REPUBLIC OF RWANDA

Leveraging Private Sector Strategy

October 2019

Foreword

Rwanda aims to become an upper-middle-income country by 2035 and a high-income country by 2050 (National Strategy for Transformation 2018–2024, NST 1). To achieve this goal, the agriculture sector has to be modernized. The fourth edition of the strategic plan for agriculture transformation (Strategic Plan for Agriculture Transformation 2018–2024, PSTA 4) puts private sector development at the forefront of this process.

The Government of Rwanda is committed to playing its role as an enabler for a greater performance of the sector as there is strong evidence that successful agriculture transformation is achieved through strong partnerships between the state and private players. Focusing on involving the private sector in agriculture development to achieve the targeted economic growth, PSTA 4 builds on substantial private sector investments.

The Leveraging Private Sector Strategy (LPSS), with the overall objective of attracting and retaining more private investors in the agriculture sector, supports the PSTA 4 implementation. The core focus of the strategy is to support private sector engagement with the intended broader benefits of sustainable job creation, a reduction of Rwanda's trade deficit, and, ultimately, meeting the country's ambitious growth targets. The LPSS also strengthens links between farmers and agricultural produce off-takers while ensuring safeguards against social and environmental risk factors.

I wish to take this opportunity to thank all agriculture sector partners and stakeholders for their valuable support and contribution to the development process of the LPSS. I look forward to its successful implementation.

Thank you.

Jean Claude MUSABYIMANA

Permanent Secretary

List of Acronyms

4P	Public- Private-Producer Partnership
AAF	African Agriculture Fund
AFR	Access to Finance Rwanda
AIIB	Asian Infrastructure Investment Bank
AGRA	Alliance for a Green Revolution in Africa
ALIS	Agricultural Land Information System
ASMEs	Agricultural Small and Medium Enterprises
BDF	Business Development Fund
BDS	Business Development Services
BNR	National Bank of Rwanda
BP	Business Plan
BRD	Rwanda Development Bank
CAT	Common External Tariff
CDI	Clinton Development Initiative
CDW	Common Data Warehouse
CEO	Chief Executive Officer
CGAP	Consultative Group to Assist the Poor
CIP	Crop Intensification Program
CoA	Certificate of Approval
CPC	Community Processing Center
CPSD	Country Private Sector Diagnostic
CRM	Customer Relationship Management
CWS	Coffee Washing Station
DFID	Department for International Development (UK)
DP	Development Partner
DRC	Democratic Republic of Congo
E&S	Environmental and Social
EAC	East African Community
EIA	Environmental Impact Assessment
EICV	Enquête Intégrale sur les Conditions de Vie des ménages
EIR	Environmental Impact Review
EMP	Environmental Management Plan
ENABEL	Belgium Development Agency
ESIA	Environmental and Social Impact Assessment
ESIM	Environmental and Social Implementation Manual
ESMG	Environmental and Social Management Guidelines
ESMS	Environmental and Social Management System
ESSA	Environmental and Social Systems Assessment
FDI	Foreign Direct Investment
FI	Financial Institution
GDP	Gross Domestic Product
GoR	Government of Rwanda
HACCP	Hazard Analysis and Critical Control Points
HoReCo	Horticulture in Reality Cooperative

IAKIB	*Impuza mashyirahamwe y'Aborozi ba Kijyambere ba Byumba*
IBMI	International Business Management Institute
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
JSR	Joint sector review
IMSAR	Improving Market Systems for Agriculture in Rwanda
IP	Intellectual Property
IRR	Internal Rate of Return
ISO	International Organization for Standardization
IT	Information Technology
KWM	Kigali Wholesale Market
LIS	Land Information System
LPSS	Leveraging Private Sector Strategy
M&E	Monitoring and Evaluation
MCC	Milk Collection Center
MFI	Microfinance Institution
MINAGRI	Ministry of Agriculture and Animal Resources
MINECOFIN	Ministry of Finance and Economic Planning
MINICOM	Ministry of Trade and Industry
MIS	Management Information System
MoU	Memorandum of Understanding
NAEB	National Agriculture Export Development Board
NAIPS	National Agribusiness Investment Promotion Strategy
NAP	National Agriculture Policy 2018
NBFI	Non-Banking Financial Institution
NCCR	National Confederation of Cooperatives Rwanda
NGO	Nongovernmental Organization
NIRDA	National Industrial Research and Development Agency
NISR	National Institute of Statistics Rwanda
NPV	Net Present Value
NST 1	National Strategy for Transformation 2018–2024
OMMIS	Operation, Maintenance and Management of Irrigation Schemes Project
PAP	Project-Affected Person
PASP	Post-Harvest Agribusiness Support Project
PE	Private Equity
PHCRAB	Post -Harvest Climate Resilience Agribusiness
PIC	Project Investment Committee
PPD	Public-Private Dialogue
PPP	Public-Private Partnership
PRICE	Project for Rural Income through Exports in Rwanda
PSDAG	Private Sector Driven Agricultural Growth
PSF	Private Sector Federation
PSTA 4	Strategic Plan for Agriculture Transformation
PTD	Potato Taste Defect
R&D	Research and Development

RAB	Rwanda Agriculture Board
RALIS	Rwanda Agriculture and Livestock Inspection and Certification Services
RCA	Rwanda Cooperative Agency
RCAL	Rwanda Chamber of Agriculture and Livestock
RDB	Rwanda Development Board
RDDP	Rwanda Dairy Development Project
REMA	Rwanda Environment Management Authority
RFP	Request for Proposal
RFQ	Request for Qualification
RICA	Rwanda Institute for Conservation Agriculture
RIF	Rural Investment Facility
RMI	Rwanda Management Investment Board
ROSCA	Rotating Savings and Credit Association
RSB	Rwanda Standards Board
RYAF	Rwanda Youth in Agribusiness Forum
SACCO	Savings and Credit Cooperative
SAS	Seasonal Agricultural Survey
SC	Steering Committee
SI	Sensitive Item
SMEs	Small and Medium Enterprises
SNV	Netherlands Development Organization (*Stichting Nederlandse Vrijwilligers*)
SPS	Sanitary and Phytosanitary Standards
SWOT	Strength, Weaknesses, Opportunities, and Threats
TA	Technical Assistance
ToR	Terms of Reference
UoB	Urwego Opportunity Bank
USAID	United States Agency for International Development
VAT	Value Added Tax
VC	Value Chain
VCCF	Value Chain Competitiveness Fund
VCP	Value Chain Platform
VFM	Value for Money
WFP	World Food Program

Table of Contents

List of Figures

List of Tables

Executive Summary

The Government of Rwanda (GoR) has identified the transformation of agriculture as a cornerstone in developing today's economy and one of the central future drivers of growth toward 2050 (World Bank Group and GoR 2018). The agriculture sector is a key contributor to national employment creation, food security, poverty reduction, and exports. As such, the sector is indispensable for propelling the transition toward a knowledge-based economy.

Substantial investment will be needed to transform the sector, while mitigating the impact of climate change is a priority. The government's National Agricultural Policy 2018 and the Fourth Strategic Plan for Agriculture Transformation of 2018–2024 (PSTA 4) recognize the need for the private sector to drive agricultural modernization to the benefit of farmers and the wider economy as well as global efforts in climate action.

However, the sector's current and significant financing gap is limiting the capacity to implement planned investment. Agriculture constitutes about 30 percent of gross domestic product (GDP) but receives only 5.2 percent of gross capital formation and less than 2 percent of formal credit.

To accelerate agriculture development, the GoR has heavily invested in the sector over the past few decades. Subsidized inputs, extension services, livestock distribution, market infrastructure, processing facilities, land husbandry, and irrigation are examples of these state efforts. The government has also incentivized financial institutions (FIs) to lend to the sector through credit guarantee schemes, matching grants, and quasi-equity loans through the Business Development Fund (BDF).

Private businesses in agriculture are best positioned to unlock the sector. They generally have a stronger implementing capacity than both farmers and the government in many areas. However, most importantly, they can establish links with farmers that lead to commercialization. Agribusinesses that formally source from farmers create income opportunities while service providers increase their productivity. As a result, farmers' access to finance increases.

Furthermore, the Leveraging Private Sector Strategy (LPSS) is aligned with the strategic assessment of the Rwanda Country Private Sector Diagnostic (CPSD) which seeks to identify market opportunities and constraints in sectors that advance the country's development objectives. The CPSD indicates how specific actions by the public sector, in collaboration with the private sector, will fill the gaps in public investment through regulatory reforms and address market failures to unleash the country's private investment potential.

The key objective of the LPSS is to "attract and retain more private investments into the agriculture sector.'' In that regard, the government is committed to addressing issues encountered by the private sector, providing quality information at a low cost and sufficient financial incentives to invest in the agriculture sector.

The strategy is built on two pillars:

- **Pillar 1: Investment facilitation to respond to investor needs**
    - Improving the business environment through strengthening participation and the voice of the private sector

- Strengthening GoR capacity to formulate, manage, and monitor public-private partnership (PPP) investment projects
- Improved stakeholder access to information pertaining to agriculture

- **Pillar 2: Investment incentives that de-risk private sector investments**
  - Developing a risk-sharing facility
  - Strengthening agriculture insurance
  - Providing technical assistance (TA) building required skills to both loan suppliers and recipients.

The strategy requires calls for RWF 122 billion in the next five years to implement the three main activities presented in the table below.

Program	Major Activities
Agri-PPD and value chain platform (VCP)	Implement the Agri-PPD and VCP mechanisms.
Sector digitalization	Provide quality data and information.
Sector de-risking	• Set up a risk-sharing facility. • Strengthen agriculture insurance. • Provide TA by building required skills to both loan suppliers and recipients.

Note: PPD = Public-Private Dialogue.

1 Introduction

1.1 Background

The Government of Rwanda (GoR) has identified agriculture transformation as a cornerstone in developing today's economy and one of the central future drivers of growth toward 2050 (World Bank Group and GoR 2018). The sector generates about 30 percent of gross domestic product (GDP) and is the backbone of Rwanda's economy in terms of employment, food security, and exports. About 4 million people are engaged in agriculture, whereby it stands as the main occupation for nearly 3.5 million people.[1] Moreover, 90 percent of the households defined as 'poor' in the Integrated Household Living Conditions Survey (EICV 5) derive their main income from farming. As such, an improvement in the agriculture sector is the basis for structural change and poverty reduction, which will propel the transition toward a knowledge-based economy.

Crowding in private sector involvement to create sustainable value chains (VCs) has been widely accepted as a core driver for the coming agriculture transformation. The private sector must be supported in creating efficient and profitable markets for farmers, thus increasing incomes in the sector. The following policy instruments have been put in place by the GoR to guide this process.

The **National Strategy for Transformation 2018–24 (NST 1)** emphasizes the need to increase agriculture and livestock quality, productivity, and production to "accelerate inclusive economic growth and development founded on the Private Sector, knowledge and Rwanda's Natural Resources."[2]

Similarly, the **National Agriculture Policy 2018 (NAP)** envisions "a nation that enjoys food security, nutritional health, and sustainable agricultural growth from a productive, green, and market-led agricultural sector." It recognizes that limited public resources dictate the necessity to ensure efficient and effective allocation of public funds, while attracting private sector investment and capabilities to the sector. The core policy orientation of the NAP is therefore to shift the role of the GoR from market actor to market enabler.

The Strategic Plan for Agriculture Transformation 2018–24 (PSTA 4) aims toward achieving the visions and targets of NST 1 and the NAP. PSTA 4 targets private sector contributions of at least RWF 500 billion over its six-year period. Contributions are planned to increase from RWF 8 billion in the first year to RWF 173 billion by the last year. This influx will mainly flow toward the areas of irrigation, resilience (mainly Girinka), market links (market infrastructure, post-harvest handling, and inputs), land husbandry (soil protection measures), and skills (primarily as counter financing to matching grants). To ensure private sector involvement and investment targets are met, PSTA 4 emphasizes the need for a conducive enabling environment, incentive schemes, improved coordination, and access to information and active involvement in decision-making processes.

Furthermore, the Leveraging Private Sector Strategy (LPSS) is aligned with the strategic purpose of the Rwanda Country Private Sector Diagnostic (CPSD), which seeks to identify market opportunities and constraints in sectors that advance the country's development objectives. By assessing the landscape of private sector investment, the CPSD identifies specific constraints to private sector investment in Rwanda.

[1] National Institute of Statistics Rwanda (NISR), Labour Force Survey, 2018.
[2] GoR, "National Strategy for Transformation" (2018–2024), Pillar I.

While the LPSS objective is to attract and retain private investment in the agriculture sector, the CPSD examines how private sector growth can support the country's development goals.

1.2 Objectives of the Strategy

This LPSS supports PSTA 4 implementation on engagement of the private sector in the development agenda, expansion of private engagement and outreach, and the development of public-private partnership (PPP) initiatives and activities. The objective of the LPSS is to "attract and retain more private investments into the agriculture sector."

In less condensed terms, this strategy provides a framework on how the GoR should engage the private sector, which tools and mechanisms can be employed to do so, and with whom the responsibility for these activities fall. To ensure that private sector engagement yields the intended broader benefits of sustainable job creation, exports, investment, and ultimately the country's ambitious growth targets, the LPSS also reviews strengthened links between farmers and the private sector. Last, safeguards against social and environmental risk factors are also crucial components of the strategy.

1.3 Methodology

The development of the LPSS is based on both primary data collection and secondary data analysis. The list of stakeholders consulted and literature used is shown in the annex. Secondary data were gathered through an extensive literature review. Consulted documents include policies, laws, regulations, technical reports, and other strategies.

Primary data collection involved consultations with a variety of stakeholders, including

- **Producers.** Meetings were held with farmers from six different VCs to determine the farmers' needs, challenges, and prospects from development interventions. This was done in focus group discussions.
- **Private sector.** First-hand information was directly collected while conditions for private sector actors to finance agriculture projects in accordance with the principles set in PSTA 4 were analyzed; the informants included the National Confederation of Cooperatives Rwanda (NCCR), Private Sector Federation (PSF), and financing institutions.
- **Government.** The policy framework was reviewed, and facilities to engage the private sector in agriculture finance were promoted.
- **Development partners (DPs).** The priority areas for DP support through interventions was made clear.

Several versions of the LPSS have been shared with stakeholders for comments during the development of the strategy.

2 Situational Analysis

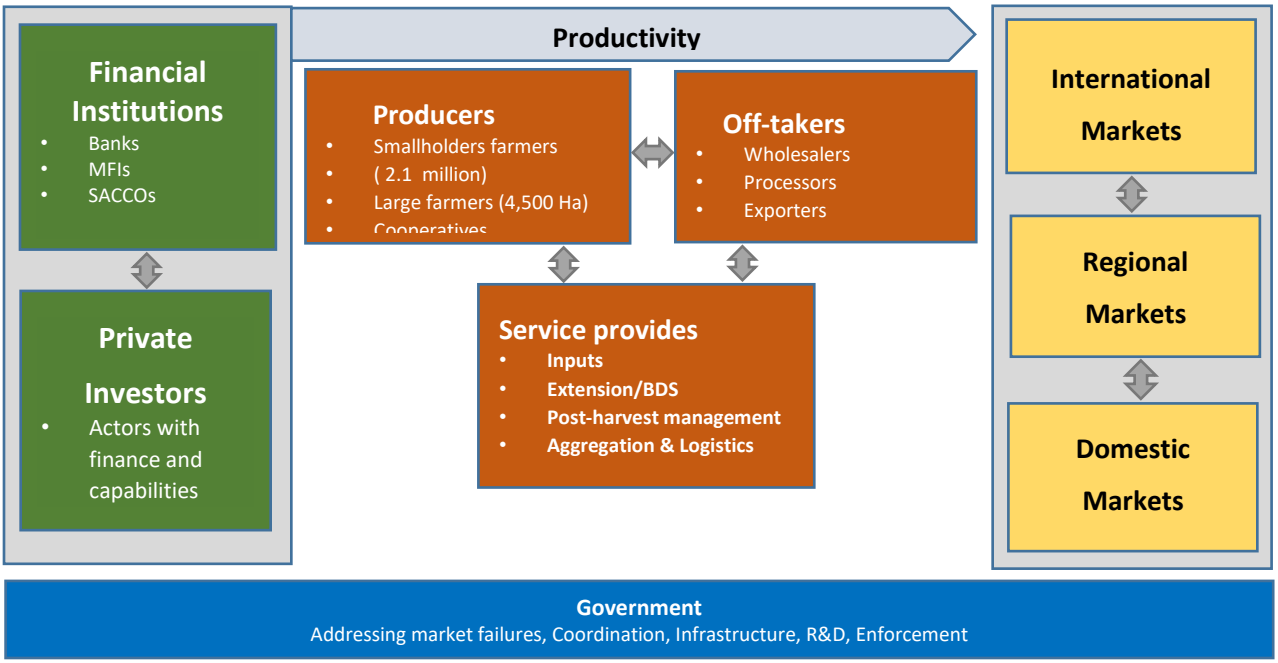
2.1 Overview

This chapter captures information from different technical sessions that were held during consultative meetings. Participants to these sessions were organized in five clusters: government officials, DPs, financing institutions, associations, and farmers/producers.

2.2 Conceptual Overview of the Agribusiness System

Figure 1 depicts a conceptual overview of the agribusiness system, its actors, and their functions in the framework of leveraging private sector investments.

Figure 1: Actors in the Agribusiness System



Note: BDS = Business development services; MFI = Microfinance institution; R&D = Research and development; SACCO = Savings and credit cooperative.

In a robust agribusiness sub-sector, there is an established link of producers, service providers, and off-takers that compete and collaborate to profitably serve end markets. In this illustration, off-takers source commodities from producers and supply them to various markets. This process is supported by a range of service providers. These actors are financially incentivized to meet the market opportunity. Furthermore, the economic activities of all private actors are generally supported and influenced by the public sector.

The value generated from these activities allows for and encourages reinvestment back throughout the VC. Ideally, all actors have access to basic infrastructure and are incentivized to invest in new technologies and processes to maximize returns and remain competitive.

2.3 Agriculture Production

Rwanda's agriculture sector experienced relatively high output growth of over 5 percent per year since 2000; however, yields have plateaued over the past few years[3] and stand still at sub-par levels. Current yields are at about 30–40 percent of their potential value (weighted by retail prices).

The low productivity and high post-harvest losses are caused largely by the fact that most producers are smallholders. Of all cultivated land in Rwanda, 44 percent is cultivated by households with less than 1 ha, 32 percent by households with 1–10 ha, while the remaining 24 percent of land is used by 'commercial' farmers representing 11,600 households growing on more than 10 ha of land. The median landholding per farming household is about 0.24 ha, and the average is approximately 0.58 ha. Noteworthy is the downward trend of the size of landholding per household due to population growth.[4]

Given their small size, Rwandan producers face significant risks in production, post-harvest losses, and marketing. At the same time, their capital base is limited, as is their infrastructure and technical capacity. These risks and resource dynamics relate to the following productivity challenges.

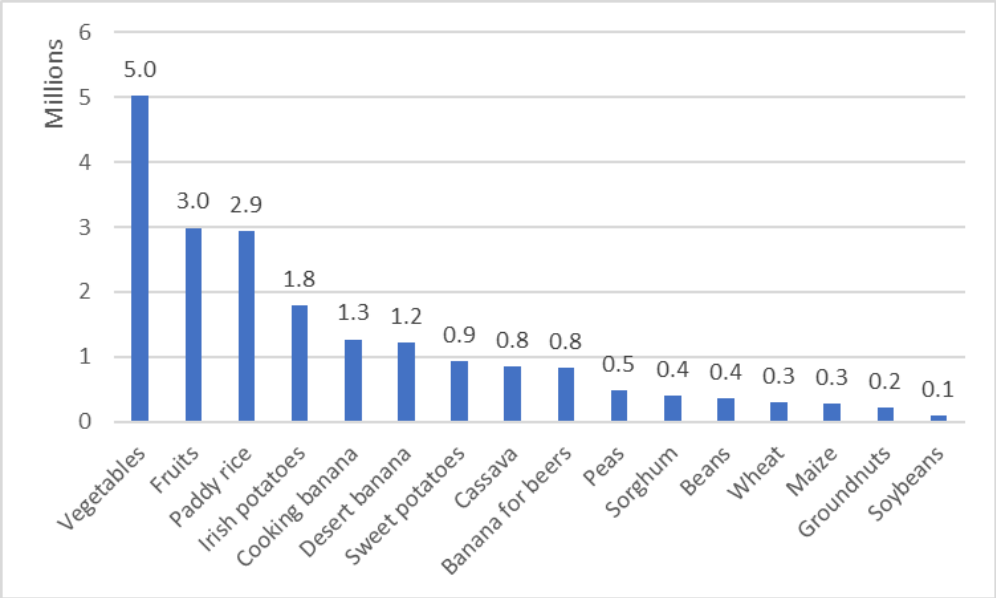
Underutilization of inputs. Smallholders underinvest in inputs as they are expensive with an uncertain payoff. In Season A 2018,[5] improved seed use was 12.5 percent among smallholders (mostly for vegetables and paddy rice) and 53 percent for large-scale farmers; inorganic fertilizer use was 25 percent for smallholders and 43 percent for large-scale plots. Pesticide was used by under 20 percent of small-scale farmer plots and 68 percent of large-scale farmer plots. Illustrating the impact of low input use on land productivity, the average maize yields are less than one-third their potential even before considering post-harvest losses.[6] Livestock productivity is also affected by limited inputs use, driven by the high costs of feed.

Limited uptake of technology and practices. Two main factors drive the slow uptake of improved practices and technologies: First, adoption of any new practice or technology implies additional costs and/or risk, which most producers are not well positioned to absorb. Second, the small farm plots possessed by ordinary farmers' limit adoption of many modern technologies. Farming in the small plots cannot absorb expensive mechanization infrastructure and/or post-harvest processing equipment. Thus, most work is left to traditional, manual techniques that have low productivity and poor quality.

Low-value crop selection. Food crops, such as maize and beans, dominate national agriculture, 80–90 percent of which are self-consumed or traded informally.[7] This is to mitigate the risk of market failure, that is, the produce can be reserved and consumed at each household in the absence of a functioning market. Despite their importance in terms of food security, these crops add low gross value per hectare relative to potential alternatives (Figure 2). For example, the value added on a hectare of vegetables is about 50 times larger than the value added on producing soybean. Other higher-value crops include fruits, paddy rice, and Irish potatoes. Although some of these crops may satisfy self-consumption needs, they also require greater investment in inputs, infrastructure, technical knowledge, and access to markets—none of which are within reach of most smallholder farmers.

[3] Ministry of Agriculture (MINAGRI), 2018, PSTA 4.
[4] NISR, 2018, EICV 5.
[5] NISR, SAS, 2018.
[6] PSTA 4.
[7] Author's calculation comparing EICV 5 consumption data to SAS production data.

Figure 2: Gross Value Added per Hectare in 2017, by Food Crop



Source: SAS 2018.

Cooperatives, representing collections of producers, could be the first source in developing solutions to address the challenges of farm scale and fragmentation. As a collective mechanism for smallholder farmers, cooperatives facilitate market access, negotiation, access to inputs (including financing), training, and basic post-harvest handling. Cooperatives range greatly in size, maturity, and strength. Generally, however, they are relatively nascent and require support and time to develop their potential. This includes growth in size, managerial capacity, governance, infrastructure, and technical capacities.

Environmental factors, specifically climate change and soil erosion, pose increasing risks in production and productivity. Climate change is likely to increase the frequency of droughts and excess rainfall. This would affect agriculture significantly given the hilly topography of Rwanda and dependency on rain-fed agriculture. According to EICV 5, 36.2 percent of the arable land was affected by climate-related problems during the time of the survey, and for 25.8 percent of the respondents, the major reported problem was 'climate change' (Table 1). Moreover, 'poor' households were most affected by climate change.

Table 1: Key Characteristics of Agricultural Land in EICV 5[8]

Land Characteristics	Non-poor	Poor	All
No. households holding arable land	1,462,331	808,356	2,270,687
Total land holdings (ha)	1,041,458	270,758	1,312,216
Average land per household (ha)	0.71	0.33	0.58
Cultivated land over past year (ha)	978,645	262,771	1,241,415
Facing any problem (%)	**34.1**	**44.0**	**36.2**
Main problem is climate change (%)	24.6	30.5	25.8
Main problem is erosion/ landslides/floods (%)	6.0	9.2	6.7

[8] Authors calculation of EICV 5 "Parcels" data set, summing the area of parcels per household and using EICV 5. Responses are weighted by the household weight and its estimated share of total land. 'Non-poor' and 'poor' refers to the EICV 5 finding as to whether the household consumes above or below the defined poverty line.

Land Characteristics	Non-poor	Poor	All
Main problem is other (%)	0.6	0.6	0.6
Main problem unreported (%)	2.8	3.7	3.1

Reportedly, land erosion is the main problem for 6.7 percent of total farmland. Farming on slope areas causes land infertility and degradation over time. Its monetary cost has been estimated at 3.5 percent of agricultural GDP per year (Olson and Berry 2004). Mitigation measures from climate change and land erosion are essential if Rwanda's growth plans are to be achieved, let alone current levels maintained.

To increase productivity and mitigate some of the effects of climate change, PSTA 4 targets irrigated area to increase from 51,884 ha in 2017 to about double (102,284 ha) by 2024. Currently, about 5 percent of small-scale farmers use irrigation in Season A and B, while about 25 percent of large-scale farmers irrigate their farmland.[9] In the (dry) Season C, 28 percent of small-scale farmers use irrigation, mainly for higher-value crops such as vegetables and fruits, while most plots are not farmed. The source of funds between public and private sectors for further irrigation development is still to be determined.

To combat erosion, the government has planned further development of terraces, agroforestry, and biological soil conservation in PSTA 4. These measures will decrease land-productivity in the short run, but they are critical for long-term erosion control and open already-limited land to be more effectively used for agriculture. While public funds will be required, the private sector can be leveraged to ensure that the land is being upgraded and used for productive purposes in subsequent years, for example, through subsidized outgrower schemes, land-lease, or land concession.

The public sector plays a significant role in the distribution of inputs. Yet, there is a plan to review the current input subsidy programs. The target is to reduce the public involvement over time and leave space for the private sector. To an increasing extent, the government aims to reduce subsidies for inputs and leave propagation/production, importation, and distribution to the private sector. Therefore, the current input subsidy mechanism is to be reviewed in the near future.

2.4 Agriculture Services

Rwanda's agriculture service providers are typically informal or insufficient, oftentimes negatively affecting the productivity, potential crop selection (must have services/expertise/technology available to grow higher-value crops), and inefficiency of the VC. Examples of agriculture services include the following:

- **Extension services.** Extension services are a key mechanism for the provision of training and advisory services to farmers, ultimately supporting better productivity and higher value generation at the farm. Extension services in Rwanda are primarily provided via public programs or nongovernmental organizations (NGOs). In a robust agribusiness system, the private sector would also be providing specialized and tailored technical assistance (TA) and expertise alongside the public sector and civil society.
- **Aggregation and logistics.** These services effectively provide the physical links between producers and markets.
- **Post-harvest handling.** Without logistics, handling activities tend to be managed directly by producers (or cooperatives) or via informal agents, all operating at a small scale. Lacking

[9] NISR, SAS, 2018.

formal larger-scale providers is one of the causes for high post-harvest losses, ranging between 15 percent and 30 percent according to commodities.[8] In addition, the poor-quality results in further reduction of farmer income as they cannot reach high-value larger markets. For example, in horticulture, cold chain is virtually nonexistent, leading to low shelf life and heat-damaged produce. The use of crates is also virtually nonexistent, leading to bruising and damage of produce in transit. As a result, horticulture is rejected or faces severe discounting in the export markets. In the dairy sector, milk collection centers (MCCs) often lack electricity to keep fresh milk at required temperatures, leading to spoilage.

- **Additional services.** Though an exhaustive list is not feasible, additional examples of agriculture services include input provision, quality and soil testing, mechanization rental, tolling processes, packing and packaging, and more.

Farmers have limited ability to pay for services, and scattered farmers are difficult to efficiently reach by service providers. While cooperatives provide useful links between service providers and farmers, most cooperatives remain small and operating with limited formality. Moreover, service providers typically represent new business models for the Rwandan market and will take time for market adoption. As a result, investment in agriculture support services is a high-risk business and will take time to grow.

Besides an increase in public sector investments, PSTA 4 and the NAP identify technological upgrading as a core national priority and present an agenda toward more demand-driven research combined with customized extension services:

(a) Demand-driven research

(b) Demonstrated new technologies with private sector

(c) Customized extension services

(d) Strengthened research capacity through collaborative networks: universities, investors, farmer organizations, and government.

The research areas are broad, ranging from improving local varieties and breeds, over irrigation technologies, and land management to fisheries, agroforestry, markets, and food systems—and many more. The research will be supported by investments in research facilities, initiatives to improve human resources in research, and research partnerships. Most importantly, research will be demand-driven by both farmers and by the private sector to ensure its relevance.

To improve extension, the government is currently developing the Customized Agriculture Extensions Program, which is intended to incentivize agribusinesses to invest in extension by improving their marketing activities.

In support of aggregation and logistics, the public sector plans for direct investment in road infrastructure. Specifically, the government plans to build all-season road connectivity from small farms to agricultural market centers in each district. This corresponds with the National Feeder Roads Policy which targets a motorway reaching within 2 km of every farm by 2027. In terms of external logistics, the public sector has made significant investment in improving the trade procedures (for example, electronic single window and single customs territory) as well as infrastructure (one-stop border post and cross-border markets). Furthermore, air cargo is subsidized to bring the price for Rwandan exporters closer to the regional price level.

The GoR also intends to catalyze investment in post-harvest handling. Government-led infrastructure is developed with the intention of encouraging private sector investment in post-harvest facilities, such as drying grounds, cold rooms, pack houses, and more.

2.5 Processing/Off-taking

Through trading relationships, value-added processes, and/or recognized brands, domestic off-takers are the link between producers and end markets. Off-takers include processors, wholesalers, and exporters. These actors are essential for setting quality standards and production needs to meet downstream market needs. Their growth and success can create greater opportunities for upstream VC actors to increase production, incentivize additional investment, and stimulate new or improved services from service providers. These actors are significant within Rwanda, with agro-processing (food, beverages, and export crops) being the largest manufacturing sub-sector in Rwanda.

Off-takers, however, are not easily positioned to take on or become heavily involved in production or aggregation activities, which are distinct from their core competencies and business focus. Thus, while the off-takers tend to have unmet market demand, many struggle to source the requisite raw materials reliably. Rwandan agro-processors frequently face the issue of under capacity operation due to insufficient supply of raw materials.[10] Exporters struggle to supply the minimum consistent quantities demanded by foreign buyers.

The challenge is not exclusively a lack of production volumes: for certain crops, a surplus of production may exist but very little reaches the gates or standards of agro-processors. This is common in maize, for example, where premium maize buyers mainly import at higher prices than local production due to difficulty in aggregation, logistics, and post-harvest handling leading to small capture of production and poor quality. Even processors and exporters who wish to carry out backward integration are challenged to find suitable land given Rwanda's population density and land fragmentation.

Aside from sourcing challenges, off-takers competing in export markets struggle due to logistics costs. At an average cost of US$3,633 per container from Mombasa to Kigali, Rwanda remains one of the most expensive places for a container to reach (Office of the President and DFID 2017). Additional challenges for off-takers include the lack of stable power supply, with larger firms reporting issues of frequent power cuts (RDB 2018) and a dearth of packaging, with the market too nascent to justify full and efficient packaging solutions in Rwanda, also challenged by restriction on use of plastics. Off-takers also cite limited legal and regulatory frameworks, affecting the lack of respect by producers to contracting, for example, as well as cumbersome taxes (RDB 2018).

Altogether, these challenges limit the efficiency of current or potential Rwandan off-takers, ultimately hindering their ability to compete, capture, and invest in the agribusiness system to reach potential markets.

Agro-processing is primarily under MINICOM and the Private Sector Development and Youth Employment Strategy. That strategy highlights, among other things, the provision of industrial zones, the anchor firms support program, and support with standards certification.

Quality assurance and traceability are complementary functions supporting access to higher-value markets. There are campaigns from the Rwanda Standards Board (RSB), National Agriculture Export

[10] Ministry of Trade and Industry (MINICOM), Rwanda Industrial Survey, 2015.

Development Board (NAEB), and Rwanda Agriculture and Livestock Inspection and Certification Services (RALIS) to expand compliance with HAACP, International Organization for Standardization (ISO), Global GAP, and others, but limited services for compliance are provided by private companies.

2.6 Downstream Markets

At the end of the agriculture VC, and ultimately the fundamental drivers of private sector growth potential, are the downstream markets for Rwanda's production. The domestic, regional, and international markets are described as follows.

- **Domestic**. The total value of traded food products in Rwanda is about US$1.3 billion, of which 42 percent represent staples; 21 percent represent beans, fruits, and nuts; 11 percent represent beverages; 10 percent represent livestock products; and 15 percent represent other products.[11] The value of non-traded produce for subsistence is several times larger and likely to be underestimated in household surveys. The domestic market for standardized food is limited and concentrated in Kigali. Meanwhile, due to high transport costs and limited market infrastructure, there are significant price differences for basic commodities across the country.[12] The key leveraging points to facilitate markets is to strengthen the links between rural farmers and the market, as well as facilitating logistics between towns. Therefore, the leverage should be made on more efficient aggregation, better organized transport, and adequate market facilities to minimize losses.
- **Regional.** The main regional market is the Democratic Republic of Congo (DRC), with which Rwanda has significant informal cross-border trade to complement the formal trade. New cross-border markets and bonded warehouses have been established in Rubavu and Rusizi bordering the major Congolese towns of Goma and Bukavu. There is significant trade of live animals, processed food (flour and edible oil), as well as vegetables. Investors generally find that there is an investment opportunity in producing these products in Rwanda by targeting the market of the Eastern DRC. The leveraging point is to increase the amount of produce to Rubavu and Rusizi, where they generally fetch a better price than the rest of the country. Therefore, like the domestic market, export to the DRC will increase with improved backward links to the farm level and better domestic logistics.

  For other regional countries, while East African Community (EAC) membership offers custom-free market access, there are still significant non-tariff barriers and generally higher production costs in Rwanda.
- **International.** In general, there is an ample international market for Rwandan production if quality and standards are met, production normalized, and cost efficiencies gained.

For Rwanda's traditional agricultural exports, coffee and tea, there is untapped potential for increasing revenues through increased use of required inputs and improving branding and quality. Beyond these well-established exports, horticulture and floriculture are nascent but important opportunities, mainly transported by air to Europe and Dubai. Additional potential exists in serving West Africa using newly established flight routes. Establishing and expanding the cold chain and attaining certifications, such as Global GAP, will allow Rwandan production access to higher-value international markets with less loss (lower cost).

[11] Estimates based on EICV 5 household consumption data.
[12] E-soko, 2016.

Last, animal products are a potential for export: a recent survey of producers, consumers, and VC actors revealed that animal feed is the key to unlocking this sector (Vanguard Economics 2019).

2.7 Financing

Finance is the lifeblood of private sector development and ultimately the prime target of the LPSS. In this strategy, financing is divided into two broad categories: investment (equity finance) and credit financing. This section covers the first. Equity finance is a more likely option for funding the current state of most agriculture VCs. Indeed, Rwanda's nascent agriculture VCs effectively need many start-ups, for which the first appropriate source of financing is equity financing. With time, as the value proposition, cash flows, and collateral are established, lending becomes attractive to both lenders and the start-up. With a large equity investment, lending may come at the start, but credit will not come on its own.

2.7.1 Investment Promotion

Rwanda is known among investors for its relatively easy and stable business environment. In 2017, Rwanda ranked 41st in the world and 2nd in Africa for the overall business environment (World Bank 2017a). This is the result of numerous reforms undertaken over the past several years aimed at creating an enabling environment for businesses, for example, by improving the ability to open a business, trading across borders, and increasing transparency. Specific to agriculture, Rwanda ranks 62nd out of 189 countries, and first in East Africa on 'Enabling the Business of Agriculture' (World Bank 2017b). The country ranks above average in the areas of finance, transport, and water. On the other hand, the country performed below average in the indicators on seed, fertilizer, machinery, markets, and information and communication technology (ICT).

Despite the incentives provided, the agriculture sector currently receives less investment than needed. Agriculture constitutes about 30 percent of GDP but receives only 5.2 percent of gross capital formation, while the share of foreign direct investment (FDI) is only 9 percent.[13] According to the 2015 Global Impact Investment Network report, "only around three percent of all non-FDI impact capital disbursed in East Africa had been placed in Rwanda, amounting to approximately US$44 million, the lowest of this report's five focus countries."[14]

The Investor Perception Survey 2018, conducted by the Rwanda Development Board (RDB), found that while most potential investors who have considered Africa are market-driven, Rwanda has been more successful in attracting investors that value security and a good regulatory environment (Table 2). This contrasts with surrounding countries with larger markets but worse stability and regulatory environments.[15]

Table 2: Domestic versus International Location Determinants

Main Location Determinants for International Investors That Have Considered Investing in Africa	Location Determinants for Existing Rwandan-Based Investors
• Size of national market (42%)	• Political/economic stability (56%)
• Access to African/regional market (41%)	• Security (52%)
• Economic stability (39%)	• Regulatory environment (26%)
• Low political risk (29%)	• Low operating costs (23%)

[13] RDB, registered investment.
[14] RDB, registered investment.
[15] RDB, 2018, Rwanda Investor Perception Survey.

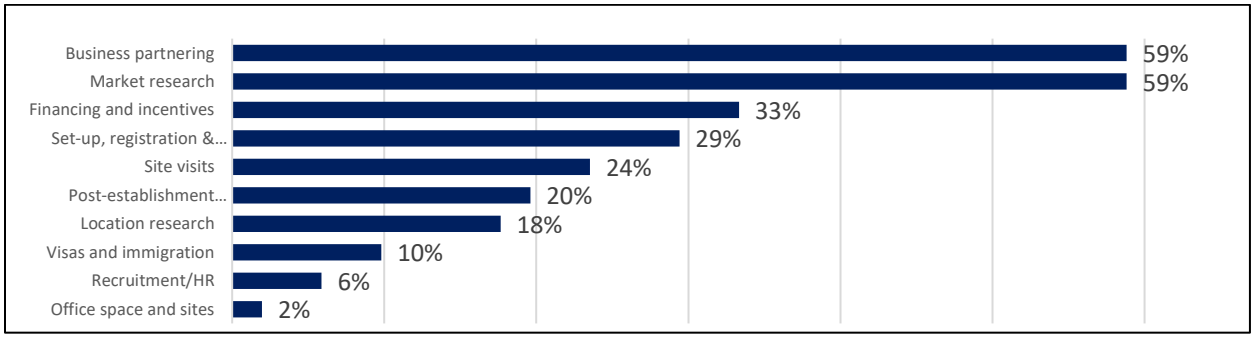
Main Location Determinants for International Investors That Have Considered Investing in Africa	Location Determinants for Existing Rwandan-Based Investors
• Regulatory environment (25%) • Low operating costs (20%)	• Size of national market (21%) • Incentives by government (18%)

Source: RDB, 2018, Rwanda Investor Perception Survey.

The survey also indicates that Rwanda's comparative weakness is market size and access, representing the top priorities for those investors looking into Africa, but not yet invested in Rwanda.

The services investors most value from the government include (a) finding local partners, (b) market research toward opportunities, and (c) financing and incentives. This implies that access to data and information on potential business partners is critical. Specific to agriculture or agro-processing, information about land and potential suppliers is important. Moreover, public sector financial incentives are important.

Figure 3: Most Valuable Government Support for Potential Investors



Source: RDB, 2018, Rwanda Investor Perception Survey.

Indeed, the typical investment sizes being sought and justifiable by investors exceed the size of most current agribusinesses in Rwanda. For most foreign investors, investments above US$5 million are preferred and usually would not go below US$1 million (Table 3). With the business and markets in Rwanda's agriculture sector smaller, nascent, and unproven, reaching this level of capital is currently uncommon. Promotion and development of markets with the largest potential will likely improve attractiveness of the sector; given the small size of Rwanda's domestic market, export VCs are likely to draw the most investment attention.

Table 3 outlines investor (and some credit) categories in more detail. Note that the bottom range of investment, though technically possible, is not common for most investors. The principal reason is the fixed costs of management and due diligence for an investment do not justify smaller disbursements unless much larger follow-on investments are expected.

An exception to investment size limitations may be the growing potential of private local and regional investors. Such investors may be attracted to smaller investments in the US$150,000–200,000 range, which traditional investors do not commonly reach. However, small but high-potential businesses may need support to become more investment-ready, including support on proper documentation, financial knowledge, and networks.

Table 3: Categories of Non-FDI Investor Profiles

Investor Category	Investment Return versus Impact	Risk Appetite	Return Outlook	Investment Structure Preference	Time Horizon and Currency
Informal Investors (High net worth private individuals)	Impact: ++ Finance: +	Medium/High	Lower	Equity or mezzanine, US$5,000–US$500,000 per deal (often syndicated at US$40,000 investor)	Patient capital and US$/€ mostly
Regional Institutional Funds	Impact: +/- Finance: +	Medium	Comparable	Comfortable with any investment instrument venture US$100,000–US$5 million, PE > US$5 million	Patient capital and US$/€ preferred
International Institutional Funds	Impact: + Finance: +	Low/medium	Comparable	Comfortable with any investment instrument venture US$100,000–US$5 million, PE > US$5 million	Patient capital and US$/€ only
Regional Capital Lenders (Banks and NBFIs)	Impact: +/- Finance: +	Low	Equal	Mostly straight debt	Less patient and mostly local currency
Not-for-Profit Foundations	Impact: ++ Finance: +	High	Lower	Grants/straight debt	No return sought mostly, US$/€

Source: Nguriza Nshore, 2018, Rwanda Banking and Investment Analysis, using information from BiD Network.
Note: NBFI = Non-banking financial institution; PE = Private equity; Lower end of investment capital is practically very difficult to access, even if technically available.

2.8 Credit Financing

Credit finance plays an active role in developed agriculture sectors, supporting private actor activities throughout the VC from production through trade financing. All segments of the agriculture VC, such as inputs, land husbandry, animal feed, irrigation, value addition, and exports require financing. Rwanda has 17 banks licensed by the National Bank of Rwanda (BNR): 11 commercial banks, 4 MFIs, 1 development bank, and 1 cooperative bank.

Despite these institutions and the economic importance of the Rwanda's agriculture sector, its production component has a share in formal credit of consistently around 1–2 percent,[16] for which the Rwanda Development Bank (BRD) is the main lender (World Bank 2017c). Credit is concentrated in the traditional cash-crop VCs such as coffee and tea, while there is little investment in the dominant food crops, which are produced by most farmers and mostly for food security purposes. While 89 percent of farmers are financially included (FinScope 2016), only 4.7 percent received a loan in 2017, of which 96.2 percent of loans were from noncommercial banks (main sources of loans for farmers are SACCOs and Rotating Savings and Credit Associations [ROSCAs]).[17]

[16] BNR Annual Report 2016/17.
[17] Agricultural Household Survey 2017.
++ =highly positive impact,+= positive impact, +/-=average/moderate

Without finance, farmers have limited funds available for increasing the production and are left with hard choices regarding which production factors to buy and which to omit. Meanwhile, they continue to face high interest rates and struggle with meeting collateral requirements. According to FinScope 2016, nearly half of the farming households save in formal banks, but only 14 percent of subsistence farmers and 17 percent of commercial farmers have access to formal credit.

The root causes for low access to finance are both on the demand side and the supply side for agri-finance. Demand-side challenges include the following:

- **Land fragmentation and widespread population makes lending expensive.** Low population density and large geographical dispersion of clients in rural areas make it difficult for banks to operate at a profitable scale. Transaction costs associated with lending are high relative to the size of transactions with smallholder farmers. Farmers consolidate in cooperatives, but participation remains low: 10–20 percent of production is sold through cooperatives (NISR SASs). Furthermore, smallholder farmers have limited collateral available.
- **Cooperatives and small and medium enterprises (SMEs) struggle to attract supply from farmers and demand from off-takers.** Cooperative membership among small-scale farmers remains low and varies by crop, with about 15 percent of small farmers supplying to cooperatives.[18] The level of organization and services provided by cooperatives is often insufficient for them to successfully aggregate and handle produce and supply to the market. Consequently, the cooperatives also struggle to generate and document the cash flow needed to access finance.
- **Risks in agriculture production are high.** Rwanda's agriculture sector is primarily rain-fed, hence vulnerable to prolonged dry seasons, excessive or untimely precipitation, and other adverse weather events. The lending risk is exacerbated by the fact these weather events affect all producers in a given VC at the same time. Moreover, low or delayed application of inputs and improved seeds render production vulnerable to pests and diseases. Finally, in animal production and cash crops, theft is another potential risk factor.
- **Limited options for mitigating risks in production.** Extension services could mitigate some production risks, but only 29.6 percent of agriculture households use extension services.[19] Limited post-harvest infrastructure leads to a high risk of post-harvest losses. Last, insurance is useful in mitigating risk; however, only 6 percent of farmers are insured (FinScope 2016).
- **Market risks are high and VCs are generally disintegrated.** There is substantial price fluctuation in agricultural markets, which makes future cash flow unpredictable. Contract farming could create price predictability but is not widespread as off-takers generally struggle to find a partner they trust to supply quality raw materials without side-selling. VCs that are competitive in international markets are generally more integrated and risks are lower. In tea, off-takers often provide extension services, inputs, and credit; in coffee, some transactions with off-takers are funded by financial institutions (FIs).
- **Information on business records and transactions are difficult to access for FIs.** Farmer transactions, through electronic platforms and mobile money, have been limited due to high costs relative to transaction size. However, electronic transaction is a growing opportunity given the rapid expansion of uptake. There are currently over 1 million registered mobile

[18] NISR, SAS 2017.

[19] NISR, Agricultural Household Survey 2017.

banking users, with total volume of transactions exceeding over RWF 1 billion in 2017 (BNR 2018). Most transactions are cash based because mobile money transactions remain costly for small transactions. Digitalization of transaction would enhance the possibility of cash flow-based lending as well as factoring services. There are initiatives by East Africa exchange (warehouse receipt system), and in coffee 'Techno Serve', but there is still a potential to scale in these and other VCs.

Challenges on the supply side include the following:

- **Agri-finance products are relatively complex given the demand-side issues.** Given the sector risks, lenders need to profile the risks along the entire VC from inputs to the market, and the risk profile and lending requirements are highly value chain specific. To develop and supply financial products for these markets is relatively expensive. Some banks have agricultural credit departments (for example, KCB Bank, Urwego Opportunity Bank (UoB), and Duterimbere), but expanding the loan portfolio to agriculture would require significant investment in staffing and training from the banks.
- **Opportunity costs of agricultural lending is a disincentive for commercial banks to supply agriculture portfolio.** Urban centers and sectors, such as construction, are more attractive for formal lenders, given larger transactions, collateral, and proximity to bank branches. With a low savings rate of 10 percent in the economy and little long-term saving, banks have limited liquidity.
- **Limited long- and medium-term liquidity in SACCOs and MFIs.** Short-term deposits of less than one-year maturity account for 77 percent of total MFI deposits, and of these short-term deposits, 93.8 percent are demand deposits (BNR 2018). Without longer-term financing, the risk exposure is too high for agricultural lending.
- **Innovative instruments which aim to reduce some of the traditional risks associated with lending are still nascent.** Instruments such as leasing of machinery and equipment factoring exist but remain on a small scale.

Ultimately, credit financing and lending institutions are conservative. The nascent conditions of Rwanda's agribusiness system, however, are of high risk and costly to serve relative to other sectors. The underlying business case is typically not palatable to FIs, even with guarantees and other incentives. Thus, limited credit has been deployed to the agribusiness sector. Prior development and strengthening must take place before the flow of credit will relax.

2.9 Public Interventions and Lessons Learned in Promoting Investment and Finance in Agriculture

2.9.1 Investment Promotion

The government has been active in investment promotion and packaging investment projects with the RDB acting as the focal point. Over the past 10 years, Rwanda has developed and packaged many projects to be marketed for private investors. Annex 7 shows a list of 21 projects that are currently available for potential private partners. The RDB also supports formal investors (with an investment certificate) by providing information, connections to partners, incentives, and facilitated access to basic infrastructure.

In terms of incentives, the Investment Law of 2015 stipulates the general framework.[20] Special provisions are given to investments in export, industrial manufacturing, and four priority sectors. Except through exporting or agro-processing (industrial manufacturing), agriculture is not included in this list. General provisions given to agriculture outside the Investment Law include value added tax (VAT) exemptions on unprocessed produce, subsidized air-transport for exports, and, in pertinent cases, exemptions on the law banning the use of plastics for packaging. Trade policy generally favors agriculture producers, as the EAC Common External Tariff (CET) for most produce is 25 percent and several commodities are on the 'Sensitive Items' (SIs) list with 50–100 percent tariff.[21] This is to the benefit the producer, yet not necessarily for agro-processors.

To support the RDB, MINAGRI's main role is to provide reliable information and data about the agriculture sector's clear direction on sector priorities.[22] Overall, there is room for MINAGRI to take more ownership in facilitating investment promotion and aftercare with agribusinesses. Given the RDB's broad sectoral mandate and finite capacity, many agriculture projects will be missed or not prioritized without a standardized procedure for formulation and flow of information on agriculture priorities and projects from MINAGRI.

2.9.2 Experience with Public-Private Partnerships

Another form of incentive is PPPs, a key component of private sector leveraging.

Projects that require continuous access to public resources or continuous involvement of the public sector qualify as PPPs**.** These are characterized as formalized partnerships between public and private sector institutions, addressing agricultural development issues with clearly defined public benefits, through which investments and risks are shared fairly. There is an active role for all parties in various stages of the project life cycle. This includes, for example, management of public infrastructure, concessional access to land, public ownership of company assets, or ongoing government support to company operations. Many investments in agriculture are de facto PPPs, in which land concessions and provisions on infrastructure are negotiated.

Rwanda's PPP Law of 2016 was enacted as a legal framework for the GoR to partner with the private sector to accelerate, de-risk, and reduce transaction costs of the investment until the investment proves profitable and sustainable. The PPP Guidelines of 2018 provide further specifications. The current law and guidelines, however, are mainly relevant for the development of large infrastructure projects. Examples in agriculture include the future Kigali Wholesale Market (KWM) and the Gabiro Agribusiness Hub which will be run as PPPs using management contracts.

Nonetheless, several other modalities are in use which fit the definition of a PPP. Any private sector project in which the government has any stake is classified as a PPP. In agriculture, concessions on publicly owned land are very common and are typically agreed through Memorandums of Understanding (MoUs) with districts or with the special economic zone authorities.

[20] N° 06/2015 of 28/03/2015, Law relating to investment promotion and facilitation.
[21] For example, with the SIs determined in 2017, the applied CET for dairy is 60 percent, maize is 50 percent, wheat flour is 50 percent, rice is 75 percent (45 percent under Rwanda's current stay of application), and sugar is 100 percent (25 percent under Rwanda's current stay of application).
[22] Stakeholder interview.

Local and international experience with PPPs has provided this strategy with three main lessons:

- **First, the importance of involving a capable private partner in the early stages is not to be overlooked.** A private sector partner's main role is to mitigate operational risk factors throughout the project and ensure the investment is being used. There are few examples in Rwanda, if any, where a government investment in market activities has been successful without early involvement of a capable private partner. The private partner must bring in the know-how on key factors for competitiveness such as appropriate technology and expected markets. Crucial details may be missed if the public sector relies exclusively on hired consultants and public officials. To adequately play their role, the private partner must demonstrate a deep understanding of the risks and success factors of a project and provide personnel with track records of successfully implementing similar projects.
- **Second, the capable private partner must be properly incentivized.** That is provided if they have a stake in the outcomes of the projects and carry adequate risk throughout the project. For example, if the private partners are merely suppliers to the project, they may not be incentivized to maximize the profit of the operations, as much as private partners whose financial stakes are aligned to the profitability of the project.
- **Third, there is a need for increased government capacity to develop, implement, and monitor PPPs.** Increased capacity can develop information to highlight opportunities for pure private sector investment projects as well as for PPPs. The government needs to improve both the quantity and quality of projects generated and implemented. There is an elaborated legal framework and guidelines on safeguarding against environmental and social (E&S) risk factors that have to be respected in all projects under implementation.

2.9.3 Financial Incentive Programs

The GoR has incentivized FIs to lend to agriculture and provided guarantee schemes and matching grants alongside several programs funded by DPs.

The main GoR institution to provide a financing mechanism is the Business Development Fund (BDF) which was established in 2011 as a subsidiary of the BRD. Its objective is to assist SMEs to access finance, particularly those with insufficient collateral to obtain credit from traditional FIs at reasonable rates. The BDF has a branch in each of the 30 districts and 130 staff who provide in-house services. Products include partial credit guarantee schemes for banks, quasi equity finance for start-ups, and a SACCO refinancing scheme currently at about RWF 3.8 billion to 263 SACCOs (cumulative). Finally, the BDF provides grants to promote investment in agriculture and livestock at a cumulative value of RWF 6.6 billion to 13,925 loans by end of fiscal year 2018/19.[23].

The following is an example of an experience with one government program:

The Rural Investment Facility (RIF). In 2009, US$10 million were allocated to the BDF for providing incentives for both FIs and entrepreneurs to make productive investments in agriculture. The RIF provided grants for a portion of an investment loan, taken by a beneficiary, to fund projects that represent investments along the agricultural chain.

[23] BDF Annual Report 2018.

An investigation in 2017 by MINAGRI covering the period 2009–2015, found that about RWF 4 billion of the grant had been disbursed to beneficiaries (MINAGRI 2017a). The number of beneficiaries was high (11,663) and monitoring and support was limited: 41 percent of interviewed beneficiaries stated they never met the FI granting the loan, 73 percent never met the BDF, 13 percent met the FI only once, and only 9 percent met the BDF more than once.

The MINAGRI assessment also found the following:

(a) Part of loans were locked on the accounts as part of the collateral.

(b) Information of the scheme was not widespread.

(c) Both the BDF and FIs did not sufficiently visit the beneficiaries or extend training to equip them with the capacity to manage projects.

(d) Some of the FI managers benefited from the program but did not use the loan for agricultural purposes.

(e) The BDF database did not reflect the reality on the ground: some of the listed projects in the database were inexistent, raising the need for an audit.

(f) Some projects had been approved to be eligible to benefit from the grant; however, the FI did not receive the allocated percentages from the BDF and ended up paying the loan 100 percent.

The MINAGRI assessment recommended that the RIF should target as wide an audience as possible. However, it seems to be that monitoring and managing that wide outreach is the main challenge.

2.9.4 Climate-Resilient Post-Harvest Agribusiness Support Project (PASP)

The program provides matching grants and training aimed at upgrading the capacity of cooperatives/aggregation points and access to finance for farmers. The main instrument previously used by PASP was the business plan (BP) prepared by service providers for beneficiaries: a producer cooperative or a private agribusiness enterprise willing to invest on infrastructure and equipment. Any BP supported by PASP needed to be financially viable to leverage financing from the financial sector. The BP was submitted to an FI that applied its own financial criteria before deciding whether a loan to cover part of the BP investments could be issued. A PASP grant was then provided to cover the financing gap.

This approach was deemed only 'Moderately Satisfactory' in the midterm review. FIs were reluctant to finance post-harvest infrastructures mainly because they were not convinced that (a) smallholder farmers have adequate post-harvest technologies and (b) smallholder farmers will receive the required cash flow to pay back the loans.

Therefore, PASP decided to adopt a new scheme with a more explicit VC approach by considering backward and forward integration. In the new approach, public funds are selectively and strategically used to leverage investments on targeted VCs from the private sector. BPs are developed primarily with the objective to mobilize funds from a business promoter, while the public matching grant is used to improve farmer capacities toward attracting private companies to partner with them. That is called the 4P model, introducing a fourth 'P' for Producers in PPP arrangements. The partnerships among the different VC actors through the 4P model distinguish three versions: cooperative-led BPs, private sector-led BPs, and joint venture with shared capital. This way, all the BPs supported are based on the creation of a partnership between the private partner and the producers' groups (with the support of PASP as the

public sector). The level of funding and the ceiling depend on the lead beneficiary organization, with a strong incentive on cooperative initiatives.

Since the introduction of the 4P model, the project has recorded significant progress in the number of grant approvals**,** with 145 BPs financed last year (28 private sector, 111 cooperatives, and 6 joint ventures). The project has now reached 78 percent of its target of 200 BPs financed. The project is now capitalizing on the enhanced producer-private sector links, which were triggered by the 4P model, to bring all VC actors together.

In addition to PASP, the BDF implements two other International Fund for Agricultural Development (IFAD) funded programs, namely the Rwanda Dairy Development Project (RDDP) and Project for Rural Income through Exports in Rwanda (PRICE). These programs have also moved to focus on the 4P model.[24]

- **BDF quasi-equity scheme.** This program supports about 60 agribusiness projects per year for young entrepreneurs. The fund co-invests with the project owner, who pays 12 percent in interest of the loan until the quasi equity is repaid. The ceiling of the amount is RWF 10 million. The facility has created some successful businesses and jobs.
- **BDF credit guarantees.** The BDF offers partial guarantees to FIs (banks, MFIs, and SACCOs) to cover 50 percent of collateral (for women entrepreneurs up to 75 percent) required by the lending institution for fixed assets and 30–50 percent for working capital. The maximum guaranteed amount is RWF 500 million. The credit guarantees a total of RWF 57 billion to 8,887 loans (but primarily non-agriculture). The applicant pays a commission fee of 1 percent to the BDF for the guarantee to be accorded. The BDF does not report by sector and program for the guarantee scheme but reports on the RIF and PASP. Interviews with FIs indicate that uptake in agriculture has been relatively limited and mainly used to provide security for larger businesses in the commercial VCs.

2.9.5 DP-Funded Programs with an LPSS Component

The following presents key lessons from the recent DP-funded programs designed to leverage private sector finances. The list is non-exhaustive but aims to highlight program design principles.[25]

- **United States Agency for International Development (USAID) funded Private Sector Driven Agricultural Growth (PSDAG).** Recently ended, PSDAG was designed to improve the effectiveness of Rwanda's agriculture sector by helping the GoR to attract and increase private investment while upgrading agricultural VCs to stimulate private sector growth. The program had a US$5 million Value Chain Competitiveness Fund (VCCF), through which the project identified SME partners and provided co-investment grants that allow them to invest in technology upgrades and strengthen relationships between themselves, producers, investors, and FIs.

  On the demand side, the program worked with 50 agribusinesses, cooperatives, and other actors to increase their bankability by (a) proving the profitability and sustainability of the business model, (b) co-investing in immovable property and other accepted forms of

[24] Stakeholder interveiw and reveiw of program supervisory reports.
[25] There is a large number of other player in this space. See Nguriza Nshore (2018) for a comprehensive overview.

collateral, (c) providing BDS to increase their financial management, and (d) lending credibility to the SME as a partner of a respected development project.

On the supply side, MoUs and partnership agreements were signed with six FIs to build their internal capacity to understand the risks and opportunities associated with agricultural lending, develop financial products tailored to agricultural VC financing, demonstrate the profitability of agricultural lending, and therefore increase lending to the sector. Training topics ranged from product development and delivery to lending to cooperatives.

At completion, the program stated four guiding principles on access to finance:

(a) Farm-level financing is more feasible through cooperatives or off-takers to minimize risk. Work with private sector partners to ensure they are engaging in professional, profitable, and integrated business models, which are easier for FIs to lend to.

(b) Pursue lines of credit instead of traditional loans to decrease interest rates and collateral requirements for agricultural small and medium enterprises (ASMEs), which can increase uptake of loans.

(c) Training and support to FIs are most impactful when they reinforce a previously planned institutional shift in strategy, including the setup or strengthening of an agriculture-specific lending unit.

(d) In addition to training, address other FI constraints such as low-cost wholesale finance and links to and relationships with lending-ready businesses.

- **Nguriza Nshore.** A recently initiated five-year program funded by USAID, Nguriza Nshore, aims to drive the growth of SMEs in Rwanda and create nonfarm jobs for rural Rwandans. The program has three components: (a) improve the capacity of FIs—banks and non-banks—to lend to SMEs, (b) increase private and commercial investment in SMEs to become investment ready, and (c) strengthen the enabling environment to create the conditions for SMEs to increase business performance and profitability.

  Rather than providing direct financial incentives, the project focuses on capacity building of both lenders and borrowers as well as improving the enabling environment for rural financing. One interesting development of Nguriza Nshore is a pilot with a private agro-business to borrow funds that can be lent on to producers for working capital. At the same time, the pilot is designed to create a behavioral change among a group of farmers who live on newly irrigated land in Rulindo District, such that they start using their land for commercial purposes. Currently, the irrigation provided by the government is not being used by farmers, who still follow the seasons and grow low-value staple crops.[26]

- **Improving Market Systems for Agriculture in Rwanda (IMSAR).** This is a market systems markets for poor project funded by Department for International Development (DFID), United Kingdom. The project has been operational for about a year and works with businesses that provide services to farmers. Emphasis is changing the market system in favor of farmers, by improving support services. Currently, the project has partners that provide

[26] Stakeholder interview.

aggregation, finance, and inputs to farmers. The businesses get matching grants and technical support to scale up their business models and change the business model for the benefit of farmers.

- **HortInvest.** HortInvest is funded by the Dutch Government and has three objectives: (a) professionalize the horticulture production for domestic and regional markets, (b) increase the food and nutrition security of targeted households, and (c) create VCs for export markets.

  The program provides trainings directly to farmers/cooperatives in good agricultural practices and business; it supports the existing VC platform to improve the business enabling environment. Finally, the project has a matching grant facility of up to 50 percent of the investment in an innovative business model. For example, the project has supported an export company that wants to invest in refrigerated transport services to improve the cold chain and logistics for quality vegetables; another example is a mobile cash transfer service for farmers, buyers, and suppliers to improve access to finance. In the evaluation, the project considers the benefits of the key actors in the VC: producers, off-takers (exporters/packers/processors), and international buyers.

2.9.6 Conclusions on Public Sector Leveraging Financing Programs

Many public sector efforts to promote deployment of capital have seen limited results. This is typically due to the quality of the underlying investment or its size and therefore the capacity of the investors it attracts. Moreover, monitoring and provision of TA to beneficiaries has been a major challenge in previous GoR financing programs. This is because the number of financed projects has been many, compared to the available staff. There have also been reports that FIs and beneficiaries were discouraged as they were not timely and properly reimbursed by the BDF (MINAGRI 2017a; Nguriza Nshore 2018), which could be the result of too many subprojects compared to available staff.

- Using the 4P approach rather than depending on approved BPs to banks has shown more uptake (PASP).
- This is also an approach that seems to be taken by recent DP-funded programs (IMSAR, PSDAG, Nguriza Nshore, and HortInvest)
- Only if the producers get viable businesses with visible commercial relationships will they be interesting to FIs, and FIs will start developing products for farmers.

Therefore, the most effective way to increase the financing of the smallholder farmers is to strengthen the formal commercial relationship between farmers and other actors in the agribusiness:

- Strengthen the commercial relationship between farmers and off-takers.
- Work with credible off-takers and service providers, who will then invest in their suppliers.
- Provide TA to actors of the demand and supply sides (producers and FIs) and facilitate their business management including support to creating accessible and reliable financial records, for example, through digitized payments.

3 Emerging Priorities

The majority of Rwanda's agriculture sector is nascent, with opportunities for significant gains in productivity, quality, and value per hectare left to be achieved. These opportunities can be achieved through many channels, including the development of better practices, technology, extension, input use, post-harvest handling, aggregation, logistics, processing, market links, and climate protection.

The development of these activities requires financing; however, there is a significant financing gap in agriculture, with the sector receiving less investment and credit than its size would suggest. To close the financing gap, the GoR has invested heavily in subsidized inputs, extension services, livestock distribution, market infrastructure, processing facilities, land husbandry, and irrigation.

Infrastructure which requires substantial up-front investment is also planned in PSTA 4. To ensure such investments of public funds (land terracing, irrigation, and certain post-harvest facilities/equipment) are put to optimal use, private partnerships should be developed from the onset and included in the design and implementation of the investments. Such partnerships could range from long-term management agreements to joint investment. At any rate, getting private sector commitment and investment will mitigate situations in which assets are built with public funds but remain underutilized as they are ultimately never taken on by the private sector.

Smallholder farmers who occupy most of the land are unlikely to be able to provide the needed financing. As they produce for subsistence, they have little funds available and limited access to finance. FIs, on the other hand, face too many risks to engage in the sector. The challenges on the demand side and supply side of agri-finance create a chicken-and-egg problem.

Agribusinesses are best positioned to unlock the system. In many areas, the private sector has more implementing capacity than both farmers and the government. Furthermore, they have the most likely opportunity to provide investment and access finance. However, most importantly, they can establish commercial links with farmers that lead to commercialization and ultimately make farmers attractive for banks.

The key leveraging point for unlocking the system is likely to be furthest downstream, particularly agro-processors, exporters, and other forms of off-takers. Off-takers create the end market and can provide an organizing incentive and investment throughout the upstream remainder of the VC. Hence, these types of potential investments provide a valuable target for investment promotion. This was generally how the high-value goods, coffee and tea, evolved (Stoelinga and Gathani, Forthcoming), and in recent years, there have been successful examples in rice, maize, and poultry.

Investments in off-takers must be complemented by clear strategies, including strong actors throughout the relevant VC, capable of delivering the services and raw materials. Prior investments without more careful consideration of upstream development challenges have caused failures in investments and PPPs in Rwanda. Public investment can be leveraged to promote productive alliances and can be designed in partnership with potential investors. This also fulfils the priority need of investors for links with local partners. While many actors work in specific VCs only, certain service providers may be cross-cutting and provide value across multiple VCs. Examples include logistics and aggregation businesses. As general market organizers and drivers of efficiency, supporting development of such private sector services will have a broad organizing effect in the agriculture sector, which eases investment cases and facilitates better operation to help existing actors grow.

These conclusions can be managed under two pillars of this strategy:

- **Investment facilitation.** Responding to investor needs through an improved business environment and improving the government capacity to attract, implement, and monitor projects with the private sector and
- **Investment incentives.** Providing a framework of competitive public funding that de-risks private sector investments toward national objectives. This framework should be flexible and transparent, such that the private sector can tailor their BPs to benefit from the incentives while supporting the implementation of PSTA 4.

3.1 Investment Facilitation

The government's creation of an enabling environment is the most important factor to facilitate investments.

First, to ensure public policy and resource allocation are demand driven, and thus more effective, the voice of the public sector must be strengthened. An improved mechanism for public-private communication will sustain a constant dialogue between the public and private sectors (and farmers) and respond to their needs. Furthermore, establishing VC platforms can (a) offer private sector-driven strategies for VC upgrading and (b) extend collaboration between mutually dependent actors within VCs.

Second, a fundamental shift in how the government plans projects in practice is needed. Public investments will still be needed to address the market failures and facilitate the emergence of profitable market systems, which crowd in private investment and commercial credit. However, there is a need for changing the way of thinking on how to design projects and invite the private sector to co-invest and co-create. While the procedures for planning and appraising projects are thorough, it is resource intensive to comply with the procedure in practice for line ministries such as MINAGRI and thus reserved for large projects only. As such, the shift from market actor to market enabler is qualitative rather than quantitative: instead of investing alone, the GoR will to a larger extent invest together with private partners, to maximize the probability that public investments are demand driven and minimize the probability of investing in idle equipment, unused infrastructure, and delayed flagship projects.

Finally, good planning for both the private sector and the GoR requires access to information and solid data. The two main services which potential investors look for are access to information and linking to potential business partners. Information should both be in the form of data which can support business planning as well as information on the investment process itself. This is a de-risking factor for any investment and important for financers as well.

3.2 Incentivizing Private Investment

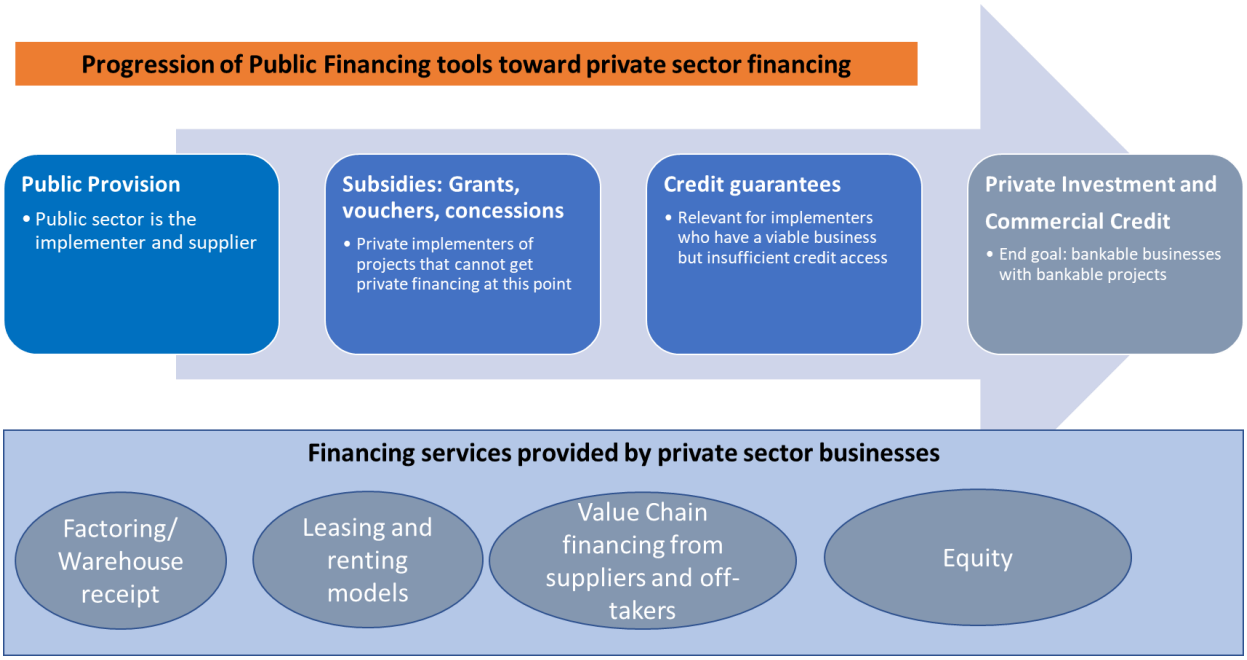
Investment facilitation shall be complemented with a framework of approaches to de-risk the private sector investment toward national objectives. This framework shall be flexible and transparent such that the private sector can tailor its BPs to benefit from the incentives, while supporting the implementation of PSTA 4. As the cost of money is high, matching grants could be used to subsidize interest rates to make loans affordable in the agriculture sector.

Figure 4 shows a progression of financing tools in this transition and the emergence of alternative financing tools from the private sector. The following sums up the findings from the situational analysis and provides guidance for the strategic framework:

Direct government provision has been widely used in Rwanda, while the main attraction from a public sector perspective is that the GoR has control over implementation, with little reliance on the private sector. On the other hand, public provisions put a strain on public resources.

Credit guarantees are an attractive financing tool because they leverage funding from the financial sector. As seen in chapter 2, credit guarantees have been provided through the BDF over the past years, but there has been limited uptake for agriculture on the side of banks, while mainly lending to commercial VCs such as coffee. The main reason is that partial credit guarantee still entails a risk to the FIs, and therefore, it is only applicable if there is a sound underlying commercial business model that is being financed. Agribusinesses may currently be best positioned to benefit from loans, which opens the possibility of VC financing. To successfully reach farmers with credit guarantee schemes, it is a precondition to de-risk the investment by linking producers with other actors in agribusiness, like off-takers.

Figure 4: Progression of Financing Tools toward Commercial Credit



The public sector can de-risk VCs by providing a flexible and transparent set of subsidies/financing tools which incentivize the private sector to upgrade the market systems. By levering the private sector investment and implementing capacity, the government can improve efficiency and effectiveness. Hence, public investment can be, to a larger extent, provided through formalized partnerships with the private sector.

One of the main tools in this regard is the matching grant fund, with different modalities. The grant share can be, in principle, anything from 0 to 100 percent of the cost or a fixed amount (independent from the total cost, called block grants). Within a comprehensive approach, grants should be used to target specific categories of actors which are possibly in need of support and/or to strategically channel funding onto specific investment which trigger greater impacts. They can incentivize private agribusiness investments in projects with positive externalities that have little or uncertain financial return. This can be under a PPP framework if the investment is large but can also be provided under established programs with specific purposes, for example, infrastructure, innovation, contract farming, or providing important services to farmers. When direct financing is applied to credit/constrained smallholder farmers and SMEs,

it can subsidize inputs and productive assets that they are currently unable to afford. This approach is suitable for short- to midterm projects including investment in equipment and machinery and vouchers for important services.

Even though grant schemes can yield good results (see Situational Analysis), there is a trade-off between social objectives and successful implementation, which needs to be addressed. From a social perspective, support should reach as many of the most disadvantaged smallholder farmers as possible. On the other hand, the provision of grants to smallholders yielded mixed results at best: providing many small grants/guarantees makes it hard to provide the needed TA during implementation. For beneficiaries with limited capacity, support with BP development alone is insufficient: significant hand-holding is required throughout implementation. Furthermore, monitoring many engagements is hard: as seen in the MINAGRI survey of RIF beneficiaries, records and reality do not always match (MINAGRI 2017a). In contrast, agribusinesses are better positioned to implement and benefit sustainably from public support, but they may not meet the social objectives and may already have access to commercial credit.

The solution to the trade-off is to incentivize and partner with agribusinesses that are willing and able to invest in their VCs. This solution has already been identified in the recent programs. In fact, a key lesson learned from the recently ended PSDAG program is that support to farmers/cooperatives is particularly effective when there is also a private partner involved to either secure a market or provide important inputs. Similarly, the PASP program at the BDF switched to the 4P model and has seen significantly increased uptake as a result. This enhanced model is also rolled out in other BDF-funded grant programs to agriculture (PRICE and RDDP).

New DP-funded programs are following a similar approach. The matching grants fund of HortInvest supports agribusiness export and sources more efficiently from farmers alongside their on-farm interventions. IMSAR supports businesses in providing systemic changes that increase the provision of services to farmers. Nguriza Nshore supports banks with technical capacity in agriculture and also facilitates access to finance for businesses that source from farmers.

The experience with the Productive Alliances approach offers inspiration on commercializing farming through links to agribusiness; however, it needs modification to the Rwandan context. It is a flexible programmatic approach, which has proved successful in Latin America over the past few decades and is now being tested on other continents (World Bank Group 2016). It is a vertical trade relationship between farmers and agribusiness. The public sector supports the alliance with an aim to promote inclusion of farmers. In its standard form, a farmer cooperative is the main implementer of the supported BP. This requires strong cooperatives. In the case of Rwanda, a more flexible approach with less reliance on cooperatives is needed. While the program should be accessible to cooperatives that demonstrate strong functioning business operations and a credible BP for upgrading, it is expected that most successful implementers will be agribusiness operators. Therefore, while maintaining the emphasis on strengthening business links between farmers and agribusiness operators, agribusiness will play a more prominent role in implementation compared to most Productive Alliances programs.

4 Theory of Change

The stated objective of the LPSS is to "attract and retain more private investments into the agriculture sector." This fits into the broader PSTA 4 objective, being the "transformation of Rwandan agriculture from a subsistence sector to a knowledge-based value creating sector, that contributes to the national economy and ensures food and nutrition security."

Private sector investment is recognized by PSTA 4 as a precondition for the envisioned transformation and contributes to the four intervention areas of PSTA 4: (a) Innovation and Extension; (b) Productivity and Resilience; (c) Inclusive Markets and Value Addition; (d) Enabling Environment and Responsive Institutions. In effect, the LPSS contributes to the outcome and impact levels of PSTA 4, as shown in Figure 5.

The underlying assumption is that private investment toward PSTA 4 priorities leads to more efficient VCs with more profits for agribusiness players and improved markets for farmers, which in turn increase their incomes. The means by which the public sector will increase private investment are (a) through being more responsive to the needs of the private sector and (b) by engaging in more PPPs.

This strategy groups a series of activities under the two pillars described previously.

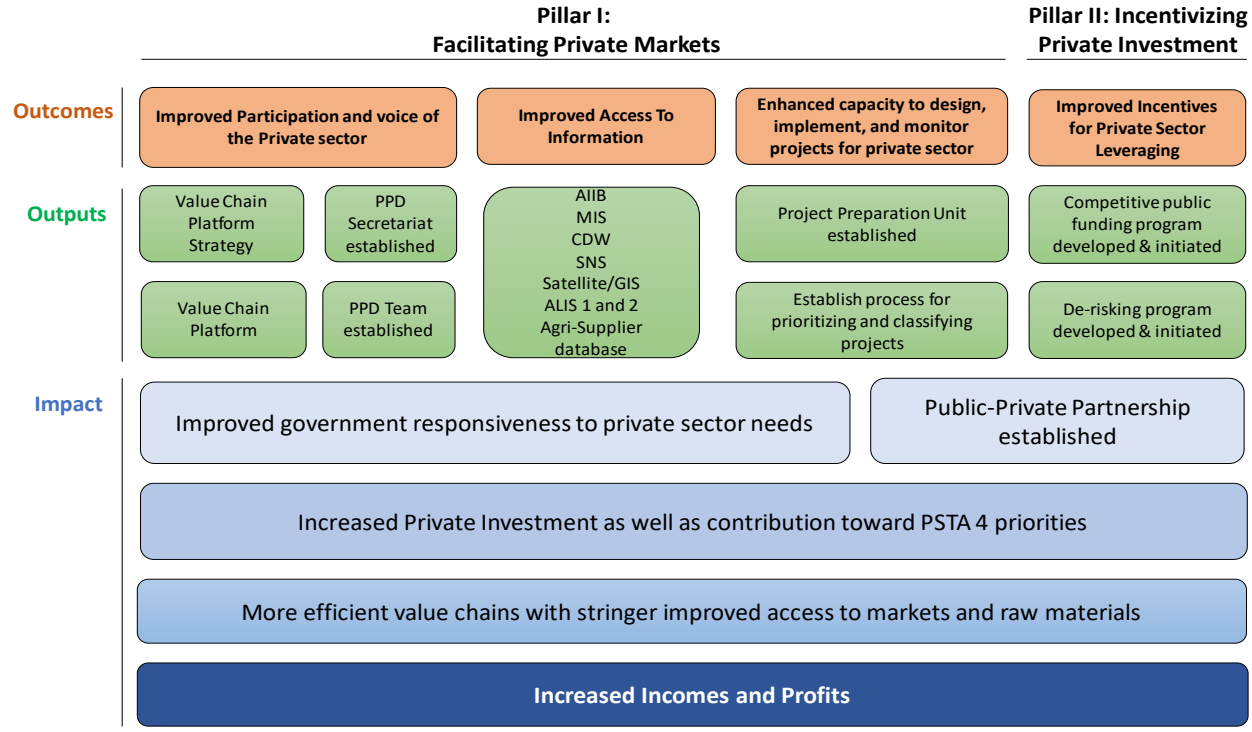
Facilitating private investment. This entails responding to the immediate needs of investors through an improved business environment and improving the government capacity to attract private investment and jointly implement and monitor projects with the private sector.

- **Improved business environment through strengthening the private sector.** The overall priorities are guided by PSTA 4 and ongoing initiatives, yet with proposed adjustments.
- **Strengthened government capacity to formulate and manage PPP investment projects.** While the legal framework for large PPPs is in place with the Law of 2016 and Guidelines of 2018, there is a need for improvement at the implementation level especially monitoring of agri-PPPs which tend to be smaller.
- **Improved stakeholders' access to information in agriculture.** There are several ongoing initiatives in this area, but the timely access to reliable information remains an issue for stakeholders and business operators to inform their business planning as well as to the planning of public projects.

Incentivizing private investment toward national objectives. Providing a framework of competitive public funding that de-risks private sector investments toward national objectives. This framework should be flexible and transparent such that the private sector can tailor its BPs to benefit from the incentives while supporting the implementation of PSTA 4. The program will also be tasked to develop and fund-

raise for a de-risking facility, which will provide credit guarantees, de-risking and promoting financial services to farmers.

Figure 5: Theory of Change Overview



Note: AIIB = ; ALIS = Agricultural Land Information System; CDW = Common Data Warehouse; GIS = Geographic Information System; MIS = Management Information System; PPD = Public Private Dialogue; SNS = Smart Nkunganire System.

5 Pillar 1: Facilitating Private Investment

MINAGRI formulated the National Agribusiness Investment Promotion Strategy (NAIPS) in 2017, which has guided the formulation of PSTA 4 and several initiatives. The overall guidance from NAIPS 2017 is still valid in 2019, and the LPSS will continue moving toward the priorities set out in NAIPS and PSTA 4. However, a few adjustments in interventions will be necessary to achieve the overall goal of increasing private investment.

5.1 Improved Participation and the Voice of the Private Sector

Agri-PPDs are a means for MINAGRI to actively support and participate in dialogues with the private sector at the national and local levels to continuously improve the business environment. They are an essential mechanism for identifying issues at all levels of the sector and tracking progress in addressing them. The National Agriculture Public Private Dialogue Framework in the sector has been piloted by PSF/Rwanda Chamber of Agriculture and Livestock (RCAL) with the assistance of PSDAG. It was intended to have a National Steering Committee through which national issues and recommended resolutions would be discussed by high-level decision makers. The agri-PPD covers issues beyond a single VC and specifically settles issues on the national level. Outcomes from such dialogues inform the sector working group and later the joint sector review forums.

During the implementation of the agri-PPD activities, MINAGRI will assist with the establishment and piloting of National Agri-PPD Champions. For most cases in agriculture, this will be chaired by the Permanent Secretary on the government side and high-level officials on the private sector side. The champions will be tasked to evaluate well-researched issues presented to them by the Agri-PPD Technical Team. Once the piloting of activities has proven to be effective, MINAGRI and the private sector entities will decide to establish a more formalized National Agri-PPD Secretariat which will be fully staffed and act independently.

To sustain agri-PPD mechanisms, both public and private sector actors must recognize the value and benefits of their outcomes. MINAGRI will take a direct role in piloting the additional agri-PPDs whose results will be tracked. In addition, VC programs will be implemented to ensure a common vision, coordination, and trust between stakeholders.

Value chain platforms (VCPs) will bring together relevant actors in a specific agriculture commodity. This will be a useful tool not only to address major constraints for a VC but also to provide a dialogue venue between the public and private sectors. The VCPs will be made up of representatives from farmers, aggregators, processors, other ancillary businesses involved in the VC such as MFIs and transporters, donors, and government entities. Private sector representatives may already be structured under their own associations and federations, but individual business owners not pertaining to any organization may also participate. It is expected that each VCP would develop its own vision, strategy, action plan, budgeting, reporting, audits, and funding source (if needed). This method is intended to address the constraints of the VC in a more organized and coordinated way.

The VCP method will follow the following steps:

(a) Engage all key players in the VC and relevant GoR institutions.

(b) Formalize the VC platform to operate.

(c) Conduct VC analysis to identify bottlenecks from the perspective of the private sector.

(d) Develop and implement the VC upgrading strategy.

(e) Identify issues affecting the VC that need policy reform and escalate those issues to a higher-level mechanism.

(f) Monitor, evaluate, and report on the progress of activities.

5.2 Major Policy Reforms

Rwanda is currently ranked 41st in the world and 2nd in Africa for the overall business environment (World Bank 2017a). This is a result of numerous reforms undertaken over the past several years aimed at creating an enabling environment for businesses. For example, improving the ability to open a business, trading across borders, and increasing transparency.

Specific to agriculture, Rwanda ranks 62nd out of 189 countries, and first in East Africa on 'Enabling the Business of Agriculture' (World Bank 2017b). The country ranks above average in the areas of finance, transport, and water. On the other hand, the country performed below average in the indicators on seed, fertilizer, machinery, markets, and ICT.

For the agriculture sector, the recently enacted NAP lays out an agenda for shifting the role of the government from a 'market actor to a market enabler'. Policy reforms in seed and land policy have recently supported this development.

Prioritizing a few policy reforms at a time increases the possibility that the reforms will be well-designed and appropriately implemented.

The following reform actions could generate substantial impact:

(a) Formulate a specific legal framework for contract farming which minimizes risks and promotes transparency in supply agreements between farmers and agribusinesses.

(b) Establish the Rwanda Agricultural Risk-Sharing Facility to have a facility for leveraging private sector financing and investment.

(c) Assess the current MINAGRI and Rwanda Agriculture Board (RAB) capacities and promote organizational development plans. This should include a plan for ensuring that all projects comply with the guidelines for PPP projects and Environmental and Social Risk Management Guidelines.

(d) Review the current subsidy system for inputs and extension: Twigire Muhinzi and Crop Intensification Program (CIP).

(e) Update Land Use Guidelines in line with the new Land Policy. This will require a Land Profiling Survey which assesses occupant of the land.

(f) Assess and address regulatory bottlenecks limiting access to fertilizer, including fertilizer registration, import, and quality control.

(g) Address regulatory barriers limiting access and use of agricultural machinery by farmers, in particular, requirements for tractor import, registration and inspection, testing, and standards.

The provision of Sanitary and Phytosanitary Standards (SPS) as well as supporting demonstration of better technologies such as green houses, hydroponics, and other small-scale irrigation solutions also needs to be addressed.

5.3 Public Private Partnership Modalities in Rwanda

5.3.1 Concept

PPP refers to a "mechanism for improving the delivery of public goods and services by partnering with the private sector while retaining an active role for the government to ensure that national socioeconomic objectives can be achieved" (FAO 2016). It is characterized as a formalized partnership between public and private sector institutions, addressing agricultural development issues with clearly defined public benefits, in which investments and risks are shared fairly. There is an active role for all parties in various stages of the project life cycle.

PPP models are among the most powerful models to engage the private sector and concern mainly long-term and large investments for which the private sector has critical capabilities but little incentive to engage on their own.

The PPP can encompass on-farm as well as downstream activities focused on efficiencies such as post-harvest interventions to improve the bulking and handling of commodities, processing and packaging, quality standards, and certification costs. Relevant activities include

- Integrated VCs: creating markets for farmers and access to raw materials for off-takers;
- Creation of food security, inclusivity, and equitable sharing;
- Productivity growth for market access and development;
- Research and innovation;
- Improved quality and efficiency at all levels of the chain; and
- Enhanced managerial and business skills for small and medium agriculture enterprises and Farmers 'Organizations.

Larger complex projects of longer duration will be particularly relevant including irrigation schemes, marketplaces, land preparation, and research labs. These projects are costly and complex to develop and thus out of reach for most farmers. Therefore, the strategy considers models for inclusion through the 4P model, which involves the farmers through a partnership with a leading private partner, for instance, through contract farming. The public sector may play a facilitating role and support with direct-financing mechanisms.

5.3.2 Potential Partners and Their Roles

PPPs involve contractual partnership agreements between lead private companies, national or local-level government units, and financing institutions.

Public Sector

For catalyzing private sector investment, the GoR creates an enabling environment for firms to thrive, while enforcing regulation to ensure that social interests and sustainable natural resource management are considered.

Lead Agribusiness Partner

Private resources can be expected to be directed toward investments that have a direct financial return. Public investment shall be complementary and directed toward addressing market failure. This can be in the form of basic R&D, provision of hard and soft infrastructure, VC integration and upgrading, access to markets, provision of an enabling environment, and attracting of further investments.

Cooperative

Cooperatives are vital private operators and play a crucial role as the intermediary between farmers and off-takers, ensuring transparent intermediation between farmers and private partners.

Financial Institution

Financing can be provided by the government through credit guarantees from the de-risking facility.

5.3.3 Current Framework under the PPP Law

Based on the PPP Law of 2016 as a legal framework, the GoR will partner with the private sector to accelerate, de-risk, and reduce transaction costs of the investment until it proves profitable and sustainable. While not included as a sector in the PPP Law, agricultural projects shall be subject to PPP determined by an Order of the Prime Minister.

Within this framework, MINAGRI would be the Contracting Authority, responsible for identifying projects developing them either internally or by hiring consultants. The Contracting Authority will conduct pre-feasibility and feasibility studies for PPP projects, procure a private partner through the competitive procurement procedure, enter into PPP agreements, and implement the PPP projects. The Contracting Authority shall appoint or nominate a project officer who will play a central role in the entire PPP project development process.

As provided in the PPP guidelines, the roles and responsibilities of the Contracting Authority (MINAGRI) mainly include the following:

(a) To identify a PPP project, prepare a pre-feasibility study, and submit it to the RDB for preliminary screening;

(b) To obtain approval on the Project Profile Document (which includes the project pre-feasibility study) from the Project Investment Committee (PIC) for conducting a full feasibility study according to article 4.4.1 of the National Investment Policy, April 2017;

(c) To undertake the project feasibility study and submit it to the PPP Steering Committee (SC); One copy must also be submitted to the RDB for recommendations from the Technical Committee on the financial feasibility, PPP ability of the project, and assessment of fiscal commitment and contingent liability by the Ministry of Finance and Economic Planning (MINECOFIN);

(d) To obtain recommendations on the economic viability and alignment with investment priorities from the PIC in accordance with article 4.4 of the National Investment Policy, April 2017;

(e) To submit the recommendations of the RDB, MINECOFIN, and PIC and obtain approval on the project feasibility study from the PPP SC in accordance with Article 14 of the PPP Law;

(f) To prepare the project bidding documents including draft PPP agreements;

(g) To obtain approval from the RDB on the bidding documents;

(h) To invite requests for qualification (RFQs), evaluate the RFQ documents, and prepare a list of shortlisted bidders or preferred bidders for approval from the PPP SC; and

(i) To invite requests for proposals (RFPs) from shortlisted bidders, receive proposals, and identify the preferred bidder.

Appraisal Criteria for PPP Projects

For any PPP projects, there will be very particular considerations depending on the specific context and the nature of the project. However, given past experience with public investment, there are certain key consideration guiding the application of the PPP modality:

(a) The project shall address a market failure as outlined in the Criteria for Public Engagement versus Fully Private, namely,

  (i) The activity has a positive economic return: desirability,

  (ii) The activity is undersupplied by the private sector without public investment: avoid crowding out,

  (iii) The private sector has a relevant comparative advantage: public sector should not invest alone, and

  (iv) The public investment can have a catalyzing effect on private investment.

(b) The PPP modality is suitable for larger complex projects and requires substantial institutional resources to develop and manage. For smaller projects in agriculture, consider existing programs that leverage private sector investment.

(c) A PPP in agribusiness shall always involve a private sector partner with an established market or significant track record of competing for providing the products or services in question. Mitigating operational risk from production to the consumer is the most prominent success factor for financial sustainability, and the private sector is specialized in operating market-driven companies. For the same reason, PPPs where the GoR is directly responsible for operating the business and selling to the market shall be avoided.

(d) The private partner shall have a significant stake in the commercial outcome of the project and carry risk throughout the project cycle. Because the critical capability of the private sector is to plan and operate a profitable business, it is important that they are incentivized to maximize the profit of the operation rather than generating a profit outside of the PPP vehicle. For example, projects where the private party is merely a supplier with a stake in the design phase shall be avoided.

(e) Emphasis is put on Environmental and Social Impact Assessment (ESIA); Rwanda has a terrain vulnerable to numerous environmental risks that can be an effect of the implementation of any proposed project. Therefore, emphasis needs to be put on sound environmental management by different government institutions during the implementation of private sector-led projects. Moreover, there are potential social risks associated with implementation of agriculture projects, especially if they involve resettlement. Rwanda has comprehensive Environmental and Social Management Guidelines (ESMG) throughout the project cycle. The specific check lists are provided in Annex 1.

The process for appraising the PPP projects is given by the PPP Guidelines of 2018 under the PPP Law of 2016, which stipulates a screening tool for the RDB. The screening tool evaluates any project against six areas: (a) strategic suitability, (b) preliminary feasibility, (c) risk assessment, (d) PPP ability, (e) fiscal affordability, and (f) institutional ability.

The inputs to the screening tool are based on a pre-feasibility study which needs to present the following:

(a) A concise description of the service needs and project objectives

(b) Technical viability, key challenges, and key technologies and their viability

(c) Initial E&S assessment

(d) Investment requirements, including preliminary cost plan

(e) Revenue forecast, including sources and major sensitivities

(f) Land requirements, status, timing, and cost

(g) Key risks, mitigation, and management in a risk allocation matrix

(h) A preliminary estimate of funding available both for the project and the procurement process

(i) An outline of the key benefits of the project and the primary beneficiaries

(j) An economic cost-benefit assessment

(k) Financial viability, including sensitivities and a basic financial model

(l) A preliminary value for money (VFM) analysis

(m) Action plan to bring the project to market, including costs and key government responsibilities such as land acquisition, and so on

(n) A list of stakeholders that have to be consulted both within the Contracting Authority and from other government departments.

Typical Project Cycle

The project cycle typically follows seven stages:

Stage 1: Project identification. The first stage in the project cycle is the identification of projects. It shows an initial review of the different project ideas from identification of the need of the project to the analysis of stakeholders.

Stage 2: Project formulation. The second stage in the cycle develops the initial project ideas from the project identification stage into more detailed proposals.

Stage 3: Project preparation:

- The feasibility study is an analysis used in measuring the ability and likelihood to complete a project successfully accounting for economic, technological, legal, and scheduling factors.
- The preliminary design involves preparation of the initial outlook of the project. It considers the time, costs, and labor that are needed to execute a project.

- The detailed design shows the project's budget, the time frame for its implementation, and all the steps to be undertaken to execute the project.

Stage 4: Appraisal. The objective is to assess different projects from social, economic, technical, institutional, environmental, political, sustainability, and risk perspectives. A social cost-benefit analysis is used in this stage to determine the attractiveness of a proposed investment in terms of the welfare of society as a whole.

Stage 5: Decision-making and negotiations. At this stage, the PPP partner is to be selected and agreement is to be negotiated.

Stage 6: Project implementation. This is the stage when the project is implemented. A project implementation plan is formulated setting clear expectations, roles, and responsibilities for all the members on the implementing team.

Stage 7: Monitoring and evaluation: Monitoring and evaluation (M&E) is an integral stage in the project cycle. Monitoring is an ongoing process during project implementation while evaluation occurs periodically, typically once a project has been completed.

Annex 3 describes more details on PPP projects and their current implementation modalities in Rwanda and the shared international experience.

5.4 Enhanced Government Capacity to Develop and Manage Projects with the Private Sector

Designing projects well and choosing the right private sector partner are essential for the successful implementation of this strategy:

- The main objective is to use public financing most efficiently to avoid crowding out private players where they can or already are investing.
- Second, public investment in the LPSS is designed to catalyze the private sector and ensure uptake of further investment. This also means that the public sector ensures the public investment is rather driven by a need of stakeholders in the agribusiness system than a public sector desire to supply.
- Finally, it is crucial to ensure that the LPSS is inclusive of farmers and local communities rather than being merely benefiting business. The LPSS must be designed in a manner that agribusiness actively creates, rather than deprives, opportunities for farmers.

Appraisal and selection criteria depend on the type and size of the project:

- **Fully private projects.** These focus on capturing key data in which investors are interested: market information, cost of production, agroclimatic conditions, fiscal incentives, and potential partners in Rwanda. A project can also be developed jointly in collaboration with the private partner in need of investment. MINAGRI will highlight relevant opportunities to the RDB. In other cases, the NAEB can be responsible for developing the project together with the domestic private partner in search of foreign investors. The RDB currently runs 150 companies in a wider pipeline.

- **Investor targeting.** A number of potential investors may be targeted that value Rwanda's stability. Market-driven investors will be looking to serve the regional market from Rwanda with Rwanda serving as the most efficient location in the region. In addition, investors will also be looking to serve international markets, primarily with products that have good growing conditions in Rwanda and are of sufficiently high value to offset the high transport costs.

Rwanda's limited size and overall consumption mean a limited market opportunity, a key detractor from private investment. To expand the market potential for Rwandan agribusinesses and maximize private sector funding, VCs that focus on the larger export markets should be prioritized. To complement the traditional exports of coffee and tea, recent developments have revealed a comparative advantage in horticultural VCs. Relative to this, facilitating reduced trade barriers and bringing down export logistics costs are essential to help improve competitiveness.

Large PPP projects of over US$10 million will be developed under the PPP Law and subsidiary guidelines. The selection criteria under this law apply within the framework, and MINAGRI and implementing agencies play the role as the 'Contracting Authority' responsible for identifying projects in their sectors and developing them either internally or by hiring consultants. The Contracting Authority will conduct pre-feasibility and feasibility studies for PPP projects, procure a private partner through the competitive procurement procedure, enter into PPP agreements, and implement the PPP projects. Typical projects covered under this procedure are investment and management of large irrigation facilities, market infrastructure, large research facilities, and large land concessions.

Smaller private sector projects involving public assets or finances. These projects are de facto PPPs but may not be covered under the current PPP Law. These projects include businesses with concessions of public assets (for example, land) or businesses that receive ongoing public support. The existing guidelines for the ESIA also apply to these projects. However, it is important to ensure that the guidelines are enforced during implementation of the projects.

5.4.1. Appraisal Criteria of Public Investment in Projects with the Private Sector

Selecting the Type of Project for Its Capacity to Generate Private Investment

As a first principle, to achieve the ambitious targets for private sector investment, a general position of 'private sector first' must be adopted. As opposed to looking for instances to involve the private sector, the private sector should be explicitly considered from the onset in any public intervention or investment. This is a core principle of the LPSS framework. If in any investment, intervention, or development objective the private sector is not included, a clear rationale should be provided.

The following section describes criteria which may be reasons for excluding the private sector:

- **Certain public goods.** In certain circumstances, the government may prefer that a public good is left to the government. While cases are not presently obvious in agriculture, examples in other sectors are basic health insurance or defense and security.
- **No financial viability.** For the private sector to be involved and actively investing, there must ultimately be a business case—the net present value (NPV) that is calculated as the discounted sum of all cash flows related to an investment over the project horizon must be positive. The NPV can be influenced by support of the public sector, but in some cases, it may be obvious from the onset that there is no viable positive NPV. Such cases will typically

fall under sizable infrastructure investments, such as large market infrastructure, universities, or the construction of main roads. In these cases, the public sector may need to contribute the investment, although the private sector can be contracted to manage or operate the project.

With the notable exception of the above examples, private sector engagement should be considered by the public sector in four phases:

(a) **Assess existing private sector activity.** A first phase of reviewing private sector engagement is to identify existing private sector actors and determining the extent to which the development need is already met. If the private sector is adequately meeting the development objective, little intervention is required by the public sector.

(b) **Determine constraints to investing.** If the development need is not satisfied or is satisfied insufficiently by the private sector, the second phase is to assess the reasons for limited private sector investments. This should be reviewed in discussion with current and potential private actors and investors. Note that challenges may differ from one actor to another.

(c) **Pair relevant private sector support.** The public sector can resort to appropriate tools according to the identified constraints, with examples listed below (non-exhaustive).

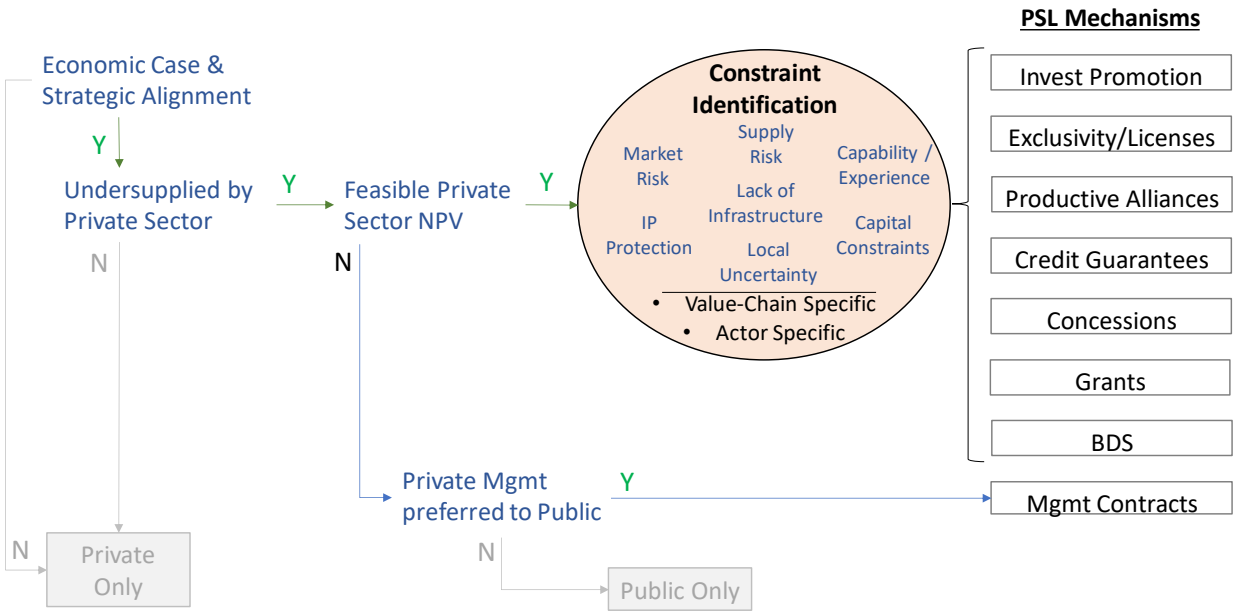
Figure 6: Constraints and Support

Note: IP = Intellectual Property.

(d) **Formalize support.** Based on the level of support required by relevant private sector actors, different agreements or structures will be appropriate. Any project that involves public assets or public finances shall be regarded as a PPP. For large formal PPPs, there is a standard procedure under the existing PPP Guidelines. Under the PPP Guidelines, the Contracting Authority (that is, MINAGRI and agencies) is responsible for identifying relevant PPP projects and producing pre-feasibility studies containing a comprehensive analysis of technical aspects as well as a cost-benefit assessment.[27] This is to be screened by the RDB and submitted to the Public Investment Committee for approval and subsequent formulation of detailed feasibility study. However, not all de facto PPPs are covered by this procedure. For private sector leveraging of a broader range of projects, it is advisable to use a simplified procedure which limits crowding out the private sector as discussed in the next section.

[27] RDB, 2018, PPP Guidelines. The list of required content or the pre-feasiblity study is in Section 3.1.2 and contains 15 items.

Figure 7: Decision-Making Process



5.4.2. Mechanism to Evaluate the Private Sector Partner

The procurement mechanism for large projects under the PPP Law outlined in the PPP Guidelines, Section 3.3, will be applied. Following these processes and mechanisms will ensure the right choice of the private partner to follow a successful implementation plan while mitigating financial and E&S risks associated with complex PPP projects.

However, for the projects that do not follow the formal process of the PPP Law, procurement will be undertaken at the program level. By experience, the four core success factors of selecting a private partner for these cases are as follows:

(a) **Capability of the partner.** A PPP in agribusiness shall always involve a private sector partner with an established market or significant track-record in competing for providing the products or services in question. Furthermore, a capable private partner should have a reasonable financial size in proportion to the project and the technical capacity should not be fully embedded with individuals in the firm. Mitigating operational risks from production to reaching the consumer is the most prominent success factor for financial sustainability. As the private sector is specialized in operating market-driven companies, PPPs where the GoR is directly responsible for operating the business and selling to the market shall be avoided.

(b) **Suitable partner incentives.** The private partner shall have a significant stake in the commercial outcome of the project and carry risk throughout the project cycle. Since the critical capability of the private sector is to plan and operate a profitable business, it is important to incentivize them to maximize profit of the operation rather than generating benefits outside of the PPP vehicle. For example, if the private partner's main interest is to supply to the project rather than getting a return from the special purpose vehicle, there is significant risk that decision-making will be driven by the interest of the supplier rather than optimizing operations of the PPP project.

(c) **Experiences of the partners.** Private partners should be prioritized in PPPs if they already have relevant business operations in the investment field. These private actors are expected to manage a profitable business with and without current public support. Thus, the likelihood of success in new PPPs are higher when partnering with these companies compared with newcomers who have limited experience in the respective business. In addition, bringing new players into the market through PPPs could discourage the business of existing private actors who have already invested and operated at their own risk, thereby essentially crowding out their investment.

(d) As part of the PPP design, the participating private sector entity should have the capacity to develop and disclose their environmental and social management system (ESMS), which will be independently assessed as part of the eligibility screening to participate in a PPP investment. Such a system must outline management processes and procedures that allow an organization to analyze, control, and reduce the environmental impact of its activities, products, and services as well as allow them to operate with greater efficiency in compliance with national E&S laws and regulations.

5.5 Contractual Requirements to Safeguard against E&S Risk

All PPPs must follow the process and guidelines established in the Environmental and Social Implementation Manual (ESIM) published by MINAGRI in 2017.[28] This is a comprehensive set of guidelines in place to mitigate the risk of adverse impacts on communities and the environment. In brief, the contractual requirement is a certificate of approval (CoA) and subsequent compliance with an Environmental Management and Monitoring Plan during implementation. The CoA is granted by the RDB, and the Rwanda Environment Management Authority (REMA) inspects projects based on the Environmental Management and Monitoring Plan.

Under the guidelines, it is mandatory for the implementer to submit a project brief for the screening of potential E&S risks and evaluating project design alternatives (the screening checklist is attached in the Annex).[29] In the process of preparing the project brief, the developer shall take note of the guidelines that may potentially be relevant for the project. The ESIM contains specific guidelines for

(a) Involuntary resettlement and displacement,

(b) Use of agro-chemicals,

(c) Natural resources management,

(d) Grievance system,

(e) Gender mainstreaming, and

(f) Procedures for the public hearing process.

The RDB, upon undertaking an Environmental Impact Review (EIR) of the project brief, determines whether the project shall be subject to a full ESIA or a partial ESIA, or a CoA may be issued. The decision is based on the Ministerial Order N° 001/2018 OF 25/04/2018 Determining the List of Works, Activities

[28] MINAGRI, 2017, Environmental and Social Management Guidelines for Agriculture Projects.
[29] Guidelines for project brief are in Annex 2 of the ESIM.

and Projects Subject to an Environmental Impact Assessment. Project types subject to full and partial ESIA requirement are listed in Annexes 1 and 2 of the Ministerial Order, respectively.

If an ESIA is required, the developer shall undertake scoping in consultation with ESIA professionals and consultations with key stakeholders and public hearings.

The ESIA to be submitted to the RDB shall follow National Environmental Impact Assessment (EIA) guidelines. In the evaluation, the RDB consults public agencies including MINAGRI and additional agencies where relevant. The ESIA may be approved subject to comments and subsequently the CoA is granted.

During implementation, the developer is responsible for self-monitoring and keeping records based on an Environmental Management Plan (EMP) and Environmental Monitoring Plan. Self-monitoring of the developer is then subject to inspection from REMA. Guidelines for these are in Annex 6 of the ESIM.

5.5.1 Institutional Upgrading in Project Preparation and Monitoring

Rwanda has a very thorough process for formulating and approving public investment projects with the MINECOFIN Guidelines for producing feasibility studies of 2018, PPP Guidelines, and the ESIM. However, preparing projects with suitable technical, financial, and economic analysis is resource intensive while MINAGRI and concerning agencies have limited resources available:

- **MINAGRI** has on its ministerial structure one planning and budgeting specialist and one agriculture finance/agribusiness specialist.
- **RAB** has several sector specialists in the VCs and key topics such as irrigation, yet limited focus on project preparation.
- **NAEB** has more people involved in project preparation in its new strategy. The office of the chief executive officer (CEO) has both a resource mobilization specialist and a strategic investment specialist alongside technical specialists to feed information to projects. Building on the existing staff, the focus on capacity building will be essential, especially on how the private sector can contribute to the insufficient finance and technical capability in relevant sectors.

The RDB's Investment Group can provide support in this regard where monthly meetings are currently held between the concerned institutions at the technical level. However, RDB resources are also by and large limited and thus mainly focused on larger investment projects. For example, the PPP department which covers all possible sectors currently only has two staff as well as one investment analyst for the agriculture sector. The main need stated is a better sense of project prioritization. With more focused agendas, it is expected that MINAGRI can receive increased support from the RDB in project preparation.

The number of projects could be increased significantly with improved quality of project design through upgrading of core capacity. This initiative could be a cost-effective lever to avoid potential investments and project failures.

To enhance the project development capacity, the strategy aims at the following:

(a) **There is a need for additional support from the executive branch.** A project preparation unit should be established that can act as a national center of excellence for project

preparation and project monitoring. This unit can support MINAGRI and relevant agencies in conducting pre-feasibility studies and detailed project preparation for larger projects.

(b) **At any given time, MINAGRI should have three priority projects known to everyone in the organization and in other government institutions.** This will help focus efforts of organizations on key priority projects and may lead to more transparency and participation from staff and relevant stakeholders, particularly the RDB, which requires clear priorities in project development.

(c) **Reorient RAB and MINAGRI structures toward enhanced planning and project preparation capacity, as already planned in the NAEB.** With public institutions moving from market actor to market enabler, more resources are expected to be available for project preparation.

(d) **Establish a transparent and flexible incentive framework aligned to the government's strategic objectives, in which the private sector and future investors can plan their BPs.** This will incentivize the private sector/future investors to prepare their own projects. For example, smaller agri-PPPs can be handled through programs that provide TA and financing to the private sector.

5.5.2 Monitoring Systems for PPPs

The monitoring system of PPPs will be carried out as follows:

(a) **At a central level, projects that receive support through public programs shall be recorded in the CDW or MIS**. The ESIA shall be available to fund institutions together with records of inspection.

(b) **Use the agri-PPD mechanism to monitor agri-PPPs during implementation.** The agri-PPD team and subsequent secretariat shall systematically record the information on E&S issues raised by the local communities. Under the current ESIM, agri-PPPs are self-monitored by the developer during implementation, and inspection is undertaken by REMA. However, for projects where a full ESIA is not required, such as purely private projects or for smaller agriculture projects, there can still be negative impacts on the communities. Systematic information collection and dialogue around issues raised by the communities will enhance transparency and offer additional safeguards.

(c) **Provide capacity building to districts in monitoring E&S risk.** Whereas inspection is currently done by REMA, districts will be well placed to monitor the impacts in local areas with additional capacity. Capacity building can be provided by the Public Preparation Unit.

5.5.3 Access to Information in the Agribusiness System

The main service that investors expect from the government is access to information which can feed into their business planning.

More broadly, all actors in the agribusiness system can benefit from improved information access. Timely accessibility to information would allow market actors to improve business operations generally. Furthermore, FIs need easy and quick access to information about borrowers to effectively and efficiently provide financial services.

Several initiatives are under development but currently no investors or planners have easy access to information. There is a need to streamline the processes of information collection and dissemination in integrated systems to efficiently feed public ICT platforms with updated data.

The National ICT4Ag Strategy 2016–2020 lays out the broad framework for collecting and disseminating information. In 2017, MINAGRI formulated the Smart Agriculture Information System project which informed the formulation of PSTA 4. The SAIS project was approved by the PIC but was never established. Instead, the SAIS initiatives are rolled out separately.

By now, there is a need to take stock of the various initiatives and consolidate the results to ensure that data are collected, managed, and exploited to their full potential. This furthermore includes updating established systems with relevant available information.

5.5.4 Major Planned Information Systems

The following systems will be established or enhanced to permit the private sector access to information at affordable cost:

(a) **CDW.** This initiative aims at creating an integrated platform for data collection and sharing. The CDW is the centerpiece in the planned data structure combining data from various sources; its groundwork is currently under development. The subsequent activity is to ensure that the CDW is properly interlinked with other relevant systems, and rules and procedures for data sharing are established.

- **Formulate data sharing policy.** As a custodian of the sector, MINAGRI shall be given access to all raw data collected in agriculture. This includes census and survey data, any data collected by private companies with public support, as well as raw data from any survey from the NISR. Second, the data sharing policy shall stipulate by whom, when, and how CDW data can be accessed considering data protection.

  The integration of the CDW with other data systems is crucial for an effective flow of information from data collection systems to accessible platforms.

- **Improve the data collection for the MIS**

  The MIS provides information on projects and the agriculture economy on the MINAGRI website. This is a valuable source of information for public planners and business actors who look for the information: for example, on market size, prices, and production areas of certain crops. However, data collection procedures currently rely, to a large extent, on manual data entry from involved agencies and districts.

- **Link the MIS to the CDW.** The MIS needs to be fed more efficiently to inform the CDW which collects information from other sources.
- **Review the data input procedures to the MIS and explore options for more efficient data input.** A significant amount of publicly available data is not currently stored in the MIS. For example, the raw data of the SAS, a valuable source of information, is not currently displayed in the MIS.
- **Continue to improve the user experience of the MIS.** It is relevant to revise the system based on feedback from users.

(b) **Link Smart Nkunganire System data to other platforms**

The system is owned by BK Tech-house and built around the CIP through an MoU with RAB. It collects key information from farmers: national ID, Land Information System (LIS), use of subsidized seeds and fertilizers, and land profiling information collected by sector agronomists and promoters of farmers.

These data links are highly valuable for many players in the agricultural sector. Especially for planning purposes, MINAGRI can use the information tracking the location of farmers as well as use of inputs. Moreover, the link between the national ID system and LIS can be an important input to ALIS 2.

- **Link SNS data to the CDW, MIS, and ALIS.** While the system is owned by a private company, data are collected with public support and through an MoU giving MINAGRI/RAB access to the data.
- **Conduct land profiling and allow for registration as land user rather than just landowner.** This is at the core of defining who can access subsidized inputs. Currently, registration requires ownership of the land farmed whereas many farmers do not own the land they farm. This has implications on input subsidy programs.

(c) **Use satellite data to follow the season**

The European Union (EU) Sentinel satellite captures public satellite imagery of Rwanda approximately every 10 days. In recent years, machine learning algorithms have been used to interpret the satellite imagery such that planting and harvesting patterns can be tracked during the season. It can also be used by aggregators and processors to determine where certain crops are being produced. The same technology can be used for tracking the development of infrastructure, for example, feeder roads.

While the technology is developed, it can only be applied to Rwanda if the algorithm is fed by data points on what is planted as well as what are corresponding yields. Two initiatives are under way to put the technology into practice for Rwanda: Agri-TAF is collecting survey information from the ground and RTI Grand Challenge is collecting data with drone information enhanced with other available data points. The main priority now is to improve the applicability of the systems and put them into practice.

- Finalize the current pilots in collaboration with the implementers (Agri-TAF and RTI) and review the results.
- Agree on how this information can continuously provide valuable information to stakeholders in the sector.

(d) **Update ALIS 1 and establish ALIS 2**

ALIS 1 is a database of all public-owned land plots which is accessible on the MINAGRI website. The concept is to make information on plots available for investors and provide other relevant information. The system has a link to the LIS in the Land Bureau.

- Update information in ALIS 1.

- ALIS 2 shall map private land to facilitate the market for land purchase and land lease.

(e) **Digitalization of Agricultural VCs and Information on ASMEs and Cooperatives**

The inclusion of farmers, ASMEs, and cooperatives is limited due to the high level of informality and lack of readily available information on their track-record for formal off-takers and FIs. As discussed previously, off-takers and other investors need reliable suppliers and businesses to partner with. There is a list of cooperatives available from districts and the Rwanda Cooperative Agency (RCA). The RDB also has a list of 150 ASMEs that are looking for equity investors. Furthermore, the Credit Bureau keeps information on repayment of past loans. However, the information is scattered, insufficient, and not readily available for off-takers and FIs that want to engage with the farming sector.

There are ongoing initiatives to digitalize agricultural cooperatives from Techno-Serve in the coffee sector as well as by the RCCP. These efforts can be scaled up at a national level and include financial sector information as well. The following is proposed:

- As a first step, create a directory of agribusinesses with sourcing agreements from suppliers/farmers, the nature of the agreement (duration of relationship, informal agreement, supply agreement, outgrower scheme, any pre-financing, and so on), the quantity supplied from each supplier, and consistency and satisfaction rate of the supply according to the off-taker.
- Second, update the directory of agricultural producers with self-reported data of supply and cash flow. This can serve as the first point of credit analysis for FIs considering financing agri-enterprises.
- Third, integrate information from the financial sector. The BNR collects data from banks, and the quality of the data could be improved if it includes information related to clients, disaggregated by gender, products, tenor of financing, and so on. The BNR's electronic data warehouse project can help improve the quality of data at their origins and their timely availability. It is also important that the data are made publicly available online.[30]
- Fourth, link the register of supplier organizations to information on members including National ID register and the National Land Register. In general, linking the Land Register to the National ID system would make it easier for banks to lend to farmers.[31] The link already exists in the Smart Nkunganire System and could be expanded more broadly to inform land use guidelines, potential off-takers, and FIs with interest in engaging producers.

(f) **Publish Agriculture Investor Information System**

Surveys of investors have revealed that new and potential investors need seamless access to information both about the general business environment as well as the process during investment.[32] This holds true especially in agriculture since the investment often involves

[30] This is already proposed under the BNR draft National Financial Inclusion Strategy 2019–2024.
[31] According to an interviewed stakeholder.
[32] For example, UNCTAD, 2012, "An Investment Guide to Rwanda"; MINICOM, 2014, Rwanda Industrial Survey 2014; RDB, 2018, "Investor Perception Survey 2017."

procedures with E&S impact and the high level of informality in the sector. The RDB has investment facilitators who the investor can interact with. However, it is more efficient if the investor can access the desired information online.

Therefore, NAIPS 2017 proposed the development of an Investor Handbook. Subsequently, it was decided that an information system would be more appropriate, which is why the RDB is currently developing AIIB. This system will be an online handbook to guide potential investors through the investment process and will link them to key data sources to support business planning of potential investors. The system now needs to be finalized and published and preferably interlinked with MINAGRI's systems. MINAGRI shall engage the RDB on the AIIB and support the finalization and publication of the system.

6 Pillar 2: Incentivizing Private Investment

A framework should be established for competitive public funding that de-risks private sector investment toward national objectives. The public incentive framework shall be flexible and transparent enabling the private sector to tailor its BPs to benefit from the incentives while supporting implementation of PSTA 4. The situation analysis identified several needs and challenges in the agribusiness sector, which are also reflected in core national strategies.

6.1 Establishment of a De-Risking Facility

The program will be implemented through competition between PPPs to implement PSTA 4. Furthermore, the program will design ways of de-risking the agriculture sector by providing skills required to both loan suppliers and recipients through providing TA, creating risk-sharing facilities, and strengthening agriculture insurance.

TA in skill building will address weaknesses of FIs with respect to evaluating and monitoring agricultural transactions and projects. In addition, financial skills will be built with loan recipients. These two activities are expected to contribute to a reduction of incidences of loan defaults currently associated with the sector.

The Risk-Sharing Facility will deal with the challenges associated with agricultural financing, namely the issues of inadequate collateral and high interest rates, by bringing on board matching grants and credit guarantees.

Agricultural risk insurance is a critical risk-mitigating tool for smallholder producers and agribusiness owners. The government has already commenced piloting agriculture insurance, and the strategy will support its expansion.

To fund various businesses, a competitive approach will be taken to incentivize the private sector in accordance with PSTA 4 priorities. The types of projects to be supported are determined according to criteria of appraising PPP projects to ensure the public investment catalyzes private sector investment rather than causing crowding out of investment and to observe proper E&S procedures.

The approach will facilitate links between farmers and agribusiness players. The support will be provided to producers, off-takers, and service providers as described in Table 4.

Table 4: Types of Funded BPs

Type of BP	Characteristics	Flow of Support	Applicable Requirements
Type 1: Producer-Driven BP	Smallholder farmers have a supply agreement with an agribusiness buyer. Public sector facilitates and provides direct financing.	Funds and support are primarily channeled directly to the famers/cooperative in the form of public provision, matching grants, and TA	• Supply agreement (necessary) • Producer targeting • Buyer assessment
Type 2: Off-Taker-Driven BP	An off-taker (nucleus farm, aggregator, exporter, or processor) is facilitated to invest in their smallholder suppliers.	Matching grants and TA are provided to the agribusiness that implements the BP.	• Supply agreement and preferably outgrower scheme (conditional) • Producer targeting • Buyer assessment

Type of BP	Characteristics	Flow of Support	Applicable Requirements
Type 3: Service Provider-Driven BP	A provider of services or inputs is facilitated to improve farmer productivity and sustainability.	Matching grants and TA are supplied to the agribusiness. Demand can be stimulated through subsidies, that is, voucher schemes.	• Supplier assessment • Farmer targeting

Targeting BP Promoters and Beneficiaries

Off-taker targeting. Off-takers include traders, exporters, processors, wholesalers, supermarkets, specialized distributors, restaurant chains and hotels, and the public sector. A nucleus farm can also qualify as an off-taker of smallholder produce.

The key function of the off-takers is to compete in the end market, thereby ensuring they have an efficient supply chain. The key parameters to demonstrate are the capability to compete as well as aligned incentives to ensure project success. Hence, the overall criteria for off-takers are as follows:

(a) Demonstrate financial sustainability of the BP and their overall business.

(b) Demonstrate commitment to building a sustainable relationship with suppliers.

(c) Show a financial stake in profitability of the project (aligned incentives).

(d) Export-oriented BPs will be favored.

(e) Off-takers shall be required to report on the quantity, revenue, and quality of produce sourced from producers under the agreement.

Service provider targeting. Service providers engage in extension services, research, BDS, logistics, aggregation, standards/SPS assurer/certifier, veterinary services, marketing, management, equipment supply/repair, laboratory services, agro-processing, and other relevant agriculture-related services. Notably, gender and youth mainstreaming will be emphasized in every project seeking funding from this scheme.

(a) Specificity in BPs is the most important aspect. They should demonstrate innovation, impact, scalability, and sustainability;

(b) Competence in providing relevant services or goods is furthermore essential.

Producer targeting. Producers must equally demonstrate the capacity to be able to succeed on their side. The BP should show inclusion of as many smallholder farmers as possible, with preference given to women and youth. Support to aggregation points (hubs), supplied by smallholder farmers and mostly managed by cooperatives, will be channeled indirectly or in the form of TA. The following criteria will be considered in any requested support:

(a) The hub must have a supply agreement with an agribusiness buyer, meeting the criteria for off-takers or service providers.

(b) Businesses promoting exports or recapturing the domestic market will be favored.

(c) For commodities of the same type, land size will be an added advantage.

(d) The hub should have basic governance and management systems.

(e) Past contract compliance needs to be ensured.

Incentives Provided under the Scheme

The proposed incentives to be provided will vary with the type of the BPs. Table 5, Table 6, and Table 7 present how support will be granted.

Type 1: Producer-Driven BP

Table 5: Areas of Support for Producer Driven BPs

Type of BP	Producers	Off-taker	Suppliers
Grants for capacity building • Management and BDS • Market studies • Trade promotion • Standards assurance • Market information systems • R&D • External communication • Advisory for accessing loans	100%	None	None
Working capital		Consider TA support to access loan guarantee under AGF or Export Growth Facility (BRD).	None
Matching Grant for Investment in • Equipment	50%, no ceiling	30% if relevant for partner producer, ceiling of US$3,000	None
• Agroforestry (including coffee trees and tea bushes)	50%, no ceiling	None	None
Land husbandry/terraces	100% for construction. 50% on lime and manure for 3 years	None	None
Irrigation	50%	None	None
Fixed assets (buildings and facilities)	Maximum 30%, capped at US$5,000. There is a cap to avoid crowding out as large fixed assets should be FI financed.	None	None

Type 2: Off-taker Driven BP

An off-taker (nucleus farm, aggregator, exporter, or processor) is facilitated to invest in its smallholder suppliers. Matching grants and TA are provided to the agribusiness that implements the BP. Access to the funds is conditional on a supply agreement targeting the producers while assessing the buyer.

Table 6: Areas of Support for Off-taker Driven BPs

Type of BP	Producers[a]	Off-taker[b]	Service Provider[c]
Grants for capacity building • Management and BDS • Market studies • Trade promotion • Standards assurance	100%	50%	None

Type of BP	Producers[a]	Off-taker[b]	Service Provider[c]
• Market information systems • R&D • External communication • Advisory for accessing loans			
Working capital including inputs	Inputs may be accessed through off-takers' working capital	Loan guarantee under AGF or Export Growth Facility and later Risk-Sharing Facility	Loan guarantee under AGF or Export Growth Facility and later Risk-Sharing Facility
Matching grant for investment in: • Equipment	50%, no ceiling	30%	None
• Agroforestry (including coffee trees and tea bushes)	30%	None	None
• Land husbandry/terraces	100% for construction	None	None
• Irrigation	50%	None	None
Fixed assets (buildings and facilities)	Loan guarantee under AGF or Export Growth Facility and later Risk-Sharing Facility	Loan guarantee under AGF or Export Growth Facility and later Risk-Sharing Facility	None

Note: a. The producer can also be an off-taker as he/she could be supplying his/her produce; b. A buyer of the produce is not involved in the production: c. A hired third party to render a service like training producers or off-takers.

Type 3: Service Provider-Driven Business Models

A provider of services or inputs is facilitated to improve productivity and sustainability for farmers and VC actors. Beneficiaries can be private businesses, civil society organizations, or universities. Eligible applicants are suppliers that have agreements with farmers/agribusinesses to supply the relevant services.

Within those criteria, the scope of supported areas is wide: Seed labs and soil testing, tailored extension services, demand-driven research and R&D, information systems for farmers (markets, weather, and advisory), demonstration plots, BDS/cooperative management, innovative service solutions for aggregation and post-harvest handling, logistics solutions, small-scale irrigation, solar power (for irrigation and mechanization), leasing out equipment for mechanization, certification and assurance for standards and SPS compliance, VC financing (factoring and warehouse receipt systems).

Table 7: Areas of Support for Service Provider-Driven BPs

Type of BP	Producers	Buyers	Service Provider
Grants for capacity building • Management and BDS • Market studies • Trade promotion • R&D • External communication • Standards certification • ISO	N/A	N/A	100%

Type of BP	Producers	Buyers	Service Provider
• Advisory for accessing loans			
Working capital including inputs	Inputs may be accessed through supplier's working capital	N/A	Consider TA support to access loan guarantee under AGF or Export Growth Facility and later Risk-Sharing Facility
Matching Grant for Investment in: • Equipment	N/A	N/A	30%
Fixed assets (buildings and facilities)	N/A	N/A	None, unless negotiated under a formal PPP
Voucher scheme to access approved supplier BPs. This includes vouchers for data to access specific apps needed to provide the service.	50% for the duration of the BP	50% for the duration of the BP	

Within a given agriculture VC, the following actors will have an aligned interest in supporting private advisory services:

- **Off-takers.** The actors directly purchasing the production, including their downstream markets have a strong interest in private advisory services. Such services support increased production, reliable supply, and potentially lower costs (with increased yields). Moreover, extension provided by off-takers builds relationships with producers to help secure reliable supply of produce during harvests.

Extension Services of Rwanda Veterinary Council

Private advisory services are arrangements where a private firm, NGO, or a specific group of professionals (for example, para-veterinaries) are contracted/accredited by the government to provide fee-based advisory services to farmers. This can include certain types of contract farming (for example, outgrower schemes).

Though MINAGRI provides publicly funded extension services, the advisory services are unable to meet farmer demand and must be reinforced by complementary efforts from the private sector. The following analysis reviews opportunities for contracting private advisory service providers, including quality assurance mechanisms of private service delivery (for example, performance standards, accreditation requirements, and contractual models).

- **Input providers. P**roviders of seed, fertilizer, animal feed, and other commercial inputs have a similar economic interest in providing advisory services to producers. The services support full uptake of inputs, which are typically underused by small producers, and of higher-quality products. It is important to note that financing via input providers and off-takers will potentially bias advisory services to the benefit of these actors, which may not be perfectly aligned with the producers' interests.
- **Financiers.** FIs offering either loan or insurance products have an interest in the success of their producer clients. Primarily interested in mitigating risks, which would lead to loan defaults or insurance pay-outs, private advisory services are an important tool to monitor and reduce risk.

- **Producers.** Finally, producers themselves have strong potential interest in advisory services to boost their own production, improve quality, reduce risk of losses, and ultimately earn greater income.

Forms of Contracting Private Advisory Services

Private Sector-Supported Advisory

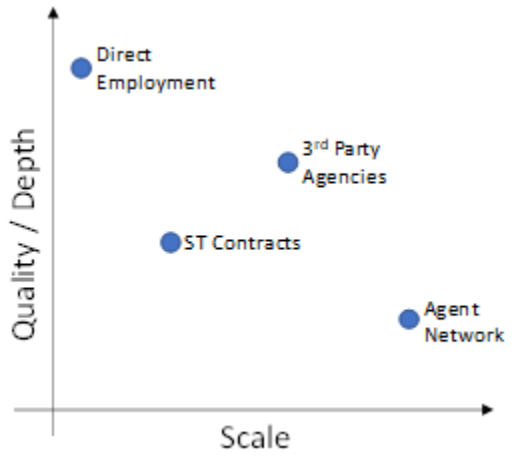
Each of these four categories of actors have a strong incentive to pay for advisory services at the farm level. Indeed, there are nascent examples of off-takers and input providers providing extension services to producers:

- In the maize VC, Kumwe Harvest employs a full extension team to advise producers and cooperatives on production and post-harvest management, with the ultimate intention of purchasing maize for sale to premium local markets.
- A similar example exists in horticulture with French bean exporters providing in-depth support to new producers (outgrowers) who, in the future, assure export supply.
- On inputs, Yara similarly provides extension services to its fertilizer clients, helping drive demand for its product as well as building customer loyalty.

Regardless of the source of funding, private advisory services can be delivered through several modes or contracts with varying levels of depth and scale:

- **Direct employment.** Private advisory is provided directly by one of the VC actors through direct hiring of staff. Examples include agronomists hired by cooperatives and agricultural extension and sourcing staff hired by horticultural growers or exporters. This form of advisory is best suited to high-value, more specialized VCs with specific, generally consolidated land. The type of advisory is deep in content but narrow in coverage.

Figure 8: Private Advisory Forms



- **Short-term contracts.** These contracts function similar to direct employment, with the exception that staff is hired on a seasonal basis. This is done primarily to avoid the cost and complexity of full-time employment, reduce idle overhead cost, and thus allow for greater

flexibility by the VC actor through greater staff deployment; this comes at the cost of depth and quality of advisory.

- **Third-party agency.** Another model is contracting a third-party agency, which can offer both high-quality advisory and lower cost via scale effects. Such entities do currently exist, though primarily servicing the public and development sectors. Appetite from the private sector currently appears limited. Distinguishing the direct results of advisory from other production variables (rainfall, disease, markets, and so on) makes justifying costs difficult, and costs are perceived as inflated given the involvement of the development sector. Pay-for-performance models may be appropriate models going forward.
- **Agent networks.** Extending the scale of advisory significantly, private actors may train and broadly deploy agents to fulfil both extension and sourcing functions, with a commission or bonus paid on performance. Candidates could include, for example, already identified lead farmers. The benefit of such a model is lower up-front costs (and therefore lower risk) while enabling the broadest reach. This model would be most appropriate for crops grown in unconsolidated areas and by smallholders.
- **Other.** Other forms of advisory are possible leveraging communications technologies. This can include information call centers, SMS platforms, radio broadcasting, and more. These are commonly not private sector-led, though there is potential to test and develop private sector models such as a call center with a small fee per call. Developing these innovations will likely require public support.

Trade-offs exist between each of the models, and their suitability should be evaluated in the context of a particular VC, considering (a) the breadth of production and producers requiring larger scale, (b) the maintenance levels of the crop or animal requiring deeper and more specialized extension, and (c) the nature of VC actors and their respective interests and willingness to invest.

General Limitations on Private Development of Advisory Services

While examples of private sector advisory services exist, the scale and deployment of these models remain limited. When considering private sector investment in advisory, risk factors shape and restrict its natural development.

First, private advisory service providers have limited track records. Private outsourced agricultural extension is not well developed in Rwanda, leaving the private sector without options for extension providers to use. Moreover, would-be extension providers have limited experience and track record, representing a risk to potential clients. This presents a chicken-and-egg issue in which outsourced extension providers need clients to gain experience and opportunity to demonstrate their value but cannot obtain clients until they have experience. Thus, private sector actors typically fund extension via directly employed or contracted staff. This usually occurs in cases where there are consolidated or specialized crops, including outgrower models. While providing targeted and potentially deeper extension, the reach of private advisory services is short.

Second, investment in private advisory can quickly be lost in the face of other production risks. For example, poor weather and lack of irrigation, market uncertainty, diseases, and poor contract compliance (for off-takers) are all significant production risks. Though private advisory may help mitigate or manage these issues, it is no silver bullet. The up-front investment in private advisory can be quickly lost, thus discouraging actual uptake of the services.

Promoting Private-Sector Advisory

The risk-sharing facility under public financing instruments will be used to address these challenges. Specifically, funding mechanisms will be created that reduce the investment exposure from a private actor to either provide or hire advisory services. This would be an initial support needed to support the advisory service provider to both build experience and demonstrate results. However, the cost should progressively be absorbed by private funding sources.

Such support may fail without properly trained and experienced staff; quality assurance is therefore essential. Funding structures and mechanisms which tie performance to financial gain or loss will be the most effective mechanism to promote quality advisory, with the strongest performance incentives borne by the direct provider of advisory services. Performance measurements can be outlined based on a given project and will depend heavily on the particular VC and type of advisory required, but examples could include quantities sold to an off-taker, yields achieved, inputs used, and more. Payments can be linked to achieving set targets to ensure that the individual advisors are accordingly motivated to achieve the desired results. Performance incentives must also be complemented by training programs equipping private advisors with the necessary skills as well as accreditation programs that promote suitable training opportunities. These mechanisms can be revocable to promote accountability.

A third opportunity for the public sector is to promote coordination among VC actors. All actors in a given VC—from farmers to financiers—have an interest in private advisory to the extent that it promotes better production. Public financial support can be leveraged to explore and raise the visibility of models in which all actors in a particular VC recognize and support robust private advisory. Productive alliances are an ideal place to promote shared acknowledgement and responsibility. The greater the benefits of private advisory that can be demonstrated to all actors, the easier it is to convince each actor to invest in the common resulting good.

Table 8: Risk Assessment for Direct Financing

Risks	Mitigation Solution
Efficiency. The public investments yield limited impact.	• Quality of the project design with specification of role and responsibilities • Accountability of the beneficiaries
Absorption capacity. The number of applicable BPs are insufficient to absorb the funding.	• Use of intensive communication campaigns fostering a mind-set change of farmers and agribusiness • Use of the agri-PPD framework as a communication channel • Facilitation of the private sector and farmers to develop VC upgrading strategies to foster collaboration and partnerships within VCs.
Projects. Level of complexity for implementers too high to deliver on projects.	• Possible external TA for the design and the implementation • Involving and tapping into technical knowledge of off-takers/traders • Strict check and screening of project design that go beyond the capacity of implementers before launching the project
Procedures. The implementation is hindered by heavy procedures and bureaucracy.	• GoR to shift its role toward facilitation and control • GoR to possibly create a dedicated agency/body/department to support PPPs
Design. Lack of proper justification and analysis leads to flawed BP design.	• Partners to prepare a solid BP • GoR to mobilize expertise at the central level to support the design process (BRD, RDB, and BDF)
Moral hazard. Beneficiaries do not deliver on their commitment.	• Beneficiaries to have a documented market to supply, which maximizes the incentive to spend funds toward seizing the business opportunity

Risks	Mitigation Solution
	• Grants to prioritize businesses that have been operating for some time rather than start-ups (which may have been set up for accessing the grant) • Beneficiaries to be held accountable on their commitment with M&E
Distortions. Distortion of the market (inputs)	• Initial assessment to be conducted to mitigate risk of distortion • Subsidization to be limited in time and scale
Price competitiveness. Applicants face prices that are relatively similar to what they can get outside the grant. Hence, the benefit for receiving the grant is lower (Small Scale Irrigation Technology and Export Guarantee Facility).	• Public grant to increase competition between suppliers to the grant • Grant managing authority to formulate requirements for suppliers and select a minimum of 3 suppliers (preferably more) that grantees can choose from based on price and quality • At the inception of project appraisal, the specific price can be determined. For subsequent beneficiaries, it will be a fixed value rather than a cost-share percentage, such that suppliers as well as grantees are incentivized toward the most competitive solution.

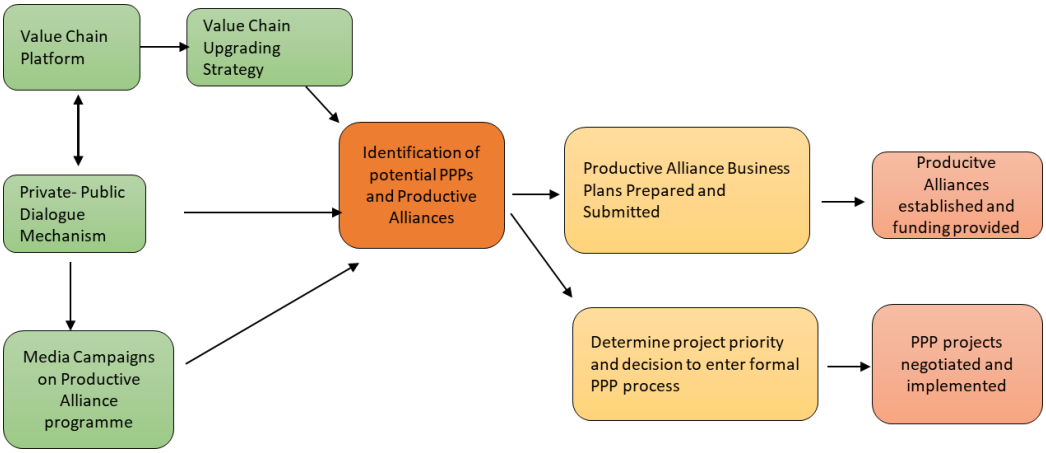
7 Communication Plan

A communication plan is a crucial element underpinning the capacity of the private sector to participate in partnerships and absorb the public funding available for private sector leveraging.

First, inclusion of farmers in commercial VCs requires a change in mind-set of all parties: public sector, farmers, agribusiness, and FIs. Mind-sets drive behavior and are based upon a set of assumptions, methods, or systems held by one or more people or groups of people. They are typically a powerful mechanism to continue to adopt or accept prior behaviors, choices, or tools.

Private sector leveraging shifts incentives toward strengthened collaboration between the parties. This will need to be communicated through the appropriate channels illustrated in Figure 9.

Figure 9: Flow of Communication for Private Sector Leveraging



MINAGRI has prepared an upgrade of the Agri-PPD Mechanism (MINAGRI 2019a), now including VCPs in which the private sector can formulate VC upgrading strategies.

VCPs will be established to build a common vision and to strengthen coordination and trust between stakeholders within a VC. It will be a central tool for formulating VC upgrading strategies across relevant parties in the VC: representatives of private producers, aggregators, processors, other ancillary businesses involved in the VC (for example, MFIs and transporters), donors, and government entities. Private sector representatives may already be structured under their own associations and federations, but individual business owners not pertaining to any organization may also participate. It is expected that each VCP develops its own vision, strategy, action plan, budgeting, reporting, audits, funding source (if needed), and so on. This method is intended to address the constraints of the VC in a more organized and coordinated way.

The VC upgrading strategies shall be private sector driven to support the identification of potential PPP projects and BPs for LPSS partnerships. Funding under the Matching Grants Program may be employed to implement the VC upgrading strategy. The public sector will support with piloting the process and organizing initial meetings in three VCs. Subsequently, the private sector will be expected to lead the process including sourcing for additional funding to finance the VCPs.

The PPD Mechanism is the anchor for resolving issues at the local and national levels. There is a national secretariat as well as agri-PPD champions at the local and national levels. These forums can be used for

communicating the opportunity to formulate BPs for PPPs' LPSS partnerships. The issues identified in the PPD-Mechanism will inform the topics raised in VCPs, while VCPs, in turn, will inform the issues to be discussed in the PPD Mechanism.

During implementation, the PPD Mechanism will be relevant for resolving issues resulting from PPP projects and LPSS BPs, including E&S risk factors.

Furthermore, the PPD Mechanism can help inform how key messages need to be shaped in media campaigns to reach a wider audience of farmers.

Broad communication channels. To communicate the opportunities to as many farmers as possible, broad media campaigns can be implemented.

Farmers can be reached most effectively through radio and SMS. To deepen the outreach, information about the opportunities can be part of the training of local PPD champions. Furthermore, the Twigire Muhinzi farmer promoters may be targeted for information campaigns.

Social media will be relevant for reaching primarily young entrepreneurs where opportunities can be conveyed with pictures and more detailed information.

Investment promotion of identified projects will be conducted in collaboration with the RDB. Currently, monthly meetings are organized with the RDB during which the status of projects can be discussed, and the list can be updated and prioritized systematically. This dialogue should inform on whether identified and prioritized projects should enter the formal PPP process or be pitched to investors as a purely private project, or what additional research and project design will be needed.

7.1 Implementation Plan and Budget

The implementation plan is structured around two pillars of the strategy namely (a) facilitating private markets and (b) incentivizing private investments.

In the first pillar, **facilitating private markets**, the broad activities to be carried out are as follows:

(a) Improve participation and voice of the private sector.

(b) Improve access to information.

(c) Enhance capacity to design, implement, and monitor projects for the private sector.

The three broad activities are further divided into subactivities with relevant budget lines.

The second pillar, **incentivizing private investments**, has the following activities with corresponding budget lines:

(a) TA

(b) Agriculture insurance

(c) Risk-sharing facility.

Action	Responsible Institution	Total Budget (RWF 122,106,857,550)	Assumptions	2019/20		2020/21				2021/22				2022/23				2023/24			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Improved Participation and Voice of the Private Sector Agri PPD Mechanism																					
Support the establishment and funding of the Agri-PPD Team	MINAGRI	130,078,500																			
Host and fund two national PPD dialogues per year to support the Joint Sector Review (JSR) meetings	Agri-PPD team	37,300,000																			
Conduct stakeholder mapping and analysis to determine additional VCPs and issue platforms that should be formed.	Agri-PPD team	159,246,000	Districts support, funding made available																		
Operation of Agri-PPD Mechanism (Training of Agri-PPD Champions, handling issues, conducting M&E)	Agri-PPD team	91,929,750																			
Support the establishment and co-funding of the independent Agri-PPD Secretariat	Agri-PPD Team/MINAGRI	88,803,300																			

Action	Responsible Institution	Total Budget (RWF 122,106,857,550)	Assumptions	2019/20		2020/21				2021/22				2022/23				2023/24			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Establish VC Platforms																					
Conduct VCP analysis	VCP facilitated by MINAGRI and PSF	32,500,000	Crucially, the interventions are defined by the VC players																		
Enhanced capacity to design, implement, and design project for private sector leveraging																					
Rigorously apply appraisal criteria principles presented in Section 5.4 to crowd in private investment and observe E&S safeguards	MINAGRI	20,000,000																			
Request for establishment of a Project Preparation Unit at executive branch to support project development	MINAGRI/Executive Branch	5,000,000																			
Define 3 key priority projects for the agriculture sector on an annual basis to be promoted by the institution	MINAGRI	150,000,000	Priorities to be communicated clearly to MINAGRI and agency staff and other institutions such as the RDB for support with investment promotion.																		

Action	Responsible Institution	Total Budget (RWF 122,106,857,550)	Assumptions	2019/20		2020/21				2021/22				2022/23				2023/24			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Increase access to information in the agribusiness system																					
Establish the CDW and link various information technology (IT) systems	MINAGRI	30,000,000	System established; data sharing policy is formulated																		
Improve the design and data collection for the MIS	MINAGRI	30,000,000	Review links to the CDW and explore possibilities for more efficient/reliable data input procedures																		
Develop and integrate the use of satellite imagery for seasonal follow-up	MINAGRI/Agri-TAF/RTI Grand Challenge	50,000,000																			
Update information in ALIS 1 and ALIS 2	MINAGRI	21,000,000																			
Digitization of agricultural VCs and Information on ASMEs and cooperatives	MINAGRI	20,000,000																			
Create directory of existing supply agreements between agribusinesses and farmers and the perceived quality	MINAGRI	5,000,000																			
Update the directory of agricultural producers with self-reported data	MINAGRI	3,000,000																			

Action	Responsible Institution	Total Budget (RWF 122,106,857,550)	Assumptions	2019/20		2020/21				2021/22				2022/23				2023/24			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Integrate information from the financial sector	MINAGRI	3,000,000																			
Link the registry of supplier organizations to information on members including national ID register and the National Land Registry	MINAGRI	5,000,000																			
Publish Agriculture Investor Information System	RDB/MINAGRI	5,000,000																			
Implementation of the communication plan	MINAGRI	20,000,000																			
Incentives to the private sector																					
TA to loan suppliers and recipients	MINAGRI	200,000,000																			
Agriculture insurance	MINAGRI	1,000,000,000																			
Risk-Sharing Facility	MINAGRI	120,000,000,000																			

Bibliography

AAF (African Agriculture Fund). 2017. “Five Years of the AAF’s Technical Assistance Facility.”

AFR (Access to Finance Rwanda). 2016. “Value Chain Financing Analyses: Coffee, Tea, Maize, Dairy & Irish Potatoes.” Agriculture Insights from FINSCOPE Rwanda 2016 Survey.

BNR. 2018. “Monetary Policy and Financial Stability Statement, March 2018.”

Cambridge Resources International. 2017. *Study on Comparative Economic Advantage of Crop Production in Rwanda*, Cambridge Resources International.

CBI. 2018. “Value Chain Analysis for the Coffee Sector in Rwanda.”

CGAP (Consultative Group to Assist the Poor). 2018. “Navigating the Next Wave of Blended Finance for Financial Inclusion.”

ClimaAdapt. 2013. “Private Public Partnerships in Agriculture: Strategy and Models for Implementation.”

De Sel, G. 2016. *Comment Financer les Exploitations Familiales?*

DIE. 2017. “Unlocking the Irrigation Potential in Sub-Saharan Africa: Are Public-Private Partnerships the Way Forward?”

ENCLUDE. 2018. “Blended Finance: How to Get Investors on Board.”

European Union’s External Cooperation Programme for Rwanda. 2014. “Baseline Report on the Rwanda Horticulture Organisations Survey.”

Fairtrade. 2014. “A Seat at the Table? Ensuring Smallholder Farmers Are Heard in Public-Private Partnerships.”

FAO (Food and Agriculture Organization). 2013. *Contract Farming for Inclusive Market Access*.

FAO. 2016. *Public-Private Partnerships for Agribusiness Development*.

FARM. 2012. *Les enjeux des partenariats entre coopératives agricoles et financières : enseignements de quatre expériences en Afrique de l’Ouest*.

Feed the Future Rwanda. 2018. “Y2 Work Plan, Nguriza Nshore Activity.”

Feed the Future Rwanda Hinga Weze Activity. 2017. “National Extension Program Twigire Muhinzi Needs Assessment.”

FIDA. 2016. *Fonds de Garantie de Prêts, Note Pratique.*

FinScope 2016.

Global Coffee Platform. 2016. “African Coffee Sector: The Kenya Case Study.”

GoR (Government of Rwanda). 2018. “Rwanda Irrigation Master Plan.” MINAGRI, Ebony Enterprise, the World Agroforestry Centre.

ICCO Cooperation. 2016. “Maize Value Chain Analysis in Rwanda.”

IFAD (International Fund for Agricultural Development). 2018a. “Climate-Resilient Post-Harvest and Agribusiness Support Project.”

IFAD. 2018b. “Project for Rural Income through Exports.”

IFAD. 2016. “Rwanda Dairy Development Project Design Report.”

IFC (International Finance Corporation). 2019. “Financing Structure to Promote Access to Small-Scale Irrigation and Access to Markets.”

IFPRI. 2015. “Public Private Partnerships for Irrigation.”

IGC (International Growth Centre). 2016. “Maize Value Chains in East Africa.”

IGC. 2018. “Impacts and Sustainability of Irrigation in Rwanda.”

MINAGRI (Ministry of Agriculture and Animal Resources). 2013. *Rwanda National Dairy Strategy*.

MINAGRI. 2014. *Rwanda National Horticulture Policy and Strategic Implementation Plan*.

MINAGRI. 2017a. *Rural Investment Facility Qualitative Impact Assessment*.

MINAGRI. 2017b. *Rwanda National Agribusiness Investment Promotion Strategy 2017*.

MINAGRI. 2018a. *National Agriculture Policy*.

MINAGRI. 2018b. *Rwanda Strategic Plan for Agriculture Transformation 2018-24: Conceptualization Report*.

MINAGRI. 2019a. *Management of Agri-PPD & Value Chain Platform Mechanisms in Rwanda*.

MINAGRI. 2019b. *Rwanda Program for Results Phase 2: Conceptualization Report*.

MINICOM (Ministry of Trade and Industry). 2018. “Private Sector Development and Youth Employment Strategy.”

NAEB (National Agricultural Export Development Board). 2015. *NAEB Medium Term Strategic Plan 2013-2018*.

Nguriza Nshore. 2018. “Rwanda Banking and Investment.”

ODI (Overseas Development Institute). 2013. *Understanding Challenge Funds*.

Office of the President and DFID. 2017. “Measuring the Social and Economic Impact of NCIP Projects on Rwanda.”

Olson, J., and L. Berry. 2004. “Land Degradation in Rwanda: Its Extent and Impact.”

OXFAM. 2014. “Moral Hazard? Mega Public-Private Partnerships in African Agriculture.”

Oxford Policy. 2016. “Rwanda Rural and Agricultural Financial Services Strategy.” MINAGRI, DFID.

Oxford Policy Management. 2011. “Rural and Agricultural Financial Services Strategy.”

Oxford Policy Management. 2017. “Rural and Agricultural Financial Services Strategy.”

Palladium. 2018. “IMSAR Market Analysis.”

Ponnusamy, Kuppusamy. 2013. “Impact of Public Private Partnership in Agriculture: A Review.” *Indian Journal of Agricultural Sciences* 83: 803–808.

PPIAF. 2016. “How to Develop Sustainable Irrigation Projects with Private Sector Participation.”

RDB (Rwanda Development Board). 2015. “N° 06/2015 of 28/03/2015, Law Relating to Investment Promotion and Facilitation.”

RDB. 2018.

République de Madagascar. 2017. *Stratégie d’Intervention Actualisée du Fonds de Développement Agricole*, République de Madagascar.

Shapiro, et al. 2017. *Rwanda Livestock Master Plan*. International Livestock Research Institute.

Stoelinga, D., and Sachin Gathani. Forthcoming. *Understanding Rwanda’s Agribusiness and Manufacturing Sectors*. International Growth Centre.

TechnoServe – AFR. 2018. “Financing Opportunities in Rwanda’s Coffee Sector.” Access to Finance Rwanda.

Twin. 2018. “Coffee Export Capabilities Assessment.”

UKAID. 2019. “Technical Assistance to Advise Rwanda’s Approach for Mobilising New Sources of Development Finance.”

UNIDO (United Nations Industrial Development Organization). 2013. “Maize in Rwanda: A Value Chain Analysis.”

USAID (United States Agency for International Development). 2017. “Cost-Benefit Analysis of Rwanda’s Poultry Value Chains.”

USAID. 2018. “ISP Rwanda: Commercial Investment Opportunities in Agriculture Value Chains.”

USAID. 2019. “Rwanda Private Sector-Driven Agricultural Growth Project.”

USAID PSDAG. 2018. “Access to Finance Program Lessons Learned.”

Vanguard Economics. 2019. “Assessing the Market for Rwandan Poultry, Pig and Animal Feeds Products.” Draft prepared for Ikiraro Project and RAB.

World Bank. 2017a. *Doing Business 2017: Equal Opportunities for All*. Washington, DC: World Bank.

World Bank. 2017b. *Enabling the Business of Agriculture 2017. Country Profile: Rwanda*.

World Bank. 2017c. *Financial Diagnostics Study*.

World Bank/IFC. 2019. “Country Private Sector Diagnostic: Creating Markets in Rwanda; Transforming for the Jobs of Tomorrow.”

World Bank Group. 2016. *Linking Farmers to Markets through Productive Alliances: An Assessment of the World Bank Experience in Latin America*. Washington, DC: World Bank Group.

World Bank Group. 2017. *Rwanda Agriculture Finance Diagnostic Report*. World Bank Group.

World Bank Group, and GoR. 2018. *Future Drivers of Growth in Rwanda: Innovation, Integration, Agglomeration, and Competition*. Washington, DC: World Bank.

Annex 1: Standards and Guidelines for Environmental and Social Risk Assessment When Involving Private Sector Investors

1. Principles

The Private Sector Leveraging Strategy refers to international and national best practices for assessing private sector partners and to establish the selection and performance criteria for participating private sector entities. Selected private sector organizations require adequate quality ESMS (as specified in section 4 of the Environmental and Social Systems Assessment [ESSA]) to be adopted as a prerequisite to their participation. To this end, an E&S checklist is developed to ensure that ineligible investments are not undertaken and that requisite approvals are taken before any scheme/intervention is financed.

The standards and guidelines for E&S guidelines aim to

- Promote E&S sustainability in the program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to the program's E&S impacts;
- Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the program;
- Protect public and worker safety against the potential risks associated with (i) construction and/or operation of facilities or other operational practices under the program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards;
- Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at a minimum, restoring their livelihoods and living standards;
- Give due consideration to the cultural appropriateness of and equitable access to program benefits, giving special attention to the rights and interests of the indigenous peoples and to the needs or concerns of vulnerable groups; and
- Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes (the ESSA notes that the program does not involve any area with such characteristics).

Rwanda has adopted the ESMG for agricultural projects as part of PSTA 3 (2013–17). These are still in place, and this annex provides an overview of the mechanisms in place during each stage of the project cycle. Section 11.14 in the ESMG Annex provides an overview of key contractual requirements associated

with a project. These requirements, based on the ESMG, will ensure that the projects follow proper E&S standards. These requirements comprise the following.

2. Identification of the Type of Project That the Program Could Support

(a) Initial Screening

Developers need to undertake their own screening to identify environmental issues of major concern at an early stage of the project. For screening agri-projects, the following questions can offer guidance to the developer:

Nature of Project

- Can the project cause significant E&S impact?
- Can the project lead to increased or decreased discharge of fossil carbon dioxide, methane, or other greenhouse gases, and can it lead to displacement of people from their land?

Location of the Project

- Is the project located within or near environmentally sensitive areas such as sources of public water supply; areas of unique historic, cultural, archaeological, scientific, or geological interest; and ecologically fragile ecosystems such as wetlands?

Natural Resources Impact

- Can the proposed project result in direct or indirect negative or positive impacts to the natural resources in the surroundings and on the people in these areas?
- Can the project develop systems, which consider gender and ensure no displacement of people, and do the systems permit sludge nutritive salts, building waste, excavated materials, or other waste products to be taken care of or brought back into the ecosystem?
- Can the project improve or impair the living conditions of the settled population?

(b) Assessment of Project Alternatives

At this early project stage, a thorough assessment of all the possible project alternatives should be conducted with a view to determining the most optimal project in terms of E&S considerations. This assessment should begin early in the planning process before the location, type, and scale of the agri-project is decided upon. For an agri-project, the following alternatives should be considered:

- Site/location alternatives
- Project scale or size alternatives
- Project alternatives
- Construction, operation, and decommissioning design alternatives
- 'No-project' alternative.

3. Contractual Requirements That Follows Proper E&S Standards

The annex provides an overview of key contractual requirements associated with a project. These requirements, based on the ESMG, will ensure that the projects follow proper E&S standards. These requirements comprise

(a) Screening guidelines,

(b) A project brief guideline,

(c) Screening checklist,

(d) Scoping checklist, and

(e) Questionnaire for public hearing.

The screening identifies the E&S risk factors. Guidelines exist for the main factors, and they must be adhered to.

The ESMG contains detailed guidelines for

- Involuntary resettlement and displacement,
- Use of agro-chemicals,
- Natural resources management,
- Grievance system, and
- Gender mainstreaming.

The ESIA will be intertwined with the project developers' project cycle from project identification to pre-feasibility study, feasibility study, project design, and implementation. The ESIA conducted at the early planning stage can serve as a tool that assists and guides developers through providing environmental information and raising environmental concerns at key stages in the project cycle leading to projects designed with built-in mitigation measures. Design proposals with potentially adverse environmental impacts can therefore be mitigated while those found to be incapable of mitigation could be changed appropriately. The ESIA applied at this critical stage permits early indication of practical design changes aimed at either avoiding or minimizing identified negative E&S impacts or enhanced E&S benefit.

4. ESIA Process in Project Formulation

(a) Project Planning and Designing

Once the developer has identified the potential environmental impacts, it can identify appropriate mitigation measures which can be incorporated into the project design. This can minimize time and costs associated with conducting ESIAs, and in any case, ESIA must be considered as part of the planning and design for all agri-projects. Good practice demands that costs for mitigation are incorporated in the total project budget.

(b) Preparation and Submission of the Project Brief

The project owner will have to produce a project brief. Project briefs are concise documents (20 pages). They should contain the contact details of the developer, characteristics of the project, and its potential impacts. The developer is advised to start writing this project brief early in the project identification and the formulation. However, the final project brief shall be completed and submitted after the initial screening of the project.

The developer prepares a project brief which it submits to the authority. The purpose of the brief is to provide enough and relevant information on the proposed project that can allow the authority and lead agencies to establish whether or not the project is likely to have significant impact on the environment and determine the level of ESIA required. If adequate mitigation measures are identified in the project brief, this may eliminate the need for further assessment and the project may be approved, subject to any other conditions that may be laid out to ensure the implementation of the proposed mitigation plan.

(c) Screening of Projects

After submitting a project brief to the authority (RDB), it is screened by the authority in consultation with lead agencies. After screening, the authority is in a position to determine whether a detailed ESIA is required or the project is exempted. The screening process is aimed at the following:

- Identification of major environmental issues at a very early stage
- Better utilization of financial and human resources by focusing on major environmental issues of the project.

A screening checklist will be used by the screening team to verify eligibility of proposed projects according to the ESIA. The proposed project owners will have to answer the questions to be asked by the screening team. The questions will encompass all details of the project and the likely significant effects of the project on both the environment and the society.

(d) EIR

The developer will be required to produce an EIR. The objective of an EIR is to determine the environmental impacts an agri-project may have and to define adequate mitigation measures for the significant impacts. The findings of the EIR are presented in the EIR report which is supposed to approximate 20–30 pages and contain

- Background and objectives of the project proposal;
- Description of the project and the project components;
- Description of the affected environment;
- A list of the potential significant environment impacts of the project;
- Identification of adequate mitigation measures to address the environmental impacts;
- A list of agencies, organizations, and individuals consulted; and
- A list of the technical team that conducted the EIR.

Depending on the decision taken on the EIR by the authority, the project can be subjected to an ESIA; otherwise a CoA may be issued.

(e) Scoping of the Project

Scoping is then conducted to determine the most critical issues that need to be addressed during the ESIA. The developer—in consultation with the authority and other interested parties—undertakes scoping. Good practice demands that there should be full participation of the public during scoping.

The developer will be required to fill out the scoping checklist. This will be to ensure E&S standards are maintained. This checklist will delve deeper than the screening checklist in exhausting all the possible E&S risks that could be caused by the project. The scoping checklist will examine the different ways in which the environment may be affected by the project. The significance of the effects will also be examined.

(f) Preparation of the Terms of Reference (ToR) and Conducting an ESIA

The ToR for the ESIA are developed based on the scoping results. The developer in close consultation with the authority (RDB) and other key stakeholders shall prepare the ToR for the study. The scoping results including the ToR shall be submitted to the authority for it to determine their completeness and adequacy. A general outline for the contents of the ToR is given in the national ESIA guidelines. At this point, the developer needs to source and hire experienced experts to undertake the different tasks specified in the ToR. Most likely, this support is already acquired during earlier stages of the ESIA process.

(g) Hold a Meeting with Practitioner

The developer and ESIA practitioner should hold a meeting to discuss and review the key findings of the ESIA. In this meeting, the practitioner should also advise the developer.

(h) Hold Public Consultation Meeting

The developer is required to hold public consultation on-site with the project-affected persons (PAPs) and all grievances and responses given to the PAPs must be documented in the ESIA report.

(i) Submission of the ESIA to the Authority

Upon completion of the study, the developer shall submit the report to the authority (RDB). The authority can in turn send copies to lead agencies and other key stakeholders for review and comments. The ESIA is a public document, which can be made available to any person requesting for it. The details of the content of an ESIA are presented in the national ESIA guidelines. The CoA of the ESIA is issued by the authority to the developer and indicates whether the environmental aspects of the ESIA have been approved. The developer then presents this certificate to any other licensing authorities that shall take an appropriate decision on the project.

The project developer is required to produce an ESIA report which will include an EMP. This EMP involves the implementation of environmental protection and mitigation measures and monitoring of significant environmental impacts. Environmental protection measures are taken to

(a) Mitigate environmental impacts,

(b) Provide in-kind compensation for lost environmental resources, or

(c) Enhance environmental resources.

These measures are usually set out in an EMP, which covers all phases of the project and outlines mitigation and other measures that will be undertaken to ensure compliance with environmental regulations and reduce or eliminate adverse impacts. The EMP will also cover a proposal for recommending the proposed project to use goods and products that are environmentally friendly.

5. Post-ESIA: Appraisal, Decision-Making, Implementation, and M&E

The ESIA forms part of the overall appraisal. If the project is approved and moves to implementation, the developer obtains a CoA based on the proposed mitigation measures. The main ESIA-related activity is then to ensure that the mitigation measures and actions proposed to protect the environment are adopted and implemented. The developer shall recruit competent environmental staff to conduct self-monitoring, self-record-keeping, and self-reporting during the project's implementation. The information gathered through monitoring shall be stored and made available during inspection. The developer shall also undertake all reasonable measures to mitigate undesirable environmental impacts not contemplated in the ESIA and shall accordingly report on these measures to the authority. During implementation and operation of a project, monitoring is a responsibility of the developer and REMA.

The developer will be required to design an environmental monitoring plan. The monitoring plan will show the extent and severity of the environmental impacts against the predicted impacts, performance of the environmental protection measures or compliance with pertinent rules and regulations, trends in impacts, and overall effectiveness of the project EMP. Annex 2: Land Acquisition and Management in Rwanda

A couple of years ago, the GoR initiated a number of different reforms aiming at streamlining the land ownership framework, including land registration and land transfer, as well as the expropriation process, which include land policy and land law, and all aim at consolidating the scattered land-related regulations.

Currently, the GoR also continues to enforce and ensure that every development plan is guided by the land use master plan. The introduction of land registration, which has set out new land tenure regulation increases security on ownership and improves productive land usage.

With regard to expropriation, the Constitution of the Republic of Rwanda, of 2003 revised in 2015, especially in its Article 34, paragraph 3, provides that the right to property shall not be encroached upon, except in public interest and in accordance with the provisions of the law. To meet government demands, the land law was initiated and promulgated.

1. Procedures

Land can be acquired, and tenure rights obtained (lease contract or ownership certificate), for 'private land' owned by the state, the city of Kigali, or the districts, not reserved for public use or nature preservation, and available for 'individual' tenure (contrary to public land).

According to the **Law N° 43/2013 OF 16/06/2013** governing land acquisition, use, and management in Rwanda, public land consists of land in the public and private domains of the state, land belonging to

public institutions, and land that belongs to local authorities whether being in their public domain or in their private domain. The state may donate to any public institution or local authority its land reserved for public or private domain. Public institutions or local authorities may also acquire land by purchasing it or by donation from individuals or associations, and that land shall fall under their private or public domain.

This law determines the modalities of allocation, acquisition, transfer, use, and management of land in Rwanda. It also establishes the principles applicable to rights recognized over all lands situated on Rwanda's national territory and all rights united or incorporated with land, whether naturally or artificially.

State land in the **public domain** consists of all land meant to be used by the general public or land reserved for organs of state services as well as national land reserved for environmental protection.

State land in the **private domain** shall consist of all the land that is not included in state land reserved for public activities or infrastructures and land that does not belong to public institutions or local authorities or individuals.

The right to land is granted by the state in the form of emphyteutic lease. The land lease period cannot be less than 3 years and cannot exceed 99 years; however, it can be renewed. Procedures for land allocation, lease, the exact number of years of land lease, and its renewal are determined by a Presidential Order.

Allocation and acquisition of land for investment are based on an approved BP by the competent authority in accordance with the importance and value of the investment. Allocation of public land in private domain for investment is done through an open competition except when authorized by an Order of the Prime Minister on well-defined land.

Swamp land belongs to the state. It shall not definitively be allocated to individuals, and no person can use the ground of holding it for a long time to justify the definitive takeover of the land. However, it may be lent to a person based on agreement concluded between both parties. A Prime Minister Order shall draw a list of swamp land, their classification, and boundaries and set up modalities of their use, development, and management for the sustainable benefit of all Rwandans.

Without prejudice to the provisions of the law relating to the area of the land which cannot be subdivided, land rights may be transferred between persons through succession, gift, inheritance, ascending sharing, rent, sale, sublease, exchange, servitude, mortgage, or any other transaction, in conformity with the conditions and methods provided for by the laws and regulations.

Freehold rights shall apply only to developed land where infrastructures are erected, and its extent shall be strictly limited to the area of land that is necessary to support the authorized developments on the land and their amenity. For a group of individuals co-owning land, a business company, an organization, or association with legal personality, freehold title can only be granted if at least 51 percent of its stake is owned by Rwandan citizens, except for land designated as special economic zones.

Modalities for obtaining a freehold title are determined by an Order of the Minister in charge of land.

The size of land that can be granted freehold title shall not exceed 5 ha. However, the minister in charge of land, based on a reasonable case made by the applicant, may authorize freehold rights on an area larger than 5 ha.

Without prejudice to the provisions of Articles 6 and 7 of this law, all land belonging to the state, whether in the public or private domain, shall be granted freehold title irrespective of whether it is developed or not. This shall also apply to land owned by public institutions and local authorities.

Without prejudice to the provisions of Articles 6, 7, and 8 of the **Law N° 43/2013 OF 16/06/2013,** foreigners shall be entitled to an emphyteutic lease on land, whether acquired from private persons or the state. The lease period cannot exceed 49 years and shall be based on a land use plan and BP approved by competent authorities. The lease period shall be renewable.

The transfer of land from the public domain of public institutions to their private domain is done by an Order of the Minister in charge of land on proposal by the supervising authority.

2. Compensation Management

The Law N° 32/2015 of 11/06/2015 determines the procedures relating to land expropriation in the public interest and land valuation modalities. This law describes expropriation as an act based on the power of government, public institutions, and local administrative entities with legal personality to remove a person from his/her property in public interest after fair compensation. It is part and parcel of the larger and coherent legal and institutional framework for land tenure, use, management, and administration.

In principle, expropriating authorities secure the buy-in from the population to be expropriated before undertaking the expropriation exercise. The spirit of the aforementioned law relating to expropriation should be the guiding principle, including on how and when landowners to be expropriated are notified. The simultaneous use of multiple channels of communication is of common use, including devising creative ways of leveraging the high rate of penetration of cellular telephones in Rwanda. This means that the use of written letters for personal notification or using SMS through personal mobile phones and strengthening the channel of media is the appropriate legal provision of the notification process.

The terms and conditions contained in any contract must be clearly explained, and concerned parties are provided their own copies for future reference. As far as land valuation is concerned, the law relating to expropriation in public interest provides that the list of land values and prices for property incorporated on land shall be reviewed every year and approved by the regulatory council for the real property valuation in Rwanda before it becomes effective. The unit prices for land and property incorporated thereon shall be published every year in the Official Gazette of the Republic of Rwanda.

Special attention is paid to landowners in rural areas, and the possibility of applying a different model for land valuation should be considered. With the automation of the land management system, there is enough data to devise a more detailed, comprehensive, and easy-to-update model for compensation computation.

Transparency and openness are key elements in trust and confidence building; expropriators ensure that the communication strategy is effective and tailored to the target population. Expropriators receive an adequate budget for compensation and avoid delays in disbursements.

The legislation should be amended to make the penalties commensurate with the losses incurred in case of delays in compensation payment.

In addition to compensation in cash, alternative means should be explored, depending on the social status of the affected population, the specific location, and the nature of the project being developed.

To improve efficiency and effectiveness of the expropriation process and its perception by the population, it is recommended to

- Make the expropriation process as inclusive, participatory, and transparent as possible, with the responsibilities of stakeholders clearly defined;
- Secure the buy-in from affected landowners right from the planning stage;
- Devise a communication strategy tailored to the target population;
- Make the land valuation system more transparent and market-driven; and
- Explore the feasibility, in some cases, of alternatives to compensations in cash.

3. Commonalities for the Different Transactions on Land

The following laws and orders form the basis for land transactions and for the responsibility of the execution of these transactions. Reference to additional details of laws and orders are made under specific transactions when required.

(a) Law N° 32/2015 of 11/06/2015 relating to expropriation in public interest

(b) Law N°10/2009 of 14/5/2009 on Mortgages

(c) Law N°15/2010 of 07/05/2010 creating and organizing condominiums and setting-up procedures for their registration

(d) Law N° 53/2010 of 25/01/2011 establishing Rwanda Natural Resources Authority (RNRA) and determining its mission organization and functioning

(e) Law N° 59/2011 of 31/12/2011 establishing the sources of revenue and property of decentralized entities and governing their management

(f) Presidential Order Nº 30/01 of 29-06-2007, determining the exact number of years of land lease

(g) Presidential Order Nº 97/01 of 18/06/2014 determining the functioning and competences of the Registrar of Land titles

(h) Presidential Order N°25/01 of 09/07/2012 establishing the list of fees and other charges levied by decentralized entities and determining their thresholds

(i) Prime Minister's Order Nº 149/03 of 05/10/2011 determining the organizational structure and summary of job positions of Rwanda Natural Resources Authority

(j) Prime Minister's Instructions N°001/03.0 of 14/04/2010 relating to implementation of client charter in land administration and land acquisition

(k) Ministerial Order N° 001/14 of 14/04/2014 determining modalities for sub-leasing of agriculture, livestock, and forest land

(l) Ministerial Order N° 003/14 of 14/04/2014 determining responsibilities, organization, and functioning of district land bureau

(m) Ministerial Order N° 009/16.01 of 23/08/2011 determining the procedure to obtain a freehold land title as amended by the Ministerial Order modifying and complementing Ministerial Order N° 009/16.01 of 23/08/2011 determining the procedure to obtain a freehold land title

(n) Ministerial order N° 001/2008 of 01/04/2008 determining the requirements and procedures for land

Annex 3: Public-Private Partnership Modalities in Rwanda

1. Concept

PPP refers to a "mechanism for improving the delivery of public goods and services by partnering with the private sector while retaining an active role for the government to ensure that national socio-economic objectives can be achieved" (FAO 2016). It is characterized as a formalized partnership between public and private sector institutions, addressing agricultural development issues with clearly defined public benefits and in which investments and risks are shared fairly. There is an active role for all parties in various stages of the project life cycle.

PPP models are among the most powerful models to engage the private sector and concern mainly long-term and large investments where the private sector has critical capabilities but little incentive to engage on their own.

The PPP can encompass on-farm as well as downstream activities focused on efficiencies such as post-harvest interventions to improve the bulking and handling of commodities, processing and packaging, quality standards, and certification costs. Relevant areas include

- Integrated VCs: creating markets for farmers and access to raw materials for off-takers;
- Creation of food security, inclusivity, and equitable sharing;
- Productivity growth for market access and development;
- Research and innovation;
- Improved quality and efficiency at all levels of the chain (R&D, extension services, logistics, and marketing); and
- Enhanced managerial and business skills for SMAEs and FOs.

Larger complex projects of longer duration are particularly relevant. This includes irrigation schemes, marketplaces, land preparation, and research labs.

2. Potential Partners and Their Roles

PPPs involve contractual partnership agreements between lead private companies, national or local-level government units, and financing institutions.

Public Sector Role

For catalyzing private sector investment, the GoR would create an enabling environment for firms to thrive, while enforcing regulation to ensure that social interests and sustainable natural resource management are considered.

Beyond this, with respect to the incentives to deploy, the goal is to use public resources in smarter ways toward removing barriers that hinder VC upgrading. The key principle is to use the PPP mechanism to

leverage investment from the private sector through the requirement of compulsory contribution, be it in cash or in kind. Specifically, the role comprises the following activities:

- Design investment projects under PPP law and PPP Guidelines
- Attract partners and have transparent partnership selection criteria
- Promote risk-sharing away from smallholder farmers through credit guarantees, insurance, and subsidized interests
- Ensure regulatory compliance
- Provide funding where necessary
- Link private partners to local public institutions and services
- Conduct M&E of the partnership at both the national and local government levels.

Lead Agribusiness Partner Role

Private resources can be expected to be directed toward investments that have an attractive financial return. This can be in the form of basic research and incentivizing R&D, the provision of hard and soft infrastructure, VC integration and VC upgrading, access to markets, provision of an enabling environment, and attracting further investment.

- Developing BPs with thorough financial and market analysis;
- Leading the implementation of partnership activities and delivering results;
- Securing markets for end products and procuring raw materials from farmers through contract farming agreements;
- providing TA and business management training for farmers;
- Contributing funding or in-kind resources as agreed;
- Disseminating inputs and technology; and
- Supporting the monitoring of partnership activities.

Cooperative Role

- Representation of the intermediary between farmers and off-takers
- Transparent intermediation between farmers and private partners
- Provision of services to farmers: extension, inputs, finance, transactions, and so on
- Governance.

Financial Institution Role

Financing can be provided by the government through a credit guarantee from the de-risking facility in the form of loan guarantees. Access to support services, including technical skills and training, may be provided by either partner by the BDF (PASP, Post Harvest Climate Resilience Agribusiness [PHCRAB], and RDDP) until the risk-sharing facility is in place. Co-funding in the form of matching grants can be provided

to farmers or their organizations for implementation from the BDF or any other financing facility that could be in place. For farmers, PPPs could be leveraged to improve smallholders' access to external financing through compulsory loan. In this case, the partnership agreement will include the incorporation of FIs into the financing model.

- Assess the credit risk of PPP partners that may receive credit as part of the PPP.
- Provide finance to relevant PPP parties.
- Monitor loans under the PPP.

3. Current Framework under the PPP Law

The PPP Law of 2016 was enacted as a legal framework for the GoR to partner with the private sector to accelerate, de-risk, and reduce transaction costs of the investment until the investment proves profitable and sustainable. Though not included as a sector in the PPP Law, agricultural projects shall be subject to PPP to be determined by an Order of the Prime Minister.

Within the framework, MINAGRI would be the Contracting Authority that is responsible for identifying projects in their sectors and developing them either internally or by hiring consultants. The Contracting Authority will conduct pre-feasibility and feasibility studies for PPP projects, procure a private partner through the competitive procurement procedure, enter into PPP agreements, and implement the PPP projects. The Contracting Authority shall appoint or nominate a project officer who will play a central role in the entire PPP project development process.

As provided in the PPP guidelines, the roles and responsibilities of the Contracting Authority (MINAGRI) mainly include the following:

(a) To identify a PPP project, prepare a pre-feasibility study, and submit it to the RDB for preliminary screening of the project for procurement through the PPP route by the PPP Technical Committee;

(b) To obtain approval on the Project Profile Document (which includes the project prefeasibility study) from the PIC for conducting a full feasibility study according to article 4.4.1 of the National Investment Policy, April 2017;

(c) To undertake the project feasibility study and submit it to the PPP SC with a copy to the RDB for recommendation from the Technical Committee on financial feasibility, PPP ability of the project, and assessment of fiscal commitment and contingent liability by MINECOFIN;

(d) To obtain recommendations on the economic viability and alignment with investment priorities from the PIC in accordance with article 4.4 of the National Investment Policy, April 2017;

(e) To submit the recommendations of the RDB, MINECOFIN, and PIC and obtain approval on the project feasibility study from the PPP SC in accordance with Article 14 of the PPP Law;

(f) To prepare the project bidding documents including draft PPP agreements;

(g) To obtain approval from the RDB on the bidding documents;

(h) To invite RFQs, evaluate the RFQ documents, and prepare list of shortlisted bidders or preferred bidders for approval from the PPP SC; and

(i) To invite RFPs from shortlisted bidders, receive proposals, and identify the preferred bidder.

Rwanda has a very thorough process for formulating and approving public investment projects with MINECOFIN's guidelines for producing feasibility studies. Given the current operational PPP guidelines, there are tangible success stories to be shared on PPPs in the agriculture sector. Furthermore, there are good examples of agriculture projects in Rwanda, especially designed and implemented before the enactment of the PPP Law 2016, which qualify as PPPs.

(a) Community Processing Centers (CPCs) were established by farmer cooperatives and government to add value to farmer produce.

(b) The BDF-PASP project funded by IFAD has been a cornerstone intervention toward increasing finance through the PPP mechanism. Farmers are required to develop bankable BPs, and the government share would be contributed to the project as a matching grant.

(c) DP-funded projects such as PSDAG, Nguriza Nshore (both USAID), and IMSAR (DFID) follow similar approaches of matching grants financing under PPP modalities.

(d) With support from the International Finance Corporation (IFC), Kenya Commercial Bank has implemented a project on financing in the maize VC. Farmers' cooperatives are supported by the government to develop BPs, which are presented to financing institutions for credit. Once approved by the FI, the grant is subsequently provided by IFC.

(e) The BRD is the main financing institution for agricultural projects and has successfully financed several PPP projects.

The success of the above projects has been due to early involvement of a capable and properly incentivized private partner. A capable private partner can support the design of the project in the early phases and bring in technological know-how. A properly incentivized private partner can maximize the profit of the project operations as they are not merely a supplier to but a partner in the project.

The process for appraising PPP projects is given by the PPP Guidelines of 2018 under the PPP Law of 2016, which stipulates a screening tool for PPP projects to be implemented by the RDB. The screening tool evaluates any project against six areas:

(a) Strategic suitability

(b) Preliminary feasibility

(c) Risk assessment

(d) PPP capability

(e) Fiscal affordability

(f) Institutional capability.

The inputs to the screening tool are based on a pre-feasibility study which needs to present the following:

(a) A concise description of the service needs and project objectives

(b) Technical viability, including key technologies and their viability, and key challenges to be overcome

(c) Initial E&S assessment

(d) Investment requirements, including a preliminary cost plan

(e) Revenue forecasts, including sources and major sensitivities

(f) Land requirements, status, timing, and cost

(g) Key risks, mitigation, and management in a risk allocation matrix

(h) A preliminary estimate of funding available both, for the project and the procurement process

(i) An outline of the key benefits of the project and the primary beneficiaries

(j) An economic cost-benefit assessment

(k) Financial viability, including sensitivities and a basic financial model

(l) A preliminary VFM analysis

(m) Action plan to bring the project to market, including costs and key government responsibilities such as land acquisition, and so on

(n) A list of stakeholders that have to be consulted both within the Contracting Authority and from other government departments.

Typical Project Cycle for PPP Projects in Rwanda

The project cycle typically follows seven stages.

Stage 1: Project Identification

The first stage in the project cycle is the identification of projects. It shows an initial review of the different project ideas from identification of the need of the project to the analysis of stakeholders. A situational analysis providing the development context and livelihoods analysis is then provided. Assessment of projects' effects on the social and economic sectors of the project are examined. Potential projects are then identified based on prior analyses. Other relevant institutions such as the RDB, MINECOFIN, and MINICOM are involved at this stage at the technical level.

Stage 2: Project Formulation

The second stage in the cycle develops the initial project ideas from the project identification stage into more detailed proposals. Many agencies, both international and national, use a logical framework for structuring their project design. The manner in which project activities will be operationalized is demonstrated through the preparation of work plans and personnel schedules. The logical framework sets out the basic structure for the projects identified. A work plan presenting the project's structure, goal, objective, outputs, and activities is necessary to be designed at this stage.

Stage 3: Project Preparation

The preparation stage has three steps:

- Feasibility study: this is an analysis used in measuring the ability and likelihood to complete a project successfully accounting for economic, technological, legal, and scheduling factors.

- Preliminary design: this involves preparation of the initial outlook of the project. It considers the time, costs, and labor that are needed to execute a project.
- Detailed design: this shows the project's budget, the time frame for its implementation, and all the steps to be undertaken to execute the project.

The pre-feasibility study will be submitted to the RDB to conduct a preliminary screening on the project to ascertain if the project can be taken up through the PPP procurement route. The RDB will deploy the Project Screening Tool and evaluate the project on various parameters and conclude on the suitability of the project for PPP. This initiates Stage 1 in the PPP guidelines.

Stage 4: Appraisal

A project appraisal criterion is formulated. The objective is to assess the different projects from social, economic, technical, institutional, environmental, political, sustainability, and risk perspectives. A stakeholder analysis, participation, and their ability to influence a project will be conducted. A social cost-benefit analysis is used in this stage to determine the attractiveness of a proposed investment in terms of the welfare of society as a whole.

Larger projects will be submitted to the Public Investment Committee(PIC)to assess the project from the perspective of public investment priorities and approve the preparation of a full feasibility study for the project. Post approval by PIC, the RDB will register the project in its database to track it through various stages of the development process. Furthermore, the PPP SC will be informed of the project for its records.

As a next step, the contracting authority shall prepare the detailed feasibility study for the project and submit it to the RDB for review. The RDB shall form a Technical Committee for the project that will review the project on behalf of the GoR. The Technical Committee shall review the project's financial feasibility, assess whether the PPP delivers VFM, and review the risk-sharing arrangements and PPP structuring for the project. The MINECOFIN representative in the Technical Committee will assess the fiscal commitment and contingent liabilities in the project, comment on the fiscal affordability, and provide recommendations on the project.

The PIC shall review the project from the viewpoint of economic feasibility and strategic investment priorities of Rwanda. The project will thereafter be recommended for implementation by the PIC.

The Contracting Authority shall submit the feasibility study along with the recommendations from the Technical Committee and PIC to the PPP SC for approval. The approval from the PPP SC on the feasibility study authorizes commencement of the competitive procurement procedure for the PPP project.

Finally, the bidding documents, including the draft PPP agreement, will be prepared by the Contracting Authority and submitted to the RDB for its review and approval. The Technical Committee will evaluate the bidding documents, the qualification criteria, and the evaluation processes. The draft PPP agreement will be evaluated to confirm the risk-sharing arrangements in relation to the approved feasibility study and other aspects of the project. The MINECOFIN representative in the Technical Committee shall review the PPP Agreement and more specifically approve the drafting of the clauses related to fiscal commitment and contingent liabilities in the documents. The Technical Committee shall compile comments and submit it to the Contracting Authority for its consideration and modification to the documents. The Contracting Authority shall make modifications to the documents and resubmit the final bidding documents to the

RDB for its approval. The RDB will approve the revised documents and the Contracting Authority can proceed to call for Request for Expressions of Interest or RFQs for the project.

Stage 5: Decision-Making and Negotiations

At this stage, the PPP partner is to be selected and the agreement is to be negotiated. First, the Contracting Authority will invite an RFQ for the PPP project. The responses received from bidders will be evaluated by the Contracting Authority based on the criteria specified in the RFQ. The Contracting Authority shall prepare a shortlist of bidders who fulfil the criteria and submit a summary report to the RDB. The RDB will review the evaluation of the RFQ and submit its recommendation to the SC. The SC shall approve the final shortlist of bidders that will be invited to submit bids.

Second, the Contracting Authority will release the RFPs to the shortlisted bidders, convene consultation meetings, and may revise the bidding documents and reissue it to the shortlisted bidders. The Contracting Authority shall consult the Technical Committee in the event that changes are to be incorporated in the draft PPP agreements that may cause material changes in the bidding documents, the project risk-sharing arrangements, VFM assessments, or the position of the government with respect to fiscal commitment and contingent liabilities.

The Contracting Authority will receive responses to the RFP from the bidders. The Contracting Authority shall evaluate and rank the bids based on the criteria specified in the RFP. The Contracting Authority will prepare an evaluation report in which it identifies the preferred bidder, and then submit it to the SC with a copy to the RDB. The RDB will review the evaluation of the RFP and submit its recommendation to the SC. The SC shall approve the preferred bidder for the PPP project, and the Contracting Authority shall invite the preferred bidder for negotiations on the PPP agreement.

The RDB shall lead the negotiations with the private partner. It will be assisted by the Technical Committee. In addition, officials from the Ministry of Justice and other public agencies may be invited by the RDB for the negotiations. After negotiations, the MINECOFIN representative in the Technical Committee will assess and reconfirm the final fiscal commitment and contingent liabilities from the project. Project agreements requiring levy of user charges or tariff charged to consumers will need to be reviewed and approved by regulatory authorities according to the licensing regulations for that sector. The PPP Agreement will thereafter be submitted to the Attorney General for a legal opinion and then submitted to the Cabinet for approval. The Contracting Authority shall sign the PPP Agreement following approval by the Cabinet.

Stage 6: Project Implementation

This is the stage when the project is implemented. A project implementation plan is formulated setting clear expectations, roles, and responsibilities for all the members on the implementing team. Infrastructure is provided to the team. Coordination among key stakeholders is established to give updates on the progress of projects. Training and capacity building are offered to team members to ensure proper execution of the project. Moreover, project tasks and project deadlines are set at this stage of the project cycle.

Stage 7: Monitoring and Evaluation

M&E is an integral stage in the project cycle. Monitoring is an ongoing process during project implementation while evaluation occurs periodically, typically once a project has been completed.

Monitoring involves the purpose, focus, and responsibility of the project implementation. A checklist covering all these aspects is created at this stage to ensure that the project is properly implemented. Evaluation challenges the original assumptions of the project design and considers '*are we doing the correct project*?' It focuses on progress toward realizing a project's purpose and goal. This may be carried out at various times during a project's life during project implementation, at the end of the implementation, or several years after the completion of a project.

Regular reports on project implementation will be sent to the SC in prescribed formats, to enable tracking of PPP projects and information sharing with the SC. In the event of post-contract negotiations, the RDB and MINECOFIN will need to be involved in renegotiations which may materially affect the fiscal position of the government due to the fiscal commitment and contingent liabilities in the project.

Annex 4: Examples of Specific LPSS Opportunities for Implementation Phase

This annex illustrates examples of potential actions that can be taken with this program. Policy actions are associated with the incentive framework to achieve development targets.

While the framework is presented in basic steps, successful private sector engagement cannot be overly formulaic or prescriptive. Indeed, the history of economic transition suggests that successful economic interventionism is "a state of mind rather than a list of specific policies."[33]

Understanding that overly prescriptive or rigid approaches will lead to missed opportunities for private sector engagement, this list should not be considered exhaustive and final, but rather suggestive and exemplary of how the public sector can facilitate and incentivize the private sector to invest toward development objectives.

Priority Actions to Increase Land Productivity

Priority Action	Potential Public Sector Actions and Reforms	Potential Private Sector Opportunities
Facilitate VC' integration to connect farmers/cooperatives to formal markets so they can access inputs, extension services, credit, and investment in crucial infrastructure on their land	• Provide a legal framework for contract farming. This includes an assessment of whether or not the current contract law is sufficient or a separate law is required. Furthermore, the provision of guidelines and standard contract formats is included. • Establish VCPs to facilitate trust and a common agenda between farmers and agribusinesses. • Establish a program that facilitates contract farming, providing TA and financial incentives.	• Take active part in the formulation of VC upgrading strategies in collaboration with farmers specifying their needs and contributions to strengthen VC linkages. • Formulate BPs which take advantage of public incentives toward strengthening supply linkages. • Implement BPs.
Increased private sector participation in providing inputs	• Review the current subsidy scheme and consider the need for reforms which could enhance private sector participation.	• Invest in the production and distribution of inputs. • Consider the delivery of inputs and extension services as part of contract farming.
Investment in irrigation to increase yields and mitigate climate change	• Provide financial incentives for investment in irrigation, especially if investors will also manage the irrigation facilities and provide irrigation to surrounding farms. • Prioritize land for investors that will invest in irrigation of the land and for surrounding farmers. • Develop projects both for large-scale and small-scale irrigation in collaboration with interested agribusinesses.	• Take advantage of incentives and projects provided and implement the projects.

[33] Rodrik, D, 2013. "The Return of IndustrialIndstrial Policy"

Priority Action	Potential Public Sector Actions and Reforms	Potential Private Sector Opportunities
Investment in land husbandry and agroforestry against soil erosion	• Initiate dialogue with off-takers and owners of the relevant land to facilitate a market opportunity for farming newly terraced land. • Provide the necessary financial and contractual incentives for private sector and farmers to invest in soil fertility of newly terraced land. That is, finance the construction and co-finance the required inputs. • Co-finance agroforestry on relevant slopes in collaboration with farmers and off-takers.	• Take advantage of incentives and projects provided and implement the projects.
Provision of productivity enhancing services to farmers, that is, extension services, leasing, equipment for mechanization, and factoring	• Provide financial incentives for providers of innovative services with systemic impact. Demand can be stimulated with voucher schemes for farmers using the Smart Nkunganire System in the first years. • Reduce taxes on importing agricultural equipment.	• Provide innovative business models to be implemented in collaboration with farmers.
Improve access to more variety and cheaper animal feed	• Promote R&D in alternative inputs for feed producers. For example, insects, improved seeds, and alternative inputs. • Reduce taxes on importing feed products	• Develop innovative solutions to produce cheaper and better animal feed. • Use bulk-buying of animal feed to reduce the price and potentially distribute to farmers via out grower models.
Improve VC off-taker and producer linkages via service providers	• Facilitate PPDs and VC platforms to understand key missing links and challenges in particular VCs that neither producers nor off-takers are able to adequately cover. • Identify existing businesses managing relevant area, if any. • Understand limitations and potential for businesses to expand or scale services. • Determine level of investment needed by government to accelerate growth and/ or adopt new technologies. • Support private investment with the appropriate mechanism as per strategic framework. • Facilitate financial links and potential lending guarantees to facilitate asset financing or potentially working capital financing in the case of aggregation needed to pay farmers.	• Develop, formalize, or grow businesses providing the following services: ○ First mile transport ○ Cold chain ○ Crate management service ○ Post-harvest processing ○ Aggregating/trading facilities.

Priority Action	Potential Public Sector Actions and Reforms	Potential Private Sector Opportunities
Promote new off-takers with additional access to markets for Rwandan agriculture production	• Analyze for each priority crop the end-to-end VC needs, including candidate actors or gaps, needed to profitably reach the market potential. • Collaborate with RAB to develop investment case and promotion for investors and solicit feedback on potential needs for public financing incentives. • Seek internal investment and interested private sector investors to fill gaps throughout the VC. • Form and channel public support through competitive funded BPs involving all necessary VC actors, each with respective commitments.	• Establish or expand products in exporting businesses. • Bring processing knowledge or products with stable base, sourcing support, and export incentives.

Annex 5: Status on National Agriculture Investment Promotion Strategy

The NAIPS preceded PSTA 4 and formed the foundational interventions in terms of MINAGRI's efforts in investment promotion. Pillar I of the LPSS builds on the priorities and subsequent development in the NAIPS. The table below indicates the status on the various initiatives.

Status of the NAIPS 2017

Outputs	Status	Proposed way forward
Pillar I - Improving Investors' Access to Information		
1.1 Develop an agri-investor handbook	The Agriculture Investment Databank and the Agriculture Investment Handbook have been combined into an Agriculture Investment Information System with links to the RDB systems. The activity in the RDB is ongoing.	The MIS and ALIS 1 and ALIS 2 have been established and can be accessed online. However, setting up data collection systems to keep the information up-to-date and continuously making the systems more user friendly remains a key priority. There is a need to follow up with the RDB IT and Deal Accelerator teams to ensure that the Agriculture Investor Information System and the databank they have set up are officially approved and published for public access. There is also a need to coordinate and collaborate with the RDB to ensure that information is continuously updated online.
1.2 Develop ALIS	ALIS 1 is developed with MINAGRI; ALIS 2 is still under development.	
1.3 Develop a databank for investors and the GoR	Combined with 1.1. Furthermore, MINAGRI has published the MIS and the amount of available information from the NISR has increased significantly with EICV 5 and SAS.	
1.4 Develop pipeline of Rwandan investment ready businesses	There are about 150 companies in the pipeline in the RDB as of the beginning of 2019. Moreover, several programs are working toward connecting Rwandan agribusiness to international investors (for example, Nguriza Nshore, IMSAR, SNV HortInvest, and Belgian Development Agency ENABEL))	The government can keep a database and store information shared by businesses. However, private investors and specialized programs outside of government are better placed to determine the investment readiness of a specific business.
Pillar II - Improving Aftercare and GoR Collaboration in the Investment Process		
2.1 Implementation of the 2016 PPP Law	Several projects have been developed under this law, and more are planned, especially through the forthcoming NAEB strategy. However, general experience from agri-PPPs in Africa have revealed potential dangers. It is important to follow these projects closely and make sure lessons are learned.	Developing and negotiating PPP projects is resource intensive, and there is a need for more capacity in the executive branch of government. Secondly, in agriculture, there are many PPPs that are too small to be captured in the existing framework. There is a need for closer monitoring of these projects.
2.2 Implement ICT systems to improve GoR	The RDB has a customer relationship management (CRM) tool for	The RDB is leading this process but is currently focused on internal systems. MINAGRI will need to continuously

Outputs	Status	Proposed way forward
coordination in providing aftercare.	investment promotion and aftercare in the making.	follow the status of ongoing projects in monthly meetings.
Pillar III - Improve the Business Enabling Environment through Strengthened Agri-PPD		
3.1 Improve the PPD secretariat's ability to collect data from the private sector	The Agri-PPD secretariat is yet to be established under the newly planned project for agri-PPD for MINAGRI. For data collection, there is the International Business Management Institute (IBMI) system in the RDB, which is currently dormant. PSF/RCAL has developed a membership database that will have the ability to gather information from their member associations. PSF/RCAL and other private sector associations supported by donors have been engaging in dialogue with their members at the local and national level.	The Agri-PPD secretariat is planned to be preceded by an agri-PPD team in MINAGRI, which should coordinate closely with PSF/RCAL and other VC-specific associations. The team will integrate M&E information into MINAGRI's MIS system.
3.2 Build the technical capacity to articulate and evaluate issues raised through PPD	There have been trainings and capacity building of stakeholders, especially by PSDAG. Capacity building materials have been shared with MINAGRI, RDB, Rwanda Management Institute Board(RMI), PSF/RCAL, and private sector associations. The new agri-PPD program under MINAGRI has budget allocated in the plan for training.	The agri-PPD team in MINAGRI will develop this capacity. Meanwhile PSF/RCAL and other private sector associations will need to raise funds for this, possibly partnering with MINAGRI.
3.3 Develop a strong M&E framework for PPD	Yet to be done	Framework to be done though the PPD program currently being prepared. The agri-PPD team will collect data and integrate it into the MINAGRI MIS.
3.4 Develop a certification program for PPD facilitators	Not done	Local PPD champions will be trained through the PPD program currently being prepared.
Pillar IV - Cooperative Professionalization		
4.1 Develop a cooperative grading/rating system with private sector input	It has proven expensive to evaluate cooperatives relative to their size. Some scoping has been undertaken in collaboration with commercial buyers (in maize, for example) using Scope Insight. However, this will be hard to scale given high costs.	Cooperatives in general have struggled with governance and management. Experience shows that support to cooperatives is better done together with a larger company that has an interest in sourcing from the cooperative or with a service that can enhance productivity.
4.2 Evaluate cooperatives based on a system to	This has not been done systematically.	

Outputs	Status	Proposed way forward
uncover areas in which capacity building is required		Cooperatives can be supported through a competitive program with support structured around strengthening the business relationship between farmers and agribusinesses. The program can track which cooperatives are successfully and consistently supplying their market and honoring their obligations and can connect them to additional buyers. Moreover, the program can engage with cooperatives and agribusinesses to identify which gaps need to be filled to build capacity.
4.3 Professionalize cooperatives by filling gaps and providing capacity building and other mechanisms of support	Several initiatives have been underway such as the National Cooperative Confederation of Rwanda(NCCR). However, these have not been led directly by MINAGRI	
4.4 Facilitate the development of business contracts between high-rated cooperatives and other private actors	This has not been done systematically.	

Annex 6: Illustrative Value Chain Verticals Scoping - Financing Needs and Linking to Financing Tools

This annex considers six agribusiness VCs, as discussed and approved in the inception report, to provide a comprehensive sense of financing needs in the agribusiness sector as a whole and subsequently match the needs with appropriate financing mechanisms. Notably, the selection of these VCs prioritizes covering a broad spectrum of financing needs and does not seek to favor these six VCs over others.

It should be emphasized that these VCs are selected as examples to show how to identify relevant investment areas and roles and responsibilities of public and private actors. Therefore, the pitched commodities have been chosen to represent all agricultural sub-sectors. The table below shows the analyzed VCs.

Analyzed VCs

Sub-sector	Commodities
Food crops	Maize
Export crops	Coffee
High-value niche crops	Macadamia and vegetables
Livestock	Poultry and dairy

Secondly, a short assessment of these selected VCs will allow identification of opportunities as well as needs and constraints, which will be used to build a typology of possible investments to improve bankability, irrespective of the VC.

The approach is to conduct a rapid scoping of Strengths, Weaknesses, Opportunities, and Threats (SWOT) in each VC based on interviews with agribusinesses in each VC and other stakeholders, focus group discussions with farmers, and review of recent studies. The SWOT analysis illustrates possible areas of market failure, which informs potential upgrading opportunities and associated financing needs. This is instrumental in preparing a structured promotion framework under the form of a set of financing solutions available for leveraging private sector finance in all VCs.

The scoping consists of a SWOT analysis to identify opportunities for upgrading the VC along the nodes. The tables below show how these investment needs could be alleviated with public support and further includes the proposed engagement mechanism.

Recommended Financing Tools

Matching grant fund. Different modalities of matching grant funds have delivered good results across African countries. The grant share can, in principle, be anything ranging from 0 to 100 percent of the cost or alternatively be a fixed amount independent of the cost (block grants). Embedded within a comprehensive approach, grants should be used to target specific categories of actors that may be in need of support. Alternatively, funding can be channeled into strategic investment opportunities, which may exert greater impact.

The matching grant tool is particularly useful as it incentivizes the beneficiary to show commitment to the investment. It can incentivize agribusiness partners' investment in projects with positive externalities that

have little or uncertain financial return. This may be administered under a PPP framework if the investment is large but can also be given under established programs with specific purposes (for example, infrastructure, innovation, contract farming, or providing important services to farmers).

When direct financing is applied to credit-constrained smallholder farmers and SMEs, it can subsidize inputs and productive assets that are currently unaffordable. This approach is suitable for short- to mid-term projects, including investment in equipment and machinery and vouchers for key services demanded. It is particularly effective when involving a private partner to either secure a market (contract farming) or provide necessary inputs. The document explores the interconnection between direct financing and alternative mechanisms, such as direct provision, provision through leasing, revolving funds, and credit guarantees.

While PSTA 4 emphasizes matching grants, there are a number of alternative tools available to substitute or replace the use of grants.

Direct government provision. In this case, the funder supplies the goods or services directly instead of financing the purchase. Essentially, it is equivalent to a full grant, but without a third-party supplier. Currently, the government is providing a broad range of goods and services directly such as extension services, terracing, research, and market infrastructure. This is also planned for the PSTA 4 period, albeit there being a mandate for increasing the role of private sector suppliers.

On the other hand, public support has the inherent risk of being supply driven and not responding directly to the needs of beneficiaries. Some goods may be over-provided or not adequate. By way of example, the provided support may not respond directly to the needs of farmers. Similarly, infrastructure may be constructed where farmers are not committed to farm. Secondly, there is a risk that beneficiaries do not use the support as intended—for example by on-selling subsidized inputs. Similarly, providers may inflate prices of subsidized goods and services. By leveraging private sector investment, the implementing capacity can improve efficiency and effectiveness. Public investment can to a larger extent be provided in collaboration with the private sector either in the form of grants, matching grants, credit guarantees, or under a PPP agreement.

Provision through leasing. This provision is relevant in cases where the farmer/VC actor does not have funds for necessary investment such as equipment or fixed assets. Instead, they can lease it for the period needed. This can be very short term (for example, a tractor leased for a few hours during harvest season) or for a longer term (for example, warehouse storage for a season). In some cases, leasing can be a stepping stone toward ownership, such that the recipient owns the asset after a certain period of leasing it (rent-to-buy). The public sector can provide leasing services, but in most cases leasing solutions are supplied by the private sector.

Equity investment/joint ventures. In this case, the public sector takes a stake in the partner company. This would be part of PPP, but with a direct government stake in the PPP special purpose vehicle.

Revolving funds. This facility typically functions as working capital provided to the beneficiary for a given period. For example, the farmer receives revolving funds in the beginning of the season to acquire inputs, and the funds are repaid after harvest. Revolving funds may remain at the farmers' disposal for the following season or may be returned once the farmer has sufficient working capital. Revolving funds can be a stepping stone toward making farmers bankable, as it creates records of cash flows and credit history.

Credit guarantees. Credit guarantees are the core element of the risk-sharing facility and function as an alternative to direct financing. The public sector incentivizes FIs that are lending to the agriculture sector by covering part of the risk associated with lending to the beneficiary. A loan application is first assessed and approved by the FI based on its risk assessment and then risk coverage sought from a government de-risking facility. The de-risking facility will then conduct a secondary-level appraisal to determine the appropriate cover needed. For projects which are highly economically viable, the analysis will look at the opportunity to subsidize interest rates building on PSTA 4's finding that the cost of borrowing is expensive in Rwanda. This approach is to ensure FIs' appetite for the transaction and to ensure the government does not accept coverage that FIs will not accept. Direct-financing mechanisms may be used as a complement to credit guarantees to render lending even more attractive.

Summary of VC analysis: Nature of Investment Needs in VC Scoping and Possible Role of Parties

Investment Areas	Nature of Needs	Duration of Financing Need	Player with the Need	Possible Role for the Public Sector	Possible Role for the Private Sector (Off-takers, Farmers, Cooperatives)
1. Coffee VC					
Upgrading opportunity 1: Improving cost-efficiency and competitiveness **Addressed SWOT:** • Production and productivity declining (ageing trees) • Coffee washing station (CWS) inefficiency leading to overcapacities • High operational and logistic costs • Strong competition in price from neighboring countries					
Replace old trees on existing fields	Investment: Cost of the seedlings, planting, and tree care	Long term	Farmers	Provide the financing for the nurseries and the inputs if commitment from farmers and off-taker is present	Farmers to offer their labor, off-takers to provide TA
Plant new trees	Investment: Cost of the seedlings, planting, and tree care	Long term	Farmers	Provide the financing for the nurseries and the inputs if commitment from farmers and off-taker is present	Farmers to offer their labor, off-takers to provide TA.
Increase access to finance (input and working capital)	Financing	Short term	Farmers, cooperatives, and private CWSs	Provide partial guarantee on loans.	Risk-sharing facility engaging each player to bear the risk on loan
Strengthen extension services	Training and coaching	Short term	Extension agents	Mobilize public agents.	Dedicated agents from off-taker to strengthen

Investment Areas	Nature of Needs	Duration of Financing Need	Player with the Need	Possible Role for the Public Sector	Possible Role for the Private Sector (Off-takers, Farmers, Cooperatives)
					extension agent capacities.
Strengthen CWS management capacities	Training and coaching	Short term	Cooperatives and private CWSs	Fix standards and regulate.	Private sector to manage organization and support costs
Innovation toward reducing cost (energy)	R&D	Medium term	Cooperatives and private CWSs	Tax incentivization on imported materials.	Private sector to manage organization and support costs
Improve CWS reliability for farmers through sharing of information	Information management	Medium to long term	Platform	None (incentives only).	Private sector platform to manage organization and support costs
Upgrading opportunity 2: Improving quality **Addressed SWOT:** • Potato Taste Defect (PTD) • Quality control at CWS level					
Research in agronomics (pest management against PTD)	R&D	Long term	Research centers	Provide the financing to public center and disseminate.	None
Build quality warehouses	Infrastructure	Medium term	Cooperatives	Provide part of the financing through matching grants.	Financing and management
Increase CWS drying capacities	Equipment	Short term	Cooperatives and private CWSs	Provide part of the financing through matching grants.	Financing and management
Increase CWS technical capacities	Training and coaching	Short term	Cooperatives and private CWS.	None (incentives only).	Private sector to manage organization and support costs

Investment Areas	Nature of Needs	Duration of Financing Need	Player with the Need	Possible Role for the Public Sector	Possible Role for the Private Sector (Off-takers, Farmers, Cooperatives)
Upgrading opportunity 3: Moving upmarket **Addressed SWOT:** • Higher value niche market coffee • Strong demand for specialty and quality coffee in the United States and in Europe • Reputation of Rwandan coffee to be strengthened					
Invest in branding and reputation based on origin, certification, and traceability	Communication campaign	Medium term	RDB	Invest in external communication to increase awareness of Rwanda being home of quality coffee.	None
Market intelligence and value creation at the VC level	Information management	Medium term	Platform	Collect data based on public agent network.	Private sector platform to manage organization and support costs
Build cooperative technical capacities in post-harvest handling and stock management	Capacity building/ management	Medium term	Cooperatives	Provide TA/management services through a provider	Buyers can identify high-capacity cooperatives
Facilitating loans for working capital	Financing	Short term	Cooperatives /aggregators	Guarantee loans (through the de-risking facility)	Private investors to participate in the de-risking mechanisms
Increase storage and shelling capacities at decentralized level	Equipment	Medium term	Cooperatives /aggregators	Support with shelling equipment	Manage post-harvest handling process
Upgrading opportunity 4: Irrigation and extension through outgrower schemes to reach critical mass of production for exporting **Addressed SWOT:** • Existing outgrower schemes with strong inclusion of small farmers • Farmers need intensive support on various dimensions (production: inputs, TA, irrigation, and so on) • Logistics and international market demands require a critical mass of production for exporting					

Investment Areas	Nature of Needs	Duration of Financing Need	Player with the Need	Possible Role for the Public Sector	Possible Role for the Private Sector (Off-takers, Farmers, Cooperatives)
Develop proper irrigation scheme (addressed below)	Infrastructure and equipment	Short term	Farmers and cooperatives	Invest in heavy infrastructure (intake and conveyance).	Investment in the distribution system
Strengthen farmer technical capacities	Training and coaching	Short term	Farmers	Mobilize public agents.	Off-taker to provide technical support, along with input package
Support organic practices and certification	Training and coaching	Short term to medium term	Farmers	None (incentive only).	Farmers/off-takers to invest to improve practices and apply for the certification
Increase cold storage capacities and improve management	Equipment and training	Short term to medium term	Cooperatives and off-takers	Public investment	Off-takers to carry out operations and maintenance management
2. Macadamia VC					
Upgrading opportunity: Expand output with accelerated production of seedlings and irrigation **Addressed SWOT:** • Currently, lack of supply of seedlings • Crop can grow on slopes and in poor soil; high profit per hectare and year-long season; simple post-harvest process • Irrigation may double yields					
Accelerating production of seedlings	Investment in setting up nurseries	Short term	Farmers, entrepreneurs, and SMEs	Facilitate access to land and guarantee on loans.	Design, finance, build, and manage facilities
Development of irrigation scheme	Infrastructure and equipment	Short to medium term	Cooperatives	Invest in heavy infrastructure (intake and conveyance) and provide guarantee on loans.	Investment in the distribution system

Investment Areas	Nature of Needs	Duration of Financing Need	Player with the Need	Possible Role for the Public Sector	Possible Role for the Private Sector (Off-takers, Farmers, Cooperatives)
3. Dairy VC					
Upgrading opportunity 1: Increasing the utilization of MCCs' installed capacities **Addressed SWOT:** • Inefficiencies in the collecting channel have led to MCCs facing high operating costs, with knock-on effect on purchasing prices to farmers that remain low					
Improving access to water	Infrastructure	Short term	MCCs/ cooperatives	Invest in adduction and water harvesting.	Invest in distribution system and manage the installation
Equipping MCCs with solar panels	Equipment	Short term	MCCs	Provide matching grants.	Invest in solar panels and manage the installation
Strengthening MCC technical and management capacities	Training and coaching	Short term	MCCs/ cooperatives	Mobilize public agents to train trainers on safety standards.	Private sector to manage organization and support costs
Facilitating loans for working capital	Financing	Short term	MCC	Guarantee loan (through the de-risking facility)	Private sector to provide their participation in the de-risking facility
Upgrading opportunity 2: Improving quality and safety standards to attract formal buyers **Addressed SWOT:** • Poor quality and safety management deters formal buyers to take up production					
Improve/ increase cooling capacities	Equipment	Short term	MCCs	Provide matching grants.	Financing and management
Ensure quality cold chain from producers to buyers	Material and vehicles	Short term	MCCs/ Cooperatives	Provide tax incentivization on material and vehicle.	Financing and management
Upgrade control system	Training and coaching on good practices and the law	Short term	MCCs	Train master trainers, establish controls, and regulate to enforce the law	Carry out sensitization and training of MCC operating team

Investment Areas	Nature of Needs	Duration of Financing Need	Player with the Need	Possible Role for the Public Sector	Possible Role for the Private Sector (Off-takers, Farmers, Cooperatives)
Upgrading opportunity 3: Ensuring regular and reliable milk production throughout the year **Addressed SWOT:** • Seasonal effect and low yield due to lack of animal fodder and proper animal health assistance					
Facilitating access to fodder/forage/concentrate through stimulating demand	Financing	Short term	Cooperatives, on behalf of their members	Guarantee loan (through the de-risking facility) and provide incentive to supply.	MCCs and buyers to provide contract to guarantee uptake
Support to national health service	Investment in a service delivery network	Medium term	Private companies	None (incentive only including favorable policy and regulation).	Private sector to rollout a national network
Reinforce farmers' technical knowledge	Training and coaching	Short term	Farmers	None (incentive).	Cooperatives and MCCs to finance and manage
4. Poultry VC					
Upgrading opportunity: Increase production through lowering the cost of inputs **Addressed SOT:** • Rwanda poultry industry remains dependent on imports for inputs: especially feed and disease mitigation					
Availability of vaccines in rural areas	Logistics and distribution channel	Short term	Agro-dealers	Subsidize transportation and promotes innovation.	Increase production/availability
Specialized technicians in poultry farming	Training and coaching	Short term	Public agents	Recruit agents and manage training dissemination.	Dedicate technical agents to train trainers
Best practice dissemination	Training, Coaching	Short term	Farmers	Mobilize public technical agents.	None
Research on feed formula using national material – better soya varieties or use of insects	R&D	Medium to long term	Research centers	Facilitate public provision.	None

Financing Needs in Coffee

The Coffee VC in Figures

- 350,000–400,000 growers; only 20% members of cooperatives.
- 42,000 ha, out of which 35,000 are small farms.
- Between 20,000 and 25,000 tons produced per year.
- Almost 300 CWSs, with installed capacities of 140,000 tons of cherries.
- 98% exported, mainly in Europe, under the form of fully washed or semi-washed beans.
- Value of export on average: US$70,000,000 per year.

Current situation

Coffee is among Rwanda's traditional exports with a well-established private sector and thus relatively higher potential for further leveraging private sector potential. The main challenges in coffee are:

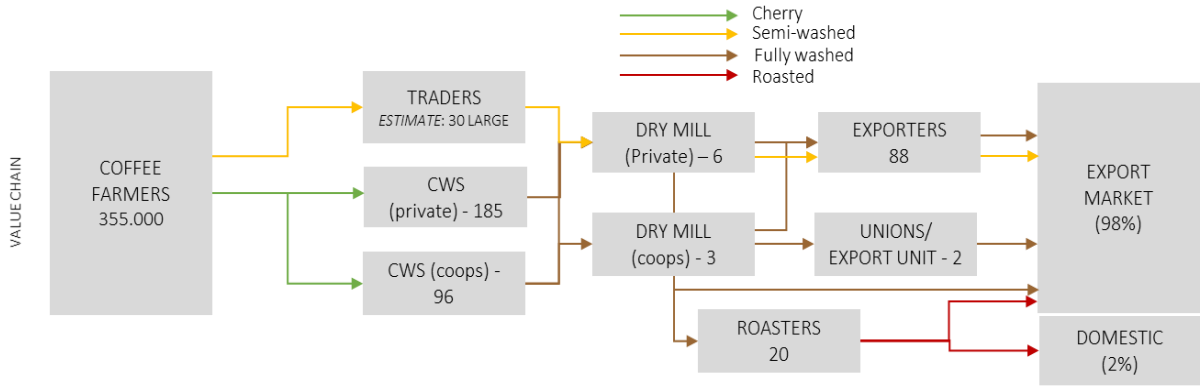
- **Low yields due to ageing trees and low use of inputs.** Current yields are at 2.8 kg per tree, which PSTA 4 targets to increase to 4 kg per tree. Around 26 percent of coffee trees are above 30 years old [34] and fertilizer application is considerably lower than optimum (40 percent).

- **Costs of aggregation and washing is high and CWSs operate below capacity.** CWSs are organized as cooperatives with many smallholder members. Many scattered members cause high costs of logistics and transactions, and the cooperatives often have low capacity utilization and cash flow issues. Consequently, working capital for inputs is limited.

- **International prices are volatile, causing market risks for farmers.** Considering Rwanda has relatively high production costs, farmers receive close to no margin when the international price is low. This is a significant disincentive for production, aggravated by the fact that there is no specific law on contract farming, which can support enforcement of contracts in this specific area.

Flow of Coffee along the VC

Dee



Source: Twin 2018; CBI 2018.

With the current margins and ageing of trees, there is a considerable possibility that producers will switch to other crops, unless incentivized.

[34] NAEB, Coffee Census 2015.

There are essentially two possible solutions to increase profits: (a) improving cost-effectiveness and competitiveness or (b) improving quality and moving upmarket to more fully washed specialty coffee. The CPSD also underlines the importance of the interventions mentioned here.

Both solutions are essential. Yet, while there have been significant efforts in past years toward the high-value solution, yields and farm-gate prices are currently too low for coffee to be an attractive VC. Therefore, this strategy considers an upgrading opportunity to work with the private sector to increase yields and reduce production costs to increase margins at the farm-gate.

SWOT Analysis for Coffee VCs

Strengths	**Weaknesses**
● Well-organized sector and administrative environment. ● Traditional knowledge in coffee farming. ● Existing network of CWSs with available capacities. ● Good traceability and transparency throughout the VC. Already 20% of the production is certified. ● Ease of doing business. ● Political stability.	● Production and productivity declining (ageing trees). ● CWSs' inefficiency leading to overcapacities. ● Low farmer motivation given low prices and lack of trust between actors. ● High operational and logistical costs. ● Lack of VC financing, lack of formal financing. ● PTD. ● Quality control at CWS level.
Opportunities	**Threats**
● Favorable conditions for growing quality coffee, particularly the high-quality varieties like Bourbon arabica. ● Strong demand for specialty and quality coffee in the United States and in Europe.	● Bulk coffee market in Europe on the decline. ● Strong competition in price from neighboring countries. ● Consolidation of the coffee market leading to lower supplier power. ● Climate change.

Investment Needs/Opportunities		
Productivity	**Quality**	**Moving Upmarket**
● Replace old trees on existing fields. ● Plant new trees. ● Increase access to finance (input and working capital). ● Strengthen extension services. ● Strengthen CWS management. ● Innovate toward reducing cost (energy). ● Improve CWS reliability for farmers through sharing of information.	● Research agronomics (pest management against PTD). ● Build quality warehouses. ● Increase CWS drying capacities. ● Increase CWS technical capacities.	● Grading facilities ● Certification to quality standards ● Branding in high-value markets (mainly Japan, the United States, and Europe)

Improving Productivity

Beyond production of cherries at field level, the competitiveness of the VC and the quality of the produce (before roasting, grinding, and export) rely heavily on the primary processing which converts the cherries into parchment and then green coffee. Coffee production in Rwanda is reputed quite competitively already when compared to neighboring countries. However, improving further efficiency in the VC would allow to secure greater revenues for farmers and would ensure better resilience in the event of a price shock on the global market. The farm-gate price is sensitive to farmers with land of only 0.11 ha on average. Production costs could be reduced through better use of the CWS installed capacity (only 60 percent on average at national level is used today) and this could be achieved through increasing the production of cherries.

However, CWSs suffer from poor management capabilities. Lack of transparency and delay in payment lead to disheartened farmers turning their back to coffee. National output has tended to decrease in the past years. With uncertain supply of cherries, CWSs are deemed unreliable and have little access to external finance. The lack of working capital to buy cherries further reduces their ability to operate cost-effectively. This strategy move implies an increase in production of cherries and improvement of CWS capability to process them cost-effectively. The CPSD talks about investment in professional management for CWSs.

Improving Quality

One major quality issue is the PTD, which is considered the major constraint for buyers of Rwandan coffees. PTD makes the coffee taste and smell like raw potatoes. PTD is thought to be caused by specific bacteria that infect the cherry in the fields. Recent studies have shown that the infection could be reduced through the application of better agronomic practices. Besides, with a niche strategy built around reputation of origin and branding, it is necessary to maintain strict high-quality standards from production to roasting and grinding. Yet, poor quality management at the CWS level leads to downgraded beans that cannot fetch a premium price. This strategy move comprises actions to ensure standardized and constant quality ensured by technical capacity building and suitable infrastructure.

Moving Upmarket

Rwanda has ideal conditions to grow coffee, particularly favorable to grow high quality varieties like Bourbon Arabica. However, the country has no particular advantages compared to larger competing countries, such as Kenya. The best strategy is to target high-value specialty markets and special origin niches. In the United States, the specialty share of the total market is on the rise growing from 37 percent in 2011 to 59 percent in 2017. This expansion is expected to generate extra value worth US$9 billion by 2020. This trend is expected to accelerate in Europe, too. Furthermore, although not a quality in itself, certification and traceability has often been considered a feature valued by the market, and premium levels may be lower than that of the mainstream coffees certified through UTZ[35]/Rainforest Alliance and Fairtrade. Today, at least 20 percent of the Rwandan production is certified. The driver for buyers is quality, associated with a marketing strategy based on origin and storytelling. The share of certified coffees, in particular organically certified coffee, is expected to continue to rise due to the growing demand. On the farmer's end, certification may attract premium prices and allow access to higher skill sets. This upgrading opportunity includes investment in improving brand awareness about Rwandan coffee.

[35] UTZ is a certification programme. The name comes from Uts Kapeh, meaning "Good Coffee" in the Mayan language.

Identified Financing Needs in Vegetables

Current Situation

The Vegetable VC in Figures

- Roughly 8,000 ha planted with vegetables.
- Vegetable production in the range of 30,000 tons per year
- Vegetables output accounts for an estimated 5% of the weight of all crops.
- 10 exporting companies, mainly to Europe; 10% to 15% of land under irrigation scheme.

Horticulture (including floriculture) has several emerging niche VCs in Rwanda with growing export figures (PSTA 4). This is mainly due to growing demand in Europe for crops with good growing conditions in Rwanda, especially chili, French beans, mushrooms, cut flowers, pineapples, and macadamia nuts, which all have favorable growing conditions in Rwanda. Several other crops are likely to be competitive as well. There are about 10 firms with significant exports. They operate either as exporting farmers, nucleus farms aggregating produce from surrounding out growers, or solely aggregating produce for export. Most of these firms have emerged over the past 5 years, driving the recent growth in export.

Export growth has also been propelled by several government initiatives. The GoR has engaged in a number of activities that have led to the entrance of a number of small businesses who are rapidly growing in the horticulture space. The initiatives spanned the expansion of RwandAir, bringing new direct routes to Europe from Kigali at subsidized prices; the establishment of the Export Guarantee Facility, the electronic single window, and subsidized irrigation through the SSIT; the establishment of the Horticulture Sector Working Group; and operation of the pack house at NAEB premises as well as cold storage at Kigali International Airport.

In general, overseas markets are considered more appealing than the domestic and regional markets due to consistent demand, beneficial payment terms, and a competitive edge in having counter-seasonal supply opportunities. Yet, reaching the overseas markets requires a consistent supply of quality produce and standards compliance throughout the supply chain: production must reach a critical mass to meet the requirements from international clients.

Therefore, increasing the supply of quality raw materials is the key to increase exports and linking farmers to high-end markets. This enables investment in required facilities with significant fixed costs such as cold chain facilities, cargo flights, standards compliance systems, packing facilities, marketing and branding, and others.

SWOT Analysis

Strengths	Weaknesses
• Favorable soil and climate conditions. • Low local demand sustains good prices and reduces side-selling risk • Rwanda has competitive advantage on cost over Kenya, one of the leading producing countries. • Existing out-growers schemes	• Farmers need intensive support on production: inputs, technical assistance, irrigation, etc. • Weak business skills at farm level. • Inconsistent/Unreliable irrigation scheme; over-dependency on rains while export markets demand consistent supply • Insufficient cold storage capacities in case of expansion. • Scattered producers with little output and few organized cooperatives • Cold chain is broken between cold facilities with (5-10%) in transport from aggregation facility to the airport alone
Opportunities	Threats
• Strong international demand on the rise, especially for organic produce • Profitable margins • Regular year-round demand with stable prices • Horticulture has become a priority for the GoR and receives support	• Risk of over-supply if production is not regulated and/or planned • Climate change leads to higher risks of drought of over flood • Dependency on air freight subsidies which may be terminated
Financing Needs	
Production-Level Improvements • Expand irrigation schemes for out-growers and as industrial blocs • Reinforce cooperative role in aggregating output • Strengthening farmer technical capacities • Support organic practices and certification	**Cold Chain** • Increase fixed cold storage capacities and management • Decentralized cold storage units • Vehicle with cold storage • Upgrading of centralized facilities to maintain constant temperatures before loaded on plane

Potential Next Steps for Vegetables

Developing the production and scale up of exports, that is, increasing output to reduce costs through economies of scale and improving consistency and reliability. Rwanda has established adequate production capacities and is organized to tap into high demand from export markets, particularly through out grower schemes. Yet, despite high and stable demand in international markets, product supply remains uncertain in quantity and quality due to challenges at the farm level. There is potential to increase production and generate economies of scale through increased use of fertilizers and selected seeds, better water control, and improved farm practices. In terms of market positioning, the organic segment appears to be growing rapidly and thus may be of interest to farmers in years to come with the perspective to reduce pesticide dependency. For the transition to organic production, training in new practices and investment in certification will be needed as mentioned in the CPSD, to improve horticulture production in Rwanda.

Maize VC Assessment

The Maize VC in Figures

- Around 700,000 tons produced per year.
- Roughly 1 million farmers, mainly smallholders with average farm size of 0.6 ha.
- Between 250,000 and 300,000 ha planted.
- Maize import value accounts for US$20 million today.
- Maximum of 3% of maize growing areas are equipped with irrigation scheme.
- Need for storage capacity outstrips installed capacities by 60% to 70%.

SWOT Analysis

Strengths	Weaknesses
• Long experience with growing maize, as one major staple crop in the country • Certified seeds available, 75% locally produced • Well organized VC with high cooperative membership • Rwanda positioned as exporter of quality processed maize(flour) • Strong food security crop with intensive kcal/ha and interchangeability between auto-consumption and selling	• Low revenue per hectare relative to other crops • Fragmented production limits scale and increase cost of aggregation • High dependency on rain • Small farmers lack access or interest in inputs to achieve high yields (costs, inefficiencies) • Sub-optimal post-harvest process leads to high losses and aflatoxins (15 to 30% due to lack of proper storage) • Strong, unregulated market for maize and flour activates informal traders with no concern for quality
Opportunities	Threats
• Livestock industry on the rise needs maize to produce animal feeds • Existing national market and several major buyers • High demand at regional level	• Climate change affects rain patterns and put rain-fed agriculture at risk

	• Strong neighboring countries with high competitiveness, notably the production on large acreage • Distortion on the input market due to public subsidies, private companies are crowded out
Financing Needs	
Production-Level Improvements • Build cooperative technical capacities in post-harvest handling • Increase collection sheds at cooperative level • Support aggregations and processing business models that address aflatoxin and formalize the maize market	

Potential Upgrading Opportunities

Supporting production of safe and quality maize to increase market capacity for commercial maize production. Poor post-harvest drying and storage facilities account for a loss of up to 15–30 percent of the total maize produced. When famers within cooperatives have access to proper drying centers and sheds, they are able to store their produce for up to three months without any loss. For other individual farmers, drying and storage at home makes the maize highly susceptible to higher moisture content, which leads to mold, discoloration, and even development of aflatoxins. For the support of Rwanda's position in the high-value niche of flour production, farmers should further develop their ability to supply grains guaranteed free of mold and aflatoxins and matching the quality requirement from millers. This upgrading opportunity comprises investments to improve and increase local drying and storage capacities, which go together with improving farmer access to market information so that they could market grains at a better price and reap the full value of quality maize. Choosing the right location for installing new sheds could also have an impact on aggregation cost and consequently would increase efficiency and grain competitiveness. Incidentally, a proper shed could be thereafter used to serve for the warranting of the harvest to give farmers access to a financing solution (through the warehousing receipts system). This upgrading opportunity includes the reinforcement of the national laboratory at the Rwanda Institute for Conservation Agriculture (RICA) for it to conduct closer control of the aflatoxin rate at cooperative level and to sensitize farmers.

Macadamia VC Assessment

The Macadamia VC in Figures

- Growing areas in the range of 800 ha.
- Annual output in the range of 300 tons.
- Minimum 5 years before first harvest after planting.
- Global demand outstrips supply two times.

SWOT Analysis

Strengths	Weaknesses
• High profit potential with currently 8% margin at farm level • Regular cash flow all year long for farmers • Favor agroforestry model • Limited labor and cost • Relatively simple post-harvest process • Drought resistant crop which can grow in many soils types	• Five years from planting to production may render planting unprofitable for credit/constrained farmers • Lack of seedlings towards increasing production • While irrigation is not essential, water management could double yield but remains under-developed • Insufficient economy of scale for processing to be profitable • High purchasing prices due to strong demand affect competitiveness
Opportunities	Threats
• Suitable for out-growers schemes generating cash-flow for farmers throughout the year • Resistant to drought • Appropriate for slopped land	• Global prices may decline in the coming years due to international production patterns • Risk of theft from the farms given high value of produce
Financing Needs	
Production-Level Improvements • Invest in upgrading seedling production • Promote out-grower schemes and contract farming coupled with incentives for agri-business to invest in land-husbandry, irrigation, inputs and extension services • Facilitate investment in hillside irrigation	

Potential Upgrading Opportunities

Support increased production to generate economies of scale. Market demand is strong, and the crop is well remunerated for farmers. Yet, macadamia is a medium-horizon investment as five years are needed for the tree to start producing and ten more to reach full yield. To expand production toward breakeven and capture market share globally, Rwanda should focus on economies of scale. The strategy is twofold: equip farms with irrigation schemes to increase yield in the short term and set up nurseries to significantly speed up seedling production.

Dairy VC Assessment

The Dairy VC in Figures

- Production estimated at 816,000 tons in 2018 from cattle headcount of 1.16 million.
- Roughly 300 cooperatives, out of which one-third are collection centres.
- Maximum 30% of the MCC total installed capacity is actually used..
- 45% of the total output is self-consumed.
- 82% of the volume marketed is sold through informal channels with no control.
- Only 2% of the producers are members of cooperatives (total of 850,000 farmers).
- Supply net deficit in 2020 forecasted to be around 30% in worst case scenario, while still widening.

SWOT Analysis

Strengths	**Weaknesses**
• Historic knowledge and practices of animal husbandry and milk production • Suitable agro-climatic conditions(north and east) • Animal genetic potential has improved • Existing veterinary service in rural areas • School Milk Programme	• Scarcity and low quality of animal feed • Lack of access to animal health and improved breeding services • Limited advisory and extension services • Challenging aggregation process • Low level of value added through processing • High informality-faster payment and lower standards requirements • Domestic market taste for unprocessed milk
Opportunities	**Threats**
• Dynamic demand that grows faster than supply • Potential of the regional market – especially milk powder in West Africa and DRC • Government support	• Climate change • Disease epidemics

Financing Needs		
Collection Centre Capacity	**Quality Improvement**	**Farmer support**
• Improving access to water • Equipping MCC with solar panel • Strengthen MCC technical and management capacities • Facilitating loans	• Improve/increase cooling capacities • Ensure quality cold chain from producers to buyers • Upgrade control systems	• Facilitating access to fodder/forage/concentrate • Support to livestock health services • Reinforce farmer technical knowledge

Potential Upgrading Opportunities

Increasing the utilization of MCCs' installed capacities. Before considering increasing the number of MCCs to absorb the whole production at national level, the utilization rate of the installed capacities should first be increased. Inefficiencies in the collecting channels have led to MCCs facing high operating

costs, with knock-on effects on purchasing prices to farmers that remain low. Producers are thus not incentivized to sell their milk to formal MCCs, but rather to the informal market that pays a higher price. Conditions to ensure reliable supply of fresh milk to MCCs would be to upgrade their capacities to collect produce, control the quality of the milk, and pay attractive prices. The *Impuza mashyirahamwe y'Aborozi ba Kijyambere ba Byumba* (IAKIB) cooperative ran a successful model that has demonstrated that strong management in addition to strong operational performance leads to farmer trust and eases access to finance for its members. Interventions are needed to reinforce MCCs' technical and management skills, improve their functional capacities (water, electricity, and cooling tanks), and facilitate access to seasonal financing.

Improving quality and safety standards to attract formal buyers. A general characterization of the dairy VC is that milk handling and trading is done through a system that does not encourage quality and does not support food safety. On the one hand, many of the dairy VC players lack the equipment and knowledge to handle milk in the appropriate way to ensure food safety, including cooling tanks, refrigerated vehicles, and so on. On the other hand, the informal market remains attractive because it does not require quality standards while at the same time offers attractive prices. Interventions are needed to enforce the law on milk handling and marketing, and support MCCs investment in cooling equipment.

Ensuring regular and reliable milk production throughout the year. The dominant extensive dairy production system relies heavily on rain for animal food (grazing, forage). This seasonal factor has a strong impact on the consistency of milk supply and revenue for farmers. Besides, farmer's low technical knowledge and the lack of a proper animal health service system keep yield at a low level. This upgrading opportunity looks at facilitating farmers' access to inputs and increasing their technical ability to manage their activities.

Poultry VC Assessment

The Poultry VC in Figures

- Meat production ranges around 18,000 tons per year which has increased from around 6,000 tons in 2011.
- Eggs production ranges around 130 million per year.
- Strong demand outstripping supply with imports in the range of 60,000 ton of meat per year.
- Only 30% of farms hold more than 500 birds.
- Coverage of day-old chicks needed in the range of 60%.

SWOT Analysis

Strengths	Weaknesses
• Strong demand-domestic and DRC • **Existing private sector interest** • Good weather and day/night cycle • **Suitable model for out-growers schemes especially with 16-week poulettes distribution rather than DOC**	• **Lack of veterinary coverage in rural areas** • Insufficient production of quality day-old chicks, balance being imported at high price • **Low use and low availability of proper animal feed impacts competitiveness** • Dominant traditional poultry farming
Opportunities	**Threats**
• Potential for simultaneous development of maize, soya, and insects VCs simultaneously	• Neighboring countries with a significant competitive advantage • Epidemics
Financing Needs	
Development of new seed varieties of soya to increase production potential Research on feed formula using alternative materials, e.g. insect feed Production of Day-Old-Chicks and 16-week poulettes Availability of vaccines in rural areas Specialized technicians in poultry farming Best practice dissemination of farming knowledge	

Annex 7: Identified Investment Projects in the Pipeline

The list below shows specific opportunities in Rwanda available to the private sector. They are part of the investment promotion efforts led by the RDB; the list is subject to continuous updates.

#	Potential Investment Opportunity	Investment Features	Investment Model
1.	KWM	A total of US$26.6 million *Phase 1*: US$16.1 million for reallocation and construction *Phase 2:* US$10.5 million for expansion	PPP or fully private sector
2.	Rwanda Farmers Coffee Company Ltd.	US$3–5 million investment made to date	Full acquisition, equity stake, or leasing model
3.	Powdered milk joint venture with Inyange	A total of US$15–20 m with the possibility to scale-up production	Set up specialized milk powder production plant in partnership with Inyange
4.	Bella Flowers Ltd.	A total of US$14.1 million US$8.1 million operational green house US$ 5.9 million additional green house	Full acquisition or leasing model.
5.	Kigembe Fish Farm	With US$1 million from GoR, covering new hatchery, laboratory, and rehabilitation of ponds	PPP or fully private sector

#	Potential Investment Opportunity	Investment Features	Investment Model
6.	Gabiro Irrigation	More than US$130 million from GoR and Netafim; initial investment estimated to be between US$3,500 and US$6,500 per hectare	PPP or private sector investors
7.	Gako Beef Farm and Abattoir	US$43 million, which will cater to both local and export markets; a phased approach envisaged that will start with farm development and move into different processing plants	PPP or fully private sector
8.	Agrigo Poultry Project	GoR to increase chicken meat production by 71% in the next five years (from 15,000 tons in 2017)	Fully privately owned operation
9.	Pork processing opportunity	GoR plans to increase pork meat production by 70% in the next 5 years (from 19,000 tons in 2017)	Fully privately owned operation
10.	Rutsiro honey production and processing	An existing processing unit is up for acquisition with a processing capacity of 165 MT/year.	PPP model by private investors, cooperatives, and MINICOM
11.	Macadamia processing sector: horticulture	Identified and mapped land for macadamia production: 832 ha in Kayonza; investors would engage in production and providing inputs to existing market or expand operations in processing	PPP or fully private investment
12.	Pineapple processing factory	Space identified in Ngoma and Kirehe for production and processing	Fully privately owned operation, joint business with the out growers
13.	Fish cage sector: aquaculture	GoR priority due to aquaculture's high potential to increase production	Fully owned by the private sector; available opportunities in the production of fingerlings, hatcheries, and processing plants
14.	Coffee production on the Kivu belt	Investment opportunity to develop large-scale coffee farming activities	Private sector
15.	Nyamagabe district tea estate opportunity sector	Investor needed to develop a joint company with outgrowers and to construct a processing facility	Fully owned by the private sector
16.	A dehydration facility for fruits and vegetables	Establish a full-fledged dehydrating plant for the commercial dehydration of fruits and vegetables in partnership with Farm Gate Ltd.	Joint venture model
17.	Burera processing plant sector: dairy processing	Processing plant owned by government and ready for acquisition Investors are welcome to bid to acquire the business.	Fully owned by the private sector

#	Potential Investment Opportunity	Investment Features	Investment Model
18.	Avocado	Avocados have the potential to be highly profitable for export to Europe and the Middle East via both air and sea freight. Out of 32 varieties grown in Rwanda, the Hass and Fuerte varieties are grown for export.	Private sector or joint venture
19.	Passion fruit	Investment required: approximately US$4 million and internal rate of return (IRR) estimated between 20–25% over 10 years.	Private sector or joint venture
20.	Seed processing plant	An existing business located in the special economic zone to be acquired.	PPP or the plant to be fully owned by the private sector
21.	Snow pea and chili farm	Developing a commercial snow pea and chili farm has the potential to earn high revenues and above market returns. Investment needed: approximately US$4.5 million with estimated IRR (20–25%) for over 10 years	Fully private sector with PPP possibility

Annex 8: Stakeholder Mapping

Stakeholder Mapping for the LPSS by TECAN/MINAGRI, 2019

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