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Report No: PAD2173

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 55.4 MILLION
(US\$75 MILLION EQUIVALENT)

TO THE

REPUBLIC OF BURUNDI

FOR A

GREAT LAKES REGIONAL INTEGRATED AGRICULTURE DEVELOPMENT PROJECT

April 14, 2017

Agriculture Global Practice
Africa Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective: Feb. 28, 2017

Currency Unit Burundian Franc (BIF)

US\$1 = BIF 1,688

US\$1 = SDR 0.73861244

FISCAL YEAR

January 1 - December 31

Regional Vice President: Makhtar Diop
Country Director: Bella Bird
Senior Global Practice Director Juergen Voegele
Country Manager: Nestor Coffi
Practice Manager: Dina Umali-Deininger
Task Team Leader: Chakib Jenane
Co-Task Team Leaders: Juvenal Nzambimana, Ziva Razafintsalama

ABBREVIATIONS AND ACRONYMS

AWPB	Annual Work Plan and Budget
BDS	Business development service
BIF	Burundi franc
BTC	Belgian Development Agency
CAADP	Comprehensive African Agriculture Development Program
CAHW	Community Animal Health Worker
CAPAD	Confédération des Associations des Producteurs Agricoles pour le Développement (Confederation of Associations of Agricultural Producers for Development)
CAS	Country Assistance Strategy
CEPGL	Communauté économique des Pays des Grands Lacs (Economic Community of the Great Lakes Countries)
CFCIB	Chambre Fédérale de Commerce et de l'Industrie du Burundi (Burundi Federal Chamber of Commerce and Industry)
CGIAR	Consultative Group on International Agricultural Research
CNTA	Centre National de Technologies Agro-Alimentaire (National Center for Food Technology)
CSA	Climate-smart agriculture
DA	Designated Account
DGTA	Direction Générale de l'Administration Territoriale (General Directorate of Territorial Administration)
DGE	Direction Générale de l'Elevage (General Directorate of Livestock)
DGMAVA	Direction Générale de la Mobilisation pour l'Auto-développement et la Vulgarisation Agricole (General Directorate for the Mobilisation for Agricultural Self Development and Extension)
DGPAE	Direction Générale de la Planification de l'Agriculture et de l'Elevage (General Directorate of Planning for Agriculture and Livestock)
DPAE	Direction Provinciale de l'Agriculture et de l'Elevage (Provincial Directorate for Agriculture and Livestock)
DRC	Democratic Republic of Congo
EAAPP	Eastern Africa Agriculture Productivity Program
EBA	Enabling the Business of Agriculture
EFA	Economic and Financial Analysis
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EU	European Union
FAO	Food and Agriculture Organization
FCS	Fragile and Conflict Affected State
FFS	Farmer Field School
FM	Financial management
FMD	Foot and Mouth Disease
FMIS	Financial Management Information System
GDP	Gross Domestic Product
GoB	Government of Burundi
GLR	Great Lakes Region
GLI	Great Lakes Initiative
GLR-IADP	Great Lakes Regional Integrated Development Project
h	Hour
ha	Hectare
IDA	International Development Association
IDP	Internally Displaced People
IFAD	International Fund for Agricultural Development
IFR	Interim Financial Report

IITA	International Institute of Tropical Agriculture
IPDP	Indigenous Peoples Development Plan
ILRI	International Livestock Research Institute
IPMP	Integrated Pest Management Plan
IPR	Implementation Progress Report
IRR	Internal Rate of Return
IRRI	International Rice Research Institute
ISA	International Standard on Auditing
ISABU	Institut des Sciences Agronomiques du Burundi (Institute of Agronomic Sciences of Burundi)
kg	Kilogram
km	Kilometer
MBC	Milk bulking center
M&E	Monitoring and evaluation
MCC	Milk collection center
MEEATU	Ministère de l'Eau, de l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme (Ministry of Water, Environment, Land Management, and Urbanization)
MGs	Matching grants
MINAGRIE	Ministère de l'Agriculture et de l'Elevage (Ministry of Agriculture and Livestock)
MSME	Micro, small, and medium enterprise
NAIP	National Agriculture Investment Plan
NARS	National Agricultural Research System
NGO	Non-governmental Organization
NPV	Net Present Value
PAIOSA	Programme d'Appui Institutionnel et Opérationnel au Secteur Agricole du Burundi (Institutional and Operational Support Program for the Agriculture Sector in Burundi)
PCU	Project Coordination Unit
PDO	Project Development Objective
PIM	Project Implementation Manual
PIU	Provincial Implementation Unit
PO	Producer organization
PPSD	Project Procurement Strategy for Development
PRASAB	Projet de Réhabilitation et d'Appui au Secteur Agricole et de Gestion Durable des Terres du Burundi Burundi Agriculture Rehabilitation and Support and Sustainable Land Management Project
PRODEMA	Projet de Productivité et de Développement des Marchés Agricoles Agro-Pastoral Productivity and Market Development Project
PSCF	Peace, Security, and Cooperation Framework
R4D	Research for Development
SLM	Sustainable Land Management
SME	Small and medium enterprise
SOP	Series of Projects
SORT	Systematic Operations Risk-Rating Tool
SRI	System of Rice Intensification
SSA	Sub-Saharan Africa
t	Metric ton
tCO ₂ -eq	Equivalent tons of CO ₂
ToR	Terms of Reference
WAAPP	West Africa Agriculture Productivity Program
WBG	World Bank Group
WUA	Water User Association
UN	United Nations



BASIC INFORMATION

Is this a regionally tagged project? Yes	Country(ies) Burundi, Congo, Democratic Republic of	Lending Instrument Investment Project Financing
<input checked="" type="checkbox"/> Situations of Urgent Need of Assistance or Capacity Constraints <input type="checkbox"/> Financial Intermediaries <input checked="" type="checkbox"/> Series of Projects		
Approval Date 05-May-2017	Closing Date 30-Nov-2022	Environmental Assessment Category B - Partial Assessment
Bank/IFC Collaboration No		

Proposed Development Objective(s)

The Project Development Objectives are: (i) to increase agricultural productivity and commercialization in Targeted Areas in the territory of the Recipient and improve agricultural regional integration; and (ii) to provide immediate and effective response in the event of an eligible crisis or emergency.

Components

Component Name	Cost (US\$, millions)
1. Smallholders' productivity and production enhancement	38.62
2. Support to investments in agro-processing and market linkages	23.74
3. Institutional integration, knowledge acquisition, and dissemination of information at the regional level	10.37
4. Project management and institutional support	7.00



Organizations

Borrower : Republic of Burundi
 Implementing Agency : Ministry of Agriculture and Livestock

<input checked="" type="checkbox"/> Counterpart Funding	<input type="checkbox"/> IBRD	<input type="checkbox"/> IDA Credit <input type="checkbox"/> Crisis Response Window <input type="checkbox"/> Regional Projects Window	<input checked="" type="checkbox"/> IDA Grant <input type="checkbox"/> Crisis Response Window <input checked="" type="checkbox"/> Regional Projects Window	<input type="checkbox"/> Trust Funds	<input type="checkbox"/> Parallel Financing
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Total Project Cost:

79.73

Total Financing:

79.73

Financing Gap:

0.00

Of Which Bank Financing (IBRD/IDA):

75.00

Financing (in US\$, millions)

Financing Source	Amount
IDA Grant	75.00
LOCAL: BENEFICIARIES	4.73
Total	79.73

Expected Disbursements (in US\$, millions)

Fiscal Year	2017	2018	2019	2020	2021	2022	2023
Annual	0.00	4.84	9.74	15.05	19.61	17.78	7.98
Cumulative	0.00	4.84	14.58	29.63	49.25	67.02	75.00



INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Trade & Competitiveness

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● High
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Substantial
8. Stakeholders	● Substantial



9. Other

● Substantial

10. Overall

● High

COMPLIANCE

Policy

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

Yes No

Does the project require any waivers of Bank policies?

Yes No

Safeguard Policies Triggered by the Project

Yes No

Environmental Assessment OP/BP 4.01

✓

Natural Habitats OP/BP 4.04

✓

Forests OP/BP 4.36

✓

Pest Management OP 4.09

✓

Physical Cultural Resources OP/BP 4.11

✓

Indigenous Peoples OP/BP 4.10

✓

Involuntary Resettlement OP/BP 4.12

✓

Safety of Dams OP/BP 4.37

✓

Projects on International Waterways OP/BP 7.50

✓

Projects in Disputed Areas OP/BP 7.60

✓

Legal Covenants

Sections and Description

Not later than six (6) months after the Effective Date, establish the Project Coordination Unit for the Project, which will assume overall responsibility over the Project.

Sections and Description

Not later than three (3) months after the Effective Date, designate its representative to the regional facilitation mechanism to ensure policy coordination and implementation between the Republic of Burundi and the



Democratic Republic of Congo.

Conditions

Type	Description
Effectiveness	The Recipient has established the National Project Steering Committee in accordance with the provisions of Section I.A.1 of Schedule 2 of the Financing Agreement.
Effectiveness	The Recipient has recruited the key personnel of the Project Coordination Unit, consisting of the national coordinator, the procurement specialist, the financial management specialist, and the monitoring and evaluation specialist, without limitation upon the transitional arrangements under paragraph 2 of Section I.A of Schedule 2 of the Financing Agreement, the duration of which shall not exceed six (6) months.
Effectiveness	The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 of the Financing Agreement.

PROJECT TEAM**Bank Staff**

Name	Role	Specialization	Unit
Chakib Jenane	Team Leader(ADM Responsible)	Agribusiness	GFA01
Juvenal Nzambimana	Team Leader	Operations	GFA01
Ziva Razafintsalama	Team Leader	Agriculture	GFA07
Melance Ndikumasabo	Procurement Specialist(ADM Responsible)	Procurement	GGO07
Hugues Agossou	Financial Management Specialist	Finance	GGO31
Abdoulaye Gadiere	Environmental Specialist	Environment	GEN07
Alice Museri	Team Member	Program Assistant	AFMBI
Amadou Alassane	Team Member	Agriculture	GFA13



Amadou Oumar Ba	Team Member	Agriculture	GFA07
Antoine V. Lema	Safeguards Specialist	Social development	GSU05
Christian Simbananiye	Team Member	Finance	GGO19
Diego Garrido Martin	Peer Reviewer	Frag. Confl. & Viol	GCFKE
Farbod Youssefi-Vash	Team Member	Post-harvest	GFAGE
Ghada Elabed	Team Member	Agri-Economist	GFA07
Gokhan Akinci	Peer Reviewer	Private Sector	GTCA2
Issa Thiam	Team Member	Finance	WFALA
Jean O Owino	Team Member	Finance	WFALA
Jose Ramon R. Pascual IV	Team Member	Legal	LEGDF
Marie Lolo Sow	Team Member	Program Assistant	GFA07
Nathalie S. Munzberg	Safeguards Advisor	Safeguards	OPSPF
Nora Kaoues	Team Member	Operations	GFA07
Wilhelmus Gerardus Janssen	Peer Reviewer	Agriculture	GFA13
Extended Team			
Name	Title	Organization	Location
Jean-Claude Balcet	Consultant, Agricultural Economist		United States



EASTERN AFRICA
GREAT LAKES REGIONAL INTEGRATED AGRICULTURE DEVELOPMENT PROJECT

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I. STRATEGIC CONTEXT

A. Regional Context

1. **Geographically spanning the plateaus and highlands of Central Africa around the Great Lakes, Africa’s Great Lakes Region (GLR) is fragile and characterized by conflicts.** Comprising Burundi as well as the Democratic Republic of Congo (DRC), Rwanda, Tanzania, and Uganda, the GLR—with its shared agro-ecological features and history of interdependence—is a major central corridor crossing Africa from Kinshasa in the West to Dar es Salaam in the East. The region has experienced civil strife since the 1960s. Its complex and challenging conflict dynamics entangle multiple actors in a web of security dilemmas, regional mistrust, ethnic polarization, extreme poverty, overexploitation of natural resources, and the marginalization of a major share of the population from economic, social, and political rights.¹ Recent conflicts have tended to shift epicenters and expand geographically. Often anchored at the national level, conflicts spill across borders to fuel regional conflicts. They take a heavy toll on human life and continue to disrupt nation-building, social peace, and economic development across the region.

2. **The World Bank Group (WBG) is implementing a comprehensive Great Lakes Initiative (GLI) to address key socioeconomic dimensions of fragility and conflict in the region—the plight of vulnerable**

groups, the need to strengthen community resilience, and the need to increase economic cooperation and regional integration—by financing infrastructure, removing barriers to trade and economic integration, supporting employment generation, and raising agricultural productivity. The GLI aptly focuses on agriculture, because it is the dominant economic activity for most people.² A sustainable increase in agricultural productivity is an essential first step to strengthen resilience against recurrent shocks and for reducing poverty. Increased agricultural productivity should improve and diversify economic opportunities for households afflicted by poverty, marginalization, and displacement, thus reducing the push and pull factors of structural violence in the GLR. The entry point for this effort is the Great Lakes Regional Integrated Agriculture Development Project (GLR-IADP). The

Box 1: Project impact on the drivers of fragility

*For decades, demographic pressure and a shortage of arable land have driven Burundians to seek seasonal employment in South Kivu Province of DRC. This labor migration has heightened ethnic tensions, as some Congolese communities view Burundians as “interlopers,” and this spurred violent mobilization of some youth groups in the Ruzizi Plains. The proposed project will help to reduce the drivers of fragility and promote regional integration by focusing on: (i) **diminishing negative spillovers:** the project will lessen the factors of violence in Burundi and their spillover to other Great Lakes countries; (ii) **increasing positive externalities:** the project will improve incomes and food security and resilience in the face of shocks, and increase trade with neighboring Great Lakes countries; and (iii) **developing value chains that are regional priorities:** project interventions in the rice, maize, and livestock/dairy value chains will foster trade and private sector development across the region.*

*By increasing food security, expanding and diversifying the rural economy, and improving employment and income, the project is expected to have a **sustainable and positive overall impact on livelihoods and conflict in the GLR.** The growing stability and prosperity throughout the project area should not only reduce the need for local people to migrate but draw people away from violence elsewhere in the region to share in expanding local opportunities. More broadly speaking, by supporting regional agricultural integration, the project will strengthen interdependence between communities on both sides of the border and raise the opportunity cost of conflict. These objectives are consistent with the goals of the Peace, Security, and Cooperation Framework (PSCF) adopted by the Great Lakes countries.*

¹ Drivers of conflict are discussed in more detail in World Bank (2013), “Reviving the Great Lakes: A World Bank Group Regional Initiative for Peace, Stability and Economic Development.”

² About 80 percent of the population in the region lives in rural areas and depends on agriculture for their livelihood.



first of the series of projects under GLR-IADP (SOP1) covered DRC and was approved by the Board in July 2016. The proposed project, covering Burundi, is the second in the series (GLR-IADP-SOP2). It will accelerate agricultural growth and economic transformation, and by building resilience, will mitigate the instability and conflict affecting Burundi and the wider region (see Box 1 above).

B. Country Context

3. **Recurrent socio-political tensions, erupting into violent conflict, have led to high food insecurity, poverty, and inequality in Burundi since the early 1990s.** Despite progress toward economic recovery,³ Burundi remains a Fragile State. It ranks 184 out of 188 countries in the 2015 Human Development Index and stands at the bottom of the Global Food Security Index.⁴ Almost one in two households is food insecure, and over half of children are stunted (the highest level globally).⁵ More than 70 percent of the population of 11.2 million survives on less than US\$1.9 per capita. About 95 percent of the poor live in rural areas, where the estimated poverty rate is 69 percent.⁶ Most of the poor are small-scale subsistence farmers. Factors adding to Burundi's low development indicators are poor dietary diversity (low intake of micronutrient-rich food), a very low human capital base (due to limited access to social services), insufficient economic opportunities (leading to high youth unemployment), and limited access to energy.

4. **Recent developments bear evidence that Burundi's economy remains highly vulnerable.** Public debt has expanded dramatically and the fiscal space to improve public service delivery has contracted. Real GDP growth was –3.9 percent in 2015 and is also likely to be negative in 2016. These difficulties are exacerbated by limited support from donors, a reduction of foreign direct investment (from US\$68 million in 2013 to US\$25 million in 2015), the depletion of official foreign exchange reserves and pressure on the official exchange rate of the Burundian franc (from BIF 1,561 per US\$1 in December 2014 to BIF 2,513 per US\$1 in August 2016), and the reduction of credit to the private sector.⁷ The World Bank estimates that turnover in the formal private sector declined by 15 percent in 2015. Small businesses suffered most, with a decrease of up to 40 percent. Formal sector jobs declined by 4 percent.⁸

5. **The intensified political turmoil at the national level since April 2015 and the resulting socio-economic pressures at the local level are compounding the forces that drive fragility in the region.** At this juncture, some 360,000 refugees have fled Burundi for Rwanda and Tanzania, and a considerable group has moved into the Ruzizi Plain and Fizi Territory in South Kivu Province, where they are resented for increasing competition for land, which is scarce. Burundian armed groups are using South Kivu as a base for training and launching attacks against the government in Bujumbura. Seasonal movement of livestock from Burundi, Rwanda, and Tanzania into DRC often destroys fields, alienates agricultural communities, and adds to the burden of deep, longstanding mistrust across borders.

C. Sectoral and Institutional Context

6. **Agriculture is central to Burundi's economic and social well-being, but agricultural growth has lagged behind population growth.** National development policies—including Outlook 2025 and second

³ Over 2006–14 Burundi experienced sustained growth averaging 4.5 percent of GDP, driven by improved macroeconomic and fiscal management, peace and security, high aid inflows, and reforms aimed at private sector development.

⁴ Global Food Security Index 2015.

⁵ World Food Programme (2016).

⁶ Burundi Poverty Assessment, GPV01, Africa (World Bank, June 2016).

⁷ World Bank staff estimates and projections and 2016 World Development Indicators.

⁸ "Étude pour évaluer l'impact de la crise sur le secteur privé Burundais" (World Bank Group, November 2016).



Poverty Reduction Strategy (PRSP-II)—recognize this point and focus on modernizing agriculture to reduce poverty and vulnerability (including the gender gap),⁹ promote shared prosperity, and create conditions for sustainable peace. The sector accounts for more than 40 percent of GDP and is the main source of jobs and livelihoods for around 85 percent of the population. Population grew by 3 percent yearly over the past decade, yet agricultural production grew by 2 percent. Agriculture relies on subsistence producers (about 1.2 million households) who use traditional technology that is unreliable and inefficient. Farming systems are organized around weather cycles and multiple crops to mitigate climate-related risks.¹⁰ A comparison of crop yields in Burundi and neighboring Rwanda reveals a major productivity gap.¹¹

7. **Apart from deep social tensions and political instability, agriculture faces specific challenges related to institutions, resources, technology, and climate.** The main constraints on productivity are linked to *recurrent socio-economic fragility* and include land tenure (and land conflict), demographic causes of land fragmentation and scarcity, limited options to generate income off-farm, no means of sustainably financing rural development, few market outlets, and weak rural infrastructure. *Institutional constraints* are seen in the difficulties of implementing structural reforms and other changes required by the agricultural development strategy, of organizing value chains, and of delivering extension and advisory services to rural communities. *Natural resource, input, and disease constraints* include declining soil fertility, degraded ecosystems, low use of improved agricultural inputs, and rising disease and pest pressure on crops and livestock. *Technology constraints* reflect inadequacies in traditional technology for managing natural resources, raising crops and livestock, and processing agricultural products. *Climate change* has disrupted and disorganized agricultural activities, most of which are rain-fed. Small farmers have lost their bearings, a situation compounded by their lack of the technical know-how or appropriate plant material to counteract the effects of such change.

8. **Burundi's poorly developed agribusiness value chains have a low ratio of processed products to primary commodities.** The World Bank's Enabling the Business of Agriculture (EBA) indicators for 2016¹² show that the regulatory framework significantly impedes private investment in agribusiness, including regulations related to variety registration and release, fertilizer imports, financial services, warehouse receipts, and plant protection. The lack of infrastructure—roads, logistics, energy, storage—raises costs for farmers and agribusiness, which in turn lowers their productivity and competitiveness. Beyond coffee and tea production and processing, foreign investors evince little interest in agriculture. For these reasons, Burundi is only weakly integrated into regional and global agri-value chains.

9. **Burundian agriculture and agribusiness can contribute far more to the economy—ultimately doing much to subdue conflict and prevent it from spilling across borders.** The proposed project area (the Ruzizi Plain and Imbo region bordering DRC, Rwanda, and Tanzania) is the country's most fertile region. Its favorable climate and soils offer real prospects for successful agricultural intensification with a wide range of crops and animal husbandry. Better organization and integration of high-potential agricultural value chains into local and regional markets, bolstered by the development of irrigation

⁹ Compared to male producers, female producers have less access to land rights and productive resources, extension information, new technology, and credit. See N. Ludgate and S. Joyous Tata (2015), "Burundi Landscape Analysis," United States Agency for International Development (USAID), Washington, DC.

¹⁰ In Burundi's Intended Nationally Determined Contribution, agriculture is a priority for adaptation and mitigation. Expected climate change impacts include declining crop, meat, and dairy production, and declining quality and quantity of pastureland.

¹¹ Cereal yields are estimated at 1,320 kg/ha compared to 1,920 kg/ha in Rwanda (WDI 2014).

¹² EBA indicators help policymakers to "identify and analyze legal barriers for the business of agriculture and to quantify transaction costs of dealing with government regulations" (<http://eba.worldbank.org>).



schemes and intensification, will increase agricultural productivity, limit pressure on scarce resources (particularly land), reduce vulnerability to shocks, create industrial value added and jobs, and develop livelihood opportunities. A transparent, community-driven process to address tensions and grievances and ensure that project benefits reach vulnerable groups should limit conflict and promote success.

10. **The National Agricultural Investment Plan (NAIP, 2012–17) aims to mobilize agricultural potential by raising crop and animal productivity, strengthening human and institutional capacities, and developing agribusiness.** Under the Comprehensive Africa Agriculture Development Program (CAADP), the Government of Burundi (GoB) prepared the NAIP, which is fully aligned with the national economic and social development strategy in Vision 2025 and PRSP-II. The NAIP has four pillars: (i) sustainable growth in production and attainment of food security; (ii) professional training of farmers and promotion of innovation; (iii) development of value chains and agribusiness; and (iv) institution building for public entities. Public-private partnerships (PPPs) are prominent in the NAIP, which urges the government to create a conducive environment for private investment in productive, industrial, and marketing activities.

D. Higher Level Objectives to which the Project Contributes

11. **The proposed project lies at the heart of Burundi’s household farm economy (and thus social peace and stability), and it reflects Burundi’s long-term vision for reducing poverty and enhancing economic growth.** By facilitating a transformation of Burundian agriculture, the project is expected to have significant multiplier effects: to generate demand for agricultural products and associated inputs and services, create on- and off-farm employment, enhance incomes, and contribute to value addition and increased public sector revenues. These effects should: (i) promote the inclusion of largely poor smallholders into more modern, efficient value chains; (ii) increase food and nutrition security; (iii) add value to important commodities and help to increase farmers’ incomes; and (iv) form an effective basis for industrialization and for more and better jobs (especially for women and youth). In the medium to long term, an efficient, profitable, and competitive agricultural sector will emerge, which provides inputs and services to smallholder farmers and mobilizes sufficient investment for its sustainable development.

12. **The GLR-IADP-SOP2 is aligned with the World Bank approach to Fragile- and Conflict Affected States (FCS), and with Burundi’s FY13–FY16 Country Assistance Strategy (CAS) and related Performance and Learning Review (PLR, 2015).** The project reflects the World Bank’s approach to FCS (set out in the World Development Report 2011) and the recommendations of the Burundi Risk and Resilience Assessment. It targets the poorest people, groups vulnerable to external shocks (such as internally displaced persons—IDPs), and groups most likely to mobilize violently (such as unemployed youth). Through a transparent process, communities and civil society will set priorities and implement the project. This strategy should alleviate misperceptions and mistrust, while promoting economic interdependence and social interactions (even across borders). The project will take care to “do no harm” to local dynamics by carefully targeting groups, preventing land conflict, providing a grievance redress mechanism, and keeping a watchful eye to prevent elite capture of project funds. The project also contributes to the CAS pillar of improving competitiveness by strengthening the country’s largest sector (in terms of contribution to GDP and employment). It is consistent with the PLR which extends the CAS for two years and proposes a greater focus of the WBG support on increasing broad-based economic opportunities for average Burundians, as the engine of poverty reduction and an important basis for peace and stability. Finally, the project aligns well with the World Bank Group’s twin goals (poverty reduction and shared prosperity) and key priority areas of the World Bank’s Agriculture Global Practice (inclusive value chains, job creation, links with the private sector, and economic resilience).



II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

13. **The Project Development Objectives (PDOs) are:** (i) to increase agricultural productivity and commercialization in Targeted Areas in the territory of the Recipient and improve agricultural regional integration; and (ii) to provide immediate and effective response in the event of an eligible crisis or emergency.

14. **Geographical focus.** The proposed project will operate in the Ruzizi Plain and the Imbo region, as well as the geographic corridor along Lake Tanganyika. Bordering eastern DRC, Rwanda, and Tanzania, the area covers 5 of the country's 18 provinces, including Bujumbura Rural, Cibitoke, Bubanza, Rumonge, and Makamba (mapped in Annex 7).

B. Project Beneficiaries

15. **The primary beneficiaries are smallholder farmers and dairy producers living in the Ruzizi Plain and Imbo region and along Lake Tanganyika.** At least 55,000 small producers (35 percent female) should benefit directly from the project's interventions. Beneficiaries will include: (i) poor farmers (with 0.5 ha on average) who grow rice, maize, and other crops and keep dairy cows as an integral part of their livelihood; and (ii) vulnerable groups in the targeted area, particularly unemployed youth (at risk of violent mobilization), IDPs, and the Batwa community. Other beneficiaries are: (i) key public institutions involved in agricultural support services, such as the Ministry of Agriculture and Livestock (MINAGRIE), the Institute of Agronomic Sciences of Burundi (ISABU), and University of Burundi; (ii) the non-governmental organizations (NGOs) and service providers tapped for project implementation; and (iii) private agribusiness investors as well as operators of cooperatives and MSMEs (micro, small, and medium enterprises) in the targeted areas. In total, the project should have at least 308,000 beneficiaries,¹³ including those who will benefit from roads and industries to be established in the project area.

16. **The regional population bordering Burundi along the Ruzizi Plain and Imbo region (in eastern DRC, Tanzania, and Rwanda), will also benefit from project interventions.** More productive agricultural systems and increased agricultural revenue in the Ruzizi and Imbo regions will contribute to stability across the region by mitigating spillovers of conflict from Burundi. In addition, the proposed project will strengthen the capacity of key sub-regional institutions such as CEPGL (the Economic Commission for the Great Lakes Countries) to foster regional harmonization, and at the same time it will invest in a regional agenda of applied agricultural research and technology generation for regionally important commodities. The project will train scientists and rehabilitate essential research laboratories in the border area to serve the region. Scientists will connect with global and regional partners such as the Consultative Group on International Agricultural Research (CGIAR) centers. Given the region's agro-climatic and socio-economic similarities, neighboring countries may readily adopt technologies developed through the project. The region will also benefit from improved roads linking Burundi and DRC and facilitating regional trade.

C. PDO level indicators

17. **The PDO-level indicators are:** (i) farmers reached with agricultural assets or services (gender-disaggregated—percentage); (ii) average annual yields of targeted commodities (metric tons per hectare or liters per cow per year, respectively); (iii) number of agro-processing enterprises rehabilitated or

¹³ Average 5.6 people per household (see www.indexmundi.com)



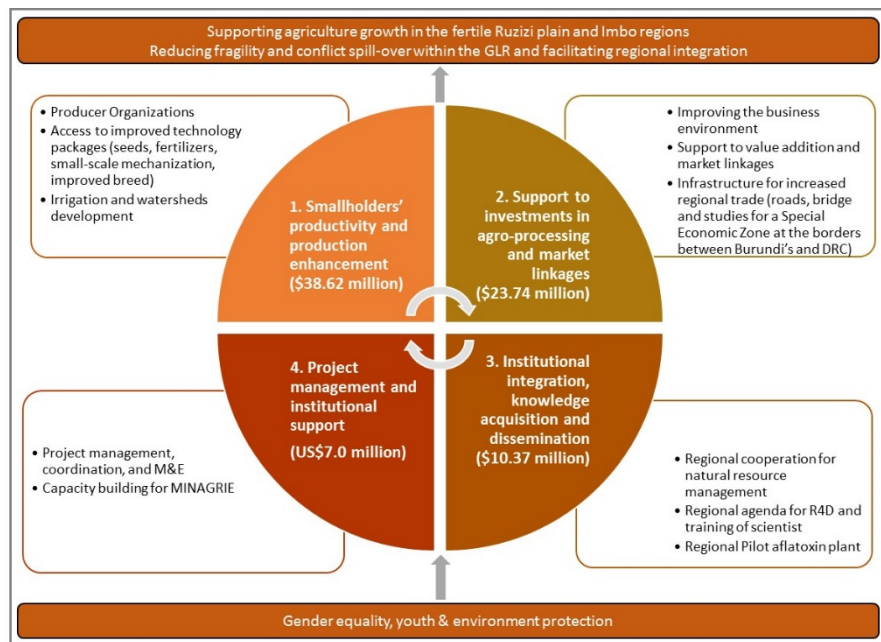
established with project support; and (iv) number of programs established to improve agricultural regional integration.

III. PROJECT DESCRIPTION

A. Project Approach

18. **Project focus and targeting principles.** The project addresses significant challenges to developing agriculture and agribusiness within the Ruzizi Plain and Imbo region, including: (i) poor organization of smallholder farmers and support institutions; (ii) low productivity due to limited access to irrigation, improved technologies, and modern inputs; (iii) poor protection of natural and environmental resources, in particular within watersheds; (iv) weak access to markets due to inadequate post-harvest, transport, and market infrastructure; and (v) limited processing capacity and value-added activities. The project’s approach reflects three core principles. The first principle is to target value chains with high potential in the region (rice, maize, and dairy) in an integrated way (from production to processing and marketing). The second principle is to concentrate investments in high-potential areas within the project zone to address binding constraints, achieve greater economies of scale, and eventually crowd-in economic activities.¹⁴ . Considering the key role women and youth play in all segments of the value chains, the third principle ensures that the project addresses gender gaps. The project builds on and complements the Burundi Agro-Pastoral Productivity and Markets Development Project (P107343) and related Additional Financing (P161447), which help smallholders increase yields and revenues; and the Landscape Restoration Project (P160613), which plans to restore degraded areas to increase agricultural productivity and prevent infrastructure-damaging landslides (induced in part by climate change). Figure 1 illustrates the project’s main components and activities.

Figure 1: Project main components and activities



¹⁴ The project will build on the main findings of the Sector Scan carried-out by the World Bank Group in 2015.



19. **Conflict mitigation measures.** The project will pursue four lines of action to mitigate the potential for conflict, do no harm to social dynamics, and address key drivers of fragility. First, it will work only on land that has been communally owned for a long time and whose owners are well known to the local community, even if there are no formal land titles. The project will not offer formal titling (which tends to be highly politicized) but rely instead on social control and on preventing capture at the community level. Second, the project will engage an independent (national or international) NGO to support its Provincial Implementation Units (PIUs) by assessing possible social tensions beforehand (particularly land tensions); developing criteria with the PIU to target the most vulnerable groups based on local needs; and setting up a local monitoring-and feedback mechanism that convenes local stakeholders, civil society, and cooperatives to ensure good communication, prevent misperceptions, mediate tensions, ensure people understand their rights, and provide access to the grievance redress mechanism. The NGO will also help PIUs prevent particular social groups, like women or Batwa, from being compelled into forced labor; prevent “capture” of funds or projects for particular political agendas; help design beneficiary surveys and support the collection of (sensitive) data; and coordinate with other NGOs or humanitarian organizations in the area to prevent overlap or double targeting of beneficiaries. Third, the project will have a high degree of flexibility to adapt, move, or even stop activities if required. Fourth, to stay up to date on local tensions or problems in the project zone, the project will coordinate closely with humanitarian platforms in Bujumbura led by the United Nations and the government.

20. **Partnerships for knowledge sharing and development in the GLR.** Knowledge in the GLR on improved crop and dairy production systems, as well as natural resource management, is substantial but highly fragmented; the project will partner with CEPGL to pull this knowledge together in an effective regional platform. The project will also draw on the expertise of agricultural research and development partners active in the region—including CGIAR centers (international Institute for Tropical Agriculture (IITA), International Rice Research Institute (IRRI), and International Livestock Research Institute (ILRI)) for maize, rice, and dairy value chains; Cornell University for promoting climate-smart technologies (in line with climate change policies in Burundi and the GLR); and FAO and an international NGO for nutrition-smart agriculture and dietary diversification (given the high incidence of malnutrition). The project will foster regional economic integration by strengthening the agricultural policy dialogue (on fertilizer and seed policy, for example), building common infrastructure (roads to facilitate trade), and promoting scientific and technical exchanges between Burundi and other Great Lakes countries. The project will also partner with the private sector to explore and expand market and business development opportunities for smallholders.

B. Project Components

21. The project activities are based on a holistic and integrated approach to developing three main value chains (rice, maize, and dairy) at the production stage (Component 1) and all other stages, including post-harvest, storage, processing, and marketing (Component 2). Project activities also include specific interventions at the regional level (Component 3), project management and coordination, and a contingency emergency response (Component 4). All project activities have cross-border impacts, since they will foster much-needed agricultural growth, economic diversification, and stability in the project area. Annex 1 provides a detailed description of the project, including implementation responsibilities.

Component 1: Smallholder productivity and production enhancement (US\$38.62 million, including US\$13.83 million national IDA, US\$23.20 million regional IDA, and US\$1.59 million beneficiary contribution)

22. Component 1 lays the foundation for sustainable intensification and diversification of rice, maize,



and dairy production. The expected outcome is an increase in smallholders' production and incomes in the project area, as well as an increase in border trade and transfer of technology with other Great Lakes countries. This component will build capacity in maize, rice, and dairy producer organizations (POs) by training their members, and it will ensure that POs are legally registered to facilitate access to rural finance and linkages with suppliers or traders. It will also support increased rice and maize production through farmer training via the Farmer Field School (FFS) approach; facilitate farmers' access to improved production packages (such as seed, fertilizer, and small-scale mechanized implements); promote the adoption of climate smart agriculture (CSA); encourage the adoption of nutrition-smart technologies, such as the System of Rice Intensification (SRI), high-zinc rice, quality protein maize (QPM), and mixed cropping systems; rehabilitate irrigation infrastructure (around 3,000 ha in Cibitoke and Nyanza-Lac) and strengthen the capacity of water user associations (WUAs) to manage irrigation systems; and improve watershed management—for example, by investing in erosion control and training community groups in sustainable land management (SLM).

23. Component 1 also supports increased dairy production along milk collection and transport routes in the corridor from the Rwandan to the Tanzanian border in the Imbo region (along the Ruzizi River) and along Lake Tanganyika (Bujumbura Rural, Rumonge, and Makamba Provinces). It will finance technical assistance for small-scale producers to form POs; strengthen access to animal health services through a network of Community Animal Health Workers (CAHWs) working hand-in-hand with MINAGRIE's veterinary services and private veterinarians; train producers in improved farming, feeding, and pasture management; and purchase dairy cows that produce more milk and distribute them to farmers. Component 1 will include specific activities targeted to the Batwa indigenous population so that they benefit fully from project support (supply of productive inputs; construction of decent housing; support for schooling and literacy; health care; legal and regulatory assistance; and vocational training.).

24. **Matching grants (MGs).** Beneficiary farmers will be eligible to receive MGs to purchase the improved production packages supported under Component 1. A Matching Grant Fund will be established and managed by the Project Coordination Unit (PCU). Improved crop packages for maize and rice (both conventional and SRI packages) and for nutrition-smart-agriculture, as well as small-scale mechanization, will be eligible for the grants. MGs for consumable inputs (seed and fertilizer) will cover 40 percent of eligible cost over three cropping years, in line with the government fertilizer and seed subsidy policy. MGs for small-scale mechanized equipment will cover 90 percent of eligible expenditures as a one-time subsidy. Dairy cows will be provided free of charge to recipients against a commitment to adhere to specific obligations. The Project Implementation Manual (PIM) to be issued before effectiveness will specify the criteria for eligibility and selection of the MG recipients, requirements for granting dairy cows, and MG financial management, procurement, and disbursement procedures.

Component 2: Support to investments in agro-processing and market linkages (US\$23.74 million, including US\$5.60 national IDA, US\$15.00 million regional IDA, and US\$3.14 million beneficiary contribution).

25. Component 2 seeks to enhance productivity and profitability for smallholder farmers and for small- and medium-scale agro-processors by strengthening their capacity to reduce post-harvest losses, promoting increased value addition, and facilitating access to markets. It encourages greater private investment with a view to increasing employment, economic development, and prosperity in the project area. As noted, these effects will help to reduce risks of conflict and mitigate factors (especially among the youth) that cause fragility to spill over to other countries. More specifically, this component will finance studies of the enabling environment for agriculture (to inform policy reforms designed to attract private investment); feasibility studies (to determine agribusiness opportunities and priorities, including



a proposed Special Economic Zone in Mutimbuzi Commune and a fruit and vegetable logistics platform in Bujumbura, which are intended to form a local and regional trade hub); a target investor outreach campaign (to attract private investors); and the strengthening of selected Business Development Services (BDS) (to support value chains).

26. Through a combination of MGs and full funding of selected business plans, Component 2 will also support the development of clusters of small and medium food-processing enterprises along the Cibitoke-Makamba corridor. These efforts will include: (i) the rehabilitation, expansion, and provision of equipment (for example, for drying, cleaning, storage, packaging) to 25 post-harvest centers and the construction of three rice- and/or maize-processing facilities at strategic points along the corridor; (ii) finance for business proposals selected for their potential to develop profitable agricultural value chains, bolster private investment, and promote market linkages (primarily for dairy products and fruits, vegetables, and legumes with strong regional market potential); and (iii) support to the Agripreneur Youth initiative (an agribusiness incubator developed by IITA), which will help youth to develop new agricultural enterprises and services to support targeted value chains.

27. Component 2 will also support the rehabilitation of about 100 km of feeder roads in the Ruzizi and Imbo regions and a bridge at the Buganda-Sange crossing between Burundi and DRC, along with a community-based road maintenance strategy involving existing (or new) road maintenance associations. The associations will receive basic tools and equipment to perform day-to-day routine maintenance. A Training of Trainers program on road maintenance will be developed for staff of the Public Works Department. All construction work, to the extent possible, will use labor-intensive methods to generate local employment.

28. **Matching grants.** Post-harvest and processing subprojects will be funded through the Matching Grant Fund. The MGs for small- and medium-scale rice/maize processing will be a one-time grant, covering 90 percent and 70 percent of eligible costs, respectively. Eligibility and selection criteria for MGs, as well as the fund management, disbursement, and monitoring procedures, will be detailed in the PIM.

Component 3: Institutional integration, knowledge acquisition, and dissemination of information at the regional level (US\$ 10.37 million IDA regional)

29. Agro-ecological zones, watersheds, and rice, maize, and dairy production systems span the national boundaries of Great Lakes countries, so it is vital for them to work together and share knowledge on their common agricultural agenda. Component 3 complements activities in Components 1 and 2 by supporting key regional agricultural strategies and Research for Development (R4D) priorities, and ensuring the dissemination of results from Burundi to Great Lakes countries and vice-versa. Knowledge acquisition and dissemination in areas of common interest requires overall institutional coordination. For that reason, the project will develop regional planning, monitoring, and evaluation capacity in CEPGL's Agriculture and Food Security Division to establish and monitor complementary investments with neighboring countries, natural resource management in shared watersheds, expected impacts of climate change, and infrastructure investments. Component 3 will also support regional exchanges of information, knowledge, and technologies through (among other channels) the establishment of a web-based exchange platform; specialized training and exchanges on priority themes for some 300 scientists, technicians, or extension workers, creating communities of practice; and degree training on priority research themes for the targeted value chains (with the completion of at least 3 PhD and 9 MSc degrees).

30. This component also supports specific productivity-enhancing interventions that complement activities in Component 1. They include the identification and promotion of improved agronomic practices



(for managing soil fertility, pests, and water, for example); the testing and validation of improved rice and maize varieties; and the identification and dissemination of climate-and nutrition-smart options to improve the productivity and diversification of rice- and maize-based production systems.

31. Finally, the project will strengthen capacity in Burundi and Great Lakes countries to undertake applied agricultural research in areas such as soil fertility, plant virology, livestock diseases, and food safety by financing two main activities. First, it will strengthen general laboratory capacity within ISABU by rehabilitating and equipping facilities, developing standard operating procedures, and training laboratory staff. Second, it will finance a system to control aflatoxin content in crops through Aflasafe,TM a biocontrol product that reduces aflatoxins by over 80 percent. The project will sensitize the general population to the importance of aflatoxin, train producers to use Aflasafe,TM and install a pilot regional AflasafeTM production facility in Burundi to serve maize production areas in the Great Lakes countries.

Component 4: Project management and institutional support (US\$7.0 million, including US\$5.57 million national IDA and US\$1.43 million regional IDA)

32. Component 4 focuses on all aspects of project management, including fiduciary aspects. Apart from the technical capacity-building provided under Components 1–3, Component 4 provides critical cross-cutting institutional support for capacity-building and training needs identified within MINAGRIE. Specifically, Component 4 will finance: (i) staffing, equipment, and operating costs of the PCU and the PIUs; (ii) project planning, monitoring and evaluation (M&E), studies and consultancies (including independent NGOs to support conflict mitigation), and stakeholder workshops; (iii) the monitoring and supervision of environmental and social safeguards; and (iv) the project communication action plan. Component 4 includes a Contingency Emergency Response; this zero-budget activity establishes a disaster recovery contingency fund that could be triggered in the event of an eligible natural or human-induced crisis or emergency through a formal declaration of a state of emergency of national or regional scope. In such cases, funds from other project components may be reallocated to finance emergency response expenditures.

C. Project Cost and Financing

33. GLR-IADP-SOP2 will be financed through an Investment Project Financing (IPF) totaling US\$79.73 million; the IDA contribution is a grant of US\$75 million (US\$25 million national IDA and US\$50 million regional IDA) (Table 1). The balance (US\$4.73 million) represents the contribution of beneficiary farmers and private agribusiness to the MGs for subprojects. Support is planned for five years (2017–22).

Table 1: Project cost by component and source of financing (US\$ million)

Project component	Project cost	IDA National	IDA Regional	Beneficiaries
1. Smallholder productivity and production enhancement	38.62	13.83	23.20	1.59
2. Support to investments in agro-processing and market linkages	23.74	5.60	15.00	3.14
3. Institution integration, knowledge acquisition, and dissemination of information at the regional level	10.37	0.00	10.37	0.00
4. Project management and institutional support	7.00	5.57	1.43	0.00
Total costs, including contingencies	79.73	25.00	50.00	4.73

D. Lessons Learned and Reflected in the Project Design

34. The GLR-IADP-SOP2 design is based on lessons from successes and failures in implementing agricultural investment projects in Burundi and elsewhere in sub-Saharan Africa (SSA). These projects



include: past and ongoing projects in Burundi—the Agro-Pastoral Productivity and Markets Development Project (PRODEMA) and the Agriculture Rehabilitation and Support and Sustainable Land Management Project for Burundi (PRASAB) and (ii) regional agricultural projects—the West Africa Agriculture Productivity Program (WAAPP) and Eastern Africa Agriculture Productivity Program (EAAPP). Specific lessons and principles derived from this experience and reflected in the project design are discussed next.

35. **At the national level: *Ownership of project interventions and a demand-driven approach are essential for achieving tangible results.*** Like PRASAB and PRODEMA, the proposed project builds on grassroots POs, adequately supported by service providers. The organization of POs and implementation of farmer-led investment subprojects will strengthen POs and social cohesion in rural areas. One example of success is the community solidarity chain for dairy subprojects developed under PRODEMA. ***Private sector service provision has proven more efficient than public sector service provision.*** The proposed project therefore relies on private service providers while continuing to reinforce the capacity of the government administration to deliver those public services falling under its mandate, such as planning, research and extension, sanitary control, and M&E. ***Focus not only on improving farm productivity but on facilitating market access and increasing local processing for value addition.*** To this end, the project will promote demand-driven post-harvest and processing investments (based on demand from local and regional markets) to increase shelf-life and add value to products. ***Access to rural finance is critical for success.*** PRASAB and PRODEMA revealed that where farmers cannot access credit (as in Burundi), a properly targeted MG fund can enable smallholders and agro-processors to build assets and increase productivity. ***Consider gender roles and the needs of youth in project design.*** Women and youth have important roles along the value chains in the project, presenting a credible opportunity to adopt a comprehensive strategy for facilitating their access to assets, finance, and decent jobs to improve their well-being. For example, the project will increase employment for young men and women in rural areas by promoting post-harvest technology (small agro-processing enterprises) and developing their entrepreneurial skills. Whenever possible, infrastructure will be built using labor-intensive methods. ***Lessons from other development partners, such as USAID (Burundi Agribusiness Project, 2007–12), were also considered.*** They highlight the need to: build human capacity for agro-industry development; strengthen value chain governance; tackle challenges in an integrated fashion throughout the value chain from field to market to achieve economies of scale; and establish effective PPPs, with clearly delineated roles and responsibilities to benefit the entire (sub)sector.

36. **At the regional level:** The design of the project reflects major lessons from WAAPP and EAAPP. First, ***in the agricultural sector, input/output markets and income support policies are highly effective when coordinated on a (sub)regional level, whereas rural development-type operations, such as investments in farm productivity and local rural infrastructure, are most effective if programmed and administered nationally.*** Second, ***regional integration and knowledge sharing do not occur automatically.*** Third, ***regional planning, exchange, and monitoring mechanisms should be clearly defined and harmonized at the design stage.*** The proposed project builds on these insights through: (i) a focus on value chains that are a shared regional priority, to achieve economies of scale and scale up innovation; (ii) support for national institutions (public, private, and civil society organizations) to interact productively with each other and with regional institutions on trans-boundary issues, such as the development and enforcement of trans-boundary policies and regulations, disease monitoring and control measures, natural resource management strategies, and measures to facilitate trade; and (iii) regional dissemination of tested agricultural practices and technologies, drawing on national, regional, and international research and development institutions with substantial expertise in disseminating those



innovations among farmers. For instance, the project will synthesize and disseminate the significant knowledge on soil fertility management and improved crop and livestock production systems to have a more rapid and greater impact on poverty and food security in the region.

37. **Major cross-country learning on conflict, risk, and vulnerability also informed the project design.** Earlier projects that successfully supported recovery and development in Burundi and eastern DRC (South Kivu) were based on principles of dialogue, community-driven development, preventing land conflict, and focusing on the most vulnerable groups in communities. Another good example comes from ZOA,¹⁵ which established village committees to prioritize and accompany agricultural projects to ensure that the benefits were distributed equitably, prevent misperceptions, and mediate conflicts.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

38. The institutional and implementation arrangements for the proposed project were developed in light of the lessons described earlier, the weak capacity of MINAGRIE, and the coordination deficiencies that must be addressed at the regional level for the project to achieve its development impact. The implementation arrangements also recognize the need for a regional facilitation mechanism, national project oversight, and arrangements at the provincial level.

39. **At the national level,** MINAGRIE will be the executing agency for the project, under an institutional setup organized as follows. A **National Project Steering Committee (NPSC)** will be established to provide policy guidance and oversight and to ensure proper coordination of a project that involves many different actors in the value chain. The main functions and responsibilities of the NPSC are to: (i) advise the project on strategic directions and supporting activities; (ii) approve the Annual Work Plan and Budget (AWPB); (iii) ensure effective collaboration and cooperation between all key stakeholders, including at the regional level; and (iv) review the PCU's Implementation Progress Reports (IPRs), advise on the effectiveness of ongoing activities, and advise on any adjustments needed in the Annual Work Plan. MINAGRIE, as the key sector ministry, will chair the NPSC. The committee will comprise officials from other sector ministries and institutions involved in implementing the project, including representatives of the private sector, POs, and civil society so that they may voice their concerns and contribute to good governance. A central **Project Coordination Unit (PCU)** established by MINAGRIE will have overall responsibility for managing the project, including financial management (daily management of the Designated Account), and coordinating project activities. With support from a number of **Provincial Implementation Units (PIUs)** and dedicated personnel to ensure planning and budgeting of project activities, the PCU will be in charge of executing the approved AWPB and producing the annual project accounts. It will manage subproject agreements and Memorandums of Understanding (MoUs), finances and procurement, technical supervision and quality control, gender and social inclusion, environmental and social safeguards, and M&E. It will work closely with an NGO to support the conflict-mitigating activities in the project. A dedicated officer will be tasked with planning and follow-up for activities supporting regional integration. **Technical and capacity-building agencies:** The project will rely on strategic international development partners active in Burundi (and DRC) to strengthen technical support and ensure efficient, transparent implementation of project activities (for example, CGIAR centers, Cornell University, and NGOs familiar with the social structure in Burundi). The PCU will contract these

¹⁵ Zuid Oost Azie, a Netherlands-based NGO.



institutions/service providers in accordance with World Bank procurement guidelines.

40. **At the regional level**, Burundi is active in a number of forums and with DRC and Rwanda forms the CEPGL. While Burundi will assume primary responsibility for implementing activities at the national level under the proposed project, the GLR-IADP envisages that **CEPGL will play an important facilitating role**, supporting knowledge sharing and monitoring activities to ensure cross-fertilization and learning from experience with GLR-IADP at the regional level. CEPGL is the most appropriate regional institution to support this project, given its more limited membership and mandate to enhance regional economic integration across the GLR. The project will support liaison activities with CEPGL to help regional facilitation, ensure policy coordination, and ease implementation between Burundi and DRC. The **regional facilitation mechanism** envisaged for this purpose is a committee, comprising representatives from: (i) national steering committees led by the Ministry of Agriculture in each country, (ii) CEPGL, through its Agriculture and Food Security Division, and (iii) CGIAR centers and other implementing partners in both countries. The committee will be chaired on a rotating basis by the respective members. It will meet on a yearly basis to assess the status of project implementation; harmonize policy, rules, and regulations; provide guidance on implementation; and monitor and evaluate results of the project.

41. **Transitional arrangements for project implementation.** As a transitional arrangement for implementing the proposed project and ensuring rapid startup, the PCU for the ongoing PRODEMA project will have initial responsibility for coordination and implementation. During this transition period, the Recipient will establish the new dedicated PCU and the PIUs for the proposed project. The new PCU and PIUs will take responsibility for project coordination and implementation from PRODEMA PCU within six months after the project effectiveness date.

42. A Project Implementation Manual (PIM) detailing all project coordination, management, implementation, M&E, and reporting arrangements will be prepared under the guidance of MINAGRIE and finalized by project effectiveness. Annex 2 fully describes implementation arrangements.

B. Results Monitoring and Evaluation

43. The M&E system for the project will provide suitable data to assess project performance and guide timely adoption of corrective measures. The M&E framework will be described in the PIM and will be based on: (i) the project results chain and underlying assumptions of the theory of change; (ii) alignment with complementary M&E frameworks at the country and regional level (NAIP/CAADP, PSCF, and so on); and (iii) compliance with World Bank Group requirements, including the selection of key core indicators and specific indicators for gender and civic engagement.

44. The project results chain reflects the theory of change underlying the project and shows how its activities are linked to the achievement of the PDO and to project outcomes. The theory of change for this project has three pillars. The first is **social sustainability**: the PDO will only be achieved if (but not only if) conflicts between and within communities in the targeted areas are prevented, especially conflicts surrounding productive resources such as land and water. The second is **financial sustainability**: the PDO will only be achieved if (but not only if) the techniques and technologies promoted at each of the value-chain links are profitable for the economic actors, including farmers, cooperatives, and agro-processors, and if they lead to products that compete sufficiently based on price and quality to be affordable to consumers and thus marketable. In that regard, the financial analysis of the proposed project must be clearly linked with (and support) the project results chain and theory of change. The third pillar is



environmental sustainability: the PDO will only be achieved if (but not only if) natural capital is managed sustainably and its services are maintained, especially production-related services.

45. Project outcomes and impacts will be evaluated through the PDO and intermediate-level indicators described in the results framework against a baseline survey to be established after project approval. The project indicators have been selected with technical experts based on SMART principles (specific, measurable, attainable, realistic, and time-bound). Given the current context in Burundi, a simple household survey, with no control groups, will be the main evaluation tool. The baseline, mid-term, and final surveys will be conducted by external service providers such as CGIAR partners, and their cost will be fully covered by the project. The project's impacts on fragility, conflict, and violence (FCV) will be assessed largely through specialized sections of the beneficiary surveys.¹⁶

46. The PCU/PIUs will monitor project outputs in conjunction with the implementing partners. The PCU/PIUs will be responsible for data consolidation, quality control, analysis, and reporting. The annual monitoring reports will be used by supervision missions and by the PCU/PIUs to ensure that the project is on track and to prepare the AWPB. The PCU/PIUs will also be in charge of communicating monitoring information to MINAGRIE and CEPGL to add to the national and regional M&E system.

C. Sustainability

47. The sustainability of the project is predicated on the use of a highly participatory consultation process and demand-driven approach; a prominent role for farmers and the private sector in designing and implementing market-led subprojects based on well-defined business plans; and a strong capacity-building program that includes efforts to strengthen POs and agro-processors and to promote an R4D program in partnership with CGIAR centers and other institutions. The project promotes a range of proven ("best-bet") technology packages in the region in conjunction with significant investments in information and capacity building so that beneficiaries can make informed decisions at the household and community level and improve their land productivity and incomes. All POs will benefit from capacity-building in leadership skills, group dynamics, decision-making, problem-solving, book-keeping, program planning, value chain concepts, marketing, preparing simple project profiles, and simple M&E. For agriculture to grow, it must effectively link with and respond to market demand, so in addition to encouraging producers to view farms as businesses, the project improves access to market information and focuses attention on product quality and opportunities to add value and increase sales. By building farmers' and communities' capacity to learn and adapt, linking farmers and communities to markets, and supporting the development of farmer-centered institutions and policies, the potential benefits in the target area (and beyond) will be realized. These benefits create the incentives for innovation and re-investment that lead to sustainability and lessen the forces that drive fragility.

D. Role of Partners

48. The project is designed to link actions at the local, national, and regional levels. It will help communities in the Ruzizi Plain and Imbo region to access improved technology, agricultural services, and new markets, but the ultimate goal is to improve food and nutritional security and place the GLR more firmly on the path toward improved welfare and sustainable development. To that end, the project will rely on strategic development partners active in Burundi and DRC to scale up agricultural innovation in

¹⁶ The surveys and their FCV content will be designed with support from the FCV Group Cross-Cutting Solution Area (CCSA), as well as with the selected NGO mentioned earlier.



the GLR. Key partners include *IITA*, which recently established its regional headquarters for East Africa in eastern DRC (Bukavu) and has programs and staff in Burundi. IITA has developed a wide range of maize production and processing technologies; it also has expertise in engaging youth and women in agribusinesses related to the region’s priority value chains, developing capacity in national agricultural research systems, and providing diagnosis and laboratory support services. *ILRI*, headquartered in Nairobi, focuses on livestock research and development. It has programs in Burundi and eastern DRC and can supply technologies and expertise to improve cattle health, nutrition, and milk productivity. *IRRI* has a regional center in Bujumbura with human resources, equipment, laboratories, and training facilities to support rice research and development in Eastern and Southern Africa. Many (and large) **development-oriented NGOs** can be engaged to improve the delivery of agricultural services and inputs and improve links to markets. *Private firms*, such as seed companies, will also participate in this regional initiative.

49. The project will build a partnership with the *Belgian Development Agency (BTC)*, the largest bilateral donor in Burundi and one of the main donors involved in agriculture there. In particular, the project seeks to partner with the BTC-financed *Institutional and Operational Support Program for the Agricultural Sector (PAIOSA)*,¹⁷ which is implemented in the same provinces as GLR-IADP. The project will seek synergies with PAIOSA in developing irrigation and post-harvest infrastructure (in Cibitoke, for instance, the project can make use of technical feasibility studies for irrigation carried out under PAIOSA); in promoting best-bet agricultural and livestock practices; and in supporting the development of an institutional environment favorable for agribusiness.

V. KEY RISKS

A. Overall Risk Rating

50. The Systematic Operations Risk-Rating Tool (SORT) was used to evaluate potential risks associated with the project (Table 2). It will continue to be used to monitor these risks during implementation.

Table 2: Systematic Operations Risk-Rating Tool

Risk Category	Rating
1. Political and Governance	High
2. Macroeconomic	High
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Substantial
9. Other: Climate change	Substantial
Overall	High

B. Overall Risk Rating Explanation

51. The overall risk rating for the proposed project is **High**. The key factors underlying this rating are related to the issues highlighted in the following paragraphs.

¹⁷ *Programme d'Appui Institutionnel et Opérationnel au Secteur Agricole du Burundi: amélioration de la compétitivité du secteur agricole (PAIOSA : 2015-2020 - BDI1308211).*



52. **Political and governance risks are rated High.** Intermittent violence in the capital city and the potential for the situation to spiral further out of control are making it difficult to implement effective development interventions. The international community is pressing for political negotiations to end or at least appease the cycle of violent political crisis and reduce the likelihood that civil conflict will resume. The World Bank will closely monitor the situation with the UN and bilateral and international development partners. Considering the fragile context, the World Bank will also promote transparent and inclusive dialogue with independent civil society organizations and producers to prevent the capture of resources by private interests and to support local mechanisms to attenuate any tensions that could arise around the project.

53. **Macroeconomic risks are also rated High.** As discussed, since 2006 the government has managed to stabilize the economy, with growth in real GDP and GDP per capita averaging 4.1 and 1.1 percent per annum, respectively. Recent political instability has slowed economic activity. The macroeconomic situation has deteriorated and public debt has risen, just as international development aid has declined substantially. These factors may impede sectoral reforms and slow implementation of the project. The project will closely monitor the macroeconomic risks and take appropriate measures to mitigate them; for instance by identifying vulnerabilities and calibrating project implementation accordingly.

54. **Risks related to institutional capacity for implementation and sustainability are rated Substantial.** Burundi is a post-conflict country with weak technical and institutional capacity at all levels. MINAGRIE has limited administrative and fiduciary capacity. That said, project implementation will rely on a strong PCU and technical partners (IITA, IRRI, ILRI, and others); their involvement will support implementation efficiently and transparently, and contribute to the sustainability of project activities.

55. **Fiduciary risks are rated Substantial.** Financial management (FM) risks are related to the large number of transactions and significant number of agreements with technical agencies. To manage fiduciary risks, the World Bank will rely on the strong PRODEMA PCU. The proposed project will benefit greatly from PRODEMA's management experience. Furthermore, regular training and supervision will be provided to strengthen capacities of all project actors.

56. **Environment and social risks are rated Substantial.** This rating is based on the political and social tensions in the region, especially on the potential for forced agricultural labor involving the indigenous Batwa. The project will take all reasonable measures to ensure that there is no forced labor in the project zones. This social issue will be a key aspect of supervision undertaken for the project.

57. **Other risks include climate change risks, which are rated Substantial.** In nearly every decade for the past 60 years, Burundi has experienced alternating cycles of flooding and drought, as well as an overall increase in mean temperatures and the length of the dry season. Burundi was severely affected by the last El Niño cycle, starting in 2015. While Burundi is highly exposed to climate shocks, it has extremely low capacity to respond to them. To mitigate the risks imposed by climate change, the proposed project will promote the adoption of drought-resistant varieties and improved water management. It will also prioritize relevant investments and financing for climate-focused initiatives.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

58. An Economic and Financial Analysis (EFA) assessed the project's potential financial and economic impact on individual beneficiaries and at the country level. The analysis, which compared circumstances



with and without the project, quantified benefits accruing from the project’s support for private investments in production, processing, and marketing in the rice, maize, and dairy value chains. The resulting estimates of the project’s profitability must be regarded as conservative, because a wide array of benefits beyond the farm/enterprise level are challenging to quantify in monetary terms. They include benefits from financing public investments (roads, irrigation, watershed rehabilitation, and so on), building capacity in partner institutions and private operators, and improving the business climate. The same problem arises in assessing benefits at the regional level.

59. **Typical farm/enterprise models.** The financial analysis considered seven typical farm/enterprise models: rice production (irrigated rice), maize production (upland maize), milk production (one cow over 248 days of production per year), small-scale rice processing (0.5 t/h), medium-scale rice processing (2.0 t/h), small-scale maize processing (0.5 t/h), and milk collection. The models represent the bulk of project support for income-generating activities in the target value chains. Other models were developed to consider the project’s pilot initiatives in climate smart agriculture (SRI) and/or nutrition-smart agriculture (bio-fortified varieties of the priority crops and rotations/associations with grain legumes).

60. **Gross margin, Net Present Value (NPV), and Internal Rate of Return (IRR).** The NPV and IRR of the investment made with the project compared to the situation without the project were computed for each model based on the estimated gross margins (Table 3). IRRs for all models are well above the producers’ own discount rate, indicating that beneficiaries will have a strong financial incentive to participate in project activities.

Table 3: Summary financial results of typical farm/enterprise models

Farm/enterprise model	Gross margin (US\$)	NPV(US\$)	IRR (%)
Irrigated rice	489	1,331	64.70
Maize	306	893	52.70
Milk (1 cow)	363	681	41.00
Rice milling (small scale) (0.5 t/h)	48,944	127,904	82.10
Rice milling (medium-scale) (2.0 t/h)	212,528	233,973	71.40
Maize milling (small-scale) (0.5 t/h)	27,651	73,554	52.40
Milk collection and storage	6,144	7,112	40.10

61. **Cash flow analysis.** The farm/enterprise models have a substantial positive annual gross margin when the investments reach a steady state and are generating their full return. Margins typically are negative at first, when producers and processors are still learning about the technology and production has not reached full capacity. Farmers and processors (whose yields and productivity are far below potential) have much to gain from the investments supported under the project, but the improved practices represent a risky, costly technological leap. The MGs provided under Components 1 and 2 compensate producers for the associated costs and mitigate the risks. These grants, along with capacity building at all stages of the value chain, will help small-scale farmers and processors to recapitalize their enterprises and lay the foundation for growth. More generally, MGs are justified by the general hardship and market failures that must be overcome to support the agricultural change sought through the project. They will not compete with rural finance services; on the contrary, they will help producers to develop the asset base to access credit in the future.

62. **Economic analysis.** The NPV of the streams of net benefits in economic terms generated by project-funded activities over 15 years for the whole country is approximately US\$39.8 million. The Economic Internal Rate of Return (EIRR) for the entire project is estimated at 19.8 percent—substantially



above the cost of borrowing for Burundi, estimated at the shadow rate of 6 percent. Sensitivity analysis demonstrates that the results are very robust. For a detailed summary of the EFA, see Annex 4.

63. **Rationale for public sector provision/financing.** The project will support the modernization and intensification of rice, maize, and milk production and processing and strengthen the corresponding value chains. This process requires public provision of specialized services and public financing of operators active in the chains (given their limited access to credit from the banking sector). To that effect, the project includes: (i) support to core government services and public goods and (ii) funding for private sector producers and traders operating in the targeted value chains. Under (i), the project will support institution building in core services such as crop research, agricultural extension, irrigation, and veterinary services, which are the purview of the government. It will also train technical professionals directly involved in the government institutions being supported; following project completion, these professionals are expected to further assist the development of the sector. Under (ii), the project will provide MGs to producers and processors to adopt specific improved technologies; the grants will cover beneficiaries' cash needs until their investments start to yield benefits. This approach engages the private sector in viable production and processing investment opportunities and partnerships to leverage public funds.

64. **Value added of Bank's support.** Government and donor interventions have been too scattered and limited in scope to permit structural change in the targeted value chains and enable Burundi to take advantage of the rapidly growing domestic and regional markets for the products of those value chains. By virtue of its strong presence and engagement in Burundi, along with relevant experience in the GLR, SSA, and elsewhere in the world, the World Bank has the convening power to aggregate the knowledge and efforts to unlock productivity and competitiveness gains in the target areas. IDA financing will support much-needed strengthening of public services as well as private farm/enterprise investments. Development partners have expressed interest in collaborating closely with the WBG in this undertaking.

B. Technical

65. The value chains supported by the project were selected based on a number of criteria, especially their development potential for the region and likelihood of reducing the drivers of fragility in Burundi. **Rice** is an important staple, planted across a wide range of agro-ecologies (lowland, irrigated, and upland ecosystems). It contributes to the domestic food supply and serves as both a food and cash crop for farm households. **Maize** is a major staple cultivated not only in Burundi but across the GLR. It has become increasingly important in farming systems because of its short cycle compared to other crops, suitability for intercropping, and dual uses as human food and animal feed. Maize is grown in mixed cropping systems, predominantly by smallholders, and Burundi has very great potential to improve yields. Livestock husbandry is an important component of smallholder farming systems in the GLR, and the demand for **dairy products** is expected to grow, particularly in urban areas, creating more market outlets and income for farmers. The technical feasibility of supporting these value chains through the project is based on the considerations discussed next.

66. ***The body of technical knowledge that underpins the project design has considerable potential to support improvements and yield large benefits.*** The project will provide much-needed resources to scale up promising innovations in Burundi and the GLR more widely. Examples of these innovations include: integrated pest management in rice; drought-tolerant, nitrogen-use-efficient, *Striga*-resistant, and herbicide-tolerant maize varieties; improved husbandry (cowsheds) and feeding practices for dairy cows; climate-smart technologies combining improved water and soil fertility management practices, such as those used in SRI; nutrition-smart agriculture combining bio-fortified varieties of priority crops



with legumes to improve productivity and improve diets; and the use of post-harvest storage and processing technologies, particularly the control of special problems such as aflatoxin.

67. ***Technical assistance will be provided by partners who have tested and piloted the technologies in the region.*** International organizations or consortia of service providers will be recruited to support MINAGRIE, ISABU, and other implementing entities. These organizations include CGIAR centers (IRRI, IITA, and ILRI) and others (Cornell University, FAO and international NGOs) active in the region. The contracting of international NGOs, which will link with the technical administration, local NGOs, and beneficiary organizations, will give the project an edge in dealing with sensitive activities related to conflict and land.

C. Financial Management

68. Different reviews, including a Public Expenditure and Financial Accountability (PEFA) review, and use of the Country System for Investment Projects, highlight the weak public financial management system in Burundi. For this project, the country PFM system will not be fully used and a dedicated PCU will be established. Moreover until the dedicated PCU is established (no later than six months after effectiveness), the PRODEMA PCU will perform day-to-day FM activities for the project, while staff recruited for the new PCU receive training in World Bank FM and disbursement guidelines.

69. The World Bank conducted an FM assessment of the PRODEMA PCU to determine whether the financial management arrangements in place remain adequate to ensure that funds for the proposed project will be used for purposes intended, in an efficient and economical way, during the transition. Most prior projects at MINAGRIE have been managed by the PRODEMA PCU. The FM assessment concluded that arrangements to use the PRODEMA PCU meet IDA's minimum requirements under OP/BP10.00, being adequate to provide, with reasonable assurance, accurate and timely information on the financial status of the project as required by IDA. The overall risk is considered Substantial (For details on risks and mitigation measures, see Annex 2). The Government of Burundi has already initiated activities to establish the new PCU, such as drafting terms of reference (ToRs) for recruiting key project staff and developing the PIM, which will include fiduciary procedures. A Project Preparation Advance (PPA) mobilized for that purpose is managed by the PRODEMA PCU.

D. Procurement

70. Procurement will be carried out in accordance with the requirements in the Procurement Regulations for Borrowers under Investment Project Financing (IPF): Goods, Works, Non Consulting, and Consulting Services, dated July 1, 2016; "*Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants (revised as of July 1, 2016)*;" and provisions stipulated in the Financing Agreement.

71. A procurement risk assessment in February 2017 noted that MINAGRIE satisfactorily used World Bank procurement guidelines in implementing three other World Bank-funded projects in agriculture during the last 10 years. The assessment—in conjunction with the Project Procurement Strategy for Development (PPSD) prepared by the Borrower in January 2017—also identified the following key risks: unfamiliarity with the new procurement regime, lack of proper procurement planning with a clear relation with the PDO, delay and/or elite capture when following national procurement procedures, insufficient technical capacity to identify project needs (ToRs and technical specifications). Proposed mitigation measures include: (i) training in the requirements of the procurement regulations for Borrowers; (ii) assurance of proper planning, with a special emphasis on contracts that show high criticality based on the PPSD risk analysis; (iii) assurance that procurement documents (especially for Requests for Bids and



Proposals at the national level) are clear and of good quality; (iv) involvement of partners (ministry technical departments and specialized institutes) for technical assistance to project implementation. The PPSD details other risks and their associated mitigation measures.

72. The World Bank will support procurement implementation on regular basis with a formal supervision once every six months (alongside other project team members) and an annual post procurement review. As part of PPSD, a procurement plan for the first 18 months of the project has been proposed by the Borrower and agreed with the World Bank before negotiations. During implementation, the procurement plan will be updated in agreement with the project team as required (at least annually) to reflect actual project implementation needs and improvements in institutional capacity. The detailed procurement plan will be published on the World Bank external website once the project is approved.

E. Social (including Safeguards)

73. The project's overall social impacts are expected to be positive, yet some activities may generate adverse social impacts. These are related to foreseen activities under Subcomponent 1.2 (irrigation and watershed development) and Component 2 (rural infrastructure and support to value-addition) which would trigger OP 4.12 on Involuntary Resettlement. The project also triggers OP. 4.10, because it will be implemented in areas inhabited by indigenous people.¹⁸

74. Specific project locations are not yet determined; only the larger project implementation area is known (Ruzizi Plain and Imbo region), so a Resettlement Policy Framework (RPF) and Indigenous Peoples Planning Framework (IPPF) were prepared, consulted upon in-country, and published in Burundi and on the World Bank's external website on February 9, 2017. The RPF estimates that involuntary resettlement could affect 678 persons (133 households), and the IPPF estimates that 18,996 indigenous persons live in the project area. An Indigenous Peoples Plan (IPP) will be prepared prior to implementation, and a Resettlement Action Plan (RAP) will be implemented before beginning project activities that induce involuntary resettlement. Given the risk that HIV/AIDS may be spread by the influx of road workers and others implementing the project in rural areas, preparation and implementation of an HIV/AIDS prevention plan will be part of the contractual obligations of various service providers hired through the project.

75. The project includes a budget for: (i) building capacity and raising awareness among stakeholders (project units, provincial environmental administrations and relevant ministry staff, POs, small and medium enterprises, and community-based organizations), with a focus on the implementation of the IPPs and the RAP; (ii) training in managing, monitoring, and maintaining infrastructures for community stakeholders; and (iii) a special program for the Batwa (Annex 1) as part of Component 1.

76. **Gender.** Project preparation and design involved gender-inclusive consultations, and the project explicitly addresses gender issues. The project will carefully analyze categories of vulnerability wherever its activities are implemented and will specifically target women, including (but not limited to) vulnerable groups such as single women, widows, and female- or child-headed households. Some of the project's activities will be equally beneficial to all regardless of gender—the rehabilitation of rural roads, increasing mobility for all, is one example. The project's conflict-mitigating measures will ensure that men, women, girls, and boys are targeted equally. The PIUs and partner NGO will: (i) ensure women's participation in all aspects of the project and dissemination of information, using appropriate media and language, and taking care to ensure that women who have a right to land are not sidelined by male relatives; (ii) provide

¹⁸ Batwa community living in the project area.



equal or greater opportunities and support to women’s groups; (iii) provide training in gender awareness; and (iv) collect and present gender-disaggregated data in the M&E system.

77. **Citizen engagement.** Because citizen engagement is integral to the design, implementation, and ultimate success of the project, consultations with stakeholders have been and will remain a consistent feature of the project cycle. For example, project components, including the value chains, were identified with stakeholders, including communities, women’s groups, local/international NGOs, provincial/national administrations, national/international research institutes, bilateral donors, representatives of civil society and the private sector, and UN organizations. Project implementation will particularly involve POs and communities; local, provincial, and national administrations; and private agribusinesses. The project’s conflict transformation component relies firmly on citizen engagement. Recurrent consultations with civil society and direct beneficiaries will be part of the project’s M&E strategy. The preparation and implementation of safeguard instruments has been and will be part of the consultation process. Citizen engagement will be monitored through surveys of beneficiaries’ satisfaction with project interventions.

F. Environment (including Safeguards)

78. The project’s environmental impacts are expected to be positive for the most part (Annex 2). The rice and maize production techniques and technologies promoted through the project will reduce land degradation and create a net greenhouse gas (GHG) sink estimated at 3.4 million tons of CO₂ equivalent. Even so, project activities include rehabilitation of 100 km of rural roads, rehabilitation of small-scale irrigation on 3,000 ha, establishment of agro-processing units (with a capacity of up to 2 t/h) and increased use of fertilizer. As the environmental impacts of these activities are likely to be moderate, site specific, reversible, and manageable to an acceptable level, the project is classified as “*Category B.*” The project triggers seven environmental safeguard policies: OP/BP4.01 (Environmental Assessment), OP/BP4.04 (Natural Habitats), OP/BP4.36 (Forests), OP4.09 (Pest Management), OP/BP4.11 (Physical Cultural Resources), OP4.37 (Safety of Dams), and OP/BP7.50 (Projects on International Waterways). These policies will be addressed through an Environmental and Social Management Framework (ESMF) and Integrated Pest Management Plan (IPMP) prepared by the Government of Burundi and approved by the World Bank. These instruments specify effective measures for mitigating and managing potential environmental and social impacts, monitoring their effectiveness, and detecting any unforeseen impact. To fully comply with OP/PB7.50, an Exception memo to the Riparian Notification Requirement to riparian countries was prepared and approved by the regional Vice Presidency on February 13, 2017.

79. The ESMF and IPMP also specify implementation arrangements and recommendations for capacity building needed by the institutions involved. The provisions of the ESMF and IPMP will be fully incorporated into the PIM. The required expenditures on environmental and social sustainability outlined in the ESMF, IPMP, IPDP, and RPF are incorporated into the project budgets. All environmental safeguard documents were disclosed in country and on the World Bank’s external website on February 9, 2017.

G. World Bank Grievance Redress

80. Communities and individuals who believe that they are adversely affected by a World Bank–supported project may submit complaints to project-level grievance redress mechanisms or World Bank Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project-affected communities and individuals may submit complaints to the World Bank’s independent Inspection Panel which determines whether harm occurred, or could occur, as a result of the World Bank’s non-compliance with its policies and procedures. Complaints may



be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the WB's corporate Grievance Redress Service (GRS), see <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, see www.inspectionpanel.org.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY : Eastern Africa

Great Lakes Regional Integrated Agriculture Development Project

Project Development Objectives

The Project Development Objectives are: (i) to increase agricultural productivity and commercialization in Targeted Areas in the territory of the Recipient and improve agricultural regional integration; and (ii) to provide immediate and effective response in the event of an eligible crisis or emergency.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Farmers reached with agricultural assets or services		Number (Thousand)	0.00	55000.00	Annual	Annual progress reports	PCU/PIUs and partner implementing agencies (IRRI, IITA and ILRI)
Female-- reached with agricultural assets or services (%)		Percentage	0.00	35.00	Annual	Annual progress reports	PCU/PIUs and partner implementing agencies (IRRI, IITA and ILRI)

Description: This indicator measures the number of farmers in target areas who were provided with agricultural assets or services by the project.



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Average annual yields of targeted commodities (rice, maize and milk)		Text	---	---	--	--	--
Milk -- Average annual yield (Liters of milk per cow per year)		Liter	1050.00	1500.00	Annual	Annual progress reports and M&E reports	PCU/PIUs and partner implementing agency (IRRI)
Rice -- Average annual yield (Metric ton per ha)		Metric ton	3.00	5.00	Annual	Annual progress reports and M&E reports.	PCU/PIUs and partner implementing agency (IRRI)
Maize-- Average annual yield (Metric ton per ha)		Metric ton	1.50	3.00	Annual	Annual progress reports and M&E reports	PCU/PIUs and partner implementing agency (IITA)
Description: This indicator measures the productivity of commodities in the targeted value chains							
Name: Number of agro-processing enterprises rehabilitated or established with project support.		Number	0.00	100.00	Annual	Progress Annual report, Technical & economic monitoring	PCU/PIUs and partner implementing agencies (IRRI, IITA)



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection and ILRI)
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Description: This indicator measures the number of agro-processing enterprises modernized and/or established with support from the project, including rice and maize processing, milk collection and bulking centers, other food processing units and service providers to targeted value-chains.

Name: Number of programs established to improve agricultural regional integration.		Number	0.00	5.00	Annual	Progress reports, M&E reports and partner implementing agencies reports	PCU
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Description: Programs will include the establishment of agricultural research programs beneficial to the region such improved seeds and other technologies (soil management, post-harvest, knowledge platform, etc.) and exchange of scientist. Cumulative number.

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Farmers adopting improved agricultural technology (of which climate-smart technologies) (Number)		Number (Thousand)	0.00	41250.00	Annual	Annual progress report, M&E reports by implementing partner agencies	PCU/PIUs and implementing partner agencies (IITA, IRRI, ILRI)



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Farmers adopting climate-smart technologies (%)		Percentage	0.00	30.00	Annual	Progress reports and M&E reports	PCU/PIUs and implementing partner agencies (IITA, IRRI, ILRI)
<p>Description: This indicator measures the number of farmers in target areas who have adopted at least one improved agricultural technology promoted by the project (SRI, agro-forestry, seeds, water management, etc.).</p>							
Name: Area provided with new/improved irrigation or drainage services (Number of ha)		Number (Thousand)	0.00	3000.00	Annual	Progress reports, M&E reports and technical firm reports	PCU/PIUs
<p>Description: This indicator measures the total area of land provided with irrigation or drainage services under the project, including in (i) the area provided with new irrigation or drainage services, and (ii) the area provided with improved irrigation or drainage services, expressed in hectare (ha).</p>							
Name: Percentage of participating producer groups/associations having contractual arrangements with aggregators and/or processing units (%)		Percentage	0.00	60.00	Annual	Annual Progress reports and M&E reports	PCU/PIUs
<p>Description: This indicator measures the percentage of participating producer groups/associations having contractual arrangements with aggregators and/or processing units</p>							



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Average annual sales from production marketed at the farm/cooperative level for targeted commodities (Rice)		Metric tons/year	8000.00	19000.00	Annual	Progress reports and M&E reports	PCU/PIUs
<p>Description: This indicator measure the volume of sales of rice that is marketed at the farm/cooperative level. The baseline is estimated taking into consideration a 40% of paddy rice auto-consumption per household.</p>							
Name: Roads constructed or rehabilitated (km)		Kilometers	0.00	100.00	Annual	Progress report, annual Project report, technical firm report	PCU
<p>Description: This indicator measures the number of kilometers of roads constructed or rehabilitated. It is cumulative.</p>							
Name: Number of youth who established their own MSMEs (Number)		Number	0.00	100.00	Annual	Progress reports and M&E reports	PCU /PIUs and IITA
<p>Description: This indicator measures the number of youth who established their own MSMEs, including support services for targeted value-chains (repair and maintenance, mechanization, marketing, etc.).</p>							
Name: Enabling environment for agribusiness		Number	40.60	57.50	Annual	EBA Annual report	PCU and EBA team



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Variety registration score (Number)		Number	43.75	60.00	Annual	EBA Annual report	PCU and EBA team
Plant protection framework score (Number)		Number	37.50	55.00	Annual	EBA Annual report	PCU and EBA team
<p>Description: This indicator measures the business environment for agri business (average score for seed variety registration process and score for plant protection framework).</p>							
Name: A knowledge platform established and operational under the CEPGL and regularly updated (Number)		Number	0.00	1.00	Mid-term and final	Annual reports, Mid-term evaluation	PCU and CEPGL
<p>Description: This indicator measures whether a knowledge platform has been established, is operational under the CEPGL, and is regularly updated.</p>							
Name: Number of agricultural researchers/technicians trained (Number)		Number	0.00	300.00	Annual	Annual reports, M&E reports and implementing agencies progress reports	PCU and implementing partners (IITA and IRRI)
<p>Description: This indicator measures the cumulative number of Phds , MS degrees and participants in specialized training programs organized by the project.</p>							



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Beneficiary satisfaction rate with quality of services provided by the project (dissagregated by gender) (Percentage)		Percentage	0.00	80.00	Biennial	External Satisfaction Survey, Progress report, annual progress report, independent report	PCU + Consulting firm
Female beneficiary satisfaction rate with quality of services provided by the project (Percentage)		Percentage	0.00	80.00	Biennial	External Satisfaction Survey, Progress report, annual Progress report independent report	PCU + consulting firm

Description: This indicator measures the percentage of beneficiaries who expressed satisfaction with the services provided in the project areas based on formal surveys. This indicator requires two supplemental data segregated by gender and age group: (i) number of targeted beneficiaries satisfied with the quality of services, and (ii) targeted beneficiaries of services and assets.

Name: Time between request from government to making funds available to respond to an eligible crisis (Weeks)		Weeks	8.00	4.00	Annual in case of an eligible crisis	Annual Progress reports and M&E reports	PCU and WB team
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Description: This indicator measures the accessibility to and efficiency of the mechanism put in place by the project to make funds available to the government in a timely manner in case of an eligible crisis. An eligible crisis will be described in the project implementation manual.

**Target Values****Project Development Objective Indicators**

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Farmers reached with agricultural assets or services	0.00	5.00	15.00	30.00	45.00	55.00	55000.00
Female-- reached with agricultural assets or services (%)	0.00	20.00	25.00	30.00	35.00	35.00	35.00
Average annual yields of targeted commodities (rice, maize and milk)	---	--	--	--	--	--	---
Milk -- Average annual yield (Liters of milk per cow per year)	1050.00	1050.00	1200.00	1300.00	1350.00	1500.00	1500.00
Rice -- Average annual yield (Metric ton per ha)	3.00	3.00	3.50	4.50	5.00	5.00	5.00
Maize-- Average annual yield (Metric ton per ha)	1.50	1.50	1.80	2.40	2.70	3.00	3.00
Number of agro-processing enterprises rehabilitated or established with project support.	0.00	10.00	30.00	50.00	75.00	100.00	100.00
Number of programs established to improve agricultural regional integration.	0.00	0.00	1.00	2.00	3.00	5.00	5.00

**Intermediate Results Indicators**

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Farmers adopting improved agricultural technology (of which climate-smart technologies) (Number)	0.00	0.00	10.00	20.00	30.00	41.25	41250.00
Farmers adopting climate-smart technologies (%)	0.00	0.00	10.00	15.00	25.00	30.00	30.00
Area provided with new/improved irrigation or drainage services (Number of ha)	0.00	0.00	1000.00	2000.00	3000.00	3000.00	3000.00
Percentage of participating producer groups/associations having contractual arrangements with aggregators and/or processing units (%)	0.00	15.00	25.00	40.00	50.00	60.00	60.00
Average annual sales from production marketed at the farm/cooperative level for targeted commodities (Rice)	8000.00	9000.00	12000.00	15000.00	17000.00	19000.00	19000.00
Roads constructed or rehabilitated (km)	0.00	0.00	40.00	80.00	100.00	100.00	100.00
Number of youth who established their own MSMEs (Number)	0.00	10.00	30.00	50.00	75.00	100.00	100.00
Enabling environment for agribusiness	40.60	40.60	42.50	47.50	52.50	57.50	57.50
Variety registration score (Number)	43.75	43.75	45.00	50.00	55.00	60.00	60.00



Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Plant protection framework score (Number)	37.50	37.50	40.00	45.00	50.00	55.00	55.00
A knowledge platform established and operational under the CEPGL and regularly updated (Number)	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Number of agricultural researchers/technicians trained (Number)	0.00	0.00	100.00	200.00	300.00	300.00	300.00
Beneficiary satisfaction rate with quality of services provided by the project (disaggregated by gender) (Percentage)	0.00	0.00	0.00	60.00	0.00	80.00	80.00
Female beneficiary satisfaction rate with quality of services provided by the project (Percentage)	0.00	0.00	0.00	60.00	0.00	80.00	80.00
Time between request from government to making funds available to respond to an eligible crisis (Weeks)	8.00	8.00	6.00	4.00	4.00	4.00	4.00



ANNEX 1: DETAILED PROJECT DESCRIPTION

Great Lakes Regional Integrated Agriculture Development Project

A. Project Development Objectives

1. **The Project Development Objectives are:** (i) to increase agricultural productivity and commercialization in Targeted Areas in the territory of the Recipient and improve agricultural regional integration; and (ii) to provide immediate and effective response in the event of an eligible crisis or emergency.

B. Project Beneficiaries and geographic focus

2. **The primary beneficiaries are smallholder farmers and dairy producers living in the Ruzizi and Imbo regions as well as along Lake Tanganyika.** These regions cover five provinces, including Bujumbura Rural, Cibitoke, Bubanza, Rumonge, and Makamba (see map in Annex 7). It is expected that at least 55,000 of these small producers (of which 35 percent will be women) will directly benefit from project interventions. They are mostly: (i) poor farmers with an average of 0.5 ha, who cultivate rice, maize, and other crops and keep dairy cows as an integral part of their livelihood base; and (ii) vulnerable groups in the targeted area, especially unemployed youth, women, IDPs, and other segments of the population vulnerable to external shocks. The main benefits will consist of improved institutional organization through POs and WUAs, access to improved crop technology, improved livestock breeds, training and extension services, and project-financed infrastructure for market access. The total number of direct and indirect beneficiaries is expected to reach at least 308,000 people, factoring in those who will benefit from the improved rural roads and processing industries to be established in the area. Smallholders' incomes are expected to rise through increased productivity and market access; they are also expected to be more stable through reduced vulnerability to climate risks.

3. Other primary beneficiaries are private agribusiness investors, as well as operators of cooperatives and MSMEs in the targeted areas. About 100 agribusinesses will benefit from project support to boost their capacities through MGs, including provision of technical assistance for business development, improvement of technical and managerial skills, upgrade of post-harvest/agro-processing technology, and facilitation of market access.

4. The key public institutions involved in agricultural extension and research will also benefit from the project interventions. Benefits include (i) strengthening the capacity of ISABU and University of Burundi in rice and maize and livestock research and (ii) strengthening the capacities of MINAGRIE's decentralized services (Provincial Directorates for Agriculture and Livestock–DPAE) in terms of improved agronomic and livestock management practices and related extension activities.

5. **At the regional level,** the population bordering Burundi along the Ruzizi Plain and Imbo region (in eastern DRC, Tanzania, and Rwanda) will also benefit from the project-induced reduction in the risk of political instability and associated conflicts, which have the potential to spill over to where they live and negatively affect their livelihood conditions. More productive agricultural systems and increased revenue from agriculture in the Ruzizi and Imbo regions will contribute to peace and stability in the wider GLR. In addition, the proposed project will strengthen the capacity of key regional institutions (such as CEPGL) to



foster regional harmonization, and at the same time the project will invest in a regional agenda of applied agricultural research and technology generation for commodities that are important across the GLR. The project will train scientists and rehabilitate essential research laboratories in the border area to serve the region. The scientists will be connected with global and regional research partners such as the CGIAR centers. Given the similarities in agro-climatic and socio-economic conditions across the region, technologies developed through the proposed project could be readily adopted in neighboring countries. The region will also benefit from improved transboundary rural road infrastructure linking Burundi and DRC and facilitating overall trade within Great Lakes countries.

C. PDO-Level Results Indicators

6. **The PDO-level indicators are:** (i) farmers reached with agricultural assets or services (gender-disaggregated—percentage); (ii) average annual yields of targeted commodities (metric tons per hectare or liters per cow per year, respectively); (iii) number of agro-processing enterprises rehabilitated or established with project support; and (iv) number of programs established to improve agricultural regional integration.

D. Project Approach

7. **Key problems to be addressed.** The project aims to address a number of constraints which pose significant challenges to developing the agricultural/agribusiness sector within the Ruzizi Plains and Imbo region. These constraints include: (i) poor organization of smallholder farmers and support institutions; (ii) low productivity due to limited access to irrigation, improved technologies, and modern inputs; (iii) lack of protection of natural and environmental resources, in particular within watersheds; (iv) weak access to markets due to poor post-harvest, transport, and market infrastructure; and (v) limited processing capacity and value-added activities. These constraints form a vicious circle of negative factors that reinforce each other, including (among others) low productivity and limited value-added; continuous marginalization of a large number of small Burundian farmers (especially women and youth); unsustainable use of natural resources, which is a source of conflict, and also the result of conflict; eroding capacities of land and land pressure; and deficient husbandry of natural resources associated with political instability, leading to conflicts and insecurity in Burundi that have the potential to spill over into the neighboring countries.

8. **Targeting principles.** The overall project approach will be implemented based on three core targeting principles: (i) a geographic concentration of investments within the broader project area to achieve a larger impact that can eventually crowd-in future economic activities; (ii) the targeting of value chains previously identified as regional priorities (rice, maize, and livestock/dairy); and (iii) considering the key role women and youth play in all segments of the value chains, the project will strive to address gender gaps and especially to facilitate access by women and youth to productive resources, extension information, new technology, and credit. Building on the main findings of the sector scan¹⁹ carried-out by the World Bank Group in 2015, five criteria were used to prioritize these value chains. The first was **existing market demand**, based on the presence of competing producers (for example, imports, supplies from other regions), competitive advantages (for example, market distance), and existing or planned distribution channels (for example, end-consumer markets, industry). The second was **high growth potential**, demonstrated by positive growth trends of the value chains, scope for expanding production and/or scope for value addition through processing or product improvement, and sufficient technological and managerial level of enterprises in the sector. The third criterion was the **potential for poverty reduction**,

¹⁹ *Prioritizing Agribusiness & Tourism Products in Burundi: Sector scan of most promising agribusiness and tourism products.*



indicated by the share of poor people employed in the value chains as compared to the economy at large, covering locations where poor people live, low entry barriers for small-scale and poor entrepreneurs, and production using services, raw material, and skills that are available locally. Value chains were also selected based on a fourth criterion of **project-related aspects**—including their relevance to priorities expressed in government development policies, World Bank Group priorities, alignment with livelihood conditions (year-round income, use of family labor, rapid returns, and contributing to food security), prospects of offering opportunities for women, and significance for the rural economy. The fifth criterion related to **other factors**, including outreach (size of the value chain in relation to the project resources, significant number of people employed and new job opportunities created, significant area covered); prospects for success (own initiatives and commitment of chain actors and their readiness for change, sufficient resources such as time and know-how); the existence of partners to collaborate with; and demand on the part of investors and partners.

9. **Conflict filter and mitigation.** Taking into account the current context and political economy of Burundi with respect to land, agriculture, livestock management, and possibilities for peacebuilding, the project will undertake several specific conflict-mitigating activities, among others: (i) specialized NGOs will be engaged to undertake careful conflict and/or political economy analysis before activities start and as investments are rolled out; (ii) established platforms for community dialogue will be supported to bring together beneficiaries from diverse groups to discuss their differences, ensure that project activities do no harm to social dynamics, and ensure an equitable share of benefits between groups; (iii) the type of support that will be given would be developed through a participatory process, in dialogue with all the actors, the overall objective being the largest degree possible of ownership and sustainability; and (iv) a high degree of flexibility will characterize project interventions, so that activities can easily be moved or stopped. By working with established community dialogue platforms, the project will be able to foster joint decision-making and mitigate tensions that could arise over a perceived lack of equity in project investments. The project will also give specific attention to reducing tensions surrounding equitable access to land, especially in the irrigated areas targeted for rehabilitation, avoiding elite capture, and ensuring that land is not misappropriated. The project will make all efforts to ensure that planned activities are undertaken only on land that is communally owned. The project will also promote a balance between power structures inside and outside the state apparatus, as well as make every effort to lay the foundation for an inclusive and democratic approach propitious to social reconciliation and development at the grassroots.

10. **Value-chain development approach.** The project will promote the development of three priority agricultural value chains with strong potential growth in the region (rice, maize and dairy—see Box 2) through a combination of soft investments (for example, capacity building of small producer organizations, and improvement in the delivery of production support services) and hard investments (for example, improved technology packages, farm equipment and mechanization, production infrastructure, and post-harvest and processing facilities) aiming at strengthening production capacity and creating opportunities for complementary private sector-led investments in agribusiness, MSME development, and job creation.

11. The project will seek to achieve the widest possible dissemination of techniques and technologies already tested in the region. These techniques and technologies are linked to: (i) irrigation and the rational use of water resources; (ii) good agricultural practices; (iii) intensive rice-growing systems; (iv) multi-stress tolerant and nutritious maize varieties; (iv) rational animal production methods, especially dairy farming using closed cowsheds; and (v) storage/post-harvest technologies. All of these technologies and methods have been mastered in the GLR. Their wider dissemination will be supported by programs to produce improved seed and facilitate access to fertilizer and mechanization. Such efforts will be based on an



approach encompassing extension and the building of technical skills among farmers through the establishment of FFSs and local service centers. In all interventions, gender issues and the role of youth in development will be systematically considered.

12. Climate-smart and nutrition-smart agriculture.

Given Burundi's high vulnerability to climate change, the project will place specific emphasis on building resilience to climate change through the promotion of climate-resilient technologies and climate-smart farming systems. This emphasis is in line with Burundi's and the GLR's stated climate change policies, which prioritize:²⁰ (i) climate risk mitigation and relevant technology adaptation; (ii) enhanced access to and efficient use of water resources; (iii) promotion of intensive agriculture, including facilitation of access to the required farm inputs and agricultural equipment; (iv) adoption of sustainable agro-ecological practices (soil fertility management, use of manure and compost, and water and soil conservation); and (v) research and extension activities aimed at developing and disseminating higher-yielding varieties, and the promotion of climate-smart agricultural practices. Considering the high prevalence of malnutrition in Burundi, the project will also promote nutrition-smart agriculture by focusing on increasing nutrient intake, diversifying diets, and promoting nutritionally-smart crop production (for example, high-zinc rice and quality protein maize). The project will prepare and disseminate nutrition-related training materials such as

manuals, charts, posters, pictures, videos, and pamphlets, which will be prepared by subject-matter specialists. Rural schools and informal leaders will be involved in an extension campaign focusing on making rural men and women aware of the damaging results of malnutrition, especially among pregnant mothers and children, and the actions needed to alleviate the risk in households (by concentrating on an appropriate diet and preparing food without losing nutritional value), on farms, and through backyard home gardens (by growing vitamin-rich vegetables, fruits, and crops).

13. Building regional partnerships for applied agricultural research. The project will ensure that the substantial, but highly fragmented, knowledge on improved crop and livestock production systems and natural resource management strategies developed in the GLR are pulled together. To achieve the

Box 2: Target value chains

Rice and maize are among the major staple crops cultivated in Burundi (and the GLR), and production is dominated by smallholder farmers in mixed cropping systems. Annual production of paddy rice has virtually stagnated over the past ten years, however; Burundi produced 102,000 t of paddy (56,000 t rice equivalent) in 2014. Domestic demand is stabilizing at 92,000–123,000 t. An estimated 85,000 ha is planted to paddy. The national average paddy yield relatively low at 2–3 t/ha. Burundi is a rice-deficit country that imports more than 10,000 t annually. With annual population growth at 2.7 percent and per capita rice consumption of 6 kg, Burundi needs to increase rice productivity to meet domestic demand and ensure food security.

Maize is an important crop for food security and animal feed. It has become increasingly important owing to its short production cycle compared to other staple food crops and its suitability for intercropping, with large potential for yield increases from minimum fertilizer application. Despite its importance, maize production is constrained by farmers' limited access to improved seed and limited knowledge of improved production techniques to maximize profit. The results is a significant reduction in household food and income security with ensuing malnutrition.

Livestock/dairy. Burundi has about 700,000 livestock producers, of whom 20 percent raise cattle. The livestock subsector contributes 14 percent of national GDP and 29 percent of agricultural GDP. Cattle rearing is generally extensive; it is intensive only around urban zones and in some integrated farm systems. The subsector has stagnated without modernization. It is characterized by a large number of herds with low productivity. Milk yields amount to about 400–600 liters per cow per year. Calf mortality is high, and malnutrition is common in cattle, particularly during the dry season.

²⁰ Burundi in its recently submitted Intended Nationally Determined Contribution has highlighted agriculture among its priority areas, both in relation to adaptation measures as well to mitigation targets.



foregoing, the project will engage in an alliance with agricultural research and development partners active in the region and draw on their expertise. These partners include IITA, IRRI, IITA, and Cornell University. The project will also support partnerships with the private sector in the region with a view to exploiting market and business development trends and opportunities for smallholders.

14. **Complementarity and synergy with other projects.** The planned activities under the proposed project will complement activities in other World Bank operations and donor-funded projects in Burundi and the GLR. Among World Bank–financed projects, the GLR IADP-SOP2 will complement: (i) the Great Lakes Trade Facilitation Project (GLTFP-SOP1-P151083), approved in September 2015, which aims to ease restrictions on trade in agricultural commodities at the Kavimvira and Bukavu border crossings between DRC and Burundi; (ii) the Burundi Agro-Pastoral Productivity and Market Development Project (P107343) and related Additional Financing (P161447), which help small-scale farmers raise yields, access finance, improve food security, and increase revenues; (iii) the Landscape Restoration Project (P160613), which is aiming at restoring degraded areas to stabilize and increase agricultural productivity (on the slopes, as well as in the Ruzizi Plain) and to protect public and private infrastructure (such as roads, water and power supplies, houses, bridges, and schools) from landslides caused by heavy rain linked to climate change. Among projects funded by development partners in the region, the GLR IADP-SOP2 will seek synergy with: (i) PAIOSA, financed by BTC, and (ii) two International Fund for Agriculture Development (IFAD) projects—the Agricultural Intensification and Value-enhancing Project and the Value Chain Development Programme.

15. Building on the corresponding project in DRC (GLR IADP-SOP1) and other World Bank operations in the GLR, the proposed project will be implemented over a five-year period and include the interlinked components described in Section E.

E. Project Components

16. The project’s activities are based on a holistic and integrated approach to developing three main value chains (rice, maize, and dairy) at the production stage (Component 1) and all other stages, including post-harvest, storage, transport, processing, and marketing (Component 2). Project activities also include specific interventions at the regional level (Component 3), as well as project coordination and management and contingency emergency response (Component 4). Although only one component directly supports regional integration, the other components share that objective, since they both promote economic development and stability in the project area, and hence prevent factors driving fragility in Burundi from spilling over to other parts of Burundi, neighboring DRC, and other Great Lakes countries.

17. The project activities will come together to support agricultural growth and economic development in the project area, resulting in the expansion of the rural economy, increased employment and income generation, development of trade, and reduction of food insecurity. The positive factors of socio-economic transformation are expected to reduce the drivers of fragility and the risks of conflict in the project area. The resulting stability and prosperity in the project area will lessen the risks of local conflicts, give the local population an incentive to stay in place rather than migrate in search of better opportunities, and attract people from neighboring Great Lakes countries to share in the increased opportunities available in the project area. There will be more trade between the project area and other areas (nationally and regionally) as the project promotes communications, trade, and road infrastructure. The project activities undertaken at the national level, together with the specific interventions undertaken at the regional level, are expected to contribute to shared prosperity across the GLR and enhance regional integration: they will both prevent the negative factors arising from violence and conflict in Burundi to spill



over to other countries, and allow the positive factors associated with growth and prosperity in the project area to benefit other Great Lakes countries through trade and exchanges.

Component 1: Smallholder productivity and production enhancement (US\$38.62 million, including US\$13.83 million national IDA, US\$23.20 million regional IDA, and US\$1.59 million beneficiary contribution)

18. Component 1 will lay the foundation for sustainable intensification and diversification of rice, maize, and dairy production. The component will adopt an integrated approach that improves farmer training and the extension of new practices, contributes to increased farm productivity and incomes, strengthens the capacity of POs, and actively supports production led by farmers in partnership with other private actors down the value chains. The expected outcome is an increase in production and income for smallholders in the project area.

19. To that end, the project will: (i) strengthen the capacity of POs, including cooperatives and WUAs, to help foster linkages between producers and to markets; this will be done through Burundi's Confederation of Associations of Agricultural Producers for Development (CAPAD) (Subcomponent 1.1); (ii) support rice and maize production by improving access to farm-level production technology (seed of selected varieties, fertilizer, pesticides, small-scale mechanization, and so on) and related extension assistance, and promoting the efficient management and maintenance of water services through the rehabilitation of selected irrigation infrastructure and the sustainable management of surrounding watersheds (Subcomponent 1.2); and (iii) support dairy production through the introduction of rational production methods and new breeds of dairy cattle, with a focus on cow husbandry practices using closed animal sheds (Subcomponent 1.3). Component 1 technical packages at the farmer level will be funded through MGs.

20. Component 1 activities will complement activities undertaken as part of Component 3, as their reach will extend beyond the project area and the national boundaries of Burundi to other Great Lakes countries. First, with regard to the strengthening of POs, the project will support development of the network between CAPAD and other national associations in Burundi with similar organizations in the GLR, with a view to sharing knowledge on trade challenges/opportunities and establishing partnerships across national boundaries. This networking will foster transboundary linkages between producers and markets. Second, with regard to crop production and irrigation, the uptake of improved technologies by Burundian farmers is likely to spread rapidly beyond the project areas to neighboring areas through the informal demonstration effect. The project will encourage this process between Burundi and other Great Lakes countries by sharing lessons as well as practices that have proven to be adapted to various GLR ecologies and can be tailored to producers' needs across the GLR (for example, management of water facilities or SRI). Third, with regard to new dairy production methods, the project will support technical exchanges with other Great Lakes countries that are more advanced in this subsector. The results of interventions regarding husbandry and feeding practices, as well as genetic improvements and enhancement in product quality, will be shared with other GLR countries through the organization of workshops and seminars, leading to the establishment of multi-lateral networks and platforms to spread knowledge for operating a successful dairy enterprise across the GLR. The new dairy cattle breeds will be imported from other Great Lakes countries. Livestock activities across national boundaries will be supported by providing technical assistance (mainly for epidemiological surveillance) and cattle vaccinations for diseases that need to be controlled at the regional level, such as foot and mouth disease (FMD) and other contagious animal diseases.



21. **Subcomponent 1.1: Strengthening of producer organizations (US\$1.95 million IDA).**

Subcomponent 1.1 will build POs' capacity to provide services to their members, with a view to strengthening their organizational capabilities, improving their access to markets, and ultimately enhancing the profitability of their farming/processing activities. The first step will be a systematic institutional mapping of POs in the targeted areas to fine-tune the strategy of intervention and the capacity-building activities for POs. This mapping, to be carried out by a specialized service provider or NGO, will assess the presence of POs at the provincial level, member characteristics (data disaggregated by gender, youth, and other traits), the type of services rendered to members, and the level of maturity and governance. The mapping will enable POs to be classified by maturity level (low, medium, high). A differentiated approach will be developed for POs at each level, including milestones and an associated support package to move from one level to the next.

22. This subcomponent will strengthen the capacity of 250 selected POs (with membership including a minimum of 35 percent women and youth) through training programs covering topics such as group dynamics, leadership and group management, assessing production costs, basic accounting systems and evaluating profitability, developing business plans, negotiating new business models with value chain partners, participatory M&E, and generating long-term upgrading plans that include processes all along the value chain. A reputable service provider or NGO familiar with Burundi's context and social structure will be contracted to carry out the mapping exercise and capacity building with POs, including support for POs to obtain legal registration, which will facilitate their access to finance and the establishment of contracts with suppliers, traders, or processors. This activity will be implemented in close collaboration with MINAGRIE (which will provide the template for PO by-laws and be in charge of their legal registration) and DPAE extension staff (who will inform PO members about the requirements of registration).

23. **Subcomponent 1.2: Support to rice and maize production (US\$31.47 million).** The subcomponent's objective is to intensify rice and maize production in the project area through farmer adoption of new technologies; use of high-yielding varieties, fertilizer, and appropriate small-scale mechanization; adoption of climate-smart, yield-enhancing, and soil fertility management cultivation practices such as SRI; and improvements in the cropping cycle, such as incorporating nutritionally-rich vegetables and legumes. Farmers will need new skills and knowledge to intensify production, and watersheds will need to be managed adequately to ensure the sustainability of irrigation investments, so capacity building plays a central role in this subcomponent, and the project will provide the required integrated package of agricultural advisory services and productive inputs. It is expected that the adoption of these packages of improved inputs and management practices will enable farmers to produce enough rice and maize for their own consumption and also generate a surplus for the market and processing industry, both at the national and regional level. All value chain actors will work together to promote adoption of the improved packages—farmers, NGOs, government research and extension services, research institutions, and private companies.

24. **Access to improved technology and dissemination of sustainable agricultural practices for rice and maize production.** This activity is expected to improve rice and maize production and productivity by supporting dissemination of sustainable practices and the use of improved technologies and modern production equipment, already tested in the region by the CGIAR and other institutions (IITA, IRRI, and Cornell University). To this end, the project will finance a mix of interrelated interventions, described next.

25. *Farmer training through agricultural extension:* The project will adopt the FFS approach to extension and follow a Training of Trainers methodology in implementing training activities. The project



will establish 100 FFSs to promote sustainable agricultural practices for rice and maize cultivation. They will include soil fertility and water management practices; better use of seed, fertilizer, and other inputs; adoption of crop rotations integrating legumes with cereals; sustainable agricultural techniques combining the use of organic matter and chemicals, and so on. The project will finance: (i) the Training of Trainers program; (ii) farmer plots under FFSs for two years; (iii) farmers-to-farmers visits, including visits at the regional level; and (iv) the design of technical sequences adapted for each crop. The project will contract IITA (maize) and IRRI (rice) for building the capacity of MINAGRIE's extension services to work with FFSs and coordinating this activity under the oversight of the PCU and PIUs.

26. *Access to improved factors of crop production:* The project will finance improved production packages (the "technological subprojects") comprising the supply of a package of improved seed and fertilizer which will benefit individual farmers, cooperatives, WUAs, and other producer groups in project areas. The improved technological packages and practices will be applied in the following target areas: (i) *rice value chain*: 6,300 ha of irrigated schemes and bottomlands (Cibitoke: 2,000 ha; Nyanza-Lac: 1,000 ha; Société Régionale de Développement de l'Imbo: 3,300 ha); and (ii) *maize value chain*, with the introduction of related technological packages across the following maize systems: maize following rice in valley bottoms (3,150 ha) and upland maize, as part of watershed management around irrigated areas and bottomlands (over a total of 3,000 ha).

27. *Access to small-scale mechanization:* The project will finance access to small-scale mechanized equipment (rototillers, planters, sprayers, and the like) to ease some of the labor constraints in selected irrigation schemes. On a demand basis, selected POs, particularly those involving youth, will be provided with MGs to purchase such equipment. The eligible POs will belong to the mature category. The equipment will be managed either by the POs themselves or private operators hired by the POs. For sustainability, the POs equipped in this manner will become remunerated service providers for their own members as well as other farmers on a demand-driven basis.

28. *Climate-smart and nutrition-smart technologies:* Climate-smart technologies such as SRI are particularly suited for producing rice in Burundi, as they combine climate-smart agricultural practices with reduced use of fertilizer and other chemical inputs.²¹ The project will promote the use of the SRI methodology for rice cultivation based on the best practices developed in Burundi and the GLR. For this special initiative, to be developed on about 1,000 hectares, the project will finance costs related to: (i) training farmers, technicians, and program implementers to use SRI practices at the field level; (ii) establishing SRI demonstration plots and the technical packages for the production plots of farmers adopting SRI; and (iii) the organization of field visits to maximize exchange and learning about the new SRI production practices at the regional level. The special SRI interventions will be entrusted to DPAAE and ISABU with the support of Cornell University. The project will also support development of nutritionally-enhanced crops, including bio-fortified crops (high-zinc rice and QPM). It will enhance farmers' ability to meet nutritional requirements by offering supplemental training about appropriate consumption patterns to improve household diets. The project will finance: (i) the introduction of bio-fortified crops; (ii) training in appropriate consumption patterns and enhanced dietary diversity; and (iii) preparation and release of corresponding training materials. These activities will be implemented jointly by MINAGRIE and the Ministry of Health, with the help of IITA and specialized NGOs already supporting nutrition activities in the GLR, such as World Vision.

²¹ SRI is based on early and quick plant establishment, minimized competition between plants through increased spacing, creating aerobic soil conditions by reducing irrigation water, and improving soils with organic matter applications.



29. **Irrigation and watershed development.** This activity seeks to achieve two interrelated objectives. First, it aims to increase production in irrigated schemes and lay the foundation for sustainable management of water service delivery through the rehabilitation and expansion of selected irrigation perimeters. To do so, the project will strengthen the institutional capacity of existing WUAs and create new ones as required, through a contractual approach empowering WUAs to manage and maintain the newly rehabilitated irrigation schemes. Second, it aims to protect watershed areas, with a focus on areas adjacent to the rehabilitated/expanded irrigation perimeters, hence reducing erosion and sedimentation. The project will promote the participation, involvement, and accountability of rural populations in this effort by identifying the watershed areas to be developed through participatory planning and negotiations with SLM associations organized by local communities. To the extent possible, all irrigation and watershed development works will be completed using labor-intensive methods.

30. This activity will be implemented in synergy with the BTC-financed PAIOSA project in Cibitoke and with IFAD in Nyanza-Lac and will finance irrigation development and watershed management interventions, discussed next.

31. **Irrigation development:** (i) Rehabilitation and/or development of irrigation infrastructure, including technical design studies, work implementation, and supervision over about 3,000 ha of irrigated areas (Cibitoke: 2,000 ha and Nyanza-Lac: 1,000 ha); and (ii) institutional development to improve management of the irrigation schemes through WUAs. The project will provide training to producers with irrigated farms. It will also promote their participation in the design and supervision of irrigation rehabilitation, in operation and maintenance activities, and costs of rehabilitated perimeters. Contractual arrangements between WUAs and MINAGRIE will be established. They will serve as the overall framework for investments in the rehabilitation of irrigation infrastructure, and they will specify the roles and responsibilities of all concerned parties in the rehabilitation, management, and maintenance of the irrigation schemes.

32. **Watershed management:** The project will finance (i) sustainable investments in watersheds (over an area of about 10,000 ha), focusing on strategic anti-erosion works (including the use of biological methods and technologies such as improved seed and seedlings for fodder plants and trees to control erosion) and interventions on communally-owned land to improve plant cover, reforestation, and pastures through strengthened technologies, based on local strategies for controlling erosion, arresting gully flow, and reducing the sediment load of river runoff; and (ii) institution building and training, in which community groups are formed and trained to undertake SLM activities.

33. **Subcomponent 1.3: Support to dairy value chain development (US\$5.20 million).** Subcomponent 1.3 will build on lessons and best practices from the World Bank-financed PRASAB and PRODEMA, and IFAD-financed PARSE²² in Burundi, as well as successful initiatives undertaken by experienced partners in the region such ILRI. It will focus on critical elements of success in the dairy value chain, including animal health and animal husbandry practices, improved pastures and fodder, and genetic improvement of local breeds through artificial insemination and/or provision of higher-performing genitors. Project activities will focus on animal health as a particular priority to ensure that the cattle are duly vaccinated, particularly against FMD, which is endemic in Burundi and spreads across borders. Another priority is the hygienic conditions surrounding milk processing and the marketing of dairy products (see Component 2). Poor animal health and substandard hygiene for milk and dairy products are a major hindrance to improved

²² *Projet d'appui à la reconstruction du secteur de l'élevage (a project to rebuild the livestock subsector, supported by IFAD).*



dairy production and trade in the region. Project activities are expected to result in larger quantities of dairy products being placed on the Burundian market (especially in urban areas such as the Bujumbura metropolitan area) and in the GLR.

34. Project interventions in the dairy value chain will be promoted along milk collection and transport roads in the project areas. They will be based on technical and financial feasibility studies to identify high-potential milk production basins and milk consumption centers. Given the relatively low development of the milk value chain in Burundi, specific attention will be given to: (i) increasing the overall productivity and efficiency of dairy cow husbandry systems and (ii) fostering market linkages through arrangements between milk producers, buyers, and processors, especially along the corridor of provinces from the Rwandan to the Tanzanian border in the Imbo region (neighboring the Ruzizi River) and along Lake Tanganyika, including the provinces of Bujumbura Rural, Rumonge, and Makamba. A special emphasis will be placed on key strategies to reduce the emission intensity of livestock systems and related impacts on climate change. Nutrition mainstreaming in this value chain will be achieved as part of Component 2 by promoting the production of processed dairy products—specifically, by developing processing capacity, providing equipment, and promoting local artisanal production of yogurt and other dairy products (whipped milk and artisanal cheese). These products, which are already available and accepted by consumers, are expected to become more affordable as a result of project interventions.

35. Under Subcomponent 1.3, the project will finance five activities. First, it will support technical assistance for small-scale producers to form POs of about 30 members each, concentrated along collection and market roads (these groups will also serve as entry points for further support). Second, it will support access to animal health services through a network of CAHWs and vaccination campaigns for cattle. More specifically, the project will strengthen animal health services by building up a network of CAHWs and private veterinarians who will coordinate the CAHWs in their zone and provide the necessary medicines and advisory services. CAHWs will be trained to provide preventive and curative animal health care such as tick control or vaccination campaigns against major livestock diseases like FMD. Third, this subcomponent will support improved animal nutrition by promoting forage crops, using agricultural residues to feed animals, improving pasturage practices, and training producers in good animal feeding, drinking, and husbandry practices. Fourth, this subcomponent will support improvements in genetic potential through local purchases and imports from neighboring countries, particularly of crossbred cattle. An action plan for animal genetic improvement and the development of artificial insemination will be prepared to that effect. Fifth, this subcomponent will finance the provision of improved genetic material for producers in the form of 3,000 dairy cows, one per two selected beneficiaries (i.e., 6,000 beneficiaries) (Box 3). These animals will be provided as per the specifications of an improved animal subproject, which will spell out the responsibilities of the project and the recipients. The improved cows preferably will be bred by local reproduction through artificial insemination.

Box 3: Creating a solidarity chain for improved dairy cows

The project approach to introducing improved genetic material is to provide one cow/heifer for two households, thus initiating a community solidarity chain, as opposed to giving one cow/heifer to each beneficiary household. This approach (used successfully in other projects, particularly PRODEMA) increases the group pressure on each initial beneficiary to take the greatest possible care of the cow and not to sell it or dispose of it for consumption. The idea is that the first beneficiary will pass the first calf that is born (male or female) to his or her solidarity partner. If the first calf is a male, the receiver of the calf will raise, fatten, and sell it to purchase a crossbred female heifer. The solidarity chain can either be extended to a third partner, or the second offspring can be used by the initial household to replace local cows and further increase farm-level milk production.



36. The foregoing dairy interventions will be supported through extension and training activities using appropriate methods of identifying animals and recording their performance, through CAHWs, as well as the use of MGs to provide investment funding. About 6,000 individual producers (of which at least 35 percent will be women) will benefit directly from the provision of improved dairy breeds, related training, and veterinary services. Beneficiaries will be selected on the basis of criteria to be detailed in the PIM.

37. **Component 1 Implementation.** Subcomponent 1.1 activities will be implemented by a specialized NGO²³ under the overall coordination of the PCU. This will be done under the oversight of MINAGRIE in charge of the PO registration; MINAGRIE’s Provincial Directorates (DPAEs) will conduct sensitization campaigns to inform PO members about the registration requirements. For Subcomponents 1.2 and 1.3, CGIAR centers will be recruited by the PCU to provide technical assistance to MINAGRIE’s research and extension services. With that assistance, these services will be equipped to train farmers to use new technologies and thus support the wider dissemination and adoption of the improved packages. IRRI will be recruited for technical assistance regarding rice, IITA for maize, and ILRI for livestock/dairy. In the same way, Cornell University will be recruited for research and extension for climate-smart agriculture and SRI technologies. These entities will work with MINAGRIE’s Research and Extension Directorate and provincial directorates, as well as cooperatives and POs (for crop production), WUAs (for irrigation), and CAHWs (for dairy). ILRI will also support MINAGRIE’s Veterinary Services in epidemiological surveillance and the organization of cattle vaccinations for endemic diseases such as FMD and other contagious diseases.

38. **Matching grants (MGs)** will be awarded to producers for the acquisition and use of the improved production packages sponsored under Component 1, as part of a Matching Grant Fund established under PCU management. The MGs will be granted as a subsidy of the cost of the improved crop packages for maize, rice (both conventional and SRI packages), and for small-scale mechanization. The MG coverage will be as follows: (i) consumable inputs (seed and fertilizer): 40 percent of eligible cost over three cropping years, in line with the government fertilizer and seed subsidy policy; and (ii) small-scale mechanized equipment: 90 percent of eligible expenditures as a one-time subsidy. As noted, dairy cows will be provided free of charge to recipients against a commitment to adhere to specific obligations. The PIM will detail the criteria for eligibility and selection of the MG recipients; requirements for granting dairy cows; and the MG FM, procurement, and disbursement procedures.

39. **Summary costs for Component 1.** Table 4 summarizes the costs and financing plan for the activities to be undertaken in Component 1.

Table 4: Project costs for Component 1—Smallholder productivity and production enhancement

Subcomponent	Cost (US\$ millions)			
	Total	National IDA	Regional IDA	Beneficiaries
Strengthening of producer organizations	1.95	0.70	1.25	-
Support to rice and maize production	31.47	11.94	18.25	1.28
Support to dairy value chain development	5.20	1.19	3.70	0.31
Total	38.62	13.83	23.20	1.59

²³ Independent (national or international) NGO to support also the participation of local communities, the targeting of vulnerable groups, and conflict mitigation.



Component 2: Support to investments in agro-processing and market linkages (US\$23.74 million, including US\$5.60 national IDA, US\$15 million regional IDA and US\$3.14 million beneficiary contribution).

40. Component 2 seeks to enhance the productivity and profitability of smallholder farmers as well as small- and medium-scale agro-processors by strengthening their capacity to reduce losses and add value to the basic commodities produced, and by facilitating access of processed products to markets. This objective will be achieved by: (i) providing tools to improve the enabling environment for agribusiness development (Subcomponent 2.1); (ii) providing investment resources to upgrade and expand storage, handling, processing, and marketing facilities for farm commodities and processed products (Subcomponent 2.2); and (iii) easing critical road infrastructure constraints to facilitate the linkage of POs and value chain operators to local, national, and regional markets (Subcomponent 2.3). All three subcomponents are essential to sustain the impact of the project's interventions, as agro-processors can achieve most of the benefits of value addition and market linkages only if they are able to operate in a pro-business environment where reliable infrastructure for efficient and responsive market participation is in place. Project interventions are predicated on a demand-led and participatory approach. They will be implemented through POs, private agribusiness investors, and selected MSMEs. The interests of youth and women are mainstreamed in the project, which supports special programs to integrate these groups into project-supported activities. A case in point is the Agripreneur Youth Initiative, which is part of Subcomponent 2.2.

41. Like activities under Component 1, Component 2 activities will have effects extending beyond the immediate project area and Burundi's national boundaries to other Great Lakes countries. They will complement and reinforce activities focusing on regional integration under Component 3 in important ways. For example, by increasing incentives for investing, Subcomponent 2.1 will help to attract domestic and foreign investors to the project area. Support to subprojects for rice and maize post-harvest, processing, and other value-adding initiatives under Subcomponent 2.2 will generate increased employment and business opportunities. The end result will be increased production, some of which will be exported and increase cross-border trade with DRC and other Great Lakes countries. The youth agro-entrepreneurship program will lay the basis for creating jobs and improving livelihood opportunities for the vulnerable youth population. Under Subcomponent 2.3, road infrastructure developed through the project will secure easier access for Burundian producers to cross-border markets for the commodities and products targeted under the project, in addition to making it easier to import production inputs and consumer goods. All in all, activities under Component 2 will come together to promote economic development and prosperity in the project area. The related business opportunities will attract foreign investors and traders, and the improved livelihood conditions will give local people incentives to stay in the project area as opposed to migrating in search of job opportunities. One key result will be to reduce the risks of conflict and mitigate fragility factors that may spill over to other countries.

42. **Subcomponent 2.1: Improving the agribusiness enabling environment and investment climate (US\$6.23 million).** A number of policies and regulations in Burundi, if strengthened, could enhance the efficiency of certain processes along the agricultural value chain (EBA 2016).²⁴ To this end, the project will finance the following activities, to be effected in partnership with MINAGRIE and the Federal Chamber of Commerce and Industry of Burundi (CFCIB).

²⁴ EBA indicators identify regulatory weaknesses in the registration and release of new varieties, requirements for importing fertilizer, tools for financial access, warehouse receipts, and the plant protection framework. Preliminary data indicate that water planning and information systems, and veterinary medical products, also require crucial improvements (EBA 2016).



43. **Support for policies, strategies, and regulatory reforms that will encourage private agro-processing investments in targeted areas.** Under this activity, the project will support (i) efforts to strengthen the national regulatory framework and (ii) a series of related feasibility studies.

44. *Support for the government to strengthen Burundi's regulatory framework will improve the business environment in key areas that affect agribusiness.* To gain a fuller understanding of target reform areas, EBA findings and other relevant metrics will be used to characterize, assess, and analyze Burundi's agribusiness enabling environment. The project will measure key aspects of the enforcement of regulations, institutional arrangements, relevant infrastructure, and/or support services. Data collected will supplement EBA indicators to provide for a more thorough analysis of the business environment and potential policy actions. The project will develop analytical material such as the sector assessments to identify key investment constraints, and carry out a series of activities to acquaint the government with the evidence provided by the assessments and its use for policy planning. Supporting activities will include technical workshops and forums with key stakeholders to trace potential areas of policy action. The project will work closely with key government representatives and policymakers to translate the data into policy reforms and outcomes that will facilitate agribusiness throughout the project area and address the investment obstacles identified in the assessments, including those impacting small and medium enterprises (SMEs), potentially serving as a model for the GLR. Improvements will result in a regulatory environment that is more conducive to private sector investment, reflected in higher EBA scores.

45. *Feasibility studies will help to determine opportunities and priorities in the sector, and they will include two investment projects with a regional dimension.* The first investment project is the Special Economic Zone being considered by the government in the Mutimbuzi Commune at the border with DRC. The second is a fruit and vegetable logistics platform planned in Bujumbura. Both investment projects are intended to capture large flows of local products, create regional hubs to increase trade, and encourage greater inflows of foreign direct investment related to the increase in investment opportunities.

46. The sector assessments and improvements in the business regulatory environment will be used to develop and implement a targeted investor outreach campaign. Promotional materials, such as briefing materials on investment opportunities, will be produced and activities developed and/or targeted to draw private sector investment. The targeted investor campaign will include data gathering, monitoring, and information systems management, with relevant tools for customer relationship management, investor aftercare, and tracking the progress of private investments in agribusiness services through the implementation of an investor tracking system. The project will also build the capacity of CFCIB to carry out investment promotion and investment climate reforms with relevant line ministries so that they may engage effectively with the private sector.

47. **Strengthening business development services for value chain support.** The advisory services of MINAGRIE have limited capacity to cope with farmers' and agro-processors' growing demand for services oriented to markets and value chains. Nor can they cope with growing demand for sustainable sources of produce from other actors in the value chain, including national and international exporters. Given these considerations, this activity will strengthen/establish a number of providers of business development services (BDS) to help small-scale farmers and their emerging agri-enterprises integrate into value chains and relate to other chain actors (traders, processors) and services. These service providers (public and private) will be identified, prequalified, and have their capacity strengthened to offer the following services: (i) preparing sound business plans (including choice of technology) and loan applications; (ii) registering, managing, and carrying out financial planning for a business; and (iii) meeting food quality and



safety standards to access national, regional, and international markets. These providers will also be trained to take a business-like approach to service delivery (sustainability through cost recovery) and be introduced to cross-cutting themes of gender equality and protection of the environment. An experienced service provider will be competitively recruited to provide capacity-building to the selected BDS providers.²⁵

48. **Subcomponent 2.2: Support for value addition and market linkages (US\$12.01 million).** This subcomponent will facilitate development of an agro-based food processing cluster consisting of SMEs located along the Lake Tanganyika (Cibitoke-Makamba) corridor by financing: (i) the construction and/or rehabilitation of post-harvest and marketing infrastructure for rice and maize (for drying, storage, transformation and/or packaging); (ii) investments in agro-processing SMEs for diverse commodities, facilitating the entry of high-value-addition participants (processors and market operators) and linkages to regional value chains; (iii) a youth agro-entrepreneurship program that assists young entrepreneurs to build relevant skills and provide support services for targeted value chains. The subcomponent supports individuals and POs as well as private agribusinesses in the identification and implementation of demand-driven agro-processing projects through a combination of MGs and/or full funding of selected business plans. This support will include: fixed capital (for example, plant and equipment, minor infrastructure) and technical assistance (for example, business planning, skills development) to be delivered through the BDS providers established under Subcomponent 2.1. Eligibility and selection criteria for access to MGs, as well as the fund management, disbursement, and monitoring procedures, will be detailed in the PIM.

49. More specifically, Subcomponent 2.2 will support:

50. **Establishment of a network of rice and maize post-harvest units.** A network of post-harvest/marketing centers will be financed along the Cibitoke-Makamba corridor. The centers will have drying, preparing, storing, and/or packaging facilities to be used for rice and maize produced by cooperatives in the region. MGs will be provided to rehabilitate, expand, and equip 25 post-harvest centers and build 3 processing factories for rice and/or maize at strategic points in the targeted provinces. The centers will be managed by cooperatives, firms, NGOs, or public sector offices selected based on performance, potential, and distribution. Factories will be managed by firms working with POs under contractual terms, in a structure that integrates these organizations into project planning and offers best performing producers shares within the company. In all cases, training and BDS will be offered for business plan preparation, implementation, and monitoring.

51. **Support for special value-adding agro-processing initiatives.** Through an MG scheme, the project will also finance business proposals selected for their potential to develop profitable agricultural value chains, bolster private investment, and promote market linkages, primarily for dairy products, fruits and vegetables, and legumes that demonstrate strong regional market potential. Interested firms or entrepreneurs will be assisted to develop and propose a business plan, and a selection process will determine candidates qualified for receiving funding, technical assistance, and training in business plan implementation and monitoring. To strengthen the link between Components 1 and 2, priority for accessing MGs will be assigned to SMEs that have established business plans featuring buying agreements concluded with farmer groups/cooperatives established under Subcomponent 1.1.

²⁵ Providers of BDS in Burundi include: Burundi Business Incubator (BBIN); Université du Burundi- Faculté des Sciences Economiques; Organisation Inter-Eglises de Coopération au Développement (ICCO).



52. Dairy products present a special case for agro-processing investments. Individual entrepreneurs are already active in dairy production and need support to develop their businesses; they are potential purchasers of the increased milk production from producers supported through Subcomponent 1.3. Investments planned for the dairy subsector therefore will be tailored to achieving higher standards in production, in handling (from the point of production through transport and storage), and in marketing to reduce post-production losses, enhance shelf-life, and meet food quality standards demanded by consumers. More specifically, the project will finance the following investments to improve the collection, storage, processing, and marketing of milk and other dairy products (cheese and yogurt), as well as corresponding training and awareness campaigns:

- *Milk collection centers (MCCs),²⁶ their equipment, and access to fresh water.* Each MCC will have simple cooling equipment in the form of a charcoal evaporation cooler. The MCC will carry out the first milk control and will therefore receive simple milk testing equipment. The operator of the MCC will receive a fee in return for providing the premises and services. The project will finance the establishment or rehabilitation of 25 MCCs.
- *Milk bulking centers (MBCs).* In each participating province, the project will finance the construction of one MBC to supply larger and constant quantities of milk to commercial dairy plants in Bujumbura. The MBC will receive the milk from the MCC and ensure transport to commercial dairy units. It will also host a shop to sell milk. Each MBC will be equipped with electric cooling equipment, milk hygiene testing kits, and transport trucks.
- *Training of milk center and sales point operators.* Staff of MCCs, MBCs, and sales points will not only receive training in milk hygiene, use of equipment, and milk testing but in managerial practices, including book-keeping.
- *Awareness campaigns.* Considering that the dairy sector needs promotion and that consumers need information on what the project will make available, the project will launch a sensitization campaign on milk and dairy products through local radio stations, television (if possible), posters, and flyers. These activities will be coordinated with the IFAD and BTC co-financed projects²⁷ being implemented in other provinces in the country.

53. **Youth agro-entrepreneurship program.** The project will finance the Agripreneur Youth initiative, successfully developed by IITA in Nigeria, Cameroon, Kenya, and more recently in DRC. The initiative will serve as an agribusiness incubator helping youth drive new agricultural enterprises that primarily support the targeted rice, maize, dairy, and eventually other value chains. Clusters of youth—at least 50 percent women—will be provided with resources and expertise to explore options for income generation, along with technical assistance to develop business plans and loan applications. This support will enable them in turn to launch their own enterprises for providing mechanical services, technology and inputs, market strategies, transport, and other services. The project proposes expanding this initiative along Burundi's Cibitoke-Makamba corridor, with a target of reaching 100 youth beneficiaries by the end of the project.

²⁶ In some projects, the MCC plays the role of small credit agency for producers who regularly deliver milk (advances, for example, for the purchase of milk cans, are deducted from the milk payments). This activity requires a simple but efficient accounting system at MCC level.

²⁷ Agricultural Intensification and Value-enhancing Support Project; Value Chain Development Programme; and the National Program for Food Security and Rural Development in Imbo and Moso.



54. **Subcomponent 2.3: Improved rural road infrastructure for market access (US\$5.5 million).** Following an inventory of the rural road network in the Ruzizi Plain, a rural road improvement program will be prepared. This program will take into account the regional dimension of the project and enhance connectivity primarily between Burundi and eastern DRC. It is expected that the project will rehabilitate about 100 km of feeder roads in the Ruzizi and Imbo regions and a connecting bridge at the Buganda-Sange crossing between the two countries. All construction work, to the extent possible, will be carried out through labor intensive methods that could generate employment for local people and IDPs. These works will be accompanied by developing a community-based road maintenance strategy, possibly making use of existing (or new) road maintenance associations formed at the community level. Road maintenance associations will be provided with basic tools and equipment to perform routine maintenance. A Training of Trainers program on road maintenance will also be developed for staff of the Public Works Department.

55. **Component 2 - Implementation.** Subcomponent 2.1 will be implemented in partnership with CFCIB (Burundi’s chamber of commerce) for activities related to strengthening policies and regulations, and through a specialized service provider to build the capacity of the selected BDS providers. Subcomponent 2.2 will be implemented with direct support from the PCU through individual and/or collective investment subprojects geared to support the development of agro-based processing SMEs; the subprojects will be designed and implemented with the assistance of BDS providers. The rural roads and market infrastructure program under Subcomponent 2.3 will be implemented under the oversight of the Ministry of Public Works through private civil works contractors.

56. The post-harvest and processing subprojects will be funded through the Matching Grant Fund. The MGs for small-scale processing equipment and medium-scale rice/maize processing will be provided as a one-time grant, representing 90 percent and 70 percent of eligible costs, respectively. The MGs provided through the project, along with capacity building, will help processors recapitalize their enterprises and lay the foundation for growth for private agribusiness/agro-industries. Eligibility and selection criteria for access to MGs, as well as the fund management, disbursement, and monitoring procedures, will be detailed in the PIM to be issued before project effectiveness.

57. Table 5 summarizes project costs and financing for Component 2.

Table 5: Project costs for Component 2—Support to investments in agro-processing and market linkages

Subcomponent	Cost (US\$ millions)			
	Total	National IDA	Regional IDA	Beneficiaries
Improving the agribusiness enabling environment and investment climate	6.23	2.73	3.50	-
Support for value addition and market linkages	12.01	2.87	6.00	3.14
Improved rural road infrastructure for market access	5.50	0	5.50	-
Total	23.74	5.60	15.00	3.14

Component 3: Institutional integration, knowledge acquisition, and dissemination of information at the regional level (US\$10.37 million regional IDA)

58. Component 3 includes activities directly related to the promotion of a regional agenda for Agriculture for Development, to complement Component 1 and 2 activities. This component will focus on defining key regional agricultural strategies and R4D priorities and on ensuring the dissemination of results



to DRC and across the GLR. The agro-ecological zones and their watersheds, as well as rice, maize, and dairy production systems, cut across the borders of countries in the GLR. For that reason, it is important for countries to work together and share knowledge on the same agenda; doing so requires overall institutional coordination of the agricultural agenda, as well as knowledge acquisition and dissemination in specific areas of common interest.

59. The project will support joint programs and interventions between Burundi, DRC, and possibly other Great Lakes countries, regarding: (i) overall institutional coordination for the development of a sustainable regional agricultural agenda, and the corresponding human capital development, through the strengthening of regional institutions, scientific exchange, the acquisition of specialized skills, and formal training at the graduate and postgraduate level; (ii) the development and/or adaptation of new production technologies suited to the regional context, including climate- and nutrition-smart technologies, and technologies for natural resource management with a focus on shared watersheds, and the required improvement of the corresponding knowledge and information systems, through support for ISABU and the National Center for Food Technology (CNTA); and (iii) research infrastructure, with a focus on laboratory infrastructure and equipment. Across all of the above activities, Component 3 will support the creation of platforms where farmers, technicians, and researchers from both the public and private sphere can interact and exchange with each other and create communities of practice that will help them to benefit from successful pathways of agricultural improvement.²⁸

60. In line with the above, and the needs of the rice, maize, and dairy value chains, Component 3 is designed along the following three subcomponents: (i) Regional cooperation and capacity development for agricultural researchers; (ii) Development of profitable and sustainable technologies; and (iii) Diagnostic services and support to laboratory services.

61. **Subcomponent 3.1: Regional cooperation and capacity development for agricultural researchers (IDA US\$4.25 million).** The proposed project will remedy two capacity weaknesses existing in the regional context: (i) insufficient capacity for institutional coordination in the definition of regional agricultural policies and (ii) the lack of human resources to pursue the R4D agenda. In addressing the first weakness, project activities will focus on CEPGL, which has an Agriculture and Food Security Division with limited capacity. With respect to human resources for R4D, Burundi, DRC, and other Great Lakes countries still struggle with inadequate systems and human resource capacity. Investments need to be made to strengthen human resource capacity in alignment with national and sub-regional priorities, combined with the strengthening of the research-extension linkages with stakeholders.

62. **Support for the Agriculture and Food Security Division of CEPGL.** The project will provide targeted support to develop the capacity of this division, which has policy objectives and activities similar to those envisaged in the proposed project. Activities in support of CEPGL will complement those financed by the parallel GLR project in DRC, and they will include: (i) regional planning, monitoring, and evaluation to establish and monitor complementary investments with neighboring countries, particularly with regard to natural resource management in shared watersheds, expected impacts of climate change, and infrastructure investments geared toward improving border connectivity; and (ii) regional exchange of information, knowledge, and technologies through, among other things, the establishment of a web-based exchange platform under CEPGL.

²⁸ An example of successful cross-country platform is the SRI West Africa project funded by the World Bank, where farmers in similar agro-ecological zones share experiences and best practices across country borders.



63. **Capacity development for agricultural researchers.** This activity focusses on (i) specialized training and exchanges on priority themes for scientists from national agricultural research institutes from Burundi, with a specific focus on ISABU and the University of Burundi; and (ii) PhD and MSc training. Because of the regional character of these capacity development activities, scientists from national agricultural research institutes in DRC and other countries will also be eligible to participate in the specialized short-term training (and vice versa). Scientific exchange visits and workshops between Burundi, DRC, and other Great Lakes countries will be organized to facilitate cross-learning.

64. CGIAR centers are mandated to develop the capacity of National Agricultural Research Systems (NARSs), and the project will rely on their expertise to improve the capacity of human resources in Burundi and the Great Lakes countries.²⁹ The proposed outputs of this subcomponent include: (i) non-degree training, consisting of at least 15 short training courses organized for some 300 national scientists, technicians, or extension workers from Burundi, leading to the creation of platforms and communities of practice where Burundian farmers, technicians, and researchers from both the public and private sphere can interact and exchange with regional counterparts; and (ii) degree training, consisting of at least 3 PhD degrees delivered on priority research themes for the targeted value chains (1 per value chain) and 9 MSc degrees delivered on priority research themes for the targeted value chains (3 per value chain).

65. Regarding regular non-degree training, the regional training workshops and/or special sessions on priority research themes will be organized through the following activities: (i) workshops to assess needs for training (15, with about 20 participants each); (ii) implementation of short-term training courses, including the development of a training program and training materials; and (iii) facilitation of the integration of knowledge acquired during project implementation. Exchange visits between scientists in Burundi, DRC, and other Great Lakes countries will be organized periodically on priority themes and common interests. The PhD program will be operationalized through the following activities: (i) identification of host universities and supervisory committees at the international level; (ii) needs assessment and identification of students, based on scientific quality of the candidate, study results, relevant research experience and/or publications, support letters of the supervisors, scientific quality of the proposal, quality and feasibility of the research plan, relevance to R4D in Burundi and elsewhere in the GLR, and coherence with research programs at the home institute and at host universities; and (iii) implementation of the PhD program, including the submission and defense of the PhD thesis and the submission of scientific papers. The MSc program will be operationalized through a similar process but handled through universities in the GLR (especially in Kenya and Tanzania).

66. **Subcomponent 3.2: Development of profitable and sustainable technologies (IDA US\$3.62 million).** As mentioned in previous sections, the rice, maize, and dairy value chains have considerable growth potential, both in the project areas of Burundi and the adjacent area covered by the GLR project in DRC, as well as in many other areas of Great Lakes countries. But farming systems still face many constraints hindering the mobilization of this potential. Subcomponent 3.2 will focus on promoting improved production techniques, developing and validating high-yielding varieties for release, facilitating access to quality seed, and introducing small-scale machinery for land preparation, harvesting, and processing. For rice in particular, varieties selected for good performance at the IRRI regional

²⁹ For instance, in the context of the Consortium for Improving Agriculture-based Livelihoods in Central Africa, four researchers have defended or are in the process of defending their PhDs in ISABU.



experimental fields in the Imbo Plain will be further tested and disseminated;³⁰ they will be shared with rice scientists in DRC to confirm their adaptability confirmation before release. Similarly, SRI practices that have proven beneficial in Burundi under the project's SRI pilot and other donor-funded initiatives will be prepared for release and shared with the GLR project in DRC before dissemination on a larger scale. For both rice and maize, experiments on enhanced cropping systems with legumes and vegetables will be pursued and disseminated.

67. Subcomponent 3.2 will include the following crop interventions: (i) *identification and promotion of best agronomic practices* for enhancing productivity and reducing the yield gap, including decision support tools for appropriate soil fertility and pest and water management, and promotion of best agronomic practices; (ii) *testing and validation* of appropriate improved rice and maize seed, including the introduction of climate-smart varieties, with the extension of best planting practices and use of appropriate machinery; and (iii) *identification and dissemination of climate- and nutrient-smart options for diversification* of rice and maize-based production systems.

68. The above interventions will be entrusted to ISABU, with the assistance of the CGIAR centers (IRRI for rice and IITA for maize) and other institutions (Cornell University for SRI,³¹ and FAO and international NGOs for nutrition smart systems),³² so that ISABU acquires the technical capacity to identify and develop profitable and sustainable technology packages to improve productivity in the targeted value chains. ISABU will share R4D results gained through the project with DRC counterpart institutions, and incorporate DRC findings in the improved technology packages that it develops. The project will support the establishment of exchange platforms for Burundi, DRC, and other Great Lakes countries to share and disseminate knowledge.

69. **Subcomponent 3.3: Diagnostic services and support to laboratory services (IDA US\$2.5 million).**

Reliable and timely diagnostic services for soils, plants, and animals are an important precondition for development of the priority value chains. Proper diagnostic testing is key to devising appropriate interventions to remove constraints that impede crop and animal productivity, in areas such as soil fertility and food microbiology. Burundi and other Great Lakes countries suffer from a severe lack of laboratory facilities and human resources to perform these functions. The IITA Bukavu (DRC) facilities can provide: (i) quality control and oversight; (ii) capacity development for laboratory technicians; and (iii) access to new technologies for Burundi and DRC, as well as other Great Lakes countries. Even so, it is important for national research systems in Great Lakes countries to have functional laboratory infrastructure and expertise. Under this project, the crop and veterinary laboratories of ISABU and MINAGRIE in Burundi will be upgraded and the capacity of laboratory staff strengthened, in line with needs and priorities for the targeted priority value chains. The laboratories will be outfitted with the equipment (testing equipment,

³⁰ In particular, varieties selected for their performance in the Imbo Plain experimental fields will be shared with rice scientists in DRC to confirm their adaptability before release. Note that rice diseases cause significant yield losses in Burundi and DRC, the most important being rice blast and sheath rot complex, which cause losses reportedly as high as 40 percent. The IRRI Regional Center, based in Burundi's Imbo Plain, has characterized blast pathogen races in Imbo Plain well, and resistant varieties have been released. Given the common characteristics of the lowland ecology in Burundi and eastern DRC, technology developed by IRRI could be adapted and deployed rapidly through collaboration with local research institutes in Congo and Burundi.

³¹ SRI is a simple, knowledge-based management approach to rice production, enabling farmers to increase yields by 20–50 percent (often more), while reducing use of irrigation water by 30–50 percent, seed by 80–90 percent, and agro-chemicals by 30–100 percent. SRI techniques reduce methane emissions by up to 50 percent and rebuild soils to become healthy, fertile, and richer in organic matter. Under several IFAD projects, ISABU has experimented successfully with SRI.

³² MINAGRIE, with the assistance of FAO and World Vision, has experimented with iron-fortified crops (beans and sweet potatoes) grown in rotation with grain crops, and with vegetable crops for home gardens.



incubation chambers, and the like) needed to undertake applied research in areas such as soil fertility, microbiology, livestock diseases, food quality, molecular biology, and plant virology. The focus will be on three types of facilities, namely plant analysis, soil testing, and veterinary diagnostics. Quality management systems complying with ISO-based or equivalent standards will be implemented.

70. Crops with high aflatoxin levels are typically encountered in Great Lakes countries and face trade barriers because aflatoxin is a health threat. Crop aflatoxin content must be managed to improve access to markets, increase crop profitability, and reduce human exposure. Aflasafe™ is a biocontrol product that consistently reduces aflatoxins by over 80 percent throughout the value chain, particularly during crop development and storage. Aflatoxin mitigation is a high priority of the African Union, which set up the specialized Partnership for Aflatoxin Control in Africa. Aflasafe™ is needed to rapidly develop quality-conscious markets for aflatoxin-safe maize in Burundi, DRC, and other Great Lakes countries. These include food processors, maize exporters, and exclusive buyers who are willing to pay a small premium for quality produce free of aflatoxin.³³ MINAGRIE and the Ministry of Health, as well as other nutrition-promoting organizations and food security agencies (for example, the UN World Food Programme), need to be involved in deploying Aflasafe-treated maize to retain the benefits of foodstuffs that are both nutritious and safe. Since 2013, IITA has produced over 480 t of Aflasafe™ products, which led to treatment of over 48,000 ha of maize across Africa.

71. In line with the above, Subcomponent 3.3 will implement two groups of activities:

- *Strengthening general laboratory capacity.* The project will support: (i) an assessment of needs for laboratory facilities in relation to the priority value chains; (ii) building and equipping laboratory facilities; (iii) developing standard operating procedures, including facilitation of quality assurance and data management procedures; and (iv) training for laboratory staff.
- *Aflatoxin control.* The project will support: (i) a diagnostic for Aflasafe™ Burundi strains and sensitization on the importance of aflatoxin; (ii) training of local producers and farmers on the use of Aflasafe™; and (iii) installation of a regional Aflasafe™ production facility in Burundi to serve all maize production areas in the country and eventually also eastern DRC.

72. **Component 3 Implementation.** Activities under Subcomponent 3.1 will be implemented as follows. Support to CEPGL will be provided under specialized consulting arrangements as needed. The capacity development program for agricultural researchers will be undertaken through consulting arrangements with specialized institutes or private service providers; the degree training will be executed through universities at the regional and international level. Subcomponent 3.2 activities related to the production and dissemination of agricultural technologies will be implemented by ISABU with the assistance of the same operators under Component 1, namely CGIAR centers (IRRI for rice and IITA for maize) and other institutions (Cornell University for SRI, FAO and international NGOs for nutrition-smart systems). Subcomponent 3.3, related to laboratory capacity building, will be implemented as follows: (i) general laboratory capacity will be upgraded with technical assistance from IITA and ILRI; (ii) aflatoxin eradication activities will be under the overall coordination of MINAGRIE and CNTA, with assistance from

³³ Farmers who treat their fields with Aflasafe™ are able to sell their aflatoxin-free maize on an average at a 15 percent premium over the prevailing market price, hence obtain a much higher return on investment. In addition, since farmers keep about 40 percent of their harvest for home consumption, they are able to improve both the safety of home-grown food and the health of their families, including women and children.



IITA; and (iii) the new regional Aflasafe™ production facility will be constructed under a contractual agreement with a specialized private contractor.

73. Table 6 summarizes project costs and financing for Component 3.

Table 6: Project costs for Component 3—Institutional integration, knowledge acquisition, and dissemination at regional level

Subcomponent	Cost (US\$ millions)			
	Total	National IDA	Regional IDA	Beneficiaries
Regional cooperation and capacity development for agricultural researchers	4.25	-	4.25	-
Development of profitable and sustainable technologies	3.62	-	3.62	-
Diagnostic services and support to laboratory services	2.50	-	2.50	-
Total	10.37	-	10.37	-

Component 4: Project Management and Institutional Support (US\$7.0 million, including US\$5.57 million IDA national and US\$1.43 million IDA regional).

74. Component 4 focuses on all aspects of project management, including fiduciary aspects (FM and procurement), M&E, knowledge generation and management, communication, and the monitoring of safeguard mitigation measures. It also provides for critical cross-cutting institutional support, meeting capacity-building and training needs identified in MINAGRIE, on top of specific technical capacity-building activities undertaken within the three technical components. It also includes a subcomponent for a contingency emergency response, which could be triggered in the event of a natural or human-induced disaster through formal declaration of a national or regional state of emergency.

75. **Subcomponent 4.1: Project management and coordination (US\$5.57 million).** This subcomponent will ensure that the project is managed efficiently and effectively to achieve expected results (see details in Annex 2). Its performance indicators will include quality and timely execution of AWPBs, timely submission of progress reports and annual audit reports, operational M&E capable of documenting key indicators, and the actual level of disbursements in line with planning. It will finance activities in four main areas. The first is the *staffing, equipment, and operating costs of the PCU*. The PCU will comprise a core team hired on a competitive basis and composed of a national project coordinator, a technical planning and regional integration officer, an FM specialist, an internal auditor, a procurement specialist, a social safeguards specialist, an irrigation specialist, and a communication specialist. The PCU will benefit from the support of a technical team of focal points appointed in the national and provincial directorates of MINAGRIE (DPAEs). The team’s role will be to facilitate project implementation through systematic review of periodic reports and briefing notes to MINAGRIE, CPGEL, and the NPSC, to facilitate the review of programming and implementation documents and speed decision-making. The second set of activities supported under this component is *project planning and internal M&E*. The project will cover consultant fees, studies, workshops, and operating costs for the preparation of AWPBs and periodic implementation status reports, completion of financial audits, as well as key national/regional studies aiming at preparing or documenting the project’s intervention, beneficiary satisfaction surveys, and a project completion report at the end of project implementation. The third set of activities is *environmental and Social Safeguards Management*. The project will support implementation and follow-up of environmental and social safeguard instruments, notably with the preparation of Environmental and Social Impact Assessments (ESIAs), as well as follow-up and supervision of their implementation. Fourth,



under this component the project will support *preparation and implementation of a communication plan*, including a GRM to redress grievances related to the project's activities.

76. **Subcomponent 4.2: Institutional support, capacity building, advocacy, and communication (US\$ 1.43 million).** This subcomponent will provide capacity building on a needs basis to national and provincial technical services in MINAGRIE (particularly extension services) to strengthen their role in the direct implementation of the proposed project. It will finance: (i) construction or rehabilitation of office buildings; (ii) training and study tours for individuals from public agencies to visit neighboring countries to learn from successful experiences; and (iii) technical assistance and equipment to the designated technical services to enable them to perform their functions more effectively.

77. **Subcomponent 4.3: Contingency emergency response (IDA: US\$0.0M).** This zero-cost subcomponent will provide an administrative and financial framework for funding emergency activities requiring immediate response in the event of a natural or human-induced disaster, should the need arise during project implementation. The funding will be triggered by a formal request from the Government of Burundi in the case of the declaration of a national or regional state of emergency. In that instance, funds from other components of the proposed project and/or from other World Bank projects may be reallocated to Subcomponent 4.3 to provide emergency response funding without having to change the Financing Agreement. The PIM will specify the conditions under which the emergency funding can be called upon.

78. **Component 4 Implementation.** In cross-cutting areas such as FM, procurement, M&E, and communication, implementation arrangements for the proposed project will build on synergies and complementarities with the GLR project in DRC. For example, staff hired for procurement should constitute a pool of competencies and shared support, available to provide additional assistance to a project in need at a particular time. Likewise, financial management and M&E software packages will be shared between the two projects to provide not only economies of scale but also the capacity to more easily aggregate data at the regional level. The role of communication with beneficiaries and other stakeholders will be critical for the two projects, given the sensitivity of the region in terms of land use and security in general. Finally, gender and youth matters will be mainstreamed in all project activities and their importance fully addressed. Expertise in this area will be included in the PCU and PIUs to ensure that needs of women and youth are properly taken into account.



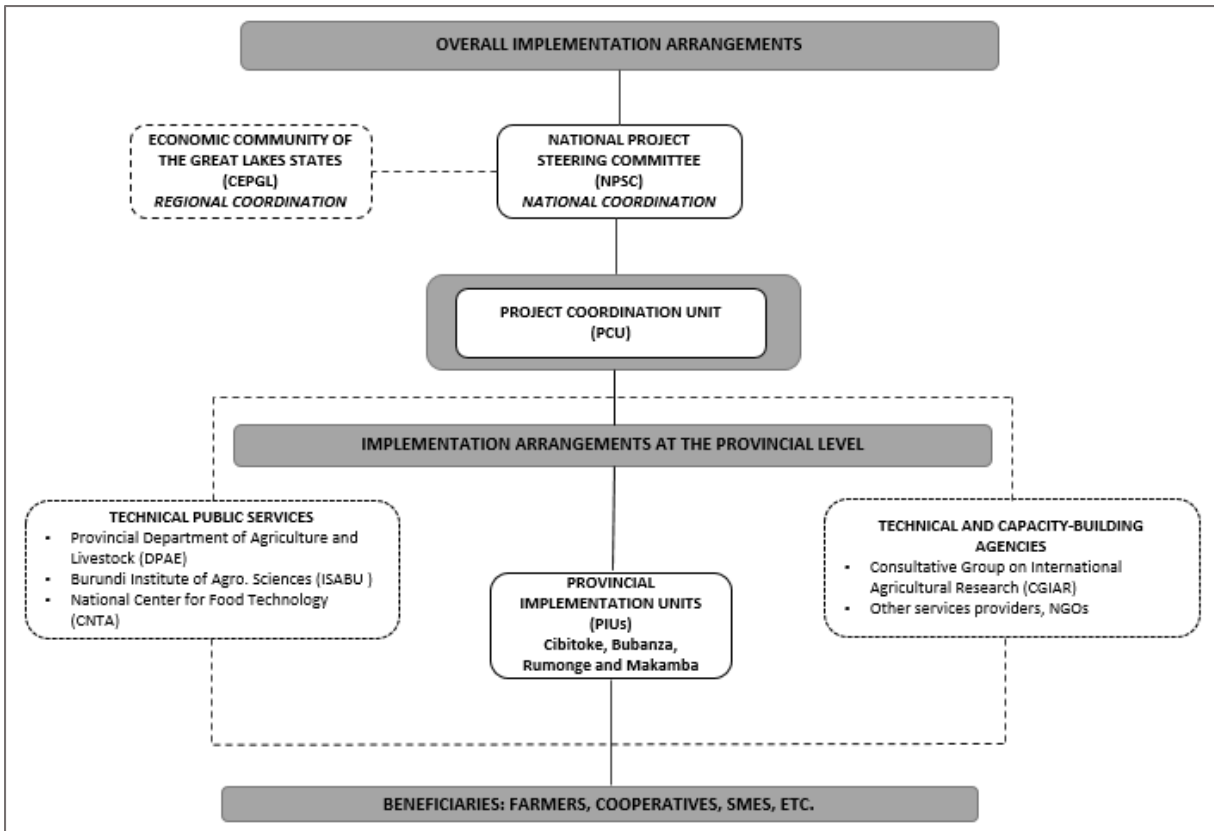
ANNEX 2: IMPLEMENTATION ARRANGEMENTS

Great Lakes Regional Integrated Agriculture Development Project

A. Project Institutional and Implementation Arrangements

1. The implementation arrangements for GLR-IADP-SOP2 have been designed to take into account: (i) the regional dimension of the project; (ii) the project area’s challenging environment, including the need to adapt fragility-mitigating measures; and (iii) the weak capacity within MINAGRIE, which needs to be addressed for the project to achieve its development impact. Overall, the institutional arrangements include a national steering committee under MINAGRIE, a national project coordination unit, provincial implementing units, and implementing partners to deliver needed services (Figure 2). The institutional arrangements also include a regional facilitation mechanism to ensure regional coordination through CEPGL.

Figure 2: Institutional and implementation arrangements for the proposed GLR-IADP-SOP2



2. **Implementation arrangements at the national level.** MINAGRIE will have overall responsibility for project implementation, in close coordination with the Ministry of Water, Environment, Territorial Development, and Urbanism, the Ministry of Commerce, Industry, and Tourism, the Ministry of Transport, Public Works, and Equipment and the Ministry of Health. Project implementation will build on PRODEMA’s successful implementation experience with an institutional setup organized around the following entities:



(i) the National Project Steering Committee (NPSC); (ii) the Project Coordination Unit (PCU); (iii) the Provincial Implementation Units (PIUs); and (iv) the technical capacity-building agencies (national and international).

3. **The National Project Steering Committee.** The NPSC will be established to provide policy guidance, oversight, and ensure proper coordination of a project that involves a number of different actors in the value chain (government agencies, farmers, cooperatives, agro-processors, traders/exporters and others). The NPSC will meet twice a year and have the following main functions and responsibilities: (i) advise the project on strategic directions and support activities to be provided; (ii) approve the AWPB and ensure that it is aligned with the project's development objective; (iii) ensure the effective collaboration and cooperation between all key stakeholders, including at the regional level; and (iv) review the Implementation Progress Reports (IPRs) issued by the PCU and advise on the effectiveness of ongoing activities and any adjustments that need to be made to the annual work plan. The NPSC will also organize at least one annual meeting with donor representatives to ensure adequate coordination of rural sector development activities. The tenure of the NPSC will be five years, consistent with the project implementation period. The MINAGRIE, as the key sector ministry, will chair the NPSC, which will comprise relevant officials from other sector ministries and institutions involved in project implementation, including representatives of the private sector, POs, and civil society to ensure that their concerns are voiced and to contribute to good governance. The establishment of the NPSC is a condition of effectiveness.

4. **Project Coordination Unit.** MINAGRIE will establish a central PCU acceptable to the World Bank. The PCU will have overall responsibility for FM under the project, including daily management of the Designated Account and coordination of project activities. It will be in charge of executing the approved AWPB and will be accountable for producing the annual project accounts. It will have dedicated personnel to ensure planning and budgeting of project activities, as well as the management of subproject agreements and MoUs, FM and procurement, technical supervision and quality control, gender and social inclusion, environmental and social safeguards, and M&E. A dedicated officer will be tasked with the planning and follow-up of regional integration activities. The core personnel of the PCU will be hired on a competitive basis and will consist of a national project coordinator, a technical planning and regional integration officer, an FM specialist, an internal auditor, a procurement specialist, a monitoring and evaluation specialist, a social safeguard specialist, an irrigation specialist, and a communication specialist. The social safeguard specialist will be in charge not only of project safeguard awareness and accountability, but will also follow up on issues related to mediation (if/where required) in potential conflicts, and ensure that there is no elite capture of project resources.

5. **Provincial Implementation Units.** The PCU will be represented in the provinces by five decentralized PIUs in charge of field coordination, guidance, and supervision of project activities. The PIUs will be established in Bujumbura Rural, Cibitoke, Bubanza, Rumonge, and Makamba within the premises of the DPAEs. Staff for the PIUs will be recruited no later than four months after effectiveness and will comprise an inter-provincial coordinator (Head of the PIU), an agricultural/livestock officer or a veterinarian, an M&E officer, and a secretary. The PIU teams will oversee and monitor implementation of all project activities in their respective provinces. In addition to serving as the project's representatives in the provinces, they will be in charge at the provincial level of coordination as well as the collection, processing, and reporting of M&E data. PIU staff members will work closely with provincial and communal services (such as DPAEs). They will provide technical assistance and hands-on training to those services to



build government capacity at the provincial and communal level and promote the transfer of knowledge between the project and these services.

6. **Technical and capacity-building agencies.** In addition to the technical public services (ISABU, CNTA, DPAEs, and DGMAVA),³⁴ the proposed project will rely on a number of strategic international development partners active in Burundi (and DRC) to strengthen technical support and ensure efficient and transparent implementation of project activities. These partners include a number of CGIAR centers and other service providers such as Cornell University and NGOs familiar with the social structure in Burundi. The PCU will enter into contracts with these institutions and service providers in accordance with World Bank procurements guidelines. More specifically:

- *IITA* will support activities related to the maize value chain, the youth entrepreneurship development program, the establishment of the regional Aflasafe™ production facility, and the human resources capacity-development program.
- *IRRI* will support activities related to the rice value chain, including small mechanization and capacity building for WUAs.
- *ILRI* will provide support activities related to the dairy value chain, including livestock health improvement issues.
- *Cornell University* will support the testing and introduction of SRI.
- *An independent NGO* will support the PIUs in undertaking conflict-mitigating measures, support the targeting of vulnerable groups, and ensure that a functional community participation and feedback mechanism is in place.³⁵

7. With regard to the technical public services, the PCU will establish an MoU specifying the responsibilities of each technical partner:

- *ISABU*, the main national research and development agency for the agricultural sector, will support production (provision of certified seed), extension, and applied research activities foreseen as part of all components.
- *CNTA*, the food technology center, will support post-harvest/agro-processing activities planned under Component 2 and the aflatoxin management interventions foreseen under Component 3.
- *DPAES and DGMAVA* will provide support related to organizing POs, extension (FFSs), and M&E.

8. **Implementation arrangements at the regional level.** Burundi, like DRC, is active in a number of regional forums, and together with Rwanda, these two countries form the CEPGL. While each country will assume primary responsibility for implementing activities at the national level, the GLR-IADP envisages that CEPGL will play an important facilitating role, supporting regional knowledge sharing and monitoring activities to ensure cross-fertilization, and learning from experience in the two countries. CEPGL would be the most appropriate regional institution to support this project, given its more limited membership and its established mandate to enhance regional economic integration across the GLR. The project will support liaison activities with CEPGL to help regional facilitation, ensure policy coordination, and ease

³⁴ *DGMAVA is the Direction Générale de la Mobilisation pour l'Auto-développement et la Vulgarisation Agricole (General Directorate for the Mobilisation for Agricultural Self Development and Extension).*

³⁵ *This can be a national or international organization, but it must be one with substantial experience in community mobilization and conflict prevention, and be independent of any political activities (be they pro- or anti- governmental).*



implementation between the two countries. This regional facilitation mechanism envisaged will comprise representatives from: (i) national steering committees led by the Ministry of Agriculture in each country, (ii) CEPGL through its Agriculture and Food Security Division, and (iii) CGIAR centers and other partners involved in project implementation in both countries. It will be chaired on a rotating basis by the respective members. The committee meetings will be held on a yearly basis, to assess the state of project implementation; harmonize policy, rules, and regulations; provide guidance on implementation; and monitor and evaluate results of the project. CEPGL will assume responsibility as the secretariat for this body.

9. **Transitional arrangement for project implementation.** To ensure fast startup of GLR-IADP-SOP2 activities, and as a transitional arrangement for project implementation, the PCU for the ongoing PRODEMA project will be entrusted with the initial responsibility for coordination and implementation. During this transition period, the Recipient will establish the new PCU and the PIUs, which will subsequently take over project coordination and implementation from the PRODEMA PCU within six months after the project effectiveness date.

10. A Project Implementation Manual (PIM) detailing all project coordination, management, implementation (including MGs and safeguards), M&E, and reporting arrangements is being prepared under the guidance of MINAGRIE. The PIM must be approved by the World Bank by project effectiveness.

B. Financial Management

11. Different reviews (including a PEFA review) and use of the Country System for Investment Projects have highlighted the weak public FM system in Burundi. Most previous projects at MINAGRIE were managed by the PRODEMA PCU. For the proposed project, it has been agreed that a new PCU will be established for the coordination of day-to-day operations and FM. Since the new PCU is yet to be established, and taking into consideration that fiduciary arrangements to manage the project are not in place, the World Bank concluded that the fiduciary risk is Substantial. To mitigate this risk, and for a transitional period not exceeding six months after project effectiveness, it is proposed to continue using the PRODEMA PCU until the new PCU is operational. This period will allow the staff to be recruited for the new PCU to receive adequate training in World Bank FM and disbursement guidelines.

12. To ensure that adequate FM arrangements are still in place to ensure that GLR-IADP-SOP2 funds will be used in an efficient and economical way for the intended purposes during the transition period, the World Bank conducted an FM assessment of the PRODEMA PCU. This assessment was carried out in accordance with the World Bank Directive: Financial Management Manual For World Bank Investment Project Financing Operations issued February 4, 2015 and effective from March 1, 2015; and the World Bank Guidance: Financial Management in World Bank Investment Project Financing Operations issued and effective from February 24, 2015. The assessment concluded that: (i) the proposed arrangements to use PRODEMA PCU do meet IDA's minimum requirements under OP/BP 10.00, and the FM arrangements are adequate to provide, with reasonable assurance, accurate and timely information on the financial status of the project as required by IDA; and (ii) the overall risk is considered Substantial.

13. Although the PCU for the proposed project is not yet established, the government has initiated preparatory activities such as drafting ToRs for the recruitment of key project staff and the development of the PIM, among others. A PPA has been mobilized for that purpose and is currently managed by the PRODEMA PCU.



14. Table 7 outlines the key FM risks and proposed mitigation measures. The risks will be periodically reevaluated and updated during the transition period. Proposed mitigation measures include the establishment of the new PCU at least three months before the end of the transition, as well as three measures to support the project's FM system: (i) recruitment of a qualified FM expert; (ii) purchase and installation of a computerized accounting system in the PCU; and (iii) development of the PIM, which includes administrative and fiduciary procedures for the project.
15. The PCU/FM unit will be responsible for ensuring compliance with the FM requirements of the World Bank and the Government of Burundi, including preparing and submitting the quarterly unaudited IFRs and audited Annual Financial Statements (AFSs) to IDA. It will maintain adequate financial management arrangements to support the deployment of project resources in an economic and effective manner to achieve the stated development objectives.
16. **Implementing entity.** The PCU will have overall responsibility for aspects of project FM and procurement, including budgeting, disbursement, book-keeping, reporting, supervision, management of the Designated Account, and so on. The financial team will be composed of at least one FM expert and one accountant. The overall recruitment should be finalized within six months after project effectiveness. The fiduciary team will be trained in World Bank procedures.
17. **Planning and budgeting arrangements.** The AWPB, along with the disbursement forecast, will be developed by the PCU with input from different implementing entities. The AWPB will be submitted to the NPSC for approval, and thereafter to IDA for no objection no later than October 31 of the year preceding the year the work plan should be implemented. The fiduciary unit of the PCU will monitor its execution in accordance with the procedures specified in the PIM. Procedures for preparing and approving the budget as well as the role of each key stakeholder involved will be described in the PIM. The quarterly IFRs will be used to monitor the execution of the AWPB.
18. **Accounting arrangements.** The current accounting standards in use in Burundi for ongoing World Bank-financed projects will be applicable to the proposed project. An integrated financial and accounting system will be in place and used by the fiduciary unit. The project code and chart of accounts will be developed to meet the specific needs of the project and documented in the PIM. Ledgers and records should be maintained with the support of FM software that should be operational no later than three months before the end of the transition period. Meanwhile the software currently used by the PRODEMA PCU will continue to be used until the acquisition of new FM software is completed.
19. **Internal control and internal auditing arrangements.** The PIM, including administrative and accounting procedures, with key internal control procedures from transaction initiation, review, approval recording and reporting will be developed with clear segregation of duties.



Table 7: Risk Assessment and mitigation measures

<i>Risk</i>	<i>Risk rating</i>	<i>Risk-mitigating measures incorporated into project design</i>	<i>Conditions for effectiveness (Y/N)</i>	<i>Residual risk</i>
Inherent risk	S			S
Country level. Burundi is a high-risk country from the fiduciary perspective. The Public Expenditure Review, PEFA (2008, 2014) as well as the UCS reports outlined weaknesses in public financial management at both central and decentralized levels.	H	The government is committed to a reform program that includes the strengthening of public financial management. This project will enhance the government’s institutional capacity to adopt and use IDA FM procedures.	N	H
Entity level. MINAGRIE has no experience in managing World Bank–financed projects. Giving fiduciary responsibility to the civil servants may undermine the FM performance of the project.	S	An experienced FM staff will be recruited. It will comprise an FM expert and an Accountant. A PCU will be established. Meanwhile PRODEMA will be in charge of the fiduciary aspects of the project during the transition phase	N	S
Project level. Weak FM performance as a result of lack of competence and experience of key fiduciary staff can hamper smooth implementation.	S	The recruitment of an experienced and qualified FM staff at the project level, and the development and implementation of a PIM (including FM procedures) will provide the requisite knowledge base on IDA policies and procedures at the project level. The PRODEMA PCU during the transition will assume the whole fiduciary responsibility.	N	M
Control Risk	S			S
Budgeting. The AWPB may not be reliable or may not reflect project needs. Risk of cost overruns and adverse variations in expenditure could arise due to potential slow implementation.	S	The project Financial Procedures Manual (which will be part of the PIM) will define the arrangements for budgeting, budgetary control, and the requirements for budgeting revisions. Annual detailed disbursement forecasts and budget will be required. IFRs will provide information on budgetary control and analysis of variances between actual and budgeted expenditure. Capacity-building activities will be provided if necessary to support preparation of a reliable budget.	N	M
Accounting. Poor policies and procedures, and delays in keeping reliable and auditable accounting records.	S	Accounting procedures will be documented in the manual of procedures (which will be part of the PIM). The FM functions will be carried out by qualified consultants (individuals) composed of one Financial Expert and one accountant to be recruited on a competitive basis. The new software will be customized to take into consideration the needs of this new project. The financial team will be trained to use international accounting procedures as well as the project’s software. With regard to the beneficiaries of the MGs, the PIM will define the criteria to be eligible for such grants. This criteria include some FM aspects, and the project will support the fiduciary capacity	N	S



		development of the beneficiaries if needed prior to approval and during the implementation of the MGs.		
Internal Control. Weak internal control system as a result of a lack of clarification of the roles and responsibilities of key players involved in project management.	S	The PIM will outline procedures for internal control that will be applied and monitored by the project. Also FM supervision and capacity-strengthening activities will contribute to mitigate the risk relating to internal control.	N	M
Funds Flow. Risks include delays in disbursing funds to finance the project's activities and delays in the replenishment of the Designated Account (DA). DA in Central Bank may delay payment of some suppliers.	H	Experienced staff will be recruited and receive training in the new disbursement procedures, particularly e-disbursement and report-based disbursement. Also regular meetings between the PCU, the PIUs, and the Government of Burundi technical focal points and FM Specialist (FMS) will be held when required. For a period not exceeding six months, the FM functions will be done by an experienced PRODEMA PCU, which will ease the startup. The World Bank, in collaboration with the PIUs, is working to improve efficiency of the Central Bank.	N	S
Financial Reporting. Inaccuracy and delays in submission of IFRs to the World Bank due to weak capacity of the FM team.	S	A computerized accounting system will be used. IFRs and financial statement formats and contents were agreed upon during project negotiations. In addition, the recruitment of a qualified FM Expert and an Accountant who are already familiar with World Bank reporting procedures will facilitate the preparation of the reports and statements and ensure timely availability. Comments provided by the World Bank during reviews of the reports will help to improve their quality.	N	M
Auditing. The risk would be delayed submission of audit reports or a qualified opinion and delays in the implementation of recommendations in audit reports.	S	IFRs will be produced on a quarterly basis. The audit firms will be recruited before the end of the first year of the project. The ToRs for the auditor will be reviewed by the World Bank, and it will ensure that the auditor recruited has the required qualification to conduct the audit in accordance with international auditing standards.	N	S
Governance and Accountability. Possibility of circumventing internal control, and abuse of administrative positions are potential risks; mis-procurement etc., is a critical issue.	S	(i) FM procedures manual will be developed for the implementation of the activities of the project; (ii) robust FM arrangements will be established with quarterly IFR including budget execution and monitoring; and (iii) Measures will be taken to improve transparency such as providing information on the project status to the public, (iv) FM supervision will be increased if necessary	N	S
OVERALL FM RISK	S			S

Note: H = high; S = Substantial.

20. **Reporting arrangement.** The PCU will record and report on project transactions and submit to the World Bank IFRs no later than 45 days after the end of each calendar quarter. At a minimum, the financial reports must include the following tables with appropriate comments: (i) Sources and Uses of Funds; (ii) Uses of Funds by Project Activity/Component and comparison between actual expenditures and budget (iii) special account activity statement; and (iv) notes to the IFR. At the end of each fiscal year,



the project will issue the Project Financial Statements (PFSs), comprising: (i) a balance sheet; (ii) a statement of Sources and Uses of Funds; (iii) accounting policies and procedures; and (iv) notes related to significant accounting policies and accounting standards adopted by management and underlying the preparation of financial statements. These PFS will be subject to annual external audits as described below. The reporting requirements from the PIUs to the PCU will be determined in the PIM.

21. **External auditing arrangement.** A qualified, experienced, and independent external auditor will be recruited on approved ToRs. The external audit will be carried out according to International Standards on Auditing (ISAs) and will cover all aspects of project activities implemented and include verification of eligibility of expenditures and physical verification of goods and services acquired. The report will also include specific controls such as compliance with procurement procedures and financial reporting requirements and consistency between financial statements and management reports and field visits (for example, physical verification). The audit period will be on an annual basis and the reports, including the PFSs, submitted to IDA and to the auditors six months after the end of each fiscal year. The project will comply with the World Bank disclosure policy of audit reports (for example, making them publicly available promptly after receipt of all final financial audit reports, including qualified audit reports) and disclose the report on the official website within one month after the final version is accepted.

22. **Governance and accountability.** The risk of fraud and corruption within project activities is substantial, but the effective implementation of the proposed fiduciary mitigation measures should help to strengthen the control environment. Also, appropriate representation in, and adequate oversight by, the NPSC; transparency in implementing project activities; and sound communication to and with stakeholders and the public, should constitute a good starting point to tackle governance and corruption issues during project implementation.

23. **Financial Management Action Plan.** A Financial Management Action Plan (Table 7) has been developed to mitigate the overall FM risks.

24. **Supervision Plan.** Supervision missions will be conducted over the project's lifetime. The project will be supervised on a risk-based approach. Supervision will cover but not limited the review of audit reports and IFRs and advice to the task team on all FM issues. Based on the current risk assessment (Substantial), the project will be supervised at least twice a year and may be adjusted when the need arises. However, five FM supervision support mission will be conducted the first 2 years following effectiveness (two during the project transition and three FM supervision support mission conducted 12 months following the project transition). The ISR will include a project FM rating. An implementation support mission will be carried out before effectiveness to ensure project readiness. To the extent possible, mixed on-site supervision missions will be undertaken with procurement, M&E, and disbursement colleagues. Based on the outcome of the FM risk assessment, an Implementation Support Plan (Table 9) is proposed with the objective of ensuring that satisfactory FM systems are maintained throughout the life of the project.

25. **List of conditionality and covenants.** FM effectiveness conditions are presented in Table 8. Other FM standard covenants include: (i) IFRs will be prepared on a quarterly basis and submitted to the World Bank 45 days after each quarter; (ii) The AWPB, including disbursement forecasts, will be prepared each year by the end of December; and (iii) the overall FM system will be maintained operational during the project's entire life in accordance with sound accounting practices.



Table 8: Financial Management Action Plan

Issue	Remedial action recommended	Responsible entity	Completion date	FM conditions
Project staffing	Recruitment of one financial management expert and one accountant	PRODEMA PCU and World Bank	9 months after effectiveness	Yes
Accounting software	Purchase and installation of new software that integrates all the functionality required to manage a World Bank project. Train fiduciary staff to use of that software.	PRODEMA PCU and World Bank	9 months after effectiveness	Yes
Training	Training of fiduciary staff at the PCU and the PIUs.	World Bank	12 months after effectiveness	No
FM Procedures Manual	Prepare a project manual of procedures (which will be part of the PIM) that will define FM and accounting procedures to run the project.	PRODEMA PCU and World Bank	Before effectiveness	Yes
External auditing	Selection of an external auditor on ToRS acceptable to the World Bank.	PRODEMA PCU	3 months after effectiveness	No

Table 9: Implementation Support Plan

FM activity	Frequency
Desk reviews	
IFR review	Quarterly.
Audit report review of the program	Annually.
Review of other relevant information such as interim internal control systems reports	Continuous as they become available.
On-site visits	
Review of overall operation of the FM system	Semi-annually (implementation support mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit, and other reports	As needed, but at least during each implementation support mission.
Transaction reviews (if needed).	As needed.
Capacity-building support	
FM training sessions by World Bank FM team.	As soon as possible during the project transition and thereafter as needed.

C. Disbursements

26. A *Designated Account* (DA) will be opened at the Burundi Central Bank (BRB) on terms and conditions acceptable to IDA under the fiduciary responsibility of the PCU. The ceiling of the DA has been set during negotiations. A subsidiary account for the Matching Grant Fund will be opened in a commercial Bank in Bujumbura on terms and conditions acceptable to the World Bank. Replenishments to the DA will be made against withdrawal applications supported by Statements of Expenditures (SOEs) or records and other documents as specified in the Disbursement Letter (DL).

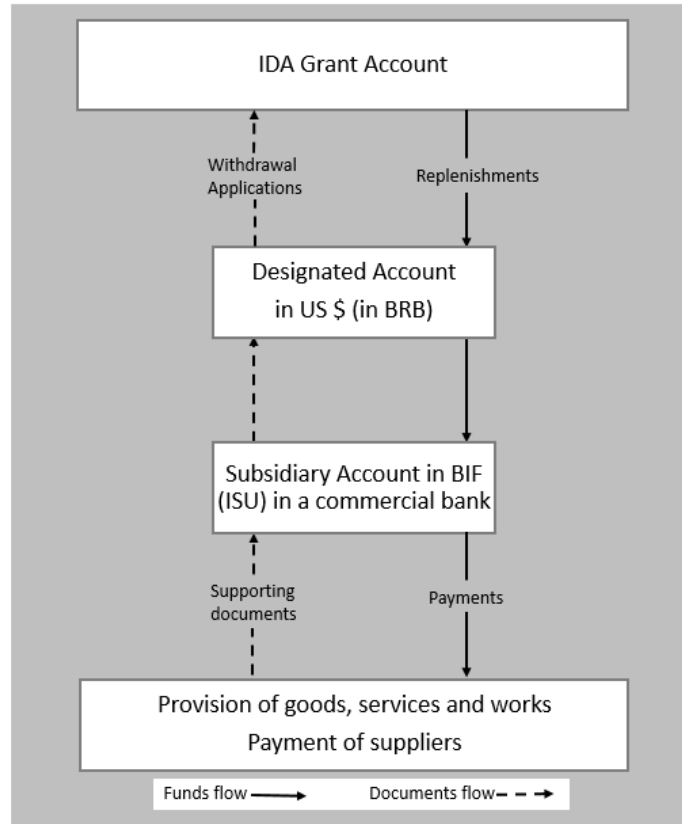
27. Upon project effectiveness, transaction-based disbursements will be used. The option to disburse against submission of quarterly unaudited IFRs (also known as report-based disbursements) could be considered subject to the quality and timeliness of the IFRs submitted to the World Bank and the overall FM performance as assessed in due course. The other methods of disbursing funds (reimbursement and direct payment) will also be available to the project. The minimum value of applications for these methods is 20 percent of the DA ceiling. Another acceptable method of withdrawing proceeds from the IDA grant



is the special commitment method whereby IDA may pay amounts to a third party for eligible expenditures to be paid by the Recipient under an irrevocable Letter of Credit (LC). Figure 3 shows the flow of funds.

28. The project will have the option to sign and submit Withdrawal Applications (WAs) electronically using the e-Signatures module accessible from the World Bank’s Client Connection website. Details will be provided in the PIM.

Figure 3: Flow of funds



E. Matching Grant Fund

29. Financing for productive investments under the project will be provided through a Matching Grant Fund managed by the PCU. The Fund will have specific windows for financing: (1) the packages of production inputs and equipment for improved rice and maize production under Subcomponent 1.2; (2) access to improved genetic material (cattle) for milk production under Subcomponent 1.3; and (3) the processing and industrial investment partnerships (investment subprojects) supported under Component 2. The MG subsidy will be granted on the following terms: (i) for consumable inputs (seed and fertilizer) under Window (1) for a maximum of three years along a declining schedule (100 percent the first year, 50 percent the second year, and 20 percent the third year); (ii) for implements and mechanized equipment under Window (1) on a one-time basis for 90 percent of costs; and (iii) for processing equipment and other investments for storage, transport, and processing activities under Windows (2) and (3) on a one-time basis up to a percentage of costs to be determined according to the type of activity. The MGs under



Windows (1) and (2) will be given to POs, which will pass along the grants to individual producers and bear responsibility for the procurement of the related inputs and implements. The MGs under Window (3) will be given to individual promoters; they will be released based on submission to the Fund of proposals for investment subprojects. The subprojects will be construed as “productive alliances,” specifying, in addition to the financial and technical feasibility of the activities to be undertaken, the business partnerships to be established with operators along the value chain. The partnership arrangements will be a condition of grant release.

30. The PIM, to be issued as a condition of project effectiveness, will present the eligibility (including the negative list of non-eligible investments) and selection criteria for beneficiaries, as well as the operating modalities along the subproject cycle. It will detail the management, disbursement, and monitoring procedures of the Fund for all three windows. Also, in addition to the project’s GRM (described in Section G of the PAD), a specific mechanism will be established to redress grievances related to the MG scheme. This mechanism will make it possible to measure the percentage of registered grievances related to delivery of the MGs that are actually addressed through channels such as hotlines, complaint boxes, and so on.

F. Procurement

31. **Applicable procurement rules and procedures.** Procurement will be carried out in accordance with the Procurement Regulations for IPF Borrowers, namely Procurement in Investment Project Financing (IPF): Goods, Works, Non Consulting and Consulting Services, dated July 1, 2016; “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants (revised as of July 1, 2016)”; and provisions stipulated in the Financing Agreement. For national competition, the Borrower and the World Bank will agree on provisions to consider for the bidding document to be used for consistency between national procurement procedures and the new procurement framework. Those provisions will include, among others, provisions for confirming the application of, and compliance with, the World Bank’s Anti-Corruption Guidelines, including without limitation the World Bank’s right to sanction and the World Bank’s inspection and audit rights.

32. **Procurement arrangements for delivery of value for money in achieving the PDOs.** The Borrower has prepared a short-form of the PPSD that was communicated to the World Bank in January 2017. It observes that although the political and security context remains fragile, the operational context is rather favorable to the successful implementation of the project, given MINAGRIE’s experience with current World Bank-funded projects. The PPSD foresees that around 25 contracts, for an amount of roughly US\$58 million, will involve procurement. Based on the risk analysis, the PPSD identified 8 contracts among the 25 (mainly for cattle, seed, fertilizer, and technical studies for irrigation) for an amount of US\$27 million, that are critical for project implementation, and hence their procurement processes and execution will need to be monitored closely. With regard to market analysis, the contractors, suppliers, and service providers already exist both nationally and internationally with sufficient competition and capacity. However, for some consultancies requiring technical expertise for which no suitable private sector alternative exists, the project would rely on specialized research institutes/centers through direct selection. For activities that will be driven by the communities, it was also noted that many local organizations are already structured and familiar with simplified procurement processes (for cattle, seed, and other agricultural and livestock inputs).

33. **Oversight and monitoring arrangements for procurement.** Given that the Borrower already possesses capacity through the existing PRODEMA structure, a need for expanded hands-on



implementation support from the World Bank is not foreseen, apart from the normal project supervision that will be conducted at least twice annually. It is also noted that no single contract will require review by the Operational Procurement Review Committee or involve the use of negotiations or competitive dialogue. A Procurement Plan outlines the procurement procedures to be used to plan and monitor implementation of investment activities; that plan (an output of the PPSD) was prepared and agreed upon by the World Bank and Government of Burundi. For each contract to be financed by the project, the different procurement or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frames should always be agreed between the Recipient and the World Bank through the Procurement Plan. The Procurement Plan may be updated at least every 12 months, or as required, to reflect the actual project implementation needs, but each update shall require World Bank approval. All procurement plans will be publicly disclosed in accordance with the World Bank's disclosure policy.

G. Environmental and Social (including safeguards)

34. The social and environmental impacts of the proposed project are expected to be largely beneficial. The expected social benefits of the project will include, but are not limited to: (i) increased productivity of selected agricultural value-chains (rice, maize, and dairy); (ii) enabling of public and private investments in the agricultural sector; (iii) enhanced rural mobility for goods and people; (iv) improved agricultural services for POs (research and development, access to finance, improved rice and maize seed, organic and mineral fertilizer, and improved dairy cow breeds adapted to local conditions); (v) job creation, especially for youth (through the agri-entrepreneurship program sponsored by the project); (vi) income generation; (vii) enhanced food and nutrition security; (viii) conflict resolution at the local community level through investments in community dialogue, participatory measures, and the prevention of land conflicts; and (ix) enhanced protection of protected areas and erosion-susceptible landscapes in selected areas. In addition to national benefits, the project is expected to generate regional or cross-boundary benefits: (i) strengthening scientific exchange between participating countries (on seed policy, forest and water resource management, and land access, for example) and (ii) increased protection of trans-boundary resources, including biodiversity.

35. **Special program for the Batwa.** The Batwa are one of three ethnic groups of Burundi. Their number is estimated at about 78,000 (less than one percent of the population), and 19,000 are thought to reside in the project area, where they live in extreme poverty and face problems of marginalization and discrimination. For that reason, the proposed project triggers World Bank safeguard policy PO4.10, and in response a Batwa Planning Framework (IPPF) has been developed. This framework is designed to ensure respect for the dignity, rights, interests, and cultural specificities of the Batwa community to guarantee that it enjoys all the benefits offered by the project. A holistic/integrated approach that was participatory and inclusive was used to develop the planning framework. Constraints identified for the Batwa include: (i) marginalization and discrimination by other communities; (ii) lack of access to land and decent housing; (iii) poor access of children to schooling; (iv) problems of access to fair justice; and (v) low participation in public decision-making bodies. Activities to be undertaken in favor of the Batwa in the proposed project include: (i) capacity building; (ii) supply of productive inputs; (iii) construction of decent housing; (iv) support for schooling and literacy; (v) health care; (vi) legal and regulatory assistance; and (vii) vocational training. The budget for implementing these activities is estimated at US\$1,265,000. Awareness and information campaigns will be conducted specifically for the Batwa prior to implementing the planning framework.



36. **Environmental issues.** The promotion of sustainable production techniques and technologies for rice and maize will undoubtedly lead to environmental benefits, including reduced land degradation, water savings, and enhanced agro-ecosystem resilience. Nonetheless, the proposed project intends to finance activities with potential negative environmental impacts, including the rehabilitation of rural roads, development of small-scale irrigation, and establishment of agro-processing units. These activities trigger eight safeguard policies, of which seven are environmental safeguard policies: OP/BP4.01 (Environmental Assessment), OP/BP4.04 (Natural Habitats), OP/BP4.36 (Forests), OP4.09 (Pest Management), OP/BP4.11 (Physical Cultural Resources), OP4.37 (Safety of Dams), and OP/BP7.50 (Projects on International Waterways). Despite the number of policies triggered, the project is rated as EA category “B” because potential adverse impacts are expected to be moderate, site specific, reversible, and manageable on an acceptable level.

37. To handle potential adverse environmental impacts, an ESMF and IPMP were prepared in accordance with OP/PB4.01 and OP4.09, respectively. The ESMF includes specific chapters to address all issues related to Natural Habitats, Forests, and Physical Cultural Resources, and incorporate generic dam safety measures. To fully comply with OP/PB7.50, an Exception memo to the Riparian Notification Requirement to riparian countries was also prepared and approved by the regional Vice Presidency on February 9, 2017. The ESMF and IPMP were consulted upon and disclosed in-country and on the World Bank external website on February 9, 2017.

38. The ESMF outlines an environmental and social screening process, including institutional responsibilities for screening, review and clearance, and implementation of mitigation and monitoring measures for future investments. This screening process consists of: (i) an environmental and social screening form to determine potential adverse environmental and social impacts and record the outcome of consultations; (ii) an environmental and social checklist with generic mitigation measures to be adapted to the specific investment; (iii) a summary of the World Bank’s safeguard policies; (iv) an Environmental and Social Management Plan (ESMP), including environmental monitoring indicators and capacity-building activities; (v) Environmental Guidelines for Contractors; and (vi) generic environmental impact assessment ToRs. It is also designed to serve as a guide for developing ESIA, which include ESMPs.

39. The IPMP is designed to provide guidance to farmers to prevent them from using pesticides and other chemical products without taking safety precautions. In other words, it informs them about authorized products, risks related to water and soil pollution, as well as the risks to human health.

40. The Financing Agreement will require the Government of Burundi to prepare and submit to the World Bank for prior approval and disclosure any required ESIA including ESMPs in accordance with the ESMF, for the activities proposed to be carried out under the ongoing operation. Prior to commencing any works, the government will take all actions required by the ESMP and obtain the World Bank’s confirmation that the works may commence. Finally, the PCU will report quarterly to the World Bank on the environmental safeguard measures taken through a specific Safeguard Monitoring Report. A summary of this specific report will be included in the periodic project progress reports.

41. To ensure that the safeguard instruments prepared in line with policies triggered by the project are implemented properly, the PCU will hire an environmental safeguard specialist. This specialist will be fully in charge of all aspects of environmental safeguards and will regularly monitor all safeguard requirements. World Bank supervision missions will also include environmental and social safeguards specialists to ensure that all safeguard issues are addressed properly, in a timely manner.



H. Monitoring and Evaluation

42. The results framework in Section VII defines the performance indicators for each component and subcomponent of the proposed project. A robust M&E system will be implemented to provide high-quality information and allow the World Bank to react immediately in the event of any issues that arise. The M&E system will be designed to link technical and financial data on project progress and impact. It will serve as a tool to assess project results and as a day-to-day management tool. It will also support project supervision by ensuring that baseline and follow-up surveys and data collected for key performance indicators are available and regularly updated.

43. M&E reports will be produced every six months. Semi-annual and annual reports will be circulated to sectoral ministries and to concerned development partners. Before project-supported activities get underway, baseline data needed for impact evaluation will be collected in project and non-project areas by a third party specialized in data collection and processing. A mid-term evaluation will be conducted halfway through the project life-cycle to assess progress made across the various components, and an impact evaluation will be undertaken no later than six months before project completion. The project will measure its impact on FCV through a separate set of indicators, for which qualitative and quantitative data will be collected under the beneficiary surveys. These indicators, to be specified at project start, will be designed in collaboration with the FCVG CCSA and focus on social cohesion, participatory decision-making, incidence of violence, and the disaggregated impact of the project on the various vulnerable groups involved in the project (unemployed youth, IDPs, female- and child-headed households, and so on). These indicators will be further detailed and collected by the independent NGO that the project will engage.

44. The project will support the integration of nutrition considerations in impact evaluation as well as the collection and dissemination of information on local feeding practices and their relation to local food systems, as well as good practices to improve nutrition through agricultural interventions. The project will measure the Dietary Diversity Score at mid-term and at the end of the project implementation period, to monitor the nutritional impact of the project's activities. The project will integrate gender considerations in impact evaluation and will measure the Women's Empowerment in Agriculture Index (WEAI) at mid-term and the end of project implementation. Finally, an external consultant will be contracted to conduct a beneficiary satisfaction survey at midline and end line. This indicator, "Beneficiary satisfaction rate with quality of services provided by the project," will also include questions related to issues of fragility and conflict which may help to evaluate the project's impact on reducing fragility in the region.

45. The monitoring of project outputs will be conducted by the PCU in partnership with the various implementing partners, and the monitoring of project outcomes will be solely conducted by the PCU. The PCU will be responsible for data consolidation, quality control, and analysis and reporting. The annual monitoring reports will be used to ensure that the program is on track by the PCU itself when preparing the AWPB, and by the supervision missions. The annual report will be prepared following a results-based management approach that will involve a gap analysis

46. The PCU will also be in charge of communicating the monitoring information to the Ministries of Agriculture in both countries to feed the national M&E system. To ensure a good flow of information between the different stakeholders, including the beneficiaries, and the PCU, a consultative process will be put in place by the PCU.



47. A project Management Information System (MIS) will be put in place, hosted and maintained by the PCU. The M&E specialist within the PCU will be responsible for training the inter-provincial coordinators of the PCUs and M&E staff of other relevant government units to ensure that required information is made available and presented as prescribed in a uniform reporting process.

48. Semi-annual joint supervision missions with representatives from the World Bank and the government will assess the status of key project outcomes and ensure compliance with legal covenants. A Mid-Term Review will be conducted no later than two-and-a-half years after project effectiveness. A final independent evaluation will be conducted in the last semester of project implementation to assess overall achievement of expected project results.

49. The M&E manual (part of the PIM) provides details with regard to the definition of the results framework, the methodology and instruments to be used for data collection, the institutional arrangements for M&E functions (identification of actors and definition of their respective responsibilities), and the mechanism to be used for disseminating information. It will inform a communication strategy that will be developed and implemented by the PCU.



ANNEX 3: IMPLEMENTATION SUPPORT PLAN

Great Lakes Regional Integrated Agriculture Development Project

A. Strategy and Approach for Implementation Support

1. The strategy for implementation support is to: (i) initiate implementation even before effectiveness, and ensure that the disbursement ratio remains above the project disbursement profile at all times over the life of the project; (ii) prevent key project risks (technical, fiduciary, and so on) from eventuating or, if they are unavoidable, reduce their potential impact to a minimum level; (iii) include adequate M&E of implementation progress and results, including at least one rigorous impact evaluation of project interventions, and document scalability to other value chains and in other regions. The strategy involves three levels of responsibilities and actions:

- **At the project level**, to minimize the risks associated with project design and capacity risk, core PCU staff will include a National Coordinator who will be responsible for the overall day-to-day implementation and coordination of project activities. The coordinator will be assisted by a technical planning and regional integration officer who will be in charge of the technical aspects of the project, technical support to PIUs, and liaison with CPEGL. When necessary, the PCU will also request support from government bodies such as DPAEs, DGMVA, ISABU, and CNTA in their respective areas of expertise. Finally, the project will engage an independent NGO that will support the PIUs in targeting vulnerable groups, undertake sensitization of communities, ensure that a functional community feedback mechanism is in place, and mediate tensions before they develop into conflicts.
- **At the government level**, DGPAE may carry out periodic or unscheduled missions based on issues that may surface during implementation. MINAGRIE's decentralized units, such as the DPAEs, will help to identify any such issues at an early stage by performing regular reviews, providing summary notes on project quarterly reports, and participating in planning and coordination activities at the provincial level.
- **The World Bank task team** will provide continuous implementation support, through a core team composed of the task team leader (TTL), the fiduciary specialists (FM and procurement), and a program assistant based in the country office. The frequency of formal implementation support missions will be as follows: (i) 1 mission every 4 months for the first 16 months following project approval, and 1 mission every 6 months in the subsequent project period; (ii) between missions, virtual implementation support missions will be agreed on with the government as the need arises. Mission scheduling and ToRs will be agreed upon with the government. An MTR will be conducted two-and-a-half years after project effectiveness to assess project progress toward achieving the PDO. The skills mix of mission teams will be selected taking into account World Bank expertise, and as necessary additional support will be provided by the FAO Investment Center and independent consultants.

2. As successfully experienced during project preparation, the formal implementation support missions will include as much as possible a workshop (2–3 days) involving all project stakeholders (ministries, development partners, private sector, and civil society) for information sharing, enhancing participation, inclusion, and accountability of all parties in project successes and possible failures. In



addition, this practice will ensure adequate exposure of the project to the wider public and will also contribute to reducing governance risk.

3. Particular emphasis will be placed on the following aspects of implementation during supervision missions:

- *Governance* aspects of the project will be monitored during the biannual implementation support missions.
- *Institutional capacity of the PCU and the PIUs* will be monitored to ensure that adequate capacity is in place at any time to carry out project activities efficiently.
- *M&E*: The World Bank will complement the project's M&E activities by carrying out biannual implementation support missions during which performance indicators will be closely monitored. Field visits will be undertaken to verify data in M&E reports and to ensure that the M&E system is generating a complete and accurate picture of project performance.
- *Environmental and social safeguard instruments*: The World Bank safeguards team will supervise the implementation of all safeguard instruments, provide guidance to the project team and client in applying these instruments, and ensure compliance. In addition, capacity-building activities in the areas of environmental and social management will be provided to implementing partners at all levels.
- *Fiduciary management*: FM risk has been assessed as Substantial. Mitigation measures will be implemented (Annex 2), and as part of the biannual implementation support missions, the World Bank FM Specialist will conduct reviews to ensure the adequacy of systems and capacity over the course of implementation, provide advice and guidance on related issues, and recommend/arrange for training and capacity strengthening where and if needed.
- *Procurement*: The focus will be on providing training to PCU staff, reviewing procurement documents, and providing timely feedback; providing detailed advice on World Bank Procurement Guidelines; monitoring procurement progress against the detailed procurement plan; and monitoring whether the implementation of contracts complies with World Bank fiduciary guidelines as well as with the obligations stipulated in the contract. Both the FM and procurement specialists will be core members of the periodic implementation support missions.
- *Coordination with development partners*: The support mission will promote close coordination with other development partners as well as with research institutions, NGOs, and the private sector involved in the agricultural sector in Burundi and the GLR. It will also coordinate with UN and government co-led humanitarian platforms.

B. Implementation Support Plan and Resource Requirements

4. Given the overall design and scope of the project, a multi-disciplinary team comprising technical specialists, along with fiduciary, environmental and social, and operations specialists will be needed to support the Government of Burundi in implementing the project. A number of technical specialists are based in the region and country office and can be called upon to provide support as needed. This approach will facilitate overall implementation and timely communication with the client and the various stakeholders involved in implementation. It will also allow timely follow-up on specific issues and/or areas of concern when needed.



5. Tables 10, 11, and 12 provide more detail on the elements of support to implementation over the project period, including the timing, expertise required, and partners involved.

Table 10: Focus and timing of support to implementation during the project period

Time	Focus	Skills needed
Project launch (1 mission)	<ul style="list-style-type: none"> • Constitution and transfer of project documentation and files to the PCU • Technical assistance to PCU on project planning • Validation of the implementation plan for year 1 • Training on project’s manuals and World Bank safeguards instruments 	<ul style="list-style-type: none"> • Agribusiness Specialist • Social and Environmental Safeguards • Financial Management Specialist • Procurement Specialist • Operation Officer • Program Assistant and Communication Specialist
0–12 months (3 missions)	<ul style="list-style-type: none"> • Procurement—processing of first contracts and management of project funds • Support on specifics of the implementation plan • Review of progress made in year 1 	<ul style="list-style-type: none"> • Agribusiness Specialist • Social and Environmental Safeguards • Fragility, Conflict, and Violence Group Specialist • Financial Management Specialist • Procurement Specialist • Program Assistant
13–24 months (2 missions)	<ul style="list-style-type: none"> • Technical support for implementing activities per component and subcomponent • Routine FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguard-related measures • Review of progress made in year 2 	<ul style="list-style-type: none"> • Agribusiness Specialist • Social and Environmental Safeguards • Fragility, Conflict, and Violence Group Specialist • Financial Management Specialist • Procurement Specialist • Operation Officer • Program Assistant
25–36 months (2 missions)	<ul style="list-style-type: none"> • Technical support for implementing activities per component and subcomponent • Routine FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguard-related measures • Review of progress made in year 3 • <i>Medium Term Review: Elaborate MTR action plan</i> 	<ul style="list-style-type: none"> • Agribusiness Specialist • Social and Environmental Safeguards • Financial Management Specialist • Procurement Specialist • Operation Officer • M&E Specialist • Program Assistant
37–48 months (2 missions)	<ul style="list-style-type: none"> • Support MTR action plan and follow up on actions/recommendations of the MTR • Adjust plan for implementing activities per component and subcomponent • Routine FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguard-related measures • Review of progress made in year 4 	<ul style="list-style-type: none"> • Agribusiness Specialist • Legal Adviser • Social and Environmental Safeguards • Financial Management Specialist • Procurement Specialist • Program Assistant
49–60 months (2 missions)	<ul style="list-style-type: none"> • Technical support for implementing activities per component and subcomponent • Routine FM and procurement reviews • Management of safeguards and monitoring of implementation of safeguard-related measures • M&E 	<ul style="list-style-type: none"> • Agribusiness Specialist • Social and Environmental Safeguards • Financial Management Specialist • Procurement Specialist • Operation Officer • Program Assistant
60–66 months (1 mission)	<ul style="list-style-type: none"> • <i>Implementation Completion and Results Report (ICR)</i> 	<ul style="list-style-type: none"> • ICR Task Team Leader and assessment team



Table 11: Required skills mix for implementation support

Skills needed	Number of staff weeks	Number of trips per year	Comments
Team Leader (TTL)	12	2	Headquarter based
Agro-economist, co-TTL	6	1	Headquarter based
Private Sector/Agri-business Enabling Environment Specialist	12	2	Headquarter based
Procurement Specialist	6	na	Country Office based
Financial Management Specialist	6	na	Country Office based
Disbursement Specialist	1.5	1	Headquarter based
Legal	4	1	Headquarter based
Project Administrative Support	12	na	Country Office based
Operations Specialist	12	2	Headquarter based
M&E Specialist	4	1	Kenya Office
Institutional Development Specialist	4	1	Consultant
Environmental Specialist	6	2	Côte d'Ivoire Office
Fragility, Conflict, and Violence Group Specialist	4	2	Kenya Office
Social Specialist	6	2	Mozambique Office

Table 12: Partners

Name	Institution/Country	Role
BTC	Belgian Development Agency	Agricultural sector dialogue and complementary activities as part of ongoing PAIOSA project
CNTA	National Center for Food Technology	Capacity building and technical advice for Subcomponent 2.2 and Subcomponent 3.3 (aflatoxin management system)
FAO	Food and Agriculture Organization	Technical support for supervision missions as needed
IITA	International Institute of Tropical Agriculture	Technical and capacity-building agency: support Subcomponent 1.2 (maize), Subcomponent 2.2 (youth entrepreneurship program), and Component 3 (research capacity building and Aflasafe™ technology)
ILRI	International Livestock Research Institute	Technical and capacity-building agency: support for the implementation of Subcomponent 1.3 (dairy value chain)
IRRI	International Rice Research Institute	Technical and capacity-building agency: support for the implementation of Subcomponent 1.2 (rice value chain) and Component 3 (research capacity-building)
ISABU	Agricultural Research Institution/Burundi	Coordination of project research-related activities
USAID	Development Agency/USA	Agricultural sector dialogue and complementarity for selected agribusiness activities
Embassy of the Netherlands in Burundi	Netherlands	Agricultural sector dialogue and complementarity for the National Fertilization Subsidy Program



ANNEX 4: ECONOMIC AND FINANCIAL ANALYSIS

Great Lakes Regional Integrated Agriculture Development Project

A. Methodology

1. An analysis was carried out to determine the proposed project’s potential financial and economic impact on individual beneficiaries and at the country level. The analysis is based on a comparison of the situation with and without the project to establish the incremental benefits that accrue as the project is implemented. The analysis quantifies benefits accruing as a result of the project’s support for income-generating activities in the targeted rice, maize, and dairy value chains at the production, processing, and marketing levels. It also takes into account the private investments in these value chains supported under the project and undertaken by farmers, transporters, and traders at farm/enterprise level. The project is expected to yield other substantial benefits as a result of its support for public investments (rural roads, irrigation, and watershed rehabilitation, among others), its contributions to building capacity in partner institutions and private operators, and its effort to improve the business climate. Those benefits are not taken into account in this analysis, however, because they are difficult to quantify. For that reason, the following estimates of the project’s profitability must be regarded as conservative.

2. The project’s incremental benefits and expenditures are analyzed over a 15-year period corresponding to the economic life of the irrigation perimeters and access roads, as well as other public infrastructure facilities rehabilitated or developed under the project. The discount rate used for estimating the NPV is 6 percent, representing the cost of capital for Burundi on the international markets.

B. Project benefits

3. *Direct benefits.* The project will generate direct benefits arising from the following interventions to develop rice, maize, and milk value chains: (i) rehabilitation of 3,000 ha of irrigated perimeters; (ii) introduction and dissemination of improved technology (seeds, fertilizers, etc.) for rice and maize; (iii) protection of 10,000 ha of upland watershed areas surrounding the rehabilitated/developed perimeters; and (iv) provision of 3,000 dairy cows to the targeted rural population. The additional production generated by project interventions at a “steady state” is summarized in Table 13 and Figure 4.

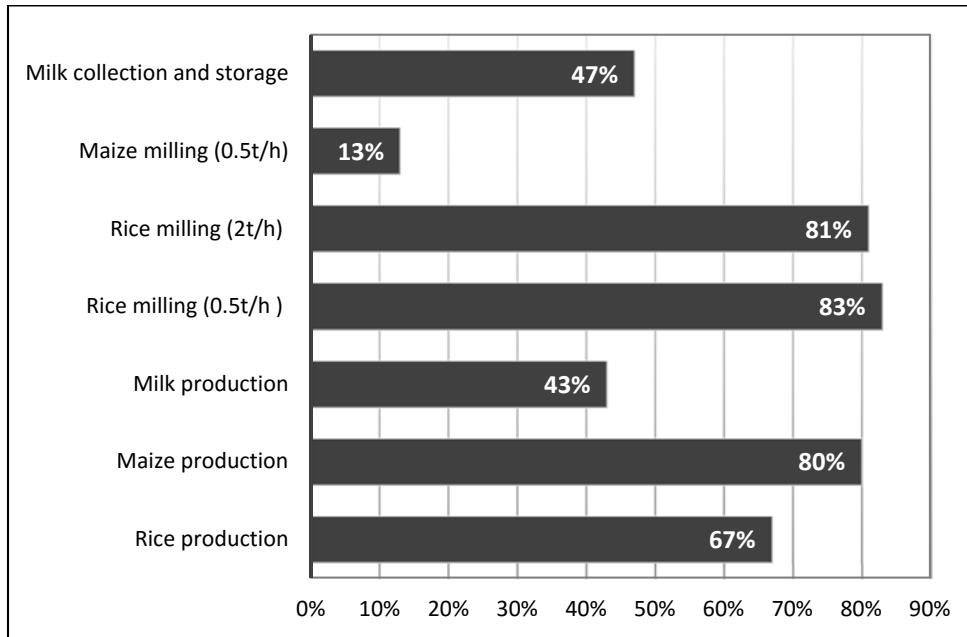
Table 13: Production without and with the project

Value chain	Unit	Without project	With project	Percent increase
Rice	kg paddy/farm [†]	1,200	2,000	67%
Maize	kg/ha	400	720	80%
Milk	liters/cow/yr	1,050	1500	43%
Rice milling (small-scale unit, 0.5 t/h)	t/yr	210	384	83%
Rice milling (medium-scale unit, 2.0 t/h)	t/yr	504	912	81%
Maize milling (0.5 t/h)	t/yr	507	574	13%
Milk collection and storage	liters/yr	71,971	105,840	47%

[†] Average farm size is 0.2 ha. Yields are 6 t/ha for paddy without project and 10 t/ha for paddy with project; 2 t/ha for maize without project and 3.6 t/ha for maize with project.



Figure 4: Incremental production with project (%)



4. Through the interventions described above, the project will help to increase the socio-economic well-being of Burundians by generating direct benefits for at least 55,000 smallholder farmers operating in targeted sectors.

5. *Farm-gate/factory-gate prices.* The project's direct benefits include not only the increase in production volumes but also the increase in the farm/factory gate price and the reduction in transaction costs resulting from project implementation. It is assumed that farmers/processors will benefit from better conditions of market access owing to the upgrading of rural roads and storage facilities supported by the project. Farmers and processors should also benefit from the higher market prices that their products are expected to fetch. Product quality is expected to increase because post-harvest handling and transportation are expected to improve, so products supported through the project should be able to command higher prices. This benefit is taken into consideration across the board in the analysis by assuming an increase of 20 percent in the level of producer/processor farm-gate or factory-gate unit prices.

6. *Indirect benefits.* The main indirect benefits of the project are, among others: (i) institutional and organizational support to sector operators, and provision of assistance to business partnerships between these operators; (ii) support provided by government extension and research structures (MINAGRI extension services, ISABU, and CNTA in particular) for the development of high-performance technologies to be made available to producers and processors with international assistance (from IITA, IRRI, ILRI, Cornell University, and FAO); (iii) capacity building of Burundian service providers, both private and public, to provide training and support to adopters of the new technologies; and (iv) improvements in product quality through the development of quality norms and standards, product screening, and implementation and monitoring of environmental and social safeguard measures. These indirect benefits are substantial, but their impact on the well-being of project beneficiaries is difficult to quantify, and because they are not taken into consideration in the analysis, the results must be regarded as conservative.



C. Financial analysis at enterprise level

7. *Typical farm/enterprise models.* The financial analysis considers seven typical farm/enterprise models: (i) rice production (irrigated rice), (ii) maize production (upland maize), (iii) milk production (one cow over 248 days of production per year), (iv) small-scale rice processing (0.5 t/h), (v) medium-scale rice processing (2.0 t/h), (vi) small-scale maize processing (0.5 t/h), and (vii) milk collection. These farm/enterprise models encapsulate the bulk of the project's support for economic activities in the targeted value chains. Other models will be developed for the financial analysis of pilot initiatives supported by the project—climate-smart agriculture (SRI) and nutrition-smart agriculture (legumes and vegetables grown in rotation/association with rice and maize in upland areas).

8. The project supports the provision of improved packages of inputs and equipment, together with corresponding extension activities to teach farmers and processors how to use the packages. The packages and extension advice will be supplied through the agricultural extension services of MINAGRIE and outreach services of ISABU, with the assistance of IRRI and IITA (rice and maize production and milling), ILRI (milk production, storage, and distribution), and other government departments (CNTA) and specialized institutions for pilot initiatives (Cornell University for SRI, FAO and specialized NGOs for nutrition-smart agriculture).

9. *Financial analysis at the farm/enterprise level.* The financial analysis shows that the project-supported farm/enterprise models all yield profitable results. Each model requires producers/processors to incur additional cash expenditures (investment and operating costs) compared to the without-project situation; each model also requires additional labor to apply the new skills promoted to farmers and processors. In all cases, the additional benefits accruing to producers and operators—in the form of increased output resulting from improved access to high-yielding technologies and inputs under the project—are expected to surpass the increase in spending and labor.³⁶ Hence the estimated net returns with the project are substantially positive, even when the subsidy granted to project beneficiaries is not taken into account (see the next paragraph).

10. *Project subsidy.* The project awards grants to eligible beneficiaries to finance their investments or business plans (subprojects). This subsidy covers the bulk of the additional expenditures incurred by beneficiaries as their investments are getting underway. The eligible expenditures include additional inputs, implements, and equipment required to implement the subprojects, including the additional revolving fund for purchasing initial stocks for the rice/maize milling units and milk collection centers.

11. The smallholders, processors, and traders who are expected to benefit from the technical packages promoted under the project are a risk-averse population. To balance the risk of failure in taking up those packages, they will require financial incentives that exceed a certain threshold of profitability and that make the new packages attractive to adopt. The subsidy enables beneficiaries to cope with the negative cash flow that will occur during the initial cropping season(s) or first year(s) of processing, when farmers and processors are learning about the technology. Eventually their enterprises will reach a “steady state,” when they will have adopted all of the sponsored new technologies, are able to reap their full benefits, and obtain a profit without the subsidy. In the absence of sources of credit, farmers and processors require the subsidy to compensate for the negative initial cash flow and hedge against the risk inherent in adopting new technical packages. In the current context, beneficiaries cannot obtain seasonal

³⁶ Family labor valued at its opportunity cost in rural areas of BiF 2,500/ day or approximately US\$ 1.0/ day at the shadow exchange of approximately BiF 2,500/ US\$1.0 (official rate is BiF 1700/ US\$ 1.0)



or short-term credit from commercial banks or specialized credit entities, which are reluctant to extend credit for agricultural activities because they perceive them to be risky and also because they lack appropriate lending instruments.

12. The subsidy to be extended to beneficiaries for production, storage, and/or processing investment subprojects will cover the following percentage of investment expenditures (Table 14): (i) 40 percent of eligible additional expenditures for seed and fertilizer over three years³⁷, and 90 percent for small mechanized implements for improved irrigated rice and upland maize cultivation; (ii) 100 percent of expenditures for the acquisition of the dairy cow for milk production; (iii) 90 and 70 percent of additional expenditures for the construction/rehabilitation of rice and maize processing milling units (small-scale and medium-scale units, respectively); (iv) 90 percent for construction/rehabilitation of milk collection and storage units; and (v) 100 percent for the establishment of services provided by young operators. For the milling and storage units under (iii) and (iv), the subsidy will also cover the incremental permanent revolving funds required to acquire the additional stocks to be stored, milled, and/or processed.

Table 14: Project subsidy by farm/enterprise model

Improved package or investment subproject (SP)	Total (ha, cows, or t)	Number of improved packages or SPs	Investment per package or SP (US\$)	Subsidy (%)	Total project subsidy (US\$ 000s)
Improved irrigated rice package (0.2 ha)	5,300	26,500	173	120*	5,501
Improved SRI rice package (0.2 ha)	1,000	5,000	173	120*	1,038
Improved maize package (0.2 ha)	10,000	50,000	173	120*	10,380
Milk production package (one cow per package)	3,000	3,000	1,200	100	3,600
Small-scale rice milling SP (0.5 t per hour)		25	100,000	90	2,250
Medium-scale rice or maize milling SP (2.0 t per hour)		6	300,000	70	1,260
Other medium-scale processing SP (cassava, fruit, etc.)		10	250,000	70	1,750
Milk collection/ storage SP		25	9,000	90	202
Services provided by young entrepreneurs		100	15,000	100	1,500

*120 percent of the cost of the eligible package, i.e., 40 percent over three years

13. *Gross margin analysis.* The gross margin is computed taking into account the incremental yields and corresponding incremental benefits and expenses generated under the improved technical packages supported by the project. Estimates of the additional gross margin generated by the project for the models at the steady state period are shown in Table 15. They range from US\$306 for maize production to US\$212,528 for medium-scale rice processing.

14. *Net present value (NPV).* The NPV of the typical operating models (Table 15) is computed for the stream of net benefits over 15 years, at a discount rate of 6 percent (reflecting the opportunity cost of borrowing for Burundi on the international market).

15. *Internal Rate of Return (IRR).* The IRR is computed for each farm/enterprise model based on the gross margins presented earlier. The incremental IRRs for all models are significantly above the discount

³⁷ Under the current national policy all seeds and fertilizer can be acquired with a 40 percent government subsidy.

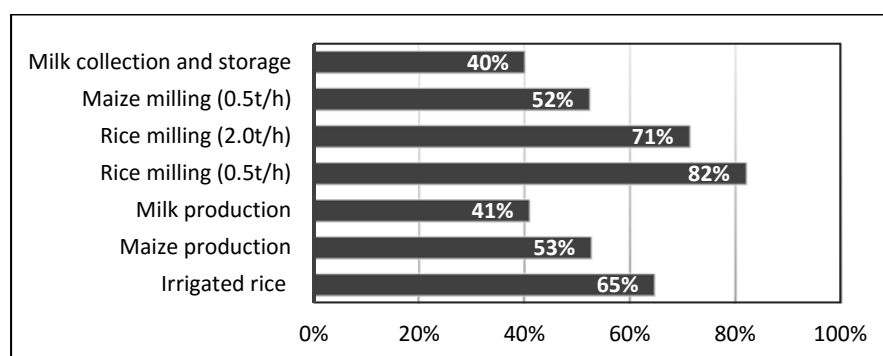


rate (Table 15 and Figure 5); in other words, they have the potential to give producers the incentives to adopt the new technical packages.

Table 15: Financial results for typical farm/enterprise models

Farm/enterprise models	Gross margin (US\$)	NPV (US\$)	IRR (%)
Irrigated rice (0.2 ha)	489	1,331	64.7%
Maize (0.2 ha)	306	893	52.7%
Milk (1 cow)	363	681	41.0%
Rice milling (small scale) (0.5 t/h)	48,944	127,904	82.1%
Rice milling (medium-scale) (2.0 t/h)	212,528	233,973	71.4%
Maize milling (small-scale) (0.5 t/h)	27,651	73,554	52.4%
Milk collection and storage	6,144	7,112	40.1%

Figure 5: Financial Internal Rate of Return for typical farm/enterprise models



D. Economic analysis at national level

16. *Methodology of project economic analysis.* The economic analysis is conducted over 15 years, corresponding to the economic life of irrigation and road infrastructure constructed under the project. A discount rate of 6 percent reflecting the cost of capital for Burundi is used to compute the NPV in economic terms. The conversion factor of financial prices to economic prices is estimated at 85 percent of the financial prices, to take into account transfers between national agents involved in the targeted value chains, which are not a cost to the Burundian economy as a whole. On the cost side, the analysis takes into account all project costs, both those incurred for direct production purposes and those incurred for the rehabilitation of supporting infrastructures and services. The MGs awarded to beneficiaries are not deducted from the costs (as done earlier when computing the profitability after subsidy of the farm and enterprise models in financial terms). On the benefit side, the analysis considers only the benefits accruing from the operation of farm and enterprise activities supported under the value chains targeted by the Project. A 10 percent increase in commodity prices relative to the current market prices is considered to take into account the indirect benefits arising from the improved access to markets brought about by rehabilitating roads and tracks to production sites, as well as from the enhanced business environment, access to finance, and regional integration promoted under the project. Since the benefits accruing from newly constructed and rehabilitated infrastructure are not fully accounted for, the results in terms of overall profitability are conservative.



17. *Results of project economic analysis.* Based on the above assumptions, the NPV of the stream of net benefits in economic terms generated by project-funded activities 15 years for the whole country is approximately US\$39.8 million (Table 16). The Economic Internal Rate of Return (EIRR) for the entire project is estimated at 19.8 percent. The sensitivity analysis demonstrates that the results are very robust. Under the scenarios of a 30 percent cost increase, 30 percent reduction in benefits, and two-year delay in benefit generation, the corresponding EIRRs are (respectively) 15.4 percent, 13.9 percent, and 13.8 percent, and the related NPVs are US\$31.2 million, US\$19.2 million, and US\$23.5 million.

Table 16: Results of sensitivity analysis of project economic results

Hypotheses	EIRR	NPV	
	(%)	(BIF millions)	(US\$ million)
Base results	19.8	67,667.1	39.8
10% cost increase	18.2	62,766.3	36.9
20% cost increase	16.8	57,865.5	34.0
30% cost increase	15.4	52,964.6	31.2
10% gross margin decrease	18.0	55,999.6	32.9
20% gross margin decrease	16.1	44,332.0	26.1
30% gross margin decrease	13.9	32,664.5	19.2
One-year delay in benefits	16.5	52,586.7	30.9
Two-year delay in benefits	13.8	39,946.0	23.5

Note: The exchange rate used for figures in local currency is the official rate of BIF 1700/ US\$1.



ANNEX 5: Assessment of the Net Carbon Balance with EX-ACT

Great Lakes Regional Integrated Agriculture Development Project

1. **Corporate mandate.** In its 2012 Environment Strategy, the World Bank adopted a corporate mandate to conduct greenhouse gas (GHG) emissions accounting for investment lending in relevant sectors. The ex-ante quantification of GHG emissions is an important step in managing and ultimately reducing GHG emission, and is becoming a common practice for many international financial institutions.
2. **Methodology.** To estimate the impact of agricultural investment lending on GHG emission and carbon sequestration, the World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), which was developed by FAO in 2010. EX-ACT allows the assessment of a project's net carbon-balance, defined as the net balance of CO₂ equivalent GHG emitted or sequestered as a result of project implementation compared to a without-project scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO₂ per hectare and year.
3. **Project boundary.**
 - a. Improved seed and seedlings for fodder plants and trees to control erosion (10,000 ha converted from severely degraded grassland)
 - b. Annual systems with climate-smart agricultural practices:
 1. 1,000 ha of SRI rice and 6,300 ha of rice
 2. Maize following rice in valley bottoms (3,150 ha)
 3. Upland maize, as part of watershed management around irrigated areas (3,000 ha)
 - c. Flooded rice system: Organic amendment type will change from *straw incorporated long (>30 d) before cultivation* to *farmyard manure* (4,000 ha)
 - d. Grassland system management: improvement with seeding inputs improvement, valorizing agricultural residues, and improving pasturage practices—in the with-project scenario, 10,000 ha of extensively grazed non-managed grassland will be improved; the other 10,000 ha of grassland will be improved as *(a) project boundary* described above
 - e. Livestock management: increase dairy cattle from 0 to 3,000 heads with feeding practice and breeding practice
 - f. Application of fertilizers: increase use of urea, nitrogen fertilizer, compost, phosphorus, and potassium
 - g. Construction of irrigation canals and rural roads
4. **Data sources.** Value chain studies; farm-level budget data.
5. **Key assumptions.** Burundi has a tropical climate with a moist moisture regime. The dominant soil type is low activity clay. The project implementation phase is 4 years and the capitalization phase is assumed to be 16 years. The 20-year implementation period is standard in the use of EX-ACT. It is also assumed that the type of rural roads to be constructed are feeder roads designed for medium traffic.



6. **Results.** The net carbon balance quantifies GHGs emitted or sequestered as a result of the project compared to the without-project scenario. Over the project duration of 20 years, the project constitutes a carbon sink of -3,405,333 tCO₂-eq. The project provides a sink of -45 tCO₂-eq per ha, equivalent to -2.3 tCO₂-eq per ha per year. The main carbon sinks are primarily from annuals, improved seedlings for plants and trees, and grassland management.

Table 17: Results of the ex-ante GHG analysis

Project activities	Over the economic project lifetime (tCO ₂ -eq)			Annual average (tCO ₂ -eq/yr)		
	GHG emissions of without-project scenario (1)	Gross emissions of project scenario (2)	Net GHG emissions (2-1)	GHG emissions of without-project scenario (3)	Gross emissions of project scenario (4)	Net GHG emissions (4-3)
Annuals with CSA practices	-265,330	-1,531,084	-1,265,754	-13,267	-76,554	-63,288
Improved seed and seedlings for plants and trees	-	-1,612,210	-1,612,210	-	-80,611	-80,611
Improved flooded rice system	306,679	250,904	-55,774	15,334	12,545	-2,789
Grassland system management	-	-1,012,631	-1,012,631	-	-50,632	-50,632
Livestock management	-	82,669	82,669	-	4,134	4,134
Inputs and Investments	692,781	1,151,147	458,367	34,639	57,557	22,918
Total	734,129	-2,671,204	-3,405,333	36,706	-133,560	-170,267
Per ha	10	-36	-45	0.5	-1.8	-2.3



ANNEX 6: Drivers of Fragility and Resilience in Rural Burundi

Great Lakes Regional Integrated Agriculture Development Project

1. Many forces that drive fragility in Burundi have a long history, such as political and ethnic tensions, disputes over land, and a mobile and displaced population. Other forces that promote fragility are more recent but are gaining in importance, such as climate change. The drivers of resilience may be less visible than the drivers of fragility, but they are present, and the proposed project intends to build on them, such as the potential for social cohesion based on shared economic interests in producer organizations, within agricultural value chains, and across national boundaries. The effects of drivers of resilience and fragility are experienced differently in urban and rural contexts; this annex focuses on how they operate in the rural setting where the proposed project will be implemented.
2. Political uncertainty and ethnic tension, cyclically devolving into violence, are the most frequently described drivers of fragility in Burundi. As in many countries, access to political power or influential social groups often appears to be the sole and most highly contested means of attaining resources and economic power. The last crisis was triggered in 2015 by the president's decision to stand for a third term, but its origins reside in perceptions (building since 2010) that Burundi was not on a positive socio-economic track, governance had been weak, and economic opportunities were not only highly limited but unequally shared. While the capital city has seen overt demonstrations and violence, rural areas have experienced a climate of uncertainty (even fear) created by suspense over occurrences in the capital and their national consequences, the lack of factual information (bringing rumors, allegations, and fears to the fore), and the real or perceived repression of members of opposition parties or critics in civil society. Although the sense of immediate crisis has abated in Bujumbura and rural areas, it has been superseded by a social climate in which direct criticism of policies and authorities is avoided, leaving room for mistrust—a strong precursor of fragility—to grow.
3. The movement of large groups of people (refugees, returnees, seasonal migrants) is another frequently cited source of fragility in Burundi. People move within and outside the country for reasons of security and/or poverty, which are often so closely interrelated that it is impossible to determine which one weighs most heavily in the final decision to leave. All localities in the proposed project area have been affected to some extent by the events of 2015 and the movement of people to neighboring countries. The project areas in the Imbo Plain are in five provinces: Cibitoke, Bubanza, Bujumbura Rural, Rumonge, and Makamba. Cibitoke shares a border with DRC and Rwanda, Bubanza with DRC, Bujumbura Rural and Rumonge are on Lake Tanganyika across from DRC, while Makamba has direct access to Tanzania. The province with the largest exodus of refugees is Makamba Province, which even prior to 2015 had extremely high numbers of landless people and land conflicts between returnees (from 1973) and local residents. The landless, as well as individuals returning after more than 30 years, encounter great difficulty in thoroughly integrating local communities. Both of these vulnerable groups might be easily tempted to leave. It is very difficult to predict if, when, and how many people will leave or return.
4. In other provinces where the project will work, individuals are accustomed to migrating temporarily to other countries in search of work or opportunities enabling them to survive periodic food shortages. Given that cross-border movements are controlled and can be risky, some families prefer to move together, instead of sending only the male household head or son. A single person moving frequently across borders may also draw attention or appear suspicious.



5. Like cross-border travel, cross-border trade is subject to limitations and requests for informal payments. Roadblocks on specific axes do not affect farmers as much as transporters using bicycles, motorcycles, trucks, and buses. No official public decree outlines limitations on border crossings. In practice, however, movement toward Rwanda is restricted, and the movement of goods to Tanzania is limited and generally subject to payment (based on whatever bargain can be struck at the border).
6. Land conflicts have been a primary cause of insecurity and violence in Burundi for a long time, arising from inheritance issues, disputed transactions and boundaries, and past displacements. It is unclear whether the number or gravity of land disputes has increased in recent years, although the two southern provinces appear to be affected more by land conflicts than the two northern provinces, owing to the return of refugees who fled in 1973. Agro-pastoral tensions are limited and appear to be managed well. Land conflicts are first managed at the local level (*colline*) with the support of *Bashingantahe* (traditionally identified leaders) or the *élus collinaires* (locally elected leaders). If these local authorities fail to find a solution, the parties may request the commune authority (*administrateur communal*) to help them come to an agreement, before escalating the matter to the Tribunal de Résidence. Weak overall governance influences governance at the local level, including the land and justice sectors, and may offer openings for corruption in resolving land disputes.
7. Parts of the northern Imbo Plain (in Bubanza and Cibitoke Provinces) came into production under a land tenure regime (the *paysannat* system) originating in colonial times, when the authorities resettled small-scale farmers on fixed blocks of state-owned land with user rights to produce cash crops (cotton and rice). The 2011 Land Law states that under specific conditions farmers occupying land under the *paysannat* system are now acknowledged to own the land.³⁸ Farmers seem to believe that the matter has been settled, but in fact there is room for interpretation, and they could still be removed from their land without legal protection. The proposed project will have to pay special attention to this issue.
8. Stable agricultural production in the project area is a critical driver of food security and resilience, because the highly fertile Imbo Plain supplies food for the local population, other parts of the country, and locations outside Burundi. Reliable official production statistics are quite difficult to obtain, and MINAGRI has released no updated national agricultural survey data since 2015, but according to farmers, recent cropping seasons have been slightly less productive for various reasons. Insecurity and uncertainty over the future have prevented farmers from regularly accessing plots and reduced the motivation to produce. Opportunities to market produce have declined with the contracting economy in the capital. The unofficial but effective closure of the Rwandan border to persons and goods has reduced producers' capacity and willingness to buy fertilizer. Drought (discussed later) has also affected production in the past few months. Rising food prices resulting from reduced food production, fewer food imports, and less money in circulation currency have increased national and household food insecurity.
9. Farmers are subject to the same treatment as other citizens in relation to (i) legal taxation and poorly managed services, and although the situation can vary quite a lot from one commune to another and bears watching, there does not seem to be any organized attempt to control rural production. Cooperatives, POs, and farmer groups can be found at the local level, but they generally have quite weak

³⁸ "Art 455: Les détenteurs des parcelles constitutives de paysannats dont leur occupation a été régulière et légale obtiennent la pleine propriété. Toutefois les terres se situant dans les périmètres dits hors paysannats et constituant des réserves foncières de l'Etat ne sont pas concernées par cette mesure. Tout litige qui naîtra de l'application de cet article sera réglé par la Commission Foncière Nationale." Art 455: The holders of the land constituting a peasant community whose occupation has been regular and legal obtain full ownership. However, land in non-farming areas and constituting State land reserves is not affected by this measure. Any dispute arising from the application of this article shall be settled by the National Land Commission.



capacity (at least those involved in the value chains for the proposed project). Cooperatives must overcome a negative history in Burundi; the first cooperatives, operated by the state in the 1970s, proved ineffective and did not gain farmers' trust. In the 1990s NGOs began to support the formation of local farmer groups—often ad hoc groups to implement a specific project. Some of these POs and cooperatives slowly started to neglect the provision of services for members and concentrated instead on activities in the capital. Even so, these local groups remain key stakeholders and will need to be involved in activities to support and strengthen small-scale producers.

10. Climate change is an emerging issue with implications for resilience and fragility. Burundi has been affected by a drought since October 2016, which has complicated a precarious situation in which families have very limited food stocks, no savings, and virtually no access to credit to help them contend with setbacks. The Imbo Plain (especially the northern part) has been particularly affected, as even a few weeks without rain in this area can have negative consequences. The drought may have contributed to the large number of refugees and displaced persons registered by humanitarian agencies in early 2017.

11. Burundian farmers have not developed specific mechanisms to address climate change, which they do not recognize as an immediate threat. Natural disasters are regarded as temporary setbacks that can “quite easily” be overcome in a country that has two or three agricultural seasons per year. When a drought like the recent one occurs, the reaction is more or less: “Let’s cope with that now, eat less, and wait for the next agricultural season and hope it will be better.” This attitude may partly result from the fact that Burundi’s subsistence farmers are quite resilient, as they grow a variety of crops to reduce risk and rarely rely on external inputs such as chemical fertilizer. Local water management is very poor and should be strengthened to reduce dependence on the regular arrival of the rains.

12. Perceptions of unfair preferment are strong promoters of social discord and conflict. The risk of capture is as high for this project as it is for any other of its kind, but mitigation measures exist. Three areas demand especially careful attention: recruiting human resources, awarding public contracts, and identifying beneficiaries. The shortage of professionals and general lack of economic opportunity can make recruitment processes highly sensitive to external pressure (for instance, individuals may be pressured to provide kickbacks to those who hire them, or employers may be pressured to hire an unsuitable but well-connected applicant). The main protection against such risks is to strictly respect clear, transparent, predefined criteria and procedures. The World Bank should be involved in each step (if not formally and directly in the decision making, then at a minimum in the close monitoring and supervision of recruitment processes). The recently passed Law on NGOs explicitly recommends following the ethnic quotas defined in the Constitution (40–60 percent for State institutions and 50–50 percent for the army), but it is not clear how this recommendation will be implemented.

13. The public contracts essential for implementing the project involve two of the most profitable sectors in the country (fertilizer and public works) and will attract high levels of interest. Clear and strict definition of criteria, conditions, procedures, and expected quality standards, together with close monitoring and supervision, are the best guarantees of objectivity in awarding those contracts and the quality of the results.

14. Only transparency, local participation, and local ownership can ensure the neutrality and quality of the process for selecting beneficiaries. Some international agricultural projects have worked with an NGO that has developed specific methods and tools to ensure that the selection of beneficiaries is in line with project objectives and expectations, accepted by the local population, and congruent with local realities. For the proposed project, some groups of prospective beneficiaries are generally more



vulnerable³⁹ and need special attention: indigenous people (Batwa), IDPs and returnees with very little or no land, and female-headed households. Youth and ex-combatants also require special attention, as they are not only vulnerable but might also be sensitive to being recruited to join armed groups. Other criteria also need to be considered in selecting beneficiaries, such as landlessness, the number and quality of meals, and level of education. Each social group, and each level of socio-economic vulnerability, will require specific support activities.

15. It is much easier to identify the factors that drive fragility and resilience than it is to predict how they will influence the project area, Burundi, and the wider region. Refugees who left the country for economic reasons (especially if they are linked to agriculture and the drought) will probably return in the coming months. The best-case scenario is that the national dialogue is productive, conditions encourage donors to resume financial cooperation, and refugees return. Their return could provoke additional land conflict, which must be managed well to avoid additional instability and vulnerability. Under such circumstances, support to improve governance at the commune level could be a good entry point for the project to increase the chances of success.

³⁹ *Vulnerable is here understood as living in difficult conditions (accommodation and nutrition), with very little and irregular sources of income.*



ANNEX 7: Map of Burundi

Great Lakes Regional Integrated Agriculture Development Project

