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Report No: PAD1320

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 105.9 MILLION  
(US\$150 MILLION EQUIVALENT)

AND

A POLICY AND HUMAN RESOURCES DEVELOPMENT (PHRD) GRANT  
IN THE AMOUNT OF US\$2.7 MILLION

TO THE

DEMOCRATIC REPUBLIC OF CONGO

FOR A

REGIONAL GREAT LAKES INTEGRATED AGRICULTURE DEVELOPMENT  
PROJECT

May 31, 2016

Agriculture Global Practice  
Africa Region

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**CURRENCY EQUIVALENTS**  
(Exchange Rate Effective April 30, 2016)

Currency Unit = Franc Congolais (CDF)

CDF 927 = US\$1

US\$1 = SDR 0.70555199

**FISCAL YEAR**

July 1 – June 30

**ABBREVIATIONS AND ACRONYMS**

ADF	Allied Democratic Forces
AfDB	African Development Bank
AIP	Agro-Industrial Park
ALT	Autorité du Lac Tanganyika (Lake Tanganyika Authority)
ANAPI	Agence Nationale de Promotion des Investissements (National Agency for Promoting Investment)
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AWP	Annual Work Plan
BC	Benefit-cost
BSc	Bachelor of Science
CAADP	Comprehensive Africa Agriculture Development Program
CAHW	Community Animal Health Workers
CAS	Country Assistance Strategy
CBSD	Cassava brown streak disease
CCI	Cadres de Concertation Intercommunautaires (Intercommunity Consultation Bodies)
CCJCP	City Competitiveness and Job Creation Project
CDD	Community-Driven Development
CDF	Franc Congolais (Congolese franc)
CEPGL	Commission Economique des Pays des Grands Lacs (Economic Community of the Great Lakes States)
CGIAR	Consultative Group for International Agricultural Research
CMD	Cassava mosaic disease
CGPMP	Cellule de Gestion des Projets et Marchés Publics (Procurement Management Unit)
COMESA	Common Market for Eastern and Southern Africa
CONAREF	Commission Nationale de la Réforme Foncière (National Land Reform Commission)
CSO	Civil society organization
CRSN	Centre de Recherche en Sciences Naturelles (Bioscience Research Center)
DFID	Department for International Development (UK)
DRC	Democratic Republic of Congo
EFA	Economic and Financial Analysis
EIRR	Economic internal rate of return
ENACT	Education for Effective Nutrition in Action
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EX-ACT	Ex-Ante Carbon-balance Tool
FA	Financial Analysis
FAO	Food and Agriculture Organization of the United Nations
FDLR	Front Démocratique de Libération du Rwanda (Democratic Forces for the Liberation of Rwanda)
FM	Financial Management

FNL	Forces Nationales pour la Libération (National Liberation Forces)
FOPAC-SK	Fédération des OPA du Congo du Sud Kivu (Federation of South Kivu Producer Organizations)
GAP	Good agricultural practice
GDP	Gross domestic product
GEL	Guichet d'Economie Locale du Sud-Kivu
GHG	Greenhouse gas
GoDRC	Government of the Democratic Republic of Congo
GRS	Grievance Redress Service
HAC	High activity (soil type)
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IBRD	International Bank for Reconstruction and Development
ICRAF	World Agroforestry Centre (International Centre for Research on Agro-Forestry)
ICT	Information and communication technology
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFDC	International Fertilizer Development Center
IFPRI	International Food Policy Research Institute
IFR	Interim Financial Report
IITA	International Institute for Tropical Agriculture
ILRI	International Livestock Research Institute
INDC	Intended Nationally Determined Contributions
INERA	Institut National de l'Etude et Recherche Agronomique (National Institute for Agronomic Studies and Research)
INGO	International non-governmental organization
IPMP	Integrated Pest Management Plan
IPDF	Indigenous Peoples Development Framework
IRM	Immediate Response Mechanism
IRR	Internal rate of return
IRRI	International Rice Research Institute
ISP	Implementation Support Plan
ISP	Institut Supérieur Pédagogique
ISSSS/I4S	International Security and Stabilization Support Strategy
LTA	Lake Tanganyika Authority (Autorité du Lac Tanganyika)
M&E	Monitoring and evaluation
MDG	Millennium Development Goal
MFI	Micro-finance institutions
MinAgri	Ministry of Agriculture and Animal Resources
MONUSCO	Mission des Nations Unies pour la Stabilisation au Congo (United Nations Stabilisation Mission in the Congo)
MoU	Memorandum of Understanding
MSc	Master of Science
MSMEs	Micro, small, and medium enterprises
MTR	Mid-Term Review
NGO	Non-governmental organization
NPV	Net present value
OHADA	Organisation pour l'Harmonisation en Afrique du Droit des Affaires
OP	Organisation de Producteurs (Producer Organization)
PARRSA	Projet d'Appui à la Réhabilitation et la Relance du Secteur Agricole (Agriculture Rehabilitation and Recovery Support Project)
PARSE	Projet d'Appui à la Reconstruction du Secteur de l'Elevage (Support Project for the Reconstruction of the Livestock Sector)
PCU	Project Coordination Unit
PDIFM	Financial Infrastructure and Markets Project
PDO	Project Development Objective

PF	Project Financing
PhD	Doctor of Philosophy
PHRD	Policy and Human Resources Development
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PF	Process Framework
PO	Producer organization (Organisation de Producteurs)
PPP	Public-private partnership
PRASAB	Programme de Réhabilitation et d'Appui au Secteur Agricole du Burundi (Agricultural Rehabilitation and Support Project)
PRCG	Projet de Renforcement des Capacités en Gouvernance (Project for Enhancing Governance Capacity)
PRCGAP	Projet de Renforcement des Capacités de Gestion des Fonctions de l'Administration Publique et Rajeunissement (Establishing Capacity for Core Public Management, Public Service Reform and Rejuvenation Project)
PRODEMA	Projet pour la Productivité et le Développement des Marchés Agricoles (Agricultural Productivity and Market Development Project)
PRSP	Poverty Reduction Strategy Paper
PSCF	Peace Security and Cooperation Framework
PY	Project Year
R&D	Research and development
R4D	Research for development
RAP	Resettlement Action Plan
RGLIADP	Regional Great Lakes Integrated Agriculture Development Program
RPF	Resettlement Policy Framework
SCC	Social cost of carbon
SENASAEM	Service National de Semences (National Seed Service)
SMART	Specific, Measurable, Attainable, Realistic, and Time-bound
SME	Small and medium enterprise
SRI	System of Rice Intensification
STAREC	Stabilization and Reconstruction (program of stabilization and reconstruction of armed conflict zones)
STEP	Eastern Recovery Project
tCO <sub>2</sub> -eq	Tons of carbon dioxide equivalent emissions
ToR	Terms of reference
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
US\$/ USD	United States dollar
USAID	United States Agency for International Development
VECO	VredesEilanden Country Office (Belgian NGO)
VSF	Vétérinaires Sans Frontières (Veterinarians without Borders)
WBG	World Bank Group
ZOA	Zuid Oost Azie (Netherlands NGO)

Regional Vice President:	Makhtar Diop
Country Director:	Ahmadou Moustapha Ndiaye
Senior Global Practice Director:	Juergen Voegelé
Practice Manager:	Dina Umali-Deininger
Task Team Leader:	Amadou Oumar Ba, Nora Kaoues, Omar Lyasse



**AFRICA**  
Regional Great Lakes Integrated Agriculture Development Project (P143307)

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**PAD DATA SHEET***Africa**Regional Great Lakes Integrated Agriculture Development Project (P143307)***PROJECT APPRAISAL DOCUMENT***AFRICA*

Report No.: PAD1320

<b>Basic Information</b>			
Project ID P143307	EA Category A - Full Assessment	Team Leader(s) Amadou Oumar Ba, Nora Kaoues, Omar Lyasse	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ <input type="checkbox"/> ]		
	Financial Intermediaries [ <input type="checkbox"/> ]		
	Series of Projects [ <input type="checkbox"/> ]		
Project Implementation Start Date 21-June-2016	Project Implementation End Date 30-Jun-2021		
Expected Effectiveness Date 21-October-2016	Expected Closing Date 31-December-2021		
Joint IFC No		Multi-focal area	
Practice Manager/Manager Dina Umali-Deininger	Senior Global Practice Director Juergen Voegele	Country Director Ahmadou Moustapha Ndiaye	Regional Vice President Makhtar Diop
Borrower: Ministry of Finance			
Responsible Agency: Ministry of Agriculture and Rural Development			
Contact:	Leopold Mulumba Mfumu	Title:	Permanent Secretary
Telephone No.:	243819906017	Email:	
<b>Project Financing Data(in USD Million)</b>			
[ <input type="checkbox"/> ] Loan	[ <input type="checkbox"/> ] IDA Grant	[ <input type="checkbox"/> ] Guarantee	
[ <input checked="" type="checkbox"/> ] Credit	[ <input checked="" type="checkbox"/> ] Grant	[ <input type="checkbox"/> ] Other	
Total Project Cost:	152.70	Total Bank Financing:	150.00
Financing Gap:	0.00		



<b>Financing Source</b>	<b>Amount</b>
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	150.00
PHRD	2.70
Total	152.70

**Expected Disbursements (in USD million)**

Fiscal year	FY17	FY18	FY19	FY20	FY21					
Annual	10.00	30.00	50.00	59.00	3.70					
Cumulative	10.00	40.00	90.00	149.00	152.70					

**Institutional Data**

**Practice Area (Lead)**

Agriculture

**Contributing Practice Areas**

GCFDR, GTCDR, GENDR, GTIDR, GWADR, GSURR

**Cross-cutting Topics**

- Climate Change
- Fragile, Conflict, and Violence
- Gender
- Jobs
- Public-private Partnership

**Sectors / Climate Change**

Sector (Maximum 5 and total percent must equal 100)

Major Sector	Sector	Percent	Adaptation Co-benefits percent	Mitigation Co-benefits percent
Agriculture, fishing, and forestry	Agricultural extension and research	100	26	12

Total 100

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

**Themes**

Theme (Maximum 5 and total percent must equal 100)

Major theme	Theme	Percent
Financial and private sector development	Infrastructure services and private sector development	40

Rural Development	Rural service and Infrastructure	20
Trade and integration	trade facilitation and market access	20
Human development and Gender	Nutrition and food security	10
Trade and integration	Regional integration	10
Total		100

### Project Development Objective(s)

The project development objectives (PDO) 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 (USD millions)
Agriculture Value Chain Development	70.70
Support for the development of the private agro-industrial sector	50.00
Regional integration	15.00
Support services and project management	17.00

### Systematic Operations Risk-rating Tool (SORT)

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

### Compliance

#### Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ] No [ X ]
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Does the project require any waivers of Bank policies?	Yes [ ]	No [ X ]	
Have these been approved by Bank management?	Yes [ ]	No [ ]	
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [ X ]	
Does the project meet the Regional criteria for readiness for implementation?	Yes [ X ]	No [ ]	
<b>Safeguard Policies Triggered by the Project</b>	<b>Yes</b>	<b>No</b>	
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04	X		
Forests OP/BP 4.36	X		
Pest Management OP 4.09	X		
Physical Cultural Resources OP/BP 4.11	X		
Indigenous Peoples OP/BP 4.10	X		
Involuntary Resettlement OP/BP 4.12	X		
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50	X		
Projects in Disputed Areas OP/BP 7.60		X	
<b>Legal Covenants</b>			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Recruitment of external auditor		21 April 2017	N
<b>Description of Covenant</b>			
The Recipient shall recruit, no later than six (6) months after the Effective Date, an independent external auditor for the Project in accordance with the provisions of Section III of Schedule 2 to the Financing Agreement.			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Upgrading of existing financial management software and fiduciary staff training		21 January 2016	N
<b>Description of Covenant</b>			
The Recipient shall have upgraded the existing financial management software, no later than three (3) months after the Effective Date, in form and substance acceptable to the Association and included the procurement system (planning, monitoring, and contract management) with thereto. The Recipient should train new fiduciary staff in the use of that software.			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Update the project Manual of Procedures that will include financial management and accounting aspects.		21 January 2016	N
<b>Description of Covenant</b>			

The Recipient shall ensure that the existing financial Manual of Procedures has been updated within three (3) months after the effectiveness to take into consideration any specific concerns relating to this project.

Name	Recurrent	Due Date	Frequency
Recruitment of a technical Project management expert, monitoring and evaluation specialist, and an internal auditor.		Three months after effectiveness	N

**Description of Covenant**  
 The Recipient shall, by no later than three (3) months after the Effective Date, recruit a technical Project management expert, monitoring and evaluation specialist, and an internal auditor for the Project Coordination Unit, in accordance with the provisions of Section III of Schedule 2 to the Financing Agreement.

Name	Recurrent	Due Date	Frequency
Regional Coordination Committee		December 15, 2016	N

**Description of Covenant**  
 The Recipient shall designate, by no later than December 15, 2016, a representative for the Regional Coordination Committee, in accordance with the provisions of Section I. A.1. of Schedule 2 to the Financing Agreement.

Name	Recurrent	Due Date	Frequency
Update the project Manual of Procedures that will include financial management and accounting aspects.		Six months after effectiveness	N

**Description of Covenant**  
 The Recipient shall ensure that the existing financial manual of procedures has been updated within 3 months after the effectiveness to take into consideration any specific concerns relating to this project.

**Conditions**

Source of Fund	Name	Type
	Steering Committee	Effectiveness

**Description of Condition**  
 The Recipient has established the Project Steering Committee, in accordance with the provisions of Section I.A.2 of Schedule 2 to the Financing Agreement.

Source of Fund	Name	Type
	Withdrawal conditions: Matching Grants	

No withdrawal shall be made under Category 3 for Matching Grants under Part A.1 (a) (vii) of Schedule 1 to the Financing Agreement, unless the Association is satisfied that the Matching Grants comply with the provision of Part D.1 of Schedule 2 to the Financing Agreement.

Source of Fund	Name	Type
	Withdrawal Conditions: Emergency Expenditures	

No withdrawal shall be made under Category 4 for Emergency Expenditures under Part D.3 of Schedule 1 to the Financing Agreement, unless and until the Association is satisfied, and notified the Recipient of its satisfaction, that all of the conditions stipulated under Schedule 2, Section IV B. 3. (a), (b), (c), and (d), to the Financing Agreement, have been met.

Source of Fund	Name	Type
	Project Coordination Unit	Effectiveness

**Description of Condition**  
The Recipient has: (i) established a Project Coordination Unit, in accordance with the provisions of Section I.A.1 of Schedule 2 to the Financing Agreement; and (ii) appointed a Project coordinator, a procurement specialist, a finance and administration manager, and an accountant for the Project Coordination Unit, all in accordance with the provisions of Section III of Schedule 2 to the Financing Agreement.

Source of Fund	Name	Type
	Project Implementation Manual	Effectiveness

**Description of Condition**  
The Recipient has adopted the Project Implementation Manual, in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.

### Team Composition

#### Bank Staff

Name	Role	Title	Specialization	Unit
Amadou Oumar Ba	Team Leader (ADM Responsible)	Sr. Agricultural Spec.	Sr. Agricultural Spec.	GFA07
Nora Kaoues	Team Leader	Sr. Agricultural Economist	Sr. Agricultural Economist	GFA07
Omar Lyasse	Team Leader	Sr. Agriculture Economist	Sr. Agriculture Economist	GFA07
Chakib Jenane	Agribusiness Specialist	Sr. Agribusiness Specialist	Sr. Agribusiness Specialist	GFA07
Andre Teyssier	Land Administration Specialist	Sr. Land Administration Specialist	Sr. Land Administration Specialist	GSULN
Clement Tukeba Lessa Kimpuni	Procurement Specialist (ADM Responsible)	Sr. Procurement Specialist	Sr. Procurement Specialist	GGODR
Bella Lelouma Diallo	Financial Management Specialist	Sr. Financial Management Specialist	Sr. Financial Management Specialist	GGO25
Antoine V. Lema	Safeguards Specialist	Sr. Social Development	Sr. Social	GSU01

		Specialist	Development Specialist	
Kishor Uprety	Lawyer	Sr. Counsel	Sr. Counsel	LEGAM
Faly Diallo	Financial Operations	Finance Officer	Finance Officer	WAFFO
Douglas J. Graham	Safeguards Specialist	Sr. Environmental Specialist	Sr. Environmental Specialist	GEN07
Abdoulaye Gadiere	Safeguards Specialist	Sr. Environmental Specialist	Sr. Environmental Specialist	GEN07
Hiroshi Hiraoka	Agriculture Economist	Sr. Agriculture Economist	Sr. Agriculture Economist	GFA07
Hugo de Vries	Program Specialist	Program Specialist	Program Specialist	GCFDR
Alexandre Marc	Chief Technical Specialist	Chief Technical Specialist	Chief Technical Specialist	GCFDR
Milaine Rossanaly	Private Sector Specialist	Private Sector Specialist	Finance and Private Sector Dev. Spec.	GTCDR
Martin Norman	Senior Private Sector Specialist	Private Sector Specialist	Sr Finance and Private Sector Dev. Spec.	GTC07
Maria Miller	Senior Private Sector Specialist	Sr Operations Officer	Sr Operations Officer	GTCDR
Yosuke Kotsuji	Senior Private Sector Specialist	Sr Investment Officer	Sr Investment Officer	IFC
Christine Heumesser	Economist	Economist	Economist	GFADR
Lucie Bobola Lufiauluisu	Team Member	Program Assistant	Program Assistant	AFCC2
Jeannine Kashosi Nkakala	Team Member	Team Assistant	Team Assistant	AFCC2
Hawanty Page	Team Member	Sr. Program Assistant	Sr. Program Assistant	GFA07

#### **Extended Team**

<b>Name</b>	<b>Title</b>	<b>Office Phone</b>	<b>Location</b>
Franz Schorosch	Agricultural Specialist	3013657253	FAO
Frans Goossens	Value Chain Specialist		FAO
Gilbert Hatungumakama	Livestock Specialist		FAO
Martin van der Knaap	Fisheries and Aquaculture		FAO

	Specialist		
Michel Disonama	Agricultural Specialist		FAO
Giorgia Fiorella Nicolò	Nutrition Specialist		FAO

**Locations**

<b>Country</b>	<b>First Administrative Division</b>	<b>Location</b>	<b>Planned</b>	<b>Actual</b>	<b>Comments</b>

**Consultants (Will be disclosed in the Monthly Operational Summary)**

Consultants Required?	Consulting services to be determined
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## I. STRATEGIC CONTEXT

### A. Country Context

1. Following a visit to the Great Lakes region by the President of the World Bank Group and the United Nations Secretary-General in May 2013, the World Bank announced its support for an integrated program to consolidate peace, revitalize regional economic development, create jobs and opportunities for young people, and improve livelihoods throughout the Great Lakes region. The integrated program would include the Democratic Republic of Congo (DRC), Burundi, Rwanda, and possibly Tanzania. The entry point for this effort is the proposed Regional Great Lakes Integrated Agriculture Development Project (RGLIADP).
2. The proposed project will address opportunities and constraints to developing agriculture across the region, which shares many agro-ecological features and extends across a major central corridor of Africa, from Kinshasa in the West to Dar es Salaam in the East. At the same time, many of the proposed project activities will support the goals of the regional Peace, Security, and Cooperation Framework (PSCF) adopted by the countries of the Great Lakes region. In addition to other regional priorities, the project will also support sustainable development and management of shared watersheds and natural resources, regional dialogue conducted through organizations such as the Commission Economique des Pays des Grands Lacs (CEPGL),<sup>1</sup> and research and development programs for key agricultural commodities with clear regional benefits.
3. The original concept was to include DRC and Burundi in the first phase of the project, with the potential for other countries in the Great Lakes region to participate in subsequent phases. Given the fragile situation in Burundi, the project will begin by financing activities in DRC only; as the situation in Burundi stabilizes, support for Burundi under the RGLIADP will be processed as a second series of projects (SOP). Despite of the political tense situation in 2016 due to uncertainty in the presidential election process, supporting DRC with such a project would be critical, considering consensus and ownership around this project during its preparation process. This project is a unique opportunity to help address the roots of conflict, food insecurity and poverty in this region.
4. **Economic growth and social challenges.** DRC, with its wealth of natural resources and considerable potential for development, is sub-Saharan Africa's largest country, extending across a land area of 2.3 million square kilometers. Security is improving but the situation remains tense, particularly in the eastern provinces, and the need for reconstruction, economic growth, and governance remains overwhelming. Efforts to consolidate peace and promote economic recovery must contend with the volatile economic and social context. After the global financial crisis brought on a domestic economic slump that drove growth down to 2.8 percent in 2009, DRC rebounded with an annual average economic growth rate of 7.4 percent in 2010–13 and growth of 8.7 percent in 2014—well above the average in sub-Saharan Africa. Despite an impressive reduction in the poverty rate from 71 percent in 2005 to 63 percent in 2012, poverty remains deeply entrenched, and per capita income (US\$220 in 2012) is still among the lowest in the world. The incidence of poverty is higher in rural areas (about 3 of every 4 people are poor)

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<sup>1</sup> Economic Community of the Great Lakes States.



than in urban areas (where fewer than 2 of every 3 persons are poor). However, the country which ranked second to last on the Human Development Index (from 186<sup>th</sup> of 187 countries) in 2012, has gained 11 places and was ranked 176<sup>th</sup> out of 188 countries in 2014. The DRC has a population of 74.9 million inhabitants (World Bank, 2014). According to the United Nations (UN), approximately 2.3 million displaced persons and refugees currently live in DRC and about 323,000 Congolese live in refugee camps outside the country.

5. **A difficult environment for business.** In the World Bank's *Doing Business 2016* report,<sup>2</sup> DRC ranks 184<sup>th</sup> of 189 countries for Ease of Doing Business. This ranking starkly portrays the challenge of operating a business in a country that requires transformative economic activity to move away from a conflictive past. The regulatory environment for domestic businesses can be improved in the majority of areas measured by *Doing Business*. In 7 of 10 areas, DRC ranks in the bottom quintile. According to the 2013 DRC Enterprise Survey,<sup>3</sup> 56 percent of business managers believe that expensive and unreliable power supply is a major obstacle to business growth. This rate is higher than in most countries in the region, and ranks higher than all other obstacles to business growth.<sup>4</sup> About half as many businesses complained about the lack of access to serviced land and about expensive and unreliable transport, while one in five were constrained by expensive and unreliable telecommunication services. Problems raised by small business owners included the difficulty of gaining access to an effective court of law, power shortages, poor tax administration, and challenges in gaining access to finance. Large businesses mentioned excessive business regulation, poor licensing and permit administration, poor transport facilities, skills shortages, and corruption.

6. **Nutrition: Some progress, but not enough.** Hunger and malnutrition affect large numbers of Congolese—for the last four years, DRC has ranked at the bottom of the Global Hunger Index. Agricultural production has fallen by 40 percent since 1990. Approximately 6.4 million people are severely food insecure; with no access to livelihoods, they require continuous food assistance. Some progress has been achieved in fighting infant mortality, which declined from 9 percent in 2007 to 5.8 percent in 2013, and reducing under five mortality, which fell from 14.8 percent in 2007 to 10.4 percent in 2013. The level of chronic malnutrition among children is strikingly high—43 percent of children age 0–59 months are chronically malnourished, and 1 out of 5 is severely malnourished. This level of malnutrition results from inadequate dietary intake over a long period, coupled with recurrent infectious diseases. Nationwide, some form of anemia affects 38 percent of women of reproductive age, while 14 percent experience a chronic energy deficit, as indicated by their Body Mass Index. Among the youngest women (15–19) in rural areas, 21 percent are anemic and 18 percent suffer from an energy deficit.

7. **Security and conflict.**<sup>5</sup> South Kivu Province in DRC and western Burundi are some of the most conflict-prone areas in the Great Lakes region, having experienced decades of war and displacement. Since 1998, an estimated 3.5 million people have died in DRC from continuous cycles of conflict. The eastern provinces are still reeling from ongoing military operations

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<sup>2</sup> See <http://www.doingbusiness.org/data/exploreeconomies/congo-dem-rep>.

<sup>3</sup> See [http://microdata.worldbank.org/index.php/catalog/2026/related\\_materials](http://microdata.worldbank.org/index.php/catalog/2026/related_materials). The Enterprise Survey, conducted across DRC between August 2013 and May 2014, included rigorous interviews of firms. It was part of the Africa-wide Enterprise Survey 2013, a World Bank initiative to assess constraints faced by the private sector.

<sup>4</sup> DRC experiences 20 power outages on average per month (with a median duration of 7 hours), compared to 9 outages in the sub-Saharan Africa region. Businesses in DRC lost, on average, 11 percent of revenue due to power outages, much above the regional norm.

<sup>5</sup> Annex 8 presents an extensive analysis of conflict and political economy issues related to land and identity in the region.

against rebel movements (M23, FDLR, and ADF)<sup>6</sup> and a host of smaller armed groups. The influence of competing political-military networks has left state institutions severely weakened and fragmented. Conflicts arise from a complex interplay of factors, many related to questions of land and identity, particularly in the project's targeted areas. Rights to land in rural areas are unclear in the vast majority of cases. Many titles date to concessions awarded in the colonial era, and others are contentious because they are the result of political patronage. With conflict and demographic pressure reducing access to land, producers are driven to using unsustainable agricultural practices that cause productivity to decline, and tensions begin to mount over the limited availability of land. In a climate of insecurity and poverty, people fall back on ethnically defined identities that, in turn, are closely linked to the possession of land as a non-negotiable tribal heritage. Armed groups, customary authorities, and political entrepreneurs may mobilize communities against each other around those identities and grievances, for economic or political gain. They create a climate of fear and mistrust in which violence is easily sparked by any intervention related to land and agriculture. Over the years, such conflicts have disrupted production and trade, forcibly displaced massive numbers of people, and increasingly subjected them to poverty, hunger, and malnutrition. In the proposed project area, tensions mainly play out between the Barundi and Bafulero groups in the Ruzizi Plains, the Banyamulenge and Babembe groups in the plateaus, and Bantu and Batwa (autochthonous people) in Tanganyika Province.

8. These multi-faceted dynamics have long disrupted the region's fragile equilibrium. The Great Lakes region has been a conduit for movements of tribal communities for decades, with the Barundi and Banyamulenge groups settling in South Kivu from neighbouring Rwanda and Burundi. Relations between the countries and groups significantly deteriorated during the two Congo Wars (1996–97 and 1997–2003), when Burundian and Rwandan armed groups were active in eastern DRC. Several Burundian armed groups, such as the FNL,<sup>7</sup> used South Kivu as a fall-out to train and launch attacks against the government in Bujumbura. Deep, longstanding mistrust across borders is exacerbated by the seasonal migration of pastoralists, who move their cattle from Burundi, Rwanda, and Tanzania into the Ruzizi Plains and Fizi in DRC, accidentally destroying fields and creating problems with local agricultural communities. At this juncture, regional tensions are rising as the Burundian electoral conflict spills over into South Kivu Province of DRC. Some 230,000 refugees have fled the country, mainly to Rwanda and Tanzania, but a considerable group has moved into the Ruzizi Plain and Fizi Territory in South Kivu, where they have settled among the local communities. Many of these communities perceive the Burundians as “interlopers,” closely related to the Barundi community, who increase competition and tensions over the available land in the area.

9. Using a conflict filter to target investments in an equitable way, the RGLIADP will build on interventions that have been successful in the area. Specialized NGOs will be engaged to undertake careful conflict and/or political economy analysis before activities start and as investments are rolled out. Established platforms for community dialogue will be supported to bring together beneficiaries from different groups to discuss their differences, ensure that project activities do no harm to social dynamics, and ensure an equitable division of benefits between the groups. The proposed project will thus take advantage of established, respected community

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<sup>6</sup> M23: The rebel military group Mouvement du 23-Mars; FDLR: Forces Démocratiques pour la Libération du Rwanda, a group led by Rwandan *génocidaires* who had fled that country after the end of the genocide, often allied with the Congolese armed forces; ADF: Allied Democratic Forces, a rebel group opposed to the Ugandan government.

<sup>7</sup> FNL: Forces Nationales pour la Libération, a Hutu-dominated Burundian armed group.

dialogue platforms to foster joint decision-making and mitigate tensions that could arise over the perceived equity of project activities and investments.<sup>8</sup> The project will give specific attention to reducing tensions surrounding equitable access to land, especially in the irrigated areas targeted for rehabilitation by the project, avoid elite capture and ensure that no land is misappropriated. A transparent mechanism will be introduced in these areas to secure land use rights and alleviate people's concerns. Moreover, to balance local peacebuilding and the wider political dialogue, the project will coordinate its activities under the International Security and Stabilization Support Strategy (ISSSS or I4S), coordinated by the UN with the local authorities.<sup>9</sup> This approach will allow for higher-level political mediation and troubleshooting where required.

## **B. Sectoral and Institutional Context**

10. Agriculture plays a major role throughout the Great Lakes region and in the economy of DRC, which has 80 million hectares of arable land, a diverse climate suited to agricultural diversity, and extensive areas for pastoralism. Aside from possessing abundant water for agriculture, DRC's numerous lakes and rivers provide rich opportunities for fishing and aquaculture. Agriculture is the most important sector in terms of GDP share and employment, accounting for 42.5 percent of GDP and employing 70 percent of the active population (62 percent of its men and 84 percent of its women). The sector comprises mostly small-scale family farms relying on low-intensity production of crops, livestock, and fish. The production of staple foods remains stagnant and has fallen behind population growth, but some agricultural subsectors—notably coffee, oil palm, and flour production—are more dynamic. Both small-scale and large commercial farmers grow rice, sugarcane, cassava, and maize.

11. The fundamental constraint on agriculture is low productivity, which has many causes. Many modern inputs and technologies are unavailable or hard to obtain, including improved seed (especially of hybrids), fertilizer and other agrochemicals, and vaccines and other animal health supplies. The emergence of a more productive, dynamic agricultural sector is also limited by the lack of protection for regional watersheds (threatening the sustainability of soil and other natural resources), weak access to markets, and the absence of information on markets and prices. Poor productive infrastructure and equipment (water, electricity, roads) and limited agro-processing facilities add up to high production, processing, and transaction costs, and as well as high post-harvest losses for crops, animal products, and fish. Attempts to remove these constraints on agricultural performance should strengthen agriculture's contributions to food security, employment, household nutrition, and poverty reduction.

12. Beyond these immediate constraints, agricultural development depends on the resolution of many overarching problems. For example, limited economic governance forestalls the emergence of a strong private sector and significantly adds to production costs. Inadequate public funding for agriculture has undermined supervision, agricultural extension, and research for years. Although it is worth noting that agriculture, allocation increased from 3 to 8 percent of national budget in 2016. Poorly organized financial services prevent most individuals from

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<sup>8</sup> These platforms consist of legitimate local notables from the various ethnic communities. Particularly relevant platforms are the Cadres de Concertation Intercommunautaire (Intercommunity Consultation Bodies) in the Ruzizi Plains and Fizi, and the Comité d'Analyse des Risques (Risk Analysis Committee) in Tanganyika. These structures have existed for a long time, mitigated many conflicts, and developed strong legitimacy as a result. Other international partners actively support them.

<sup>9</sup> The ISSSS is the international community's foremost support strategy for the government's Stabilization and Reconstruction plan (STAREC). The ISSSS has a series of area-specific priority plans, with which the activities envisioned under the proposed project will be integrated. .

obtaining capital to finance their agricultural activities.<sup>10</sup> As noted, the multiple, overlapping, and non-transparent land administration systems (customary and statutory) lead to conflict over access to land and increase the risks of expropriation. The deterioration of rural living conditions, exacerbated by years of conflict, makes it extremely difficult for producers and agricultural value chain actors to organize their efforts and it is driving the high, selective exodus of young people from rural areas to cities and mining operations in search of better prospects.

13. In Eastern DRC, South Kivu and Tanganyika have considerable agricultural potential and large areas suited to pastoralism. The major commodities produced in the area include the main commercial crops (rice, sugarcane, cassava, and maize, grown by smallholders and large-scale farmers in the Ruzizi River Plain). Local herders and pastoralist groups that come down from the plateau produce livestock in the mid-lowland extension of the Ruzizi River Plain (a seasonal grazing area for cattle). Extensive rainfed crop production (maize and cassava in particular, as well as rice) takes place in the lowland central-basin of western Tanganyika, and artisanal fishing is practiced in Lake Tanganyika. The numerous abandoned fishponds in the Ruzizi River Plain indicate that aquaculture used to be important. This part of the country is also endowed with forests that can produce timber and non-timber products.

14. At the same time, much of the area's agricultural potential has been suppressed by the constraints mentioned earlier, and agriculture for the most part is limited to small-scale, low-risk, subsistence activities. Overfishing is the primary reason that the harvest of fisheries resources from Lake Tanganyika has declined by approximately 30 percent over the past two decades to approximately 120,000 tons per annum. The *Autorité du Lac Tanganyika* (ALT),<sup>11</sup> which governs the lake and its basin on behalf of the five riparian countries,<sup>12</sup> concluded in 2011 that the number of fishers and canoes doubled during that same period. Approximately 50,000 fishers originate from DRC.

15. A subsector scan to identify value chains ready for commercial investment found potential for effective demand and commercial opportunities in the rice, cassava, and livestock/dairy value chains; cassava was the most important food staple and cash crop in South Kivu (see paragraph 38 for details). Buyers and aggregators are present in all of these value chains, and with increased support, they could meet the demand from current and prospective buyers.

16. With respect to nutrition, local diets are limited in variety and quality, consisting largely of roots (cassava), tubers (sweet potatoes), and some cereals. These staples are sometimes accompanied by limited amounts of vegetables and pulses, and very infrequently by animal products. Households rely mainly on what they can produce for themselves. Distribution of food within the household can be an issue; men and boys receive most of the animal protein when it is available. Aside from these limited diets, other causes of malnutrition include inadequate health services, poor access to sanitation and drinking water, and a general vulnerability of women-headed households, which are reportedly common in rural areas.

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<sup>10</sup> Less than 10 percent of Congolese are estimated to have bank accounts, and less than 5 percent of companies have access to loans from formal financial institutions.

<sup>11</sup> Lake Tanganyika Authority (LTA).

<sup>12</sup> Burundi, DRC, Rwanda, Tanzania, and Zambia.

17. Environmental degradation is a significant problem throughout the proposed project area. The loss of forests threatens globally important biodiversity as well as the sustainability of local agricultural investments. Deforestation provokes landslides and erosion-related sedimentation on steep slopes; poor management of forest resources also reduces the availability of charcoal, the most important fuel in rural areas.

18. **Rationale for regional financing.** The RGLIADP is designed to foster the integration of neighboring countries such as Burundi, Rwanda, and Tanzania by developing links with regional institutions to pave the way for participating in a larger regional program over time. The project is fully aligned with the second pillar of the proposed “World Bank Group regional initiative for peace, stability, and economic development,” which focuses on economic cooperation and regional integration to revive the Great Lakes region. The second pillar supports countries in the region to address key common economic challenges, including the challenge of raising agricultural productivity to alleviate poverty. More productive agricultural systems and increased revenue from agriculture in eastern Congo will contribute to peace and stability in the wider Great Lakes region. The proposed project will strengthen the capacity of key regional institutions (such as CEPGL) to foster regional harmonization, and at the same time it will invest in a regional agenda of applied agricultural research and technology generation for commodities that are important across the Great Lakes region. The project will train scientists and rehabilitate two research stations in the border area to serve the region. The scientists will be connected with global and regional research partners such as the CGIAR centers and the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA).<sup>13</sup> 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. Close attention will be paid to capturing the transboundary benefits of this research by monitoring the technologies that the project introduces, tests, and improves in eastern Congo.

19. Earlier projects that successfully supported recovery and development in Burundi and South Kivu were based on principles of dialogue and Community-Driven Development (CDD). Good examples include the early recovery projects under the UN’s International Security and Stabilization Support Strategy (ISSSS) in DRC, where communities themselves prioritized projects for agriculture based on inter-ethnic dialogue. They also include projects by ZOA,<sup>14</sup> which established local village committees to prioritize and accompany agricultural projects to ensure that the benefits were distributed equitably. Those efforts have provided important cross-country learning that is reflected in the design of the proposed RGLIADP.

20. This project is expected to reduce regional tensions by limiting the competition and other pressures surrounding scarce resources, particularly land. If agricultural systems in the project area can become more productive and profitable, some of the pressure on land and vulnerability to shocks should be reduced. If communities perceive that key resources and commodities are becoming less scarce, they may feel less threatened by the presence of “interlopers” on their land. The project should boost overall trade in agricultural goods between DRC and other Great Lakes countries and increase the purchasing power of the population involved in different

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<sup>13</sup> CGIAR: Consultative Group on International Agricultural Research; ASARECA: Association for Strengthening Agricultural Research in Eastern and Central Africa.

<sup>14</sup> ZOA: Zuid Oost Azie, based in the Netherlands.

segments of the targeted value chains on different sides of the border.<sup>15</sup> Finally, by creating economic opportunities for pastoral communities through the livestock value chain, the project could conceivably lessen the need to move herds into neighboring countries to graze, ameliorating tensions and promoting stability in the region.

21. Taking into account the political economy of South Kivu and Burundi with respect to land, agriculture, and possibilities for peacebuilding, the project will undertake several specific conflict-mitigating activities. As noted, the project's investments in agricultural value chains in DRC will be guided by a conflict filter and supported by dialogue platforms in the Ruzizi Plain, Fizi Territory, and Tanganyika. In this way, the proposed project intends to actively direct interventions to vulnerable groups and ensure equitable distribution of the benefits from the value chains on which the project will focus its efforts. Finally, the project's indicators will be aligned with those of the ISSSS stabilization strategy to provide evidence of the project's aggregate impact on peacebuilding in the region at large.

22. The proposed project complements other initiatives supported by the World Bank in the Great Lakes region. For instance, the proposed project will collaborate with the Great Lakes Trade Facilitation Project (P151083) to ease restrictions on the trade in agricultural commodities at the Kavimvira and Bukavu border crossings between DRC and Burundi. The Eastern Recovery (STEP) Project (P152821) focuses on improving access to livelihoods and socio-economic infrastructure for vulnerable communities in the eastern provinces of DRC. As this project is already active in South Kivu, the regional project will identify collaboration mechanisms in overlapping areas of intervention.<sup>16</sup> Activities under several Trade and Competitiveness lending and investment climate programs will also be leveraged to support the proposed project's activities. They include: (i) the East Africa Investment Climate Program (585047) to develop harmonized seed certification standards and enhance cross-border trade in seed of five staple crops, including maize, and (ii) the DRC Investment Climate Program (600085) to address economy-wide and potentially subnational investment climate issues affecting business regulation. International Finance Corporation (IFC) Investments will assist the proposed project to identify potential private sector buyers of the agricultural commodities produced in value chains supported through the project. The proposed project will also leverage the DRC Finance and Infrastructure Markets Project (P145554), which is establishing a modern national payment system, building capacity for micro-finance institutions (MFIs) across the country (including South Kivu and Tanganyika), and developing a line of credit that will provide medium- and long-term financing for small and medium enterprises (SMEs). It will also build on current interventions by the Department for International Development (DFID), especially in investment climate reform and the establishment of a collateral registry in DRC. Implementation of the collateral registry could increase access to finance for hundreds of smallholders and small fishers under the proposed RGLIADP.

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<sup>15</sup> Recent World Bank studies found a growing sense of solidarity between Burundian and Congolese traders (who are mainly women), which should grow as trade flows increase.

<sup>16</sup> The Eastern Recovery Project undertakes agricultural activities on the Miti-Hombo and Bukavu\_Walungu-Mwenga corridors in South Kivu Province; these areas were selected because the agriculture program of the proposed RGLIADP would cover other areas in South Kivu.

### C. Higher-level Objectives to which the Project Contributes

23. The proposed regional project will contribute to poverty reduction, improved food and nutrition security, and conflict reduction in several important ways. In combination with community-based planning processes, it will increase farm productivity and value addition in selected agricultural value chains in DRC, thus improving rural livelihoods. It will generate employment for women and young people, and it will pursue conflict prevention and landscape management approaches in the targeted areas. In addition to these national objectives, the project will contribute to a number of regional or cross-boundary objectives. It will strengthen scientific exchanges between DRC and neighboring countries on strategic issues such as seed policy and forest and water resource management. It will increase the protection and management of trans-boundary resources, including biodiversity and the fisheries resources in Lake Tanganyika. It will reduce conflict by supporting inter- and intra-community dialogue and economic growth, in addition to fostering greater regional cross-border trade.

24. By supporting the development of agricultural value chains with strong economic potential, the proposed project also coincides with the national strategy of DRC and the Comprehensive Africa Agriculture Development Program (CAADP). The Government of DRC signed the CAADP country compact agreement<sup>17</sup> in 2011. The National Agriculture Investment Plan for 2013–20 focuses on promoting agricultural value chains and agribusiness; managing food and nutrition security and strategic reserves; research, extension, and agricultural education; agricultural governance, gender, and strengthening human and institutional capacities; and adaptation to climate change. Since 2012, the Government of DRC has displayed a clear interest in reforming land administration; among other actions, it announced the roadmap for land reform in July 2012 and in May 2013, it created a National Land Reform Commission (CONAREF).<sup>18</sup>

25. Because of climate change, DRC, like many countries, is at greater risk of reduced agricultural production, natural resource degradation, food insecurity, and threats to the livelihoods of its vulnerable populations. The country's size and the value of its natural resources underscore the importance of climate risks for DRC and the wider region. The Center for Global Development ranks DRC 92<sup>nd</sup> of 233 countries for “direct risks” arising from “extreme weather” and 44<sup>th</sup> of 233 for “overall vulnerability” to climate change. To build resilience to the vagaries of climate change, DRC must focus on increasing agricultural productivity and commercialization in a sustainable way by addressing the key constraints mentioned earlier.<sup>19</sup> The proposed project, which offers a clear opportunity to address those multiple constraints, is well aligned with the World Bank's Africa Climate Business Plan, particularly the first cluster of the plan (“strengthening resilience”). This cluster stresses initiatives that build and protect the resilience of the continent's assets by investing in natural capital (landscapes, forests, agricultural land, inland water bodies), physical capital (including

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<sup>17</sup> The CAADP vision, which emerged from the Maputo Summit (2003), is to redefine the future of African agriculture by accelerating economic growth, minimizing poverty, and enhancing food security. In line with the CAADP Compact, DRC is expected to renew its commitment (along with the other African Union Heads of State) to the Maputo Declaration, which calls for governments to allocate at least 10 percent of national budgets to agriculture for accelerating growth by at least 6 percent per year, the minimum sufficient for effective poverty reduction.

<sup>18</sup> Commission Nationale de la Réforme Foncière.

<sup>19</sup> To recapitulate: low use of agricultural inputs, natural resource degradation (particularly soil and water), low levels of private investment in primary production and in value addition, and poor rural infrastructure, especially small-scale irrigation, roads, marketing, and storage facilities (among others).

roads and other infrastructure), and human and social capital (including improving livelihoods for more vulnerable individuals, to mitigate the effects of climate shocks on social cohesion).

26. In alignment with the FY13-16 Country Assistance Strategy (CAS) for DRC, the proposed project should contribute significantly to the government's efforts to alleviate extreme poverty and malnutrition (MDG1). It coincides fully with the fourth outcome of the CAS, addressing conflict and fragility in eastern DRC through "increased agriculture productivity and production and access to markets."

27. In addition, this proposed regional project has close links with ongoing stabilization and economic recovery interventions in eastern DRC. The outcomes of the regional PSCF, particularly Pillar 4, "Strengthening regional cooperation, including deepening economic integration," clearly coincide with the aims of the proposed project. As noted in the previous section, where relevant the proposed project will coordinate closely with other regional initiatives supported by the World Bank, which include the initiatives on cross-border trade, infrastructure, the fight against sexual violence, and the Eastern Recovery (STEP) Project.

28. The project's activities in conflict prevention and land management will complement several other activities in DRC. For example, community dialogue will be undertaken in line with the ISSSS, which coordinates a range of UN actors and international NGOs, and which can demonstrate the added value of the project to regional peacebuilding more broadly.

## II. PROJECT DEVELOPMENT OBJECTIVES

### A. PDO

29. The project development objectives (PDO) are **"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."**

**Targeted areas.** The area targeted under the proposed regional project is in South Kivu and Tanganyika Provinces, specifically in the Bukavu-Uvira-Kalemie corridor (Bukavu, Ruzizi Plain, and the Baraka-Fizi-Kalemie coastal plain). The exact areas of intervention will be determined based on the Master Plan findings.

30. The following **PDO Level Results Indicators** have been identified:
- i. Direct project beneficiaries, of which are female and of which are between age 15-24.
  - ii. Productivity increases in selected value chains supported by the project.
  - iii. Percentage of participating producer groups/associations having contractual arrangements with marketing agents.
  - iv. Number of programs established to improve agricultural regional integration.



## **B. Project Beneficiaries**

31. The direct beneficiaries of the proposed project will be: (i) the population living in the Ruzizi Plain (along Lake Tanganyika) and in the highlands in eastern Congo; it is estimated that approximately 200,000 households will benefit directly; (ii) the farmers' organizations and their apexes in the targeted areas; (iii) private investors and micro, small, and medium enterprises (MSMEs) in the targeted areas; (iv) vulnerable groups in the targeted areas, particularly women, children, youths, and others at risk of violent mobilization; and (v) agricultural support services, including the public agricultural research and extension services, and NGOs and service providers involved in the targeted value chains. Indirectly, private companies will benefit from agricultural sourcing and market opportunities.

## **III. PROJECT DESCRIPTION**

32. The proposed project is based on a holistic and integrated approach to support agricultural growth and commercialization with the active involvement of the private sector. The project will work through three main channels: (i) strengthening agricultural value chains; (ii) developing the private agro-industrial sector through activities that include promoting enabling environment reforms, developing agro-industrial parks, and providing access to business development services; and (iii) supporting regional integration.

33. The project also aims to reduce and prevent conflict in a region-specific context where tensions are chronically high. Putting this region and its people on an equitable agricultural growth path can help attenuate these tensions. Conflicts cannot be prevented, in the short run, without dialogue between communities, and in the long run, in the absence of equitable economic growth. The project encompasses interventions to promote sustainable landscape management as well as the environmental services that are critical for agriculture to become (and remain) more productive. The project design will expand to include Burundi as soon as the situation there stabilizes; project support for Burundi will be processed as a second series of projects (SOP).

34. Two core-targeting principles have shaped the design of the proposed project. The first is that productive investments will be geographically concentrated within the project area to achieve a larger impact that should crowd-in future economic activities. The second targeting principle is to work through priority value chains that—beyond their effective market demand and commercial opportunities—are highly significant for: (i) improving food security in the targeted area; (ii) balancing crop and livestock production; and (iii) fostering regional coordination. The selected value chains will respond to current food security needs, improve the market orientation of the evolving agricultural sector, and foster import substitution (particularly of rice and dairy products). By selecting value chains that strike a good balance between livestock and crop production, the proposed project will help to ensure that the needs of different communities are met and reduce existing tensions. The inclusion of livestock and crop producers also makes it possible to introduce these communities to workable conflict-resolution mechanisms without excluding either group. The selected value chains are a significant means of fostering regional coordination in agricultural research for development and for managing shared resources such as the Ruzizi Plain. In addition, the proposed project will proactively support the

inclusion of women and young people, and it will give attention to nutrition-sensitive interventions in the targeted value chains.

35. All dimensions of the proposed project are closely intertwined (as the next section shows in detail), and the success of each one is necessary to achieve the PDO. For instance, the value chain activities in Component 1 will succeed only to the extent that a well-conceived conflict filter guides the planned investments to ensure a conducive general business environment. Similarly, improved business environment and access to finance will contribute to enhancing agribusiness services and market linkages, while the regional integration dimension of the proposed project will ensure that interventions in the value chains take advantage of regional economies of scale.

### A. Project Components

#### **Component 1: Agriculture Value Chain Development (Total financing: US\$70.7 million, of which IDA: US\$68 million; PHRD Grant: US\$2.7 million)**

36. **Component 1 seeks to increase the productivity and production of selected value chains in targeted areas of South Kivu and Tanganyika Provinces.** The proposed project will scale up successful value chain initiatives that have demonstrated results on the ground. Specifically, VECO<sup>20</sup> (an NGO) has experience in developing a value chain for table and brewery rice in the Ruzizi Valley and Kalemie area, in partnership with the private sector; VSF<sup>21</sup> has developed services for the livestock sector; and the International Institute of Tropical Agriculture (IITA) has worked on genetic improvement of cassava and improved cassava processing in value chains in eastern DRC. See Annex 2 for details on these initiatives.

37. In building on these partners' efforts, and as detailed in Annex 2, Component 1 will: (i) use a conflict filter and support community dialogue platforms to select the beneficiaries, sites, and communities in ways that help to reduce social tensions and contribute to peacebuilding; (ii) support activities that secure access to land and mediate land grievances, particularly with respect to preventing elites from capturing the benefits of irrigation investments under the project; (iii) mainstream nutrition in the value chain interventions; and (iv) promote market linkages by establishing productive partnerships between producers and buyers.

38. Component 1 also builds on the main findings of the sector scan by IFC in June 2015, which confirmed the market potential of the targeted commodities, as well as on key findings from the Master Plan (*Schéma Directeur*) prepared in 2015/16 as part of the design process for the proposed project. The sector scan, undertaken to identify agricultural subsectors ready for commercial investment, noted opportunities in the rice, dairy, cassava, maize, and wheat subsectors, as well as opportunities for import substitution in fisheries, coffee, and palm oil. For rice, the scan found that local buyers were present, with plans to expand. It also found a functioning system of rice cooperatives that, with increased support, could more readily meet demand from current and prospective buyers and support import substitution (20 percent of rice is imported from neighboring countries). Commercial opportunities in the dairy sector also

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<sup>20</sup> VECO: VredesEilanden Country Office.

<sup>21</sup> VSF: Vétérinaires Sans Frontières (Veterinarians without Borders).

included demand from domestic consumers, the presence of producer cooperatives, and suitable environmental conditions for raising higher-yielding European or hybrid cattle. The sector scan confirmed that cassava, with an annual production of 6 million tons, one-third of which is sold commercially to meet local food demand, is the most important food staple and cash crop in South Kivu. It is equally important in Fizi, where official data place the average annual household income from cassava at US\$2,600 in 2013.<sup>22</sup>

***Subcomponent 1.1: Enhancing productivity and market linkages of selected value chains (Total financing: US\$32.7 million, of which IDA: US\$30 million; PHRD: US\$2.7 million)***

39. **Support to the rice and cassava value chains.** The proposed project will: (i) strengthen the capacity of selected producer organizations (POs) or cooperatives of rice and cassava; (ii) facilitate access to quality seed and planting material; (iii) introduce and promote improved production techniques for both crops; and (iv) facilitate access to input and output markets through a matching grant scheme. In addition, Subcomponent 1.1 will promote techniques for intercropping with leguminous species (such as soybeans) and off-season vegetables to improve the availability of nutrient-dense foods throughout the year. To promote these good agricultural practices (GAPs), the project will adopt the Farmer Field School approach to facilitate group-based learning. A matching grant scheme will be used to establish the production base required to meet market demand by improving access to improved inputs and equipment; financing will be contingent upon the establishment of purchasing arrangements between the producer organizations and buyers to develop market links and productive partnerships. It is expected that the project will provide a 50 percent subsidy on investments in agro-inputs for a maximum of two cropping seasons.

40. **Development of the livestock/dairy value chain.** Interventions in the livestock and dairy value chain will build on the best practices derived from three projects (PRASAB, PRODEMA, and PARSE)<sup>23</sup> and experienced groups working in the local dairy value chain. The proposed project will simultaneously increase the productivity of livestock at the farm level and build linkages with the market for dairy products. More specifically, it will support technical assistance for small-scale producers to form organizations of about 30 members concentrated along market roads; these groups will serve as entry points for further support. In parallel, the project will strengthen animal health services by building a network of Community Animal Health Workers (CAHWs) and private veterinary officers to conduct vaccination campaigns for cows, goats and poultry. It will improve animal nutrition through innovations in forage production, valorization of crop and fishery residues, pasture management, and good practices in animal husbandry. The project will also prepare and implement an action plan for animal genetic improvement, based on the importation and distribution of improved animals from neighboring countries, in parallel with local artificial insemination services. Small groups of dynamic entrepreneurs and established small-scale dairy processing units will be supported to improve the collection, processing, and marketing of milk and dairy products. As with the other value chains, a matching grant scheme will be used to finance productivity-enhancing investments in

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<sup>22</sup> From the 2014 annual, report of the Provincial Ministry of Agriculture, Lands, Rural Development, and Environment of South Kivu.

<sup>23</sup> PRASAB: Programme de réhabilitation et d'appui au secteur agricole du Burundi (Agricultural Rehabilitation and Support Project, supported by the World Bank); PRODEMA: Projet pour la productivité et le développement des marchés agricoles (an agricultural productivity and market development project, also supported by the World Bank); and PARSE: Projet d'appui à la reconstruction du secteur de l'élevage (a project to rebuild the livestock subsector, supported by IFAD).

livestock and dairy production, where a 50 percent subsidy will be provided on a one-time basis for a producer organization meeting preset criteria, including buyer arrangements.

***Subcomponent 1.2: Development of critical infrastructure from improved market access (IDA: US\$38 million)***

41. **Subcomponent 1.2 will support the development of public and collective infrastructure to support the value chains.** In particular, it will: (i) rehabilitate 540 kilometers of feeder roads connecting production areas to markets; (ii) rehabilitate irrigation schemes in the Ruzizi River Valley and other lowlands; and (iii) support the rehabilitation of selected small hydro-electricity dams, where identified as necessary and the connection of selected agro-enterprises to existing water systems. The rural road program will take the regional dimension of the proposed project into account and enhance connectivity between DRC and Burundi. It will establish a community-based road maintenance mechanism and develop the institutional capacity of the Public Works Department. Water user associations will receive training to manage the irrigation schemes.

**Component 2: Support for the Development of the Private Agro-industrial Sector (IDA: US\$50 million)**

***Subcomponent 2.1: Improving the business environment and access to finance (IDA: US\$8 million)***

42. Private firms operating in agriculture and agribusiness face market failures that need to be addressed if the private sector is to develop and contribute to economic growth. SMEs are more affected by regulation and transaction burdens than larger firms (*business environment constraints*) are, have little access to credit (*finance constraints*), and have limited access to information, advisory services, technology, and innovation (*knowledge constraints*). Subcomponent 2.1 aims to address these market failures through support for business regulatory policy and reform, better access to finance for private agribusinesses, and capacity building.

43. **Support policy strategies and regulatory reforms to encourage private investments in targeted areas.** As a first step, the proposed project will support the completion of sector assessments to identify private sector costs, opportunities, and challenges, including key investment constraints, and it will design a plan to overcome obstacles to investment. The sector assessments will make it possible to develop and implement a targeted investor outreach campaign. To improve the inclusiveness and sustainability of regulatory reforms, the project will develop a public-private dialogue mechanism at the provincial level through the Fédération des Entreprises du Congo. The project will build capacity at the provincial level to implement investment climate reforms and carry out investment promotion campaigns, in collaboration with the Agence Nationale de Promotion des Investissements (ANAPI)<sup>24</sup> and relevant line ministries.

44. **Facilitating access to finance for agro-processors and market operators.** This subcomponent also supports a market study to clarify the demand of private firms and cooperatives for financial services along the agricultural value chains. The study will assess the

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<sup>24</sup> National Agency for Promoting Investment.

supply of financial services, highlighting the capacity and interest of financial institutions to serve the targeted sectors. Based on recommendations from that study, the project will finance tailored technical assistance to selected financial institutions to strengthen their operations as needed and develop financial products and services specifically for the agricultural sector. Capacity building and training will enable financial institutions to match their offerings to the needs of various borrowers in the agricultural sector, such as producers, producer associations, aggregators, wholesalers, and agro-processors. Depending on the situation in these institutions, capacity building will be delivered in up to three phases: (i) training loan officers in the essentials of agricultural lending as well as general lending practices and procedures; (ii) helping to establish agribusiness finance as a core offering by developing a strategy, risk management framework, operations process, and products catering for this market segment; and (iii) if needed, technical assistance to enhance the performance of lending institutions.

45. **Build the capacity of cooperatives, private enterprises, and startups.** Capacity building for cooperatives, aggregators, industries, startups, and other actors in agricultural value chains will target the demand side of credit. Training will focus on preparing sound business plans (including choice of technology) and loan applications, banking literacy, business management, access to national/regional and international markets, financial planning, and creditworthiness (so that participants can more easily obtain loans). The technical assistance will help beneficiaries design solid projects acceptable to private investors and financial institutions and obtain financing through initiatives developed by other IDA projects and donors to improve access to finance. One such initiative is a pilot program by the IDA-funded Financial Infrastructure and Markets Project to set up a US\$15 million line of credit to finance medium- to long-term projects of private MSMEs, especially enterprises linked to the targeted value chains, including capital investment and capacity expansion projects. Currently, two or three sound financial institutions that offer services for MSMEs (for instance, ProCredit and FINCA) have been identified to participate in the pilot. Another initiative (developed by USAID's Development Credit Authority) supports private lending to MSMEs in eastern Congo through a loan portfolio guarantee, in partnership with ProCredit and other financial institutions interested in serving agricultural value chains (including producers, traders, processors, and transporters). This technical assistance will be provided by training centers that have demonstrated good results on the ground, such as the Guichet d'Economie Locale du Sud-Kivu (GEL), an NGO created in 2003 by IITA (through its Youth Agripreneur program) with the NGOs Louvain Development and ONE Group.

***Subcomponent 2.2: Support development of competitive and inclusive agro-industrial parks based on market demand and economic, social, and financial viability (IDA: US\$42 million)***

46. In the context of this Project, the agro-industrial park (AIP) concept is based on a concentrated agro-industrial zone, mainly focused on value addition/agro-processing services of food products, including crops, livestock/dairy products and fisheries. It is also based on a PPP scheme aiming at facilitating private sector investment in agribusiness by providing: (i) access to basic industrial infrastructure; (ii) shared common services and facilities and creation of economies of scale in service provision, including warehouses, cold storage facilities, logistic services, quality control services, waste management, etc.; (iii) improved access to technical support and information and management services; and (iv) improved agri-business linkages

between and within actors through effective network between primary producers, agro-processors, traders, retailers and end markets.

47. The Bukavu–Kalemie corridor provides potential locations and markets for piloting the development of AIPs, including sites near the cities of Kalemie (rice, maize, cassava, and fish processing), Uvira (food crops, livestock, and fish), Luvungi (rice, maize, and cassava processing), and Kabare (dairy products and food crop processing). The final site identification and assessment will be carried out based on specific criteria including demonstrated market demand (domestic/regional/export), access roads, site-specific risks, key cost factors, etc. In-depth technical and economic feasibility studies for the design of each selected site will be conducted (including a market demand assessment, sizing of necessary industrial land for the establishment of the AIP, master planning and development, and business development plan including local population, environmental and social safeguards, etc.). Conflict risk assessments will be undertaken to make sure that the ownership of land is clear with title and the project cannot lead to large displacements or trigger inter-community conflict dynamics.

48. The project will take a sequenced approach to agro-industrial park diagnostics with a series of go/no-go decision points and the possibility for reallocating the funds for AIPs if analysis shows a lack of demand for the AIPs or a lack of feasibility (Figure 1). The first step will be to conduct a site assessment to determine which of the sites identified for AIP development, if any, are suitable, and rank them according to their potential feasibility. If no sites are found to be suitable, either the Project can ask the government to propose alternative sites, or the AIP component can be discontinued. Should the subcomponent be discontinued, a reallocation of the budget foreseen for the AIPs in this project will be considered upon agreement between the Government of DRC and the World Bank, following established procedures governing project restructuring.

49. The next step will be to conduct a benchmarking exercise on the top two or three sites to determine the competitiveness of each site as well as a demand survey. If the demand survey demonstrates insufficient demand for the AIP, funds can be reallocated to other project components.

50. If demand is deemed sufficient, a feasibility study will be done (including a Master Plan, economic and financial analysis, and an Environmental and Social Impact Assessment) on the site for which demand is greatest. If, based on the feasibility study, certain pre-established criteria are met (among others, the internal rates of return are acceptable and the cost-benefit analysis indicates that the economic benefits of the project to the country outweigh the costs),<sup>25</sup> the AIP can proceed to implementation. In implementing the first pilot AIP, the government may decide whether to develop the first few phases of the AIP itself, or it may select private developers through competitive tendering to develop the AIP. The government may be required to complete certain off-site, last-mile infrastructure projects for the site to be viable.

51. In line with the UN Voluntary Guidelines on the Governance of Tenure<sup>26</sup> and the guidelines for responsible investment in agriculture and food systems,<sup>27</sup> the proposed project

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<sup>25</sup> For a more detailed list, see Annex 2, paragraph 44.

<sup>26</sup> <http://www.fao.org/docrep/016/i3016e/i3016e.pdf>.

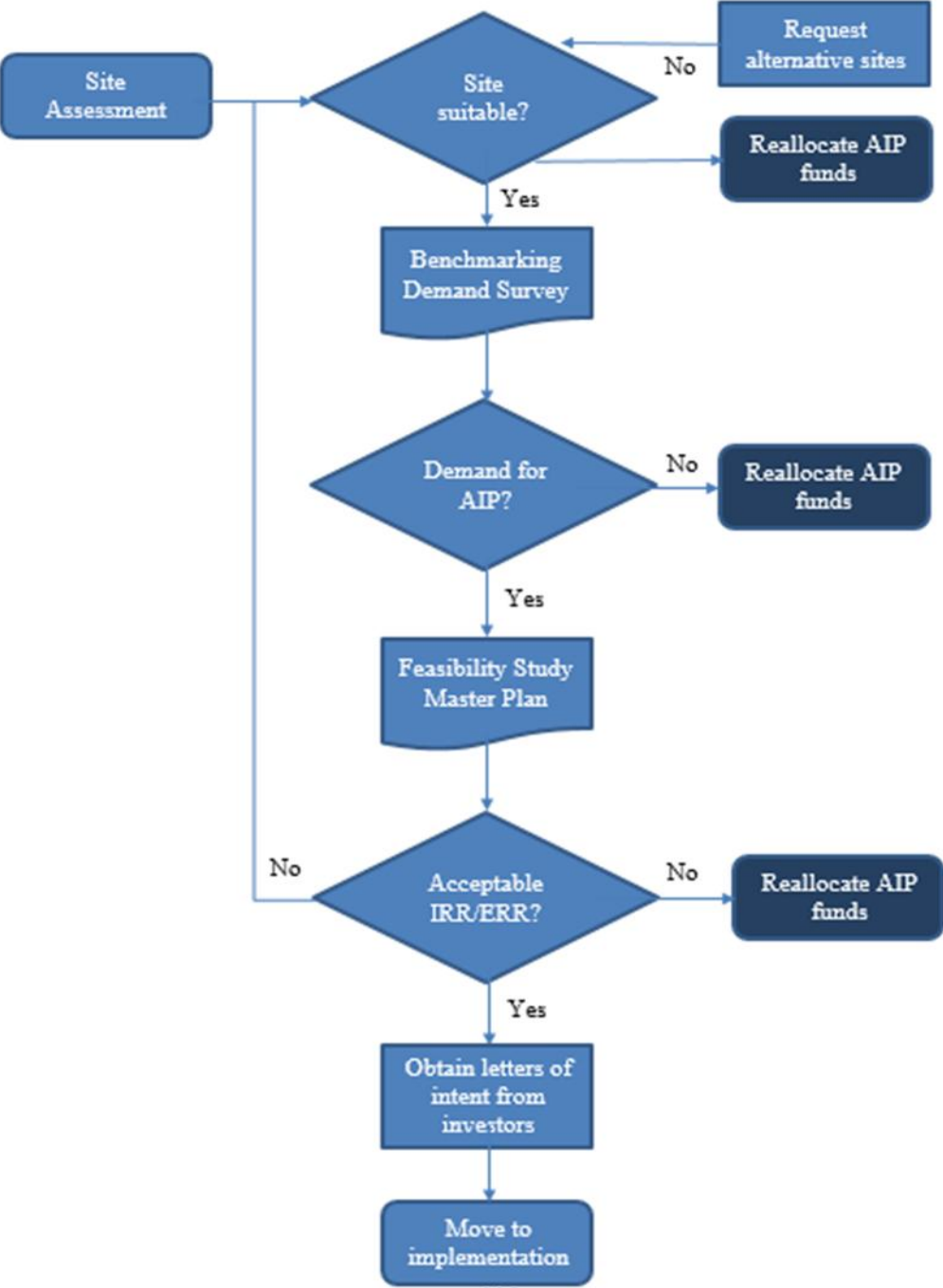
will encourage socially inclusive and environmentally friendly investments that are mutually beneficial for investors, landowners, local communities, and the region. It will promote procedures that ensure, that affected communities have the opportunity and responsibility to: (i) engage in the identification of land appropriate for investment, based on informed choices; (ii) secure sustained and well-defined benefits; (iii) receive fair compensation for the land (including common areas) and natural resources that they make available for investment; (iv) engage in ongoing partnerships with investors and the government; and (v) be able to hold investors and government institutions accountable to their commitments.

**Figure 1: Sequenced approach for identifying and investing in sites for agro-industrial parks (AIPs) under the proposed RGLIADP**

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<sup>27</sup> [http://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS\\_Principles\\_Oct\\_2014\\_EN.pdf](http://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS_Principles_Oct_2014_EN.pdf).

**Flowchart – Decision Tree for Agro-industrial Parks**





### **Component 3: Regional Integration (IDA: US\$15 million)**

52. **Component 3 will foster more effective regional integration** by: (i) creating an enabling environment for regional cooperation and joint natural resource management and (ii) promoting a regional agenda for agricultural research for development (R4D).

#### ***Subcomponent 3.1: Regional cooperation and joint natural resource management (IDA: US\$6 million)***

53. **The proposed project will provide targeted support to develop the capacity of sub regional organizations such as CEPGL.** CEPGL will be supported through its Agriculture and Food Security division, which has policy objectives similar to those of the proposed regional project. The project will finance: (i) regional planning, monitoring, and evaluation to establish and monitor complementary investments with neighboring countries, particularly with regard to managing natural resources in shared watersheds and adapting to the expected impacts of climate change; and (ii) the regional exchange of information, knowledge, and technologies through (among other activities) the establishment of a web-based exchange platform in coordination with CEPGL.

54. Activities that focus on the management of shared watersheds require a trans-boundary effort, in which cooperation between DRC and neighboring countries is crucial. Investments in three major activities are planned for the Ruzizi River watershed. The first activity is to prepare a shared vision for managing natural resources. That vision will build on the Master Plan formulated in designing the proposed project, as well other planning instruments, such as the planning document that will be developed for the Ruzizi Plain, with support from the African Development Bank (AfDB). Second, targeted reforestation and agroforestry activities are planned to protect productive investments for the Ruzizi River and its tributaries in the Ruzizi Plain. The third activity consists of South-South exchanges between DRC and neighboring countries to share knowledge and build capacity in natural resource management and adaptation to climate change. CEPGL, as the common body for all three-member countries (DRC, Rwanda and Burundi) is acting on their behalf. It is coordinating the elaboration of the vision document, a Master Plan for the Ruzizi River watershed, with support of the AfDB who is financing the process. The adoption of this vision document is part of that process.

#### ***Subcomponent 3.2: Regional agricultural research for development and promotion of other strategic value chains (IDA: US\$9 million)***

55. **Regional agricultural research for development.** Subcomponent 3.2 brings national and regional agricultural research priorities into better alignment by building capacity within the national agricultural research system (INERA)<sup>28</sup> and strengthening cooperation with CGIAR centers.<sup>29</sup> To that end, the proposed project will support: (i) nutrition-sensitive agricultural research; (ii) improved research infrastructure, including physical infrastructure and equipment for two research facilities (selected based on an institutional analysis and needs assessment); (iii)

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<sup>28</sup> INERA: Institut National de l'Etude et Recherche Agronomique (National Institute for Agronomic Research).

<sup>29</sup> For instance, with IITA, the International Food Policy Research Institute (IFPRI), Africa Rice, International Rice Research Institute (IRRI), International Livestock Research Institute (ILRI), and the World Agroforestry Centre (ICRAF).

improved knowledge and information systems, including information on nutrition; and (v) human capital development, through scientific training at the postgraduate level and the development of specific skills through short courses or targeted training. The focus will be on pursuing key agricultural R4D priorities, while making the best use of scarce resources to achieve meaningful progress in increasing agricultural growth and reducing extreme poverty. Regional integration is an effective way for DRC to increase the efficiency of its investments in agricultural R4D.

**56. Technical Assistance (TA) to promote fisheries and aquaculture, and other value chains.** TA will be mobilized to prepare strategic interventions in priority value chains, including the fisheries and aquaculture subsector. FAO, with its proven capacity in fisheries and aquaculture, will provide TA to: (i) produce an action plan to reduce post-harvest losses in the Lake Tanganyika area (an estimated at 20,000 tons per year, valued at US\$5 million, are lost through inappropriate processing); (ii) produce an action plan to develop inland aquaculture and reduce the pressure on Lake Tanganyika fisheries; (iii) produce a strategy for communities to play a stronger role in managing fisheries through co-management and community surveillance; (iv) conduct specialized studies to strengthen research institutions in data collection, fisheries, and limnological research; (v) analyze the role of fish in nutrition and the impact of limited access to animal protein on children's health; (vi) analyze the quality of locally processed and imported fish products, with an emphasis on preventing health hazards; and (vii) assess pollution and other destructive impacts of human and naturally induced processes in the Lake Tanganyika Basin and the potential for mitigating them.

#### **Component 4: Support Services and Project Management (IDA: US\$17 million)**

##### ***Subcomponent 4.1: Strengthening capacity of public, NGO, and private technical services (IDA: US\$7 million)***

**57. Subcomponent 4.1 provides results-based capacity building on a needs basis to national and provincial technical services in the Ministries of Agriculture and Rural Development to strengthen their role in the direct implementation of the proposed project.** This subcomponent also supports capacity building for the extension services and for establishing a sustainable seed industry in which the National Seed Service (SENASSEM)<sup>30</sup> can perform its essential functions of controlling and certifying seed production. Based on a needs assessment, the proposed project will finance: (i) construction or rehabilitation of office buildings and seed laboratories; (ii) training and study tours for individuals from public agencies to visit neighboring countries to learn from successful experiences; and (iii) TA and equipment to the designated technical services to enable them to perform their functions more effectively. In addition, the project will finance training and provide technical support to NGOs (particularly to producer organizations such as FOPAC-SK)<sup>31</sup> and private actors at the provincial level to enable them to participate more effectively in implementing and monitoring project activities.

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<sup>30</sup> Service National de Semences.

<sup>31</sup> Fédération des OPA du Congo du Sud Kivu (Federation of South Kivu Producer Organizations).

***Subcomponent 4.2: Project management, monitoring, and evaluation (IDA: US\$10 million)***

58. **Subcomponent 4.2 encompasses activities related to project management, coordination, communication, monitoring, and evaluation at the national and provincial levels.** The proposed project will establish an M&E system to collect data in a timely manner, enable the timely adoption of corrective measures, and monitor impact. This subcomponent will finance a baseline and final impact assessment, goods and equipment, hiring of staff, consultant services, workshops, and training. Under this subcomponent, the project will also ensure proper monitoring of environmental and social safeguards policies.

***Subcomponent 4.3: Contingency emergency response (IDA: US\$0.0M)***

59. **Subcomponent 4.3 will provide immediate response in the event of an eligible crisis or emergency.** This zero-budget subcomponent establishes a disaster recovery contingency fund that could be triggered in the event of a natural or human-induced disaster through formal declaration of a national or regional state of emergency, and upon a formal request from the government. In such cases, funds from other project components may be reallocated to finance emergency response expenditures.

**B. Project Financing**

60. The total cost of RGLIADP is about US\$152.7 million, including physical and price contingencies. **The project will be financed mainly through an IDA Credit of US\$150 million equivalent for the Democratic Republic of Congo, under an Investment Project Financing instrument.** Support is planned for five years (2016–21). The IDA contribution will be made available upon effectiveness and disbursed based on a withdrawal application.<sup>32</sup> **The nutrition activities of the proposed project are to be co-financed by a Japanese PHRD grant for a total amount of US\$2.7 million.** Table 1 summarizes the costs by component.

**Table 1: Summary of costs for the proposed RGLIADP project (US\$million)**

Project Components	Project costs (US\$million)		% Financing
	IDA	PHRD	
<b>1. Agriculture Value Chain Development</b>			
1.1. Enhancing productivity and market linkages of selected value chains	30.00	2.70	100%
1.2. Development of critical infrastructure for improved market access	38.00		
<i>Subtotal Agricultural Value Chain Development</i>	<i>68.00</i>	<i>2.70</i>	
<b>2. Support for the Development of the Private Agro-industrial Sector</b>			
2.1. Improving the business environment and access to finance services	8.00		100%
2.2. Development of competitive and inclusive agro-industrial parks	42.00		
<i>Subtotal Support for the Development of the Private Agro-industrial Sector</i>	<i>50.00</i>		
<b>3. Regional Integration</b>			
3.1. Regional cooperation and joint natural resource management	6.00		100%
3.2. Regional agricultural research for development and promotion of other strategic value chains	9.00		

<sup>32</sup> The credits will be financed under regular IDA credit terms, with a 38-year maturity including a 06-year grace period.

<i>Subtotal Regional Integration</i>	<i>15.00</i>		
<b>4. Support Services and Project Management</b>			
4.1. Capacity building of public services and private actors	7.00		100%
4.2. Project coordination and monitoring and evaluation	10.00		
4.3. Contingency emergency response	0.00		
<i>Subtotal Support Services and Project Management</i>	<i>17.00</i>		
<b>Total</b>	<b>150.00</b>	<b>2.70</b>	<b>100%</b>
<b>Total Project Costs</b>	<b>152.70</b>		<b>100%</b>

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

61. The design of the proposed project incorporates lessons from several regional operations. It reflects two major lessons from large regional agricultural projects, particularly the West Africa Agriculture Productivity Program (WAAPP) and the Eastern Africa Agriculture Productivity Program (EAAPP). The first lesson is that regional integration and knowledge sharing do not occur automatically; the second is that regional planning, exchange, and monitoring mechanisms should be clearly defined and harmonized at the design stage. Because a regional approach increases the challenges for reporting and evaluation, under the proposed RGLIADP, the same financial management and M&E software systems will be used at the national and sub regional level. Like other World Bank projects in the region, the proposed project will rely on existing government structures and systems for implementation and will pay particular attention to clearly defining roles and responsibilities of stakeholders at different levels.

62. The project's design also reflects the current consensus on priorities for developing value chains, including the region's value chains for livestock. There is widespread agreement that an enabling environment—policies, enforced regulations, and functioning institutions—is needed to support economic transformation based on more resilient, sustainable, productive, and remunerative economic activity (including robust value chains). That enabling environment will be ineffective without better national and regional coordination, however. Functioning national institutions (public, private, and civil society organizations) must be able 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. Development and dissemination of new agriculture practices and technologies also requires integrated national and regional support for agricultural research, extension, and training systems.

63. Major lessons on conflict, risk, and vulnerability informed the design as well. It incorporates a conflict and vulnerability filter into the design to engage up-front with the various risks and drivers of instability that might have been exacerbated in the recent political and security environment. It seeks to ensure that good management information systems are in place to detect emerging problems in this risky environment and address them early. The project also gives attention to the challenging governance and capacity issues related to working in fragile agro-ecologies with dispersed, mobile populations. Finally, it intends to use strong M&E and management information systems to track expenditures and investments and link them with outputs.

64. Lessons from implementing current agriculture projects in DRC (PARRSA<sup>33</sup> and the Western Growth Poles Project) contributed to the design of the proposed project in specific ways. First, grassroots organizations, particularly farmer groups and cooperatives that are adequately supported by service providers, can substantially improve their performance and achieve tangible results in a fragile state such as DRC. The proposed regional project will ensure effective capacity building at the grassroots level and support inter- and intra-community

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<sup>33</sup> PARRSA: Projet d'Appui à la Réhabilitation et la Relance du Secteur Agricole (Agriculture Rehabilitation and Recovery Support Project).

dialogue platforms to do so. A second lesson is that involving non-state actors for service provision proves to be more effective and efficient than public sector service provision; for that reason, the proposed project relies on non-state service providers while simultaneously reinforcing public capacity to provide for key mandated services such as planning, research and extension, sanitary and phytosanitary controls, and monitoring and evaluation (M&E). Public-private partnerships will be actively pursued to provide an appropriate mix of complementary expertise to beneficiaries. Third, where it is difficult for producers to obtain credit, as continues to be the case in DRC, a well thought out and targeted matching grant scheme can effectively assist small-scale producers to build their assets and increase their productivity. In a fragile context such as the proposed projects areas, matching grants are highly unlikely to compete with an under-performing rural financial services industry; rather, matching grant schemes may assist producers and producer groups to develop the requisite asset base to elicit interest from credit providers. A fourth lesson reflected in the design is that it is essential to strengthen the capacity of the client to address social and environmental safeguards considerations.

65. Other lessons pertinent to the design of this project come from the World Bank's experience in financing productive partnerships to develop agricultural value chains. The first such projects were implemented in Latin America at the turn of the century.<sup>34</sup> A review of those projects by the World Bank's Independent Evaluation Group identified the critical elements needed for value chains to develop, including: (i) the importance of supporting initiatives to enhance production and productivity; (ii) the need for strong marketing and market infrastructure; (iii) the need for access to land and secure land tenure; (iv) the importance of well-targeted, sustained technical assistance; and (v) the need to support both the quantity and quality of production while improving access to markets and to credit in order to consolidate the investments in value chains. The experience with productive partnerships in Latin America also revealed that the creation of consultation forums that involve producer organizations, buyers, sellers, agro-dealers, and rural finance institutions could improve the commercialization of products and the supply of inputs, leverage credit, and ultimately contribute to strengthening supply chains. Producer organizations were most successful when they had a collective production and marketing strategy, defined in a business plan that included marketing arrangements for the produce (for example, with a trader or an agro-processing firm). These business plans have increased the integration of small producers in agricultural supply chains and reinforced their connection to markets. The design of the proposed project clearly contains key elements of these lessons.

## **IV. IMPLEMENTATION**

### **A. Institutional and Implementation Arrangements**

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

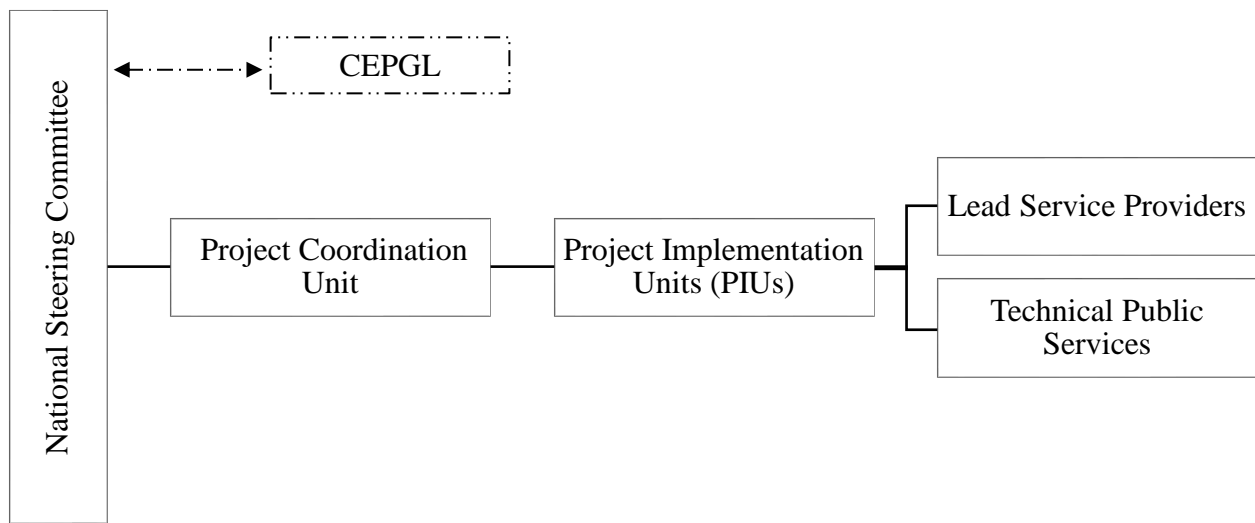
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<sup>34</sup> In Bolivia, Colombia, Guatemala, and Mexico, for instance.

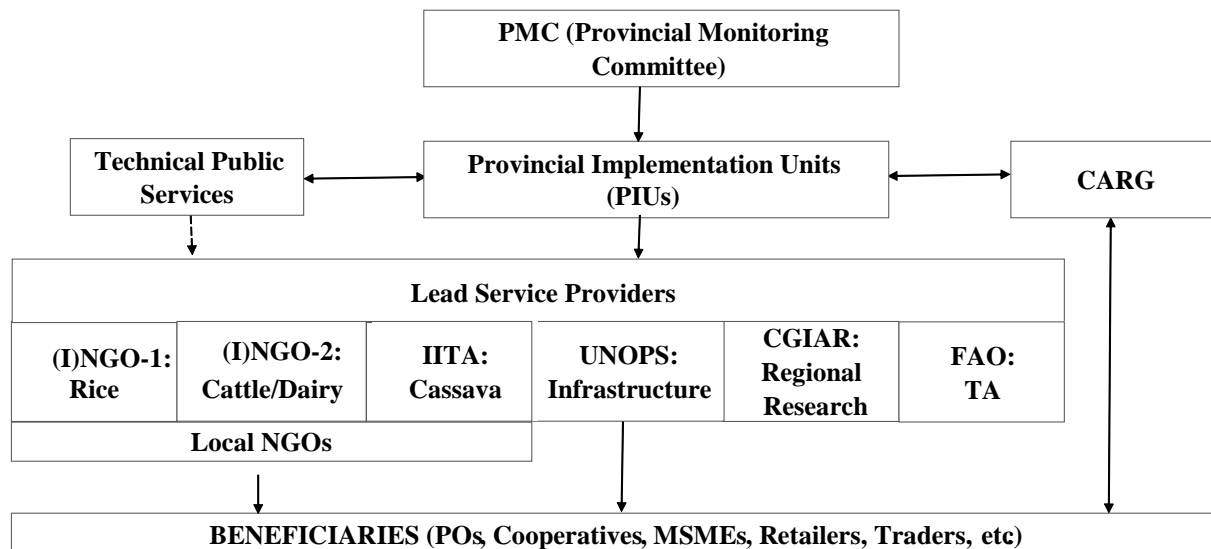
and local level. Figure 2 depicts the relationships between the core structures involved in implementing the project. Annex 3 provides more detailed information on implementation arrangements, core institutions and mechanisms, and their responsibilities.

67. DRC is active in regional forums. It is a member of ASARECA as well as COMESA (the Common Market for Eastern and Southern Africa); the 17<sup>th</sup> meeting of the COMESA Council of Ministers focused on strengthening exchanges through SME development. DRC, Burundi, and Rwanda are the constituent countries of CEPGL. Under the proposed project, CEPGL will strengthen its capacity to play an important facilitating role, support regional knowledge sharing and monitoring to ensure cross-fertilization with neighboring countries, and benefit from experiential learning through activities implemented in DRC. CEPGL appears to be the most appropriate regional institution to support the proposed project, given its more limited membership and its established mandate to enhance regional economic integration across the Great Lakes region. CEPGL will be supported through Subcomponent 3.1.

**Figure 2: Overall implementation arrangements for the proposed RGLIADP**



Implementation arrangements at the provincial level for the proposed RGLIADP



### *Steering committee*

68. A high-level steering committee will be officially established before effectiveness. It will be chaired by the Minister in charge of Agriculture or his/her representative and composed of representatives of relevant ministries, governors of targeted provinces, the private sector, and civil society (including producer organizations) to voice their concerns to contribute to good governance.

### *Project coordination and management*

69. DRC will set up a Project Coordination Unit (PCU) at the Ministry in charge of Agriculture (MinAgri) at the national level. The national level will supervise project activities with support from their public services. The PCU will be responsible for overall coordination of project implementation and performance monitoring, as well as overall coordination with the World Bank and other partners.

### *Project implementation units*

70. Two Project Implementation Units (PIUs) will be established in Bukavu and Kalemie. These PIUs will be under the supervision of the provincial Ministry in charge of Agriculture for each province. Since Tanganyika is a new province and will be in a transitional period, supervision will be done from the national PCU until a provincial government is in place. These units will be responsible for the direct supervision of program activities and of subcontracted (consortia of) experienced service providers, selected based on their comparative advantages and proven experience.

### *Provincial monitoring committee*

71. Given the country's size, a provincial monitoring committee will be set up for each province (South Kivu and Tanganyika), chaired by the representative of the provincial governor. This committee will monitor the execution of project activities and provide strategic advice in compliance with provincial development strategy.

## **B. Results Monitoring and Evaluation**

72. In a timely manner, the project's M&E system will provide the data needed for assessing program performance and for the timely adoption of corrective measures. The detailed description of the M&E framework for the proposed project will be presented in the Project Implementation Manual (PIM). It will be based on: (i) the program results chain and the underlying assumptions of the theory of change; (ii) alignment with complementary M&E frameworks at the national and regional level (specifically, CAADP, ISSSS, and PSCF); and (iii) compliance with World Bank requirements, including the selection of key core indicators as well as specific indicators for gender and civic engagement.



73. The results chain (the outputs, outcomes, and impacts of project activities) is linked with the PDO through a theory of change that underpins the process of intervention. The theory of change and results chain for the proposed project have three pillars that are all vital to achieving the PDO. The first is *social sustainability*: the PDO will only be achieved if (but not only) conflicts between and within communities in the targeted areas are prevented, especially around productive resources such as land and water. The second is *financial sustainability*: the PDO will only be achieved if (but not only) the techniques and technologies promoted at each link in the value chain are profitable for the economic actors, including producers, cooperatives, and MSMEs, and lead to products that are competitive in terms of price and quality, so that consumers can afford them and their marketing is ensured. In that regard, the results chain and theory of change must be clearly linked to the financial analysis for the project. The third pillar is *environmental sustainability*: the PDO will only be achieved if (but not only) the natural resource capital is managed sustainably and its services maintained, especially production-related services.

74. Project outcomes and impacts will be evaluated through the PDO and intermediate-level indicators described in the results framework. The indicators will be assessed against data from a baseline survey that will be established at the project start. The project indicators have been selected based on the SMART principles (specific, measurable, attainable, realistic, and time-bound) with technical experts. Given the context in DRC, a simple household survey will be used as the main evaluation tool. External service providers, such as CGIAR partners, will conduct baseline, mid-term, and final surveys. A specific survey will be conducted to monitor the dietary diversity score in the targeted areas. The score will provide information on nutrition through several proxy indicators.

75. Program outputs will be monitored by the PCU and PIUs in partnership with the various entities contracted to provide specific services. The PCU will be responsible for data consolidation, quality control, analysis, and reporting. The annual monitoring reports will be used to ensure that the project is on track by the PCU itself when preparing the annual work plan and budget, and by the supervision missions. The PCU will also be in charge of communicating the monitoring information to the Ministry in charge of Agriculture to be provided in turn to the national M&E system.

### **C. Sustainability**

76. Sustainability and exit strategies have been integrated into all components of the proposed project. Under the value chain and other business activities, the project will invest in strengthening institutions—agricultural cooperatives and organizations of farmers, livestock owners, and processors—so that they can continue their economic ventures beyond the life of the project. In addition, any economic infrastructure or AIP developed under the project or equipment that is provided will be accompanied by a business plan clearly indicating who will be responsible for daily management and maintenance.

77. The capacity that local NGOs and community-based dialogue platforms develop through Component 1 of the proposed project should enable communities and organizations to continue discussions and mediate between groups after the project ends.

78. Regional institutions and linkages will be developed under Component 3 (regional integration) and Component 4 (capacity building). The project will also help to strengthen the capacity of national and provincial institutions. These activities will also help to ensure that the results of the project continue to be beneficial to the Great Lakes region at large.

#### **D. Key Risks and Mitigation Measures**

79. The proposed RGLIADP is a high-risk, potentially high-reward regional project (as the rankings in Table 2 indicate). In DRC, politics are in a state of flux and land is a critical driver of conflict, and any agricultural intervention will have to consider these dynamics. Because so many people rely on agriculture for their livelihoods, the project can generate significant benefits—not only through its immediate contribution to economic development but also through its impact on conflict dynamics and social cohesion in the region. Lessons from implementing this project could help to design a possible expansion to neighboring countries such as Burundi, Rwanda, and Tanzania.

80. Within DRC, South Kivu and Tanganyika are volatile areas, with some territory under the control (or at least the influence) of armed groups. After 20 years of war and displacement, land is a resource that is prized economically and endowed with social value through its links to notions of ethnic belonging. In the Ruzizi Plain, the influx of thousands of Burundian refugees since the beginning of 2015 has placed extra pressure on the area. Trust between communities is low. Customary and formal authorities as well as armed groups play on people’s fears to mobilize them for their own ends, provoking frequent clashes between the Barundi and Bafulero in the Ruzizi Plain, the Babembe and Banyamulenge in Fizi, and more recently the Luba and autochthonous people in Tanganyika.

**Table 2: Systematic Operations Risk-rating Tool (SORT), applied to proposed RGLIADP**

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

81. The resulting sporadic fighting, displacement, and insecurity could severely affect achievement of the PDO. The proposed project will make every effort to avoid perceptions of “favoritism” to arise with respect to targeting project investments (occasionally communities tend to try to “capture” projects for themselves). DRC is entering an insecure period, with local, provincial, and presidential elections planned for 2016. Aside from the violent mobilization that

has been the pattern following DRC elections, the need to gain votes may also provoke attempts to capture project funds and move them to electorally interesting areas. Finally, should the local elections replace a large part of local administrative structures, renewed capacity building and dialogue may be required. On top of these political and security issues, the provincial and local governments and most local NGOs in DRC lack the capacity to design and implement programs. To ensure that project implementation can proceed smoothly, the project is contracting with experienced international NGOs that will be linked up with local NGOs and working closely with them and providing capacity building and training. In addition, the project is using an established PCU with solid fiduciary management systems.

82. For all of these risk factors, adequate mitigation measures were identified and incorporated into the project design and will be detailed in the PIM to limit negative impacts. Flexibility and resourcefulness will be essential, and the national program implementation teams will need to have good capacity. For example, with regard to containing **political and governance risk (H)**, the project will maintain constant contact with the appropriate political and security actors in the area, such as MONUSCO,<sup>35</sup> peacebuilding NGOs, and international donors. As discussed, the proposed project will also use a bottom-up, participatory approach, particularly under Component 1, to address socio-economic drivers of conflict and ensure that communities are engaged in a dialogue and set priorities themselves in an equitable fashion. This approach may also prevent problems related to elite capture and integrating returning refugees. The proposed project will also right-size the matching grant scheme to control damage in case of corruption.

83. With respect to **macroeconomic risk (S)**, the Bank's Great Lakes Region Conflict Facility has been supporting the project in undertaking forward-looking conflict and risk assessments, boosting the project's safeguards, and identifying suitable partners and issues around which to organize community dialogue and planning. To mitigate risks related to **sector strategies and policies (S)**, comprehensive sector scans will be undertaken. For more substantive investments in infrastructure and agro-processing facilities, political and security risk assessments will be carried out in addition to ensuring that there is effective participation and oversight by the project beneficiaries. Risks related to **institutional capacity for implementation and sustainability (H)**, as well as **fiduciary risks (S)**, have been mitigated by using an established PCU and contracting with experienced groups and lead partners with proven expertise in the intervention area and solid fiduciary management systems. Regarding **environmental and social risks (H)**, the required screening has been undertaken, and a budget of US\$2 million has been allocated to ensure effective monitoring of this risk category. The risks related to **stakeholders (S)** have been mitigated by financing a range of activities that create economic opportunities for farmers and livestock producers as well as job opportunities for specific vulnerable groups, particularly young people and women.

## V. APPRAISAL SUMMARY

### A. Economic and Financial Analysis

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<sup>35</sup> Mission des Nations Unies pour la Stabilisation au Congo (United Nations Stabilisation Mission in the Congo).

84. The economic and financial analysis (EFA) is based on experience with similar projects and follows World Bank guidelines.<sup>36</sup> Financial analyses are conducted at the farm household level to estimate financial viability of the selected value chains (rice, cassava, and dairy). The economic analysis considers the same value chains to evaluate the project's prospective benefits and costs to the national economy. For the estimation of environmental benefits, the project's net carbon balance is assessed with the EX-ACT tool (Annex 6).

85. The financial analysis finds that investments in the main commodities (rice, cassava, and dairy) are profitable from the beneficiaries' point of view. The net present value (NPV) of incremental net benefits over 20 years ranges from US\$8,115 for cassava to US\$12,110 for a farmer planting improved rice varieties in the Ruzizi Plain. The benefit-cost ratios range from 1.3 for rice farming in Kalemie area to 2.8 for the pastoral livestock system, which will benefit from a vaccination campaign. The sensitivity analysis demonstrates that the enterprises are robust against external market price shocks, indicating that beneficiaries have a strong financial incentive to participate in the proposed activities.

86. The economic analysis is based on the aggregation of crop models for rice, dairy, and cassava over the project area and beneficiaries, using economic prices. In addition, environmental benefits in the form of reduced or avoided tons of carbon dioxide equivalent emissions (tCO<sub>2</sub>-eq) are considered at a price of US\$10 per ton. *At a discount rate of 6 percent, the estimated NPV of the project is US\$324.9 million, with an internal rate of return (IRR) of 26.7 percent.* The sensitivity analysis indicates the robustness of the result. Component 2 investment in AIPs and activities related to aquaculture and fisheries are not considered. Overall, the benefits may be underestimated, as the potential for value addition and employment effects in various segments of the value chain has not yet been considered. Other potential benefits from the proposed project that could not be quantified and included in the analysis include intangible benefits (increased gender equity and empowerment of vulnerable groups, social security, conflict reduction), health benefits (through improved nutrition, for example), and the benefits of knowledge exchange.

## **B. Technical**

87. The technical feasibility of the program is based on the following elements:

- i. **The selection of activities and approaches that have been piloted and used by partners in the region;** for example, VECO is developing the rice value chain at a small scale in the region. FAO has provided technical assistance in fisheries to PRODAP<sup>37</sup> and is a reference in DRC with respect to building capacity through Farmer Field Schools. The research centers of the CGIAR are active in the region; IITA has opened a regional center in Bukavu, with the required human resources, equipment, and laboratories, as well as training facilities.
- ii. **The recruitment of international organizations or consortia of service providers to implement clusters of activities.** These organizations include FAO as

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<sup>36</sup> World Bank (2014), "Investment Project Financing: Economic Analysis."

<sup>37</sup> PRODAP: Projet d'appui au programme régional d'aménagement intégré du lac Tanganyika (Support Project for the Lake Tanganyika Integrated Regional Development Program).

well as CGIAR centers (IITA, IFPRI, AfricaRice, ILRI, IRRI, and World Forestry Center). In addition, international NGOs could be contracted; these organizations would link up with local NGOs, organizations of beneficiaries, and public services. This will be of particular concern for conflict- and land-related activities.

- iii. **A Master Plan is being formulated for the Bukavu-Uvira-Kalemie corridor.** It will identify the exact program locations, define the physical infrastructure that is needed, including the AIPs and their size, and carry out detailed feasibility and design studies prior to implementation.

### **C. Greenhouse Gas Accounting**

88. Climate change adaptation and enhancement of resilience in the agricultural sector remain priorities for DRC. At the same time, the importance of achieving mitigation co-benefits is acknowledged in DRC's Intended Nationally Determined Contribution to the United Nations Framework Convention on Climate Change (UNFCCC) (Fall 2015). The World Bank has adopted a corporate mandate to quantify the greenhouse gas (GHG) mitigation potential of its projects, as an important step in managing and ultimately reducing emissions. For that purpose, it uses the EX-ACT tool. For the proposed project, the GHG analysis considered activities along the rice, cassava, and dairy value chains, as well as the proposed agroforestry and agricultural infrastructure. The analysis shows that the project constitutes a net carbon sink, compared to the without-project scenario. Over a period of 20 years, the proposed project has the potential to avoid emissions and sequester -1,467,947 tCO<sub>2</sub>-eq.

### **D. Financial Management**

89. A financial management assessment of the implementing units for the proposed project was undertaken to determine whether: (i) these units have adequate financial management arrangements to ensure that project funds will be used for the intended purposes, in an efficient and economical way; (ii) project financial reports will be prepared in an accurate, reliable, and timely manner; and (c) the project's assets will be safeguarded. The financial management assessment was done in accordance with the Financial Management Practices Manual issued by the Financial Management Sector Board on November 3, 2005 (revised March 2010). The assessment reviewed the financial management system (budgeting, staffing, financial accounting, financial reporting, funds flow and disbursements, internal and external audit arrangements) at the PARRSA Coordination Unit in Kinshasa as well as the Ministry of Agriculture in Bukavu.

90. The PARRSA PCU has satisfactorily managed the implementation of that project since December 2010. The financial management staff includes a Financial and Administrative Expert, who is responsible for financial and administrative matters, an accountant who handles overall accounting and reporting, and an administrative assistant. They have been trained in the use of World Bank procedures as well as the accounting software over the last years of project implementation. The project maintains proper books of accounts, which include a cash book, ledgers, journal vouchers, and a contract register.

91. At the provincial level, however, financial management is weak. The staff consists of civil servants with no experience in implementing donor-funded programs. They have no

manual of procedures or project accounting software. **The assessment concluded that the overall residual Financial Management risk is Substantial (see details in the Financial Management Assessment Report, Annex 3) because of DRC's weak capacity, particularly at the decentralized level.**

92. **Going forward, to better strengthen the financial management system, six actions must implemented.** The first is to update the Manual of Procedures to take the specifics of the proposed project into consideration and to adopt the TOM2PRO software at the decentralized level (in Bukavu). The second action is to recruit one additional accountant to work exclusively on this new project at the central level. The third is to recruit two accountants in Bukavu and Kalemie to handle all financial management, including the management of the subaccount and the advance account. Fourth, the project must recruit an independent external auditor based on acceptable terms of reference; fifth, agree on the format and content of unaudited Interim Financial Reports (IFRs); and finally, organize a launching workshop for all beneficiaries right after effectiveness.

93. Overall project funding of US\$152.7 million will be managed through one designated bank account to be opened and maintained by the PARRSA PCU in a commercial bank acceptable to IDA. The Designated Account will be replenished against withdrawal applications supported by Statements of Expenditures (SOEs) and other documents evidencing eligible expenditures as specified in the Disbursement Letter. A subaccount will be opened in Bukavu and an advance account in Kalemie to finance some activities implemented at that level. All supporting documents should be retained at the National Project Coordination Unit and remain readily accessible for review by periodic IDA implementation support missions and external auditors.

94. The Immediate Response Mechanism (IRM) Operations Manual and the Disbursement Letter will include the detailed disbursement arrangements applicable under the IRM part of the proposed project. As part of such arrangements, a positive list could be used, which would feature in the IRM Operations Manual, and would include the items against which disbursements will be made. Where a positive list of expenditures is used, the documentation required to support disbursement requests should be agreed (for example, invoices and bills of lading for food imports) and recorded in the IRM Operations Manual and the Disbursement Letter.

## **E. Procurement**

95. The PARRSA PCU within the Ministry of Agriculture will have fiduciary responsibilities (financial management and procurement) in implementing this project, supplemented by two new units that will be created in the Provincial Ministry of Agriculture in South Kivu and Tanganyika. The assessment made at the Provincial Ministry of Agriculture in South Kivu in November 2015 concluded that this provincial ministry has no experience in implementing World Bank projects. On the other hand, the procurement unit set up within PARRSA comprises four procurement specialists; one is based in the PCU (Kinshasa) and three others are in the implementing offices in the field (Lisala, Gemena, and Gbadolite).

96. The PCU is functioning and supervising the procurement activities of PARRSA; it has the qualifications and experience needed to handle the procurement activities for the proposed RGLIADP based on its satisfactory performance to date. Procurement capacity must be strengthened in the teams operating at the provincial level, however, who must be trained to use World Bank procedures. Therefore, a procurement specialist will be recruited for each new unit (South Kivu and Tanganyika) through a competitive process to manage procurement activities in the proposed project. The procurement specialists to be recruited will be the mentor of the Procurement Management Unit (Cellule de Gestion des Projets et Marchés Publics, CGPMP) in each province after the CGPMPs are created.

97. A specific PIM will be prepared for this project by effectiveness.

#### **F. Social (including Safeguards)**

98. **Social benefits: Poverty and equity.** The proposed project is designed to contribute to shared growth and poverty alleviation. Its expected social benefits at the national level will include, but are not limited to: (i) increased productivity in selected agricultural value chains (rice, cassava, dairy); (ii) enabling public and private investments in the agriculture sector; (iii) enhanced rural mobility for goods and people; (iv) enhanced agricultural services for producer organizations (research and development, micro-credit, improved rice seed and cassava planting material, organic and mineral fertilizers, improved dairy cattle adapted to local conditions); (v) job creation; (vi) income generation; (vii) enhanced food and nutrition security; (viii) conflict resolution at the community level through investment in community management of shared natural resources and support to inter and intra-community dialogue; and (ix) enhanced protection of protected areas and erosion-susceptible landscapes in selected areas. In addition to these national benefits, the project is expected to generate regional or cross-boundary benefits: (i) strengthening scientific exchanges between DRC and neighboring countries (particularly Burundi, when it joins the project) in such areas as seed policy, forest and water resource management, and access to land; and (ii) increased protection of trans-boundary resources, including biodiversity.

99. The targeted direct beneficiaries of the project are: (i) the population living in the Ruzizi Plain (along Lake Tanganyika) and in the highlands in eastern Congo; (ii) producer organizations and their apex organizations in the targeted areas; (iii) private investors and MSMEs in the targeted areas; (iv) vulnerable groups in the targeted area, particularly women, youths, internally displaced people, and others at risk of violent mobilization; and (v) agricultural services, including the public agricultural research and extension services, international and local NGOs, and service providers involved in the targeted value chains. Indirectly, private companies will also benefit from agricultural sourcing and market opportunities.

100. **Gender.** Gender-inclusive consultations were carried out during project preparation. People of all ages and men and women will benefit from the project's investments—for example from the improved access and mobility facilitated by the rehabilitation of rural roads. The gender-informed approach will be consolidated during project implementation through gender-specific investments in the value chains. While women may have a comparative advantage, given their participation in the rice and cassava value chains, men may be more competitive in the livestock/dairy and fisheries value chains. Conflict resolution at the local level is also likely

to benefit people across gender and age boundaries. Through the community dialogue platforms, the proposed project will include women's representatives. The proposed project will ensure that: (1) women participate in all aspects of the project and that information is disseminated to women using appropriate media and language; (2) gender-sensitive approaches and methods are used, corresponding to local conditions (place, timing, facilitation techniques, and so on); (3) equal or more opportunities and support are provided to women's groups/associations or males, affected by sexual violence; (4) training in gender awareness is provided; and (5) a gender-informed M&E system is implemented and will collect and present gender-disaggregated data on project beneficiaries.

101. **Citizen engagement.** Project design, preparation, and implementation are based on citizen engagement. Consultations with stakeholders have been and will continue to be carried out throughout the project cycle, from preparation to project completion. The identification of project components, including the value chains, was based on consultations with various stakeholders and strong community support. Stakeholders consulted during preparation included: local communities, women's groups, civil society, local and international NGOs, provincial and national administrations, national and international research institutes, bilateral donors, and UN organizations. Project implementation will particularly involve farmers associations; local communities; local, provincial, and national administrations; national and international research institutes; NGOs, the private sector, and UN organizations. Conflict prevention activities rely firmly on citizen engagement. Recurrent consultations with civil society and direct beneficiaries will be part of the proposed project's M&E strategy; the same is true for the beneficiary assessment. The preparation and implementation of safeguards instruments has been and will be part of the consultation process. Citizen engagement and beneficiary feedback will be monitored through agreed and detailed indicators.

102. **Social safeguards.** Overall, the proposed project is expected to have positive social impacts, although some activities will generate adverse social impacts. Specifically, Subcomponent 1.2 (Development of rural infrastructure—roads, energy, and water—to support the value chains) will induce land acquisition and involuntary restriction of access to legally designated parks and protected areas. Both of those impacts trigger OP 4.12 (Involuntary Resettlement). Because the proposed project will be implemented in areas inhabited by indigenous people, OP. 4.10 (Indigenous Peoples) is triggered.

103. Given these considerations, and also given that the precise project locations have yet to be specified and only the larger project implementation area is known, three social safeguards instruments have been prepared: (i) a Resettlement Policy Framework (RPF); (ii) a Process Framework (PF), and (iii) an Indigenous Peoples Planning Framework (IPPF). The RPF estimates that 500 individuals may be affected by involuntary resettlement. The IPPF estimates that 10,000–13,000 indigenous persons live in the project area. These instruments (RPF, IPPF, and PF) were prepared, consulted upon in country on January 25, 2016, and publicly disclosed in country on February 22, 2016 and at the InfoShop on February 22, 2016. In addition, Resettlement Action Plans (RAPs) will be prepared as needed, prior to project activities that induce involuntary resettlement. An additional adverse impact to be addressed is the potential transmission of HIV/AIDS, induced by the influx of extension workers, road contractors, and other professionals involved in implementing the project in rural areas. The preparation and



implementation of HIV/AIDS prevention plans will be part of the contractual obligations of various contracts issued under the proposed project.

104. The project includes a budget for capacity building and awareness raising for stakeholders (project units; provincial environmental administrations and relevant ministry staff; producer associations; SMEs; community-based organizations), with a focus on the implementation of the IPPFs, RAPs, and PF. The project has also a budget to provide training in the management, monitoring, and maintenance of infrastructure for the targeted communities and various stakeholders.

**G. Environment (including Safeguards)**

105. The proposed project is associated with major environmental benefits as it aims at promoting a landscape approach by ensuring that the project incorporates measures to conserve forestry landscapes and river basin protection. By inducing improved soil and water conservation, increased tree/shrub/grass cover, and reduced deforestation and soil degradation, the project should have a significant, positive environmental impact.

106. The planned project will finance physical infrastructure investments and triggers five out of six environmental safeguard policies: OP/BP/ 4.01 (Environmental Assessment), OP/BP/ 4.04 (Natural Habitats), OP/BP/ 4.36 (Forests), OP/BP/4.09 (Pest Management), and OP/BP/ 4.11 (Physical Cultural Resources). Structures that will be funded under the proposed project include storage facilities, rural roads, warehouses, cold storage facilities, and AIPs, among others. In addition, rehabilitation work or new development will include main water supply and drainage canals. OP 4.37 will not be triggered, as the project will invest only in small dams that are below 10 meters high; for these small dams, generic dam safety measures designed by qualified engineers are deemed adequate. It is likely that some activities will be realized near parks and protected areas and could potentially induce significant adverse environmental impacts.

107. Given these considerations, the project is rated **Environment Category “A.”** To handle potential adverse impacts, an Environmental and Social Management Framework (ESMF) and an Integrated Pest Management Plan (IPMP) were prepared in accordance with OP/BP/ 4.01 and OP 4.09. The ESMF includes specific chapters addressing issues related to Natural Habitats, Forests, and Physical Cultural Resources. 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 March 9, 2016. The ESMF and IPMP were consulted upon on January 25, 2016 and disclosed in country and at the InfoShop on February 22, 2016.

**H. Other Safeguards Policies Triggered**

<b>Safeguard Policies</b>	<b>Triggered</b>
Environmental Assessment OP/BP 4.01	<b>Yes</b>
Natural Habitats OP/BP 4.04	<b>Yes</b>
Forests OP/BP 4.36	<b>Yes</b>
Pest Management OP 4.09	<b>Yes</b>
Physical Cultural Resources OP/BP 4.11	<b>Yes</b>

Indigenous Peoples OP/BP 4.10	Yes
Involuntary Resettlement OP/BP 4.12	Yes
Safety of Dams OP/BP 4.37	No
Projects on International Waterways OP/BP 7.50	Yes
Projects in Disputed Areas OP/BP 7.60	No

## **I. World Bank Grievance Redress**

108. Communities and individuals who believe that they are adversely affected by a World Bank-supported project may submit complaints to existing project-level grievance redress mechanisms or to the World Bank’s 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 their complaint to the World Bank’s independent Inspection Panel, which determines whether harm occurred, or could occur, because 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 World Bank’s corporate Grievance Redress Service (GRS), see <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, see [www.inspectionpanel.org](http://www.inspectionpanel.org).

## Annex 1: Results Framework and Monitoring

### DEMOCRATIC REPUBLIC OF CONGO: Regional Great Lakes Integrated Agriculture Development Project (P143307)

<b>Project Development Objectives (PDO):</b> 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. .												
PDO Level Results Indicators*	Core	Unit of Measure	Baseline	Target Values**					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5				
<b>Indicator 1:</b> Direct project beneficiaries	<input checked="" type="checkbox"/>	Number	0	15,000	30,000	80,000	150,000	200,000	Yearly	Calculation of number of individuals receiving project inputs	PIU	Individuals directly benefitting from at least one project activity / input. <u>Cumulative</u> targets.
Of which female	<input checked="" type="checkbox"/>	Percent	0	50	50	50	50	50				
Of which between age 15–24		Percent	0	10	15	20	20	25				
<b>Indicator 2:</b> Productivity increases in selected value chains supported by the project	<input type="checkbox"/>								Per season	Survey	PIU/National Agricultural Statistics	Productivity increases in priority value chains
<b>Rice</b>		t/ha	2.5	2.5	4.0	5.0	6.0	6.0				
<b>Cassava</b>		t/ha	8	8	12	14	14	14				
<b>Dairy</b>		l/lactation period	500	500	700	900	900	1040				
<b>Indicator 3:</b> Percentage of participating producer groups/ associations having contractual arrangements with marketing agents		Percent	0	0	10	30	50	60	Yearly	Annual sample survey	PIU	This indicator would show to what degree producer organizations/ associations are engaged in commercial agriculture
<b>Indicator 4:</b> Number of programs established to improve agricultural regional integration	<input type="checkbox"/>	Number	0	0	2	4	5	5	Baseline, mid-term, and final	Calculation	Consulting firm	Programs will include the establishment of agricultural research programs beneficial to the region, and regional agricultural knowledge platform
<b>Intermediate Result (Component 1) –Agriculture Value Chain Development</b>												

1.1: Beneficiaries who have adopted an improved agricultural technology promoted by the project*	<input checked="" type="checkbox"/>	Number	0	10,000	20,000	60,000	90,000	100,000	Baseline, mid-term, and final	Survey	Consulting firm	Individuals adopting at least one technology. Cumulative targets
Of which female		percent	0	50	50	50	50	50	Baseline, mid-term, and final	Survey	Consulting firm	Individuals adopting at least one technology. Cumulative targets
1.2: Area provided with irrigation and drainage services	<input checked="" type="checkbox"/>	Hectares	0	0	0	1,000	2,000	4,000	Yearly	Calculation of number of hectares	PIU	Cumulative
1.3: Road rehabilitated	<input checked="" type="checkbox"/>	Km	0	0	50	150	300	540	Yearly	Review of technical inspection report 3 months after completion	PIU	Cumulative. Information provided by service providers
<b><u>Intermediate Result (Component 2) – Support for the Development of the Private Agro-industrial Sector</u></b>												
2.1: Number of MSMEs having access to credit		Number	0	0	10	40	70	100	Yearly	Annual reports	PIU	Better access to credit for MSMEs due to improved business environment and capacity building
2.2: Number of AIPs with complete feasibility studies		Number	0	0	1	1	1	1	Mid-term	Mid-Term Review	PIU	1 AIP site is suitable for feasibility studies based on a sequenced approach
2.3: Number of AIPs/Multiservice platforms equipped with basic public infrastructure		Number	0	0	1	3	5	5	Yearly		PIU	Critical public infrastructure financed for 1 AIP and 4 multiservice platforms
2.4: Percentage of beneficiaries satisfied with the AIPs/multiservice platforms established		Percentage	0	n/a	n/a	50	60	70	Mid-Term Review and annually thereafter	Investor Survey	PIU	Beneficiaries include: small and medium producers, wage workers, investors, SMEs
Of which female		Percentage	0	n/a	n/a	50	50	50	Mid-Term Review and annually thereafter	Investor Survey	PIU	Beneficiaries include: small and medium farmers, wage workers, investors, SMEs

<b>Intermediate Result (Component 3) – Regional Integration</b>												
3.1: Number of research/dissemination centers with scientific infrastructure and equipment (ISTA/ISO certified)		Number	0	0	1	2	2	2	Mid-term and final	Annual reports, Mid-term evaluation	Implementing partner/PIU	Cumulative
3.2: Vision document for the management of shared Natural Resources for the Ruzizi Plain adopted by the 3 countries (DRC, Rwanda, and Burundi)		Yes/No	No	No	No	Yes	Yes	Yes	Mid-term	Mid-term evaluation	CEPGL/PIU	A shared vision document based on existing strategies and Master Plan under preparation in collaboration with AfDB approved by the respective Ministry of Agriculture in each of the 3 countries.
3.3: Knowledge platform operational (website developed, launched and regularly updated)		Yes/No	No	No	Yes	Yes	Yes	Yes	Yearly	Annual progress reports,	CEPGL/PIU	Knowledge generated through the project available and on website hosted by CEPGL
3.4: Number of value chain studies with (value chain) implementation strategy		Number	0	0	1	2	4	4	Yearly	Annual progress reports,	PIU	Identification of additional strategic value chains through the TA with FAO
<b>Intermediate Result (Component 4) – Support Services and Project Management</b>												
4.1: Client days of training provided		Number	0	TBD	TBD	TBD	TBD	TBD	Yearly	Annual progress reports	Implementing partner, PIU	Assess the number of advisory services provided by the different service providers (public, private, NGO) and monitor the capacity of specialized institutions (INERA, SENSEM ...). Targets to be determined with service providers.

4.2: Periodic reports submitted on time		Number	n/a	2	4	4	4	4	Quarterly and Yearly	Quarterly and annual progress reports	PIU	
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**Annex 2: Detailed Project Description**  
**DEMOCRATIC REPUBLIC OF CONGO: RGLIADP**

**Component 1: Agriculture Value Chain Development (IDA: US\$68 million)**

1. The aim of this component is to increase the production and productivity of selected value chains, and promote market linkages for rice, cassava, and dairy in targeted areas of South Kivu and Tanganyika.

2. The project will scale up successful ongoing value chain initiatives of NGOs, CGIAR centers, and FAO in the project area. More specifically, the project will build on good results achieved to date by contracting out to experienced groups working in these areas. Below is a brief overview of groups that might become partners: VECO in the rice value chain, VSF in the livestock sector, and IITA in genetic improvement of cassava and processing in eastern DRC.

3. VECO, an international NGO with longstanding experience in developing agricultural value chains and working with farmer organizations, has been active in DRC since 1987 and has a regional office in South Kivu. VECO works in the Ruzizi Valley on the value chain for beer rice in partnership with a private firm (Bralima). It has a similar partnership in table rice with private importers and wholesalers that bought rice locally in DRC until 1995 and are willing to buy locally again. VECO uses a market-driven, comprehensive value chain approach based on: (i) an agreement with a private sector partner that guarantees market access; (ii) support to local cooperatives, selected on the basis of their performance and contribution; (iii) the development of all required services, including seed supply, access to credit, access to other inputs, and promotion of the System of Rice Intensification (SRI); and (iv) co-financing of processing capacity in partnership with local stakeholders. In 2015, during the second year of the beer rice operation, eight producer cooperatives supported through VECO delivered 650 tons of rice to Bralima (up from 450 tons in the first year).

4. VSF, an international NGO with wide experience in West Africa, has been active in eastern DRC since 2005. Among other activities there, VSF has established 4 veterinary clinics, trained 60 CAHWs, established 85 associations of livestock owners, supported 8,000 livestock owners, provided support to vaccination campaigns, established pastoral field schools, and improved animal feed systems and participatory rangeland management.

5. IITA recently established its regional headquarters for East Africa in Kalambo, Bukavu, where the organization is working with other CGIAR centers and INERA. IITA can contribute to the success of RGLIADP through its institutional and fiduciary management capacity and its proven experience (and that of other CGIAR partners) relevant to the project. That experience includes the identification and validation of sustainable production techniques and technologies for cassava and rice (for example, appropriate varieties and seed systems, soil fertility management practices, crop-livestock integration, and climate-smart agricultural practices), as well as expertise in post-harvest handling and processing of cassava, technical support to reforestation and agroforestry, and nutrient-enriched diets. IITA and its partners also have expertise in engaging youths in agri-business related to the priority value chains, facilitating the engagement of women in the priority value chains, institutional capacity development of national agricultural research systems and the development of human resources, and providing diagnosis and laboratory support services.

6. In building on the efforts of those partners, the project will: (i) use a conflict filter and support community dialogue platforms to select the beneficiaries, sites, and communities so as to reduce social tensions and contribute to peacebuilding; (ii) support land access and land-mediation activities, especially for irrigation investments, to avoid elite capture; (iii) mainstream nutrition in the value chain interventions; and (iv) promote market linkages by establishing productive partnerships between producers and buyers. This work will build on the main findings of the sector scan undertaken by IFC in June 2015, which confirmed the market potential of the targeted commodities, as well as the key findings of the Master Plan being prepared in 2015/2016 as part of the design process.

7. A *conflict filter* will be brought in, with a careful political economy analysis undertaken before activities start and as investments are rolled out. Established platforms for community dialogue will be supported to bring together beneficiaries from different tribes to discuss their differences, ensure that project activities do no harm to social dynamics, and ensure an equitable division of benefits between the groups.

8. *In supporting access to land for the targeted beneficiaries*, the project will pursue land mediation activities that ensure that targeted farmers have access to land, especially (as noted) around irrigation-related interventions. Moreover, mediation activities related to conflict and land in DRC will be undertaken in close collaboration with the ISSSS stabilization strategy in the area, allowing the project to coordinate with (and have an aggregate impact on) other peacebuilding activities in the zone.

9. *Nutrition* will be mainstreamed in the value chain approach as a cross-cutting theme. The approach of the project will be to: (i) organize Training of Trainers and strengthen technical extension services in nutrition-sensitive actions; (ii) train and promote behavioral change for nutrition of the population at the grassroots level; (iii) distribute “nutrition kits” for the targeted population; (iv) undertake nutrition-sensitive agricultural research; and (v) monitor progress and impact of the activities.

10. *To promote market linkages*, the project will pursue a productive partnership approach, building on lessons from the Rural Productive Partnership projects financed by the World Bank and successfully implemented in Latin America. The productive partnership approach aims to create favorable conditions and incentives for buyers and smallholders to establish mutually beneficial relationships by ensuring consistent production and reliable supply of a commodity of a particular quality. In so doing, the targeted beneficiaries will be enabled to overcome market barriers and gain stability through consistent price incentives, while buyers receive a more reliable supply of goods of a particular quality. The project will therefore provide significant investments in strengthening the capacity of producer organizations to provide for the existing markets as evidenced by the findings in the sector scan (see the next paragraph). These investments include access to improved technologies and market information, financial services, and rural infrastructure. Both global and national experience show that once farmers are organized into effectively functioning producer organizations and provided with the necessary skills to access markets, they take up activities that add more value. They also capitalize on other inclusive growth opportunities in the rural economy to generate additional cash flows that enable them to seek advisory and rural finance services.

11. A subsector scan was conducted to identify sectors ready for commercial investment. The scan noted potential opportunities in the rice, dairy, cassava, maize, and wheat value chains. Opportunities to support import substitution to meet local food demand were also



identified with respect to fisheries, coffee, and palm oil. As it relates to rice, the scan revealed the existence of buyers with expansion plans and a functioning system of rice cooperatives, which could, with increased support, more readily meet the demand of existing and potential buyers, as well as support local demand for rice, 20 percent of which is now imported from neighboring countries. Similarly, commercial opportunities reflecting increased domestic consumption were identified in the dairy sector. The presence of established producer cooperatives and the availability of suitable environmental conditions that could support the introduction of higher yield European or hybrid cattle were also noted. With an annual production of 6 million tons, a third of which is sold commercially to meet local food demand, cassava was the most important food staple and cash crop in South Kivu. Its importance was particularly noted in Fizi, where, according to official data, in 2013 the average annual household income from cassava was US\$2,600.<sup>38</sup> The subsector scan therefore signaled the potential for effective demand for the selected crops, a critical prerequisite for successful productive partnerships.

***Subcomponent 1.1: Enhancing productivity and market linkages of selected value chains (Total: US\$32.7 million, of which IDA: US\$30m; PHRD: US\$2.7 million)***

12. This subcomponent will focus on investments geared toward increasing the productivity and market access of the targeted commodities in the selected value chains (rice, cassava, and dairy products). Expected results will be in the form of increased volume and quality of marketable produce (rice, cassava, and milk). The project will finance a mix of interventions depending on the targeted value chain, as follows.

13. ***Rice and cassava value chains.*** Investing in the rice and cassava value chains will not only increase the food security status of rural and urban populations in eastern DRC, but it will positively affect income levels of targeted beneficiaries. It will also reduce reliance on imports, particularly for rice. In addition, increased productivity of these two crops will benefit the dairy value chain, as it will make more crop residues available for livestock feed. Building on the successful approaches for these two value chains, the project will: (i) strengthen the capacity of selected rice and cassava producer organizations or cooperatives; (ii) facilitate access to quality seed and planting material; (iii) introduce and promote improved production techniques for both crops; and (iv) facilitate access to input and output markets through a matching grant scheme. The major activities that will be implemented are described next.

14. ***Strengthening the capacity of selected producer organizations or cooperatives.*** The project will first carry out a systematic institutional mapping of producer organizations in targeted areas to fine-tune the strategy of intervention and the activities to be undertaken to support capacity building for producer organizations. Based on this mapping exercise, the members of producer organization will benefit from various 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 chain partners, participatory M&E, and generating long-term upgrading plans that include chain-wide processes.

15. The project will support: (i) legal registration of producer organizations (and development of by-laws if needed) to facilitate the establishment of contracts with suppliers,

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<sup>38</sup> Provincial Ministry of Agriculture, Lands, Rural Development, and Environment of South Kivu, 2014 annual report.

traders, or processors; (ii) the establishment of “poles” of aggregation by constructing and operating common storage facilities; and (iii) the provision of technical assistance, including short-term expertise, logistics, and IT equipment. These activities will be implemented under the overall coordination of the PCU and in close collaboration with the provincial Ministries in charge of Agriculture in the two concerned provinces. Experienced service providers in the region will be subcontracted to implement activities in support of the producer organizations and associated training. The project will build on the existing social structures in DRC and will draw on best practices from World Bank projects as well as other relevant programs by IFAD, AfDB, international institutions (FAO, IITA, IRRI, and so on), active NGOs in the region, and other donor-funded initiatives.

16. *Facilitate access to quality rice seed and improved cassava planting material.* The project will support the introduction, registration, multiplication, and dissemination of certified rice seed and cassava cuttings using the participatory variety selection method with farmer communities. To this end, the project will make the following investments. *For rice*, the project will build the capacity of selected producer organizations and farmers of the Ruzizi Plain for the production and the dissemination of certified rice seed by providing them inputs, foundation rice seed, and training in cropping patterns; certified seed production; and handling, cleaning, and packaging seed to meet quality standards. Around 60 rice producers/organizations will be established for the production and dissemination of certified rice seed. AfricaRice will lead activities in this investment, in close partnership with IRRI, INERA, and SENASEM. *For cassava*, the project will promote the development of community-based seed systems to accelerate the dissemination of improved planting material. Promising clones will be evaluated in farmer-managed trials, and the selected varieties will be further evaluated in community demonstration fields for the development of community-based seed systems. A mother-garden, secondary-garden, tertiary-garden approach will be followed to produce a targeted 200 million cuttings of improved varieties. IITA will lead these activities and implement them in partnership with SENASEM, which will be engaged to provide quality control services. The project will disseminate planting material that was promoted successfully under previous programs in the region, such as varieties resistant to cassava brown streak disease.

17. *Dissemination of improved production techniques.* The project will support investments to promote the adoption of good agricultural practices (GAPs) for producing rice and cassava. They will include practices for sustainable land management, crop nutrition and fertilizer management, crop maintenance, harvesting, and post-harvest processes (such as equipment developed by IITA for grating and chipping cassava roots). The project will support demonstrations of integrated crop and soil management options for sustainable productivity increases. The integration of legumes into rotations or intercropping systems for cassava and the use of Rhizobium inoculants will improve nitrogen fixation by the legumes and raise yields and soil fertility. In areas where its use is economically feasible, the project will also demonstrate and support the introduction of the System of Rice Intensification (SRI).

18. The project will also introduce practices in the rice value chain that increase nutrition in a number of ways. It will encourage producers to diversify production in the off-season and benefit from integrated crop and soil management options by growing highly nutritious foods (such as cowpeas, beans, soybeans, and vegetable crops). Other nutrition-sensitive practices include reducing production losses—for example, by using rice bran to feed animals, generating cash from enhanced harvesting, and using better post-harvest techniques—and the promotion of time-saving technologies for women, who are a significant portion of the

workforce in the rice fields. For the cassava value chain, activities to promote nutrition will focus on improving the capacity of selected producers and producer organizations to grow nutrient-rich foods locally (including testing bio-fortified cassava varieties) and using better processing practices for current varieties (to obtain cassava flour for baking, for instance).

19. To promote the proposed GAPs in a group-based setting, the project will adopt the Farmer Field School approach. It will also build capacity in extension and research services (public and private) in close collaboration with AfricaRice, IITA, national agricultural research institutes, academia, and experienced service providers active in the area.

20. *Facilitate access to input and output markets through a matching grant scheme.* A matching grant scheme will help to address some of the financial constraints experienced by members of producer organizations and facilitate the acquisition of improved technology (mechanization services, fertilizer and other agro-chemicals, certified seed, storage facilities, logistics, and so on) so that producers can meet market demand for their produce. A key objective of the matching grant scheme is to build productive partnerships with buyers and agri-business; for that reason, project resources earmarked for matching grants will be allocated contingent on the existence of (in-)formal arrangements with buyers, as the matching grants should be allocated to match existing demand of buyers and not be based on market forecasts or speculation. The project will make fertilizer and certified seed available through a voucher system with existing suppliers and local agro-dealers in eastern DRC, building on the recent successful experience of IFDC<sup>39</sup> in the region. It is expected that the project will provide a 50 percent subsidy on investments in agro-inputs for a maximum of two cropping seasons.

21. For equipment and infrastructure, such as agricultural equipment and storage facilities, a 50 percent subsidy will be provided on a one-time basis for a producer organization meeting preset criteria, including buyer arrangements. The project will use a market demand-driven approach implemented through a productive partnership identified based on a participatory analysis of the structure of demand for the various types of buyers (for brewery rice and table rice, for example)<sup>40</sup> and their quantity and quality requirements. The maximum matching grant amount would be US\$50,000 equivalent. Thirty percent of the matching grant funds will be earmarked for women and young people. Matching grants will also be provided to enable producer organizations to invest (under an approved business plan) in improved harvest and post-production handling practices that reduce losses and uphold the food quality standards demanded by the markets. For the cassava and rice value chains, matching grants will go to producer organizations adopting appropriate harvesting methods, adhering to drying standards, and using appropriate storage technologies. Eligible investments will include the construction or refurbishment of produce collection and storage facilities, small processing/packaging equipment, and similar items. The activities eligible for matching grants, the criteria for selecting beneficiaries, and the matching grant formula will be described in more detail in the PIM.

22. *Livestock/dairy value chain.* The development of interventions in the livestock and dairy value chain will build on lessons and best practices from PRASAB, PRODEMA, and PARSE, as well as successful initiatives undertaken by experienced partners in the region. The interventions will increase the productivity of livestock at the farm level and foster

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<sup>39</sup> International Fertilizer Development Center.

<sup>40</sup> The project expects the supply of brewery rice to increase from the current level of 3,000 (metric) tons per year (milled) to 6,000 tons per year (milled) by 2021, while the production of paddy table rice will increase from 13,000 tons per year to 45,000 tons per year, which allows the sale of 30,000 tons per year (milled) valued at US\$ 18 million per year by 2021.

market linkages through arrangements with buyers and milk processors. The activities, coordinated by VSF in collaboration with other partners, will:

- (i) Provide technical assistance for small-scale producers to form producer organizations of about 30 members each, concentrated along market roads. These groups will also serve as entry points for further support.
- (ii) Improve access to animal health services through a network of CAHWs and vaccination campaigns for cows, goats, and poultry.
- (iii) Support improved animal nutrition by promoting forage crops, valorizing agriculture residues, improving pasturage, and training producers in good animal feeding and husbandry practices.
- (iv) Improve the genetic potential of herds through the delivery of improved animals through local purchases and imports from neighboring countries, particularly crossbred cattle and Boer breed males. An action plan for animal genetic improvement and the development of artificial insemination will also be prepared.
- (v) Support the development of dairy value chains to collect, process, and market milk and other dairy products. This activity will target small groups of dynamic entrepreneurs. Individual entrepreneurs are already active in dairy production, along with organized dairy cooperatives in the Ruzizi Plain, and need support to develop their businesses. They are potential purchasers of the increased milk production from producers supported through activities (i) to (iv). Beneficiaries will be selected based on criteria detailed in the PIM.

23. All of these activities will be channeled through a Farmer Field School approach to training, as well as a matching grant mechanism and technical assistance. The matching grant mechanism will follow an approach similar to the matching grants for the rice and cassava value chains. Investments will be tailored to achieving higher standards in handling from the point of production through transport, storage, and marketing to safeguard against post-production losses, enhance shelf-life, and meet food quality standards demanded by the markets. As with the other value chains, the matching grant financing for the livestock/dairy value chain will be contingent upon the establishment of arrangements between the producer organizations and buyers. The technical assistance will be provided by specialized institutions, including international NGOs such as VSF and international organizations such as ILRI and FAO for specific domains, including but not limited to Farmer Field Schools, methods of identifying animals and recording their performance, and CAHWs. The collaboration of international and regional research institutions—IITA, ISABU,<sup>41</sup> and INERA—will be beneficial to produce seed of forage crops and support forage development and pasture improvement. A more detailed implementation mechanism will be described in the PIM.

24. Nutrition mainstreaming in this value chain will be achieved by developing capacity, providing equipment, and promoting local artisanal production of yogurt and other dairy products (whipped milk, artisanal cheese) that are already available and accepted by consumers but are not very affordable. In DRC, especially in the Kalemie area, a large proportion of butchers are women, and they will be particularly targeted by the project to

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<sup>41</sup> Institut des Sciences Agronomique du Burundi (Agronomy Institute of Burundi).

improve their working conditions, increase their incomes, and promote time-saving techniques.

25. As with the other interventions supported by the proposed project, interventions in the livestock/dairy value chain will be promoted in South Kivu and Tanganyika Provinces. As noted, they will be concentrated along marketing roads; they will also be based on technical and financial feasibility studies to identify milk production basins and milk consumption centers. Specific attention will be given to: (i) increasing overall productivity and efficiency of farm systems; (ii) promoting market linkages; and (iii) recovering energy and nutrients as key strategies to reduce the emissions intensity of livestock systems and the impacts on climate change.

***Subcomponent 1.2: Development of critical rural infrastructure for improved market access (IDA: US\$38 million)***

26. Subcomponent 1.2 finances public and collective infrastructure for value chain development, particularly: (i) feeder roads connecting production areas to markets; (ii) rehabilitated irrigation schemes for rice in the Ruzizi Valley and other lowlands; (iii) support the rehabilitation of selected small hydro-electricity dams, where identified as necessary and the connection of selected agro-enterprises to existing water systems

27. A rural road improvement program will be prepared to rehabilitate 540 kilometers of feeder roads, taking into account the project's emphasis on regional integration and value chain development. The road improvements will facilitate connectivity between DRC and Burundi, and the mapping of key markets for products of the targeted value chains will be a critical input into the selection of roads to be rehabilitated. A community-based road maintenance mechanism will be put in place, based on road maintenance associations that will be provided with basic equipment to carry out routine maintenance. A Training of Trainers program in road maintenance will be also supported for staff of the Public Works Department.

28. The project will rehabilitate irrigation schemes on 3,000 hectares in the Ruzizi Plain and 1,000 hectares in other lowlands. Within the schemes, the required commercial facilities will be developed and management systems put in place. The project will also help to build the capacity of water user associations to maintain and manage the irrigation schemes. The project will give specific attention to reducing tensions surrounding equitable access to the irrigated areas targeted for rehabilitation by the project, to avoid elite capture and ensure that no land is misappropriated.

29. To ensure the project does no harm to social dynamics and brings communities together around the selected value chains, it will use a conflict filter and extensive community dialogue. Specialized local NGOs will be recruited to undertake conflict- and/or political economy assessments around particular subprojects to ensure that they support social dynamics (in other words that they filter out potential sources of conflict). The project will also support established community dialogue platforms in the Ruzizi Plains, Fizi Territory, and Tanganyika. The Cadres de Concertation Intercommunautaires (CCIs)<sup>42</sup> have operated for some time in Uvira and Fizi and have been supported by other donors. This project will provide funding for the CCIs to accompany infrastructure subprojects as they unfold and guide the dialogue around these investments to manage expectations, help local people to see that subprojects do not favor any one group, and ensure that they have an equitable impact on

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<sup>42</sup> Intercommunity Consultation Bodies.

the various communities in the area. In Tanganyika, the Comité d'Analyse des Risques<sup>43</sup> serves a similar purpose and will be supported.

30. The project will support appropriate activities to prevent elites from capturing resources and avoid heightening tensions surrounding land ownership and access. The project will mitigate those risks by working with customary authorities and provincial land agencies to ascertain that the ownership of the land used in subprojects is clear and that land titles are provided for the proprietors involved. The above-mentioned CCIs will provide hands-on support to this process, guided by their deep knowledge of local actors.

31. Finally, to ensure wider political accompaniment of the proposed project and to ensure that its activities dovetail and are coordinated with other peacebuilding activities, the project will align itself with the UN's International Security and Stabilization Support Strategy (ISSSS) in the area, in support of the government's Stabilization and Reconstruction (STAREC) plan. Project activities will be aligned with the ISSSS's area-specific strategies, and STAREC's provincial coordination meetings can be used to ensure coordination and political trouble-shooting at a higher level where required. By integrating the project's indicators into the M&E-framework of the ISSSS, the project will have a better idea of its aggregated impact on diminishing tensions in the area.

## **Component 2: Support for the Development of the Private Agro-industrial Sector (IDA: US\$50 million)**

### ***Subcomponent 2.1: Improving the business environment and access to finance (US\$8 million)***

32. The private sector operating in agriculture and agribusiness faces market failures that need to be addressed if the private sector is to develop and contribute to economic growth. SMEs are affected more than large firms are by regulation and transaction burdens (*business environment constraints*), have little access to credit (*finance constraints*), and have limited access to information, advisory services, technology, and innovation (*knowledge constraints*). Subcomponent 2.1 aims to address these market failures in the ways described below.

33. *Support for policy strategies and regulatory reforms to encourage private investments in targeted areas.* This support will include financing the completion of sector assessments to identify private sector costs, opportunities, and challenges (including key investment constraints). Results of the sector assessments will make it possible to design an enabling environment program to address the investment obstacles identified in the assessments, including those impacting SMEs. In addition, the sector assessments will enable the development and implementation of a targeted investor outreach campaign and the production of promotional materials, such as briefing materials on investment opportunities. 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 capacity to carry out investment promotion and investment climate reforms at the provincial level, in partnership with ANAPI and with relevant line ministries (to enable them to engage effectively with the private sector).

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<sup>43</sup> Risk Analysis Committee.

34. To support the inclusiveness and sustainability of regulatory reforms, the project will support the development of a public-private dialogue mechanism at the provincial level. Such platforms can help identify and solve the main regulatory constraints and alleviate governance issues faced by the private sector in the targeted region. A key constraint already identified by the private sector in the region is the number and cost of permits (specifically, taxes and licenses, as well as permits) required to operate business. Requirements for these numerous permits can impose substantial constraints on entrepreneurship and investment. The project will finance, inter alia, the streamlining of permits through (i) an inventory of all permits; (ii) a regulatory assessment to determine the legal/regulatory basis for each permit; (iii) an assessment to determine the effective burden of the permit on businesses; (iv) rationalization of the permits, including required regulatory actions; and (v) design and implementation of a database to serve as a repository of information on all required permits. The goal of the intervention is to both streamline applicable permits and improve transparency (predictability) for the private sector.

35. *Facilitating access to finance for agro-processors and market operators.* The project will conduct a market study to understand the demand of private firms, startups, and cooperatives for financial services along the agricultural value chains. The survey will also assess the available supply of financial services, the capacity of financial institutions, and their interest in serving the targeted value chains. Based on the recommendations from the survey, the project will finance tailored technical assistance to selected financial institutions to help them strengthen their operations as needed, develop financial products and services that are better fitted to agricultural sector, and provide capacity building and training for financial institutions to match borrowers' (producers, producer associations, aggregators, agro-processors, and wholesalers) expectations. More specifically, and depending on the situation of the financial institutions involved, capacity building will be delivered in up to three phases: (i) training loan officers in the essentials of agricultural lending in addition to general training in lending practices and procedures; (ii) support to establish agribusiness finance as a core offering by developing a strategy, risk management framework, operations process, and products catering for this market segment; and (iii) if needed, technical assistance to enhance the institutions' performance.

36. In parallel, capacity building will target the demand side of credit, focusing on the preparation of sound business plans (including choice of technology) and loan applications, banking literacy, enterprise management, financial planning, and strengthening the creditworthiness of clients (to obtain loans more easily). This work will focus on producer associations, aggregators, industries, and wholesalers rather than individual smallholders. It will be carried out in partnership with GEL (an NGO created in 2003 by the NGOs Louvain Development and ONE Group) and IITA (through its Youth Agripreneur Program).

37. Finally, the project will leverage existing initiatives to provide access to finance to project beneficiaries, such as the US\$15 million line of credit being set up by the IDA-funded Financial Infrastructure and Markets Project. This credit will be used for on-lending to viable projects of creditworthy private MSMEs, especially those linked to the targeted value chains. It will supply medium- to long-term financing, including financing for capital investment and capacity expansion. Currently, two or three sound financial institutions that offer services for MSMEs (including ProCredit, FINCA, and others) are being identified to participate in the pilot phase. Another initiative that the proposed project can leverage is the loan portfolio guarantee being developed by USAID's Development Credit Authority to support private lending to MSMEs in eastern Congo. Potential beneficiaries are ProCredit and other financial

institutions that are interested in serving priority sectors of agricultural value chains (including agricultural producers, traders, processors, and transporters).

***Subcomponent 2.2: Support development of competitive and inclusive agro-industrial parks based on market demand and economic and financial viability (US\$42 million)***

38. In the context of this Project, the AIP concept is based on a concentrated agro-industrial zone, mainly focused on value addition/agro-processing services of food products, including crops, livestock/dairy products. It is also based on a public-private partnership scheme aiming at facilitating private sector investment in agribusiness by providing (see figure 3 below): (i) access to basic infrastructure like roads, electricity, communications, and water supply; (ii) shared common services and facilities and creation of economies of scale in service provision, including warehouses, cold storage facilities, logistic services, quality control services, waste management, etc.; (iv) improved access to technical support and information and management services; and (v) improved agri-business linkages between and within value-chain actors through effective network between primary producers, agro-processors, traders, retailers and end markets. AIPs provide opportunities for diagonal linkages and strong incentives for agricultural commercialization through market-oriented production for small- and medium-scale primary production (through support systems such as contract farming, warehouse receipts, and so on). They also support agro-industrial development by enhancing access to raw materials, marketing facilities, and other support services, and by enhancing competitiveness for the chain actors through improved efficiency and reduced operational costs.

39. In concurrence with guidelines for responsible investment in agriculture and food systems,<sup>44</sup> the project will seek to encourage socially inclusive and environmentally friendly investments that are mutually beneficial for investors, landowners, local communities, and the region, and to promote procedures that ensure that affected communities have the opportunity and responsibility to: (i) engage in the identification of land appropriate for investment, based on informed choices; (ii) secure sustained and well-defined benefits; (iii) receive fair compensation for the land (including common areas) and natural resources that they make available for investment; (iv) engage in ongoing partnerships with investors and the government; and (v) be able to hold investors and government institutions accountable to their commitments.

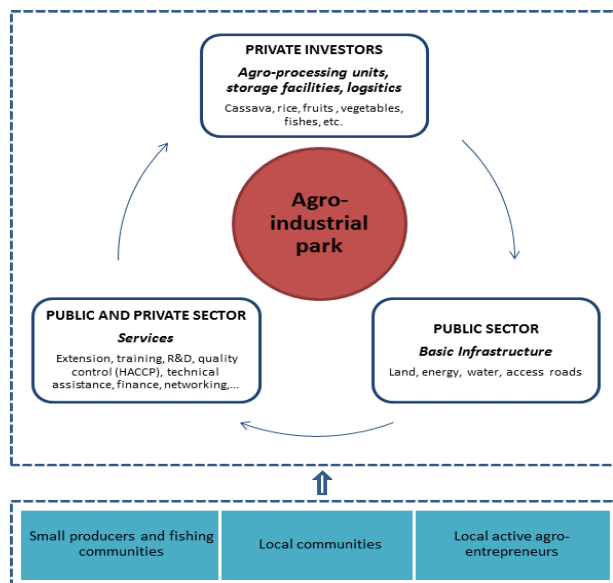
40. The Bukavu-Kalemie corridor provides promising locations and markets for the creation of AIPs. The project identified various sites near the cities of Kalemie (rice, maize, cassava, and fish processing), Uvira (food crops, livestock, and fish), Luvungi (rice, maize, and cassava processing), and Kabare (dairy products and food crop processing) as potential sites for the creation of these parks.

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<sup>44</sup> [http://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS\\_Principles\\_Oct\\_2014\\_EN.pdf](http://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS_Principles_Oct_2014_EN.pdf).



**Figure 3: Basic concept of the agro-industrial park to be applied under the proposed RGLIADP**



41. Based on specific criteria (including size of the land, land ownership; access to major transport modes; safety, security, and conflict; and environmental and social impacts), priority sites for AIPs will be chosen for further analysis. No sites with “fatal flaws” or deal-breaking features<sup>45</sup> will be chosen. AIPs will be designed as part of project implementation and the elaboration of the Master Plan for the Bukavu-Kalemie corridor. Special attention will be given to conflict risk assessments that will ensure that the project can do no harm to social dynamics.

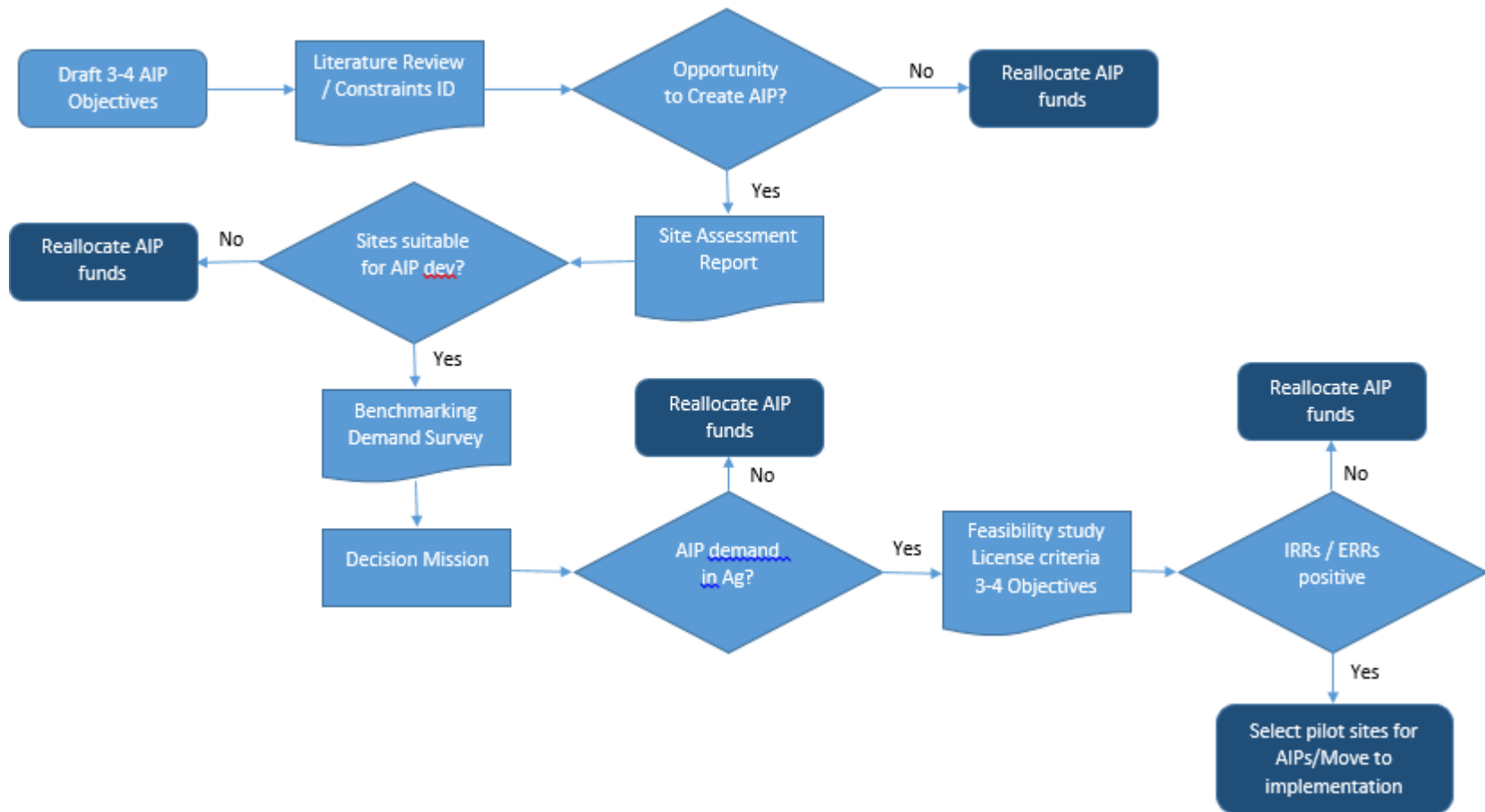
42. The project will take a sequential approach (illustrated in Figure 4) to agro-industrial park diagnostics with a series of go/no-go decision points and the possibility for reallocating the funds for AIPs if the analysis shows a lack of demand or feasibility for the AIPs. The first step will be to conduct a site assessment to determine which sites identified for AIP development, if any, are suitable for AIP development, and rank them according to their potential feasibility. If no sites are found to be suitable, either the project can ask the government to propose alternative sites, or the AIP component can be discontinued. In the event that this component is discontinued, a reallocation of the budget foreseen for the AIPs in this project will be considered upon agreement between the Government of DRC and the World Bank, following established procedures governing project restructuring. This reallocation could potentially include parts of Component 1 that are seen at that point in time to be working well.

43. The next step will be to conduct a benchmarking exercise on the top two or three sites to determine the competitiveness of each site. A demand survey will also be done. If the demand survey demonstrates insufficient demand for the AIP, funds can be reallocated to other project components, as mentioned. If demand is deemed to be sufficient, the diagnostics can proceed to a feasibility study stage (including a Master Plan, economic and financial analysis, and environmental, conflict, and social impact assessments) on the site for which demand is highest.

<sup>45</sup> For example, the site is located on a flood plain or an extensive religious or heritage site.

**Figure 4: Flow chart—decision tree for AIPs**

**Flowchart – Decision Tree for Agro-industrial Parks**



44. Once the feasibility study has been completed, the following additional criteria will be used to make a final decision on whether to develop the AIP: (i) the economic and financial analysis indicates acceptable IRRs and ERRs for the AIP; (ii) social and environmental diagnostics indicate that all adverse impacts can be effectively mitigated, no people are displaced, and no harm is done to inter-community social dynamics; (iii) there is a strategy on how to maximize benefits to smallholders and SMEs; (iv) demand analysis and forecasting demonstrate acceptable uptake of land and buildings; (v) close proximity to actual or proposed off-site infrastructure; and (vi) no outstanding or prohibitive security, safety, or conflict issues are tied to the land.

45. In implementing the first pilot AIP under the project, the government can develop the first few phases of the AIP itself or it can source private developers through competitive tendering to develop the AIP. The government may be required to complete certain off-site, last-mile infrastructure projects for the site to be viable.

### **Component 3: Regional integration (US \$15 million)**

46. Component 3 aims to contribute to more effective regional integration by: (i) creating an enabling environment for regional cooperation and joint natural resource management and (ii) promoting a regional agricultural research for development (R4D) agenda.

#### ***Subcomponent 3.1: Regional cooperation and joint natural resource management (IDA: US\$6 million)***

47. The project will provide targeted support to develop the capacity of sub regional organizations such as CEPGL. CEPGL will be supported through its Agriculture and Food Security division, which has policy objectives are similar to those envisaged in the proposed regional project. Regional activities financed by the project 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, inter alia, the establishment of a web-based exchange platform in coordination with CEPGL.

48. It will be important for DRC to cooperate with its neighbouring countries on a range of activities that are specifically focused on the management of shared watersheds, and which need trans-boundary focus. In the Ruzizi Plain watershed, the following activities are planned: (i) preparation of a shared vision for the management of natural resources of the watershed, building on the Master Plan and other existing planning instruments, such as the planning document for the Ruzizi Plain to be supported by AfDB; (ii) support targeted reforestation and agroforestry activities to protect productive investments, particularly planned irrigation rehabilitation investments along both the Ruzizi River and its tributaries in the Ruzizi Plain, with technical backstopping through technical assistance provided by the World Agroforestry Centre; and (iii) South-South exchanges between DRC and neighbouring countries to share knowledge and build capacity in natural resource management and adaptation to climate change.

***Subcomponent 3.2: Regional agricultural research for development and promotion of other strategic value chains (IDA: US\$9 million)***

49. *Regional agricultural research.* This subcomponent aims at strengthening the alignment of national priorities with regional priorities within the national agricultural research system. This aim will be met by strengthening the capacity of the national agriculture research system (INERA), while building on the existing cooperation with CGIAR centers such as IITA, IFPRI, Africa Rice, IRRI, ILRI, and World Agroforestry Centre (ICRAF). The project will: (i) strengthen the capacity of INERA; (ii) promote scientific exchanges between the countries in the Great Lakes region on specific themes that transcend national boundaries, including land conflict management, seed and fertilizer policy, climate-smart agriculture, and evidence-based nutrition interventions. The focus will be on key agricultural R4D priorities, making the best use of scarce resources to achieve meaningful progress toward increasing agricultural growth and tackling extreme poverty. Regional integration is an effective way for DRC to increase the efficiency of its investments in agricultural R4D. A concentration of resources invested in specialized national research institutions can deliver a number of benefits. First, duplication will be reduced by allowing national research entities to undertake work that otherwise would be done in parallel within multiple national research institutes. Second, it will help attain economies of scale by concentrating resources within a single institute to achieve a critical mass. Third, it will increase the returns derived from research by facilitating dissemination of improved technologies across national borders, thereby significantly increasing the number of beneficiaries. Fourth, it will mitigate the isolation that frequently occurs in small, fragmented research institutions by creating effective mechanisms for facilitating knowledge exchange and technology transfer.

50. Specifically, the project will support: (i) targeted regional agricultural research, including research on nutrition; (ii) upgrading of research infrastructure, including physical infrastructure and equipment for two research facilities (the final selection of facilities will be based on an institutional analysis and needs assessment); (iii) improving knowledge and information systems, including on knowledge on nutrition; and (iv) developing human capital through the provision of scientific training at the postgraduate level and upgrading skills through short courses or targeted training.

51. *Support for targeted regional agricultural research activities.* The focus will be on the identification and validation of profitable and sustainable production techniques and technologies, including appropriate varieties and seed systems, soil fertility management practices, dairy breeds, veterinary services, crop-livestock integration, and climate-smart and nutrition-sensitive agricultural practices.

52. *Upgrading research infrastructure.* Research facilities will be upgraded to provide reliable and timely diagnostic services for soil, crops, and livestock to support the targeted value chains. Two research facilities will be outfitted with analytical equipment, greenhouses, and incubation chambers that enable them to meet an acceptable standard of research on soil fertility, microbiology, molecular biology, and plant virology. The final selection of these facilities will be based on an institutional analysis and needs assessment. It is envisaged to include the soil laboratory at INERA-Mulungu and the veterinary laboratory of the Centre de Recherche en Sciences Naturelles<sup>46</sup> at Lwiro in South Kivu. ISO/IEC 17025 accreditation

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<sup>46</sup> Research Center for Natural Sciences.

will be sought for these facilities for all basic testing. Quality management systems certified to ISO 9001, ISO 14001, OHSAS 18001, or equivalent standards will be implemented.

53. *Improving knowledge and information systems.* Access to appropriate information and the use of locally generated knowledge to shape existing and new technologies adapted to local situations will help the beneficiaries to improve their production efficiency and to generate more income. The project will support regional efforts to improve knowledge and information sharing through more effective use of communication methods, media channels, and processes. A detailed situation analysis will be carried out to identify specific activities to be supported. Consequently, the project will focus its support on:

- (i) The identification of information and communication technology (ICT) tools and network linkages best suited for different stakeholders, and the use of ICTs for education and learning.
- (ii) Networks and partnerships among ICT practitioners with links to R&D stakeholders, focusing on regional ICT interventions that enable research, extension, the private sector, and smallholder farmers to make informed decisions, and also on innovative ICT applications to improve commercialization and market access among smallholders.
- (iii) Building capacity in the use of ICTs in agricultural information systems.
- (iv) Developing and maintaining regional ICT information systems relevant for different stakeholders (institutions, frontline extension staff, farmers, and others), and building the capacity of CEPGL and ALT to serve as platforms for information sharing.
- (v) Promoting knowledge sharing and providing regional training focusing on ICT tools and network linkages best suited for specific national and regional needs.
- (vi) The need for updated and reliable quantitative data on nutrition in the project areas is significant. The project will complement current initiatives by other international partners (for example, surveys by UNICEF and the World Food Program) to strengthening the capacities of national actors to collect key nutrition information and disseminate it to relevant decision makers.

54. *Human capital development.* Numbers of agricultural researchers have grown rapidly in DRC in recent years, mostly of researchers trained to the BSc or MSc levels. Women remain seriously underrepresented. DRC had an estimated 424 full-time equivalent researchers in 2011, but the share of PhDs was extremely low (13 percent). This limited capacity adversely affects the overall quality of agricultural R&D, which remains very weak.<sup>47</sup>

55. The project will finance the development of a critical mass of human resources for managing and implementing market-responsive research in priority value chains. As noted, the human capital base for national agricultural R4D will be strengthened through scientific training at the postgraduate level and by upgrading skills in short courses and targeted training. INERA, with technical backstopping from the CGIAR, will develop a plan for graduate training, including numbers of specialists, disciplines, timing, and institutions to provide the training. The actual selection will be done by the university that will admit the candidate(s), based on the university's own selection criteria. Successful MSc and PhD

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<sup>47</sup> ASTI (Agricultural Science and Technology Indicators) / INERA (2013).

candidates will need to commit to work for the national institute in the area of their training for a period agreed with their respective governments. In terms of developing capacity for effective nutrition education and promotion, the project will also support pilot testing of newly developed tools on basic knowledge of nutrition for extension service and front line workers (ENACT course).

56. The activities will focus on: (i) strengthening degree-related PhD and MSc projects, co-supervised by national universities, universities in the North (only for PhD projects), and CGIAR scientists; (ii) engaging national agricultural research system staff in non-degree-related training, including training workshops on prioritized topics and a small grants research scheme in relation to the priority value chains; (iii) training in activities to support nutrition-sensitive agriculture within the priority value chains; (iv) promoting scientific exchanges between the countries in the sub-region on specific themes, including land conflict management, seed and fertilizer policy, and climate-smart agriculture, and (v) the development of regional food composition tables and food-based dietary guidelines.

57. *Technical Assistance to promote fisheries and aquaculture, and other value chains.* This Technical Assistance will prepare strategic interventions in priority value chains, including the fisheries and aquaculture subsector. Given its strong track record and proven institutional capacity in fisheries and aquaculture, FAO will provide the technical backstopping to develop: (i) an action plan to reduce post-harvest losses in the Lake Tanganyika area (estimated at 20,000 tons, with a market value of US\$5 million per annum) arising from inappropriate processing methods; (ii) an action plan to develop inland aquaculture and reduce the pressure on Lake Tanganyika; (iii) an implementable strategy to strengthen the role of communities in better managing fisheries resources through co-management and community surveillance; (iv) specialized studies to strengthen education and research institutions in the fields of data collection, fisheries, and limnological research; (v) an analysis of the role of fish in nutrition and the impact of limited access to animal protein on children's health; (vi) an analysis of the quality of locally processed and imported fish products, with an emphasis on preventing health hazards; and (vii) an assessment of pollution and other destructive impacts of human and naturally induced processes in the Lake Tanganyika Basin and the potential for mitigating them.

#### **Component 4: Support Services and Project Management (IDA: US\$17 million)**

##### ***Subcomponent 4.1: Capacity strengthening of public and private technical services (IDA: US\$7 million)***

58. Subcomponent 4.1 aims at providing results-based capacity building, on a needs basis, to national and provincial technical services to enable them to play a direct role in the implementation of the project in a coordinated way. This subcomponent supports relevant departments in Ministries of Agriculture and Rural Development, agricultural statistics, technical services of provincial offices, land department offices, research institutes, the seed certification service, and investment promotion agencies. Through this subcomponent, the project 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) TA and equipment to the designated technical services to enable them to better carry out their functions. In addition, the project will finance training and provide technical support to NGOs (in particular to producer organizations such as

FOPAC-SK) and private actors at the provincial and local level to enable them to better participate in implementing and monitoring project activities.

59. To lay the basis for a sustainable seed industry, the project will enable SENASEM to perform its essential functions of controlling and certifying seed production. The project will support additional activities to strengthen the seed system, including building/rehabilitating premises to house the Provincial Ministry of Agriculture and SENASEM, establishing a seed laboratory to test physical and sanitary characteristics of seed, establishing SENASEM staff outposts in selected project areas to facilitate the inspection of sites where seed is multiplied and registered seed is produced. The project will also support training for seed inspectors and laboratory technicians.

60. For nutrition, the project will support the development of multisectoral operational plans in collaboration with agricultural extension services. It will provide technical support to NGOs and private actors at the provincial and local level to enable them to participate more effectively in implementing and monitoring project activities.

***Subcomponent 4.2: Project management, monitoring, and evaluation (IDA: US\$10 million)***

61. Subcomponent 4.2 includes activities related to project management, coordination, communication, monitoring, and evaluation at the national and provincial levels. It will ensure the payment of staff costs, the recruitment of short-term consultants for specific activities, and the payment of operational costs to supervise the implementation of project activities. This subcomponent also supports the M&E system proposed for this project, which will monitor progress in implementation (inputs and outputs) as well as progress in achieving project outcomes. Under this subcomponent, the project will also ensure proper monitoring of environmental and social safeguard policies.

***Subcomponent 4.3: Contingency Emergency Response (IDA: US\$0.0 million)***

62. **This component will provide immediate response in the event of an eligible crisis or emergency.** This zero-budget subcomponent establishes a disaster recovery contingency fund that could be triggered in the event of a natural or human induced disaster through formal declaration of a national or regional state of emergency, and upon a formal request from the Government of DRC. In such cases, funds from the unallocated expenditure category or from other project components would be reallocated to finance emergency response expenditures to meet agricultural crises and emergency needs.

## Budget: DRC

Democratic Republic of Congo  
Regional Great Lakes Integrated Agriculture Development Project (RGLIADP)  
**Components Project Cost Summary**

	(FC Million)			(USD Million)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
<b>A. Agriculture value chain development</b>								
1. Enhancing productivity and market linkages of selected value chains	19,868	7,204	27,072	22.23	7.77	30.00	27	20
2. Development of critical infrastructure for improved market access	20,659	11,406	32,065	25.70	12.30	38.00	36	24
<b>Subtotal Agriculture value chain development</b>	40,527	18,610	59,137	47.93	20.07	68.00	31	45
<b>B. Support for the development of the private agro-industrial sector</b>								
1. Improving the business environment and access to finance services	1,483	5,933	7,416	1.60	6.40	8.00	80	6
2. Development of competitive and inclusive agro-industrial parks	26,327	12,607	38,934	28.40	13.60	42.00	32	29
<b>Subtotal Support for the development of the private agro-industrial sector</b>	27,810	18,540	46,350	30.00	20.00	50.00	40	35
<b>C. Regional integration</b>								
1. Regional cooperation and joint natural resources management	3,504	1,687	5,191	4.18	1.82	6.00	33	4
2. Regional agricultural research for development and promotion of other strategic value chains	4,962	2,566	7,528	6.23	2.77	9.00	34	6
<b>Subtotal Regional integration</b>	8,466	4,253	12,719	10.41	4.59	15.00	33	10
<b>D. Support services and project management</b>								
1. Capacity building of public services and private actors	2,680	1,523	4,203	5.36	1.64	7.00	36	3
2. Project coordination and monitoring and evaluation	6,941	1,499	8,441	8.38	1.62	10.00	18	6
3. Contingency emergency response	0	-	0	0.00	-	0.00	-	-
<b>Subtotal Support services and project management</b>	9,621	3,023	12,643	13.74	3.26	17.00	24	10
E. Project preparation advance	1,854	-	1,854	2.00	-	2.00	-	1
<b>Total BASELINE COSTS</b>	88,278	44,426	132,704	100.08	47.92	148.00	33	100
Physical Contingencies	2,094	1,022	3,116	0.40	1.10	1.50	33	2
Price Contingencies	4,280	1,456	5,736	1.63	1.57	3.20	25	4
<b>Total PROJECT COSTS</b>	94,652	46,903	141,555	102.11	50.60	152.70	33	107



## **Annex 3: Implementation and Institutional Arrangements**

### **DEMOCRATIC REPUBLIC OF CONGO: RGLIADP**

#### **A. Implementation Arrangements**

1. The implementation arrangements have been designed to take into account: (i) the regional dimension of the project; (ii) the project area's challenging environment; and (iii) the weak capacity and coordination failures within the Congolese public sector, which need to be addressed for the project to achieve its development impact. Overall, the institutional arrangements include a national steering committee under the Ministry in charge of Agriculture, a national project coordination unit, a provincial implementing entity for each province, and implementing partners to deliver needed services (Figure 5). The institutional arrangements also include a "light" regional facilitation mechanism to ensure regional coordination through existing institutions such as CEPGL.

##### *Regional coordination mechanism*

2. The project will establish a "light" regional facilitation mechanism to ensure policy coordination and ease project implementation. The DRC is active in regional forums and is a member of COMESA, whose 17<sup>th</sup> meeting of the Council of Ministers focused on strengthening exchanges. CEPGL members consist of DRC, Burundi, and Rwanda, and DRC is a member of ASARECA. The project will work with CEPGL and ALT to strengthen their capacity to play an important facilitating role, supporting regional knowledge sharing and monitoring activities to ensure cross-fertilization with neighboring countries, and experiential learning from activities implemented in DRC. 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 Great Lakes region. CEPGL and ALT facilitating roles will be considered under Component 3. An arrangement will be set up to ensure facilitation for regional coordination through existing institutions such as CEPGL and ALT.

##### *Project coordination and administration mechanisms*

3. To address the issue of weak capacity in national institutions, the following arrangements will be established (illustrated in Figure 6):

- (i) **Anchor institution.** The national coordination of the project will be anchored within the Permanent Secretary of the Ministry in charge of Agriculture.
- (ii) **Steering Committee.** A steering committee will be established to provide strategic guidance to the project and ensure that the intended objectives are achieved. It will also ensure coordination of the involved departments. A formal decree establishing the Steering Committee signed by the responsible national authority needs to be published prior to project effectiveness. The committee will be chaired by the Minister in charge of Agriculture or his/her representative and composed of representatives of relevant ministries, governors of targeted provinces, and representatives of the private sector and civil society (including producer organizations) to voice their concerns and contribute to good governance.

- (iii) **Project Coordination Unit (PCU).** The NPCU will be set up at the Ministry in charge of Agriculture (MinAgri) at the national level with the Permanent Secretariat. It is agreed that the PARRSA Project Coordination Unit existing within the Ministry of Agriculture will have fiduciary responsibilities (financial management and procurement) and ensure overall coordination of the project. This unit has the requisite qualifications and experience and has been performing satisfactorily during the past five years. The NPCU will be responsible for overall coordination of project implementation and performance monitoring, as well as overall coordination with the World Bank and other partners. The project activities will be performed through project implementation units (PIUs) to be established in each province.
- (iv) **Provincial Monitoring Committee (PMC).** Given the country's size, a provincial monitoring committee will be set up for each province (South Kivu and Tanganyika), to be chaired by the representative of the provincial governor. This committee will monitor execution of project activities and provide strategic advice in compliance with provincial development strategy and the PDO of the proposed project.
- (v) **Project Implementation Units.** Two Project Implementation Units (PIUs) will be established in Bukavu (PIU-SK) and Kalemie (PIU-TG) for each of the two provinces, South Kivu and Tanganyika. These PIUs will ensure sound project implementation through experienced technical partners under the supervision of the provincial Ministry in charge of Agriculture for each province. Since Tanganyika is a new province and will be in a transitional period, the supervision will be done from the NPCU until a provincial government is in place. These units will be responsible for the direct supervision of project activities subcontracted to experienced (consortia of) service providers, selected based on their comparative advantages and proven experience.
- (vi) **Lead Service Providers.** For each value chain, a lead implementing partner has been identified and will work with local NGOs and institutions already active in these value chains within the project zone. For infrastructure activities, a delegated management contract will be concluded with UNOPS.<sup>48</sup> Public technical service providers (SENASA, DVDA,<sup>49</sup> IPAPEL,<sup>50</sup> and so on) will be involved through specific Memorandums of Understanding (MoUs) depending on their comparative advantage.
- (vii) **CGIAR support.** The envisaged CGIAR support (IITA, IFPRI, IRRI, AfricaRice, and World Agroforestry Centre) will be coordinated by IITA and is structured around 10 Clusters of Activities that are fully aligned to the overall project structure (that is, with its four components and various subcomponents). The national research institution, INERA, will also benefit from technical and scientific support from this consortium to improve its capacity.
- (viii) **CARGs (Agricultural and Rural Management Councils)**<sup>51</sup> are decentralized bodies operating at the territory level. One-third of the council members come from the public technical services, and two-thirds are representatives of producer organizations, the private sector, and civil society. The CARGs will

<sup>48</sup> United Nations Office for Project Services.

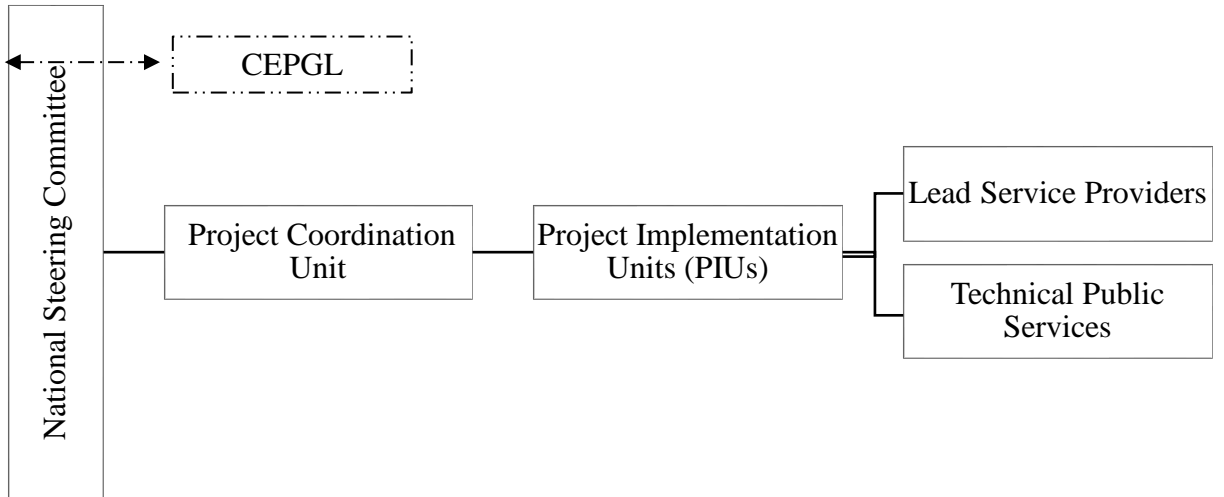
<sup>49</sup> Direction des Voies de Desserte Agricole (Directorate of Agricultural Access Roads).

<sup>50</sup> Inspecteur Provincial à l'Agriculture, Pêche et Elevage (Provincial Inspectorate of Agriculture, Fisheries and Livestock).

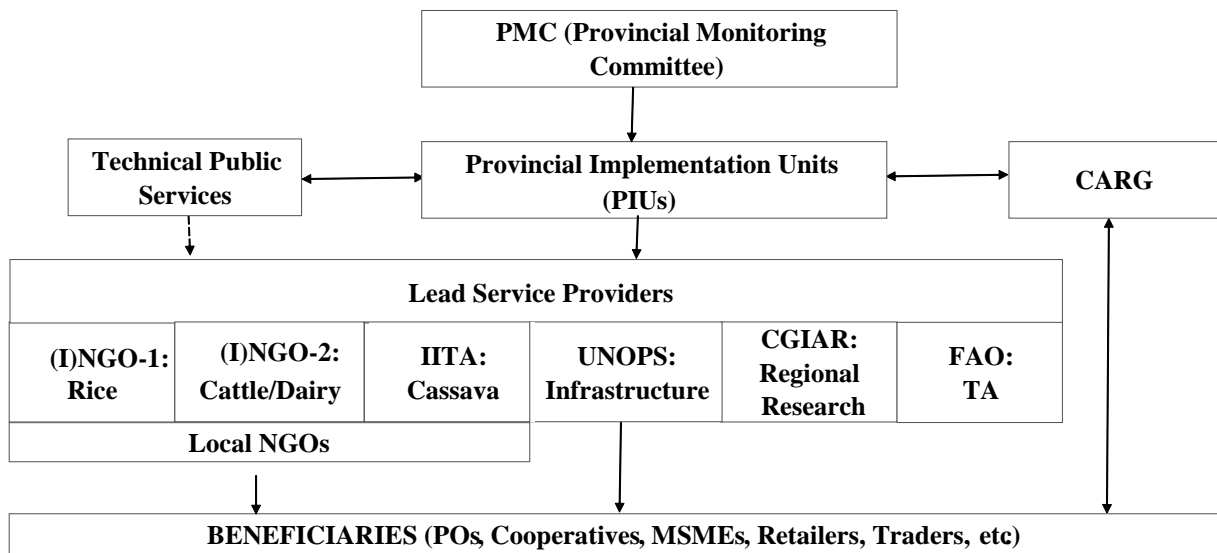
<sup>51</sup> CARG: Conseil Agricole et Rural de Gestion.

be an interface between beneficiaries and project implementing entities, playing a role in monitoring activities and making sure that complaints are treated in an appropriate manner.

**Figure 5: Overall implementation arrangements for the proposed RGLIADP**



**Figure 6: Implementation arrangements at the provincial level for the proposed RGLIADP**



***Overall implementation of activities***

4. Activities will be implemented under the overall coordination of the PCU and direct supervision of the PIUs, in close collaboration with the provincial Ministries in charge of Agriculture. Experienced (consortia of) service providers, selected based on their comparative advantages and proven experience, will be contracted to implement Clusters of Activities. The performance of each organization was further assessed during appraisal to

gauge its experience and knowledge of local realities to reduce project management complexity and ensure results on the ground. To avoid complexity, one service provider will be selected for each selected value chain. The PIM will clarify roles and responsibilities of the implementing entities.

5. A detailed PIM, including a project implementation plan, administrative, procurement, financial and accounting, and M&E procedures, will be prepared and finalized before effectiveness. The manual will spell out the mandates, responsibilities, governance structure, and relationship between each implementing unit. The PIM will take into account an assessment of the capacity of the institutions to be involved and their coordination mechanisms. The partnership agreements between the government and the main implementing partners will also be spelled out. The manual will also clarify the Terms of Reference (ToRs) of each structure that will be involved in project implementation. Semi-annual performance review meetings will be organized with all relevant stakeholders, given the need for close monitoring. Annual performance review meetings will be organized for the overall project. The project will be implemented in different stages related to the sequencing of activities (see Table 9). Implementation of the second stage will be contingent upon a thorough review of the results of the first stage. Depending on the difficulties encountered related to the complexity of the proposed project, the team would consider revisiting the scope of the project even before the Mid-Term Review to ensure that the PDO is achieved. A more comprehensive Mid-Term Review will be held based on project implementation performance approximately 30 months after credit effectiveness to assess progress and adopt corrective measures aimed at improving implementation and reaching project objectives.

### *Implementation of components*

6. **Component 1.** Specific selected value chains will be subcontracted to existing lead service providers that have ongoing activities in the project's targeted areas. These partners are: (i) the international NGOs active in the rice and livestock/dairy value chains in the region and (ii) IITA for the cassava value chain. Technical and scientific backstopping will be provided by the CGIAR centers (IITA, IFPRI, AfricaRice, ILRI, IRRI, and World Agroforestry Centre) in partnership with INERA. IITA will be the lead technical partner of the CGIAR centers.

7. The infrastructure subcomponent (rural roads, irrigation schemes, rehabilitation works) will be coordinated by the PCU/PIU, working closely with the relevant national and provincial departments. These works will be subcontracted to UNOPS, a UN agency with a proven record in designing and supervising civil works through the PARRSA project in the former Equateur province. UNOPS will be contracted as a Delegated Management Operator and will be responsible for hiring and supervising specialized firms and engineering companies to rehabilitate the road network and the targeted irrigation schemes. UNOPS will work closely with DVDA at the Ministry of Rural Development, the responsible entity for the national rural roads program with a presence at provincial level. A similar arrangement is being implemented successfully through the PARRSA project.

8. **Component 2.** Component 2 (development of the private agro-industrial sector, including the AIPs), will be implemented in a sequential approach. An international consulting firm will be hired to conduct (successively) a site assessment exercise, a demand survey, and feasibility study; then it will develop a Master Plan for the AIP (if the site is suitable) and, if the outcome of this effort is positive, prepare for site development. This

sequenced approach will be conducted according to a decision tree (a set of agreed criteria and go/no-go processes for each stage).

9. **Component 3.** As part of the regional Great Lakes initiative, this project is being implemented to foster regional integration between neighboring countries such as Burundi, Rwanda, and Tanzania. The project will work with existing regional institutions to facilitate regional linkages and encourage the Great Lakes countries to join a larger regional program as the situation evolves. Component 3 will be implemented in coordination with subregional organizations such as CEPGL, ALT, and also using the international and regional agricultural research institutions to strengthen regional agricultural R4D and knowledge exchange. As for the development of additional value chains, including aquaculture/fisheries, targeted TA will be conducted with FAO, building on its recognized international expertise and experience, to inform potential future investments.

10. As noted, it is envisaged to use CEPGL to support regional knowledge sharing and monitoring activities to ensure cross-fertilization, concentration of activities, and experiential learning from activities implemented in the different countries under different programs. CEPGL would be the most appropriate regional institution to play this role, given its more limited membership and its established mandate to enhance regional economic integration across the Great Lakes region.

## **B. Financial Management**

11. As part of preparation for the proposed RGLIAD (P143307), a financial management assessment of the implementing units within the Ministries of Agriculture at the central level in Kinshasa and the decentralized level in Bukavu was carried out. The objective of the assessment was to determine whether those units have adequate financial management arrangements to ensure that: (i) project funds will be used for the intended purposes in an efficient and economical way; (ii) project financial reports will be prepared in an accurate, reliable, and timely manner; and (iii) the project's assets will be safeguarded. The financial management assessment was carried out in accordance with the Financial Management Practices Manual issued by the Financial Management Sector Board on November 3, 2005 (revised March 2010). In this regard, a review of the existing financial management system (budgeting, staffing, financial accounting, financial reporting, funds flow and disbursements, internal and external audit arrangements) at the PARRSA unit in Kinshasa as well as the Provincial Ministry of Agriculture in South Kivu was carried out.

### ***Assessment of the PARRSA unit***

12. At the *central level*, the PARRSA coordinating unit within the Ministry of Agriculture has been identified as the unit that will be in charge of the overall coordination of administrative and fiduciary aspects of the proposed project, tracking and reporting results, procurement of selective activities, financial management reporting, and ensuring smooth flow of funds to different agencies and institutions for activities funded under the project. The PARRSA unit was established with support from the World Bank and has successfully implemented the Agriculture Rehabilitation and Recovery Support Project (P092724). The unit is already in charge of managing the new Designated Account for the Project Preparation Advances. The assessment of this unit reveals the following strengths. The fiduciary staff of this unit consists of six people (Coordinator, Procurement Specialist, Financial Management Expert, two Accountants, and an Internal Auditor) with good

experience in managing donor-funded projects, including World Bank operations. The project Manual of Procedures as well as project software (TOM2PRO) are in place and functioning, and fiduciary staff have been trained in the use of these tools. Additionally, the unit maintains proper books of accounts for the projects under implementation.

13. Going forward, to mitigate fiduciary risk to the extent possible, the following actions will need to be implemented: (i) recruitment of two accountants to work exclusively on this new project in Bukavu and in Kalemie; (ii) training of the newly recruited accountants in Kinshasa in World Bank fiduciary procedures; (iii) updating the Manual of Procedures to take into consideration the specific features of this new project; (iii) configuring the existing version of the accounting software (TOM2PRO) acquired under the Project Preparation Advance to reflect the specific features of the new project; and (iv) adapting the IFR format for the project's quarterly reports.

14. At the *decentralized level*, a subaccount will be opened at a reliable commercial bank, acceptable to the World Bank to hold and manage project activities in Bukavu Province. This account could be located at the same bank where the Designated Account is opened. In addition, one advance account will be opened in Kalemie Province. The two accounts will be managed in accordance with the disbursement procedures outlined in the PIM.

#### ***Assessment of Provincial Agriculture Ministry in Bukavu***

15. A preliminary assessment was conducted to determine whether the provincial Ministry of Agriculture meets the minimum requirements to manage the project subaccount. The provincial ministry was found to have a weak financial management system; the staff consists entirely of civil servants without experience in implementing donor-funded programs. There is no manual of procedures or a project accounting software. The provincial coordinating team including the accountants both in Bukavu and in Kalemie will be in place before effectiveness and trained in the use of World Bank procedures.

#### ***Country issues***

16. DRC is gradually emerging from a decade of political instability, conflict, and mismanagement of public finances. Recently, structural reforms have been launched in the areas of economic governance, public expenditure management, and transparency. The ongoing PRCG (P104041) as well as the PRCGAP (P117382)<sup>52</sup> are helping the country to strengthen capacity in public and private administration and tackle corruption and mismanagement. In addition, the new Public Financial Management Program (PFMAP) (P145747) will strengthen the public financial management system at the central level and in some provinces.

17. Although there is cause for cautious optimism—significant improvements have been made in public financial management in recent years—it will take a long time for these reforms to yield substantial improvements in the management of public funds. Given the fragility of the fiduciary environment, the government has requested that a ring-fenced approach should be used to implement the proposed project, similar to the other Bank-financed projects in the country.

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<sup>52</sup> PRCG: *Projet de Renforcement des Capacités en Gouvernance* (Project for Enhancing Governance Capacity); PRCGAP: *Projet de Renforcement des Capacités de Gestion des Fonctions de l'Administration Publique et Rajeunissement* (Establishing Capacity for Core Public Management, Public Service Reform and Rejuvenation Project).

### *Risk assessment and mitigation*

18. The risk identification worksheet (Table 3) summarizes the significant risks identified for the proposed project, along with the corresponding mitigating measures. *The overall residual FM risk rating is deemed Substantial.*

**Table 3: Risks identified for the proposed RGLIADP and corresponding mitigation measures**

<b>Risk</b>	<b>Risk rating</b>	<b>Risk-mitigating measures incorporated into the project design</b>	<b>Conditions for effectiveness (Y/N)</b>	<b>Residual risk</b>
<b>Inherent risk</b>	<b>MI</b>			<b>MI</b>
<b>Country level</b> DRC is still a high-risk country from the fiduciary perspective. The Public Expenditure Review (PER), Public Expenditure Management and Financial Accountability (PEMFA), and Use of Country Systems (UCS) reports outlined public financial management (PFM) weaknesses at the central and decentralized government levels, as well as at the level of sector ministries, in term of governance and management of public funds.	H	The government is committed to a reform program that includes strengthening PFM, and ongoing IDA-financed projects are being implemented—PRCG (P104041) and PRCGAP (P117382). In addition, the PFMAP (P145747) will strengthen the PFM system at the central level and in some provinces, but it is unlikely to yield results quickly enough to impact the proposed project.  Use of IDA FM procedures is required for this project.	N	H
<b>Entity level</b> The assessment of some ministries during the PEFA and UCS, including the Ministry of Agriculture, revealed internal control weaknesses and a weak fiduciary environment.	S	The existing fiduciary team at all levels will be used; a critical measure for mitigating the fiduciary risk of this project is to rely on a dedicated FM team at all levels (to be recruited) and on use of World Bank fiduciary procedures.	N	S
<b>Project level</b> This project will be implemented across different levels (national, provincial) and will face coordination challenges. Ensuring that funds are used for the intended purposes will be an implementation bottleneck. The implementing entities at the decentralized level for the provincial Agriculture ministry do not have experience in implementing World Bank-financed projects. On the other hand, the implementation entity at the central level has successfully implemented World Bank projects.	S	Training in fiduciary procedures will be conducted for all FM staff throughout the life of the project.  Clear ToRs for each staff will be agreed and included in the Manual of Procedures. Ex-ante and ex-post control will be strengthened by ensuring clear separation of duties. The scope of external auditors and FM supervision will include review of expenditures incurred at all levels.	N	S
<b>Control risk</b>	<b>S</b>			<b>S</b>
<b>Budgeting</b> The budgeting process is complex. Inputs are required from all implementing entities, which could result in delays in the preparation of the budget; weak budgetary execution and control; the risk that the institutions to which funds are sent do not spend all their funds in a timely fashion and do not report on what they have spent.	S	The project Financial Procedures Manual will define the arrangements for budget preparation and execution as well as annual detailed disbursement forecasts. IFRs will provide information on budgetary control and analysis of variances between actual and budgeted expenditure. The Annual Work Plans and Budgets will be prepared by the Ministry of Agriculture at the decentralized level and consolidated at the central level by the PARRSA unit.	N	M
<b>Accounting</b> : This project will use the accounting	S	The project will adopt the OHADA accounting system. Accounting procedures will be	N	S

Risk	Risk rating	Risk-mitigating measures incorporated into the project design	Conditions for effectiveness (Y/N)	Residual risk
software as for all other World Bank financed projects in DRC. The existing SOFTWARE TOM2PRO might be adapted and used to accommodate financial information this project. The risks will be the following: (i) poor policies and procedures, delay in keeping reliable and auditable accounting records; (ii) risk of increasing the workload, leading to some delays in submitting the reports.		documented in the Manual of Procedures; the FM functions will be carried out by qualified consultants (individuals); additional accountant to be recruited on competitive basis where need be; and the existing software will be customized to take into consideration the needs of this new project. Fiduciary staff at all levels will be trained in the use of the software.		
<b>Internal control</b> Insufficient safeguards and controls may result in misuse of funds and affect the implementation of the project. The existing Manual of Procedures for PARRSA does not reflect the specific details of this new project.	S	Strengthen the internal audit units to ensure that the project complies with fiduciary procedures. Revise and adapt a FM Procedures Manual and provide training in the use of the manual by all fiduciary staff recruited for this purpose. It is expected that they will be in place before project effectiveness.	N	M
<b>Funds flow</b> Risks include: (i) risk of misused funds; (ii) delays in disbursements of funds to implementing entities and beneficiaries; (iii) delay of replenishment of subaccount and advance accounts at the decentralized level.	S	The risk-mitigating measures are: (i) payment requests will be approved by the FM Manager prior to disbursement of funds; (ii) ToRs of the External Auditors will include physical verification of goods, services acquired; (iii) the steering committee will approve the consolidated annual budget of the project annually, which would facilitate transfer of funds to Bukavu and Kalemie and mitigate the risks.	N	S
<b>Financial reporting</b> Inaccurate and delayed submission of IFRs to the World Bank due to delays from implementing entities.	S	The risk-mitigating measures are: (i) a computerized accounting system and the IFR format which will be customized to the requirements of the project; (ii) IFR and financial statement formats and content were discussed and agreed upon during project negotiations; an IFR template will be included in the FM Manual of Procedures.	N	M
<b>Auditing</b> The national audit capacity is weak and not reliable. A qualified external auditor will be appointed to audit all projects, including the World Bank-financed project. The risks are that the submission of audit reports is delayed; a qualified opinion is issued; the implementation of audit report recommendations is delayed; and a lack of coordination between internal auditors for the selection of the external auditor and acceptance of audit reports.	S	The risk-mitigating measures are: (i) the project's institutional arrangements allow for the appointment of adequate external auditors, and the ToRs will include field visits and physical verification of project assets; (ii) annual auditing will be carried during the project implementation period in accordance with International Standards of Auditing; and (iii) auditor's recommendations will be monitored during project supervision missions.	N	S
<b>Governance and accountability</b> Possibility of circumventing the internal control system with colluding practices such as bribes, abuse of administrative positions, misprocurement, and similar behaviors is a critical issue.	M	The risk-mitigating measures are: (i) the ToRs of the external auditor will contain a specific chapter on corruption auditing; (ii) the FM Manual of Procedures will be approved within three (3) months after effectiveness; (iii) robust FM arrangements (qualified individual FM staff recruited under ToRs acceptable to IDA, quarterly IFRs, including budget execution and monitoring); (iv) measures to improve	N	M



Risk	Risk rating	Risk-mitigating measures incorporated into the project design	Conditions for effectiveness (Y/N)	Residual risk
		transparency are built into the project design, such as providing information on the project's status to the public and encouraging participation of civil society and other stakeholders.		
<b>OVERALL FM RISK</b>	<b>S</b>			<b>S</b>

### *Implementing entity*

19. The existing fiduciary team within the Ministry of Agriculture in Kinshasa will have overall responsibility for coordination of administrative and fiduciary aspects of the project, tracking and reporting results, financial management reporting, and ensuring smooth flow of funds to different agencies and institutions at the central level. At the decentralized levels in Bukavu and Kalemie, two accountants will be recruited and appointed to the respective Ministry of Agriculture. The World Bank will have the right to review the resumés of the identified experts and provide comments before formal appointment; the overall selection should be finalized before effectiveness. The fiduciary team will be trained in the use of World Bank procedures as well as the project's accounting software.

### *Planning and budgeting*

20. The Annual Work Plan (AWP) and budget, along with the disbursement forecast, will be consolidated at the provincial level into a single document by the Agriculture Ministry; the consolidated document will then be submitted to the central level at the PARRSA unit for consolidation. The AWP will then be approved by the National Steering Committee and submitted to the World Bank no later than December 31 of the year proceeding the year the work plan should be implemented.

21. The implementing entities will monitor execution of the AWP with the accounting software in accordance with the budgeting procedures specified in the Manual of Procedures and report on variances along with the quarterly IFR. The budgeting system needs to forecast for each fiscal year the origin and use of funds under the project. Only budgeted expenditures will be committed and incurred to ensure the resources are used within the agreed upon allocations and for the intended purposes. The quarterly IFRs will be used to monitor the execution of the AWP.

### *Information and accounting system*

22. DRC is now a member of the Organisation pour l'Harmonisation en Afrique du Droit des Affaires (OHADA) and adheres to its accounting standards (Syscohada), in line with the International Accounting Standards. Hence, Syscohada accounting standards will apply to this project. Integrated financial and accounting systems are already in place and being used by the fiduciary unit at the central level, and they will be deployed at the decentralized level. The project code and chart of accounts will be developed to meet the specific needs of the project and documented in the Manual of Procedures. These software programs should be upgraded for the proposed project. The upgraded system is expected to include a general diary, auxiliary diaries, general balance, cash record, and fixed assets record. The chart of

accounts should be prepared according to the wording used in tables for sources and uses of funds for the accepted eligible expenditures as agreed during negotiations for the project. These diaries and records should be maintained with the support of financial management software that should be operational no later than three (3) months after project effectiveness. Newly recruited fiduciary staff should also be trained in the use of the software by the same date.

23. *Internal control and financial, administrative, and accounting manual.* The existing implementing unit at the central level has a financial management manual that details key internal control procedures from transaction initiation to review, approval recording, and reporting. The manual has to be updated within three (3) months after effectiveness to take into consideration any specific concerns relating to this project. There should be clear separation of duties within the financial management units. The ToRs of the internal auditor will be revisited to take into account the specific needs of this project; the internal auditors will report directly to the Coordinator and the Steering Committee.

24. *Funds flow and disbursement arrangements.* Two Designated Accounts will be opened in a commercial bank on terms and conditions acceptable to IDA under the fiduciary responsibility of PARRSA. The ceiling of the Designated Account will be set at US\$5.7 million equivalent to four (4) months expenditures forecast and will become effective upon credit effectiveness. These Designated Accounts will be used to finance all eligible project expenditures under the different components. Payments will be made in accordance with the provisions of the PIM (namely, two authorized signatures will be required for any payment). PARRSA will open one subaccount in Bukavu and one advance account in Kalemie; these accounts will be used to pay all expenditures at the decentralized level. Replenishment of these accounts will be done at least once a month by the project upon submission of acceptable expenditures recap along with supporting documents. Payments from the subaccount will be subject to arrangements acceptable to the World Bank. The Designated Account will be replenished against withdrawal applications supported by Statements of Expenditures (SOEs) and other documents evidencing eligible expenditures as specified in the Disbursement Letter. All supporting documents should be retained at the project and readily accessible for review by periodic IDA implementation support missions and external auditors.

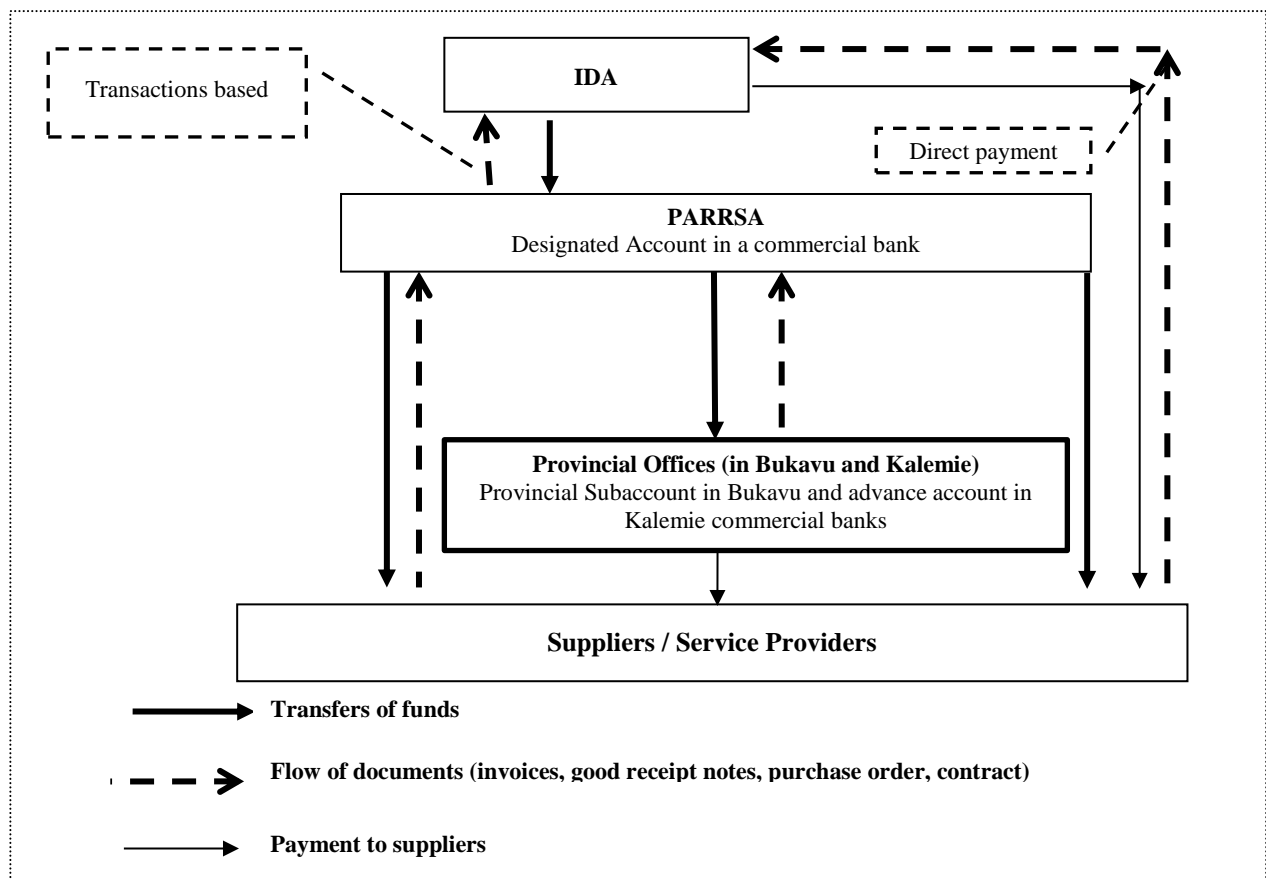
25. *Disbursement arrangements and method.* Upon Credit effectiveness, transaction-based disbursements will be used during the first year of the project implementation. Thereafter, the option to disburse against submission of quarterly unaudited IFRs (also known as the report-based disbursements) could be considered, subject to the quality and timeliness of the IFRs submitted to the World Bank and the overall financial management performance as assessed in due course. If report-based disbursement is used, the Designated Account ceiling will be equal to the cash forecast for two quarters provided in the quarterly unaudited IFR. The option of disbursing funds through direct payments to suppliers/contractors for eligible expenditures will also be available for payments equivalent to twenty percent (20%) or more of the Designated Account 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.

26. For the IRM contingent component, the existing flexibility in OP 12.00 Disbursement will be used to provide significant advances to provide the necessary liquidity for a fast

response. The level of the advance needed for the IRM component would be established independently of any existing advances for the project components and recorded in the revised Disbursement Letter. The advances for the IRM component would be deposited in separate Designated Account established for the purpose.

27. Figure 7 is the funds flow diagram for the Designated Account.

**Figure 7: Funds flows diagram for the proposed RGLIADP**



28. *Disbursement of funds to other service providers and suppliers.* The PARRSA unit will make disbursements to service providers and suppliers of goods and services in accordance with the payment modalities, as specified in the respective contracts/conventions as well as the procedures described in the PIM (Administrative, Accounting, and Financial Manual). In addition to these supporting documents, the PARRSA unit will consider the findings of the internal auditor while approving the payments. In particular, the PARRSA unit, with the support of its internal auditor, will reserve the right to verify the expenditures ex-post, and refunds might be requested for non-respect of contractual clauses. Misappropriated activities could result in the suspension of financing for a given entity.

29. *Disbursements by category.* Table 4 sets out the expenditure categories to be financed out of the Grant. This table takes into account the prevailing Country Financing Parameter for DRC in setting out the financing levels. In accordance with World Bank standard procurement requirements, contracts will continue to be approved “all taxes included” for local expenditures. The project will, however, claim invoiced amounts, excluding taxes. The

government will take appropriate steps to cover the tax portion of contracts signed by the project with contractors and suppliers of goods and services.

**Table 4: Disbursement categories for the proposed RGLIADP**

Category	IDA / Amount of the Financing Allocated (expressed in US\$)	Percentage of Expenditures to be Financed [(inclusive of Taxes)]
Goods, Works, Consultant Services, non-Consultant services, Operating Costs, and Training under the Project except for Sub-Component 1.1		100%
Goods, Works, Consultant Services, non-Consultant services, Operating Costs, and Training under Sub-Component 1.1 of the Project except for Matching Grants		92%
Matching Grant under Subcomponent 1.1. of the Project		100% of Amount disbursed
Contingent Emergency Response under Component/ Subcomponent... of the Project		100%
Project Preparation Advance		Amount payable pursuant to Section 2.07 of the General Conditions
<b>TOTAL AMOUNT</b>		100%

### ***Financial reporting***

30. For the proposed project, the fiduciary team in the PARRSA unit will be required to prepare financial monitoring reports as defined in the Financing Agreement for the project. These reports will be submitted to IDA on a quarterly basis within the 45 days following the end of each quarter. These reports will include: (i) a table with sources and use of funds; (ii) a table with use of funds per activity; (iii) a table regarding use of funds according to procurement methods and thresholds; and (iv) a table with monitoring and evaluation or physical advance of activities. Financial statements will be prepared for each financial exercise covering in general twelve (12) months. Interim financial statements will also be prepared taking into account: (i) certified status of expenditures; and (ii) an analysis of Designated Account management. The format of such reports was discussed and agreed upon during project negotiations.

31. It is expected that one single monitoring report will be prepared which will consolidate all levels of reporting before submission to the World Bank.

### ***External audit***

32. The financial statements for the proposed project should be the object of an external audit prepared by an independent firm, which should be selected according to procedures acceptable to the World Bank and other donors. Audit reports produced by this auditor should be submitted to IDA six (6) months after the end of each fiscal year before June 30. These reports should include: (i) a report on the financial statements; (ii) a report on the special accounts and certified statements of expenditure; and (iii) a report on the internal control procedures or letter of recommendation. The ToRs for the selection of the external auditor should be prepared by the financial management team of PARRSA and submitted to IDA for comments.

### ***Governance and accountability***

33. The risk of fraud and corruption within project activities is high, given the political environment in the country. In the context of the project, the effective implementation of the fiduciary mitigation measures should contribute to strengthening the control environment. Other strong entry points for addressing governance and corruption issues during the project's implementation are the Steering Committee (with appropriate representation and oversight by the key actors involved), as well as transparency in project implementation and the dissemination of project information to stakeholders and the public.

### ***Financial Management Action Plan***

34. A Financial Management Action Plan (Table 5) was developed for the proposed project to mitigate the overall financial management risks.

**Table 5: Financial Management Action Plan for the proposed RGLIADP**

<b>Issue</b>	<b>Remedial action recommended</b>	<b>Responsible entity</b>	<b>Completion date</b>	<b>FM conditions</b>
FM staffing	Recruitment of an additional account at the PARRSA PCU and of 2 accountants at Provincial Agriculture Ministries (one each in Bukavu and Kalemie).	PARRSA PCU	By board date	N
Accounting software	Upgrade the existing software and train the fiduciary staff in the use of that software.		Three months after effectiveness	N
FM and accounting Manual of Procedures	Update the project Manual of Procedures, which will include FM and accounting aspects.		Three months after effectiveness	N
Reporting (IFRs)	Agree on the format and content of unaudited IFRs		May 05, 2016 (negotiations, done)	N
External auditing	Select external auditor.		Six months after effectiveness	N

### ***Implementation Support Plan***

35. Supervision missions will be conducted over the project's lifetime. The project will be supervised on a risk-based approach. Supervision will comprise, among other activities, the review of audit reports and IFRs and advice to the task team on all financial management issues. Based on the current risk (which is assessed to be substantial), the project will be supervised at least twice a year, and the frequency of supervision missions may be adjusted as the need arises. The Implementation Status and Results report will include a financial management rating of the project. An implementation support mission will be carried out before effectiveness to ensure the project readiness. To the extent possible, mixed on-site supervision missions will be undertaken with procurement monitoring and evaluation, and disbursement colleagues.

36. Based on the outcome of the financial management risk assessment, an implementation support plan is proposed; it is shown in Table 6. The objectives of the implementation support plan are to ensure that the project maintains satisfactory financial management systems throughout its life.

**Table 6: Implementation Support Plan for the proposed RGLIADP**

FM Activity	Frequency
<b>Desk reviews</b>	
Interim financial reports 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
<b>On-site visits</b>	
Review of overall operation of the FM system	Annually (Implementation Support Mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed
Transaction reviews (if needed)	As needed
<b>Capacity building support</b>	
FM training sessions by World Bank FM team	Before project start and thereafter as needed

*List of conditionality and covenants*

37. There are no financial management effectiveness conditions:

*Other financial management standard covenants*

Other financial management standard covenants include the following:

- IFRs will be prepared on a quarterly basis and, submitted to the Bank 45 days after each quarter.
- The annual detailed work program and budget, including disbursement forecasts, will be prepared each year by end of December.
- The overall financial management system will be maintained operational during the project's entire life, in accordance with sound accounting practices.

*Conclusions of the financial management assessment*

38. The overall residual financial management risk at preparation is considered **Substantial**. The proposed financial management arrangements for this project are considered adequate to meet the World Bank's minimum fiduciary requirements under OP/BP10.00.

**C. Procurement***Applicable guidelines*

39. Procurement for the proposed project will be carried out in accordance with the World Bank guidelines, including: (i) "Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits," dated January 2011 (revised July 2014); (ii) "Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers," dated January 2011 (revised July 2014); (iii) "Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants," dated October 2006 (revised January 2011); and (iv) the provisions stipulated in the Financing Agreement. The various items under different expenditure categories are described in general terms in the sections that follow. For each contract to be financed by the Credit

(IDA) and Grant (TF), the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Recipient and the World Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

### ***Reference to the National Procurement Regulatory Framework***

40. For all contracts awarded through National Competitive Bidding (NCB), the World Bank may authorize the use of the national institutions and regulations that comprise the law, including its texts of application, the institutions set up for the control and regulation of procurement, and the institutions responsible for implementing procurement activities. The NCB procedures currently in force in DRC deviate slightly from the World Bank Procurement Guidelines on NCB procedures for procurement of Works, Goods, and Services (other than consultants services); for that reason, they have been reviewed and appropriate modifications have been proposed to assure economy, efficiency, transparency, and broad consistency with the provisions included in Section I and paragraphs 3.3 and 3.4 of the World Bank Procurement Guidelines (refer to the paragraph below).

### ***Requirements for National Competitive Bidding***

41. The procedures to be followed for NCB shall be those set forth in the Recipient's Procurement Code of April 27, 2010, as revised from time to time in a manner deemed acceptable to the Association, subject, however, to the modifications described in the following paragraphs required for compliance with the Procurement Guidelines:

- (i) *Standard Bidding Documents*: All standard bidding documents to be used for the project under NCB shall be found acceptable to the World Bank before their use during the implementation of the project.
- (ii) *Eligibility*: Eligibility of bidders and acceptability of their goods and services shall not be based on their nationality and/or their origin; and association with a national firm shall not be a condition for participation in a bidding process. Therefore, except for the ineligibility situations referred to in paragraphs 1.10(a) (i) and 1.10(a) (ii) of the Procurement Guidelines, the eligibility of bidders must be based solely on their qualification, experience, and capacity to carry out the contract related to the specific bidding process.
- (iii) *Advertising and Bid Preparation Time*: Bidding opportunities shall be advertised at least in a national newspaper of wide circulation and on the website of the Recipient's Procurement Regulator (Autorité de Régulation des Marchés Publics), and bidders should be given at least 30 days from the date of invitation to bid or the date of availability of the bidding documents, whichever is later.
- (iv) *Criteria for Qualification of Bidders*: Qualification criteria shall only concern the bidder's capability and resources to perform the contract, taking into account objective and measurable factors. Such criteria for qualification of bidders shall be clearly specified in the bidding documents.
- (v) *Evaluation and Contract Award*: A contract shall be awarded to the substantially responsive and lowest evaluated bidder provided that such bidder

meets the qualification criteria specified in the bidding documents. No scoring system shall be allowed for the evaluation of bids, and no “blanket” limitation to the number of lots, which can be awarded to a bidder, shall apply. The criteria for bid evaluation and the contract award conditions shall be clearly specified in the bidding documents;

- (vi) *Preferences:* No preference shall be given to domestic/regional bidders; to domestically/regionally manufactured goods; and to bidders forming a joint venture with a national firm, proposing national subcontractors or carrying out economic activities in the territory of the Recipient.
- (vii) *Publication of Contract Award:* Information on all contract awards shall be published in at least a national newspaper of wide circulation or in the Recipient’s Procurement Regulator (Autorité de Régulation des Marchés Publics) website;
- (viii) *Fraud and Corruption:* In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the World Bank’s policy to sanction firms or individuals found to have engaged in fraud and corruption as set forth in the Procurement Guidelines.
- (ix) *Inspection and Audit Rights:* In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the World Bank’s policy with respect to inspection and audit of accounts, records, and other documents relating to the bid submission and contract performance.
- (x) *Requirement for Administrative Documents and/or Tax Clearance Certificate:* The bidding documents shall not require foreign bidders to produce any administrative or tax-related certificates prior to confirmation of awarding a contract.
- (xi) *Modifications of a Signed Contract:* Any change in the contract amount which, singly or combined with all previous changes, increases the original contract amount by fifteen (15) percent or more must be done through an amendment to the signed contract instead of signing a new contract.

***Items to be procured and methods to be used***

42. *Advertisement.* General Procurement Notice (GPN), Specific Procurement Notices (SPN), Requests for Expression of Interest, and results of the evaluation and contracts award should be published in accordance with advertising provisions in the following guidelines: "Guidelines: Procurement under IBRD Loans and IDA Credits," dated January 2011 (revised July 2014); and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers," dated January 2011 (July 2014). For this purpose, the Implementing Unit of the Agriculture Rehabilitation and Recovery Support Project will prepare and submit to the World Bank a General Procurement Notice (GPN). Specific Procurement Notice (SPN) for all goods, non-consulting services, and works to be procured under International Competitive Bidding (ICB) and Requests for Expressions of Interests for all consulting services costing the equivalent of US\$200,000.00 and above will be published in “Dg Market,” on the World Bank’s external website, and in the national press, in addition to other media with wide circulation. All other specific procurement notices and other requests for expression of interest shall be published at a minimum in the national press with wide circulation.



43. *Civil works.* Civil works procured under this project will include mainly the establishment of centers for processing food products; rehabilitation of village plantations; strengthening infrastructure and storage facilities for producer organizations; rehabilitation and maintenance of rural road networks to facilitate access to markets and transport of agriculture inputs and products; supply of electricity and water to common service platforms; physical infrastructures (fencing, earthworks, road construction, river protection, surface water drainage, and construction of administrative buildings). Depending on the size of the contracts, procurement will be done either under ICB using World Bank procurement rules that include the related SBD or under NCB using National Standard Bidding Documents agreed with or satisfactory to the World Bank. Works of small value may be procured under shopping procedures. Direct contracting may be used where necessary if agreed in the Procurement Plan in accordance with the provisions of paragraphs 3.7–3.8 of the Procurement Guidelines. The prequalification processes for all contracts for works to be procured using ICB are subject to prior review by the World Bank.

44. *Procurement of goods, works, and non-consultancy services.* Goods procured under this project will include mainly office equipment (computer, scanner, server, printer, and copier); vehicles; and equipment for quality control in agricultural products. Depending on the size of the contracts, procurement will be done either under ICB using World Bank procurement rules that include the related SBD or under NCB using National Standard Bidding Documents agreed with or satisfactory to the World Bank. Goods of small value may be procured under shopping procedures. Direct contracting may be used where necessary if agreed in the Procurement Plan in accordance with the provisions of paragraphs 3.7–3.8 of the Procurement Guidelines.

45. Procurements of goods such as vehicles or motorcycles could use the agency of the United Nations<sup>53</sup> (UNOPS) in accordance with the provisions of paragraph 3.10 of the Procurement Guidelines.

46. *CDD approach for implementing activities financed under matching grants.* Goods, works, and services to be procured under the matching grant mechanism will be carried out in accordance to the procedures laid out in the PIM, found acceptable to the World Bank before effectiveness.

47. *Selection and employment of consultants.* Consultancy services required for the project would cover advisory services, consultancies, and technical assistance and studies. The selection method for consultant services will be Quality and Cost Based Selection (QCBS) method whenever possible. Contracts for specialized assignments estimated to cost less than US\$200,000 equivalent may be contracted through Consultant Qualification (CQ). The following additional methods may be used where appropriate: Quality Based Selection (QBS), Selection under a Fixed Budget (FB), and Least-Cost Selection (LCS).

- Short lists of consultants for services estimated to cost less than the equivalent of US\$100,000 per contract for ordinary services and US\$200,000 for design and contract supervision may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. However, if foreign firms express interest, they will not be excluded from consideration.

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<sup>53</sup> An agency of the United Nations refers to the United Nations departments, specialized agencies, and regional offices (for instance, the PanAmerican Health Organization, PAHO), funds, and programs. The Borrower shall submit to the World Bank for its no objection a full justification and the draft form of agreement with the UN agency.

- Single Source Selection (SSS) may be employed with prior approval of the World Bank and will be in accordance with paragraphs 3.8–3.11 of the Consultant Guidelines.
- All services of Individual Consultants (IC) will be procured under contracts in accordance with the provisions of paragraphs 5.1–5.6 of the Guidelines.

48. Operating Costs shall consist of operations and maintenance costs for vehicles, office supplies, communication charges, equipment, utility charges, travel expenses, per diem and travel costs, training costs, and workshops and seminars and associated costs, among others. Operating costs will not include salaries of civil servants.

49. Training and workshops will be based on capacity needs assessments. Detailed training plans and workshops activities will be developed during project implementation and included in the project’s annual work plan and budget for World Bank review and approval.

### ***Implementation arrangements for procurement and capacity assessment***

50. The guiding principles for the implementation of procurement for the proposed project are as follows. The PARRSA Project Coordination Unit (PCU) existing within the Ministry of Agriculture will have fiduciary responsibilities (financial management and procurement) in implementing this project, supplemented by two new PIUs that will be created in the Provincial Ministries of Agriculture in South Kivu and Tanganyika. The assessment made in the Provincial Ministry of Agriculture in South Kivu in November 2015 concluded that this Ministry at the provincial level has no experience in implementing World Bank projects. On the other hand, the procurement unit set up within PARRSA comprises four procurement specialists, one based in the PCU (Kinshasa) and three others in the field offices (Lisala, Gemena, Gbadolite). The PCU is performing and supervising the procurement activities of PARRSA, and based on its satisfactory performance to date, it has the qualifications and experience needed to handle the procurement activities for the proposed project. The procurement capacity of team members who will be involved in implementing this project at the provincial level should be strengthened through training in the use of World Bank procurement procedures. Therefore, a procurement specialist will be recruited through a competitive process to manage procurement activities in this project for each new PIU (South Kivu and Tanganyika). The procurement specialists to be recruited will be the mentor of the CGPMP in each province after its creation. A specific PIM will be prepared for this project.

### ***Assessments of the risks and related mitigation measures***

51. Procurement for the proposed project is likely to involve the following risks:

- The Ministry of Agriculture at the provincial level (South Kivu and Tanganyika) has no capacity and experience, and the two new units to be set up by the project will need to be strengthened and trained.
- CGPMPs are not yet set up within the two provinces. After they are established and become operational, these CGPMPs will be associated with executing procurement activities. They will need to be trained in methods for handling procurement in projects funded by the World Bank.

- The administrative system as it operates in practice creates opportunities for informal interference in the procurement process by senior officials—creating opportunities for waste, mismanagement, corruption, collusion, and fraud.
- Government officials likely to be involved in project procurement through tender committees and the national control system to ensure that rules are respected and who handle complaints from bidders may not be familiar with procurement procedures under World Bank guidelines and rules.
- Control and regulation mechanisms under the provisions of the Country procurement law and the procedures for the law’s application could delay the procurement process if mandatory reviews are required.

52. The overall unmitigated risk for procurement is **Substantial**. Corrective measures that have been agreed upon to mitigate that risk are summarized in Table 7. *The prevailing risk can be improved to Moderate, provided the corrective measures are implemented.*

**Table 7: Action plan for mitigating procurement risks under the proposed RGLIADP**

Ref.	Task	Responsibility	Due date
1	Recruit a procurement specialist for each province who will handle procurement activities and will support, train, and coach the two CGPMPs after their creation.	PARRSA	3 months after effectiveness
2	Prepare a specific PIM that will include procurement methods to be used in the project along with their step-by-step explanation, as well as the standard and sample documents to be used for each method.	PARRSA	Before effectiveness
3	Organize a launch workshop involving all stakeholders, including civil society.	PARRSA	3 months after effectiveness
4	Provide procurement training to the staff involved in procurement activities.	PARRSA	On regular basis
5	Identify the root cause of procurement delays at the national level and propose appropriate solutions (global).	PARRSA	On regular basis
6	Apply a “one-strike” policy to all contractors and consultants, and any case of complicity in corruption, collusion, nepotism, and/or fraud will lead to dismissal, disqualification from all further project activities, and prosecution.	PARRSA	Permanently

***Frequency of procurement supervision***

53. In addition to the prior procurement review carried out by the World Bank, the procurement specialist recommends at least three missions for the first year and two missions per year for the following years to provide support to the implementation of procurement activities. This support will include not only the organization and functioning of the procurement unit but also the implementation of procurement activities listed in the Procurement Plan. One post review of procurement activities will be also carried out every year. As agreed with, the government, contracts will be published on the web. Annual compliance verification monitoring will also be carried out by an independent consultant and will aim to:

- (i) Verify that the procurement and contracting procedures and processes followed for the project were in accordance with the Financing Agreement.

- (ii) Verify technical compliance, physical completion, and price competitiveness of each contract in the selected representative sample.
- (iii) Review and comment on contract administration and management issues as dealt with by the implementation entity.
- (iv) Review capacity of the implementation entity in handling procurement efficiently.
- (v) Identify improvements in the procurement process in light of any identified deficiencies.

#### ***Contract management and expenditure reports***

54. As part of the Procurement Management Reports, the PARRSA unit will submit contract management and expenditure information in quarterly reports to the World Bank for the project. The Procurement Management Report will consist of information on procurement of goods, works, and consultants' services and compliance with agreed procurement methods. The report will compare procurement performance against the plan agreed at negotiations and as appropriately updated at the end of each quarter. The report will also provide any information on complaints by bidders, unsatisfactory performance by contractors, and information on contractual disputes, if any. These contract management reports will also provide details on payments under each contract, and will use these to ensure that no contract over-payments are made or no payments are made to sanctioned entities.

#### ***Procurement Plan***

55. The Borrower has prepared a Procurement Plan for the first 18 months of project implementation, to provide the basis for the procurement methods. This plan was agreed between the Borrower and the World Bank during negotiations. It will also be available in the project database and the World Bank external website. The Procurement Plan will be updated in agreement with the project team annually or as required to reflect the actual project implementation needs.

56. Table 8 indicates the thresholds for procurement methods and prior review.

**Table 8: Thresholds for procurement methods and prior review<sup>54</sup> (See Table of Clearance Thresholds based on risk assessment)  
New Risk-based PS/PAS, RPM, and OPRC Clearance Thresholds**

		PS/PAS Thresholds				RPM Thresholds as a function of Risk				OPRC Thresholds as a function of Risk			
Procurement Category in current PROCYS	Procurement Category in new Matrix	Estimated Contract Cost in US Dollars (millions)				Estimated Contract Cost in US Dollars (millions)				Estimated Contract Cost in US Dollars (millions)			
		High	Substantial	Moderate	Low	High	Substantial	Moderate	Low	High	Substantial	Moderate	Low
(i) Design, Build & Operate Solid Waste facility	Works, Turnkey and S&I of Plant and Equipment	>=5 and <25	>=10 and <25	>=15 and <25	>=20 and <25	>= 25 and <50	>= 25 and <75	>= 25 and <115	>= 25 and <200	>=50	>=75	>=115	>=200
(ii) Output and Performance-based Road Contracts													
(iii) Plant Design, Supply, and Installation													
(iv) Works													
(i) Goods	Goods	>=0.5 and <10	>=1 and <10	>=3 and <10	>=5 and <10	>=10 and <30	>=10 and <50	>=10 and <75	>=10 and <125	>=30	>=50	>=75	>=125
(ii) Health Sector Goods													
(iii) Textbooks													
(i) Information Systems	IT Systems, and Non-Consulting Services	>=0.5 and <5	>=1 and <5	>=3 and <5	>=5 and <5	>=5 and <20	>=5 and <40	>=5 and <60	>=5 and <100	>=20	>=40	>=60	>=100
(ii) Non-Consulting Services													
(iii) Procurement of Management Services													
Consultant Services - Firm	Consultant Services	>=0.2 and 3	>=0.5 and 3	>=1 and 3	>=2 and 3	>=3 and <15	>=3 and <20	>=3 and <30	>=3 and <40	>=15	>=20	>=30	>=40
	All Direct Contracting and Single-Source Contracts with Consultant (Firms)	Works, Turnkey and S&I of ....	>=0.1 and <0.5		>=0.5 and <50	>=0.5 and <75	>=0.5 and <115	>=0.5 and <200	>=50	>=75	>=115	>=200	
		Goods	>=0.1 and <0.5		>=0.5 and <30	>=0.5 and <50	>=0.5 and <75	>=0.5 and <125	>=30	>=50	>=75	>=125	
		IT Systems.....	>=0.1 and <0.5		>=0.5 and <20	>=0.5 and <40	>=0.5 and <60	>=0.5 and <100	>=20	>=40	>=60	>=100	
		Consultants Services.....	>=0.1 and <0.5		>=0.5 and <15	>=0.5 and <20	>=0.5 and <30	>=0.5 and <40	>=15	>=20	>=30	>=40	
Consultant Services-Individual Consultants	Individual Consultants (Single-Source Contracts)		>=0.1 and <0.25		>=0.25 and <15	>=0.25 and <20	>=0.25 and <30	>=0.25 and <40	>=15	>=20	>=30	>=40	
	Individual Consultants (Based on Comparison of CVs)		>=0.2 and 3		>=3 and <15	>=3 and <20	>=3 and <30	>=3 and <40	>=15	>=20	>=30	>=40	

NB: All ToRs and justifications of SSS/Direct contracting regardless of the value of the contract are subject to prior review. Details of the Procurement Arrangements Involving International Competition will be reflected in the PIM, which will be prepared and finalized before effectiveness.

<sup>54</sup> ICB: international competitive bidding; NCB: national competitive bidding; CQ: Consultants qualification; SSS: Single source selection; IC: individual consultant.

**List of Contract Packages to be Procured Following  
ICB and Direct Contracting for works, Good, and No-consultant Services**

1	2	3	4	5	6	7	8
Ref. No.	Contract (Description)	Estimated Cost - US\$ 000	Procurement Method	Prequalification	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Comments
1	Trucks	160	Shopping	No	Post	Nov 16	
2	Equipment for Privat Vets	35	Shopping	No	Post	May17	
3	Motos	110	Shopping	No	Post	Nov 16	
4	Refrigerated Vehicles	100	Shopping	No	Post	Maiy17	
5	Vehicles, TT (4WD)	700	Direct Contract with UNOPS	No	Prior	Nov 16	
6	Fridges and Cool boxes	20	Shopping	No	Post	May17	
7	IT equipment and office furniture	250	NCB	No	Post	Nov 16	
8	Office rehabilitation / construction in Bukavu	400	NCB	No	Prior	June 17	
9	Office rehabilitation / construction in Kalemie	400	NCB	No	Prior	June17	
10	Lab Equipment for seed certification in Bukavu	50	Shopping	No	Post	Dec 17	

**List of Contract Packages to be Procured Following guidelines Selection and Employment of consultants**

1	2	3	4	5	6	7
Ref. No.	Description of Assignment	Estimated Cost - US\$ 000	Selection Method	Review by Bank (Prior / Post)	Expected Proposals Submission Date	Comments
1	Contract with Service Provider for Rice value chain	3000	Direct Contract with VECO	Prior	N/A	
2	Contract with Service Provider for Cassava value chain	8500	Direct Contract with IITA	Prior	N/A	
3	Contract with Service Provider for Milk/Livestock value chain	3000	Direct Contract with VSF	Prior	N/A	
4	Technical Assistance and M&E	500	Direct Contract with FAO	Prior	N/A	
5	National Specialist for Nutrition	120	IC	Post	March 17	
6	National Specialist for knowledge management	120	IC	Post	March 17	
7	Contract with Service Provider for rural roads rehabilitation	17000	Direct Contract with UNOPS	Prior	N/A	
8	Sector study for Agroindustrial Park	450	QCBS	Prior	Feb. 17	
9	Market study for agroindustrial Park	400	QCBS	Prior	Feb. 17	
10	Capacity building for financial institutions	500	QCBS	Prior	July 17	
11	Practical training for MSMEs and cooperatives	500	QCBS	Prior	July 17	
12	Contract with Service Provider to support Fisheries and Aquaculture value chain	1500	Direct Contract with FAO	Prior	March 17	
13	External Auditor	170		Prior	Oct. 16	
14	M&E Specialist	240	IC	Prior	Oct. 16	

15	Financial management Specialist	270	IC	Prior	Oct. 16	
16	Procurement Specialist	240	IC	Prior	Oct. 16	
17	Accountant	180	IC	Prior	Oct. 16	
18	Provincial Coordinators (2)	500	IC	Prior	Oct. 16	
19	Provincial M&E Specialist x 2	400	IC	Prior	Oct. 16	
20	Experts in charge of agronomy and applied research x 2	400	IC	Prior	Oct. 16	
21	Civil works Expert x 2	400	IC	Prior	Oct. 16	
22	Private Sector Development Specialist x 2	400	IC	Prior	Oct. 16	
23	Provincial Procurement Specialist x 2	400	IC	Prior	Oct. 16	
24	Provincial Accountants x 2	360	IC	Prior	Oct.16	



## **D. Environmental and Social (including safeguards)**

### ***Institutional arrangements***

57. The project will follow a flexible design, where investments to be financed will be subjected to a screening process to ensure that technical selection criteria are met and environmental and social issues are adequately identified and addressed. The project is environment category “A” and triggers five environmental policies (OP 4.01, OP 4.04, OP 4.36, OP 4.09, and OP 4.11), two social policies (OP 4.10 and OP 4.12), and one legal policy (OP 7.50).

58. DRC is still struggling with a lack of capacity at the local level among environment ministry staff. For that reason, it is highly recommended to organize capacity-building sessions to strengthen their capacity to ensure adequate screening, monitoring, and management of adverse environmental and social impacts that the proposed project may potentially generate. Each PIU will include an environmental and social specialist with relatively good knowledge of World Bank safeguard policies and procedures. These individuals will be fully responsible for environmental and social issues induced by the project. They will also coordinate and liaise with other relevant ministries and agencies, organize various capacity-building initiatives for government and local staffs, and facilitate regulatory and statutory clearances as required.

### ***Stakeholder consultation***

59. In accordance with World Bank policy, public consultations at the local level were conducted to guide the preparation of safeguard documents—the ESMF, IPMP, IPPF, PF, and RPF. These stakeholder consultations were carried out between November 23 and December 4, 2015 for South Kivu Province in Bukavu, Uvira, and Fizi and on December 1, 2015 in Kalemie for Tanganyika Province. All required safeguard documents have been prepared, and public consultations were carried out on January 25, 2016 in Bukavu (stakeholders from Tanganyika Province and national stakeholders from Kinshasa were also present). The consultation process for the project included a range of formal and informal on-site discussions, interviews, and meetings with participation of stakeholders, including producer organizations, herder organizations, local residents, and representative of municipalities and local civil society organizations. The objective was to obtain inputs on safeguard instruments and to seek views on the approach toward minimizing and mitigating potential negative impacts on people and environmental resources.

60. 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 Environmental and Social Impact Assessments (ESIAs) and ESMPs as needed.

61. As for the IPMP, it is designed to provide guidance to farmers to avoid using pesticides and other chemical products without precautions. In other words, it provides information on authorized products, risks related to water and soil pollution, as well as risks to human health.

62. The Financing Agreement will require each government to prepare and submit to the Bank for prior approval and disclosure any required ESIA and 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 government, through the PIU, will report quarterly to the World Bank on the environmental safeguard measures taken through a specific Safeguard Monitoring Report and a summary of this specific report to be included in the periodic project progress reports.

63. In order to ensure proper implementation of safeguard policies triggered by the project, it is strongly recommended to recruit an environmental specialist who will be fully in charge of environmental and social safeguard aspects. This PIU staff will regularly monitor all safeguard requirements. The Bank's supervision missions will also include environmental and social safeguard specialists to make sure that all safeguard issues are properly addressed.

#### ***Financing Agreement***

64. The Financing Agreement will require the Government of DRC, as part of the annual project work plans agreed with the World Bank, to prepare and submit to the World Bank for prior approval and disclosure, any required ESIA and ESMPs in accordance with the ESMF, an IPP in line with the IPPF, and a RAP pursuant to the RPF if required, for the activities proposed to be carried out under the agreed annual work plan. In addition, prior to commencing any works under the annual work plan, the Government of DRC will take all actions required under the resettlement plan and obtain the World Bank's confirmation that the works may commence. Finally, through its PCU, the Government of DRC will report quarterly to the World Bank on the safeguard measures taken. Implementation measures specified in the safeguard instruments will be incorporated as a covenant in the Legal Agreement for the project.

**Annex 4: Implementation Support Plan**  
**DEMOCRATIC REPUBLIC OF CONGO: RGLIADP**

**A. Strategy and Approach for Implementation Support**

1. A detailed implementation support plan (ISP) has been prepared to ensure timely and effective project implementation. The goal is to ensure that implementation support activities provide effective measures for mitigating the project's key risks and increase the likelihood of achieving the expected results. The ISP focuses on the key implementation risks identified in the risk assessment and describes actions to mitigate them. The ISP also includes a detailed schedule summarizing the planned implementation support missions, collaboration with other partners, and the human and financial resource commitment required by the World Bank to ensure effective and successful implementation of the project.
2. The ISP approach entails close monitoring of the project's technical design and implementation and governance, fiduciary, and safeguard issues. Given the overall design and scope of the project, a multi-disciplinary team comprised of technical specialists, along with fiduciary, environmental, social, and operations specialists will be needed to support the Government of DRC in implementing the project. A number of technical specialists are based in the region, sub-region, and country office. Their presence will facilitate overall implementation and timely communication with the client and the various stakeholders involved in implementation, and it will permit timely follow-up on specific issues and/or areas of concern when needed.
3. The biggest implementation challenge identified is the overall low capacity. To respond to this challenge, and to ensure that project resources are being used effectively to achieve the PDO, the World Bank will undertake biannual implementation support missions. In addition, a Mid-Term Review of the project is envisaged. The first implementation support mission will take place as soon as possible after effectiveness to provide start-up support through direct and timely feedback on the quality of implementation plans and their likely soundness and acceptability. The first mission is therefore expected to include all team members (namely, technical, environmental, social, fiduciary, and operational specialists). Subsequent implementation support will focus on verification/M&E skills and technical implementation expertise, as per the actual needs specified in the ISP. Another important challenge will be to coordinate the actions agreed in the ISP with operational activities on the ground, ensuring that information flows effectively and on a timely basis between all the project implementing entities. A critical component of effective implementation support by the World Bank will therefore be its coordination and timing, aligned with key stakeholders and points in the planning and implementation of project activities. An overview of the sequencing of activities in relation to project components is given in Table 9.

**Table 9: Sequencing of activities in implementation of the proposed RGLIADP**

Types of Activities	Stakeholders Involved in Implementation	Implementation Stage 1 (Expected Results)	Implementation Stage 2 (Expected Results)
<b>Component 1: Agricultural Value Chains Development</b>			
<i>Subcomponent 1.1: Enhancing productivity and market linkages of selected value chains</i>			
Support to rice and cassava value chains: (i) Organization/Strengthening of producer/farmer association (ii) Capacity building of producer organizations (iii) Provision of inputs to farmers (iv) Access to finance (v) Nutrition-sensitive activities	<ul style="list-style-type: none"> <li>Ministry of Agriculture (MinAgri)</li> <li>(I)NGOs</li> <li>IITA</li> <li>INERA</li> <li>SENASAEM</li> <li>Existing farmer organizations (e.g., FOPAC-SK), including women's associations</li> <li>Banks, MFIs</li> </ul> <p><i>–Rehabilitation of SENASEM building and lab in Bukavu and staff training and basic equipment</i></p> <p><i>–Rehabilitation of INERA station in Mulungu</i></p> <p><i>–Collaborate with banks, MFIs to ease access to finance for POs and MSMEs</i></p>	<ul style="list-style-type: none"> <li>Contracts with (I)NGOs and IITA under preparation and signed</li> <li>Existing capacity within the two institutions is assessed and areas that need to be strengthened are identified</li> <li>MoUs (<i>Protocoles d'Accord</i>) between the Project and SENASEM and INERA, currently under discussion, are signed <i>–Similar partnerships were agreed with these two institutions as part of the ongoing Bank-financed PARRSA and Western Growth Poles projects</i></li> <li>Capacity building of the two institutions (training, equipment, office space, transportation...)</li> <li>Existing farmer groups are organized</li> </ul>	<ul style="list-style-type: none"> <li>INERA and SENASEM are fully operational</li> <li>Technical skills of seed multipliers (<i>agri-multiplicateurs</i>) and farmer groups are strengthened</li> <li>Certified planting materials, other relevant inputs, and agricultural extension services are available to farmer groups</li> <li>Access to finance improved for POs and MSMEs</li> </ul>
Development of livestock/dairy value chain: (vi) Organization of small scale producers in POs of about 30 members that are concentrated along market roads (vii) Building a network of CAHWs and private veterinary officers (viii) Vaccination campaigns of cows, goats, and poultry (ix) Support to improve animal nutrition through promotion of innovation in forage production	<ul style="list-style-type: none"> <li>MinAgri</li> <li>Public Vet. services</li> <li>(I)NGOs, small-scale dairy producers</li> <li>Private entrepreneurs</li> <li>Cooperatives</li> <li>Existing farmer organizations (e.g., FOPAC-SK), including women's associations</li> </ul>	<ul style="list-style-type: none"> <li>Partnership arrangements with VSF under preparation and signed</li> <li>Zoning of targeted areas and POs formed</li> <li>CAHWs selected and trained</li> </ul>	<ul style="list-style-type: none"> <li>POs organized</li> <li>CAHWs equipped and operational</li> <li>Vaccination campaign implemented</li> <li></li> </ul>
<i>Subcomponent 1.2: Development of infrastructure to support the value chains</i>			
(i) Rehabilitation of rural roads and maintenance (ii) Rehabilitation of irrigation schemes	<ul style="list-style-type: none"> <li>MinAgri through the DVDA</li> <li>UNOPS</li> <li>CLER (Local Committees for Road Maintenance)</li> </ul>	<ul style="list-style-type: none"> <li>Delegated Management Contract with UNOPS signed</li> <li>Technical studies completed as part of ongoing Master Plan</li> <li>Bidding process launched and builder selected</li> <li>MoU signed with the DVDA for the organization and training of CLER, which will be used for rural road maintenance</li> <li>Capacity of DVDA assessed and areas that need capacity building are identified</li> <li>Subcontracts with NGOs and CLER for HIMO (<i>Travaux à Haute Intensité de Main-d'œuvre</i>) and rural road maintenance signed</li> </ul> <p><i>–A similar agreement is being successfully implemented as part of the ongoing Bank-financed PARRSA project</i></p>	<ul style="list-style-type: none"> <li>Construction of rural roads underway</li> <li>DVDA is strengthened and is providing training to CLER</li> <li>System of roads maintenance in place</li> </ul>

Types of Activities	Stakeholders Involved in Implementation	Implementation Stage 1 (Expected Results)	Implementation Stage 2 (Expected Results)
<b>Component 2: Support for the Development of the Private Agro-industrial Sector</b>			
<b>Subcomponent 2.1: Improving the business environment and access to financial services</b>			
(i) Sector scans (ii) Design and implementation of investment climate reforms to facilitate investments in targeted value chains (iii) Design and implementation of a targeted investor outreach campaign (iv) Financial market study (v) TA to financial institutions and MSMEs	<ul style="list-style-type: none"> <li>• WBG team</li> <li>• Private consulting firm</li> <li>• Ministry of Planning, ANAPI</li> <li>• Ministry of Finance and Central Bank</li> <li>• MSMEs and cooperatives operating along value chains</li> </ul>	<ul style="list-style-type: none"> <li>• Sector scans completed</li> <li>• A detailed implementation plan for investment climate reforms is prepared</li> <li>• A targeted investment promotion campaign is designed</li> <li>• A financial market study is carried out to identify market needs</li> </ul>	<ul style="list-style-type: none"> <li>• Investment climate reforms implemented</li> <li>• Investment promotion campaign carried out</li> <li>• TA is provided to financial institutions to serve the agriculture sector</li> <li>• Capacity building is provided to MSMEs</li> <li>• Ongoing access to finance; solutions are targeted to project beneficiaries</li> </ul>
<b>Subcomponent 2.2. Support development of competitive and inclusive agro-industrial parks</b>			
(i) Site selection (ii) Demand survey (iii) Decision mission (iv) Feasibility study, master planning	<ul style="list-style-type: none"> <li>• WBG team</li> <li>• GoDRC (Prime Minister office, MinAgri)</li> <li>• Consulting firm</li> </ul>	<p>(i) <i>Agro-Industrial Park:</i></p> <ul style="list-style-type: none"> <li>• List of criteria available agreed</li> <li>• Suitable site determined</li> <li>• Private sector interest verified</li> <li>• International consulting firm recruited</li> </ul> <p>(ii) <i>Multiservice Platforms:</i></p> <ul style="list-style-type: none"> <li>• Sites identified</li> <li>• Feasibility studies completed</li> <li>• Management of platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Private sector demand</li> <li>• Feasibility study</li> <li>• Best Practice Master Plan</li> <li>• Financial and Economic Analysis</li> <li>• ESIA's</li> <li>• At least one platform developed and operational</li> </ul>
<b>Component 3: Regional integration</b>			
<b>Subcomponent 3.1: Regional cooperation and joint natural resource management</b>			
(i) Regional planning, monitoring and evaluation (ii) Regional exchange of information, knowledge and technologies	<ul style="list-style-type: none"> <li>• GoDRC (MinAgri)</li> <li>• CEPGL</li> <li>• Partners (WBG, AfDB...)</li> </ul>	<ul style="list-style-type: none"> <li>• Master plan for Ruzizi available</li> <li>• CEPGL needs assessment available</li> </ul>	<ul style="list-style-type: none"> <li>• Common investments to foster regional integration identified</li> </ul>
<b>Subcomponent 3.2: Regional agricultural research for development and promotion of other strategic value chains</b>			
(i) Regional agricultural research for development (ii) TA to promote additional value chains (including aquaculture /fisheries)	<ul style="list-style-type: none"> <li>• GoDRC</li> <li>• CGIAR (IITA, IRRI...)</li> <li>• FAO</li> <li>• INERA</li> <li>• Universities</li> </ul>	<ul style="list-style-type: none"> <li>• Needs assessment for INERA available</li> <li>• Key R4D relevant themes for regional integration identified</li> <li>• TA partnership with FAO concluded</li> </ul>	<ul style="list-style-type: none"> <li>• INERA station in Mulungu upgraded</li> <li>• Capacity building for researchers through targeted scientific training</li> <li>• Results for at least 2 additional value chains available</li> </ul>

### **Technical**

4. A number of potential risks in the project design have been identified, including potential challenges associated with implementing a matching grant scheme and developing the AIPs. Rigorous technical vetting of matching grant proposals, the establishment of clear guidelines and criteria for selecting proposals to fund, and close attention to implementation of the grants will help to increase the success of the grant scheme. The World Bank team will ensure that the appropriate mix of technical skills and experience is available to support and guide implementation. The process for developing the AIPs (described comprehensively in Annex 7) relies on a clear, detailed sequence of analysis and consultation to produce evidence of the feasibility of prospective sites.

### *Governance*

5. Governance of the project will be monitored during the biannual implementation support missions.

### *Monitoring and evaluation*

6. The World Bank will complement M&E performed by the project with a series of biannual implementation support missions. The mission teams will closely monitor performance indicators. They will visit operations in the field to verify data in M&E reports and ensure that the M&E system is generating a complete and accurate picture of the project's performance.

### *Environmental and social safeguards*

7. Potential risks may include negative impacts on the environment and/or human populations living in the project areas. DRC has developed and disclosed environmental (ESMF and IPMP) and social safeguard instruments (RPF, IPPF, and PF). In addition, Resettlement Action Plans (RAPs) will be prepared as needed prior to initiating project activities that will induce involuntary resettlement. Implementation of these instruments will require rigorous screening of the project's targeted areas and close follow-up on related implementation issues. The World Bank's safeguards team will consist of the environmental and social safeguards specialists who will be core members of the biannual support missions. They will guide the project team and client in applying the agreed safeguard instruments and ensuring compliance.

### *Fiduciary*

8. Financial management risk has been assessed as **Substantial**. Procurement capacity risk has also been assessed as **Substantial**. Proposed mitigation measures for financial management and procurement are detailed in Annex 3. As part of its biannual implementation support missions, the World Bank's financial management and procurement specialists will conduct reviews to ensure that systems and capacity are adequate as the project is implemented, provide advice and guidance on related issues, and recommend and arrange for training and capacity strengthening when needed.

9. Tables 10 and 11 indicate the main focus of support to implementation during the project's lifetime, the skill requirements, and involvement of other partners.

**Table 10: Focus of support to implementation during the proposed RGLIADP**

Time	Focus	Skills Needed
Before effectiveness	Complete and validate final Master Plan Recruit project staff Finalize and validate PIM Signing of the different contracts and MoUs with implementing partners and service providers Validate priority production areas ( <i>bassins de production</i> )	Procurement Financial expert Agribusiness specialist Legal adviser Social safeguards Environmental safeguards
0-12 months	Recruit consultants Validate selection of roads and irrigation schemes to be rehabilitated Complete detailed feasibility studies ( <i>avant-projet sommaire, avant-projet détaillé</i> ) Tender for infrastructure (roads, irrigation) Identify location for multiservice platforms ESIA / RAP screening Site selection for AIPs Prepare for feasibility studies	Procurement Economist PSD Engineer Agribusiness specialist Financial expert Economist, Agronomist Social safeguard Environmental safeguards Legal adviser
12-36 months	Supervise construction of multiservice platforms Supervise feasibility studies for AIP Additional studies EMP/RAP and implementation monitoring MTR	Procurement Financial expert Public-private partnership Engineers Agribusiness specialist Economist Social safeguards Environmental safeguards
36-60 months	Regular supervision activities	Same as above

**Table 11: Skill mix required for the proposed RGLIADP (per year)**

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Team Leader (TTL)	15		CO based
Agricultural economist (Co-TTL)	15	2	DC based
Procurement Specialist	8		CO based
Financial Management Specialist	8		CO based
Disbursement Specialist	3		DC based
Lawyer	2		DC based
PPP Expert	4	2	DC based
Team Assistant	10		CO based
Operations Specialist	10	1-2	M&E CO based
Agribusiness/Management Specialist	10	2-3	Consultant
Environmental Specialist	8	2-3	CO based
Social Specialist	10	2-3	DC based
Communications Specialist	2		CO based

## B. Role of Development Partners

10. The project was prepared in close collaboration with other development partners, including AfDB, FAO, JICA, UNICEF, USAID, and World Food Programme. These partners will not finance any of the proposed activities, because they have their parallel or upcoming operations, but the PCU within the Ministry of Agriculture will ensure that collaboration and information sharing will occur systematically during implementation of the proposed RGLIADP. Partners will also be invited to join implementation missions when and if so they desire. The PCU/PIU will encourage the establishment of a task force of

development partners involved in the targeted areas and to meet on a regular basis to monitor the matrix of interventions and action plan. This task force will also be represented in the meeting of the provincial monitoring committee for the project. For the development of additional value chains, and particularly for aquaculture/fisheries, the project will build on the recognized international expertise and experience of FAO to mobilize TA and to inform potential future investments.

11. The project has been designed to support critical activities that were identified in the targeted value chains and areas but are not supported by other partners. This flexible and pragmatic design will enable the project to build on initiatives supported by other partners (which focus on a more limited set of activities) in ways that are expected to foster synergies and create a framework for more integrated agricultural development, in line with the project's objectives and regional emphasis.



## **Annex 5: Economic and Financial analysis**

### **DEMOCRATIC REPUBLIC OF CONGO: RGLIADP**

#### **INTRODUCTION**

1. The methodology for the economic and financial analysis (EFA) follows World Bank guidelines and reflects experience with similar projects.<sup>55</sup> The financial viability of the selected value chains (rice, cassava, and livestock/dairy) is estimated based on financial analyses at the farm household level. A separate financial analysis was also done for aquaculture, given that the proposed project will support technical assistance to explore the potential for aquaculture in the project area. The analysis determines the net present value (NPV) of incremental net benefits, benefit-cost ratios, and switching values, and it includes a series of sensitivity analyses. The economic analysis evaluates the benefits and costs to the national economy of the project's proposed investments in the rice, cassava, and livestock/dairy value chains; it also calculates environmental benefits in the form of net carbon benefits and estimates the internal rate of return (IRR) and NPV. To provide some context for the results of the EFA, it is first necessary to understand the likely development impact expected from the proposed project, why the intervention of the public sector is justified, and what value is added through the World Bank's participation.

#### **Project Development Impact**

2. The PDO is to (i) 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.”. This objective is to be achieved through three components proposing investments in private and public goods. All dimensions of the project (value chain dimension, business environment and access to finance, and regional integration) are closely intertwined and necessary for the achievement of the PDO. The EFA assesses whether the project's incremental net benefits justify its cost, yet it is important to emphasize that not all benefits can be expressed in monetary terms. The proposed project is likely to yield a range of other kinds of benefits, including additional income and employment along the selected value chains; a larger marketable surplus for producers, giving consumers better access to more nutritious food at a lower price; fewer conflicts related to land and agriculture; the correction of environmental externalities, such as decreased land degradation; and knowledge spillovers through the development and diffusion of agricultural technologies. Given the strategic importance of agriculture in the economy of the targeted areas, no plausible alternative to an integrated agricultural program would appear capable of yielding a similar set of benefits.

#### **Rationale for Public Sector Provision**

3. The value chain component of this project focuses on correcting major market failures faced by smallholder farmers and livestock owners in strategic value chains and by private entrepreneurs throughout the Great Lakes region. These market failures constrain the development of commercial value chains and thus constrain job creation, revenue generation, and overall local economic development. The current business environment and infrastructure do not allow much private investment. To make it more likely, that the project will have a sustained impact, the project seeks to foster private investment in addition to

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<sup>55</sup> World Bank (2014), “Investment Project Financing. Economic Analysis.”

public investment, through public-private partnerships and matching grant mechanisms. For example, the targeted region relies on rice imports from Tanzania and Asia. Because local rice farmers lack the financial, organizational, and technical capacity to develop the value chain and compete with imported rice, public sector intervention is justified.

4. The activities to be financed under Component 3 address redistributive and social issues by ensuring a fair balance of investments between communities and groups, especially the most vulnerable (women, young people at risk of violent mobilization), and by preventing social conflicts. Opportunities for community dialogue are fundamental to the project's design, and the project will also strengthen the capacity of communities to manage their local development programs. Finally, the support provided under Component 4 will build capacity in public and private technical services.

### **Value Added through World Bank Support**

5. The World Bank adds value to the proposed project in several ways. World Bank technical expertise and financing are crucial resources to create the conditions for sharing knowledge and building capacity and networks of lasting strategic value to the region—among scientists, producers, communities, private entrepreneurs, and public agencies. The World Bank has the capacity to mobilize other donors and international expertise to support the institutional and economic reforms being undertaken by DRC (and other governments that eventually participate in this regional initiative). By allocating IDA resources to post-conflict areas such as eastern DRC, and by targeting agriculture in particular, the World Bank is financing a long-term inclusive growth strategy, in line with strategies supported by the individual countries in the Great Lakes region. Another consideration is that through the proposed project, the World Bank adds its expertise and resources to the ongoing STAREC/I4S stabilization process,<sup>56</sup> which has gathered momentum in recent years but has many gaps to fill.

### **LITERATURE REVIEW: EXPECTED BENEFITS**

6. The following paragraphs provide a brief overview of key parameters, costs, and quantifiable and non-quantifiable benefits that demonstrate the profitability and challenges in the selected value chains.

#### **Selected Value Chains: Rice, Cassava, Dairy**

7. *Rice* is considered one of the most dynamic commodity markets in South Kivu. While rice production ranks behind cassava in terms of consumption preferences and importance, rice production patterns and trade channels are evolving rapidly. DRC produced about 350,000 tons of rice in 2012 and imported around 100,000 tons. The national average yield of 0.7 tons per hectare is low compared with paddy yields in neighboring countries—for example, paddy yields are 2.8 tons per hectare in Burundi and 5.6 tons per hectare in Rwanda)<sup>57</sup>—yet yields in South Kivu and around Kalemie are reportedly around 3 tons per hectare per season. It is estimated that current production in North and South Kivu can meet

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<sup>56</sup> The proposed project will support DRC's STAREC strategy and the ISSSS (I4S) stabilization strategy, both of which address fragility and conflict in the eastern provinces, support the strengthening of community and other local institutions to improve community participation in economic activities, and the solution of constraints to key livelihoods in the eastern growth corridor. Other World Bank-programs, such as the Eastern Recovery (STEP) Project, are doing the same.

<sup>57</sup> FAOSTAT (January 2016).

about one-quarter of local demand, implying that imports still play an important role in meeting aggregate demand. South Kivu produced 10,407 tons per year of milled rice on average between 2005 and 2011 and imported around 41,630 tons.<sup>58</sup> Rice produced in the Ruzizi Plain is largely used by local breweries, which have stringent quality and quantity requirements. Table rice is typically imported from Pakistan or Tanzania.

8. A number of studies have found that the adoption of improved rice varieties has been profitable for African households. In Nigeria, for example, the adoption of a NERICA variety increased household income by about US\$419 per cropping season; the incidence of poverty was lower among adopters (45.5 percent) compared non-adopters (50 percent).<sup>59</sup> An assessment of East African rice producers found that yield gains of 2 tons per hectare from an improved variety increased annual household income by about US\$500, despite increased input prices.<sup>60</sup> Rice is a labor-intensive crop, requiring investments in planting, weeding, and pest control, on average 154 person-days per acre. A recent study in Tanzania where rice is grown more commercially shows that rice yields notably increase when producers invest in hired labor.

9. Additionally, increased on-farm income and investment are expected to generate employment opportunities in several segments of the value chain (such as financial services and input sales, wholesale and retail trading), and outside the value chain due to increased disposable income. Gender benefits are more difficult to assess. Women's contribution to rice production varies by region; for instance, in Bas-Congo men have a predominant role in all stages of rice production, whereas in Katanga women have a prominent role (except in the clearing phase).<sup>61</sup> Recent research in Uganda has shown that the introduction of a new rice variety, which was perceived to be a (high-value) food crop rather than cash crop, could potentially increase women's intra-household bargaining power and access to income. However, while the variety did not require high amounts of chemical inputs (a fact that encouraged women to adopt the variety), the labor requirements increased (which created an additional burden for women and children).<sup>62</sup> How investments by the proposed project can help to increase gender equity in the Ruzizi Plain is an issue that needs to be assessed in more detail.

10. *Cassava* is the most important crop in DRC, which produced 16.6 million tons in 2014, representing a gradual increase from about 15.0 million tons in 2004. Production has declined from about 20 million tons in 1990, however, because of cassava mosaic disease.<sup>63</sup> On average over 2005–11, South Kivu produced 580,000 tons of cassava and imported some 15,000 tons from international or regional markets from or via Uganda, Rwanda, and Tanzania. Only small quantities of dried cassava are exported; milled cassava flour is

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<sup>58</sup> FEWSNET (2015): Democratic Republic of the Congo: Staple Food Market Fundamentals. October 2015

<sup>59</sup> NERICA: New Rice for Africa. See Dontsop Nguetzet, P.M., A. Diagne, V.O. Ooruwa, and V. Ojehomo (2011) "Impact of Improved Rice Technology on Income and Poverty among Rice Farming Households in Nigeria: A Local Treatment Effect (LATE) Approach," prepared for the 25<sup>th</sup> conference of the Centre for the Studies of African Economies (CSAE). University of Oxford.

<sup>60</sup> Kilimo Trust (2012), "Expanding Rice Markets in the Eastern African Community," <http://www.kilimotrust.org/RICE%20REPORT-%20for%20web.pdf>.

<sup>61</sup> Ragasa, C., A. Kinwa-Muzinga, and J. Ulimwengu (2012), "Gender Assessment of the Agriculture Sector in the DRC," IFPRI Discussion Paper 01201, International Food Policy Research Institute (IFPRI), Washington, DC.

<sup>62</sup> Bergman Lodin, J., S. Paulso, and M. Senoga Mugenyi (2012) "New Seeds, Gender Norms, and Labor Dynamics in Hoima District in Uganda," *Journal of African Studies* 6(3): 405-22; Bergman Lodin (2012). "Intrahousehold Bargaining and Distributional Outcomes Regarding NERICA Upland Rice Proceeds in Hoima District, Uganda," *Gender, Technology, and Development* 16(3): 253–78.

<sup>63</sup> FAOSTAT (January 2016).

imported from Rwanda.<sup>64</sup> Average yields are rather low (about 8 tons per hectare) in the project area but are projected to increase to 12–20 tons per hectare with improved management and varieties, and possibly to reach 30 tons per hectare with additional fertilizer.<sup>65</sup> Similarly, under current farming practices farmers in Kenya and Uganda obtain 6–12 tons per hectare, which could increase to 14–20 tons per hectare if high-yielding varieties and fertilizer are used (even up to 40–60 tons per hectare, according to FAO and IFAD).<sup>66</sup> Labor requirements for establishing and cultivating cassava are reported between 172 and 222 person-days per year,<sup>67</sup> but they can vary depending on soil type. In Bukavu in November 2015, prices of US\$0.32 per kilogram of fresh cassava and US\$0.54–0.75 per kilogram of cassava flour were observed, showing the added revenue that can be obtained through value addition.<sup>68</sup> In South Kivu from January 2009 to 2014, the market price of dried cassava was US\$0.50 and US\$0.45 per kilogram, with a minimum and maximum price of US\$0.30 per kilogram and US\$0.75.<sup>69</sup> Several studies have demonstrated the profitability of improved cassava production at the farm level: van Eijk et al. (2012) assess the profitability of a low and intermediate input system for cassava and report an NPV of US\$–185 per hectare for the low-input system and a benefits of US\$1,249 for the intermediate intensity system, with benefit-cost ratios of 0.9 and 1.2, respectively. If the opportunity cost of family labor is not taken into account, the benefit-cost ratios increase to 6.4 and 5.4, respectively.<sup>70</sup> The profitability of improved cassava varieties was further confirmed by several studies in Nigeria, which report benefit-cost ratios of 1.90, 1.40, and 1.96.<sup>71</sup> A study in Tanzania reported that the gross margin for improved cassava production, with an average yield of 8 tons per hectare, could increase by 2.7 times compared to traditional cassava production, with average yield of 4 tons per hectare.<sup>72</sup>

11. DRC leads the world in per capita cassava consumption (consuming on average 400 grams per capita per day). It is the main food crop for more than 80 percent of the population and represents about 65 percent of daily energy requirements. Malnutrition and vitamin A deficiency are highly prevalent in DRC, and improvements in cassava varieties with higher beta-carotene content, can have important nutritional benefits.<sup>73</sup> Women play a disproportionately large role in the cassava value chain (90 percent of farmers) compared to the maize (50 percent) or rice value chains (30 percent), so that improving cassava production and processing can have sizable gender equity benefits.<sup>74</sup> The proportion of cassava sold by

<sup>64</sup> FEWSNET (2015), “Democratic Republic of the Congo: Staple Food Market Fundamentals,” October.

<sup>65</sup> HarvestPlus (2010), “Provitamin A Cassava in the Democratic Republic of Congo. Country crop profile.” Washington, DC.

<sup>66</sup> Fermont, A.M., P.J.A. van Asten, P. Tittonell, M.T. van Wijk, and K.E. Giller (2009), “Closing the Cassava Yield Gap: An Analysis from Smallholder Farms in East Africa,” *Field Crops Research* 112: 24–36. FAO and IFAD (2005), “A Review of Cassava in Africa, with Country Case Studies on Nigeria, Ghana, the United Republic of Tanzania, Uganda, and Benin,” Rome..

<sup>67</sup> F.I. Nweke, D.S.C. Spencer, and J.K. Lynam (2001). “The Cassava Transformation: Africa’s Best-Kept Secret, Michigan State University Press, East Lansing.

<sup>68</sup> Market observations in Bukavu. In May 2015, cassava flour sold at US\$ 0.45 per kilogram.

<sup>69</sup> FEWSNET (2015), “Democratic Republic of the Congo: Staple Food Market Fundamentals.” October.

<sup>70</sup> van Eijk, J., E. Smeets, and A. Faaij (2012), “The Economic Performance of Jatropha, Cassava, and Eucalyptus Production Systems for Energy in an East African Smallholder Setting,” *GCB Bioenergy* 4(6): 828–45.

<sup>71</sup> See, respectively: Ebukiba, E (2010), “Economic Analysis of Cassava Production (farming) in Akwa Ibom State,” *Agriculture and Biology Journal of North America*, 2151–7525; Ogisi, O.D., T. Begh, and B.O. Alimeke (2013), “Productivity and Profitability of Cassava in Ika South and Ika North East Local Government Areas of Delta State, Nigeria,” *IORS Journal of Agriculture and Veterinary Science*, 6(1): 52–6; and Nandi, J., P. Gunn, and E.N. Yurkushi (2011), *Asian Journal of Agricultural Science* 3(3): 205–9.

<sup>72</sup> FAO and IFAD (2005).

<sup>73</sup> HarvestPlus (2010).

<sup>74</sup> FAO TCIA Project report, May 2015.

small-scale producers is correlated with the size of fields owned by women,<sup>75</sup> suggesting that cassava is a particularly important crop for women farmers. In addition, women conduct 60–90 percent of sales for all cassava-related products—roots, *cossettes* (processed roots), fermented flour, and so on.<sup>76</sup> Income controlled by women has large multiplier effects, as it has significantly greater effects on child nutrition and household food security than income controlled by men, as women typically spend a higher proportion of their income on food and health care for children than men.<sup>77</sup> Women provide the majority of labor in cassava processing, harvesting, and collecting. For instance, in South Kivu it is mainly women collectors who transport surplus amounts to deficit areas (they transport it on foot, owing to the lack of infrastructure and other means of transport).<sup>78</sup> Cassava processing is laborious, and improved post-harvest technologies are needed to reduce inefficiency and waste. To benefit from improved processing machines, women’s ownership rights have to be ensured.<sup>79</sup> In addition, several constraining factors such as the inability to mobilize labor to clear fields and prepare land, limited access to land, and lack of credit can prevent women from expanding or improving cassava production activities and reaping the benefits.<sup>80</sup>

12. The *dairy* sector has a historical tradition in the Kivus, although production facilities are limited at present and the region largely depends on imports, which are of high quality and competitively priced. On a national level, from 2006 to 2013, milk production increased from 5,248 to 9,500 tons per year, and imports increased from 247 tons to 2,310 tons.<sup>81</sup> The proposed RGLIADP aims to improve productivity, introduce improved breeds, and reduce the incidence of animal disease. Interventions in neighboring countries demonstrate the profitability of improving dairy operations. A gross margin of about US\$2,660 has been reported for an intensive dairy farm in Kenya.<sup>82</sup> In Uganda, a dairy enterprise with 12 lactating cows and relatively low yield of 3.5 liters per cow per day can obtain an annual gross margin of US\$2,800 and return on investment of about 164 percent.<sup>83</sup> An ex-ante analysis of a project in Zambia suggested an annual gross margin of US\$832 for an improved two-cow dairy operation, with an IRR of 21 percent. A milk collection center for 30 beneficiaries resulted in an annual gross margin of US\$6,291 and an IRR of -11 percent.<sup>84</sup>

13. Besides the financial benefits, studies show that improved dairy productivity can lead to more diversified consumption patterns and improved nutrition. Currently, dairy products are consumed only 0.5 days per week and constitute only 1 percent of average food expenditures in poor households. This share could increase with increasing wealth, as wealthy households’ dairy expenditure was found to be 2 percent on average.<sup>85</sup> Research finds a general pattern in livestock ownership in which women own poultry and small

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<sup>75</sup> FAO and IFAD (2005).

<sup>76</sup> IFPRI gender report.

<sup>77</sup> Herforth, A., A. Jones, and O. Pinstrip-Andersen (2012), “Prioritizing Nutrition in Agriculture and Rural Development: Guiding Principles for Operational Investments,” World Bank, Washington, DC. Quisumbing, A.R., L. Brown, H. Feldstein, L.J. Haddad, and C. Pena (1995), “Women: The Key to Food Security,” International Food Policy Research Institute (IFPRI), Washington, DC.

<sup>78</sup> FEWSNET (2015).

<sup>79</sup> HarvestPlus (2010). Mbwika, J.M., S. Lukombo, and K. Mvuangi (2001), Cassava sub-sector analysis (draft field survey report, [http://www.fao.org/fileadmin/user\\_upload/drought/docs/IITA%20DRC\\_casava\\_subsector.pdf](http://www.fao.org/fileadmin/user_upload/drought/docs/IITA%20DRC_casava_subsector.pdf)).

<sup>80</sup> Ragasa et al. (2012).

<sup>81</sup> FAOSTAT, January 2016.

<sup>82</sup> See <http://agricoop.info.ke/files/downloads/Dairy%20Main%20pdf.pdf>.

<sup>83</sup> Besigye, A. (2014), Analysis of livestock value chains for potential financing opportunities (draft report for Centenary Bank).

<sup>84</sup> World Bank (2012), Zambia Livestock Development and Animal Health Project.

<sup>85</sup> Comprehensive Food Security and Vulnerability Analysis (CFSVA) (2014), Democratic Republic of Congo. Data collected in 2011-2012.

animals but do not own, control, or benefit from large livestock to the same extent as men. Women's livestock herds are up to six times smaller than men's are. In some countries, women are involved in marketing livestock products, however. These relations need to be taken into account to ensure that women benefit from project activities.<sup>86</sup> Vaccination campaigns and disease control can have several effects. Diseases outbreaks typically interrupt the breeding cycle and have long-term adverse impacts on herd structure and household returns. The increased number of animals can have a positive effect on the feed industry, provide livestock products for consumers at lower prices as supply increases, generate employment, and create additional sources of income and nutrition. Although such benefits can be achieved, there is a high risk that potential gains can be decimated due to increased security risks and the potential for raids.<sup>87</sup>

## Further Activities

14. The project also expects to provide *environmental benefits* by reducing and preventing GHG emissions and increasing carbon sequestration through the introduction of improved farming practices, agroforestry, and more sustainable natural resource management (which reduces soil erosion and land degradation). The world's soils store more than double the carbon of the world's atmosphere and biomass combined.<sup>88</sup> The cost of global damage associated with each increased unit of carbon emitted is approximated by the shadow price for carbon or the social cost of carbon (SCC), which makes it possible to calculate the present value of the stream of future economic damage from increased GHG emissions.<sup>89</sup> The SCC is derived from Integrated Assessment Models reviewed by the IPCC; the models simulate complex relationships between global climate and the economy.<sup>90</sup> With a 5 percent discount rate, the 5–95 percent range of the SCC is between US\$0 and US\$60. The 2014 World Bank guidance note recommends using the average value of US\$30 in 2015, increasing to US\$80 in real terms by 2050.<sup>91</sup> As these values are disputed, this assessment uses an alternative approach, which is to use the carbon market price derived from forecasting models of existing and emerging carbon markets. The existing carbon prices vary significantly—from less than US\$1 per tCO<sub>2</sub>-eq to US\$130 per tCO<sub>2</sub>-eq. Eighty-five percent of emissions are priced at less than US\$10 per tCO<sub>2</sub>-eq.<sup>92</sup> For the economic analysis, the project's net carbon balance will be used as derived in Annex 6. A price of US\$10 and sensitivity analysis of US\$5 and US\$30 per tCO<sub>2</sub>-eq are considered.

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<sup>86</sup> Njuki, J. and P.K. Sanginga (eds.) (2013), *Women, Livestock Ownership, and Markets: Bridging the Gender Gap in Eastern and Southern Africa* (London: Earthscan, Routledge).

<sup>87</sup> USAID (2015), "Assessment of the DRC's Agricultural Market Systems: Value Chains in the North and South Kivu and Katanga Provinces," Report # 16, Leveraging Economic Opportunities, Washington, DC.

<sup>88</sup> UNCCD (United Nations Convention to Combat Desertification) (2015), "Science-Policy Notes. Pivotal Soil Carbon" ([http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/2015\\_PolicyBrief\\_SPI\\_ENG.pdf](http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/2015_PolicyBrief_SPI_ENG.pdf)).

<sup>89</sup> The SCC is an estimate of the economic damages associated with a small increase in carbon dioxide (CO<sub>2</sub>) emissions, conventionally one metric ton, in a given year. This dollar figure represents the value of damages avoided for a small emission reduction. The climate change damages include changes in net agricultural productivity, human health, property damages from increased flood risk, and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning. Given current modelling and data limitations, not all important damages are assessed. The SCC is assessed with three integrated assessment models; estimates for 2020 for discount rates between 5 percent and 2.5 percent are US\$ 12, US\$ 43, and US\$ 62 per ton of CO<sub>2</sub>-equivalent emission (United States Environmental Protection Agency Technical documentation available n: <http://www3.epa.gov/climatechange/EPAactivities/economics/scr.html>; January 2016).

<sup>90</sup> IPCC, WGII, Summary for Policy Makers, [http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5\\_SPM\\_FINAL.pdf](http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5_SPM_FINAL.pdf).

<sup>91</sup> World Bank (2014), "Technical Guidance Note on the Social Value of Carbon" (<http://www.worldbank.org/en/topic/climatechange/brief/integrating-climate-change-world-bank>).

<sup>92</sup> World Bank (2015), "State and Trends of Carbon Pricing 2015," Washington, DC.



15. The project is expected to have substantial *nutrition benefits*. Nutrition mainstreaming is another dedicated activity of the project with large potential benefits at the individual and national level. The literature shows the high economic cost of malnutrition, which leads to direct losses in productivity due to poor physical status and diseases linked with malnutrition, indirect losses from poor cognitive development and losses in education, and losses caused by increased health care costs.<sup>93</sup> Farmers who are undernourished are less productive. For instance, childhood stunting, reflected in a 1 percent loss in adult height, is associated with a 1.4 percent loss in productivity.<sup>94</sup> In Zimbabwe, the effect of malnutrition on schooling has been calculated to reduce lifetime earnings by 12 percent.<sup>95</sup> A study of several African countries found undernutrition to cause economic losses equivalent to 1.9–16.5 percent of GDP. Governments spend billions of dollars on interventions to deal with poor nutrition and its effects.<sup>96</sup> Examples from India suggest that micronutrient deficiencies alone may cost India US\$2.5 billion annually, about 0.4 percent of India’s annual GDP.<sup>27</sup> Foregone wage employment owing to child malnutrition and productivity losses is estimated to cost India another US\$2.3 billion. Improving nutrition can provide public good benefits; for example, better nutrition can reduce the spread of contagious diseases and raise national economic productivity.<sup>97</sup>

## FINANCIAL ANALYSIS OF SELECTED VALUE CHAINS

16. The financial analysis estimates the financial viability of the proposed project and incentives for the prospective beneficiaries to engage in project activities and value chains. The analysis used with- and without-project scenarios to estimate the incremental financial net benefits at the farm level in the rice, dairy, and cassava value chains and examine the impact of the project interventions on household income. A discount rate of 12 percent is assumed for the analysis, and unless otherwise indicated, a time period of 20 years. Table 12 describes the models that were developed. The analysis relies on secondary data obtained from the literature as well as field data collected by local technical experts.<sup>98</sup>

**Table 12: Assumptions made in household models**

Value chain	Without project	With project
Rice	Ruzizi Plain and Kalemie: Irrigated rice production in one season, low-quality variety with low yield	Rehabilitated on-farm irrigation infrastructure; improved rice varieties (brewery and table rice); improved water management techniques and storage facilities; small-scale mechanization affects labor time
Cassava	Traditional variety with low productivity (e.g., due to lack of disease resistance); intercropped with beans; 1m x 1 m spacing	Improved varieties; improved crop management leading to increased productivity of cassava; optimal spacing of cassava increases productivity of beans; small-scale mechanization affects labor time
Dairy production	(a) Small-household scheme with 6 local dairy cows, low productivity (b) Pastoralist household with free-ranging cattle herd, hardly any	(a) Introduction of 1 cow of improved breed; improved animal health services; improved pasture management (2 ha) leading to increased milk productivity (b) Vaccination campaign that reduces mortality rate,

<sup>93</sup> World Bank (2006), “Why Invest in Nutrition?” Chapter 1 in *Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action*, Washington, DC. Herforth, Jones, and Pinstrup-Andersen (2012).

<sup>94</sup> Hunt, J.M. (2005), “The Potential Impact of Reducing Global Malnutrition on Poverty Reduction and Economic Development,” *Asia Pac. J. Clin. Nutr.* 14(S): 10–38.

<sup>95</sup> Behrman, J.R., H. Alderman, and J. Hoddinott (2004), “Nutrition and Hunger,” in *Global Crises, Global Solutions*, edited by B. Lomborg, Cambridge, UK, Cambridge University Press.

<sup>96</sup> African Union Commission, NEPAD Planning and Coordinating Agency, UN Economic Commission for Africa, and UN World Food Programme (2014), “The Cost of Hunger in Africa: Social and Economic Impact of Child Undernutrition in Egypt, Ethiopia, Swaziland, and Uganda,” Abridged Report, Addis Ababa, UNECA.

<sup>97</sup> World Bank (2006).

<sup>98</sup> Technical experts in the implementing agencies provided information in November 2015 and March 2016 on rice (VECO, Mazao, and a group of farmer representatives), cassava (IITA, SENASEM, and a group of farmer representatives), and livestock/dairy (VSF and ABDIK).

	veterinary services (c) Dairy - milk collection unit	slightly increases milk production of local cows (c) Milk collection center in place
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## Rice

17. In the Ruzizi Plain and Kalemie, the proposed project targets farmers who have outdated irrigation systems and produce rice for local breweries or low-quality table rice.<sup>99</sup> The project proposes to rehabilitate irrigation systems (US\$2,100 per hectare), provide new varieties of brewery and table rice, and increase the use of improved agricultural practices, production inputs, and storage facilities. With the project, cropping intensity is expected to increase from 1.5 to 2, leading to an increase in annual yield from about 3.75 tons per hectare to 12 tons per hectare in Ruzizi Plain and Kalemie; home consumption remains at 200 kilograms per year. The farmgate price for paddy rice (US\$0.35)<sup>100</sup> is held constant, although a higher price can be expected due to the improvement in quality. In Kalemie, rice production is not as established as it is in the Ruzizi Plain, and labor requirements higher; fewer inputs are required due to the biophysical conditions, however. The daily wage rate is around US\$2.2 per day and varies by type of activity. All labor (hired and family) is valued in the farm budgets. Without the project, the gross margin of farmers in Ruzizi is US\$61, which increases with the project to about US\$2,235; the NPV of incremental net benefits over 20 years is US\$14,011, with a benefit-cost ratio (BC) of 1.9. The switching value is -47 percent for benefits and 88 percent for costs. In Kalemie, the gross margin without the project is negative (US\$-332); with the project it is US\$1,185. The NPV of incremental net benefits over 20 years is US\$9,224, the BC ratio is 1.3, and switching values of benefits and costs are -21 percent and 28 percent. Sensitivity analysis was conducted for reductions in the selling price of 10, 20, and 30 percent. Results are reported in Table 13.

## Cassava

18. In eastern DRC, cassava is affected by cassava brown streak disease (CBSD) and cassava mosaic disease (CMD). IITA and Food for the Hungry introduced improved cassava varieties, improved agronomic practices, and fertilizer, which can increase cassava yields from 8 tons per hectare to 14 tons per hectare; optimal spacing of cassava lines allows yields of intercropped beans to increase from 0.7 tons per hectare to 1 ton per hectare.<sup>101</sup> Cassava leaves are harvested twice a year and yield 500 bundles, which sell at US\$0.66. The average market price in Bukavu between March 2015 and March 2016 was US\$0.45 per kilogram for dried cassava and US\$0.80 per kilogram for beans. A daily wage rate of US\$2.5 is assumed, and family labor is valued. The results show that without the project, a farmer could achieve a gross margin of US\$460; with the project, it would be US\$1,537. Over a period of 20 years, this results in an NPV of incremental net benefits of US\$8,114 per hectare and a BC ratio of 1.7. The switching value is -41 percent for benefits and 71 percent for costs. Sensitivity analysis was conducted for reductions in the selling price of 10, 20, and 30 percent. Results are reported in Tables 13 and 14.

<sup>99</sup> Information in this section was received from VECO for Ruzizi Plain, Mazao for Kalemie area, a group of farmer representatives in Kalemie, and technical experts (November 2015 and March 2016).

<sup>100</sup> Market observations in May 2015 showed a market price for milled rice of US\$ 0.8, and the local brewery offered US\$ 0.82 per kilogram. Observations by FEWSNET found that the price per kilogram for local and imported rice varied between US\$ 0.7 per kilogram in Bukavu in January 2009 to about US\$ 1.3 per kilogram in Bukavu in 2014. See FEWSNET (2015).

<sup>101</sup> Information from personal communication with Food for the Hungry in Kalemie; yields of cassava leaves from IITA (November 2015). Further information was provided by a recent IFAD project in Uganda.



## Dairy

19. The interventions proposed by the project target (a) mixed crop and livestock systems with about 6 cows (including 2 adult milk cows) as well as (b) pastoralist systems with a minimum herd of 60 cows. In the mixed systems, the project introduces one cow of an improved breed (US\$784). The improved cows provide an average milk yield of 8 liters per cow per day and have lower calving intervals than local cows, which typically produce 2.4 liters per day. The project also introduces improved health services as well as improved pasture management (on pastures of 2 hectares) and forage production (on 0.8 hectares of that land), which lead to better feeding and reduce calf and adult mortality. For the pastoralist system, the project introduces a vaccination campaign, which considerably improves mortality rates and slightly increases milk production from 2.4 liters to 2.8 liters. The share of milk marketed in both production systems is 20 percent; over time that share increases to 80 percent (for the mixed system) and 60 percent (for the pastoralist system). In the pastoralist system in the last period, the incremental increase in herd size is valued at current market prices. The herd dynamics are modeled with ECORUM (02/2014). In the mixed crop-livestock system without the project, the average gross margin over 20 years is about US\$300; with the project, an average gross margin of US\$2,499 can be achieved. The NPV of incremental net benefits is US\$10,020 with a BC ratio of 1.6. The switching value is -39 percent for benefits and 64 percent for costs.<sup>102</sup> In the pastoralist system, the gross margin without the project is US\$4,766; with the project, it is US \$6,083, and the incremental net benefit over 20 years is US\$8,737 with a BC ratio of 2.8. The switching value is -64 percent for benefits and 180 percent for costs. Sensitivity analysis was conducted for reductions in the selling price of 10, 20, and 30 percent. Results are reported in Tables 13 and 14.

**Table 13: Financial analysis of value chain benefits with and without the proposed project (US\$)**

Commodity	Model	Gross margin without project	Gross margin with project	NPV (US\$)	BC ratio	Switching values (benefits)	Switching values (costs)
Rice	<b>Ruzizi - Improved variety</b>						
	Baseline	315	2,235	12,118	1.9	-47%	88%
	<i>Sensitivity analysis of reduction in price</i>						
	by 10%		1,761	10,926	1.7	-41%	69%
	by 20%		1,409	7,842	1.5	-34%	51%
	by 30%		996	4,757	1.3	-24%	32%
	<b>Kalemie - Improved variety</b>						
	Baseline	-332	1,185	9,224	1.3	-21%	28%
	by 10%		772	6,139	1.2	-13%	15%
	by 20%		359	3,054	1	-2%	2%
by 30%		-54	-31	0.9	11%	-10%	
Cassava	<b>Improved cassava variety</b>						
	Baseline	460	1,537	8,115	1.7	-41%	71%
	<i>Sensitivity analysis of reduction in price</i>						
	By 10%		1,281	6,197	1.6	-37%	60%
	By 20%		1,024	4,279	1.47	-32%	47%
By 30%		767	2,361	1.3	-26%	35%	
Milk	<b>Livestock system (2-3 lactating cows)</b>						
	Baseline <sup>103</sup>	305	2,499	10,020	1.6	-39%	64%
	<i>Sensitivity analysis of reduction in price</i>						
	By 10%		2,234	8,463	1.55	-36%	55%
	By 20%		1,970	6,906	1.44	-32%	47%
By 30%		1,705	5,350	1.39	-28%	39%	

<sup>102</sup> For the moment, the same model is implemented for DRC and Burundi though in Burundi, the average herd size may be small, at 3 cows and lactation period was reported to be longer for local cows than in DRC.

<sup>103</sup> Note: The gross margin with and without the project represent the average over 20 years.

Pastoralist system (herd of 60 to 80 cows)							
Baseline	4,766	6,083	8,737	2.8	-64%	180%	
By 10%		5,753	6,383	2.7	-63%	170%	
By 20%		5,423	4,029	2.6	-62%	160%	
By 30%		5,094	1,676	2.5	-60%	150%	
Milk collection (15 years)			NPV: 90,541	IRR: 34%			

### Milk Collection

20. The financial analysis for a milk collection center is based on a recent example in Burundi, in a project funded by IFAD. The cost of setting up a collection center with a milk handling capacity of up to 500,000 liters per year is assumed to be US\$163,033 over a period. Average operating costs are assumed to be about US\$300,000 per year. It is assumed that 95 percent of the processed milk is sold in Bujumbura, and 5 percent is sold locally, leading to an average annual revenue of US\$387,000. The NPV of incremental benefits calculated over 15 years at a discount rate of 16 percent is US\$90,541; the IRR is 34 percent.<sup>104</sup>

### Aggregation of Financial Accounts

21. The next step in the analysis is to aggregate the financial accounts over the number of beneficiaries and the targeted project area—for rice, 3,000 hectares in the Ruzizi Plain and 1,000 hectares in Kalemie; for cassava, 17,702 hectares; for small mixed crop-livestock systems, 4,500 households; for pastoralist systems, 7,071 pastoralist households. The total investment cost (excluding Component 2, and activities for fisheries and aquaculture) are US\$90.3 million, with recurrent costs of US\$5.9 million. At a discount rate of 6 percent and period of 20 years, the NPV of incremental net benefits is US\$284 million and the IRR is 21.7 percent. Results of the sensitivity analysis are presented in Table 14.

**Table 14: Sensitivity analysis for financial accounts**

	NPV (US\$millions)	IRR (%)
<i>Analysis result (baseline)</i>	<b>284</b>	<b>21.75</b>
<b>Sensitivity analyses:</b>		
Increase in investment cost by 10%	276	20.4
Increase in investment cost by 20%	269	19.2
Increase in investment cost by 30%	261	18.2
Decline in incremental net benefits by 10%	247	20
Decline in incremental net benefits by 20%	210	18.2
Decline in incremental net benefits by 30%	173	16.2
Reduction in adoption rate by 10%	274	20
Reduction in adoption rate by 20%	210	18.2
Reduction in adoption rate by 30%	173	16.2

### ECONOMIC ANALYSIS

22. The objective of the economic analysis is to examine to overall project viability, to assess the project's impact on the economy and the overall economic rate of return, and perform sensitivity analyses to understand the robustness of the results. The economic analysis uses the same models as the financial analysis, using economic prices aggregated over the targeted area and beneficiaries for the rice, cassava, and dairy value chains. To

<sup>104</sup> For the analysis of Burundi, currently insufficient data is available, but similar values are expected. The analysis follows before/during appraisal.

estimate environmental benefits, the project's net carbon balance is assessed with the tool EX-ACT (see Annex 6) and valued at a carbon price of US\$10 per ton.

23. The estimates are based on the following assumptions. The time span for benefits is 20 years; the economic discount rate is 6 percent (as recommended by the World Bank);<sup>105</sup> the rural unemployment rate of 70 percent is used to determine the shadow market wage rate; thus the daily market wage of US\$2.2 is converted using the shadow exchange rate factor of 0.7. Economic prices have been calculated using import parity prices for traded goods—specifically, rice and fertilizer imported through Dar es Salaam.<sup>106</sup> Transfer payments are eliminated, commodity-specific conversion factors are derived, and the shadow exchange rate factor is applied on traded goods. As cassava is hardly traded and milk is a perishable good, it is assumed that the opportunity costs are reflected in the market price.

24. The project investment costs considered for the analysis and calculated in Costab are US\$73.8 million, and recurrent cost are US\$5.2 million for the project period and assumed to be US\$0.5 million per year thereafter. Activities related to AIPs proposed in Component 2 and potential benefits and cost for activities related to aquaculture and fisheries are not considered. The number of beneficiaries/extent of project area for each value chain are noted in paragraph 21. Environmental benefits are assumed to be about 90,000 tCO<sub>2</sub>-eq per year on average (detailed estimates are found in Annex 6) and are valued at US\$10 per ton, starting in year 3. The phasing of benefits is in line with phasing of activities in the Costab.

## Results

25. *At a discount rate of 6 percent, the estimated NPV of the project is US\$324.9 million, with an IRR of 26.7 percent.*

## Sensitivity Analyses

26. Sensitivity analyses are conducted to test the robustness of the results to: (i) an increase in total project investment and recurrent costs of 10, 20, and 30 percent; (ii) a decline in incremental net benefits of 10, 20, and 30 percent; (iii) a decrease in the adoption rate of 10, 20, and 30 percent; (iv) environmental benefits valued at US\$0 and US\$30 per ton, which reflect the social cost of carbon; and (v) delays in initiating project activities of 1 and 2 years. The results are presented in Table 15 and demonstrate that the project's favorable results are robust against external shocks.

## SUMMARY AND CONCLUSION

27. The financial analysis shows that investing in the main value chain commodities (rice, cassava, and dairy) is profitable from the beneficiaries' point of view. The NPV of incremental net benefits over 20 years ranges from US\$7,555 for cassava to US\$12,118 for a farmer planting improved rice varieties in the Ruzizi Plain. The BC ratios range from 1.2 for rice farming in Kalemie to 2.9 for the pastoralist livestock system and vaccination campaign. Almost all of the sensitivity analyses demonstrate that the enterprises are robust against

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<sup>105</sup> World Bank (2015), "Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects," Washington, DC.

<sup>106</sup> Information for calculating the import parity prices was provided by KOTTECHA (a trading company) and for fertilizer from IFDC.

external market price shocks, indicating that beneficiaries have a strong financial incentive to participate in the proposed activities.

28. The economic analysis is based on the aggregation of crops models for rice, cassava, and dairy over the project area and beneficiaries, using economic prices. The analysis also considers the environmental benefits of reduced or avoided tCO<sub>2</sub>-eq emissions at a price of US\$10 per ton. At a discount rate of 6 percent, the estimated NPV of the project is US\$324.9 million with an IRR of 26.7 percent. Table 16 shows the aggregated incremental net benefits by value chain. Sensitivity analyses indicate the robustness of the result. (Component 2 investments in AIPs and activities related to aquaculture and fisheries are not considered.) The benefits may be underestimated, as the potential for value addition and employment effects in various segments of the value chain are not considered. In addition, although intangible benefits such as increased gender equity, empowerment of vulnerable groups, health benefits of improved nutrition, the benefits of knowledge exchange, and greater social security and conflict reduction cannot be quantified and are not considered in the analysis, they indicate that project benefits may be underestimated.

**Table 15: Sensitivity analysis of results of the economic analysis**

	NPV (US\$ millions)	IRR (%)
<i>Analysis result (baseline)</i>	<i>324.9</i>	<i>26.7</i>
<b>Sensitivity analyses:</b>		
Increase in investment cost by 10%	318	25.2
Increase in investment cost by 20%	312	23.8
Increase in investment cost by 30%	306	22.6
Decline in incremental net benefits by 10%	285	24.7
Decline in incremental net benefits by 20%	245	22.5
Decline in incremental net benefits by 30%	206	20.3
Reduction in adoption rate by 10%	286	24.7
Reduction in adoption rate by 20%	247	22.6
Reduction in adoption rate by 30%	208	20.4
Increase of social cost of carbon to US\$30/t	341	27.4
Increase of social cost of carbon to US\$0/t	316	26.2
Delay of project activities by 1 year	288	22.8
Delay of project activities by 2 years	252	19.8

**Table 16: Aggregated incremental net benefits by value chain (in US\$000s)**

	<b>PY1</b>	<b>PY2</b>	<b>PY3</b>	<b>PY4</b>	<b>PY5</b>	<b>PY6</b>	<b>PY7</b>	<b>PY8</b>	<b>PY9</b>	<b>PY10</b>	<b>PY11- PY20 (average)</b>
Rice production - Ruzizi Plain	0	0	1,775	3,814	4,078	4,078	4,078	3,898	3,898	4,078	4,006
Rice production - Kalemie	0	366	795	858	858	858	795	795	858	858	833
Cassava	0	5,453	10,352	15,252	20,152	19,598	19,598	19,598	19,598	19,598	19,598
Dairy - mixed livestock system (2-3 lactating cows)	0	0	252	2,006	3,947	4,474	2,995	2,829	4,698	5,273	6,663
Dairy - pastoralist system (Herd of 60-80 cows)	0	3,855	7,958	11,486	14,659	13,809	11,934	10,662	9,822	9,259	12,259
Environmental benefits	0	0	450	900	900	900	900	900	900	900	900
<b>SUM</b>	<b>0</b>	<b>9,673</b>	<b>21,582</b>	<b>34,315</b>	<b>44,593</b>	<b>43,717</b>	<b>40,300</b>	<b>38,683</b>	<b>39,774</b>	<b>39,966</b>	<b>44,260</b>
Total investment cost	10,338	13,292	24,396	19,938	5,907						
Recurrent cost	729	937	1,719	1,406	416	500	500	500	500	500	500
Total cost	11,067	14,230	26,088	21,345	6,324	500	500	500	500	500	500
<b>INCREMENTAL NET BENEFITS</b>	<b>-11,067</b>	<b>-4,556</b>	<b>-4,507</b>	<b>12,969</b>	<b>38,268</b>	<b>43,216</b>	<b>39,800</b>	<b>38,182</b>	<b>39,273</b>	<b>39,466</b>	<b>44,529</b>
<b>Discount rate</b>	<b>6%</b>										
<b>NPV of incremental net benefits</b>	<b>324,899</b>										
<b>IRR</b>	<b>26.7%</b>										

## **Annex 6: Assessment of the Net Carbon Balance with EX-ACT**

### **DEMOCRATIC REPUBLIC OF CONGO: RGLIADP**

1. The following analysis aims to assess the net carbon balance of the project, provide an understanding of which project activities have the largest mitigation and carbon sequestration potential, and provide an understanding of how the project contributes to the participating countries' mitigation goals.

#### **CLIMATE CHANGE POLICY CONTEXT**

##### **Climate Change Impacts in DRC**

2. The impacts of climate change are notable in DRC. The frequency of heat waves has increased over the past years, the dry season is longer, and an increase in drought sequences has been observed, as well as violent rains, floods, and subsequent soil degradation.<sup>107</sup> Climate change is projected to change the frequency or severity of extreme weather events, increase average temperatures, and change annual and seasonal rainfall, all of which will affect agricultural production.<sup>108</sup> Typically, the impacts of climate change are felt disproportionately among vulnerable groups that have fewer resources to adapt. Adaptation measures in agriculture that increase resilience and enhance productivity are identified as priority goals over mitigation goals.<sup>109</sup>

##### **Policies Related to Climate Change**

3. DRC published a National Adaptation Program of Action in 2006, focusing strongly on provision of basic services such as electrification of urban areas and water supplies. DRC defined a Climate Adaptation Program 2010-2012, to strengthen the administrative capacity of adaptation management and planning to cope with uncertainties related to climate change impacts.<sup>110</sup> In 2009, DRC submitted the second national communication to the UNFCCC, identifying priority adaptation measures in various sectors (water resources, agriculture, land use and land use change, sanitation, health, and energy) and highlighting the mitigation trends.

##### **Mitigation—Intended Nationally Determined Contributions (INDC)**

4. In 2003, the emissions from land use and forestry constituted 88 percent of total emissions, and emissions from agriculture accounted for 9 percent of total emissions (428,233 Gg CO<sub>2</sub> emission).<sup>111</sup> On the other hand, land use and forestry had a total sequestration potential of 495,334 Gg CO<sub>2</sub> emission, leading to a net balance of -67,100 Gg CO<sub>2</sub>, which indicates that DRC provided a carbon sink. In August 2015, DRC submitted its INDC to the UNFCCC. DRC intends to reduce its emissions by 17 percent in 2030 compared

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<sup>107</sup> Democratic Republic of the Congo (2009), "Second National Communication to the UNFCCC ([http://www.undp-alm.org/sites/default/files/downloads/drc-second\\_national\\_communication\\_2009\\_english.pdf](http://www.undp-alm.org/sites/default/files/downloads/drc-second_national_communication_2009_english.pdf)).

<sup>108</sup> BBC World Service Trust (2010), "Research Report. Democratic Republic of Congo Talks Climate. The Public Understanding of Climate Change" (<http://r4d.dfid.gov.uk/PDF/Outputs/MediaBroad/02-Democratic-Republic-of-Congo-Talks-Climate.pdf>).

<sup>109</sup> Democratic Republic of the Congo (2015), "Intended Nationally Determined Contributions to the UNFCCC" ([http://unfccc.int/focus/indc\\_portal/items/8766.php](http://unfccc.int/focus/indc_portal/items/8766.php)).

<sup>110</sup> Nachmany et al. (2015).

<sup>111</sup> Democratic Republic of the Congo (2009), "Second National Communication to the UNFCCC ([http://www.undp-alm.org/sites/default/files/downloads/drc-second\\_national\\_communication\\_2009\\_english.pdf](http://www.undp-alm.org/sites/default/files/downloads/drc-second_national_communication_2009_english.pdf)).

to the status quo scenario, which would lead to emissions of 430 MtCO<sub>2</sub>-eq in 2030. The mitigation potential largely stems from three sectors: energy,<sup>112</sup> agriculture (the introduction of agroforestry, improved agricultural practices, integrated livestock management, irrigated areas, recovery of waste and by-products from livestock farming) and forests (afforestation and lumber and forest management).<sup>113</sup>

## WORLD BANK MANDATE AND ACCOUNTING METHODOLOGY

5. In its 2012 Environment Strategy, the World Bank has adopted a corporate mandate to conduct GHG emissions accounting for investment lending. The quantification of GHG emissions is an important step in managing and ultimately reducing emissions, and it is becoming a common practice for many international financial institutions. The World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), developed by FAO in 2010,<sup>114</sup> to assess a project's net carbon-balance—that is, the net balance of tons of CO<sub>2</sub> equivalent (tCO<sub>2</sub>-eq) GHGs that were emitted or carbon sequestered as a result of project implementation compared to a “without-project” scenario.

## DATA INPUTS AND ANALYSIS WITH EX-ACT

### Basic Assumptions

6. The project areas are in a tropical moist climate regime with High Activity (HAC) soil types. The project implementation period is 5 years, with a capitalization period of 15 years. Dynamics of evolution are assumed to be linear. Default “Tier 1” coefficients are used, by IPCC (2006). It is assumed that the without-project scenario is the same as currently observed.

### Activities by Value Chain

7. The following paragraphs and Table 17 describe the data inputs to EX-ACT by value chain:

- *Irrigated rice production*: The project plans to improve irrigated rice production on 4,000 hectares of agricultural land by rehabilitating irrigation and drainage systems (surface irrigation), introducing new varieties, improving water management, and promoting SRI techniques. The project's activities will allow rice to be grown for two seasons instead of one. Total fertilizer use is expected to be a maximum of 90 kilograms per hectare per season of NPK (20:20:20) and 75 kilograms per hectare per season of urea, resulting in and 720 tons of NPK fertilizer and 600 tons of urea fertilizer per year compared to the without-project scenario.
- *Improved cassava production*: The project introduces improved cassava varieties and intercropping with legumes on 17,702 hectares.
- *Improved dairy production*: Due to the vaccination campaign, the project expects to increase the herd size of 7,071 pastoralist households by about 3 animals per

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<sup>112</sup> For instance through the introduction of hydro-electrification, promotion of efficient cook stoves, large-scale afforestation to cover fuelwood needs, and improvements in transport.

<sup>113</sup> DRC INDC (August 2015) [https://unfccc.int/files/focus/indc\\_portal/application/pdf/indc\\_drc\\_v310815.pdf](https://unfccc.int/files/focus/indc_portal/application/pdf/indc_drc_v310815.pdf)

<sup>114</sup> <http://www.fao.org/tc/exact/ex-act-home/en/>

household at the end of year 5. Currently, each pastoralist household has on average 60 cows. The model ECORUM was used for the estimation. In addition, 4,500 households, which currently have 6 dairy cows on average, will receive 1 dairy cow of an improved breed per household. In these households, all cows (about 31,500) are expected to receive improved feeding (for example, more concentrates, improved forage).

- ***Pasture management:*** It is assumed that dairy households that receive an improved cow have access to 2 hectares of pasture on average, of which 0.8 hectares are proposed to come under forage production. Thus, 3,600 hectares will be improved with inputs; without the project that land is expected to become moderately degraded. The remaining 5,400 hectares will be sustainably managed, but without additional inputs, so that the pasture does not become degraded.
- ***Facilities and roads:*** For the rice value chain, 23 storage facilities are proposed; and 300 kilometers of roads will be constructed or rehabilitated.
- ***Agroforestry:*** Enhancing tree cover in agricultural areas yields a range of environmental and economic services to local communities and protects the agricultural investments by conserving soils, reducing erosion, and enhancing biodiversity. The project proposes to bring about 8,000 hectares under agroforestry.

**Table 17: Proposed project activities and incremental change, with and without the project**

Value chains/ activities	Implementation in EX-ACT	Without project	Change in with-project scenario
Rice	Rehabilitation of irrigation systems	0	4,000 ha
	Improved varieties and management practices <ul style="list-style-type: none"> <li>• Increase in cultivation days from 150 to 300 per year</li> <li>• Non-flooded pre-season from &gt; 180 days to &lt; 180 days with project</li> <li>• From continuously flooded to intermittently flooded (with project)</li> </ul>	0	4,000 ha
Cassava	Improved agronomic practices; (intercropping with legumes, improved varieties)	0	17,702 ha
Dairy	Improved breeds	0	Plus 4,500 head
	Improved feeding (e.g., concentrates, forage)	0	31,500 head
	Additional cattle at the end of year 20	0	Plus 21,213 head
Pasture management	Improved pasture management with inputs; preventing moderate degradation of the land	0	3,600 ha
	Sustainable management, preventing moderate degradation; land remains non-degraded	0	5,400 ha
Facilities and inputs	Newly constructed storage facilities	0	23 agricultural buildings
	Total fertilizer consumption	0	424 tons of N/year 144 tons of P/year 144 tons of K/year
	Rehabilitated/newly constructed km	0	300 km
Land use change	Introduction of agroforestry on previously annual cropland	0	8,000 ha

### Activities not Considered



8. A range of activities is not considered in the analysis. Component 2 proposes the introduction of AIPs. For the time being, insufficient information is available to include this activity in the analysis. Transportation is a critical issue. Insufficient information about the quantity of field visits and fuel use is available to include it in the analysis. The project supports improved market access and access to finance and processing activities, which can lead to increased fuel and electricity consumption, and constitute an additional carbon source. This is currently not accounted for. Further the increase in local production of rice and milk is expected to slowly reduce the need to import from Asia or neighboring countries, which could avoid large CO<sub>2</sub> emissions. As this effect falls outside the determined project area, and in addition, little is known about the extent of these externalities, they are not included in the analysis. Nor is the rehabilitation of off-farm irrigation infrastructure accounted for in the analysis.

## RESULTS

### The Project is a Net Carbon Sink

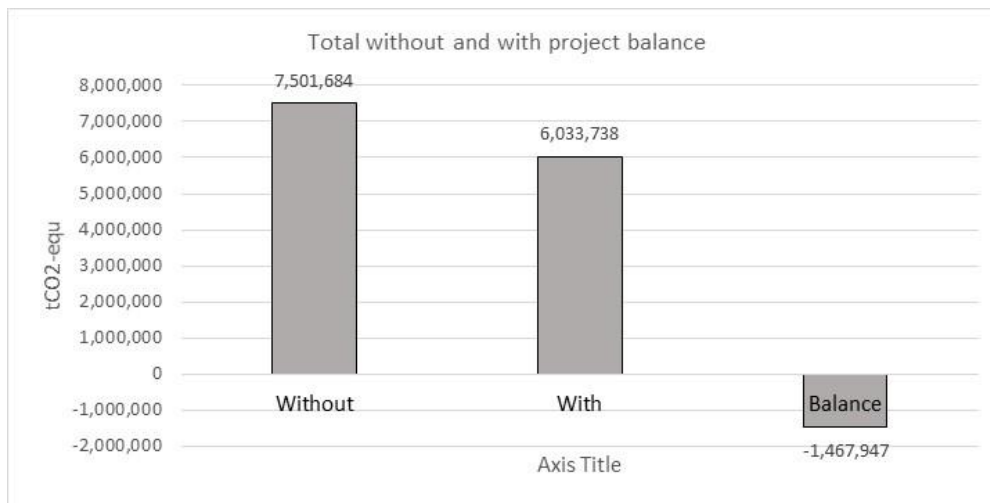
9. The results show that the project constitutes a net carbon sink and has the potential to avoid emissions and sequester carbon to the extent of -1,467,947 tCO<sub>2</sub>-eq compared to the without-project scenario over a period of 20 years (and -97,863 tCO<sub>2</sub>-eq for 1 year). Altogether, about -2.9 tCO<sub>2</sub>-eq of emissions are avoided per hectare per year. Table 18 and Figures 8 and 9 present the without- and with-project gross carbon balance and the project's net carbon balance for the overall project and for the value chains. Activities related to the introduction of agroforestry, improving annual crop production and improved pasture management constitute a net carbon sink of -1,937,039 tCO<sub>2</sub>-eq. Of that total, 81 percent stems from agroforestry, 10 percent from improved crop management, and 9 percent from pasture management. Irrigated rice production, livestock activities, and storage and production inputs constitute a net carbon source of 469,093 tCO<sub>2</sub>-eq, of which livestock constitutes 76 percent, irrigated rice 13 percent, and inputs 11 percent. For livestock activities and improved rice production, the with-project gross carbon balance is higher than the without-project gross carbon balance. The livestock herd increases in size and emissions increase. The mitigation from improved breeding and feeding does not outweigh this gain. In irrigated rice production, the project allows a doubling of cultivation days per year, thus leading to an increase in methane emissions.

**Table 18: Results for the full adoption scenario, in tCO<sub>2</sub>-eq**

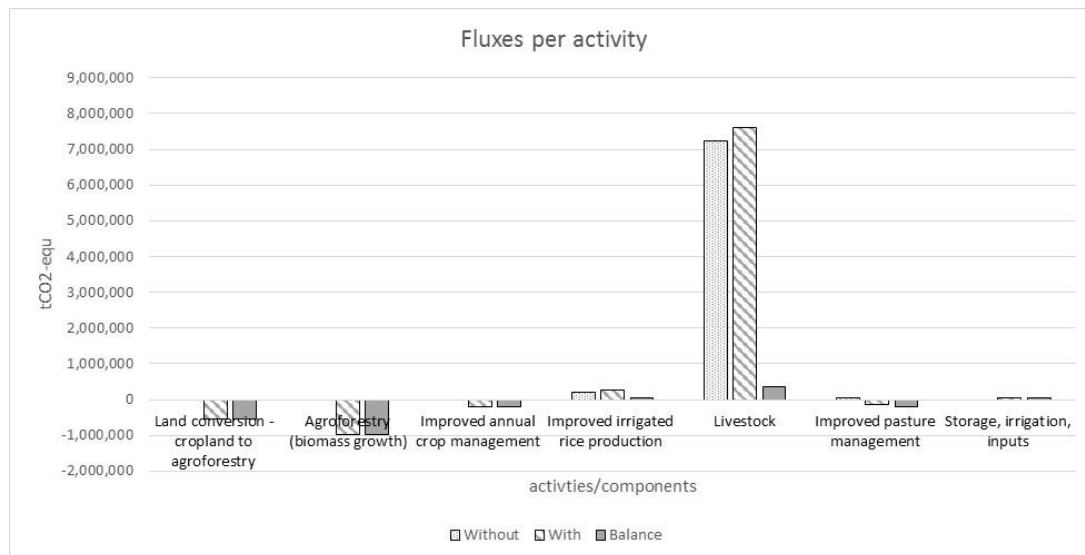
	Gross fluxes			Results per year		
	Without project	With project	Balance	Without project	With project	Balance
Land conversion from cropland to agroforestry	0	-549,267	-549,267	0	-36,618	-36,618
Agroforestry (biomass growth)	0	-985,200	-985,200	0	-65,680	-65,680
Improved annual crop management	0	-194,722	-194,722	0	-12,981	-12,981
Improved irrigated rice production	200,491	262,735	62,244	13,366	17,516	4,150
Livestock	7,247,568	7,601,095	353,527	483,171	506,740	23,568
Improved pasture management	53,625	-154,226	-207,851	3,575	-10,282	-13,857
Storage, irrigation,	0	53,321	53,321	0	3,555	3,555

inputs						
<b>Total</b>	7,501,684	6,033,738	<b>-1,467,947</b>	500,112	402,249	<b>-97,863</b>
<b>Per hectare</b>	194	156	-38			
<b>Per hectare/year</b>	13	10	-3	13	10	-3

**Figure 8: Gross carbon balance for the “with-” and “without-project” scenario and net carbon balance**



**Figure 9: Net carbon balance per project activities**



### Sensitivity Analysis

10. Sensitivity analysis was conducted for a range of adoption rates (90, 70, and 50 percent) (Table 19). The same analysis was conducted for the LAC (Low Activity) soil type, the dominant soil type in areas close to the project area). The results show that project remains a sizeable net carbon sink.

**Table 19: Results of sensitivity analysis, in tCO<sub>2</sub>-eq**

Adoption rate	Without project	With project	Net carbon balance
<b>Soil type HAC (baseline)</b>			
90 percent	7,501,684	6,160,776	-1,340,908
70 percent	7,501,684	6,414,854	-1,086,830
50 percent	7,501,684	6,668,932	-832,752
<b>Soil type LAC</b>			
100 percent	7,486,834	6,248,046	-1,238,788
90 percent	7,486,834	6,352,169	-1,134,665
70 percent	7,486,834	6,560,415	-926,419
50 percent	7,486,834	6,768,662	-718,173

**Conclusion**

11. The project constitutes a net carbon sink. It has a sizeable mitigation and carbon sequestration potential compared to a business-as-usual scenario, and thus it can contribute to DRC's INDC target. Agroforestry activities have the highest mitigation potential, whereas improvements in livestock and irrigated rice production—which also deliver important food security and economic benefits—can lead to an increase in emissions. The results should be interpreted with caution; however, as not all activities that could constitute a carbon source could be included in the analysis.

## **Annex 7: Approach for the Development of Agro-Industrial Parks (AIPs)**

### **DEMOCRATIC REPUBLIC OF CONGO: RGLIADP**

Articulate the sequenced approach for the development of the AIPs within the project's timeframe / stakeholder engagement framework

1. The following series of activities (Table 20) is required for decisions related to AIPs to be based on robust analysis, and it has been designed according to international best practice as well as lessons from AIP projects implemented by the World Bank since the 1970s. Each major step will require stakeholder engagement (indicated below under “comments”), including smaller focus groups, workshops, and larger stakeholder events for final validation of recommendations or findings.

2. The following stakeholders should be included in the consultation process:

Public Sector:

- AIP Authority
- Ministry of Agriculture
- Ministry of Industry
- Immigration
- Customs
- Public Works
- Ministry of Labor

Private Sector:

- Chambers of commerce
- Sector-specific associations
- Foreign investor associations/ chambers
- Large companies/ potential investors and developers, especially in agricultural and agribusiness sectors
- SME associations

Other:

- Non-governmental organizations
- Worker organizations and labor unions
- Think tanks / research organizations
- Other bilateral and multilateral donor organizations

The following documents will be prepared during project implementation:

- ToR for the literature review and constraints validation exercise (single consultant – international or local).
- ToR for the site assessment exercise (single consultant – international).<sup>115</sup>
- ToR for the benchmarking exercise (single consultant).
- ToR for the demand survey (consulting firm – local).
- ToR for the feasibility study and Master Plan (consulting firm – international/local consortium).
- ToR for transaction advisory services (consulting firm).
- Draft agreement with private developers/operators.

3. The government will have to decide whether it will yield the best results to bundle several of these activities together or to keep them separate. For example, the government could hire Transaction Advisors from the beginning and have them do the literature review, site assessment, benchmarking, demand survey, and feasibility study in addition to their transaction advisory services, or they can have separate entities conduct each of these exercises separately.

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<sup>115</sup> Having an international consultant conduct this study is desirable not only from a capacity/experience perspective, but also to ensure that the analysis is completely disinterested. It is possible that a local consultant will be suspected of having ties with individual sites or those wishing to develop them for a variety of commercial and political reasons. It will be important to present the case for different sites to the government and private sector clients from a completely technical perspective.

**Table 20: Activities required to provide robust evidence for decisions on AIPS**

Sr.	Activity	Timetable	Objective	External resource	Output	Est. Cost	Comments
1	Choose the 2-4 principal objectives for the AIPs	Month 1	To disaggregate the PDO into several individual goals that the agro-industrial parks are aiming to achieve.	WBG team in sessions with the GoDRC	List of the 2-4 objectives for the agro-industrial parks	US\$500	<p>Examples: reduce food dependence, foster SME development, and increase value-added to agricultural products, create jobs, prevent conflict, diversify agribusiness, etc.</p> <p>This will require stakeholder engagement, probably internal sessions with the government clients and one larger validation event with the full group of stakeholders. The objectives established here will be revisited after the diagnostics for revalidation.</p> <p><i>Note:</i> The number of objectives should be limited to at most 2-4. AIPs are not “silver bullets” for development and should focus on a few priority areas.</p>
2	Literature review <sup>116</sup> / constraints identification / validation of major constraints with the private sector	Months 1-3 <sup>117</sup>	To determine sufficiency of current information to identify constraints and market and government failures in targeted ag subsectors, and gather new information where necessary.	GoDRC Client Single Consultant	Literature review (10 pages)  Constraints identification (10 pages)	US\$15,000 <sup>118</sup>	This may include some initial fact-gathering activities such as organizing focus groups, especially of private sector stakeholders, to identify existing information, validate constraints, and gather new information.
<p><b><i>Decision point :</i></b>            Are AIPs the correct tool tackle the identified constraints and failures? (go/no-go)            Stakeholder group to involve: Government implementing agencies of the RGLIADP with technical assistance from the WBG team</p>							
3	Site assessment	Months 2-5 <sup>119</sup>	To identify which sites are suitable for AIP development	Single Consultant (int'l)	Site assessment (50 pages including annexes)	\$20,000	Subactivities: <ul style="list-style-type: none"> <li>Government provides long list of 8-15 sites; they should be of all shapes, sizes and several in each of the subareas of concentration (e.g., 2-3 in Kalemie and surroundings, 2-3 in two other areas).</li> </ul>

<sup>116</sup> A primary source document will be the recent enterprise survey conducted by the World Bank. Unfortunately, this study was not disaggregated on a subnational level, and hence the conclusions that can be drawn from it are limited. Constraints that affect this project must be identified as regional constraints to agriculture and agribusiness for eastern DRC.

<sup>117</sup> Includes procurement time.

<sup>118</sup> Travel and time for the consultant, some event costs for the stakeholder consultation.

<sup>119</sup> Includes procurement time.

Sr.	Activity	Timetable	Objective	External resource	Output	Est. Cost	Comments
							<ul style="list-style-type: none"> <li>• Consultant conducts site assessment; ranks sites.</li> <li>• Presentation and findings.</li> </ul>
<p><b>Decision:</b> Which will be the 3-4 pilot sites chosen for further analysis? (possibility of a go/no-go decision if none of the sites is suitable) Stakeholder group to involve: Government implementing agencies of the RGLIADP with technical assistance from the WBG team</p>							
4	Benchmarking exercise	Months 5-9	To determine how an agro-industrial park on the priority site(s) would fare against competitor parks/zones in comparator countries; this would also feed into the price determinations for infrastructure and services to ensure that they are competitive	Single Consultant	Benchmarking report (50 pages) Excel sheets with individual values and sources	\$15,000	<p>A decision will have to be made here with respect to the focus of the exercise, that is whether:</p> <ul style="list-style-type: none"> <li>• International investors will be contemplated in which case industrial parks and AIPs in comparator countries will be benchmarked.</li> <li>• Local investors and producers for which local options should be explored.</li> <li>• Regional investors for which conditions in select areas of DRC will be explored.</li> </ul> <p>Note: Some recent benchmarking information exists for some countries in Africa, which may be used if updated.</p>
5	Demand survey	Months 5-10	<ul style="list-style-type: none"> <li>• Determine if there is demand for one or more sites</li> <li>• Determine the subsectors for which there is demand for those sites</li> <li>• Validate constraints information</li> <li>• Provide information for the master planning phase (plot sizes, infrastructure and service requirements, whether the park business model should include renting out land or buildings, etc.)</li> <li>• Provide inputs into the</li> </ul>	Local consulting company	<ul style="list-style-type: none"> <li>• Demand survey and report</li> <li>• Individual survey results</li> <li>• Analysis, findings and recommendations</li> <li>• 20-year demand forecast</li> </ul>	US\$60,000	<p>Among other things, the demand survey will determine:</p> <ul style="list-style-type: none"> <li>• Agricultural subsectors (and other sectors) for which there is demand for AIP services.</li> <li>• Potential land uptake and thus phasing requirements.</li> <li>• Size and layout of plots, roads.</li> <li>• Infrastructure and service requirements.</li> <li>• Which sites are most desired by private sector?</li> <li>• Whether or not there is private sector interest in developing the agro-industrial parks.</li> <li>• Which sites do no harm to social</li> </ul>

Sr.	Activity	Timetable	Objective	External resource	Output	Est. Cost	Comments
			regulatory regime (i.e., what investors and especially AIP developers require to invest in DRC) <ul style="list-style-type: none"> <li>• Provide demand forecasting information for subsequent feasibility studies (for 3 scenarios - base case, aggressive case, pessimistic case)</li> <li>• Identify private sector interest in developing an AIP in the Great Lakes area, DRC side</li> </ul>				dynamics.  The range of costs comes from the range of levels of depth the demand survey can go into, what % of international companies are included in the surveys, and which language skills are required. The survey for DRC will most likely include mostly local companies.
6	Decision mission	Month 11	To make a final decision on the 2-3 priority sites, if any, on which to conduct subsequent feasibility study	WBG team with GoDRC client	A list of the sites on which both the World Bank and the client agree to proceed	US\$30,000	Activities: <ul style="list-style-type: none"> <li>• Specialist sessions to come up with initial recommendations.</li> <li>• Stakeholder validation of recommendations.</li> <li>• Sessions with government clients for final decisions.</li> </ul>
<p><b><u>Decisions:</u></b>  Which will be the 2-3 AIP projects subject to the feasibility study, if any? (go/no-go decision based on demand survey and benchmarking information)  Can the WBG support the project if the demand for an AIP project is for sectors other than AG?<sup>120</sup> (go/no-go decision)  Is there enough private sector interest in developing the AIP to target private developers?  Does the existing AIP law provide the appropriate regulatory framework for the AIPs, or is a separate regulatory framework needed?  Stakeholder group to involve: Government implementing agencies of the RGLIADP with technical assistance from the WBG team</p>							
7	Conduct (pre) feasibility <sup>121</sup> study, master planning, and environmental and social impact analysis	Months 10-22	<ul style="list-style-type: none"> <li>• Complete a Master Plan for the project</li> <li>• Calculate probable IRRs and ERRs for the project</li> <li>• Complete environmental and</li> </ul>	Consulting firm <sup>122</sup>	<ul style="list-style-type: none"> <li>• Feasibility study</li> <li>• Best Practice Master Plan</li> <li>• Financial and Economic Analysis</li> </ul>	\$600,000	These costs assume that the government will be targeting the sites for private sector development, hence more of a “pre-feasibility” to be used in attracting a developer, rather than the GoRDC

<sup>120</sup> Demand survey may reveal that certain sites have demand for both ag and other sectors. In theory, this should not automatically rule out WBG involvement, but it will require some expert evaluation of the potential impact of these sites on the ag sector, which is the focus of the PDO. For example, if demand forecast indicates that for a larger site – say 500ha – 40% of the AIP will be filled by agro-processing companies, but the rest by other sectors, the potential impact of this 40% in that particular geographic location might be sufficient for the WBG to decide to move ahead with supporting the AIP.

<sup>121</sup> Much of the decision about the scope and scale of the feasibility study will depend on what the demand survey has indicated about the interest among potential private developers. If the interest is low, the GoDRC may have to develop at least the first phase by itself, requiring a more rigorous feasibility study and Master Plan to then move to the development stage. If the demand survey shows a high interest in the private sector developing AIPs, a pre-feasibility study may be sufficient to demonstrate to private sector developers the business case for developing the AIP. In this case, the pre-feasibility study constitutes an investment promotion tool, and the private developers will conduct their own in-depth feasibility study.

<sup>122</sup> There are several ways of providing these services. The demand survey, feasibility studies, and transaction advisory services in the implementation phase can be tendered out together or separately. There are advantages and disadvantages to either bundling these or not, and the WBG team will discuss with the GoDRC the best approaches for this.

Sr.	Activity	Timetable	Objective	External resource	Output	Est. Cost	Comments
			social impact assessments		<ul style="list-style-type: none"> <li>Environmental and Social Impact Assessments</li> </ul>		<p>developing themselves.</p> <p>This assumes a feasibility study for 2 sites.</p>
8	Develop criteria for licensing an AIP and for providing financing through the financing window	Months 22-24	Provide criteria for licensing an AIP and disbursing under a financing window	WBG team and GoDRC client	List of criteria	\$500	<p>Costs represent event costs only.</p> <p>Although draft criteria have already been developed, these will need to be revalidated based on the diagnostics.</p> <p>Stakeholder engagement: Some validation among a wider group of stakeholders might be desirable, especially private sector stakeholders.</p>
9	Reevaluate and reformulate the 2-4 principal objectives for the AIPs	Month 23-24	Based on the previous diagnostics, reevaluate the original goals of the AIP regime to ensure that they are feasible, and reformulate them if they are not	WBG team and GoDRC client	Reformulated list of AIP regime objectives		Stakeholder engagement: Government implementing agencies with technical assistance from the WBG team.
<p><b><u>Decision:</u></b>            What will be the criteria for licensing a particular AIP or gaining access to financing window funds?            Which specific AIP projects should the Project finance based on the diagnostics submitted?            Stakeholder group to involve: The results of the feasibility studies, new criteria for licensing an AIP, and 2-4 objectives for the AIPs should be communicated with and validated by the full group of stakeholders in a series of large-scale events.<sup>123</sup></p>							
<p><b>Post-diagnostic Phase</b></p>							
10	Obtain technical assistance from Transaction Advisory Services (TAS)	Months 12-36	Incorporate lessons learned from other AIP projects worldwide in contracting TAS consultants to assist the government with navigating all aspects of attracting private developers and	TAS consultants <sup>124</sup>	Tendering documents, orientation sessions on choosing the best AIP developer/operator, capacity-building sessions, general	\$500,000 <sup>125</sup>	Duties of the TAS will be: to tender out AIP development and management to the private sector, attract anchor investors, <sup>126</sup> and provide capacity building for government agencies.

<sup>123</sup> In Bangladesh, for example, local development companies were considered the most likely developers/operators of AIPs in the country. The results of the feasibility studies were communicated with a wide group of local stakeholders in 3-4 large events, from which 7 potential developers were identified 3 of which are current in the process of developing the first private zones in Bangladesh.

<sup>124</sup> Typically one of the big 4 companies (e.g., Ernst & Young, PWC).

<sup>125</sup> Obviously, the costs will depend on the set of services offered. Keep in mind that \$600,000 was already contemplated for the feasibility studies, and if the TAS will be conducting these studies, that quantity would be added on to their contract.

<sup>126</sup> As indicated above, the TAS consultants can alternatively be contracted earlier to conduct the demand survey, the feasibility study and these services. There are advantages and disadvantages to bundling this work, and this warrants some in-depth discussion between the WBG team and the GoDRC.



Sr.	Activity	Timetable	Objective	External resource	Output	Est. Cost	Comments
			operators and large anchor companies		handholding.		
11	Identify private AIP developers and operators, tendering, negotiating agreements for first AIP sites, construct infrastructure, buildings, common areas	Months 12-60	Line up private developers, operators, and anchor companies for the first priority AIPs	TAS consultants	Signed agreements with 2-3 developers / operators		
12	Construction of off-site enabling infrastructure to enable AIP development <sup>127</sup>	Months 22-48	Enable the construction of the AIPs by connecting them with needed infrastructure	<ul style="list-style-type: none"> <li>• TAS consultants</li> <li>• Construction companies</li> </ul>	Completed construction of off-site infrastructure		
13	Construction of on-site infrastructure	Months 36-60	Develop new AIPs (ideally with private development and operation)		Completed on-site infrastructure		This will take place once agreements have been signed with the private sector developer/operator.
14	Investment promotion for AIP tenant companies, especially “anchor companies”	Months 13-60	Ensure that the AIPs are being developed according to approved Master Plans				
15	Construction of AIP tenant companies in priority zones	Months 36-60	Ensure that the AIPs are being developed according to approved Master Plans				
16	Opening of the first AIPs	Month 49-60	To launch the first AIP projects with operating tenant companies				
17	Begin to register results in new investments, jobs created, increases in agribusiness <sup>128</sup>	Month 56-60	To ensure that the AIPs are having the desired impacts				
	<b>Total</b>					<b>\$1,241,000</b>	

<sup>127</sup> Based on the findings of the pre-feasibility studies and negotiations with the private developers

<sup>128</sup> Replace these with the disaggregated objectives for the AIP regime.

**Project Activity Timeline**

**Table 21: Project Years 1 & 2**

Sr	Activity	Comment	Project Year 1												Project Year 2											
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	Choose AIP objectives																									
	Hold internal sessions		█																							
	Hold larger validation event		█																							
2	Conduct literature review / validation of constraints																									
	Draft ToR/procurement		█																							
	Conduct literature review			█	█																					
	Stakeholder validation				█																					
3	Conduct site assessment																									
	Draft ToR/procurement			█																						
	Identify long list of sites			█																						
	Conduct consultant mission				█	█																				
	Analyze data / determine ranking					█	█																			
	Validate ranking						█																			
4	Conduct benchmarking exercise																									
	Draft ToR/procurement						█																			
	Decide on sites to be benchmarked						█																			
	Conduct fact-gathering, analysis, and make recommendations							█	█	█																
	Validate conclusions											█														
5	Conduct demand survey																									
	Draft ToR/procurement						█																			
	Generate / approve database							█	█																	
	Draft / approve survey							█	█																	
	Conduct survey, analyze								█	█	█	█														

Sr	Activity	Comment	Project Year 1												Project Year 2											
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
	results, draw conclusions																									
	Validate results and conclusions																									
6	Decision mission																									
7	Conduct (pre) feasibility study																									
	Draft ToR/procurement																									
	Kick-off; inception report																									
	Complete initial stage analysis; first draft																									
	Review and comment																									
	Draft final report																									
	Stakeholder presentations																									
8	Develop criteria for licensing an AIP																									
9	Reevaluate AIP objectives																									
10	Obtain TA from TAS																									
	Draft ToR/procurement																									
	Perform TAS services																									
11	Identifying private AIP developers and operators																									
	Conduct investment promotion for developers/operators																									
14	Investment promotion for AIP tenant companies																									

**Table 22: Project Years 3 & 4**

Sr	Activity	Comment	Project Year 3												Project Year 4											
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
10	Obtain TA from TAS																									
	Perform TAS services																									
11	Identify private AIP developers and operators																									
	Conduct investment promotion for developers/operators																									
	Develop and float tender for AIP development																									
	Evaluate bids																									
	Reward tender and negotiate																									
	Sign agreement with developer																									
	Construct on-site infrastructure																									
14	Investment promotion for AIP tenant companies																									
15	Construction of AIP tenant companies																									

**Table 23: Project Year 5**

Sr	Activity	Comment	Project Year 5											
			1	2	3	4	5	6	7	8	9	10	11	12
10	Obtain TA from TAS													
	Perform TAS services													
11	Identify private AIP developers and operators													
	Conduct investment promotion for developers/operators													
	Develop and float tender for AIP development													
	Evaluate bids													
	Reward tender and negotiate													
	Sign agreement with developer													
	Construct on-site infrastructure													
14	Investment promotion for AIP tenant companies													
15	Construction of AIP tenant companies													
16	Opening of the first AIPs													
17	Begin to register new investments, jobs created, increases in agribusiness <sup>129</sup>	Month 53												

Development of a clear set of criteria

The following criteria will be used to prioritize sites as a result of the site assessment exercise (Table 24):

**Table 24: Summary of criteria for site assessments**

Criteria	Definition / parameters
Size of the land	<ul style="list-style-type: none"> <li>At least 100 ha</li> </ul>
Land ownership	<ul style="list-style-type: none"> <li>Clear land titling or government-owned preferable; any unclear land titling issues should be flagged</li> </ul>
Access to major transport modes	<ul style="list-style-type: none"> <li>Access to a major highway; rail, airport and port connections are a plus</li> </ul>
Surrounding context – safety, security, and conflict	<ul style="list-style-type: none"> <li>Access to major transport modes is not impacted by security issues, theft, or conflict on a regular basis</li> <li>Land is not contested between ethnic communities</li> <li>Planned AIP activities will benefit ethnic communities equitably</li> </ul>
Environmental and social impacts	<ul style="list-style-type: none"> <li>No environmental deal-breakers such as being located on a flood plain</li> <li>Religious and cultural landmarks can be avoided</li> <li>Avoids complicated or costly resettlement issues</li> </ul>
Availability of electric power and water	<ul style="list-style-type: none"> <li>Either sufficient electric power for the project provided through the existing grid or an electric power plant for generation/transmission/distribution dedicated to the AIP</li> <li>Access to water, either through existing sources or the ability to provide dedicated water through one or more boreholes</li> </ul>

<sup>129</sup> Replace these with the disaggregated objectives for the AIP regime.

The following criteria (Table 25) have been developed for two purposes:

1. To determine what conditions should be met before issuing a license for AIP development for a particular AIP.
2. To provide trigger criteria for obtaining funds through a possible financing window that might be designed by the Project.

Criteria to date set up by the project are the following; hence, the criteria developed in this section are placed under each of these categories:

**Table 25: Criteria developed by the project to date**

General Area	Criteria
Development potential ( <i>Potentiel de développement</i> )	Feasibility study which results in an IRR of at least 18% and an ERR that is acceptable to the government
Social and environmental feasibility ( <i>Viabilité socio-environnementale</i> )	Social and environmental diagnostics including an Environmental and Social Management Framework (ESMF), an Environmental and Social Impact Assessment (ESIA), any needed Resettlement Action Plans (RAPs), and implementation plans on how to mitigate impacts
Inclusivity ( <i>Inclusivité</i> )	A strategy on how to maximize benefit to smallholders and SMEs through the AIP project
Private sector interest ( <i>Intérêt du secteur privé</i> )	Demand analysis and forecasting which demonstrate uptake of land and buildings that yield an IRR in the proposed AIP of at least 18%
Accessibility ( <i>Accessibilité</i> )	The subject land area is in close proximity to actual or proposed off-site infrastructure including roads, electric power, and water
Security, awareness of the prevention and management of conflicts ( <i>Sécurité, sensibilité à la prévention et gestion des conflits</i> )	The site cannot be eliminated as a possibility because of severe security, safety, or conflict issues

It is important to note that criteria for these purposes must strike a balance. They must not be so burdensome as to discourage potential investors (which may be few in the preliminary stages), but at the same time they must ensure that national interests are preserved.

To gauge the interest of the private sector (*intérêt du secteur privé*):

- **Demand analysis**, including a demand survey among a target group of companies and demand forecasting over a certain number of years. The demand survey must determine that there is sufficient investor demand to justify the development of the AIP at the proposed location (all demand surveys older than three years must be re-validated), and should include different scenarios (such as a base case scenario, aggressive scenario, and pessimistic scenario).

To gauge the potential for development (*potentiel de développement*):

- **A complete feasibility study**, based on the findings of the demand analysis, which: (i) outlines the assumptions made to complete the study; (ii) includes a Master Plan with a phased site development strategy, the triggers that will need to take place for the subsequent phases to commence, and clear land use planning and infrastructure plans; (iii) makes a definitive determination of the ownership of the lands comprising the

proposed site (whether or not they are undisputed and are not subject to any actual or impending legal liability or contingency that could give rise to a legal claim); and (iv) provides a financial analysis that demonstrates financial viability, commercial sustainability, acceptable projected internal rates of return (IRR) of the proposed AIP, and sensitivity analysis based on the scenarios from the demand survey. (See below for the content requirements of a feasibility study and Master Plan.)

- ***A government cost-benefit / economic analysis*** which indicates that the AIP will bring sufficient benefits to the country to justify any government outlays of funds, and the expected returns to the national economy in fiscal terms. This analysis can be based on studies provided by the private developer/operator, if the studies are deemed to be based on good analysis.

To gauge social and environmental viability (*viabilité socio-environnementale*):

- ***Environmental and social safeguards***, including an ESMF, an ESIA, any needed RAPs, and implementation plans on how to mitigate impacts. (See below for further details on required content).

Accessibility (*accessibilité*):

- ***Access to required infrastructure***: The subject land area is in close proximity to actual or proposed off-site infrastructure, including roads, electric power (unless the Master Plan is able to demonstrate a reasonable plan for providing sufficient dedicated on-site sources), and water (requirements for water and waste-water treatment will vary from sector to sector).

To gauge potential access, security, and conflict impacts (*sécurité, sensibilité à la prévention et la gestion des conflits*):

- ***Location in a non-conflict area without major security issues***: The site cannot be eliminated as a possibility because of severe security, safety, or conflict issues. Investors will not locate in an area where doing business is impossible because of prohibitive security issues and costs.
- ***The site is not contested*** between communities, who both claim that the land is traditionally theirs. In terms of benefits, the proposed activities will clearly have a more or less equitable impact (in terms of jobs, infrastructure, and so on) on both groups.

Inclusivity (*inclusivité*):

- ***Smallholders and SMEs***: The AIP has real possibilities to benefit smallholders and SMEs, and there are strategies for including the local communities in the economic growth of the AIP.

In addition, the following conditions and criteria will apply to all AIPs located on government land, whether they will be developed and/or operated by the private sector or the public sector:

- *A site assessment*, which determines whether the site will be suitable for AIP development, what issues need to be considered in developing that site, and if there are any “fatal flaws” or deal-breakers that completely eliminate that site as a possibility for AIP development (see below for the required content and issues to address in a site assessment).

Finally, and in addition to the criteria above, the World Bank should determine which criteria should be used to decide whether to support individual AIP projects:

- *Agribusiness sector demand*: At least 40 percent of the allocated operational land<sup>130</sup> has strong demand from agro-processing subsectors. Given that the AIP is an agricultural / agribusiness project, there must be a minimum demonstrated demand for agribusiness in the AIP.

#### Design parameters of appropriate feasibility and site studies

### **Content of a Best-Practice Site Assessment Exercise**

The purpose of a site assessment exercise is to determine if a particular site is suitable for an AIP or AIP development. Several steps are involved in completing a site assessment, which typically looks at anywhere from 3 to 15 sites to rank and prioritize them in order of best to worst from an AIP development perspective. Each site will receive a separate analysis; hence the following typical steps are repeated for each site examined:

1. Examine factors such as the following (not an exhaustive list):
  - General site characteristics
    - Size of the land
    - Space for contiguous expansion
    - Land ownership (a definitive identification of who owns the land and any titling issues can be left for the feasibility study, but any uncertainties identified in the site assessment stage should be flagged for the feasibility study)
    - Surrounding context, including safety and conflict
    - Locational vulnerability
    - Existing land use
    - Topography
    - Soil conditions
  - Access
    - Access to major transport modes
    - Access to urban hubs

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<sup>130</sup> Not 40 percent of the total AIP land. An international benchmark is that 30 percent of all AIP land should be left as green/common areas, with 70 percent allocated for industrial/operational land, usually in plots rented out to AIP tenant companies. Hence, the demand for agricultural / agribusiness tenants must be at least 40 percent of the 70 percent allocated for industrial/operational land.



- Infrastructure
    - Existing on-site infrastructure
    - Existing off-site roads, power, water, waste water treatment facilities, drainage, telecoms
  
  - Environmental and social impacts
    - Contamination issues
    - Loss of livelihoods
    - Historic/religious/cultural landmarks/buildings
    - Indigenous peoples
    - Existing labor
    - Resettlement needs
  
  - Quality of life
    - Safety
    - Existing international housing
    - Existing international schools/hospitals
    - Existing parks/open space
    - Leisure activities
2. Use the above information in a SWOT analysis to identify the strengths, weaknesses, opportunities, and threats for each site.
  3. Identify for each site the critical development issues that should be taken into consideration when evaluating the site for AIP development, such as a remote location, critical off-site infrastructure needing improvement, ambiguous land ownership, or resettlement issues. In addition, this analysis should identify any “fatal flaws”, that is, any factors that eliminate that site as a possibility altogether (for example, it is located on a flood plain, has extreme security issues, extensive and unmanageable toxic wastes are discovered on-site, or a combination of flaws).
  4. Rank sites in order of priority and desirability as AIP sites. This ranking will be used to identify the 2–3 sites for which a demand survey will be performed, with the possibility that none of the sites provided in the long list is suitable for AIP development.

### **Content of a Best-Practice Feasibility Study and Master Plan**

The following general headings would typically be covered by a feasibility study/Master Plan:

- Project Description
  - Project profile/ project overview
  
- Agro-Industry Sector Assessment
  - Agro-industry sector assessment
  - List of proposed agro-industry sectors for the AIP

- Overview of these agro-industry sector requirements (infrastructure, land, and employment)
  - Outline of the agro-industry sectors value chain/logistics/export requirements
- Demand Analysis
  - Draft demand survey and survey exercise
  - Analysis of results
  - Scenario analysis: base case, aggressive case, pessimistic case
  - Demand forecast for a 20-year period
- Marketing Plan
  - Marketing strategy
  - List of targeted investors and countries
  - Preferred methods of marketing the AIP
- Master Planning
- Land Survey—Boundaries
- Site Description—Context, location, size, general description
- Determination of Ownership / Pending Titling Factors
- Existing Conditions of the Site—topography, soil conditions, existing structures, landmarks, constraints, environmental and social issues
- Planning Framework
- Master Plan with Plot Plan
- Land Use Plan
- Zoning Plan
- Phasing Plan
- Infrastructure Requirements
  - Assessment of on and off-site infrastructure and utilities needed and potential improvements
  - Concept infrastructure plans for key utilities (roads, power, water, drainage, effluent treatment plant, waste water, solid waste, and telecom)
  - Cost estimates for required infrastructure and utilities, leveling of land, construction
- Environmental and Social Review
  - Environmental Impact Assessment
  - Environmental Management Plan
  - Social Impact Assessment, including resettlement issues
  - Resettlement Plan, if required
- Financial Modeling
  - Capital costs for infrastructure
  - Operating and management costs
  - Revenues

- Balance sheets
- Sensitivity analysis
- Project IRR
- Proposed leasing/sale pricing
- Economic Analysis
  - Economic impacts and cost/benefit assessment
  - Economic rate of return for the project
- Implementation Plan
  - Timing of all components of the project

Articulate scenarios of possible interventions depending on the outcome of the above - if yes, what type of infrastructure will be financed, adherence to the World Bank's social and environmental safeguard requirements, financing window, investment promotion, regulatory framework, management structure, etc.

The following costs are commonly incurred by the government in AIP regimes:

***Providing enabling off-site infrastructure.*** If a site is to function as an AIP at all, it is often necessary to create new off-site (often called “last-mile”) infrastructure, especially for a greenfield project, or to upgrade existing off-site infrastructure. Typically, this might include:

- Roads
- Railroads
- Bringing electric power to the site (sometimes not necessary if the AIP developer has a specific plan for dedicated on-site electric power generation/transmission/distribution)
- Bringing water to the site (often provided through an on-site borehole, either one or several on-site boreholes provided by the AIP developer for all the tenant companies or by each individual company for their own operations)
- Port and airport construction/upgrading (only if deemed absolutely essential for an AIP project)

***Providing on-site infrastructure.*** Because attracting private AIP developers and operators is perhaps the most difficult aspect of an AIP regime, and competition for the few existing developers/operators is fierce, governments are often forced to make significant concessions to these developer/operators. It is common for governments to “sweeten the pot” by offering certain aspects of on-site infrastructure, which are normally the responsibility of the developer. Some of the following may be included in this package:

- Perimeter and internal walls
- Internal roads
- Electric power plant for generation/transmission/distribution
- Water for industrial and sanitation purposes
- Waste water treatment
- Solid waste disposal facilities

- Administrative buildings
- Standard factory buildings
- Customs facilities and control station
- “Social” infrastructure (such as clinics and daycare centers)

Note: In a fully government-developed/operated AIP regime, the government would bear all of the above costs. AIPs typically cost US\$100–200 million by the time the entire area is developed and occupied.

***Other costs to government***

- Operation of a one-stop-shop for AIP tenant companies
- Establishing a new AIP authority (personnel, office construction / rental, office outfitting)
- Conducting studies (site assessments, feasibility studies, Master Plans, ESIAs, RAPs)
- Contracting Transaction Advisory Services

In a fully government-developed/operated AIP regime, many additional costs would be incurred, such as the costs of providing security to each AIP and personnel to actually manage and operate each AIP. These costs can be significant. As an example, when the Philippines converted from 16 government-developed/operated to 300 privately-developed/operated zones, they were able to reduce the number of people needed in the AIP authority from 1,600 to 600.

## Annex 8: Conflict and Political Economy

### DEMOCRATIC REPUBLIC OF CONGO: RGLIADP

#### THE POLITICAL ECONOMY OF LAND AND IDENTITY<sup>131</sup>

1. The DRC's South Kivu Province and the western Imbo Plains in Burundi have constituted one of the most conflict-affected areas in the African Great Lakes region over the last decades. The area has been a conduit for trade and emigrating tribal communities for hundreds of years. The Banyamulenge from Rwanda and the Barundi from Burundi moved into what would become South Kivu Province over the last hundred years and settled among the autochthonous tribes. Tribal and family connections across borders are common to this day. Regional tensions flared during the two Congo Wars (1996–1997 and 1997–2003), when Rwanda and Burundi first supported a Congolese rebellion to overthrow the Mobutu regime and subsequently turned sides and fought against the newly established Congolese state when they were pushed out. The border between South Kivu and Burundi became one of the most heavily militarized areas in the region over the following years: military operations and armed groups as the FDLR and the FNL fought each other, with local armed self-defense groups (the so-called *mayi-mayi*) fighting to control territory and benefit from smuggling mineral and other resources. Regional strategic interests in the area were rife. For Burundian rebel groups like the FNL, South Kivu was a convenient fall-out base from which to launch attacks against Bujumbura, which had not let them join the government and integrate into the army. For Rwanda, South Kivu was home to the Banyamulenge community, which Kigali saw as a Rwandan security interest, even if the Banyamulenge themselves have historically preferred to stay independent from the regional conflict.

2. If regional tensions are political, however, the political economy of the South Kivu–Western Burundi area plays a critical role as well. Politics may be the *trigger* for conflict in the region, but land and identity are a key *driver* of armed violence—and therefore highly relevant for any agriculture program in the area. Despite all the attention that Congolese “blood minerals” have gotten in the press, the real cornerstone of the economy, and the best part of people’s livelihoods and identity, is related to the all-consuming issue of land. Burundi is the second most populated country in Africa (after Rwanda), and with a growing population and few economic opportunities in agriculture available, pressure on land is increasing rapidly, leading to tensions between villages and families about access to the soil. The eastern DRC, despite its much larger surface, suffers from a similar problem. The amount of arable land available—land that is not owned by large-scale proprietors or part of natural parks—is actually relatively limited. In both countries, bad seed, poor agricultural practices, and erosion are worsening the problem. As a result, in both DRC and in Burundi, the cause of conflict that is cited most often is the inability to gain access to land.

3. Access to land is not merely a technical problem, something that can be “fixed” by increasing agricultural yields, but a highly political issue. Precisely because of its value, land has become a key source of patronage in both countries. Politicians, businessmen, armed groups, and

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<sup>131</sup> For a good overview of conflict in the area, see for example the UN's *International Security and Stabilization Support Strategy* (ISSSS, 2012); participatory studies undertaken in both countries by the Life and Peace Institute (2010–15); and publications by the International Crisis Group (2014–15).

military officers occupy land and hand it out to their supporters, building their resource base. In both Burundi and DRC, land titling is a highly opaque process, with overlapping and contradictory formal and customary rules and regulations, and poor government oversight, with the result that well-connected and rich individuals can easily gain access to land titles. For subsistence farmers, however, land is not a “negotiable” asset, and not only for livelihood reasons. Land is a critical source of belonging: land belongs to the tribe, or the community, or the family, and is a fundamental part of one’s identity. Particularly in times of crisis, people will fight against any supposed interloper and support local “self-defense” groups to do so if they have to. The many unemployed youths in the countryside, or those who have moved to the cities, can be willing participants in this dynamic; many of them have joined *mayi-mayi* rebel groups in the Congolese Ruzizi Plains and Fizi, and armed movements like the *imbonerakure* and FNL in Burundi.<sup>132</sup> Land and agriculture, in turn, also provide an important source of income for government and armed groups: farmers in areas under the control of political or armed groups are forced to pay “tithes,” and roadblocks are set up on access roads to agricultural production areas and markets to illegally tax farmers and traders.

4. This explosive situation makes it relatively easy for politicians to mobilize people around an ethnic or land-centric discourse. This type of political maneuvering has been the case particularly in DRC—elections are often fought on an ethnic basis, with people voting in blocs for the candidate from their community, who promises them land and access to government resources in return. A particularly dangerous element in this political game in South Kivu is the presence of the Barundi and Banyamulenge communities in the province. There is substantial mistrust of both groups, which, after two wars, are (largely incorrectly) seen by the “autochthonous” Babembe and Bafulero communities as proxies of Rwandan and Burundian interests and as “foreigners” who are occupying land that does not historically belong to them. An added problem is that many Banyamulenge are pastoralists, who graze their cattle in the agricultural areas of other communities, which further raises tensions. As a result, South Kivu has been fertile soil for xenophobic politics.<sup>133</sup> Across the border, Burundi is in a slightly different situation. The issue here is not so much between tribes, as the Hutu-Tutsi difference (at least until the recent electoral violence, but this has barely spread outside of Bujumbura) is less of an issue than the use of land by political interests to buy allies, especially in the Imbo Plains.<sup>134</sup> This patronage shrinks the amount of arable land and water even further, leading to violence within villages, communities, and even families.

5. This generalized uncertainty and insecurity has led to people in both countries to adopt less sustainable agricultural practices, further worsening their vulnerability to shocks. In Burundi, with insecure land titles and an ever-increasing patchwork of small fields split up between families, people have largely fallen back on small-scale subsistence agriculture with little left to sell in the market and make a profit. In DRC, the situation may be even worse: without knowing when the next illegal taxation is due, when another armed group may pass through, and where going to the market may mean running the gauntlet of roadblocks, people have fallen back on small-scale farming of crops that are rapidly ready for harvest. As a result,

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<sup>132</sup> *Imbonerakure* (“those who see far”): a youth movement closely related to the ruling party in Burundi.

<sup>133</sup> During the 2011 presidential elections, for example, Etienne Tshisekedi won Fizi Territory through a discourse that promised to “throw out the foreigners” if he won.

<sup>134</sup> The Imbo Plains fall under the *paysannat* system, which means that farmers need to be able to show a land title dating from the colonial period (1950s) to be able to keep their land. This demand is often impossible to meet, and it leaves people vulnerable to land grabbing.

farmers in both countries have little extra income left to save, or to send their children to school, or to prevent malnutrition through a diversified diet. Moreover, farmers have no safety nets to protect themselves against external shocks: a missed harvest, a flood, a landslide, or (in DRC) the need to flee from fighting means that entire communities can be rapidly put in harm's way.

## REGIONAL LINKAGES AND SPILLOVER

6. Land-related violence plays out differently in Burundi and DRC, even though the causes of it are arguably similar: a shortage of arable land, poor governance, and the use of land for patronage. South Kivu, however, seems to be in a more dangerous situation due to the ethnic element involved in land claims and the continuing presence of armed groups on its terrain. An agriculture program in the area will first and foremost have to deal with these issues based on their local specificities, rather than from a generalized regional point of view.

7. However, a number of regional issues between South Kivu and Burundi (and to a lesser extent Rwanda) are also relevant for raising tensions in the area. Some of these issues are of long standing. In particular, they are the harassment of traders moving agricultural goods across the borders by customs guards asking for bribes, and the movement of pastoralists from Rwanda, Burundi (and even Tanzania) into Fizi and the Ruzizi Plain to herd their cattle. More widely speaking, there is a long history of mistrust across borders, and rumors fly, in particular of Burundian and Rwandan businessmen buying large tracts of lands in the Ruzizi Plains and in Fizi for their own private use, further marginalizing local farmers.

8. Over the last year, the Burundian electoral conflict has spilled over into South Kivu Province. First, some 230,000 Burundian refugees have entered the surrounding countries—moving mainly into Tanzania and Rwanda, but also into DRC via South Kivu. As DRC has much poorer infrastructure to take care of these refugees, many are staying in poor makeshift camps or with Congolese communities. This latter group, who are mainly staying with the Barundi, with whom many have family ties, have caused serious concern with the “autochthonous” Bafulero community. There is a long-running conflict between the Barundi and Bafulero over who owns the land and whose customary authorities are in charge of the area, and many Bafulero youths see the Burundian refugees as shifting the demographic balance in the favor of the Barundi. This fear has led to rising tensions and has increased the difficulty of negotiating between the groups.<sup>135</sup> Moreover, the influx of Burundians has increased pressure on land, with many host communities now in as vulnerable a state (or worse) as their guests. If the refugees are causing a spillover effect into Congo at this point, there is a good chance that the reverse will happen once tensions calm in Burundi in the coming year(s). Many of the refugees are from the Imbo Plains and it is not at all certain that their land will be waiting for them upon their return. Rumors abound about illegal expropriation by both political actors (as the refugees are often seen as “enemies of the regime”) or by neighboring communities who are short of land and see their chance to occupy the empty fields for themselves.<sup>136</sup>

9. A second issue, which is rather harder to pin down, is that South Kivu has long been a fall-out base for Burundian armed groups to train and launch attacks against the government in Bujumbura. There are increasing rumors that Burundian armed groups are once again moving

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<sup>135</sup> Discussion with Life and Peace Institute mediators active in the area, November 2015.

<sup>136</sup> Discussion with civil society organizations and diplomats in Burundi, November 2015.

into the Ruzizi Plain, crossing the long and largely unguarded Ruzizi River, to either wait out the conflict or to use South Kivu as a fall-out base once more. It should be noted that as of yet, there is little tangible proof for this development—though in an explosive situation like the one in South Kivu, sometimes perceptions are enough to quickly raise tensions.<sup>137</sup>

## PEACEBUILDING THROUGH AGRICULTURE

10. For the proposed RGLIADP, then, three points stand out. First, an agricultural development program cannot “solve” conflict by itself, as violence is primarily triggered by politics. However, the project will have an important impact on increasing livelihoods options and thereby diminishing tensions between groups and providing alternatives to violent mobilization—in other words, it will have a very important indirect social effect. Second, conflict differs by country and even by area—the violence between the Barundi and Bafulero, for example, is different from that between the Banyamulenge and Babembe, and is different again from local-level land-related violence in Burundi. This means that, even if the agriculture project cannot deal directly with all these issues, locally appropriate responses will build on communities’ own perceptions of the conflict and support locally led solutions. Finally, it is important to realize that to have a positive impact and “do no harm,” the agriculture project will keep in mind not only how to “grow the pie” (in terms of agricultural yields), but also “how the pie is divided.” Who benefits (or who is *perceived* to benefit) from the project is perhaps as important as how people benefit from it. This issue cannot be underestimated.

11. Despite the mistrust and violence, there are still important sources of resilience at the community level. Some of the most successful projects in Burundi and South Kivu have been based on grassroots dialogue between communities or within communities: if people speak to each other and are given time to strip away the ethnic discourse and stereotyping, they often realize they have much more in common than what divides them. They are all poor and living in uncertainty, and feel that political and armed actors are taking advantage of them. Moreover, there is a certain skepticism that state institutions are willing to act as a neutral broker, as many people in both countries (rightly or wrongly) see the state as biased toward particular individuals or (in DRC) toward particular communities. The project will therefore ensure that dialogue and land mediation happen based on people’s self-identified needs, and getting the communities to take charge of the process by themselves.

12. Successful projects for early recovery and development in both Burundi and South Kivu have been based on the principles of dialogue and Community-Driven Development (CDD). Good examples are the early recovery projects under the UN’s International Security and Stabilization Support Strategy (ISSSS) in DRC, where communities themselves prioritize projects for agriculture based on inter-ethnic dialogue; and projects by ZOA, a Dutch NGO that has set up local village committees that in turn prioritize and accompany agriculture projects, to ensure that everyone gets their equal share of project benefits. In both countries, these projects have ensured that all notables, decision-makers, and vulnerable groups have had a say in the proceedings: formal and informal authorities, women’s groups, youth representatives, and farmer’s collectives. It may take slightly longer to come to a decision through community-based planning, but people know their own needs very well and, as we have seen, a top-down planning

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<sup>137</sup> Discussions with MONUSCO officials, November 2015.



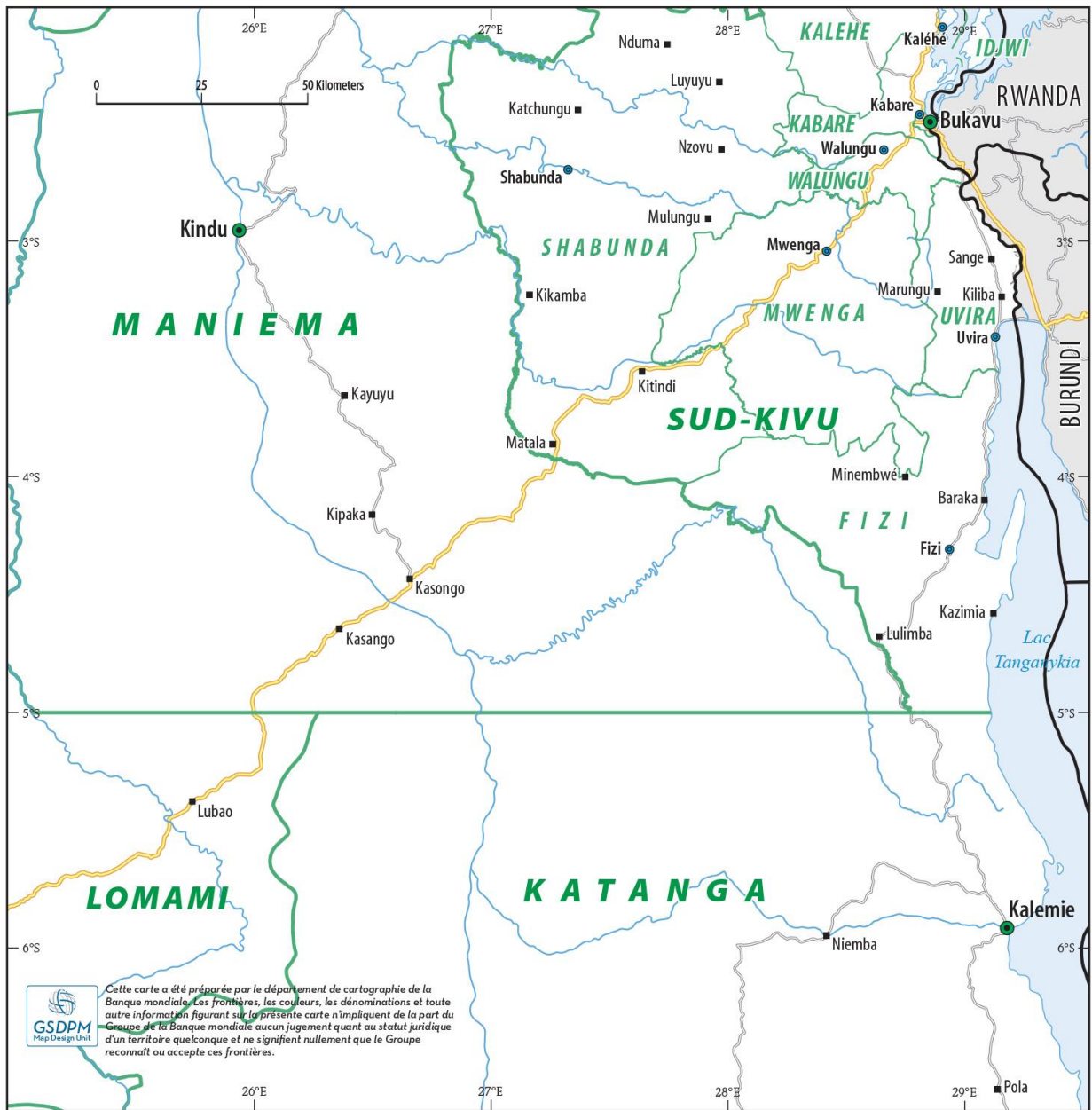
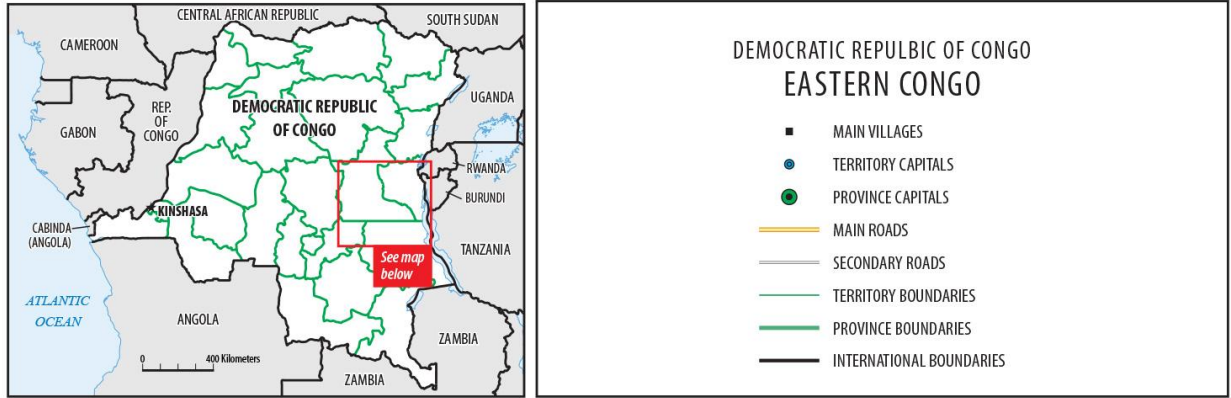
process based only on what makes sense from an economic point of view may do harm to social dynamics by ignoring the question of how the project benefits are divided.


13. The agriculture project will therefore have an (indirect) impact on regional tensions. Most importantly, the project will target areas where Burundian refugees are staying with host families and enlarge yields and profits, which may take some of the pressure off of the land and decrease vulnerability to shocks in the area. If more food is available, communities may feel less threatened by “interlopers” on their lands as well. Moreover, trade in agricultural goods between Burundi and DRC will be boosted; assuming prices decrease when production goes up, buying power will increase on both sides of the border. Recent World Bank studies have shown that there is a sense of solidarity between Burundian and Congolese traders (who are mainly women), which will be further built upon if trade flows increase.<sup>138</sup> Finally, by creating economic opportunities for pastoral communities through the livestock value chain, there will be less need for these people to move their cattle into neighboring countries to graze, which could diminish tensions as well.

14. Taking into account the political economy of South Kivu and Burundi related to land and agriculture, and possibilities for peacebuilding, the RGLIADP has decided to undertake the following conflict-mitigating activities. In DRC, the project will accompany the agricultural value chains by funding dialogue platforms in the Ruzizi Plain, Fizi Territory, and Tanganyika. These platforms largely exist already. They are supported by various actors and coordinated under the before-mentioned ISSSS. This will ensure that the project not only “does no harm” to social dynamics but will allow it to actively target vulnerable groups and ensure an equitable division of the benefits from the value chains. Finally, the project’s indicators will be aligned with those of the ISSSS stabilization strategy, to allow the project to have an idea of its aggregate impact on peacebuilding.

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<sup>138</sup> Morisho (2016 - forthcoming) for the Great Lakes Trade Facilitation program (P151083).



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