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Report No: PAD1202

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 36.9 MILLION
(US$52 MILLION EQUIVALENT)

TO THE

DEMOCRATIC REPUBLIC OF CONGO

FOR A

GOMA AIRPORT SAFETY IMPROVEMENT PROJECT

February 25, 2015

Transport & ICT Global Practice
Country Department AFCC2
Africa Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective January 31, 2015)

Currency Unit	=	Congolese Franc (CDF)
CDF 924	=	US$1
US$1.41	=	SDR 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AAC	*Autorité de l'Aviation Civile* Civil Aviation Authority
AfDB	African Development Bank
ARC	Aerodrome reference code
BCA	Benefit-Cost Analysis
CEPTM	*Cellule d'Exécution du Projet de Transport Multimodal* Multimodal Transport Project Implementation Unit
CPAR	Country Procurement Assessment Review
CPIA	Country Policy and Institutional Assessment
CQ	Consultant's Qualifications
DA	Designated Account
DFID	UK Department for International Development
DL	Disbursement Letter
DME	Distance measuring equipment
DRC	The Democratic Republic of Congo
ESIA	Environmental and Social Impact Assessment
FM	Financial Management
GEEC	*Groupe d'Etudes Environnementales du Congo* Environmental Studies Group of Congo
GPN	General Procurement Notice
GRS	Grievance Redress Service
IATA	International Air Transport Association
IC	Individual Consultants
ICAO	International Civil Aviation Organization
ICB	International Competitive Bidding
IDA	International Development Association
IFR	Interim Financial Report
LCS	Least Cost Selection
LIB	Limited International Bidding
METTELSAT	*Agence Nationale de Météorologie et de Télédétection par Satellite* National Meteorological and Satellite Remote Sensing Agency
MONUSCO	United Nations Stabilization Mission in the DRC
MOT	Ministry of Transport
MTP	Multimodal Transport Project (supported by the World Bank)
NCB	National Competitive Bidding
NDB	Non-Directional Beacon
NGO	Non-Governmental Organization
NPV	Net Present Value

OHADA	*Organisation pour l'Harmonisation en Afrique du Droit des Affaires* Organization for the Harmonization of Business Law in Africa
OVG	*Observatoire Volcanologique de Goma* Goma Volcanic Observatory
PAD	Project Appraisal Document
PAFAPM	Project Administrative, Financial, Accounting and Procurement Manual
PAPI	Precision Approach Path Indicator
PDO	Project Development Objective
PEFA	Public Expenditure and Fiduciary Assessment
PFM	Public Financial Management
PPSA	Priority Air Safety Project, supported by the AfDB
QBS	Quality Based Selection
QCBS	Quality and Cost Based Selection
RAP	Resettlement Action Plan
RVA	*Régie des Voies Aériennes* National Airways Management Agency
SBD	Standard Bidding Document
SNEL	*Société Nationale d'Electricité* National Electricity Company
SPN	Specific Procurement Notice
SSS	Single Source Selection
TOR	Terms of Reference
UCS	Use of Country Systems
UNDB	United Nations Development Business
UPK	*Unité de Projet à Kinshasa* Project Implementation Unit in Kinshasa, under CEPTM
VHF	Very High Frequency
VOR	Very High Frequency Omni-directional Range
WB	World Bank

Regional Vice President:	Makhtar Diop
Country Director:	Ahmadou Moustapha Ndiaye
Senior Global Practice Director:	Pierre Guislain
Practice Manager:	Supee Teravaninthorn
Task Team Leader:	Mohammed Dalil Essakali

DEMOCRATIC REPUBLIC OF CONGO
GOMA AIRPORT SAFETY IMPROVEMENT PROJECT

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PAD DATA SHEET

Democratic Republic of Congo

DRC - Goma Airport Safety Improvement Project (P153085)

PROJECT APPRAISAL DOCUMENT

AFRICA

Report No.: PAD1202

Basic Information		
Project ID P153085	EA Category B - Partial Assessment	Team Leader Mohammed Dalil Essakali
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [X] - Fragile States - Post-Conflict	
	Financial Intermediaries [ ]	
	Series of Projects [ ]	
Project Implementation Start Date 10-Mar-2015	Project Implementation End Date 30-Jun-2020	
Expected Effectiveness Date 01-Jul-2015	Expected Closing Date 31-Dec-2020	
Joint IFC No		

Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Supee Teravaninthorn	Pierre Guislain	Ahmadou Moustapha Ndiaye	Makhtar Diop

Borrower: Democratic Republic of Congo, represented by the Ministry of Finance			
Responsible Agency: Ministry of Transport			
Contact:	Lazare Dakahudyno Wakale Minada	Title:	Coordonnateur du Projet
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Responsible Agency: Régie des Voies Aériennes (RVA)			
Contact:	Abdala Bilenge	Title:	Directeur General a.i.
Telephone No.:	243-811-681-123	Email:	rva.dg@rva.cd and regiedesvoiesaeriennes@yahoo.fr

Safeguards Deferral (from Decision Review Decision Note)

Will the review of Safeguards be deferred? [X] Yes [ ] No

Project Financing Data(in USD Million)

[ ]	Loan	[X]	IDA Grant	[ ]	Guarantee
[ ]	Credit	[ ]	Grant	[ ]	Other

Total Project Cost:	52.00	Total Bank Financing:	52.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	0.00
IDA Grant	52.00
Total	52.00

Expected Disbursements (in USD Million)

Fiscal Year	2016	2017	2018	2019	2020	2021				
Annual	10.00	12.00	12.00	8.00	8.00	2.00				
Cumulative	10.00	22.00	34.00	42.00	50.00	52.00				

Institutional Data

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Cross Cutting Areas

[ ] Climate Change
[X] Fragile, Conflict & Violence
[ ] Gender
[ ] Jobs
[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Transportation	Aviation	80		
Transportation	General transportation sector	20		
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 % must equal 100)

Major theme	Theme	%
Financial and private sector development	Infrastructure services for private sector development	30
Social dev/gender/inclusion	Conflict prevention and post-conflict reconstruction	30
Trade and integration	Regional integration	20
Trade and integration	Trade facilitation and market access	20
Total		100

Proposed Development Objective(s)

The Project Development Objective is to improve the safety, security, and operations of Goma International Airport.

Components

Component Name	**Cost (USD Millions)**
Component A: Airport Infrastructure Investments	40.00
Component B: Capacity Building and Project Implementation Support	6.00
Contingencies	6.00

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	Substantial
8. Stakeholders	Moderate
9. Other	N/A
OVERALL	High

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
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 [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
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**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Safeguards		30-Sep-2015	

Description of Covenant

On or before three months after the Effective Date, the Recipient shall adopt the Environmental and Social Impact Assessment and the Resettlement Action Plan, as described in Section V. of Schedule 2 to the Financing Agreement.

Name	**Recurrent**	**Due Date**	**Frequency**
Implementation Arrangements		31-Jul-2015	

Description of Covenant

On or before one month after the Effective date, the Recipient shall: (i) amend the regulation creating CEPTM; (ii) adopt the updated Project Administrative, Financial, Accounting, and Procurement Manual; and (iii) create and establish the Project Steering Committee, as described in Section V of Schedule 2 to the Financing Agreement.

Conditions

Source Of Fund	**Name**	**Type**
IDA	Subsidiary Agreement	Effectiveness

Description of Condition

Subsidiary Agreement has been executed on behalf of the Recipient and the *Régie des Voies Aériennes*.

Team Composition

Bank Staff

Name	Role	Title	Unit
Mohammed Dalil Essakali	Team Leader (ADM Responsible)	Senior Infrastructure Economist	GTIDR
Philippe Mahele Liwoke	Procurement Specialist	Senior Procurement Specialist	GGODR
Bella Lelouma Diallo	Financial Management Specialist	Senior Financial Management Specialist	GGODR
Alexandre K. Dossou	Team Member	Senior Transport Specialist	GTIDR
Antoine V. Lema	Safeguards Specialist	Senior Social Development Specialist	GSURR
Bertrand Murguet	Team Member	Consultant	GTIDR
Charles E. Schlumberger	Team Member	Lead Air Transport Specialist	GTIDR
Fabio Galli	Team Member	Lead Transport Specialist	GTIDR
Faly Diallo	Team Member	Financial Officer	WFALA
Hocine Chalal	Safeguards Specialist	Lead Environmental Specialist	GENDR
Isabella Micali Drossos	Counsel	Senior Counsel	LEGAM
Koho Francine Takoy	Team Member	Team Assistant	AFCC2
Laure Deffa Barry	Team Member	E T Temporary	GTIDR
Michel De Marigny	Team Member	Finance Analyst	WFALA
Nora Weisskopf	Team Member	Consultant	GTIDR
Noroarisoa Rabefaniraka	Team Member	Senior Transport Specialist	GTIDR
Sidy Diop	Procurement Specialist	Senior Procurement Specialist	GGODR
Lanssina Traore	Procurement Specialist	Senior Procurement Specialist	GGODR

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Congo, Democratic Republic of	Nord Kivu	Goma	**X**	**X**	

I. STRATEGIC CONTEXT

A. COUNTRY CONTEXT

1. Over the past few years, the Democratic Republic of Congo (DRC) was able to make significant progress in stabilizing its economy after decades of political instability. Implementation of sound macroeconomic policies has enabled DRC to weather the global crisis reasonably well. Since 2010, DRC's economic growth has exceeded the average for Sub-Saharan Africa by two percentage points, growing at an annual average of 7.4 percent between 2010 and 2013. Inflation declined to a single digit in 2012, down from 15.4 percent at end-2011 and from over 50 percent at end-2009. DRC's economy, however, faces substantial downside risks because of its continued reliance on mining exports with no local content or significant in-country transformation. Additionally, the rapid growth of the economy over the past years has not contributed to private sector employment.

2. With a land surface area of 2.3 million square kilometers, DRC is the largest country in Sub-Saharan Africa and shares borders with nine countries. The country is endowed with rich natural resources—mineral deposits, forests, water, and arable land—a strategic location, and a young population. Despite this wealth, DRC remains one of the poorest countries in the world. The country has yet to emerge from decades of conflicts and mismanagement during 1960-2000 that have devastated its economy and people.

3. Poverty in DRC remains widespread and the country will not reach any of the Millennium Development Goals by the 2015 deadline. With a per capita Gross National Income in 2013 of US$400, DRC's population—estimated at about 67 million—is among the most vulnerable in the world. More than 63.7 percent of the population lives below the US$1.25 per day poverty line, and 14 percent of the poor in Sub-Saharan Africa live in DRC. All DRC's human development indicators are low: the 2013 United Nations Human Development Index ranks DRC 186th among 187 countries. Life expectancy at birth is 50 years, maternal mortality ratio is 540 per 100,000 live births, infant mortality rate is 100 per 1,000, and under-5 child mortality rate is 146 per 1,000.

4. Over the past decade, DRC has been at peace everywhere except in some areas in the Eastern provinces. Since the 1960s, parts of the Eastern DRC have been afflicted by an explosive mix of weak governance, widespread poverty, natural resource mismanagement, land tenure disputes and ethnic tensions stoked for political and economic gain. This has created a permanent state of instability that has frequently spilled over into outright violent conflict. Unlike the rest of the country where relative peace has been maintained over the past decade, armed conflicts in the Eastern provinces have continued. The invasion of Goma, capital city of North Kivu on DRC's eastern border with Rwanda, in November 2012 by the M23 rebellion was the cornerstone of the instability that continues to negatively affect large swaths of population. The cumulative impact of the civil strife has been catastrophic from a humanitarian point of view. It has been estimated that since 1998 about 5.4 million people have died as direct and indirect consequence of the civil strife, while millions of others have been plunged into a state of acute and chronic vulnerability

due to displacement, dispossession, the breakdown of communal and social bonds, and the loss of livelihoods.

5. Decades of conflict have led to the near total collapse of state authority and services in Eastern DRC, allowing armed groups and criminal elements to operate with impunity. The government of DRC does not have adequate resources, human capacity and physical infrastructure required to deliver basic services and handle the explosive security situation in the East. The ensuing absence of government, lawlessness, and lack of infrastructure have caused a breakdown in the social contract and reinforced the isolation of many parts of the Eastern provinces, creating a haven for armed groups to operate and holding back the economic and social development that are crucial for long-term stability of DRC and the Great Lakes region as a whole.

6. Several peace initiatives have failed to put an end to the armed groups in the East, though progress was achieved in the past two years, including with the defeat of M23. However, there are still armed groups active in the Eastern DRC. Since 2004, several waves of armed groups have been integrated in the national army, but a number of them continue to harass civilians and exact violence.

7. Tackling the drivers of conflict and fragility in the Eastern provinces will require significant long term engagement by the central government, local governments, civil society, and development partners to strengthen governance structures, promote economic development, bolster conflict resolution mechanisms, restore security and state authority, and address the severe socioeconomic vulnerabilities. The proposed project directly supports efforts by the international community to break the cycle of conflict and fragility in Eastern DRC.

B. SITUATIONS OF URGENT NEED OF ASSISTANCE OR CAPACITY CONSTRAINTS

8. The proposed project qualifies for processing under paragraph 12 of OP. 10.00 as per World Bank's guidelines because two situations are met under the "Fragility, Capacity Constraints, Conflict, and Emergency":

(a) Conflict: (i) Eastern DRC, where the proposed project area is located, has been affected by a protracted conflict for over ten years; and (ii) areas within Eastern DRC are currently experiencing violent conflict or are at risk of violence.

(b) Fragile state: (i) the harmonized average Country Policy and Institutional Assessment (CPIA) rating of DRC is below the cutoff point of 3.2 for fragile countries; and (ii) DRC hosts the largest United Nations peacekeeping mission in the world since 1999.

9. The proposed project will benefit Eastern DRC, and particularly the provinces of North Kivu and South Kivu. North Kivu is located at the eastern edge of the East African Rift, bordering Uganda and Rwanda. North Kivu, and its capital Goma, has been hard hit by the instability in Eastern DRC over the past decades. Today, most of the economic and social infrastructure in the province has been destroyed or is in a poor state.

C. SECTORAL AND INSTITUTIONAL CONTEXT

10. The development of the transport sector in DRC is a key priority of Government policy to ensure economic growth, poverty reduction, and national integration. In a country almost as large as the whole of Western Europe, this sector is a key enabler to increasing agriculture output, improving internal and external trade, supporting mining growth, overcoming the economic and social barriers that affect isolated communities, and providing security throughout the country.

11. The transport sector has however suffered from the decades of conflict, mismanagement, neglect, and underinvestment. The current capital stock of transport infrastructure is well below what it was back in the late 1970s. Its performance is currently inadequate and is a key constraint to DRC's ability to achieve sustained economic growth. The sector requires massive investments as well as reforms to redress the weaknesses. Even though the rehabilitation of dilapidated transport infrastructure and facilities is underway, the transport network is still suffering from major connectivity gaps and bottlenecks. Interregional transportation is a major challenge in DRC due to the country's vast landmass, low population density and poor condition of the existing road network. Connecting DRC's various regions is impossible without a multimodal approach covering waterways, roads, railways, and air transport.

12. Air transport itself has not been able to fulfill its role because of the dilapidated airport infrastructure and navigation equipment, and the extremely weak technical and safety regulation in the country. With a population of about 67 million, and a land mass that is about twice as large as Britain, France and Germany combined, airport passenger traffic in DRC's airports was about 1.7 million in 2013. DRC has 54 airports, including five classified as international airports, but all of them are poorly maintained with dilapidated infrastructure. As a consequence, large areas of the country remain unserved by air transport, DRC's airspace poses high air navigation risks, and serious accidents and incidents have occurred in the past years. This outcome is reflected in DRC's failure to meet international air transport safety and security standards[1].

13. The government has recognized air transport's critical situation and its negative impact on economic development, and it has embarked on a program to gradually rehabilitate the sector's institutions and infrastructure. Laws and regulations have been put in place to improve the sector's institutional framework. For instance, air transport regulation is now with the Civil Aviation Authority (AAC), and airports and air traffic management are with the National Airways Management Agency (RVA), with plans to split airport operations from air traffic management in the near future. However, these institutions still suffer from poor governance and weak technical and managerial capabilities. With support from the African Development Bank[2] and the World Bank[3], infrastructure and equipment are being rehabilitated in three (Kinshasa Ndjili, Lubumbashi, and Kisangani) of the five international airports; air traffic control equipment is being modernized nationwide; and an ongoing program to enhance the capabilities of AAC and RVA is at its inception stage.

[1] Universal Safety Oversight Audit Program Report for DRC, dated January 15-23, 2013. International Civil Aviation Organization (ICAO).
[2] African Development Bank: Priority Air Safety Project (PPSA), approved on September 27, 2010.
[3] World Bank: Multimodal Transport Project (MTP), approved on June 29, 2010.

14. Government efforts to address air transport weaknesses has however yet to reach Eastern DRC, where connecting the population with the rest of the country and providing efficient access for humanitarian aid and United Nations (UN) operations are crucial to stabilize the sub-region and end its isolation. The geographic isolation of the landlocked Eastern DRC and the virtual collapse of transport infrastructure during decades of conflict pose a significant risk to the ongoing peace consolidation efforts.

15. Eastern DRC's main international gateway—Goma International Airport—is critical to addressing the geographic isolation of that region, but is in dire condition. While decades of conflict and frequent rebel control of the airport have had a toll on its operations, the most significant damage of the airport's key infrastructure (sole runway and taxiway) had resulted from the volcanic eruption in 2002 of Mount Nyiragongo. The lava flow from the volcano buried 1,150 meters or more than one third of the 3,000-meter runway and isolated the terminal and apron. The short available section of the runway—combined with the airport's altitude at 1,532 meters—renders it operational only for small or very-short-takeoff-landing type aircraft. Humanitarian aid flows, UN operations and passenger and cargo transport have been constrained by the limited capacity of the damaged airport and the non-compliance of the airport with basic safety and security standards. There have been seven recorded air crashes since 2002 at the airport with dozens of fatalities, many of them attributed to the condition of the airport and the overall air transport operating environment in DRC.

16. The government has put the re-establishment of safe and secure operations of Goma International Airport as a top priority for the development of Eastern DRC. That is because a fully functioning airport will reconnect this region long isolated from the rest of the country by the conflict, enabling trade to resume, and facilitating humanitarian relief and peace and stabilization efforts. For a variety of reasons ranging from civil unrest to economic constraints, the reconstruction of Goma International Airport has been postponed since 2002, but it has now become critically important for the following reasons:

(a) In the context of a fragile peace process since 2013, and a still fluid security situation in large parts of Eastern DRC, it is important to quickly deliver "peace dividends" to the population in this conflict-affected region and demonstrate that public services and government presence are being restored. Additionally, the rehabilitation of the airport directly supports the 2013 Great Lakes Regional Initiative, whose success hinges on rapid high impact interventions on the political and security front as well as on integrated regional economic and social development. Goma International Airport—which in the past was a hub for domestic and international export of high value agriculture products—has the potential to quickly rebuild both regional passenger and cargo business and support domestic and regional trade integration.

(b) Humanitarian aid and peacekeeping operations urgently need a fully functioning airport. Despite its limited capacity due to the damage to its runway, the airport has been a hub for humanitarian aid and for the operations of the United Nations Stabilization Mission in the DRC (MONUSCO). The capacity limitation may pose serious problems to MONUSCO's ongoing plan to concentrate their operations in Eastern DRC, where their transport logistics operations are forecast to increase, and

where Goma International Airport is the only gateway. Additionally, capacity limitation on humanitarian aid constitutes a high risk factor to the peace process in this region of DRC.

17. The German government provided about EUR 10 million in funding and technical assistance to mitigate the impacts on Goma of the lava flow from the 2002 volcanic eruption. Since 2009, the German-supported lava removal program enabled the clearance of lava from about 700 meters of the Goma airport runway. Additional German government support has been used to reconstruct 500 meters of the damaged runway. DRC government funds have also been used to reconstruct 165 meters and to strengthen the 2,000 meters that were not damaged by the lava. By early 2015, these various interventions are expected to have delivered a completely reconstructed runway with a length of 2,665 meters.

D. HIGHER LEVEL OBJECTIVES TO WHICH THE PROJECT CONTRIBUTES

18. The World Bank Group's DRC Country Assistance Strategy (CAS) for FY2013-16—discussed by the Board of Executive Directors on May 9, 2013—is aligned with the government's development strategy in the Second Poverty Reduction Strategy Paper (PRSP-2) (2011-2015). The guiding principle of the CAS is that business as usual is not an option for a country that will have the world's eleventh largest population in 2050, and that is facing the challenges of stabilization and peace consolidation in its Eastern provinces. In recognition of these challenges, the fourth objective of the CAS is to "address the development deficits contributing to fragility and conflicts in the Eastern provinces." This CAS objective concentrates on peacebuilding and stabilization with two expected outcomes specifically targeted towards conflict-affected areas: (a) improved management of public finances and accountability; and (b) increased social economic opportunities. The focus on conflict and fragility in the Eastern DRC is fully supported by World Bank's regional strategy for supporting peace and stability in the Great Lakes Region, which was announced in May 2013 and for which US$1billion has been pledged.

19. The proposed project will directly support the fourth pillar of the CAS and complements other ongoing or planned World Bank Group interventions in Eastern DRC. These include the Eastern Recovery Project, approved on February 27, 2014, which aims to improve access to livelihoods and socio-economic infrastructure in vulnerable communities in the Eastern provinces of DRC. Other projects include: Great Lakes Emergency Sexual and Gender Based Violence and Women's Health Project, approved on June 26, 2014; the Prevention and Mitigation of Sexual and Gender Based Violence in North and South Kivu Project, approved on October 24, 2014; the ongoing Pro-Route program; the forthcoming Regional Great Lakes Integrated Agriculture Development Program; and the forthcoming Disarmament, Demobilization and Reintegration Project.

20. Since 2006, the international community has been actively involved in efforts to end conflict and consolidate peace in Eastern DRC. International assistance currently spans a broad range of security, humanitarian, stabilization, peacebuilding and economic recovery interventions, implemented by a wide range of development partners—including notably the UN, but also the European Union (EU) and the World Bank—and international non-government

organizations (NGOs). Collectively, these interventions have represented significant investments in peace and stability, and amount to a considerable portion of the over US$15 billion allocated in international assistance to the DRC since 2007. However, most of the financing has been focused on humanitarian and peacekeeping activities, with relatively limited allocations to economic recovery and development interventions considered critical to sustain long-term peace consolidation.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

21. The Project Development Objective (PDO) is to improve the safety, security, and operations of Goma International Airport.

B. PROJECT BENEFICIARIES

22. The airport serves the Eastern part of DRC, with a catchment area of about 7.5 million people living mostly in the Province of North Kivu and parts of the Province of South Kivu. It is estimated that Goma International Airport accounts currently for 10 percent of total DRC's airport traffic, in terms of passengers, cargo, and aircraft movements. Direct project beneficiaries are airport users including passengers, shippers of cargo, airlines, as well as humanitarian aid organizations and the UN mission in DRC (MONUSCO). Indirect project beneficiaries are the tradable sectors of the economy and the private sector, which would use the airport as an intermodal hub.

C. PDO LEVEL RESULTS INDICATORS

23. The PDO's achievements will be monitored by the following indicators:

(a) Regulatory certification of safety and security at Goma International Airport.

(b) Capacity of the runway infrastructure at Goma International Airport to accommodate the original design aircraft.

III. PROJECT DESCRIPTION

A. PROJECT COMPONENTS

24. The proposed Project will have two components: (a) Airport Infrastructure Investments; and (b) Capacity Building and Project Implementation Support.

25. **Component A: Airport Infrastructure Investments:** This component will include investments necessary to urgently enable the airport to meet international safety and security standards, and to bring its capacity to the level prior to the volcanic eruption.

26. The component will include the following activities:

(a) Rehabilitation of the existing runway, which will include: (i) the removal of lava rock in the northern end of the runway; (ii) the reconstruction of the 335 meters needed to bring the runway's total length to the original 3,000 meters; (iii) the construction of a runway turn pad at the northern end of the runway; (iv) extension of the runway strip and construction of a Runway End Safety Area at both runway thresholds; (v) construction of the necessary side drainage system along the western side of the runway; and (vi) installation of runway and taxiway edge lights.

(b) Rehabilitation and extension of the existing apron, which include the strengthening of the apron's pavement and its extension to a total area of 200 m x 130 m, as well as the rehabilitation of the apron's lighting system.

(c) Rehabilitation of the airport's electrical systems, which will include the rehabilitation of the existing power plant, the provision and installation of electrical equipment, and the rehabilitation of the airport's electrical distribution network.

(d) Supply and installation of a new mobile control tower.

(e) Supply and installation of equipment to upgrade air navigation aids.

(f) Construction of the airport's security fence, by completing the construction of the fence already started with the support of MONUSCO, and the rehabilitation of the internal service road.

(g) Support to airport rescue and firefighting services, which were established with MONUSCO's support, by providing the necessary tools, parts, supplies, vehicles, as well as training for fire and rescue personnel.

(h) Rehabilitation of the existing passenger terminal.

(i) Laying-out of a cargo area.

(j) Implementation of the mitigation measures of the environmental and social impacts linked to the civil works.

27. **Component B: Capacity Building and Project Implementation Support:** This component will include activities necessary to support the institutional development of Goma airport, share lessons learned with other key airports in DRC, mitigate the risks associated with the volcanic activities in the area, promote interventions to provide social dividends to surrounding communities in this conflict-affected area, and ensure appropriate project implementation. The component will include the following activities:

(a) *Preparation of a priority airport rehabilitation program.* This will include provision of technical assistance to RVA to prepare a rehabilitation program benefiting a priority list of national airports. The technical assistance will be based on the results of the national airport master plan being prepared under the ongoing Multimodal Transport Project and will use the lessons and experience of the proposed project.

(b) *Monitoring of volcano risks and strengthening the preparedness of the airport and surrounding communities.* This will include the provision of technical assistance, equipment, training, and operating costs. This activity supports the mitigation

measures of the high risk related to the volcanic activity in the project area (see the risk section), and it is consistent with the findings of the Climate and Disaster Risk Screening conducted for this project. Currently, the monitoring of the volcano is undertaken by the *Observatoire Volcanologique de Goma* (OVG – Goma Volcanic Observatory), and the proposed project will partly support the OVG's program over the period 2015 – 2018. In addition to the proposed activities under the project, a request to the World Bank-administered Global Facility for Disaster Reduction and Recovery was being discussed at the time of project appraisal.

(c) *Provision of technical assistance to strengthen the economic and social fabric of the communities around the airport.* The removal of the lava rock from the airport will make available a large quantity of lava rock (basalt) that has an economic value if processed. In the context of high unemployment in the Goma area, the proposed project plans to help provide social dividends to the local communities, with a gender and vulnerable groups focus. The proposed project will support the study of the feasibility of labor-intensive activities including the identification of the demand for by-products of basalt rock—such as cobblestones for street paving—and the logistics of such activities. Based on the results of this feasibility study, the proposed project may develop operational procedures for such activities, and would seek partnerships and collaboration with similar ongoing activities in the Goma area.

(d) *Project implementation support.* This will include provision of goods, consultant services, training and operating costs to support project coordination, implementation, management, auditing, and monitoring and evaluation. Budget allocation to project management, estimated at about 4 percent of the total project cost is low by DRC standards, but it takes into account the economies of scale of embedding project management within the existing Multimodal Transport Project implementing unit (CEPTM). In general, project management costs are high in DRC given the high cost of doing business in the country due to a combination of factors including the poorly developed transport network, difficult terrain and large land mass, which often require travel by air, as well as to the high salaries necessary to attract and retain highly qualified individuals.

B. PROJECT FINANCING

28. This proposed Project will be financed by an IDA Grant of SDR 36.9 million (US$52 million equivalent) under World Bank policies relative to Investment Project Financing. It is covered by paragraph 12 of OP 10.00 which refers to projects in situations of urgent need of assistance or capacity constraints.

Project Cost and Financing

Project Components	Project cost	IDA Financing	% Financing
Component A: Airport Infrastructure Investments	40.0	40.0	100%
Component B: Capacity Building and Project Implementation Support	6.0	6.0	100%
Total Cost	**46.0**	**46.0**	**100%**
Contingencies	6.0	6.0	100%
Total Financing Required	**52.0**	**52.0**	**100%**

C. LESSONS LEARNED AND REFLECTED IN THE PROJECT DESIGN

29. The following lessons—drawn from World Bank experience in DRC and in other countries—have been used to inform the design of the proposed project:

(a) In a conflict and fragile environment, project design and implementation arrangements must be kept simple in order to maximize the chances of success. This is reflected in (i) the project's focus on one large investment component that is also geographically limited to the airport itself, with a second small component only providing implementation support; (ii) the limited number of procurement packages; (iii) a prudent 5-year project implementation period to take into account the high risk of delays; and (iv) the reliance on one project implementation unit that has a proven good track record in implementing World Bank-supported projects.

(b) While mindful of the need to keep project design simple in a conflict and fragile environment, investment projects can be used to leverage other interventions that can benefit peacebuilding or provide social dividends to the larger community. Project design provides for (i) catalyst support to strengthen the management of the volcanic risk in the Goma area; and (ii) assessment of the valorization of the lava rock under labor-intensive schemes, which if found feasible may be supported under the project in collaboration with various interventions of development partners and non-government organizations.

(c) In general, projects providing urgent investments in the context of conflict and fragility have had mixed results when they attempted to address the issues of broader institutional and financial sustainability. Therefore, the design of the proposed project takes stock of efforts and supports some of the objectives of the ongoing World Bank-supported Multimodal Transport Project and the African Development Bank-supported Emergency Air Transport Safety Project, which are more appropriate vehicles to address air transport institutional issues.

IV. IMPLEMENTATION

A. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

30. Project institutional and implementation arrangements will follow as much as possible those of the ongoing World Bank-supported Multimodal Transport Project:

(a) The Financing Agreement for the project will be between the Democratic Republic of Congo ("Recipient") and the International Development Association (IDA) ("Association").

(b) A Project Steering Committee, including high-level representatives of the concerned ministries and entities will be maintained throughout the implementation of the project and will be responsible for providing overall strategic guidance for the project.

(c) The Ministry of Transport (MOT) will be responsible for the: (a) overall coordination and facilitation of the implementation of the project; (b) resolution of any conflicts that may arise between the different entities involved in the implementation of the project; and (c) follow-up on the orientations and recommendations of the Project Steering Committee.

(d) The responsibility for detailed implementation activities will rest with *Cellule d'Exécution du Projet de Transport Multimodal* (CEPTM – Multimodal Transport Project Implementation Unit), which was created—for the purpose of the ongoing World Bank-supported Multimodal Transport Project—by a Ministerial regulation under terms of reference, staffing, and resources acceptable to the World Bank.

(e) The responsibility for technical inputs and technical oversight of project implementation will rest with *Régie des Voies Aériennes* (RVA – National Airways Management Agency), which is the main project beneficiary. RVA—which is a separate legal entity—will enter into a Project Agreement with IDA in order to provide the necessary guarantees related to the implementation of the project and the use of project investments. RVA will also sign a Subsidiary Agreement with the Recipient to specify the modalities of the transfer of project funds and assets to RVA.

(f) Day-to-day implementation procedures will follow the *Project Administrative Financial, Accounting and Procurement Manual* (PAFAPM), which is the manual outlining the administrative, financial, accounting, and procurement arrangements for the implementation of the Project. Annual work programs will be prepared for each year of project implementation.

31. CEPTM has performed satisfactorily under the ongoing Multimodal Transport Project (MTP), despite all of implementation issues that the project is facing. All its key personnel are on board and the recruited staff have proven to be well qualified for their respective missions and are generally performing well. CEPTM includes two independent units, one located in Lubumbashi (*Unité de Projet de Lubumbashi* (UPL)) for Component 1 of the MTP, and the other in Kinshasa (*Unité de Projet de Kinshasa* (UPK)) for the management of Components 2 and 3 of the MTP. Each unit independently manages one of the project's two separate designated accounts (DA) and has its individual financial management and procurement divisions. CEPTM's UPK will be in charge of the management of the proposed project. RVA is one of the beneficiaries of MTP's Component 2. Coordination between CEPTM and RVA under the MTP has been satisfactory. RVA has its own internal project implementation unit that is in charge of the implementation of AfDB-supported project as well as the World Bank-supported MTP. The same unit will be responsible for the implementation of the proposed project.

32. CEPTM's ministerial regulation will be updated to accommodate CEPTM's additional responsibilities under the proposed project. Similarly, the detailed Project Administrative, Financial, Accounting and Procurement Manual (PAFAPM), which has been agreed by the World Bank for the MTP, will be updated, since it has proven to be an effective guide in the implementation of the MTP. The deadline for the update of the decree and the PAFAPM is no later than one month after the Effective Date.

B. RESULTS MONITORING AND EVALUATION

33. Annex 1 presents the project's results framework. The CEPTM will coordinate with RVA in collecting data required for monitoring and evaluation of outcomes. The CEPTM will review the results on the basis of various progress reports, and take appropriate corrective actions as needed.

C. SUSTAINABILITY

34. Sustainability of project outcomes will be achieved thanks to the forecasted acceptable financial rate of return of project interventions, which shows that, if well managed and commercially run, the airport will be able to self-sustain its operations. At the much broader sector level, the project will be implemented in parallel to the larger ongoing program to enhance air transport safety, security, and operations in DRC, supported by the African Development Bank—under the Priority Air Safety Project (PPSA), approved on September 27, 2010 in addition the World Bank supported the Multimodal Transport Project (MTP), approved on June 29, 2010; and support from other partners such as the European Union, the International Civil Aviation Organization (ICAO), and the Belgian Government. Both PPSA and MTP provide for a large program of training to air transport professionals in DRC. The modernization of air traffic control system under the two projects will also provide additional financial resources to the sector, which is in turn expected to support greater financial and managerial autonomy for RVA and AAC.

V. KEY RISKS

A. OVERALL RISK RATING AND EXPLANATION OF KEY RISKS

35. Overall project risk rating is "High". The rating per risk category is presented in the PAD datasheet. Below is a discussion of the various risk categories:

(a) There is a high likelihood that political and governance factors could significantly impact the PDO, due to the post-conflict situation in Eastern DRC. While some level of political stability and peace has been achieved in the area, and the stabilization process supported by the international community is well underway, armed groups remain active. This has an impact on the actual implementation of the project as it makes it difficult to attract contractors and consultants necessary for project implementation, and it generally discourages the private sector and may slow down the increase in airport traffic and business. In the past couple of years, the international contractor that was initially selected for the reconstruction of a section of the airport's runway under German funding had to withdraw because of security concerns. Similarly, the lava removal works under the same program had been disrupted several times by rebel activities in the area in the period between 2009 and 2011. The mitigating factor for this substantial risk is the ongoing stabilization and peacebuilding process that is supported by the MONUSCO and to which this proposed project also contributes.

(b) The macroeconomic risk is substantial. DRC has made significant progress with macroeconomic management, but DRC's economy faces substantial downside risks because of its continued reliance on mining exports with no local content or significant in-country transformation. Additionally, the rapid growth of the economy over the past years has not contributed to private sector employment.

(c) There is a substantial risk of adverse impact on the PDO stemming from inadequate sector strategies and policies. The governance of the transport sector, and air transport in particular, remains weak with unreliable funding for the sector and weak technical and managerial capabilities. Efforts are ongoing on various fronts, and they contribute to mitigating this risk. AfDB-supported PPSA and World Bank-supported MTP have activities to address technical capabilities as well as funding for investments which are also expected to generate more revenues for the sector from air traffic control. A new strategy for air transport was being finalized at the time of project appraisal.

(d) The risk related to the technical design of project is moderate. The project is moderately complex from a technical and engineering point of view, as the activities supported are standard in the air transport field. Project components and subcomponents have been kept simple to facilitate implementation. The exception is the subcomponent related to valorization of the lava rock to provide social dividends to the population in the vicinity of the airport. The project recognizes the complexity of this activity and it will first assess its feasibility before making the decision on seeking collaboration from other partners for its implementation.

(e) There is a high likelihood that institutional capacity for implementation and sustaining the proposed project may adversely impact the PDO. This is directly due to the capacity constraints in the Eastern DRC environment. This is partially mitigated by the fact that: (i) the project involves a small number of well-coordinated implementing entities which have demonstrated—under the ongoing MTP—their capacity to implement the project; (ii) monitoring and evaluation arrangements are largely adequate and simple; and (iii) the project is focused on a well-defined geographical area.

(f) Fiduciary risks have a substantial probability of impacting the PDO. These risks are detailed in Annex 3. The overall financial management and procurement environment in DRC remains weak. The project puts in place a strong risk mitigation plan for fiduciary risks, but the fiduciary risks remain substantial.

(g) There is a substantial likelihood that exogenous environmental or social risks could adversely affect the achievement of the PDO or the sustainability of results. The key environmental risk is volcanic eruptions of Mount Nyiragongo, which last erupted in 2002. To mitigate these potential impacts, the project provides for the strengthening of the monitoring of the activities of the volcano as well as the preparation of contingency plans for the airport and for the Goma area as a whole. There are also exogenous social factors that may impact the project and they are related to the civil unrest and social conflict that have plagued Eastern DRC. This

risk is mitigated by the ongoing efforts by the government and international partners such as MONUSCO to stabilize the region.

(h) Stakeholders risk is moderate. The Project is widely discussed and understood by the general public, and it is supported by the various political layers at the national, provincial, and city levels. Additionally, the project is supported by international partners such as the MONUSCO, and it complements the interventions initiated by the German government.

VI. APPRAISAL SUMMARY

A. ECONOMIC AND FINANCIAL ANALYSIS

36. The proposed project supports the initial and emergency phase of investments identified in the "Goma International Airport Strategic Development Plan". A brief summary of the economic and financial analysis of the plan is presented below. A more detailed description of the assumptions and results of the analysis are in Annex 5.

37. In the context of past conflict and persistent instability, reliable statistics about air transport demand in Eastern DRC are scarce. Goma International Airport passenger traffic has seen sustained growth between 2004 and 2014, with an average annual growth rate of 15.5 percent, increasing from 34,123 passengers in 2004 to 143,898 passengers in 2014. Air cargo seems to have decreased over the same period. The peak was recorded in 2007 with 45,710 tons, which has gradually decreased to 17,533 tons in 2014. Based on past traffic and GDP growth rates for Congo, and Goma/Nord Kivu's potential for economic and social development thanks to the region's endowment of agriculture land and natural attractions, a conservative 8.2 percent average annual growth rate for airport traffic has been used in the economic analysis.

38. A Benefit-Cost Analysis (BCA) of the Goma International Airport's Strategic Development Plan was undertaken. The key benefits that were quantified are reduced aircraft operating costs due to: (i) airport's ability to accommodate larger aircraft types; (ii) reduced aircraft delay during normal airport operations; (iii) greater schedule predictability; and (iv) improved safety leading to lower insurance costs. The results of the BCA show that the implementation of the plan would yield a Net Present Value (NPV) at a discount rate of 12 percent of US$9.8 million, and an Economic Internal Rate of Return of 15.1 percent. Should traffic be 20 percent lower than projected, the NPV at 12 percent drops to US$2.0 million, and the economic internal rate of return drops to 12.2 percent. These estimates are conservative for the following reasons. First, only the benefits derived from savings on aircraft operating costs were accounted for. Secondly, the analysis also included investment for safety and security, which are usually not subject to benefit-cost analysis or financial analysis as they are implemented in compliance with prescribed national or international standards (see for example US Federal Aviation Administration's *Airport Benefit-Cost Analysis Guidance*).

39. A financial analysis was also undertaken. The result of the financial analysis shows that the plan has a Financial Internal Rate of Return of 11.4 percent, which is acceptable for an investment program in a region that has been marred by decades of conflict and instability. As

for the case of the BCA, investments for safety and security were included in the analysis, which makes the financial analysis conservative.

B. TECHNICAL

40. The technical complexity of the proposed project's components are low. The proposed project interventions were determined based on two broad criteria: (i) immediate interventions to bring the airport's capacity back to its level prior to the 2002 volcanic eruption, and (b) necessary interventions to comply with international safety and security standards. While some procurement activities will be for very specialized systems and equipment, similar activities have or are being implemented by RVA under the ongoing AfDB-supported PPSA and World Bank-supported MTP. RVA has tested the technical specifications and requirements and has therefore acquired experience with the logistics of those interventions. Additionally, the design of the runway rehabilitation works has already been used under the portion already completed with German government funding.

C. FINANCIAL MANAGEMENT

41. As part of project preparation, a financial management assessment of the CEPTM was carried out. The objective of the assessment was to determine whether: (a) this unit has adequate financial management arrangements to ensure that the proposed project funds will be used for purposes intended in an efficient and economical way; (b) the 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 (FM) assessment was conducted in accordance with the Financial Management Practices Manual issued by World Bank's Financial Management Sector Board on November 3, 2005 as revised in March 2010. In this regard, a review of the existing FM system (budgeting, staffing, financial accounting, financial reporting, funds flow and disbursements, internal and external audit arrangements) has been carried out. The assessment concluded that, the overall residual financial management risk is substantial.

42. The CEPTM has performed satisfactorily under the ongoing World Bank supported Multimodal Transport Project (MTP). The following major strengths were identified: (i) project manual of procedures (PAFAPM) as well as project software are in place and functioning, and fiduciary staff have been trained in the use of these tools, (ii) staff has been trained in the use of World Bank fiduciary procedures, and (iii) space and offices are available to accommodate this new project.

43. In order to better strengthen the financial management system, the following actions need to be implemented: (i) updating the manual of procedures (PAFAPM) and upgrading the software to take into consideration the specificity of the proposed project, (ii) recruitment of an independent external auditor based on acceptable terms of reference, and (iii) organizing a project launch workshop for all beneficiaries including the discussion of the PAFAPM.

44. RVA, which is the main project beneficiary, is a separate legal entity, and it has a status of a limited liability company, whose sole shareholder is the Congolese State. Under the World Bank-supported MTP, a governance action plan was prepared and approved by RVA's board,

and its implementation has just started; the first audit of RVA's 2012 financial statements and procurement procedures has been completed. The proposed project will require RVA's financial statements to be audited annually. Given the poor quality of RVA's 2012 financial statements, the proposed project will provide capacity building to RVA in the form of technical assistance so that RVA can improve its accounting system and prepare quality financial statements.

D. PROCUREMENT

45. Procurement for the proposed project will be carried out in accordance with World Bank's "Guidelines: Procurement of Goods, Works and Non-consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised in July 2014 ("Procurement Guidelines"), in the case of goods, works and non-consulting services. The World Bank's "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised in July 2014 ("Consultant Guidelines") will be used in the case of consultants' services. The provisions stipulated in the Financing Agreement. The "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 shall apply.

46. The proposed project will follow the procurement arrangements of the ongoing World Bank-supported MTP. The capacity of the CEPTM to carry out procurement under the project and to apply the procurement procedures manual (PAFAPM) was recently reviewed by the Bank's procurement team and found acceptable. CEPTM's organization includes a Senior Procurement Specialist, a Procurement Specialist, and an Assistant Procurement Specialist.

47. Due to the additional workload, CEPTM's procurement capacity will be regularly evaluated during the course of Project implementation, and if necessary, an additional Procurement Specialist may be recruited. CEPTM's Senior Procurement Specialist will lead the procurement process, provide on-the-job training to other procurement staff—including any other officers assigned by the Ministry—and contribute to maintaining an acceptable procurement system within the CEPTM.

48. The existing project procurement procedures manual (PAFAPM) of the ongoing World Bank-supported MTP will be updated to reflect the new organization of the CEPTM Procurement Unit. This manual defines the role and responsibility of each actor/beneficiary in the management of the procurement cycle and the processes to be followed. For each contract to be financed by the proposed project, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame have been agreed at negotiations between the Recipient and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual implementation needs and improvements in institutional capacity.

49. For the purpose of the proposed project, CEPTM will prepare and submit to the World Bank a General Procurement Notice (GPN). A 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 and above will be published in the United Nations Development Business (UNDB) online and in the national press, in addition to other media with wide circulation. All other specific procurement notices and other requests for expressions of interest shall be published at least in the national press with wide circulation.

E. SOCIAL (INCLUDING SAFEGUARDS)

50. *Social Benefits – Poverty, Gender Equity.* The socio-economic impacts of the proposed project are expected to be largely beneficial by enhancing airport infrastructure, security and safety, which will facilitate travel and trade between the Eastern part of DRC and the rest of the country. The project will contribute to improve air transport infrastructure, facilitate air transport access and mobility, create new job opportunities, and further increase social cohesion at national and regional levels. Civil works related to the airport rehabilitation works will provide medium term income generating opportunities for skilled and less skilled labor force in the greater Goma area. In the long term, the implementation of the planned project will further contribute to create new job opportunities and consolidate existing jobs in the air transport sector and contribute to induced development in domestic trade. In addition, the project will strengthen provincial, national and regional integration through improved mobility, trade and security. The project will benefit both women, children, men and elderly and the physically challenged by responding to their airport infrastructure and mobility needs, and providing them with better access to basic air transport services. A sample of expected social and poverty outcomes of the proposed project will include but not be limited to the following: (a) job creation and income generating opportunities; (b) enhanced air transport access and services; (c) enhanced domestic trade.

51. *Consultations.* The project concept and implementation strategy builds on a consultation process at several levels: at civil society level, at provincial administration level, at private sector level, at national level as well as at international donor level. Consequently, the project components are the result of a consultative process, and are designed to respond to assessed and latent air transport demand in Eastern DRC. Both the government and the development partners have welcomed World Bank engagement in the stabilization process.

52. *Social Safeguards Policies.* "Component A: Airport Infrastructure Investments", particularly sub-component (e) – Construction of Airport Security Fence, may induce involuntary resettlement. However, no irreversible adverse environmental or social impacts are expected. Project activities are confined within the airport operational area. Social impacts are expected to be site specific and not cumulative. The construction of the security fence might potentially induce involuntary resettlement, depending on the design and positioning of the fence. The fence might also force people who may currently be trespassing the airport's secured area to move from one side of the airport to the other to find alternative routes. To mitigate potentially adverse impacts, one social safeguards policy is triggered: OP 4.12/BP Involuntary Resettlement. Subject to the design and positioning of the fence, a Resettlement Action Plan (RAP) will be prepared and disclosed no less than three months after effectiveness date, as stipulated under the exceptional deferral paragraph 12 (a) of OP 10.00, and as explained in further details in the following section. Compensation for involuntary resettlement, if any, will be covered by government funds.

F. ENVIRONMENT (INCLUDING SAFEGUARDS)

53. The proposed project is classified as an "Environmental Category B" operation under World Bank's OP/BP 4.01, and it triggers two World Bank environmental safeguards policies: OP/BP 4.01 – Environmental Assessments, and OP/BP 4.11 Physical Cultural Resources.

54. The project consists of the rehabilitation or reconstruction of existing facilities with activities confined to the airport's operational area. Project activities are not expected to have significant or irreversible environmental impacts, and they would have no cumulative impact. Environmental impacts are expected to be site specific and not cumulative.

55. *Construction stage.* Construction activities will cause temporary impacts on the surrounding environment. Construction impacts on neighborhoods and the natural environment will be minimized or avoided through better environmental planning and integration with civil works design. The lava rock excavated from the airport provides good construction materials, and it will be used for all the aggregate materials needed for runway rehabilitation and for other materials for the airport fence. This significantly reduces the construction environmental impacts. Environmental specifications to mitigate construction related impacts will be prepared and incorporated in civil works contracts and will be enforced by construction supervision.

56. *Volcanic eruption risks.* The proposed project area is in the middle of an active volcanic zone. The proposed project includes targeted activities to strengthen the monitoring of the volcanic activities and other geo-hazards in Goma and its surroundings. The proposed project will also support the activities related to preparedness and contingency planning.

57. *Surface water*. The existing airport occupies approximately 1.2 square kilometers of land and creates an impervious surface. Impacts of rapid rain runoff from this impervious area is minor because the land area of the airport is limited compared to the watershed area estimated at more than 140 square kilometers. Because the lava deposits from the volcanic eruption of 2002 might have modified the hydrology of the watershed around the airport and the eastern part of the city of Goma, specific attention will be paid to ensuring adequate drainage design is implemented as part of the airport rehabilitation. This will ensure that storm water is captured before crossing the runway in order to ensure safe operations for takeoffs and landings, that drainage of the airport surface area is done without generating physical or chemical pollution, and that the airport's drainage is integrated in the Goma city drainage system.

58. *Other environmental issues*. As part of project implementation, project subcomponents will include solutions for waste and wastewater management at the airport, which is currently weak. The project will also help strengthen emergency response to various incidents, particularly fire and rescue. Risk management to be strengthened will also include risks associated with fuel storage and transport, including both prevention and emergency preparedness and response plan for potential accidents.

59. An Environmental and Social Impact Assessment (ESIA) will be prepared and disclosed no less than three months after effectiveness date, as stipulated under the exceptional deferral paragraph 12 (a) of OP 10.00. No additional safeguards instruments are required for OP 4.11

Physical Cultural Resources, but instructions on how potential chance finds of physical cultural resources will be managed will be covered in the ESIA.

60. As the proposed project is processed under the exceptional deferral paragraph 12 (a) of OP 10.00, the safeguards action plan, as referred to in paragraph 53 of World Bank's BP 10.0, consists of the preparation of the ESIA and the RAP not later than three months after the Effectiveness Date. The ESIA will include the environmental and social management plan. The preparation of these instruments is the responsibility of the Recipient. CEPTM and RVA have already appointed an independent consultant in December 2014 to carry out the ESIA and prepare the safeguard instruments including the RAP, under terms of reference that were reviewed and approved by the World Bank. A draft environmental and social screening report has already been submitted by the consultant on December 28, 2014. CEPTM and RVA are therefore on track to comply with the requirements of the applicable World Bank safeguards policies ahead of the deadline. Funding for the preparation, implementation, and monitoring of the safeguards instruments has been included in the budget of the proposed project. The project also strengthens the environmental capacity of CEPTM by putting in place an environmental specialist who will be the focal point to ensure the monitoring of safeguards compliance. RVA already has its own environmental specialists, and a focal point will be designated for the proposed project. Civil works will not start prior to the completion and disclosure of relevant safeguards instruments.

61. Addressing the proposed project's safeguards issues and the preparation of the applicable safeguards instruments is benefiting from the existing safeguards instruments of the ongoing World Bank-supported MTP. For the purpose of the MTP, a *"Plan Cadre de Gestion Environnementale et Sociale"* (Environmental and Social Management Framework) for the air transport component and *"Plans et Directives de Gestion Environnementale et Sociale du Secteur de Transport"* (Environmental and Social Plans and Directives for the Transport Sector) were prepared and disclosed in-country on December 31, 2009 and at the World Bank's *Infoshop* on January 21, 2010. Those documents include five safeguards instruments: (i) Environmental and Social Management Plans for each transport subsector, including one for air transport; (ii) an Indigenous Peoples Framework; (iii) a Physical Culture Resources Framework; (iv) a Resettlement Policy Framework; and (v) a Framework for HIV/AIDS Prevention. These instruments, with which CEPTM and RVA are familiar, provide a good basis for the preparation of the safeguards instruments of the proposed project.

62. In accordance with the conclusions and recommendations of the seventeenth replenishment of IDA resources, a screening of the proposed project for short and long term climate change and disaster risks was undertaken using World Bank Climate and Disaster Risk Screening Tool. The key risks are those related to the volcanic activities in the region and the associated earthquake or limnic eruption risks. Potential climate risks relate to extreme precipitation and flooding. Project design incorporates resilience measures for extreme precipitation and flooding risks, and they will form part of the final engineering solutions for the airport infrastructure. Project activities related to strengthening the monitoring of the volcanic and limnic activities and the preparedness of the region are designed to reduce the potential impacts of those risks.

G. GENDER

63. Gender inequalities are profound in DRC which ranks 148 of 157 countries in the Gender-Related Development Index. High gender inequality, identified as one of the factors of war-time sexual and gender based violence, mirrors the existing challenges for women, including high maternal mortality, limited empowerment, and unequal access to economic opportunities. Gender-based violence has been the key gender issue of the North Kivu Region in the last decade. Beyond the physical and psychological damage to the individuals involved, gender-based violence also carries important social and economic costs. These costs are particularly high in countries in conflict or emerging out of conflict where sexual violence is rife and where it is used as a weapon of war which causes deep trauma and undermines social cohesion, such as in eastern DRC. It is broadly recognized that the overall climate of fear impedes participation in economic, social and political life with survivors often facing stigma and rejection by spouses, families and communities. Moreover, impunity reigns as justice systems are too weak to prosecute perpetrators and some high level perpetrators are often party to peace agreements and ensuing political pacts. These factors undermine trust at all levels of society, and adversely affect social cohesion. Empirical evidence has shown that sexual violence tends to remain high even after conflicts end, as documented in the 2011 World Development Review of 50 countries across the globe, underscoring the importance of sustained support. The World Bank-supported Great Lakes Emergency Sexual and Gender Based Violence and Women's Health Project is designed to respond to these challenges, and it is complemented by the Prevention and Mitigation of Sexual and Gender Based Violence in North and South Kivu Project, approved on October 24, 2014. These two projects provide a vehicle for World Bank gender-focused interventions in Eastern DRC.

64. The proposed project will contribute to the broader goal of reducing vulnerability of women and girls in the Great Lakes region, by providing an enabling environment for participation in economic and social life, through safer and competitive air transport services. As part of project design, the technical assistance sub-component of the project related to the valorization of lava rock aims to specifically target vulnerable groups with focus on women. The project's ESIA is being prepared with specific attention to gender issues. Monitoring of gender-related project activities and benefits will be part of the project social safeguards reports. Finally, throughout the implementation of the proposed project, coordination and synergies will be ensured with the other World Bank gender interventions in Eastern DRC.

H. WORLD BANK GRIEVANCE REDRESS

65. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB 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), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring

Project Development Objectives

PDO Statement

The Project Development Objective is to improve the safety, security, and operations of Goma International Airport.

These results are at Project Level

Project Development Objective Indicators

Indicator Name	Baseline (2014)	Cumulative Target Values					
		2015	2016	2017	2018	2019	2020 (End Target)
Regulatory certification of safety and security at Goma International Airport (Yes/No)	No						Yes
Capacity of the runway infrastructure at Goma International Airport to accommodate the original design aircraft (Yes/No)	No						Yes

Intermediate Results Indicators

Indicator Name	Baseline (2014)	Cumulative Target Values					
		2015	2016	2017	2018	2019	2020 End Target
Goma International Airport Passengers (Number)	140,000						200,000
Annual aeronautical revenues of Goma International Airport (Amount(US$))	2,500,000						4,500,000
Goma International Airport Runway	0			100	100	100	100

reconstruction physical progress (Percentage)							
Goma International Airport Terminal Rehabilitation physical progress (Percentage)	0					100	100
Preparedness and contingency plan to mitigate the impacts of the risk of volcanic activities (Yes/No)	No			Yes	Yes	Yes	Yes
Guidance on valorization of lava rock (Yes/No)	No			Yes	Yes	Yes	Yes

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Regulatory certification of safety and security at Goma International Airport	The safety and security certification of the airport by DRC's Civil Aviation Authority (AAC). Goma International Airport is currently not certified, as it is non-compliant with the Standards and Recommended Practices (SARPs) outlined in Annex 14 to the Convention on International Civil Aviation (Aerodromes). At the conclusion of the project, AAC will complete a detailed assessment of Goma International Airport in accordance with the above-mentioned standards and, if compliance is achieved, issue certification of the aerodrome to *Régie des Voies Aériennes* (RVA). Institutional strengthening activities aimed at ensuring the necessary capacity within AAC and RVA to undertaken the certification process are being financed under the DRC Multimodal Transport Project.	At the end of the project	RVA and AAC	RVA and AAC
Capacity of the runway infrastructure at Goma International Airport to accommodate the original design aircraft	Goma airport's original design aircraft is a Boeing 767, and the aerodrome's reference code is 4D, as per Annex 14 to the Convention on International Civil Aviation. The reconstruction of the runway will restore it to its original length of 3000 m. This, with the rehabilitation of the taxiway and the apron, will enable the airport to accommodate its original design aircraft.	Annual	RVA annual report	RVA

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Goma International Airport Passengers	The number of passengers using Goma International Airport	Annual	RVA Annual Statistics	RVA
Annual aeronautical revenues of Goma International Airport	Airport revenues related to traffic	Annual	RVA Annual statistics and financial statements	RVA
Goma International Airport Runway reconstruction physical progress	Physical progress of the construction as reported by the construction supervision engineer	Quarterly	RVA	RVA
Goma International Airport Terminal Rehabilitation physical progress	Physical progress of the construction as reported by the construction supervision engineer	Quarterly	RVA	RVA
Preparedness and contingency plan to mitigate the impacts of the risk of volcanic activities	The outcome of the activities under Component B	Progress reported annually	Goma Volcanic Observatory (OVG)	OVG
Guidance on valorization of lava rock	Conclusions of the technical assistance under Component B	Annually	CEPTM/RVA	CEPTM/RVA

Annex 2: Detailed Project Description

Background

1. Goma is the capital of the Nord Kivu Province in Eastern DRC. It is located at an altitude of about 1,500 meters above sea level in the East Africa Rift on the northern shore of Lake Kivu next to the Rwandan border. Goma sits on volcanic rocks formed from old lava flows from the Virunga mountain range, and more specifically from Mount Nyiragonga, which—at 3,470 meters from sea level or 2,000 meters from Lake Kivu level—is located 20 kilometers north of the city.

2. Goma International Airport was built in 1975. It is located about 3 km from Goma's city center, to the north, at an elevation of 1,551 meters. The airport's International Air Transport Association's (IATA) code is GOM and ICAO's code is FZNA. At the time of its opening in 1976, the airport was equipped with the following facilities:

- An asphalt concrete runway 3,000 meters long and 45 meters wide, with a North-South orientation (thresholds 36/South and 18/North).
- An apron 200 m x 80 m.
- A taxiway 300 m long and 23 m wide connecting threshold 18 to the apron.
- A 2,592 square meter passenger terminal, capable of handling 240,000 passengers per year.
- A cargo shed 50 m x 30 m.
- A power plant and sub-station.
- A fire station.
- A 240 square meter administrative building.
- A control tower.
- A weather station.
- A VHF Omnidirectional Range / Distance Measuring Equipment system (VOR/DME), installed in 2008 at about 220 meters from threshold 36.
- A Non-Directional Beacon (NDB), installed 2,800 meters from threshold 36 in Lake Kivu.

3. There is currently no information on the Aerodrome Reference Code or on the Pavement Classification Number.

4. Today, the airport's control tower is obsolete and does not allow safe and adequate air traffic control. Its equipment is outdated, and its current low height does not allow a full view of the aprons, taxiways, and runway thresholds.

5. The airports power station is obsolete as its already outdated equipment has been repeatedly vandalized in the past. It has an out-of-date 21 kVA generator. With the frequent power outages of the National Electricity Company (SNEL), the generator has a limited capacity to meet the electricity needs of the airport. The power supply for navigation aid equipment and the control tower is currently provided from MONUSCO's camp, which is located inside the airport.

6. The airport's air navigation systems include a VHF Omnidirectional Range (VOR) system with Distance Measuring Equipment (DME), and a Non-Directional Beacon (NDB). The VOR/DME requires rehabilitation to upgrade its electronic modules to the newest generation, while the NDB operates randomly. The airport is also equipped with a Precision Approach Path Indicator (PAPI), which was provided and installed by MONUSCO; it is functioning properly.

7. In 2002, following the volcanic eruption of Mount Nyiragongo, lava covered 1,150 meters of the northern part of the runway strip and the taxiway, isolating the apron and the passenger terminal, which were connected by the taxiway to the northern threshold. The lava rock reaches at points 2 to 3 meters in height. Since then, the shorter available runway length has limited flight operations at the airport to small aircraft, whose load is also limited due to the airport's high altitude of 1,551 meters above sea level.

8. With the support of the UN Mission in Congo (MONUSCO), a concrete taxiway 500 meters long and 18 meters wide was built to connect the temporary threshold 18 with the apron. In addition, a temporary apron/aircraft stands area 350 m x 70 m was built by MONUSCO near the runway (it now temporarily serves for cargo traffic.)

9. The German government provided funding (about EUR 10 million) for the removal of lava from the runway along an area 700 meters long and 150 meters wide (75 meters on each side of the runway's centerline). This was intended to prepare for future reconstruction of the runway along that area in order to provide more secure runway operations and ensure safe use of the airport by MONUSCO. A German NGO was the implementing agency on behalf of the German government. Lava removal started in March 2009 and was completed in December 2011, with numerous interruptions due to armed group activities in the area, including damage to the airport and the NGO's lava removal equipment. The lava removal required about 18 months of effective work not counting the downtime during interruptions. Lava removal used mechanical excavation techniques.

10. The German government subsequently provided financing for the reconstruction of 500 meters of the damaged runway (two base courses of 150 mm and an AC overlay of 55 mm—to receive an additional AC overlay of 45 mm), and for the strengthening of the touchdown zone. The German government, first competitively awarded the construction works to a German construction firm, which later withdrew its bid due to security concerns. A second competitive bidding process by the German government led to the award of the construction contract to a local construction firm, for a total price of EUR 3 million. Construction started in December 2013 and it is expected to be completed in the first quarter of 2015. An engineering consulting firm from Sweden has undertaken supervision of the construction works. The German NGO acted as the implementing agency for the German government-funded interventions.

11. In parallel to the German-funded interventions, the Congolese government financed (i) reconstruction of 165 additional meters of the damaged part of the runway to the same standards; (ii) a new taxiway linking the new threshold 18 (at 2,665 meters) and the apron; and (iii) cross drainage pipes and a side drain along the western part of the runway. The cost of these interventions was US$3.8 million. Additionally, the Congolese government financed the strengthening of the runway along its entire new length of 2,665 meters using a 45 mm of asphalt overlay costing US$4 million. These interventions have been under implementation since July

2014 and are expected to be fully completed by the end of March 2015. The final engineering design of the newly reconstructed 665 meters of the runway is 300 mm of crushed stone base-course (in two 150 mm layers) and 100 mm of asphalt concrete overlay.

12. MONUSCO has large air transport operations in DRC, using about 100 aircraft. MONUSCO has helped equip most airports used by its operations in DRC with basic equipment to ensure safe operations. Goma International Airport supports now about 70 percent of MONUSCO's logistics in DRC. MONUSCO's interventions in Goma International Airport included: erecting a fence over a distance of 2,100 meters (the total perimeter length is 9,600 meters); supplying the airport's air navigation equipment from MONUSCO's own power supply system; providing an Air Weather Automatic System and training RVA and METTELSAT staff on the use of the system; equipping the rescue and fire services with two fire trucks and an ambulance and training its personnel; and providing the PAPI system. At the time of project preparation, MONUSCO was in the process of procuring runway edge lights for the airport.

Project Components

13. The proposed Project will have two components: (a) Airport Infrastructure Investments; and (b) Capacity Building and Project Implementation Support.

Component A: Airport Infrastructure Investments

14. This component will include investments necessary to urgently enable the airport to meet international safety and security standards, and to bring its capacity back to the level prior to the volcanic eruption. The component will include the following activities:

Subcomponent A.1: Rehabilitation of the existing runway

15. At the time of project preparation, construction works were underway to rebuild 665 meters of the damaged part of the runway (500 under German funding and 165 under Government funding) and strengthen of the pavement of the 2,000 meters that were not damaged, bringing the runway's length to 2,665 meters. The interventions to be implemented under the proposed project consist of:

(a) Removal of lava in the northern end of the runway over an area 150 meters wide (75 meters on each side of the centerline) and 425 meters long.

(b) Reconstruction of the 335 meters needed to bring the runway's total length to the original 3,000 meters. The engineering design of the runway reconstruction recommended an asphalt concrete layer of a combined minimum thickness of 100 mm, a 300 mm thick crushed stone base course with an underlying sub-base layer of approximately 600 mm thickness consisting of existing materials to be levelled, scarified and compacted as necessary.

(c) Construction of a runway turn pad at the end of the runway at threshold 18 to facilitate a 180-degree turn of airplanes.

(d) Extension of the runway strip at threshold 18 (north) beyond the end of the runway over a distance of 60 meters, and construction of a Runway End Safety Area from the end of the runway strip to a distance of 90 meters.

(e) Extension of the runway strip at threshold 36 (south) beyond the end of the runway and construction of a Runway End Safety Area. The available free area at threshold 36 is only 120 meters. Options will be considered to comply with requirements of Annex 14 to the Convention on International Civil Aviation.

(f) Construction of the necessary side drainage system, along approximately 1,000 meters on the western side of the runway, and the accompanying surface water drainage management system.

(g) Installation of runway and taxiway edge lights. At the time of project preparation, MONUSCO was in the process of procurement of the edge lights for the 2,650 meters of the runway. The proposed project will cover the remaining part of the runway as well as the taxiways and aprons.

(h) Detailed engineering design studies and the construction supervision services for this sub-component.

16. These investments will permit safe operations of a 3,000-meter runway capable of handling larger passenger and cargo aircraft. In parallel to the runway intervention, a thorough evaluation of the airport's obstacle free zone will be undertaken.

Subcomponent A.2: Rehabilitation and extension of existing apron

17. The current apron is 200 m x 80 m and is designed to accommodate three large airplanes simultaneously. The apron's pavement has reached a severe state of degradation. In addition, the projected increase in traffic will require the extension of the apron. The interventions to be included under the proposed project include the strengthening of the pavement of the existing apron and its extension to a total area of 200 m x 130 m to allow for space for two additional large airplanes. The subcomponent will also include the rehabilitation of the apron's lighting system.

Subcomponent A.3: Rehabilitation of the airport's electrical systems

18. The airport's existing power plant and all equipment have been repeatedly vandalized during the war. The connection to the network of SNEL (the public electricity utility) is unreliable. The interventions to be supported by the proposed project will include the complete rehabilitation of the existing building, the provision and installation of electrical equipment, and the rehabilitation of the airport's electrical distribution network.

Subcomponent A.4: Supply and installation of a new mobile control tower

19. The existing control tower is obsolete, and its height is not sufficient for safe operations. The construction and equipment of a permanent control tower may not be possible in less than 2 to 3 years, which is not compatible with the urgency of bringing the airport in

compliance with international safety and security standards. The proposed project will therefore support the rapid provision and deployment of a mobile control tower. This will provide time to RVA to plan and secure funding for the construction of a permanent tower. Should such a tower be built in the future, the mobile control tower can be redeployed to another high priority national airport in DRC.

Subcomponent A.5: Supply and installation of equipment to upgrade air navigation aids

20. This sub-component will upgrade the existing VOR/DME.

Subcomponent A.6: Construction of the airport's security fence and rehabilitation of the internal service road

21. MONUSCO and RVA partially erected a fence surrounding the airport site covering 2,100 meters of the 9,600-meter airport perimeter. Work stopped due to lack of funding. The proposed project will allow the completion of the airport's security fence and the rehabilitation of the internal service road.

Subcomponent A.7: Support to airport rescue and firefighting services

22. MONUSCO has just provided to the airport two fire trucks with a capacity of 9,000 liters each and one ambulance. To ensure proper operations of the fire and rescue services, the proposed project will support the provision of necessary tools, parts, supplies, and a four-wheel drive vehicle. The project will also support training for fire and rescue personnel.

Subcomponent A.8: Rehabilitation of the existing passenger terminal

23. This subcomponent will comprise the rehabilitation of the existing passenger terminal, including optimizing the passenger flows and controls, as well as the overhaul of the outdated mechanical and electrical systems. An important activity of this component will be improving the security of the airport through the supply and installation of X-ray equipment for passengers and luggage.

Subcomponent A.9: Laying-out of a cargo area

24. This subcomponent will include the rehabilitation of the existing cargo terminal. Options will be evaluated to have the private sector participate in various schemes.

Subcomponent A.10: Implementation of the mitigation measures of the environmental and social impacts linked to the civil works

25. This subcomponent will support the activities that will be identified in the detailed Environmental and Social Impact Assessment. Many activities expected to be included in the relevant subcomponent relate to the issues of surface water and drainage, will be addressed under subcomponent A1. It is expected that this subcomponent will additionally support enhancing waste and wastewater management, the preparation and implementation of a risk

management plan, and activities related to the implementation of the Resettlement Action Plan, where applicable.

Component B: Capacity Building and Project Implementation Support

26. This component will include activities necessary to support the institutional development of Goma airport, share lessons learned with other key airports in DRC, mitigate the risks associated with the volcanic activities in the area, promote interventions to provide social dividends to surrounding communities in this conflict-affected area, and ensure proper project implementation. The component will include the following activities:

Subcomponent B.1: Preparation of a priority airport rehabilitation program

27. This will include provision of technical assistance to RVA to prepare a rehabilitation program benefiting a priority list of national airports. The technical assistance will be based on the results of the national airport master plan being prepared under the ongoing Multimodal Transport Project and will use the lessons and experience of the proposed project.

Subcomponent B.2: Monitoring of volcano risks and strengthening the preparedness of the airport and surrounding communities

28. This will include the provision of technical assistance, equipment, training, and operating costs. This activity supports the mitigation measures of the high risk related to the volcanic activity in the project area (see the risk section), and it is consistent with the findings of the Climate and Disaster Risk Screening conducted for this project. Currently, the monitoring of the volcano is undertaken by the *Observatoire Volcanologique de Goma* (OVG – Goma Volcanic Observatory). The OVG is adequately staffed and has benefited over the past decade from very effective support from various partners including the MONUSCO, the International Organization for Migration, DFID, etc. The proposed project will partly support the OVG's program over the period 2015 – 2018. In addition to the proposed activities under the project, a request to the World Bank-administered Global Facility for Disaster Reduction and Recovery was being discussed at the time of project appraisal.

Subcomponent B.3: Provision of technical assistance to strengthen the economic and social fabric of the communities around the airport

29. The removal of the lava rock from the airport will make available a large quantity of lava rock (basalt) that has an economic value if processed. In the context of high unemployment in the Goma area, the proposed project plans to help provide social dividends to the local communities, with a gender and vulnerable groups focus. The proposed project will support the study of the feasibility of labor-intensive activities including the identification of the demand for by-products of basalt rock—such as cobblestones for street paving—and the logistics of such activities. Based on the results of this feasibility study, the project may develop operational procedures for such activities, and would seek partnerships and collaboration with similar ongoing activities in the Goma area.

Subcomponent B.4: Project implementation support

30. Project implementation support: This will include provision of goods, consultant services, training and operating costs to support project coordination, implementation, management, auditing, and monitoring and evaluation. Budget allocation to project management, estimated at about 4 percent of the total project cost is low by DRC standards, but it takes into account the economies of scale of embedding project management within the existing Multimodal Transport Project implementing unit (CEPTM). In general, project management costs are high in DRC given the high cost of doing business in the country due to a combination of factors including the poorly developed transport network, difficult terrain and large land mass, which often require travel by air, as well as to the high salaries necessary to attract and retain highly qualified individuals.

Estimated Project Cost by Sub-component:

Project Components	**US$ million**
Component A: Airport Infrastructure Investments	
A.1. Rehabilitation of the existing runway	20.2
A.2. Rehabilitation and extension of existing apron	3.3
A.3. Rehabilitation of the airport's electrical systems	3.5
A.4. Supply and installation of a new mobile control tower	2.0
A.5. Supply and installation of equipment to upgrade air navigation aids	0.4
A.6. Construction of the airport's security fence and rehabilitation of the internal service road	1.9
A.7. Support to airport rescue and firefighting services	0.2
A.8. Rehabilitation of the existing passenger terminal	5.0
A.9. Laying-out of a cargo area	1.0
A.10. Implementation of the mitigation measures of the environmental and social impacts	2.5
Total Component A	**40.0**
Component B: Capacity Building and Project Implementation Support	
B.1. Preparation of a priority airport rehabilitation program	1.5
B.2. Monitoring of volcano risks and strengthening the preparedness of the airport and surrounding communities	0.5
B.3. Technical assistance to strengthen the economic and social fabric of the communities around the airport	1.0
B.4. Project implementation support	3.0
Total Component B	**6.0**
Total before Contingencies	
Contingencies	**6.0**
Total with Contingencies	**52.0**

Annex 3: Implementation Arrangements

Project Institutional and Implementation Arrangements

1. Project institutional and implementation arrangements will follow as much as possible those of the ongoing World Bank supported Multimodal Transport Project:

- The Financing Agreement for the project will be between the Democratic Republic of Congo ("Recipient") and the International Development Association (IDA) ("Association").
- A Project Steering Committee, including high-level representatives of the concerned ministries and entities will be maintained throughout the implementation of the project and will be responsible for providing overall strategic guidance for the project.
- The Ministry of Transport (MOT) will be responsible for the: (a) overall coordination and facilitation of the implementation of the project; (b) resolution of any conflicts that may arise between the different entities involved in the implementation of the project; and (c) follow-up on the orientations and recommendations of the Project Steering Committee.
- The responsibility for detailed implementation activities will rest with *Cellule d'Exécution du Projet de Transport Multimodal* (CEPTM – Multimodal Transport Project Implementation Unit), which was created—for the purpose of the ongoing World Bank-supported Multimodal Transport Project—by a Ministerial regulation under terms of reference, staffing, and resources acceptable to the Bank.
- The responsibility for technical inputs and technical oversight of project implementation will rest with *Régie des Voies Aériennes* (RVA – National Airways Management Agency), which is the main project beneficiary. RVA—which is a separate legal entity—will enter into a Project Agreement with IDA in order to provide the necessary guarantees related to the implementation of the project and the use of project investments. RVA will also sign a Subsidiary Agreement with the Recipient to specify the modalities of the transfer of project funds and assets to RVA.
- Day-to-day implementation procedures will follow the Project Administrative Financial, Accounting and Procurement Manual (PAFAPM), which is the manual outlining the administrative, financial, accounting, and procurement arrangements for the implementation of the Project. Annual Work Programs will be prepared for each year of project implementation.

2. CEPTM has performed satisfactorily under the ongoing Multimodal Transport Project (MTP), despite all of implementation issues that the project is facing. All its key personnel are on board and the recruited staff have proven to be well qualified for their respective missions and are generally performing well. CEPTM includes two independent units, one located in Lubumbashi (*Unité de Projet de Lubumbashi* (UPL)) for Component 1 of the MTP, and the other in Kinshasa (*Unité de Projet de Kinshasa* (UPK)) for the management of Components 2 and 3 of the MTP. Each unit independently manages one of the project's two separate designated accounts (DA) and has its individual financial management and procurement divisions. CEPTM's UPK will be in charge of the management of the proposed project. RVA is one of the beneficiaries of MTP's Component 2. Coordination between CEPTM and RVA under the MTP has been satisfactory. RVA has its own internal project implementation unit that is in charge of

the implementation of AfDB-supported project as well as the World Bank-supported MTP. The same unit will be responsible for the implementation of the proposed project.

3. CEPTM's ministerial regulation will be updated to accommodate CEPTM's additional responsibilities under the proposed project. Similarly, the detailed Project Administrative, Financial, Accounting and Procurement Manual (PAFAPM), which has been agreed by the World Bank for the MTP, will be updated, since it has proven to be an effective guide in the implementation of the MTP. The deadline for the update of the decree and the PAFAPM is no later than one month after the Effective Date.

4. RVA—the main project beneficiary—has the mandate for airport management and operations in DRC as well as air traffic control in DRC's air space. RVA is a limited liability company, whose sole shareholder is the Democratic Republic of Congo, since its transformation by Law No. 08/007 of July 7, 2008 laying down general provisions on the transformation of public enterprises, Decree No. 09/12 of April 24, 2009. RVA is the successor of the public enterprise created by Ordinance No. 72-013 of February 21, 1972. RVA is regulated by the laws and regulations governing limited liability companies, subject to the specific laws and regulations or derogatory and statutes from July 2, 2010 and September 6, 2014.

Financial Management, Disbursements and Procurement

Financial Management

5. As part of project preparation, a financial management assessment of the *Cellule d'Exécution du Projet Multimodal* (CEPTM) was carried out. The objective of the assessment was to determine whether: (a) this unit has adequate financial management arrangements to ensure that the above mentioned project funds will be used for purposes intended in an efficient and economical way; (b) the 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 (FM) assessment was conducted in accordance with World Bank's Financial Management Practices Manual issued by the Financial Management Sector Board on November 3, 2005 as revised in March 2010. In this regard, a review of the existing FM system (budgeting, staffing, financial accounting, financial reporting, funds flow and disbursements, internal and external audit arrangements) has been carried out. *The assessment concluded that, the overall residual financial management risk is substantial.*

6. **Implementation arrangement.** CEPTM was created by Ministerial regulation under terms of reference, staffing, and resources acceptable to the Bank. CEPTM has performed satisfactorily under the ongoing World Bank-supported Multimodal Transport Project (MTP). The following major strengths were identified: (i) project manual of procedures (PAFAPM) as well as project software are in place and functioning and fiduciary staff have been trained in the use of these tools, (ii) staff has been trained in the use of World Bank fiduciary procedures, and (iii) some space/offices are available to accommodate this new project.

7. **Going forward and in order to better strengthen the financial management system**, the following actions will need to be implemented: (i) updating the manual of procedure (PAFAPM) and upgrading the software to take into consideration the specificity of the proposed

project, (ii) recruitment of an independent external auditor based on acceptable terms of reference, and (iii) organizing a launching workshop for all beneficiaries including a discussion of the PAFAPM.

8. **Risk assessment and mitigation.** The following risk identification worksheet summarizes the significant risks with the corresponding mitigating measures.

Table 3-1: Risk Assessment and Mitigation

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effective-ness (Y/N)	Residual Risk
Inherent risk	**MI**			**MI**
Country level According to questions 13 and 16 of the CPIA, DRC is a high risk country from the fiduciary perspective. The Use of Country Systems (UCS) and the Public Expenditure and Fiduciary Assessment (PEFA) reports outlined Public Financial Management (PFM) weaknesses at central and decentralized government levels as well as sector ministries levels in term of governance and public funds management.	H	The government is committed to a reform program that includes the strengthening of the PFM through the Public Financial Management and Accountability Program which is jointly financed by DFID. This project will complement the effort made by the other ongoing IDA-financed operation enhancing governance capacity. These projects are being implemented but are unlikely to yield results quickly enough to impact the proposed project. Use of IDA FM procedures is required for this project.	N	H
Entity level The assessment of selected ministries during the PEMFAR, UCS as well as the PEFA revealed internal control weaknesses and weak fiduciary environment.	S	The existing CEPTM reporting to the Ministry of Transport will be used; relying on a dedicated FM team at this unit. Use of IDA FM requirements is critical for the mitigation of fiduciary risk of this project; the update of the FM procedures manual on or before one month after the date of Project Effectiveness will mitigate internal control weaknesses.	N	M
Project level This is a project which will require a substantial number of procurement contracts. Ensuring that procurement procedures are followed and funds are used for purposes intended will be a challenge.	S	The CEPTM fiduciary team will be strengthened by additional staff when necessary. Training on fiduciary procedures will continue to be conducted for all FM staff throughout the life of the project. Clear Terms of Reference (TORs) for each responsibility will be agreed between the parties involved to ensure clear understanding and timeframes for reporting.	N	S
Control Risk	**S**			**S**
Budgeting: The Annual Work Plans and Budgets will be prepared by CEPTM and approved by the Steering Committee based on the policy guideline as for MTP. Weak capacity at the implementing unit to prepare and submit accurate work program	S	The updated project Financial Procedures Manual will define the arrangements for budgeting, budgetary control and the requirements for budgeting revisions. Annual detailed disbursement forecasts and budget required. Interim Financial Reports (IFRs) will provide information on budgetary control and analysis of variances between actual and budget.	N	M

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effective-ness (Y/N)	Residual Risk
and budget; weak budgetary execution and control.				
Accounting: This project will use the accounting software as for MTP. It is expected that it will continue to use the same software. Delay in keeping reliable and auditable accounting records will be the risk.	S	The project will adopt the OHADA accounting system. Accounting procedures will be documented in the manual of procedures. The FM functions will be carried out by qualified financial experts; the existing software will be customized to take into consideration the need for this new project. Staff will be trained on the use of the accounting software.	N	S
Internal Control: This will require additional work for the internal auditor; insufficient safeguards and controls may result in misuse of funds and impact the implementation of the project.	S	Revision and adoption of a FM Procedures Manual (PAFAPM) and training on the use of the manual by the financial expert. The internal auditor should prepare an annual work program which will include this project.	N	M
Funds Flow: One Designated Bank Account will be opened in a reliable Bank, it will be managed by CEPTM; all project activities will be financed through this Bank account. Risk of misused funds; and delays in replenishment of the designated account.	S	The following are the mitigating measures: (i) Payment requests will be approved by the financial expert prior to disbursement of funds. (ii) The TORs of the External Auditors will include physical verification of goods, and services acquired. (iii) Frequent in-depth reviews will be conducted to ensure that funds are being used for intended purposes, and (iv) the launching workshop will also be conducted.	N	S
Financial Reporting The CEPTM will provide a quarterly Interim Financial Report (45 days after the end of each quarter); annual Financial Report (within six months after the year-end) to the Bank in order to monitor the utilization of funds for the project. The risk will be to have inaccurate and delay in submission of IFR to the Bank.	S	(i) A computerized accounting system will be used. (ii) IFR and financial statements formats were agreed during negotiations. CEPTM will be in charge of overall reporting. The consolidated IFRs will be submitted to the Bank no later than 45 days after the end of the quarter.	N	M
Auditing: The national audit capacity is weak and not reliable; thus the external audit will be performed by an independent firm. The risks are the following: Delay in submission of audit report or qualified opinion and delays in the implementation of audit reports recommendations.	S	(i) The project's institutional arrangements allows for the appointment of adequate external auditors (independent auditors) and the TORs will include physical verification and specific report on finding of physical controls of goods, and services acquired or delivered. (ii) Annual audit will be carried out during the project implementation period in accordance with International Standards on Auditing.	N	S
Governance and Accountability Possibility of circumventing the internal control system with colluding practices as bribes, abuse of administrative positions,	M	(i) The TOR of the external auditor will include a specific chapter on corruption auditing; (ii) FM procedures manual (PAFAPM) approved on or before one month after the Effective date; (iii) quarterly IFR including Budget execution and	N	M

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effective-ness (Y/N)	Residual Risk
mis-procurement etc., are a critical issue.		monitoring; (iv) Measures to improve transparency such as providing information on the project status to the public, and to encourage participation of civil society and other stakeholder are built into the project design.		
OVERALL FM RISK	**S**			**S**

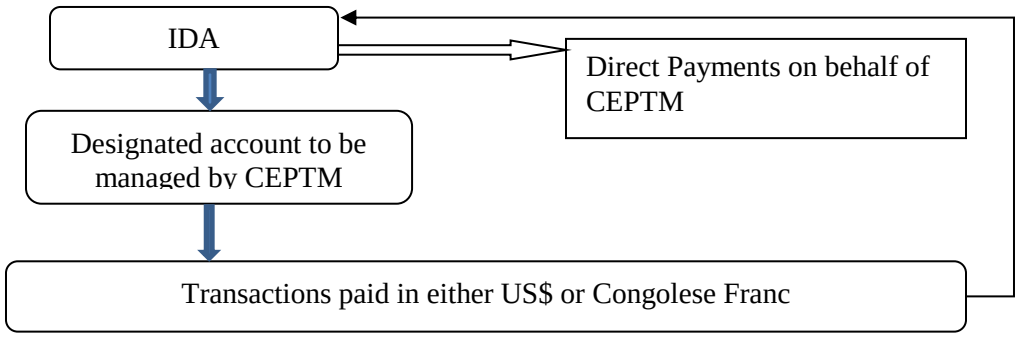
9. The overall residual FM risk rating is Substantial.

10. **Internal control and financial, administrative, and accounting manual.** The internal control system of the Project will be described in the financial management manual (PAFAPM) which should be flexible enough to allow for improvement and changes as necessary during Project implementation. This manual should be fully aligned with the accounting aspects mentioned above as well as the modules of FM software. CEPTM already has an FM and accounting procedures manual that is being used for MTP (the PAFAPM). That manual of procedures will be subject to a final revision so as to take into account the specific aspects of the proposed Project. Such revision will be carried out by the financial expert assisted by all fiduciary staff.

11. **Disbursement and Flow of funds.** Project activities will be financed through a Designated Account (DA) that will be opened in a commercial bank acceptable to IDA. The DA will be managed according to the disbursement procedures described in the FM manual and the Disbursement Letter (DL) for the Project. The ceiling of the account will be specified in the DL estimated to be the equivalent of four months of project cash needs and takes into account the disbursement capacity of the various structures implementing the proposed project.

12. Additional advances to the Designated Account will be made on a monthly basis against withdrawal applications submitted electronically and supported by Statements of Expenditures or records and other documents as specified in the Disbursement Letter. Retroactive financing will be possible up to 20 percent of the financing as allowed under OP 10.0. The flow of funds is summarized as follows:

Figure 3-1: Flow of Funds



13. **Disbursement arrangements (disbursement methods).** Given the high risk environment, the report-based disbursement will not be applicable by default. Therefore, upon project effectiveness, transaction-based disbursements will be used. The other methods of disbursing the funds (reimbursement, direct payment and special commitment) will also be available to the project. The minimum value of applications for these methods is 20 percent of the DA ceiling. The project will have the option to sign and submit Withdrawal Applications electronically using the e-Signatures module accessible from the Bank's Client Connection website.

14. **Disbursements by category.** The Disbursement Schedule is in the Financing Agreement. It sets out the expenditure categories to be financed out of the IDA Grant. This schedule takes into account the prevailing Country Financing parameter 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 following table specifies the categories of Eligible Expenditures that may be financed out of the proceeds of the financing ("Category"), the allocations of the amounts of the financing to each Category, and the percentage of expenditures to be financed for Eligible Expenditures in each Category:

Table 3-2: Disbursement table in US$

Category	Amount of the Grant Allocated (expressed in US$)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consultants' services, Operational Costs, Training and Workshops for the Project	52,000,000	100%
TOTAL AMOUNT	52,000,000	

15. **Financial reporting.** For the proposed Project, the CEPTM will be required to prepare an interim unaudited financial report as defined in the financing agreement for the Project. These reports will be submitted to IDA on a quarterly basis within 45 days following the end of each quarter. This report will include: (i) a table with sources and use of funds; (ii) table with use of funds per activity; (iii) table regarding use of funds according to procurement methods and threshold; and (iv) a table with monitoring and evaluation or physical advance of activities. The format of such reports were discussed and agreed during project negotiations.

16. For the external audit purposes, financial statements will be prepared for each financial exercise covering in general twelve months.

17. **External Audit.** The project's financial statements will be audited by an independent external audit firm to be selected according to the procedures of the World Bank. Audit reports produced by this auditor should be submitted to IDA six (6) months after the end of each financial statement for the Project, before June 30 of each year. These reports should include: (i) report on the financial statements; (ii) report on the special accounts and certified statements of expenditure; and (iii) a report on the internal control procedures or letter of recommendation. The terms of reference for the selection of the external auditor should be prepared by the financial management team of the CEPTM and should be sent to IDA for comments. The terms

of reference for the selection of this external auditor should be made available right after project effectiveness. The external audits reports will be publicly disclosed following the Bank's disclosure policy.

18. **Financial Management Action Plan.** The Financial Management Action Plan described below has been developed to mitigate the overall financial management risks.

Table 3-2: Financial Management Action Plan

Issue	Remedial action recommended	Responsible entity	Completion date
Accounting software	Update the existing computerized system and train the fiduciary staff.	CEPTM	3 months after effectiveness
FM procedures manual	Update the existing project FM and accounting manual of procedures (PAFAPM).	CEPTM	On or before one month after project Effective date
External auditing	Selection of an external auditor on TORs (project accounts)	CEPTM	3 months after project effectiveness

19. The FM implementation support plan is described in Annex 4.

Procurement

General

20. The proposed project will follow the procurement arrangements of the ongoing World Bank-supported Multimodal Transport Project.

21. Procurement for the proposed project will be carried out in accordance with World Bank's "Guidelines: Procurement of Goods, Works and Non-consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised in July 2014 ("Procurement Guidelines"), in the case of goods, works and non-consulting services; and World Bank's "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised in July 2014 ("Consultant Guidelines") in the case of consultants' services, and the provisions stipulated in the Financing Agreement. The "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 shall apply. The various procurement actions under different expenditure categories are described in general below. For each contract to be financed under the Financing Agreement, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame have been agreed at negotiations 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 implementation needs and improvements in institutional capacity.

22. The implementing entity, as well as contractors, suppliers and consultants will observe the highest standard of ethics during procurement and execution of contracts financed under this project.

Reference to the National Procurement Regulatory Framework

23. For all contracts which are not advertised internationally, 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 and the institutions responsible for procurement activities implementation. The national competitive bidding procedures currently in force in DRC deviate slightly from the World Bank Procurement Guidelines National Competitive Bidding (NCB) procedures for procurement of Works, Goods and Services (other than consultant services). However, they have been already 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 (NCB)

24. 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:

(a) **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 Project;

(b) **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;

(c) **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;

(d) **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;

(e) **Bid 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;

(f) **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 or proposing national sub-contractors or carrying out economic activities in the territory of the Recipient;

(g) **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) web-site;

(h) **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;

(i) **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;

(j) **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;

(k) **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.

25. **Procurement of Works:** Works planned to be procured under the proposed project include, inter alia: (i) the rehabilitation of the airport runaway including lava removal; (ii) the rehabilitation of the apron; (iii) the completion of the construction of the airport security fence; and (iv) the rehabilitation of the passenger terminal and cargo facilities. The procurement will be done using World Bank's Standard Bidding Documents (SBD) for all International Competitive Bidding (ICB) and National SBD found acceptable by the Bank. Other methods of procurement will be Direct Contracting, Quotations, and Force Account.

26. **Procurement of Goods:** Goods planned to be procured under the proposed project include, inter alia: (i) a mobile control tower; (ii) equipment for the airport's electrical systems; (iii) spare parts and vehicles for the airport's rescue and firefighting service; and (iv) airport security screening machines. The procurement will be done using the Bank's SBD for all ICB and National SBD found acceptable by the Bank. Other methods will be direct contracting, Limited International Bidding (LIB), and Shopping.

27. **Procurement of non-consulting services:** Non-consulting services under this project include, inter alia: (i) technical surveys; and (ii) airport certification services. The procurement will be done using appropriate SBD consistent with IDA Guidelines.

28. **Selection of Consultants:** Consultancy services required for the project would cover consultancies and technical assistance. All consulting services contracts with estimated costs equal to or more than US$200,000 equivalent for firms will be awarded through Quality and Cost Based Selection (QCBS) method. Contracts for specialized assignments with costs less than US$200,000 equivalent may be contracted through Consultant's Qualifications (CQ) and Quality Based Selection (QBS) methods. Contracts for standard accounting audits and of a routine nature may be awarded under Least Cost Selection (LCS). Single Source Selection (SSS) may be employed with prior approval of the World Bank and will be in accordance with paragraphs 3.8 to 3.11 of Consultant Guidelines. All services of Individual Consultants (IC) will be procured under individual contracts in accordance with the provisions of paragraphs 5.1 to 5.6 of Consultant Guidelines. Short lists of consultants for services estimated to cost less than US$200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. All Terms of Reference (TORs), regardless of the cost estimate, will be subject to prior review by the World Bank.

29. **Operating Costs:** The operating costs for this project will include expenses related to the management of the project. These expenses shall consist of salaries of support staff (excluding civil servants), office supplies, travel expenses and subsistence expenditures, operation and maintenance costs for vehicles and equipment, which would be procured using the implementing agency's administrative procedures. The procurement procedures and SBDs to be used for each procurement method, as well as model contracts for works and goods procured, are presented in the procurement manual (PAFAPM).

30. **Training and Workshops:** Training and workshops will be based on capacity needs assessment. Detailed training plans and workshop activities will be developed during project implementation, and included in the project annual work plan and budget for World Bank's review and approval.

Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value Threshold (US$)	Procurement Method	Contract Subject to Prior Review (US$)
1. Works	≥10,000,000	ICB	All
	≥5,000,000	NCB	All
	<5,000,000	NCB	None
	<200,000	Shopping	None
	All amount	Direct contracting	All
2. Goods	≥1,000,000	ICB	All
	≥100,000	NCB	None
	<100,000	Shopping	None
	All amount	Direct contracting	All

3. Services Firms	≥200,000	QCBS	All
	<200,000	CQ and LCS	None
	All amount	SSS	All
Individual Consultants	≥100,000	IC	All
	<100,000 (*)	IC	None
	All amount	SSS	All

(*): Except for special assignment (see paragraph 5.4 of the World Bank Guidelines: "Selection and Employment of Consultants by World Bank Borrowers" dated January 2011, revised July 2014).

Assessment of the agency's capacity to implement procurement

31. Procurement activities will be carried out by the Procurement Unit of the CEPTM (UPK). CEPTM's workload will be regularly evaluated during project implementation, and if needed a Procurement Specialist may be recruited to support CEPTM's procurement activities. In this context, procurement capacities of the CEPTM (UPK) were reviewed during the November 2014 implementation support mission of the ongoing World Bank-supported Multimodal Transport Project by the World Bank's procurement team and found acceptable. The procurement capacities of CEPTM (UPK) will be reassessed at the time of the Midterm Review by World Bank procurement specialists who will advise accordingly.

Assessments on the risks and measures to mitigate

32. The overall project risk for procurement is substantial.

33. The risk factors for procurement performance include those listed in the country context and those due especially to the fact that the project will be implemented in a remote location.

34. In terms of country context, the Country Procurement Assessment Review (CPAR) published in 2004 and the experience of other World Bank-assisted projects indicate that procurement on the project is likely to involve the following risks:

(a) A weak governance environment, weakness in accountability arrangements, and an overall lack of transparency in conducting procurement processes which creates significant risks of corruption, collusion, and fraud;

(b) Government officials likely to be involved in project procurement through tender committees may not be familiar with procurement procedures;

(c) Control and regulation mechanisms according to the provisions of the new procurement law and its application procedures could delay the procurement process if mandatory reviews are required; and

(d) Few companies are interested in supplying goods and constructing works for development projects in the current conditions. Goods may not be available or may

be exorbitantly expensive, especially up-country, because there may be insufficient competition resulting in the higher prices of these goods and services.

35. The main recommendations of the 2004 CPAR were to: (i) prepare and approve a public procurement code; (ii) do a survey of the existing capacity on procurement; (iii) conduct a needs assessment of the institutional and human capacity requirements for public procurement in the country; and (iv) prepare an action plan for the procurement reform. All of these recommendations have been implemented.

36. The procurement reform in DRC began soon after the 2004 CPAR with assistance from the World Bank, including the drafting of an Act on the Public Procurement code. The Act was promulgated on April 27, 2010 and has been effective since October 2010. The related procurement institutions—the regulatory body and the prior review institution—began functioning at the same time.

Measures to mitigate the risks

37. The following strategy has been devised in the project to mitigate procurement risks:

(a) To mitigate risks related to the low level of capacity both at the project coordination unit (CEPTM) and MOT, all proposed procurement decisions at a given threshold (as determined by the CEPTM procurement manual, i.e. the PAFAPM) will be subject to mandatory review by the Prior Review Institution and the annual procurement audit;

(b) To avoid delays in the procurement process due to the interventions of the national control and regulation system, the World Bank procurement team will identify the sources of delays and propose appropriate solutions to be discussed and agreed during project implementation;

(c) The publicly accessible project website will include all relevant information to facilitate transparency and integrity of implementation, including the following: Project Appraisal Document and Financing Agreement; advertisements; funding proposals; terms of reference for all activities; contract awards; progress reports from implementing entity; a procedure for handling complaints satisfactory to the World Bank; and complaints received and action taken;

(d) All ICB contracts for Goods and works, and all consulting contracts costing US$200,000 and above will be published in the UNDB and World Bank external website, in accordance with World Bank Guidelines;

(e) The government project team will 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;

(f) A project launch workshop will be carried out for all project stakeholders, including civil servants of all entities involved, the civil society and trade unions;

(g) For all procurement, the updated Project Administrative, Financial, Accounting and Procurement Manual (PAFAPM), 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;

(h) The MOT, in close relation with the CEPTM, will create a database of suppliers of the required goods, construction contractors and consultants (firms and individuals). The database will also include information on current prices of goods.

Procurement Plan

38. The Recipient, at appraisal, developed a Procurement Plan for project implementation which provides the basis for the procurement methods. This plan has been agreed between the Recipient and the World Bank on February 6, 2015 and is available at the CEPTM files. It will be updated and made available in the project's database and in the World Bank's external website. The Procurement Plan will also be updated in agreement with the World Bank annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

Frequency of Procurement Supervision

39. In addition to the prior review supervision to be carried out from Bank offices, two supervision missions will be conducted each year to visit the field during the course of project implementation. More details are in Annex 4.

Details of the Procurement Arrangements Involving International Competition

A. Goods, Works, and Non Consulting Services

(a) List of contracts packages to be procured following ICB, NCB and direct contracting:

1	2	3	4	5	6	7	8	9
Ref. No.	Contract (Description)	Estimated Cost (US$ million)	Procurement Method	P-Q	Domestic Preference (yes/no)	Review By Bank (Prior/Post)	Expected Bid Opening Date (mm/dd/yyyy)	Comments
Goods								
1	Supply and installation of new power station	2.78	ICB	No	No	Prior	4/15/2015	
2	Supply and installation of mobile control tower	2.0	ICB	No	No	Prior	4/15/2015	
3	Equipment to upgrade VOR/DME	0.35	ICB	No	No	Post	4/2/2015	
4	Supply of runway edge lights	0.50	DC	No	No	Prior	3/30/2015	
Works								
1	Runway Rehabilitation	16.40	DC	No	No	Prior	3/30/2015	
2	Rehabilitation and extension of apron	3.00	ICB	No	No	Post	11/2/2015	

3	Modernization of passenger and cargo terminal	5.00	ICB	No	No	Post	11/2/2015	

(b) Contracts estimated to cost the equivalent of US$ 10,000,000 or more for works and the equivalent of US$ 1,000,000 or more for goods and non-consultant services per contract and all direct contracting will be subject to prior review by the World Bank.

B. Consulting Services

40. List of consulting assignments with short-list of international firms

Ref. No.	Description of assignment	Estimated Cost (US$)	Selection Method	Review By Bank (Prior/Post)	Date of publication of expression of interest (mm/dd/yyyy)
1	Construction supervision of power station installation	720,000	QCBS	Prior	3/13/2015
2	Architectural, conceptual design, and construction supervision of passenger terminal	1,000,000	QCBS	Prior	9/4/2015
3	Technical assistance for economic valorization of lava rock	1,000,000	QCBS	Prior	9/4/2015
4	Preparation of strategic airports' investment program	1,500,000	QCBS	Prior	9/4/2015
5	Technical assistance for the financial accounting of RVA	250,000	QCBS	Prior	6/1/2015

(a) **Prior review:** (a) each contract estimated to cost more than US$200,000 per contract for firms and US$100,000 per contract for individuals consultants; (b) all single source selection; (c) all training; (d) all TORs; and (e) all amendments of contracts raising the initial contract value by more than 15 percent of original amount above the prior review thresholds will be subject to IDA mandatory prior review in accordance with the provisions of paragraphs 2 and 3 of Annex 1 of the World Bank's Consultants selection Guidelines.

(b) **Post review:** For each contract for services not submitted to the prior review, the procurement documents will be submitted to IDA for post review in accordance with the provisions of paragraph 4 of Annex 1 of the World Bank's Consultant selection Guidelines. The post review will be based on a ratio of at least 1 to 5 contracts.

(c) **Short lists composed entirely of national consultants:** Short lists of consultants for services estimated to cost less than US$200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Environmental and Social (including safeguards)

41. At national level, the DRC has a legislative and regulatory framework which is conducive to good environmental management. In addition, the DRC has signed a number of international

treaties and conventions. However, implementation capacity is weak. Environmental policies and their compliance are governed by the Ministry of Environment, Conservation and Tourism. Environmental monitoring and management at the Ministry of Environment are handled by three departments: (i) *Le Groupe d'Etudes Environnementales du Congo* (GEEC); (ii) *le Centre National d'Information sur l'Environnement*; and (iii) *La Cellule Réglementation et Contentieux Environnementaux*. The GEEC is responsible for safeguards compliance of all projects in the country, but with emphasis on environmental category "A" projects. GEEC is understaffed and has limited capacity. Despite several donor-funded capacity building initiatives, GEEC still largely relies on donor funds to carry out its field supervision duties.

42. The proposed project is classified as an "Environmental Category B" operation under World Bank's OP/BP 4.01, and it triggers two World Bank environmental safeguards policies: OP/BP 4.01 – Environmental Assessments, and OP/BP 4.11 Physical Cultural Resources. The proposed project also triggers OP 4.12/BP Involuntary Resettlement, to mitigate potentially adverse impacts that might result from the construction of the airport's fence. Therefore, the project requires an Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP). No additional safeguards instruments are required for OP 4.11 Physical Cultural Resources, but instructions on how potential chance finds of physical cultural resources will be managed will be covered in the ESIA.

43. As the proposed project is processed under the exceptional deferral paragraph 12 (a) of OP 10.00, the safeguards action plan, as referred to in paragraph 53 of World Bank's BP 10.0, consists of the preparation of the ESIA and the RAP not later than three months after the Project's date of Effectiveness. The ESIA will include the environmental and social management plan. The preparation of these instruments is the responsibility of the Recipient. CEPTM and RVA have already appointed an independent consultant in December 2014 to carry out the ESIA and prepare the safeguard instruments including the RAP, under terms of reference that were reviewed and approved by the World Bank. A draft environmental and social screening report has already been submitted by the consultant on December 28, 2014. CEPTM and RVA are therefore on track to comply with the requirements of the applicable World Bank safeguards policies ahead of the deadline. Funding for the preparation, implementation, and monitoring of the safeguards instruments has been included in the budget of the proposed project. The project also strengthens the environmental capacity of CEPTM by putting in place an environmental specialist who will be the focal point to ensure the monitoring of safeguards compliance. RVA already has its own environmental specialists, and a focal point will be designated for the proposed project. Civil works will not start prior to the completion and disclosure of relevant safeguards instruments.

44. Addressing the proposed project's safeguards issues and the preparation of the applicable safeguards instruments is benefiting from the existing safeguards instruments of the ongoing World Bank-supported MTP. For the purpose of the MTP, a *"Plan Cadre de Gestion Environnementale et Sociale"* (Environmental and Social Management Framework) for the air transport component and *"Plans et Directives de Gestion Environnementale et Sociale du Secteur de Transport"* (Environmental and Social Plans and Directives for the Transport Sector) were prepared and disclosed in-country on December 31, 2009 and on World bank's *Infoshop* on January 21, 2010. Those documents include five safeguards instruments: (i) Environmental and Social Management Plans for each transport subsector, including one for air transport; (ii) an

Indigenous Peoples Framework; (iii) a Physical Culture Resources Framework; (iv) a Resettlement Policy Framework; and (v) a Framework for HIV/AIDS Prevention. These instruments, with which CEPTM and RVA are familiar, provide a good basis for the preparation of the safeguards instruments of the proposed project.

Monitoring & Evaluation

45. The CEPTM will monitor the overall implementation of the proposed project. This includes: (i) the extent to which project objective is being achieved; (ii) the administrative, physical, and financial progress of implementation of project components; and (iii) the extent to which required implementation procedures, such as the safeguards instruments when applicable, are in compliance. These monitoring and reporting arrangements are enumerated in the Project Administrative, Financial, Accounting and Procurement Manual (PAFAPM). CEPTM will submit to IDA quarterly Project Reports, as defined in the Financing Agreement.

46. The majority of the data for the monitoring and evaluation, including baseline data, will be gathered by the CEPTM, with technical input from RVA. Baseline safety and security audits for the airport will be provided at the beginning of the project. The costs of data collection are included in the project costs.

Annex 4: Implementation Support Plan

Strategy and Approach for Implementation Support

1. The strategy for implementation support has been developed based on the nature of activities involved in the project and the commensurate risk profile in accordance with the risk assessment. The Implementation Support Plan, as described below, will be a living document and will be reviewed regularly and revised as and when required during the implementation, at least on a half yearly basis.

2. **Technical Support.** The World Bank will provide required technical support through sector specialists to finalize the technical aspects of the engineering and bidding documents. The implementation support will be provided through at least two implementation support missions a year and through continuous exchange of correspondence and frequent use of telecommunication and short interim visits will be conducted to maintain a close coordination among the Bank team and the project staff.

3. **Procurement.** Implementation support will include: (a) reviewing procurement documents and providing timely no objection; (b) providing detailed guidance on the Bank's Procurement Guidelines to project staff; (c) monitoring procurement progress against the detailed Procurement Plan; and (d) identifying the capacity building/training needs of project staff on procurement processing and providing training if required. The support will be provided through regular interactions, half-yearly implementation support missions and thematic implementation support missions, if required.

4. **Financial management.** The objective of the FM implementation support plan is to ensure the project maintains satisfactory financial management systems throughout the project's life. FM supervisions will be conducted over the project's lifetime. The project will be supervised on a risk based approach. It will comprise, inter alia, the review of audit reports and IFRs, and advice of the World Bank's task team on all FM issues. Based on the current risk assessment, which is substantial, the project will be supervised at least twice a year and may be adjusted when the need arises. The World Bank's Implementation Status Reports (ISRs) will include a FM rating of the project. An implementation support mission will be carried out before effectiveness to ensure project readiness. To the extent possible, mixed on-site supervision missions will be undertaken with World Bank procurement, monitoring and evaluation and disbursement staff. Based on the outcome of the FM risk assessment, the following implementation support plan is proposed:

Table 4-1: FM Implementation Support Plan

FM Activity	**Frequency**
Desk reviews	
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
On site visits	
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	As needed

other reports	
Transaction reviews	As needed
Capacity building support	
FM training sessions by World Bank FM team	Before Project start and thereafter as needed.

5. **Environmental and Social Safeguards.** The World Bank safeguards specialists in the team will supervise various activities to ensure full compliance with the World Bank's operational policies/procedures and the agreed framework related to environment and social safeguards aspects. The implementation support will be provided through regular interactions, regular half yearly implementation support missions and thematic review missions, if required and in full cooperation with the technical members in the Bank team.

Implementation Support Plan

Primary Focus of Implementation Support

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	▪ Project design ▪ Terms of Reference ▪ Fiduciary	▪ Technical ▪ Financial management ▪ Procurement ▪ Safeguards	4-5 staff; 2 trips per staff	Design, procurement training and supervision
12-60 months	▪ Procurement ▪ Project implementation ▪ Monitoring and Evaluation ▪ Supervision	▪ Technical (Construction and operations) ▪ Financial management ▪ Procurement ▪ Safeguards	4-5 staff; 2 trips per staff	Procurement, financial management, implementation, M&E

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Airport Expert	1 staff: 20 staff-weeks	10	2 trips of 2 weeks each per year
Transport Expert	1 staff: 20 staff-weeks	10	2 trips of 2 weeks each per year
Procurement	1 staff: 10 staff-weeks	10	2 trips of 1 week each per year
Financial management	1 staff: 10 staff-weeks	10	2 trips of 1 week each per year
Safeguards	1 staff: 10 staff-weeks	10	2 trips of 1 week each per year

6. Based on the above, it is estimated that the annual cost of project implementation support from the World Bank side would be about US$180,000 per year.

Annex 5: Economic and Financial Analysis

Introduction

1. The proposed project supports the first emergency phase of investments identified in "Goma International Airport Strategic Development Plan", which was prepared in late 2014 and early 2015 for the government and RVA by a consulting firm. A summary of the economic and financial analysis of the plan is presented below.

Demand analysis and forecast

2. Goma is the capital of the province of Nord Kivu, and it is located on the shore of Lake Kivu. Despite decades of conflicts and instability, Goma and the Nord Kivu Province have great potential for economic and social development thanks to the region's endowment of agriculture land and natural attractions.

3. Transport connectivity of Goma and the Nord Kivu province is weak. Goma can be reached by air either via direct flights from Kinshasa, or through Rwanda where the nearest international airport is about three to four hours' drive. Goma is connected to the Bukavu, the capital of the neighboring province of Sud Kivu, by a 207-kilometer unpaved road or by boat on Lake Kivu (a 3 to 8 hour journey).

4. The population of Nord Kivu was estimated in 2010 at about 6.1 million, whereas that of Goma was estimated at 660,000. Various estimates put the population of Goma at more than one million given the large number of refugees and internally-displaced people in Goma and its surroundings.

5. In the context of past conflict and persistent instability, reliable statistics about air transport demand are scarce. Available statistics (Table 5-1) show that:

- Airport passenger traffic has seen a sustained growth between 2004 and 2014, with an average annual growth rate of 15.5 percent, increasing from 34,123 passengers in 2004 to 143,898 passengers in 2014, despite the instability and conflict situation.
- Airport cargo seems to have decreased over the same period between 2004 and 2014. The peak having been registered in 2007 with 45,710 tons which gradually decreased to 17,533 tons in 2014.
- Aircraft movements increased substantially, and after a peak of 26,652 in 2009, it went down to 20,742 in 2014.

Table 5-1: Goma International Airport Traffic (2004 – 2014)

Year	Passengers	Cargo (tons)	Aircraft Movements
2004	34,123	22,771	11,409
2005	59,658	37,221	18,695
2006	53,408	23,210	12,793
2007	86,194	45,710	24,706
2008	87,119	34,750	26,029
2009	94,416	30,828	26,652
2010	82,221	23,635	24,857
2011	135,189	20,429	19,784
2012	141,556	18,909	20,688

2013	141,432	18,188	19,111
2014	143,898	17,533	20,742

6. Analysis of Goma International Airport air transport services in the fall of 2014 shows that there is a mix of regular passenger and cargo air services, as well as an increasing number of humanitarian and peacekeeping traffic.

7. The share of Goma International Airport in DRC's total air transport is substantial; it ranks third behind Kinshasa Ndjili airport and Lubumbashi airport, and ahead of Kisangani. In fact, Goma's share in passenger traffic in 2013 was 8.5 percent, while it was 9.6 percent for freight and 15.9 percent for aircraft movements (Table 2).

Table 5-2: Goma International Airport's Share in Annual National Airport Traffic (2013)

Airport	Passengers	Cargo (tons)	Aircraft Movements
Total DRC	1,673,263	188,558	120,095
Goma	141,432	18,188	19,111
Share	8.5%	9.6%	15.9%

8. In the absence of robust statistics, traffic forecast for Goma International Airport (Table 5-3) was undertaken using a general trend methodology, historical data and correlation to GDP growth rate, and taking account of the share of the airport in the overall national air transport demand. The average annual DRC GDP growth over the period 2003 – 2012 was 6.22 percent. Future air traffic annual growth rate for Goma was estimated at 8.22 percent, which is 2 percentage points higher than the historic GDP growth rate, but still much lower than the average annual growth rate over the period 2004 – 2014, which was 15.5 percent. It is also below IATA's forecast of air traffic growth in Africa of about 10 percent, but higher than Boeing's (5.7 percent) and Airbus' (5.1 percent) growth rate projections for Africa.

Table 5-3: Goma International Airport Traffic Projections (2015 – 2035)

	2012	2013	2014	2015	2020	2025	2030	2035
Passengers	141,556	141,432	143,898	155,729	231,179	343,183	509,452	756,278
Cargo	18,909	18,188	17,533	18,975	28,168	41,815	62,073	92,147
Aircraft Movements	20,688	19,111	20,742	22,447	33,323	49,468	73,434	109,013

Economic Analysis

9. A Benefit-Cost Analysis (BCA) of the Goma International Airport's Strategic Development Plan was undertaken. The methodology used for the BCA followed the US Federal Aviation Administration's "*Airport Benefit-Cost Analysis Guidance"* and *"Effective Practices for Preparing Airport Improvement Program Benefit-Cost Analysis"*, ACRP Synthesis 13, Transport Research Board, 2009.

10. Key assumptions were:

- The baseline year was 2012, for which operational and financial statistics were available.
- Average annual airport traffic growth rate of 8.22 percent.

- The investments prior to the proposed project (under German Government and Congolese government funding) to reconstruct the runway up to 2,650 meters are considered sunk costs.
- The Base Case represents the best course of action that would be pursued in the absence of the major initiatives of the plan to sustain the operations of the airport, but may not lead to improvements in safety and security. The Base Case represents the reference point against which the incremental benefits and costs of the plan alternative is measured. The Base Case consists of increasing the operations and maintenance efforts from the currently very low levels, but not exceeding half the optimal levels under the plan because of budget constraints. There is no major capital investment under the Base Case, since the 2,650 meter runway had already been reconstructed.
- The Evaluation Period is 20 years.
- Typically, the benefits of this type of projects would be: (i) reduced aircraft delay, reduced passenger delay, reduced cargo delay; (ii) greater schedule predictability (aircraft operators able to make more efficient use of equipment and personnel, passenger able to take later flight and arrive at destination on time, and shippers saving on logistics costs); (iii) reduced aircraft operating costs and passenger travel times due to airport's ability to accommodate faster, larger, and/or more efficient aircraft; and (iv) lower facility maintenance costs. In the absence of reliable demand data, the BCA focused on the key benefits related to reduced aircraft operating costs thanks to the ability of the airport to accommodate faster, larger, and/or more efficient aircraft at an airport.
- Airline operating and financial data were not available, so assumptions were made on the current operating costs and on the savings thanks to the plan. For example, currently, because of the short runway, payload restrictions limit available seat capacity on an operator who might use an A320 to 110 seats, or less than 75 percent of the capacity. On average, it was estimated that lifting the payload restrictions, the use of more efficient aircraft, and lower insurance costs could generate a saving of at least 10 percent in the cost per available seat kilometer and per ton-kilometer of cargo.
- The current average cost per available seat kilometer for flights to and from Goma was estimated at US$ 0.15. The going revenue (ticket price) per passenger kilometer is estimated at US$ 0.20 (excluding VAT). Similarly, the cost to airlines to transport one ton-kilometer of cargo to and from Goma was estimated at about US$ 1.3.
- The economic discount rate is 12 percent.

11. The results of the BCA show that the implementation of the plan would yield a Net Present Value (NPV) at a discount rate of 12 percent of US$ 9.8 million, and an economic internal rate of return of 15.1 percent. Should traffic be 20 percent lower than projected, the NPV at 12 percent drops to US$ 2.0 million, and the economic internal rate of return drops to 12.2 percent (Table 5-4).

12. These estimates are conservative for two reasons: (i) only the benefits to derive from savings on aircraft operating costs were accounted for; and (ii) the analysis included investments for safety and security, which are usually not subjected to BCA or financial analysis as they are implemented in compliance with prescribed national or international standards (see for example US Federal Aviation Administration's *Airport Benefit-Cost Analysis Guidance*).

Table 5-4: Benefit-Cost Analysis and Sensitivity Analysis

	Net Present Value in US$ (@ 12%)	Economic Internal Rate of Return
Base case scenario	9.8 million	15.1 %
Traffic 20% lower	2.0 million	12.2 %

Financial Analysis

13. The financial analysis of the Goma International Airport's Strategic Development Plan was undertaken. Key assumptions were as follows:

- The baseline year was 2012, for which airport and RVA operational and financial statistics were available.
- Average annual airport traffic growth rate of 8.22 percent.
- Average annual growth rate of air traffic fees and other fees of 2 percent in real terms.
- Operating expenses growth rate at 4.1 percent, which is half the growth rate of traffic. This would allow attaining a reasonable level of operating expenses.
- Current levels of maintenance expenses are too low; they are projected to increase by 100 percent in the first two years, and 10 percent thereafter.
- Average annual growth rate of administrative expenses of 2 percent in real terms.

14. The result of the financial analysis shows that the master plan has a financial internal rate of return of 11.4 percent, which is acceptable for an investment program in a region that has been marred by decades of conflict and instability. Additionally, as indicated in the BCA, the analysis also included investment for safety and security, which are usually not subjected to financial analysis.

Table 5-5: Financial Analysis and Sensitivity Analysis

	Net Present Value in US$ (@ 8%)	Internal Rate of Return
Base case scenario	14.7 million	11.4 %
Revenues 10% lower	5.1 million	9.2 %