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IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-57840

ON A

CREDIT

IN THE AMOUNT OF SDR 68.9 MILLION

(US\$95 MILLION EQUIVALENT)

TO THE

Republic of Rwanda

FOR THE

Rwanda Urban Development Project

December 21, 2021

Urban, Resilience And Land Global Practice
Africa East Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 1, 2021)

Currency Unit = Rwandan franc (RWF)

1,005 = US\$1

US\$1.39 = SDR 1

FISCAL YEAR
July 1–June 30

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ABBREVIATIONS AND ACRONYMS

ARAP	Abbreviated Resettlement Action Plan
C-ESMP	Contractors' Environmental and Social Management Plan
CoK	City of Kigali
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
CSC	Construction Supervision Consultant
DRC	Democratic Republic of Congo
DED	Detailed Engineering Design
EDPRS II	Second Economic Development and Poverty Reduction Strategy
ESHS	Environmental, Social, Health and Safety
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GDP	Gross Domestic Product
GIS	Geographic Information System
GRC	Grievance Redress Committee
ICR	Implementation Completion and Results Report
IDA	International Development Association
IRR	Internal Rate of Return
ISR	Implementation Status and Results Report
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KUUT	Kigali Urban Upgrading Team
LED	Local Economic Development
LODA	Local Administrative Entities Development Agency
M&E	Monitoring and Evaluation
MEIS	Monitoring and Evaluation Information System
MICST	Mobile Implementation and Capacity Support Team
MINALOC	Ministry of Local Government
MININFRA	Ministry of Infrastructure
NPV	Net Present Value
NUISUIP	National Urban Informal Settlements Upgrading Implementation Program
O&M	Operations and Maintenance
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PAP	Project Affected Person
PCU	Project Coordination Unit
PDO	Project Development Objective
PFM/FM	Public Financial Management/Financial Management
PIM	Project Implementation Manual
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RUDP 2	Second Rwanda Urban Development Project
RUDP	Rwanda Urban Development Project
RWF	Rwandan Franc

SA	Social Assessment
SDR	Special Drawing Rights
SPIU	Single Project Implementation Unit
TA	Technical Assistance
TOR	Terms of Reference
TTL	Task Team Leader
UICMP	Urban Infrastructure and City Management Project
USD	United States Dollar

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P150844	Rwanda Urban Development Project
Country	Financing Instrument
Rwanda	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
Republic of Rwanda	Ministry of Infrastructure

Project Development Objective (PDO)

Original PDO

<p>The project development objective is to provide access to basic infrastructure and enhance urban management in selected urban centers of the participating districts.</p>

PDO as stated in the legal agreement

The project development objective is to provide access to basic infrastructure and enhance urban management in selected urban centers of the participating districts.



FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing			
IDA-57840	95,000,000	95,000,000	95,422,584
Total	95,000,000	95,000,000	95,422,584
Non-World Bank Financing			
Borrower/Recipient	5,000,000	0	0
Total	5,000,000	0	0
Total Project Cost	100,000,000	95,000,000	95,422,584

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
29-Mar-2016	13-Jul-2016	17-Sep-2018	30-Jun-2021	30-Jun-2021

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Substantial

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	30-Jun-2016	Satisfactory	Satisfactory	0
02	21-Dec-2016	Satisfactory	Satisfactory	6.24



03	28-Jun-2017	Satisfactory	Moderately Satisfactory	12.13
04	20-Dec-2017	Satisfactory	Moderately Satisfactory	12.39
05	15-Jun-2018	Moderately Satisfactory	Moderately Satisfactory	22.28
06	15-Nov-2018	Moderately Satisfactory	Moderately Satisfactory	33.56
07	23-Apr-2019	Moderately Satisfactory	Moderately Satisfactory	42.91
08	15-Oct-2019	Moderately Satisfactory	Moderately Satisfactory	45.00
09	28-Apr-2020	Moderately Satisfactory	Moderately Satisfactory	53.64
10	16-Nov-2020	Moderately Satisfactory	Moderately Satisfactory	62.83
11	01-Jun-2021	Moderately Satisfactory	Moderately Satisfactory	81.94
12	04-Aug-2021	Satisfactory	Satisfactory	89.89

SECTORS AND THEMES

Sectors

Major Sector/Sector (%)

Public Administration 6

Sub-National Government 5

Other Public Administration 1

Transportation 76

Urban Transport 75

Other Transportation 1

Water, Sanitation and Waste Management 18

Sanitation 6

Waste Management 7

Other Water Supply, Sanitation and Waste Management 5

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3) (%)



Public Sector Management	4
Public Administration	4
Administrative and Civil Service Reform	1
Municipal Institution Building	3
Urban and Rural Development	96
Urban Development	96
Urban Infrastructure and Service Delivery	48
Services and Housing for the Poor	48

ADM STAFF

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

Country context

1. **Rwanda had made impressive progress following the 1994 genocide.** Gross domestic product (GDP) had quadrupled between 1995 and 2013, thanks to effective use of foreign aid and prudent macroeconomic policy. Government policy had focused on building institutional capacity, good governance, and a business-friendly environment, resulting in an annual GDP growth rate of 8 percent during 2000–2013 (a 170 percent increase in real GDP) making the country among the world’s fastest-growing economies. This growth has been pro-poor: poverty rates declined from 59 percent in 2000 to 45 percent in 2010. During this time, the country also made impressive gains in health and education outcomes. Homegrown initiatives, most notably *Umuganda* (community work) and *Imihigo* (performance contracts), have contributed to this development progress. However, economic growth during the first half of the decade (2000–2010) was concentrated in the City of Kigali (CoK), and only a fraction of the country’s poor had benefited. During the second half of the decade, growth was mostly concentrated in rural areas and led to a 12-percentage point reduction in poverty. Despite this progress, half of the rural population continued to live below the poverty line, compared to 22 percent of the urban population. Rwanda’s high population density, scattered settlements, hilly topography, and low urbanization rates created strong pressure on arable land and constrained the transition from subsistence to more productive large-scale commercial agriculture.

2. **The government viewed urbanization as a key driver to achieve the 11.5 percent annual economic growth needed to reduce poverty and move the country to middle-income status by 2020 as articulated in the country’s Vision 2020.** To turn this vision into reality, the country’s Economic Development and Poverty Reduction Strategy 2013–2018 (EDPRS II) set, as one of its key objectives, the transformation of Rwanda’s economic geography. The EDPRS II supported the emergence of a hierarchy of cities with complementary functions. First, the government planned to continue investment in the CoK to enable it to emerge as a primary city serving as an East African hub and a national growth engine. Second, it would focus on developing a strong network of six secondary cities (Muhanga, Rubavu, Rusizi, Nyagatare, Huye, and Musanze) which would serve as a national urban backbone and as regional growth poles providing off-farm employment. The third level of agglomeration was in district centers which would remain connected to the CoK and the secondary cities and serve as local service providers to rural areas.

Sector context

3. **At appraisal, Rwanda was one of the most densely inhabited countries in Africa and one of its least urbanized, with just 17 percent of its 11 million people living in urban areas.** Nevertheless, the urban population had been steadily growing over the past several decades—from just 2 percent in 1960 to 4.6 percent in 1978 and to 16 percent in 2012. With an annual urbanization rate of around 4.1 percent, according to the National Urbanization Policy (2015)¹, the total urban population was expected to reach close to 30 percent by 2030. However, much of the urban growth thus far had

¹ The National Urbanization Policy of 2015 aims to promote good urban development that enhances local and national economic growth and ensures good quality of life for everyone. It addresses all aspects of cross-sectoral action in urban development and governance.



been concentrated in the CoK, which, with a population of 1.1 million, had been growing at an annual rate of 9 percent. The CoK was significantly larger than all six secondary cities combined, which had populations ranging from Rubavu's population of 149,200 to Muhanga's 50,600.

4. **Access to basic infrastructure was a challenge in urban areas.** This was in part caused by the high cost of infrastructure due to the country's landlocked nature and terrain, exacerbated by inadequate urban planning tools and skilled staff at the local level. Roughly 60 percent of all urban households were living in unplanned settlements where access to road and transport infrastructure, adequate tap water, electricity, and sanitation was limited, and settlements were often situated in precarious areas that were prone to floods. The size of unplanned settlements varied from 13 percent in Muhanga to 37 percent in Musanze. The Bank's Poverty Assessment found that in urban areas, those living in neighborhoods that lacked infrastructure were typically among the poorest. The government's approach was to promote inclusive urbanization by upgrading unplanned settlements before they expanded any further and became prohibitively costly to do so. To support this effort, it undertook a national unplanned settlement inventory that served as a strategic guide for action. The CoK was leading the way by adopting a citywide policy to eradicate informality and making in-situ upgrading its priority for the next five years.

5. **Rwanda's decentralization process had advanced significantly during the previous decade and it had successfully managed to create viable local governments.** However, district governments, the highest form of local government, were responsible for a significantly wide territory and needed to cater to the differing needs of urban and rural areas under their jurisdiction. This constrained districts' ability to deliver effectively on their mandates, due to limited government capacity with regard to management, planning, budgeting, financial management, and revenue collection. Moreover, intergovernmental fiscal transfers had a built-in rural bias and did not take into consideration the specific financing needs of urban areas. Districts were not able to generate sufficient own source revenues to meet their needs and remained highly dependent on central government grants. As a result, financing available for capital investments in secondary cities was insufficient to provide the level of service they required. Estimates indicated that secondary cities would need to invest between US\$490 million and US\$610 million over the next 10 years to improve the levels of public service and cater to the flow of new migrants from rural areas. These investments represented close to 6 percent of the GDP and far exceeded the financial resources then available.

Rationale for World Bank involvement

6. **The Rwanda Urban Development Project (RUDP) marked the Bank's reengagement in Rwanda's urban sector following the successful closure of the Urban Infrastructure and City Management Project (UICMP) in 2009.²** The Bank's involvement in the program was valuable for several reasons. First, the Bank was uniquely positioned to make the long-term commitment required for urban development, focusing on institutional reform and capacity building for urban management while investing in large-scale investment in infrastructure and services. At the time of appraisal, the Bank was one of the only development partners providing substantial financing for infrastructure in the urban sector, especially outside the CoK. As co-chair of the Urban Sector Working Group, it was envisaged that the Bank could become a catalyst for other development partners to support the sector. Second, the Bank had developed considerable global knowledge and experience in urban upgrading taking into account key lessons from projects in East Asia (such as the Vietnam Urban Upgrading Project). Third, the Bank could leverage and complement the ongoing portfolio³ to enable

² The Implementation Completion and Results Report rated the UICMP as Highly Satisfactory for achieving its development objectives.

³ According to the PAD (page 14), IDA was financing the Rural Feeder Roads Project, the Regional Great Lakes Trade Facilitation Project, and the



districts to become centers of service and economic provision for their wider region. Recognizing these strengths, the government requested the Bank to take the lead in promoting urban development.

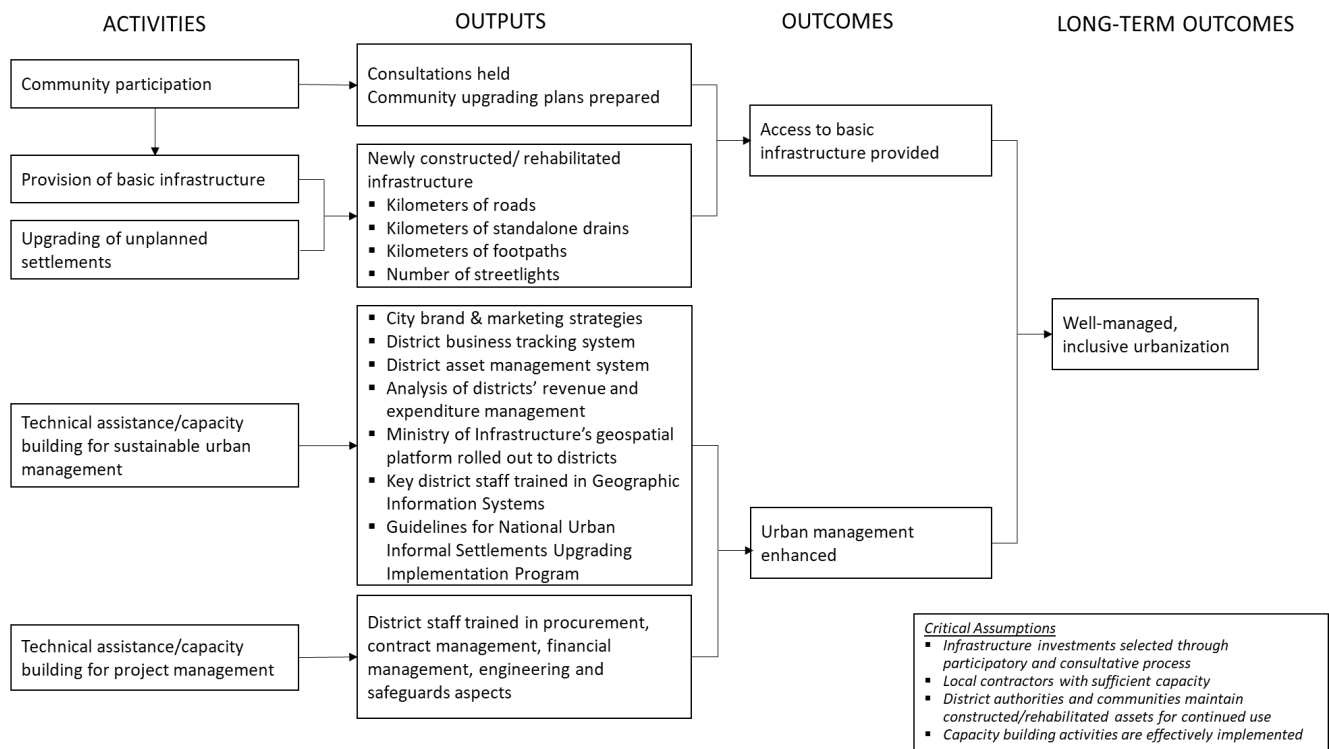
Contribution to higher-level objectives

7. The proposed project would support the sector-specific priorities identified in EDPRS II. This itself was aligned with the Bank’s Country Partnership Strategy (CPS) 2014–2018. Both the EDPRS II and the CPS identified urban development as one of the strategic sectors to leverage the World Bank Group’s assistance for promoting private-sector-driven and job-creating economic growth. The project would also contribute to the Bank’s twin goals of ending extreme poverty and promoting shared prosperity by improving access to basic infrastructure, especially in unplanned settlements where the urban poor resided, and in secondary cities which had been suffering from an infrastructure deficit. Through improved infrastructure, the project would also support districts in creating an enabling environment for local economic development (LED), which was another key priority for supporting Rwanda’s urban transition.

Theory of Change (Results Chain)

8. The theory of change is illustrated in Figure 1 and is implicit in the PAD as no theory of change was developed during project preparation.

Figure 1: RUDP Theory of Change



Program-for-Results on Public Sector Governance in Rwanda. These projects were complementary to the RUDP (addressing issues such as rural-urban connectivity, facilitating improved cross-border trade, and supporting reforms in public financial management).



Project Development Objectives

9. The project development objective (PDO), as stated in the Financing Agreement and the Project Appraisal Document (PAD), was to provide access to basic infrastructure and enhance urban management in selected urban centers of the participating districts.

Key Expected Outcomes and Outcome Indicators

10. **Achievement of the PDO was measured through four outcome indicators.** These were: (a) number of people in urban areas provided with access to all-season roads within a 500-meter range under the project; (b) land area provided with drainage services (hectares); (c) increase in share of maintenance expenditures of district budget (percent); and (d) number of direct project beneficiaries, disaggregated by gender.

Components

11. **The RUDP included four components.** The first two components (components 1 and 2) and partially the third (specifically subcomponents 3.1 and 3.2) and fourth components were managed and implemented by the Single Project Implementation Unit (SPIU) at the Local Administrative Entities Development Agency (LODA). The Project Coordination Unit (PCU) at the Ministry of Infrastructure (MININFRA) partially managed the implementation of the third (specifically subcomponents 3.3 and 3.4) and fourth components. The project's implementation architecture was designed to be consistent with the implementing agencies' institutional mandates and legal provisions.

12. **Component 1: Provision of Basic Infrastructure in Secondary Cities (US\$80 million).** This component supported the provision of basic infrastructure in the six secondary cities. It was designed to be implemented in two phases. Phase 1 focused on quick wins to allow district governments to demonstrate their ability to deliver early on during project implementation. These investments consisted of roads, sidewalks, footpaths, and public lighting to provide connectivity across the city for both vehicular and pedestrian mobility. Another set of investments focused on drainage structures to reduce the risk of urban floods. During phase 2, a wider set of interventions was planned, including urban upgrading and simplified solutions for solid waste management and sanitation as well as roads and drainage. This phased approach would allow districts to learn and hone their skills on infrastructure project implementation to undertake complex initiatives more effectively. The funds for the investments would be allocated through the Urban Development Grant split into a general pool (US\$75 million) and a performance pool (US\$5 million). The general pool would be distributed by a formula, while the performance pool would be based on progress achieved by each district in implementing RUDP subprojects at project mid-term.

13. **Component 2: Upgrading of Unplanned Settlements in the City of Kigali (US\$10 million).** This component supported the upgrading of an 86-hectare unplanned settlement in Nyarugenge District, comprising four cells (Rwampara, Kiyovu, Biryogo, and Agatare), located in the CoK's oldest neighborhood, close to the central business district. The project area is densely populated (220 people per hectare) with a total population of almost 19,000. The upgrading of the site would serve as a model for community-based urban regeneration that could be scaled-up to other parts of the CoK and to the secondary cities. Following the outcomes of detailed technical studies and the consultations conducted with the communities during preparation, this component financed the upgrading of roads, footpaths, and streetlights, in addition to secondary and tertiary drainage.



14. **Component 3: Technical Assistance for Sustainable Urban Management (US\$3 million).** This component provided technical assistance (TA) to the six districts to strengthen their capacity for urban management by focusing on the following four priorities for achieving sustainable urban development: (a) building competitive cities by creating the enabling environment for LED; (b) support for managing urban infrastructure; (c) improving urban planning and strategic decision making through the use of Geographic Information System (GIS); and (d) capacity building for scaling up urban upgrading. In addition to advisory services, the component financed the provision of equipment, software, and related goods as necessary.

15. **Component 4: Support for Project Management (US\$2 million).** This component supported overall project coordination by MININFRA and project management of secondary cities by LODA. Activities included PCU and SPIU staffing costs, training related to project implementation, safeguards monitoring, beneficiary surveys, design review, and supervision.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

16. The PDO remained the same throughout the implementation of the project.

Revised PDO Indicators

17. Not applicable.

Revised Components

18. Not applicable.

Other Changes

19. **Following the mid-term review, the Bank and government teams decided to drop the performance grant mechanism from the project.** Data on poverty by urban area were not readily available, rendering it difficult to calculate the base grant. Comparing implementation performance of districts also proved difficult, as some districts faced significant challenges in implementation that were outside of their control, such as hard rocks and the need to relocate utility lines.

Rationale for Changes and Their Implication on the Original Theory of Change

20. The above-mentioned change did not alter the original theory of change.

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

Rating: High

21. **The overall objectives of RUDP were and remain highly relevant.** They reflect the importance of increasing access



to basic infrastructure in Rwanda’s urban areas, particularly unplanned settlements, and strengthening urban management capacity at the local level to effectively deliver services and infrastructure. At appraisal, the project was fully consistent with the CPS for 2014–2018. At closing, it supported the objectives of the Country Partnership Framework (CPF) (fiscal year 2021–2026) (Report No. 148876-RW) endorsed by the Board of Executive Directors on July 9, 2020. The project contributed to Objective 5 of the CPF: “Intensified Urban Agglomeration.” It also supported two priorities highlighted in the 2019 Systematic Country Diagnostic: (a) promoting market-driven urbanization and agglomeration, and (b) investing in a stable and sustainable landscape, which underscore the critical need to manage urbanization, strengthen decentralization and support climate compatible urban development.

22. **The PDO is also relevant to the country’s current development priorities.** The RUDP contributed to the government’s program, which comprises the Vision 2050 that targets upper middle-income status by 2035 and high-income status by 2050 and the National Strategy for Transformation for 2017–2024⁴ that succeeds EDPRS II and provides the medium-term framework clustering of strategic priorities, including promoting sustainable urbanization through the development of flagship projects and implementation of master plans in the six secondary cities. In addition, the project was consistent with two policies approved by the Cabinet in 2015. The National Housing Policy⁵ identifies unplanned settlement upgrading as a key priority, while the National Urbanization Policy emphasizes the need for spatial planning at the national, district, and city levels, and development control to enforce planning standards.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Rating: Substantial

23. **Project outcomes were assessed throughout implementation through beneficiary consultations, regular supervision, field visits, a mid-term evaluation and review of construction supervision reports and quarterly progress reports and final outputs delivered under the RUDP.** The assessment also benefitted from interviews with beneficiaries and district staff during implementation support missions, field visits, validation workshops for TA activities, the government’s ICR for the project, as well as anecdotal evidence collected from local newspapers.

24. **The RUDP achieved and substantially exceeded all four of its PDO indicator targets** (see table 1). In addition, all but two intermediate outcome targets were met. This was in part due to implementation of additional works financed in the CoK and four other districts using savings generated from the appreciation of Special Drawing Rights (SDR) to the US dollar (see paragraph 64). The project also delivered a wide range of tangible outcomes not captured in the results framework. This included strengthened LED and infrastructure management capacity at the district level, and commercial and business development due to improved access to roads, street lighting and drainage systems, as noted in the section on other project outcomes and impacts (Section II E), below.

Table 1: Achievement of RUDP PDO outcome targets

Indicators	Baseline	End Target	Final Value	Level of achievement
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⁴ The National Strategy for Transformation (NST1) is the government’s seven-year program which lays the foundation for Rwanda’s Vision 2050 of becoming a middle-income country by 2035 and high-income country by 2050. The NST1 came after two, five-year Economic Development and Poverty Reduction Strategies (EDPRS) (2008–12) and EDPRS-2 (2013–18). The key priorities for NST1 are economic transformation, social transformation, and transformational governance.

⁵ The National Housing Policy of 2015 outlines the principles pursued by the government when supporting housing development. It focuses on the support of private sector housing development, while striving to achieve the creation of livable and inclusive built environments.



Number of people in urban areas provided with access to all-season roads within a 500- meter range under the project (number)	36,299	88,000	153,254	174% of target
Land area provided with drainage services financed under the project (ha)	0.00	3,479.00	7,906.75	227% of target
Direct project beneficiaries (% female)	0.00	118,805 (51.70%)	154,599.00 (51.70%)	130% of target
Increase in share of maintenance expenditures of district budget (%)	3.46	10.00	15.40	154% of target

Objective 1: To provide access to basic infrastructure in selected urban centers of the participating districts

25. **The objective to provide basic infrastructure in selected urban areas was fully achieved.** Some 153,254 people in urban areas were provided with access to all-season roads within a 500-meter range under RUDP. This exceeded the target in the PAD of 118,805 people. Of note is that the counting methodology for the road beneficiaries and direct project beneficiaries was erroneously reversed and the target presented in the PAD and Implementation Status and Results Reports (ISRs) was for the total number of project beneficiaries, not just those benefiting from roads. The correct target was 88,000 and the indicator was exceeded by 174 percent. Project beneficiaries interviewed have noted the decrease in transport costs and travel time, improved traffic flow, and better access to schools and markets by having access to paved roads. They also noted reduced flooding from improved drainage, improved security due to the installation of streetlights, and increased pedestrian safety from the introduction of footpaths. In Rubavu, a mother of three interviewed by a local newspaper noted that she used to spend Rwf 600 to Rwf 1,000 going to the market on the other side of town but now saves Rwf 300 because of the new roads.⁶

26. **About 89.3 kilometers of urban roads were rehabilitated or constructed under RUDP.** This is above the target of 81 kilometers by 110.3 percent. The roads that have been constructed or upgraded have improved access to markets, services, and opportunities, and have reduced travel times for users.

27. **About 7,907 hectares of land has been provided with drainage services.** This exceeded the target of 3,479 hectares by 227 percent as it includes the rehabilitation or construction of both standalone and roadside drains. Project beneficiaries interviewed during the government's ICR mission in August 2021 have observed improved sanitation and hygiene services and reduced property damages due to flooding and diseases through improved drainage systems and decent housing after renovations following project compensation.

28. **About 29.9 kilometers of standalone drains were rehabilitated or constructed under RUDP.** This is only 68 percent of the target. Some of the reasons for this underachievement include inaccurate estimates made during project appraisal (targets were set prior to the finalization of the detailed engineering designs), as well as works not completed in Rubavu due to the temporary suspension of works caused by the volcanic eruption in the Democratic Republic of Congo (DRC) that led to a series of earthquakes in May 2021. Nevertheless, the construction of standalone drains completed under the project has reduced flooding in urban areas through reduced rainwater runoff, increased stormwater retention in upstream catchment areas, and reduced accumulation of water in streets and road intersections.

⁶ <https://www.newtimes.co.rw/news/rusizi-rubavu-tourism-potential-get-boost-infrastructure-project>



29. **About 154,600 residents (51.7 percent female)⁷ have benefited directly from the improved infrastructure and services delivered under the project.** They are enjoying upgraded and new access to urban roads and standalone drainage. This exceeded the target in the PAD of 88,000 people. Of note is that the counting methodology for the road beneficiaries and direct project beneficiaries was erroneously reversed and the target presented in the PAD and ISRs was for the total number of road beneficiaries only. The correct target was 118,805 and the indicator was exceeded by 130 percent.

30. **Some 1,175 people participated in consultation activities during project implementation, of which 398 were female.** This exceeded the end targets in the PAD of 700 and 350, respectively. Of note is that the targets for years 2, 3, and 5 presented in the PAD and ISRs were incorrectly set, as targets were intended to be cumulative. The correct target for the number of people who participated in consultation activities during project implementation was 1,000 – of which 500 were female and the indicator was exceeded by 118 percent. However, the number of female participants reached only 80 percent of the target. Extensive consultations were conducted for project prioritization and planning, such as feasibility study preparation, Resettlement Action Plan (RAP) preparation and Grievance Redress Committee (GRC) meetings for phases 1 and 2.

31. **Approximately 111 hectares of unplanned settlement areas were upgraded.** This is above the target of 86 hectares by 129 percent because savings generated under components 1 and 2 were used to expand the area to be upgraded. Some 9.2 kilometers of roads, 19.1 kilometers of pedestrian walkways, and 7.41 kilometers of drainage channels were constructed, under the project. In addition, 559 streetlights were installed, and a water tank was provided to a secondary school in Kigali (*Lycee de Kigali*).

Objective 2: To enhance urban management in selected urban centers of the participating districts

32. **The share of maintenance expenditures of district budgets increased significantly from 3.46 percent in 2015 to 15.4 percent in 2021 by 154 percent.** In addition, the baseline was recalculated from 6.50 percent to 3.46 percent to be consistent with the revised formula (see paragraph 66). The Bank team regularly discussed the progress towards achievement of this indicator during implementation support missions, including the challenges of districts' financial reporting to support revenue and expenditure management.

33. **A system for tracking business activities was developed and is now operational.** The system is being used to report on employment and business establishment activities in each of the six secondary cities and is integrated within LODA's Monitoring and Evaluation Information System (MEIS). District staff were trained on the use and functionality of the system and are now testing its efficiency and accuracy.

34. **Six secondary cities are using GIS as a key planning tool.** Each of the district governments have access to MININFRA's geodata portal and district staff have been trained to use GIS in strategic investment planning and annual planning procedures such as issuance of construction and building permits, plots partitioning, master plan development and land transfers.

- In Musanze, staff noted the use of GIS in cadastral mapping to demarcate sensitive urban areas and potential dumping sites, land recovery and property taxes and geographical data collection and planning for schools
- In Muhanga, staff use GIS for mapping of social and economic activities (agriculture and natural resources,

⁷ Rwanda census data show that about 51.7 percent of residents in urban areas are female.



special economic zones, schools, hospitals, electricity) vis-à-vis approved urban master plan, land dispute resolution, water and sanitation network planning, land zoning, land subdivision, plot servicing, cadastral planning and parcel maintenance.

- In Rubavu, staff use GIS in master plan preparation, including establishing site layout maps such as for the relocation of residents to Rubavu Mountany.
- In Huye, GIS was used to track project beneficiaries, including access to land and the correction of their land titles and in the determination and ranking of informal settlements.
- In Rusizi, GIS was used in mapping the location of informal settlements and creating a base map to inform urban policy decisions, land dispute resolution, land surveying and land suitability.

35. **Six LED and city branding and marketing strategies developed.** Six LED strategies were updated under the project to assess and identify districts' economic potentialities and relative comparative advantage. The strategies were endorsed by the district councils in 2017 and integrated within each of the districts' District Development Strategies (2018–2024) under the pillar for economic transformation. Further to this, six city branding and marketing strategies were developed as a marketing and communication tool to attract private sector development. These strategies were also endorsed by district leaders and are currently under implementation.

36. **Analysis of districts' revenue and expenditure management carried out.** TA was provided to develop strategies to address districts' capacity constraints in making accurate revenue and expenditure forecasts as identified in the diagnostic study and baseline analysis undertaken at the start of the project. The study was validated by national and district staff and an implementation roadmap for enhancing own-source revenues and good financial reporting practices was prepared to guide LODA in the roll-out of these strategies.

37. **Capacity needs assessment and capacity building plans for the six secondary cities developed.** These were each developed for the district units in charge of: (a) business development and employment, (b) planning, monitoring and evaluation, and (c) One Stop Centers, to identify the challenges and opportunities for meeting districts' LED targets. The capacity building plans were envisaged to be implemented during a three-year period (2020–2023) and included recommendations for enhancing formal coordination and supervisory roles across institutions and at the central and district levels, achieving districts' performance contracts (*Imihigo*) and augmenting staffing capacity through training and on-the-job coaching.

38. **Guidelines for a National Urban Informal Settlements Upgrading Implementation Program (NUISUIP) developed.** The NUISUIP emerged out of a critical need to develop a systematic approach to upgrading informal settlements in Rwanda. A policy framework and a detailed set of implementation guidelines were developed to guide the Rwanda Housing Authority in the roll-out of the NUISUIP consistent with the government's National Informal Settlements Upgrading Strategy of 2018. A series of trainings of trainers was also conducted for policymakers, and staff of the CoK and districts and other interested government stakeholders. Key policy recommendations from the TA were used to inform the selection and prioritization of informal settlements that would be upgraded under the RUDP 2.

39. **District infrastructure management system for road and drainage assets is not operational.** This indicator was not achieved as it was reported at mid-term review that the German Development Bank (KfW) had committed Euro 8 million to update the existing MEIS at LODA, which would include a module for holistic, decentralized infrastructure (inventory, status monitoring, budgeting and financing). Procurement for this consultancy was dropped from RUDP and the budget was reallocated to other project activities. The indicator was not dropped because the project did not

undergo a formal restructuring. The Bank team agreed that efforts would be coordinated with KfW to achieve the objective envisioned under the RUDP and that documenting the changes in the aide memoire would be sufficient. It was reported in the last implementation support mission that procurement was still in the early stages and thus this would not be achieved under the project.

Justification of Overall Efficacy Rating

40. **The efficacy rating for the PDO is substantial.** The RUDP fully achieved its objective to provide access to basic infrastructure and enhance urban management in selected urban centers of the participating districts. Targeted urban areas have improved infrastructure services through the rehabilitation or construction of roads, drainage systems, footpaths and street and security lights. Secondary cities have benefited from various TAs through support to LED strategy development, use of business tracking and GIS-based information systems, as well as capacity building to scale up urban upgrading. All PDO outcome indicators met and/or exceeded the targets. All but two intermediate outcome targets were met.

C. EFFICIENCY

Assessment of Efficiency and Rating

Rating: Substantial

41. **An ex-post update of the economic efficiency analysis carried out for the RUDP at appraisal stage shows that the economic benefits of the investments are substantial and well above the cost of capital.** The investments in roads, drainage systems, and upgrading of informal settlements provided significant benefits, with details below. The main assumptions underlying the calculations of the net present values (NPVs) and internal rates of return (IRRs) for the infrastructure are: (a) the construction period was two years, (b) the benefits start to flow from year three and continue for 20 years, and (c) the discount rate is 5 percent, the same rate as used in the appraisal stage economic analysis. It should be noted that the NPVs at project end are much higher than those at appraisal, because the analysis at appraisal covered only a sub-set of investments, while this analysis covers all investments made under the project. See annex 5 for details of the efficiency analysis.

Roads and drainage systems

42. **Benefits of investments in urban roads and drainage systems in the six secondary cities.** A total of US\$72.43 million was spent to construct 89.32 kilometers of roads with associated drainage infrastructure, pedestrian walkways and streetlights and 29.95 kilometers of stand-alone drainage systems. The NPVs and IRRs at appraisal and at closing are presented in table 2, below.

Table 2: Economic analysis for the roads and drainage systems constructed in six secondary cities

Roads and drainage systems	At appraisal		At closing	
	NPV	IRR	NPV	IRR
	US\$37.92 million	14%–20%	US\$195.0 million	18.3%

43. The roads and drainage investments in the six secondary cities remain viable even with changes in costs and



benefits.

Informal settlement upgrading in the CoK

44. **Benefits of upgrading informal settlements in the CoK.** A total of US\$10.49 million was spent to construct 9.2 kilometers of roads, 19.1 kilometers of pedestrian walkways, and 7.41 kilometers of stormwater drains, and to install streetlights throughout the settlement. The NPVs and IRRs at appraisal and at closing are presented in table 3, below.

Table 3: Economic analysis for the investments to upgrade informal settlements in the CoK

Roads and drainage systems	At appraisal ⁸		At closing	
	NPV	IRR	NPV	IRR
	US\$10.27 million	14%	US\$20.8million	14.5%

45. The investments in settlement upgrading remain viable even with changes in costs and benefits.

Non-quantifiable benefits

46. **Roads, drainage systems, pedestrian walkways, and streetlights provide significant benefits that have not been quantified in the above analysis.** Details are below.

- **Roads.** Non-quantified benefits include reduced vehicle maintenance and operating costs (the benefits of reduced travel times and increased rental values are captured in the quantified analysis above).
- **Drainage systems.** The non-quantified benefits include (a) reduced loss of income from businesses whose hours are curtailed, and reduced access due to flooding; (b) lower maintenance costs for vehicles; and (c) reduced costs of illness associated with exposure to polluted and stagnant water. The drainage systems are also contributing to disaster risk management and urban resilience, areas of increasing importance to the Bank.
- **Pedestrian walkways.** The non-quantified benefits of pedestrian walkways include reductions in fatal or serious injuries due to vehicle-pedestrian accidents (the benefits of reduced travel times and increased rental values are captured in the quantified analysis above).
- **Streetlights.** The non-quantified benefits of streetlights include (a) heightened sense of security at night which allows people to walk rather than take motorized transport to their destinations, and (b) reduced accidents between vehicles and between vehicles and pedestrians.

47. **The procedures followed by the implementing agencies under the RUDP have resulted in adequate value for money of investments.** Priority investments were identified through consultations with residents of the urban areas. Procurement was through international and national competitive bidding procedures to ensure value for money in procurement. Moreover, both the national and district governments maintain complaints handling mechanisms to allow for citizens to bring suspected cases of fraud and corruption to the attention of the authorities. Collectively, these procedures provide reasonable assurance that investments in cities are providing value for money. Indeed, the annual audit reports of the Office of Auditor General of Rwanda noted that the investments supported under the RUDP were realizing value for money in utilization of public funds.

⁸ The calculations at appraisal covered only investments in streetlights. The economic analysis carried out for the ICR also covers investments in roads and drainage systems that were constructed in informal settlements under the project.



48. **Institutional benefits were substantial.** The RUDP provided TA and capacity building support in core areas of urban development and management. Details are presented in the efficacy section on component 3, above. In addition, the RUDP team led the preparation of the follow-on RUDP 2.

49. **Administrative efficiency was substantial.** All activities except for those affected by the earthquake in Rubavu were completed by the original project closing date. There were no significant time or cost overruns. In addition, nearly all of the IDA Credit has been disbursed.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

50. A rating of high for the relevance of the PDOs, a rating of substantial for achievement of outcomes, and a rating of substantial for efficiency justify an overall outcome rating of satisfactory.

E. OTHER OUTCOMES AND IMPACTS

51. **Gender.** There was no specific gender-targeted activities in the project, but the approach ensured equal rights for men and women to participate in project preparation and implementation. When prioritizing investments for the upgrading project in Agatare, women expressed the need for well-lit footpaths because they were more likely to walk and use non-motorized transport, and these were included in the list of investments to be supported under the project. A female student interviewed by a news outlet said, "It was not easy to reach school due to dirty roads and whenever it rained, I would fail to go." Installing streetlights gave her confidence to walk home in the evenings knowing that she would not be robbed, a common problem in most poorly lit neighborhoods in Kigali. In addition, the RUDP also generated employment opportunities for residents, particularly women. In Musanze, it was reported⁹ that road works resulted in job creation for casual labor during works construction, new businesses, and enhanced environmental protection along the River Rwebeya. A mother of two, who was among the group of casual laborers working on several of the RUDP-financed drains, said to a local newspaper that the Rwf 1,500 (approximately US\$ 1.51) daily pay, which she got every two weeks, was "better than begging on the streets." She said, "I've been working for a month now and can get money to take some food home. It is not easy for me but, at least, it is a job."

52. **Institutional Strengthening.** Districts had no prior experience implementing World Bank-financed projects and had very low technical and managerial capacity when the project started. The project strengthened cities' infrastructure management capacity – especially planning, design, procurement, and supervision. In addition, districts benefited from various TAs and capacity building activities to promote LED and GIS in planning and decision-making. Given each of the cities' unique economic positioning and government's priorities to enable LED, the project developed six city brand and marketing strategies to support business development and private sector engagement based on cities' comparative advantages. These strategies are currently aligned with districts' LED and development strategies and are envisaged to be part of districts' investment programs. A report on "District Revenue and Expenditure Management Strategies for the Six Secondary Cities" was also prepared to develop strategies for enhancing locally sourced revenues and come up with strategies for reporting results. Moreover, districts have benefited from trainings and are using GIS to fulfill strategic urban planning functions through the roll-out of MININFRA's geodata platform. At the national level, technical advisory support to the Rwanda Housing Authority was provided to develop guidelines and training modules for implementing a National Urban Informal Settlements Upgrading Implementation Program.

⁹ <https://www.newtimes.co.rw/featured/musanze-tourism-business-buoyed-word-bank-funded-road-project>



53. **Poverty Reduction and Shared Prosperity.** The RUDP directly improved living conditions in unplanned settlements in the CoK and secondary cities, which accommodate the country’s urban poor. The roads and street lighting have improved mobility, benefiting students, for example, who say that prior poor street conditions made transportation in Agatare nearly impossible. In addition, the RUDP directly reduced poverty and boosted shared poverty through job creation. In Agatare, upgrading works generated roughly 6,905 person days of employment¹⁰ – of which 28 percent were carried out by women. In addition, an impact assessment report for phase 1 investments noted that a total of 55,603 off-farm jobs were created during 2019–2020 – a portion of which was attributed to the new businesses created in the secondary cities because of the rehabilitation and construction of urban roads (see paragraph below).

54. **Other Unintended Outcomes and Impacts.** The project generated unintended positive impacts with respect to enhanced local revenue generation, tourism, and commercial and business development due to improved access to roads, street lighting and drainage systems. New businesses included hotels, motels, bars, restaurants, shops, saloon, garages and workshops. In Rubavu, newly constructed roads and drains have attracted new residents to the city despite the ongoing challenges brought about by the Covid-19 pandemic. A female shopkeeper told a reporter, “Earlier, one would be earning at least Rwf 500,000 (approximately US\$500) and then gradually move up to a million but things came to a standstill now. Challenges of the Covid-19 pandemic and more recently, the earthquake across the border...[but] there is hope that once the border fully reopens, we will resume normal operations and take full advantage of the development brought by the new roads...”¹¹ In Rusizi, a resident told a reporter “the tourism potential has increased attracting visitors from all parts of the country.”¹² The roads and drainage systems constructed under the project in Kamembe town has spurred development of three new hotels, several high rising commercial buildings, modern market facilities, and a cross-border market, which have improved business between Kamembe and the DRC, according to the government’s ICR. In Nyagatare, the number of building permits issued has increased from eight in 2017 to 206 as of August 2021, according to the government’s ICR. Some are for new or improved residential houses, while others are for new businesses. Apart from the formal businesses established, the RUDP government team in its final site visits to all the cities noted the increased number of informal businesses, which are indirectly contributing to local economic growth.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

55. **Several factors in project design positively affected implementation.** The RUDP built on the design elements of the UICMP with regard to the project objective (access to urban infrastructure), geographic focus (CoK and six secondary cities), and components (urban infrastructure, settlement upgrading and institutional capacity building). As such, project components were consistent with the PDO. The project adopted a phased approach with phase 1 focusing on quick wins to test out and strengthen district- and national-level capabilities. Parallel TA and capacity building activities would allow districts and national agencies to learn and hone their skills on infrastructure project implementation enabling them to undertake complex initiatives more effectively under phase 2. In the CoK, the upgrading project in Nyarugenge District (also known as Agatare settlement) was seen as a demonstration project for community-based urban regeneration in Rwanda that could be scaled up in the secondary cities during phase 2. In addition, the selection and prioritization of

¹⁰ Taken from the PAD for the Second Rwanda Urban Development Project

¹¹ <https://www.newtimes.co.rw/news/rusizi-rubavu-tourism-potential-get-boost-infrastructure-project>

¹² <https://www.ktpress.rw/2021/06/rudp-road-project-changing-face-of-rwandas-border-cities/>



investments involved active community participation. Consultations were led and managed by the districts (and observed by the Bank team) comprising male and female residents of the project-affected neighborhoods, cell and sector leaders, district leaders and their technical staff, opinion leaders, local experts, and representatives from community-based, civil society and non-governmental organizations.

56. The project was thoroughly prepared. The PAD specified the risks the project would face and identified adequate mitigation measures. Although some challenges, particularly project management issues, that would later be identified during implementation (see Section III. B), were not anticipated at appraisal. Nonetheless, the overall risk rating at appraisal was appropriately assessed as substantial due to district-level capacity constraints, especially fiduciary, environmental and social safeguards aspects. Procurement and financial management arrangements of MININFRA, LODA, CoK and the districts were thoroughly assessed, and action plans prepared to mitigate the risks identified. The project was classified appropriately as environmental category B (partial assessment) given that the proposed project activities were identified to have small- to medium-scale impacts localized to the project sites caused by rehabilitation and construction works. All infrastructure investments for which sites had been identified during appraisal were subject to the project's Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF). These, along with an Environmental Impact Assessment (EIA), Social Assessment (SA) and RAPs were finalized and disclosed in-country and at the Bank's Infoshop prior to appraisal. By the time of Board presentation, a draft Project Implementation Manual (PIM) was prepared and finalized. Arrangements for monitoring and evaluation (M&E) were also confirmed following extensive discussions on project indicators, baselines and targets. The results indicators in the PAD provided higher level monitoring of the project's achievements while more detailed indicators would be included in the PIM. The government had appointed a dedicated project coordinator at MININFRA, as well as an SPIU at LODA to manage the implementation of RUDP in coordination with the CoK and districts. An 18-month procurement plan had been agreed, containing works that could start soon after the project became effective.

B. KEY FACTORS DURING IMPLEMENTATION

57. Delays experienced during first two years of implementation. During the first year of implementation, the project was behind schedule by 10 months due to delays in the finalization of detailed engineering designs (DEDs) for phase 1 investments, procurement of the construction supervision consultancy (CSC), time taken by contractors to draw up Contractors' Environment and Social Management Plans (C-ESMPs), and completion and implementation of abbreviated RAPs (ARAPs). The DEDs were deemed of poor quality as corrective actions needed to be taken due to the insufficient soil sample analysis conducted during appraisal. As a result, contracts for all roads and drainage civil works in the secondary cities were signed between May and June 2017 and works formally started 15 months after effectiveness.

58. Significant delays and eventual cancellation of Mobile Implementation and Capacity Support Team (MICST). The procurement of a MICST was the single most important contract and mitigation measure for successful project implementation at the district level as indicated in the PAD. The MICST was expected to provide capacity building and backstopping support to districts in a wide range of areas including engineering and planning, fiduciary management, and environmental and social safeguards. The MICST was also expected to provide implementation support to the LODA SPIU. Firm selection commenced in September 2016 but qualifications of firms that expressed interest were found to be inadequate. This is attributed to the quality of the original request for expression of interest, which did not capture the essence and scope of the assignment as spelled out in the Terms of Reference (TOR). The procurement activity was canceled during the mid-term review because the protracted process did not allow the team to be mobilized in time to support phase 1 implementation. As a result, functions that were supposed to be carried out by the MICST were taken



on by the LODA SPIU, which had found itself overstretched and lacking both the direct support from the MICST as well as its district outreach capacity. In place of the MICST, other modalities for providing capacity support were explored including the recruitment of two floating engineers at LODA in November 2019.

59. Other factors negatively affected component 1 implementation. Persistent delays in contract implementation of road and drainage construction of the six cities in both phases are attributed to: (a) poor quality engineering designs and tender document preparation causing unexpected design changes; (b) time taken by LODA, the CSC and districts in reviewing and approving variation orders¹³ to reflect design changes thereby increasing contract costs by 113 percent and 112 percent during phases 1 and 2, respectively, delaying payments made to the contractors and slowing the disbursement of project funds; (c) delays in settlement of expropriation and compensation payments and lack of timely relocation of utilities (water, electricity, telecommunications) at construction sites requiring coordination among multiple agencies; (d) allowing unrealistic contract time (too short); (e) poor contractors' performances in some districts; (f) contractors' shortage of materials, equipment, manpower and financial resources; and (g) inclement weather conditions hampering physical progress of works.

60. Several factors negatively affected component 2 implementation. Finalization of the DED for the upgrading of the Agatare settlement area encountered considerable delays. There was a substantial design change as the CoK decided to apply high road standards to 19 access streets with an intention to comply with the 2011 Roads Act and the 2013 Kigali City Transportation Master Plan. The decision significantly changed the design parameters in the feasibility study as agreed and approved during project appraisal, widening the carriageway of these roads from 4.5 meters to 6 meters and the total right-of-way from 6-8 meters to 9 meters. This, together with CoK's guidelines on expropriation indicating that the whole property had to be demolished and compensated even where partial destruction was anticipated, had increased the number of affected properties from 289 as originally estimated to 541 in the draft DED. Around 265 properties were fully affected and households relocated, compared to 34 properties as earlier estimated. The increased scale of involuntary resettlement required a full RAP to be prepared and had a budget implication for the CoK since its allocation for compensation was insufficient to cover all Project Affected Persons (PAPs). Estimates of the final cost of compensation went over US\$3.1 million because of the increasing amount and value of the land and property expropriated (from US\$1.6 million at feasibility study stage to US\$2.6 million at DED stage). As a result of technical discussions between January and May 2017, the Bank and the CoK teams eventually agreed on the final designs.¹⁴ Tertiary infrastructure that was envisaged in the original scope of works was left out of RUDP due to cost increases.¹⁵ The principle of adopting flexible, adapted planning standards for roads rights-of-way was also reconfirmed by both teams and the CoK agreed to maximize resettlement of PAPs onsite or nearby to minimize negative impacts. A sectional approach to site handover was introduced whereby the CoK would use the available budget to first compensate people in the sections that involved the least complicated and costly involuntary resettlement, allowing civil works to commence in those sections after involuntary resettlement was concluded.

61. Weak inter-agency coordination. Overall project management was identified in previous missions as a key concern due to the lack of clarity of roles and responsibilities and capacity gaps among implementing agencies. While there are

¹³ Districts are reluctant to approve variation orders for fear of having them go beyond 20 percent of the total contract value, which is against national guidelines.

¹⁴ Several proposed 9-meter-roads were scaled down to 8-meter-roads, including the carriageway of 6 meters and sidewalks/drainage channels/others of 2 meters (either 2 meters on one side or 1 meter on both sides, depending on the road), the detailed composition of which would depend on site conditions. The width of other roads was restored to the initial 6 meters or 4 meters.

¹⁵ The CoK agreed to fund the works with its own budget (as documented in the May 2017 aide memoire) to be provided in the fiscal year 2020.



considerable benefits to having a dual management arrangement with MININFRA taking a coordination role and LODA with a more day-to-day project management function, coordination and communication challenges between MININFRA and LODA and between districts and the implementing agencies were observed during implementation. MININFRA is not the line ministry to which LODA reports or is administratively accountable to. As a result, the RUDP—with its focus on infrastructure and urban management—very clearly overlapped with the mandates of both agencies,¹⁶ while information about the RUDP did not seem to flow effectively or easily between LODA and MININFRA as demonstrated in the quality of overall monitoring and reporting. After the mid-term review, the PIM was updated to redefine the roles and responsibilities of national and district entities over various urban development functions.

62. Inadequate project management capacity. The Bank team also noted significant capacity gaps at MININFRA, LODA and the CoK. At MININFRA, a project coordinator was recruited before the first mission was conducted in September 2016. He was the only full-time PCU member until January 2020 when a public financial management specialist (PFM), procurement specialist and M&E specialist were recruited. But until then, the coordinator had taken on a much more operational role than originally envisaged to fill in the capacity gaps at LODA. At LODA, the SPIU coordinator and some core staff were also recruited in mid-2016. However, there were serious SPIU recruitment gaps during implementation due to frequent staff turnover, notably with respect to the procurement specialist, environmental safeguards specialist and M&E specialist. Some of these gaps were filled by core LODA staff on a part-time basis. Recruitment deficiencies were compounded by the difficulties associated with the SPIU staff also working on the Bank-financed Great Lakes Trade Facilitation Project and made more problematic by the failure to recruit the MICST. Similarly, at the CoK, the Kigali Urban Upgrading Team (KUUT) for most of the project implementation period comprised one project coordinator fulfilling various project management functions. It was only in January 2020 that the KUUT was fully staffed with the recruitment of the social safeguards specialist, engineer, procurement specialist and PFM specialist completed with only 16 months left until project closing.

63. The mid-term review, which took place in September 2018, provided a comprehensive assessment of progress towards development objectives and implementation performance and recommended measures to address shortcomings. The review confirmed the overall relevance of the project and provided an opportunity to assess project implementation progress in detail, identify bottlenecks and make mid-course corrections that were necessary. This included support to the MININFRA PCU and LODA SPIU by recruiting additional staff. The mid-term review also identified implementation challenges and recommended measures for addressing them.

64. Project savings. The project generated savings in the amount of approximately US\$4.56 million due to the appreciation of SDR to the US dollar. A portion of the savings was used to finance additional works under component 1 in Muhanga (1.5 kilometers of road and Gahogo ravine improvements); Musanze (landscaping and greening of project sites); Nyagatare (2.47 kilometers of road, 6.8 kilometers of street lighting and 1.8 kilometers of drains); and Rusizi (0.6 kilometers of road and construction of retaining walls). Other districts were informed of this with some delay and declined to increase the scope of work given the short time remaining until project closure. For component 2, savings from the exchange rate gain as well as unspent funds in Rubavu (see paragraph below) were used to finance 2.34 kilometers of additional road. This additional work would improve the connectivity of the area and reduce flooding and improve safety through construction of roads and associated stormwater drains, and installation of streetlights. Given the time remaining until project closure, the Bank team held weekly joint progress meetings with the CoK, contractors

¹⁶ MININFRA'S mandate includes policy functions related to infrastructure and urban development, planning and housing. LODA, which is the implementing arm of MINALOC, is broadly responsible for local development and administration. MINALOC has no specific mandate with respect to urban development but oversees and supervises districts and the CoK.



and the CSCs to review progress against detailed work plans prepared by the contractors and the CSCs. All remaining works were completed and fully disbursed during the disbursement period.

65. **The Covid-19 outbreak and volcanic eruption in Rubavu disrupted remaining project works.** The Covid-19 outbreak delayed the provisional handover of works in the secondary cities due to successive partial and total lockdowns beginning in March through June 2020. During this period, slow rates of progress and sometimes suspension of works were observed. Nonetheless, all works and consultancies were fully delivered by project closing. Additionally, the May 2021 mission revealed that some works were unlikely to be completed due to a volcanic eruption in the DRC, which borders Rubavu District, and was followed up with a series of earthquakes. This affected works progress, caused delays in the stormwater sewer drain due to works suspension, and damaged some of the completed road sections under RUDP. Physical progress as of the project closing date stood at 91 percent. During the mission, LODA committed to complete phase 2 works in Rubavu under the RUDP 2 and assumed responsibility to regularly monitor and enforce environmental and social safeguards compliance for works not completed.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

66. **The PAD included a results framework, which established clear links between the PDO and the project interventions with clearly identified baseline and target values based on the feasibility studies undertaken at appraisal, and were in line with the capacity, data availability, and costs of M&E.** However, there were several shortcomings that proved to be a challenge during implementation. First, the outcome indicator— “increase in share of maintenance expenditures of district budget”—proved difficult to measure. Districts’ financial reporting did not provide sufficient data for establishing current balances and thus to measure financial sustainability of the districts’ operations in general and their capacity for increasing operations and maintenance (O&M) in the future. As a result, the baseline and all succeeding annual values were recalculated to be consistent with the formula used by the RUDP team.¹⁷ Second, there was confusion between “number of people in urban areas provided with access to all-season roads within a 500-meter range under the project” and “direct project beneficiaries.” The methodology for measuring the value of the indicators and the targets presented in the PAD and ISRs were erroneously reversed. Finally, one intermediate results indicator on “district infrastructure management asset management system for road and drainage assets operational” was no longer relevant due to KfW’s commitment to update the existing MEIS at LODA, which would include a module for holistic infrastructure asset management and TA for local government capacity building. These weaknesses in M&E design were addressed during implementation, ensuring that the M&E system was able to provide reliable data to assess the achievement of the objectives and test the links in the results chain.

M&E Implementation

67. **LODA and the districts were responsible for M&E activities under the project.** Data collection for the project started only when the implementation of activities had commenced. The Bank team noted inconsistencies in the

¹⁷ Road maintenance (instead of all rehabilitation projects, public works projects and budget lines with “Repair and Maintenance” as indicated in PAD) was calculated as a share of total districts’ development budget (instead of the total districts’ budget as indicated in PAD).



districts' reporting, particularly of the values of the PDO-level indicators. The sources of data and method of calculation to report actual progress, as agreed during project preparation, were not uniformly understood by district project staff. It was only towards the end of 2017 that the project began to periodically report on the results framework. The Bank team held regular discussions on data collection and methodology for aggregation including developing a guidance note for M&E and updating the PIM following the mid-term review. These steps, together with the recruitment of full-time M&E specialists at MININFRA PCU and LODA SPIU to support the districts, led to greatly increased quality of M&E during the final two years of project implementation. In addition, the quality of project progress reports significantly improved as the frequency shifted from semiannual to quarterly. The M&E team regularly visited the project sites to document progress of works and their contributions to development outcomes. The Bank team regularly reviewed and reported on the functioning of the project's M&E system in each aide memoire, noting improvements and areas requiring further strengthening.

M&E Utilization

68. **The monitoring information presented in the RUDP progress reports formed the basis of discussions during missions as well as for meeting government performance targets (in the form of *Imihigo*).** Specifically, it was used to identify areas of particular challenge and to identify measures to address them. While M&E reporting was initially fragmented and inadequate in flagging issues in a timely manner, the Bank team used the mid-term review (and subsequent missions) as opportunities to follow up on and improve the data collection methodology and M&E system. The reports were also used to update relevant line ministries highlighting critical issues for their coordination and support. The same M&E system is being used under the RUDP 2 to inform policy and technical discussions within the project's national steering and project technical committees, respectively.

Justification of Overall Rating of Quality of M&E

69. Considering the three aspects of design, implementation and utilization, the overall rating of M&E quality is assessed as substantial.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

70. **Compliance with the project's environmental and social safeguards remained moderately satisfactory throughout implementation.** The project was classified as Category B and four policies were triggered: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Physical Cultural Resources (OP/BP 4.11) and Involuntary Resettlement (OP/BP 4.12). Project ESMF, RPF, EIA, SA and RAPs were prepared and disclosed in-country and at the Bank's Infoshop prior to appraisal. While the RUDP had localized social and environmental impacts,¹⁸ there were no issues regarding compliance with the Natural Habitats and Physical Cultural Resources policies. However, there were several shortcomings with compliance with other relevant Bank safeguards policies and procedures. The LODA SPIU had full-time environmental and social safeguards specialists, but their overall capacity to support the districts and works supervision was limited. Participation of districts' safeguards staff was also limited due to time constraints, competing district responsibilities, and lack of transportation. In addition, the CSCs hired under the project to supervise the

¹⁸ Some of the impacts observed from the project were related to open pit excavations which disrupted normal living conditions due to noise and dust, damages to people's homes (sometimes complete removal or partial removal of walls and safe entrances to houses), regular disruptions in access to public services (water, electricity, sidewalks, access to schools, health centers), cutting of slope vegetation, sedimentation of drainage and wetlands, traffic and overall impact to the public safety for pedestrian and vehicles.



contractors and sub-contractors were overstretched and could not regularly visit all the project sites. The CoK, up until project closure, did not have an environmental specialist. Some of the shortcomings encountered through implementation included: (a) limited understanding of the safeguard requirements by the implementation team, (b) procurement processes initiated without a completed ESIA evaluation, (c) work contracts awarded prior to completion of the ESIA, (d) preparation of C-ESMPs when civil works were already ongoing, (e) bidding documents without clear environmental, social, health and safety (ESHS) measures and/or not reflecting the findings from the ESIA. This last shortcoming caused difficulties related to the enforcement of ESIA measures and proper budget allocation for C-ESMP implementation, in addition to unwillingness of contractors to prevent or remediate some of the identified impacts. The use of national bidding documents with very general, weak ESHS measures made enforcement difficult. Furthermore, despite the ESIA and ESMP having a monitoring plan in place, the CSC and contractors rarely provided periodic monitoring on air, water, and soil management, health and safety (near misses, use of protective equipment, water provided per day, and the like), weekly number of workers, number of Covid-19 cases, and the like.

71. Social safeguards performance, on the other hand, improved once LODA recruited a social safeguards specialist. This was evidenced by the improved quality of quarterly progress reports. RAP implementation was generally smooth. By project closing, all outstanding compensation had been completed for CoK and all six secondary cities with a total of 765 PAPs paid. Nine PAPs that could not be located had their compensation payments deposited in escrow accounts. All construction sites were handed over to the contractors to facilitate the completion of civil works. A RAP completion report was prepared detailing the process of implementation, grievance management and performance of the grievance redress committees, stakeholder engagement, challenges experienced, and lessons learned for RUDP 2 implementation. GRCs were established at the cell level, trained and operationalized in all six secondary cities. Around 140 GRC members were trained on how to receive, assess and compile reports on received grievances in the logbooks provided to the GRCs. In general, the nature of grievances received pertained to requests for counter valuation, damaged properties and requests from PAPs to be added to the list for compensation and disruption of utilities. By project closing, all cases had been resolved. Complaints were in relation to safety concerns due to incomplete access points, disputed valuation process and cracks caused by construction works.

72. Compliance with occupational health and safety (OHS) measures was inadequate. Three accidents involving project-financed contractors (two classified as severe and one as serious) took place within a span of 18 months. The first incident took place on February 21, 2020 in Nyarugenge District (Agatare settlement) where an earth slope collapsed during construction of a retaining wall leaving one worker seriously injured and unable to work for almost a year. The second incident involved a fatal traffic accident in Nyagatare District on November 1, 2020 that killed one person and injured four others. The third accident took place on July 27, 2021, involving a contractor-owned water tanker that hit and killed one of its workers. All incidents were immediately reported to the Bank. These project incidents demonstrate a critical need to enforce OHS management and supervision under the project, especially road and community safety, transportation of materials and workers and contractors' supervision. Full investigations and corrective action plans for the three incidents were prepared and Bank supervision is ongoing until the cases are resolved, and the workers and their families are duly compensated.

73. Compliance with financial management arrangements was satisfactory. The project was generally compliant with the Bank's financing reporting requirements with quarterly interim unaudited financial reports and annual audit reports submitted on time. The accounting system under the RUDP worked satisfactorily in recording and processing financial transactions and in preparing regular and acceptable financial reports. Functional responsibilities were sufficiently segregated, and adequate internal control procedures were in place. Since the mid-term review, when it was noted a



significant capacity gap with 14 percent of FM positions vacant in LODA and the districts, key FM staff and arrangements under the project were put into place and there were no outstanding fiduciary issues to report at project closing. Audit reports had unqualified opinions, particularly on compliance with applicable laws, regulations, and guidelines regulating public spending and on realizing value for money in utilization of public funds. The rate of budget execution was noted to be high, but the level of disbursements was consistently noted to be low. The Bank team closely coordinated with the implementing agencies to ensure that all project activities, including goods and works delivered, were completed on time. By the project closing date, the project had disbursed almost 95 percent of funds.

74. **Compliance with the project's procurement procedures was moderately satisfactory.** Under the RUDP, a total of 63 contracts were awarded. The CoK committed to use government resources to pay for works and consultancy supervision services that continued beyond the project closing date. LODA agreed to use RUDP 2 funds to complete works that had been damaged by the earthquake in the DRC. However, there were significant delays in uploading procurement documents in the Systematic Tracking of Exchanges in Procurement. Moderately satisfactory¹⁹ performance was attributed to: (a) low disbursement, (b) delays in the procurement process for most contracts, procurement complaints and change of scope of service or works following extended delays, (c) quality issues of the requests for expression of interest, requests for proposal, particularly technical specifications, evaluation reports, and contract documents, and (d) slow turnaround in transaction with the Bank. In general, the procurement capacity was weak at both national and district levels. Weaknesses in contract management and related challenges affected procurement performance resulting in significant delays. For instance, the procurement plan did not provide a realistic timeframe for completion of procurement activities. Estimation of costs and contract duration was also unrealistic. The district contract award decision for phase 1 was coordinated by the LODA SPIU to avoid the risk of one contractor winning on all or most districts; but it did not help improve implementation, as performance of some contractors was not satisfactory. There was also a lack of clear demarcation of roles and responsibilities of districts, the CSCs, and LODA in managing the civil works contract, especially in granting time extensions and variation orders. Finally, the sustainability of institutional capacity in terms of continuity of functional procurement and contracts management unit, staffed by skilled personnel, may be an issue in the future.

C. BANK PERFORMANCE

Quality at Entry

75. **The Bank's performance in ensuring quality at entry was satisfactory.** Project preparation from concept note to Board approval took approximately 17 months, cost about US\$481,000 and involved 42 staff weeks. The cost is comparable with other informal upgrading and urban development projects in the Bank. Feasibility studies, preliminary designs and safeguards documents for phase 1 roads and drainage investments were prepared as a pre-requisite for appraisal and it was expected that the DEDs would be completed, and procurement initiated soon after effectiveness. The project benefited from extensive discussions with key stakeholders, particularly ministries responsible for finance and economic planning, infrastructure, housing, transport, local governments, water and sanitation, as well as city/district authorities on project principles and key design parameters. A capacity assessment was conducted as part of project preparation, which suggested that the implementing agencies would require support, especially in project management, contract management, safeguards monitoring, FM, and procurement. The MICST was envisaged as a key risk mitigation measure to support the LODA SPIU and the six districts by providing key technical capacity building

¹⁹ The rating on procurement was determined at the portfolio level and was consistent throughout project implementation.



support through coaching and on-the-job training. The Bank team provided written inputs to the draft terms of reference to ensure timely firm procurement. However, the procurement of the MICST was eventually dropped (see paragraph 58) and instead two field-support civil engineers were recruited to support districts with execution of works.

76. In addition, the Bank team mobilized a multi-disciplinary team of experts on LED, GIS, municipal finance and urban planning to incorporate global practices and lessons from other upgrading and urban development projects. For component 2, upgrading criteria was developed through the CoK's Structure Planning and Capital Investment Planning process in tandem with a Guidance Note developed with Bank assistance for Upgrading of Infrastructure in Unplanned and Predominantly Low-Income Communities. The Bank team also mobilized available trust funds (Korean Green Growth and Cities Alliance) to support: (a) the hiring of three technical consultants at MININFRA to advance project preparation; (b) developing a diagnostic report on strengthening local government finance and design of performance grant; (c) conducting technical diagnostic work to inform the design of the LED sub-component; (d) developing guidelines for identification, survey, planning, design, implementation, monitoring, maintenance and project management of urban upgrading in Rwandan cities; (e) conducting a rapid needs assessment of existing geo-data, GIS capabilities and GIS systems in Rwanda; and (f) training and exchange visits.

Quality of Supervision

77. **The Bank's performance in supervision was satisfactory.** Although the project had three Task Team Leaders (TTLs) and two co-TTLs throughout from identification to closure, the transition was generally smooth because each TTL following the first had served as a team member prior to appointment. In addition, one TTL and one co-TTL were based Nairobi and one TTL was based in Kigali since mid-2019, which enabled the team to conduct frequent in-person discussions and field visits and provide close supervision and day-to-day support to the RUDP team and national and local authorities.

78. **The Bank fielded some 14 implementation support missions during the project's five years of implementation.** Missions took place at least two times a year, with smaller missions (often in combination with preparation for RUDP 2) taking place in between the formal missions. Missions lasted one to two weeks each and typically comprised ten or more members, including international and local staff and consultants with expertise in urban development, municipal engineering, upgrading, municipal finance, institutional and local governance, environmental and social safeguards, M&E, procurement and financial management. To ensure regular contact, the Bank team held frequent video and audio conferences with the RUDP team between missions to proactively address key issues arising during implementation. For instance, on the project fatalities that had taken place in November 2020 and July 2021, respectively, the Bank team initiated the Environmental and Social Incidents Response Toolkit as soon as the incidents were reported by the government in order to conduct a thorough investigation and identify appropriate corrective measures. On project delays due to the suspension of works during Covid-19, heavy rain, and weak contract management, the Bank team held weekly progress meetings with the RUDP team, contractors and CSC during the final months of implementation to monitor progress against a detailed work schedule. This enabled the contractors to meet their weekly targets and complete all civil works by the closing date.

79. **Aide memoires were of high quality and candid, thoroughly covering all key issues and providing practical recommendations on how to address challenges.** They routinely reported on implementation progress, M&E, and performance of financial management, procurement, and compliance with safeguards. Draft aide memoires were discussed with the RUDP team to ensure that they reflected a common understanding of both the Bank and government



teams. The Bank team in the implementation status reports also consistently rated project performance indicators realistically. It carefully reviewed both progress towards development and implementation performance during each mission, and generally provided a justification for the ratings in the aide memoires.

Justification of Overall Rating of Bank Performance

80. **The Bank's overall performance was satisfactory.** A rating of satisfactory for ensuring quality at entry and a rating of satisfactory for supervision justify an overall rating of satisfactory for Bank performance.

D. RISK TO DEVELOPMENT OUTCOME

81. **Institutional risk.** High vacancies and staff turnover were observed throughout implementation. Significant staffing gaps and frequent turnover pose the risk that capacity built under the project is not maintained.

82. **O&M risk.** Sustainability of the infrastructure and services financed under RUDP will depend on the districts' budgeting resources to operate and maintain them. As the PDO outcome indicator on "increase in share of maintenance expenditures of district budget" demonstrates, several steps have been taken to dedicate budget for newly constructed and rehabilitated infrastructure. This would need to be sustained throughout the life of the asset.

83. **Risks from natural hazards.** This will remain a constant threat for Rwandan cities and will require further studies and investments to increase their resilience, particularly to earthquakes, flooding and landslides, as observed throughout project implementation. This risk is being mitigated under the ongoing RUDP 2 through an integrated approach to sustainable urbanization, flood risk management and wetland restoration. Specific interventions to mainstream resilience in Kigali include: (a) wetland rehabilitation; (b) green and grey investments to mitigate erosion, reduce and manage stormwater runoff along settlements, enhance wetland buffer zones and address flood hotspots; and (c) comprehensive technical support to improve citywide flood risk management such as the development of a stormwater master plan and solid waste strategy. These activities will not only reduce the risks of water scarcity and urban flooding, but will also contribute to job creation, higher agricultural productivity and lower carbon emissions.

84. **These risks are likely to be addressed through the follow-on US\$150 million IDA operation, RUDP 2.** This project was approved in October 2020 to support both national and district governments in improving access to basic services, enhancing resilience, and strengthening integrated urban planning and management. The RUDP 2 will help cities and relevant ministries to develop an institutional structure and capacity for integrated urban planning through a series of interconnected TAs that are well aligned with the national government's decentralization and urbanization policies. In addition, budget to complete remaining works in Rubavu (see paragraph 65) has been allocated under RUDP 2.

V. LESSONS AND RECOMMENDATIONS

85. **Strong government commitment and adherence to key principles for urban upgrading is critical.** The objective of the upgrading of unplanned settlements in Agatare—which would serve as a model for urban upgrading in Rwanda—was to improve residents' living conditions in a way that would minimize resettlement without compromising the functional efficiency of the city in terms of access, mobility and service delivery needs. The core principles of upgrading that need to be upheld include: (a) in-situ upgrading with minimal relocation; (b) community choice and input to investment proposals; (c) "incremental provision" to "functional standards" applied "flexibly;" (d) application of cost



guidelines to spread benefits of limited funding as widely as possible (for example, limits on cost per hectare or cost per household); and (e) implementation of “network infrastructure” in multi sectoral, balanced, “area-based” packages for impact. These principles are being put into practice under the RUDP 2 and should be captured in government policy and planning instruments (as is the situation for the Bank-financed Kenya Informal Settlements Improvement Project and the Mekong Delta Region Urban Upgrading Project).

86. Community participation should be integrated throughout the project cycle. There was relatively little discussion on community participation beyond project preparation and how involving communities from the onset could have contributed to the project’s success. Moreover, it was unclear whether gender considerations were mainstreamed in local planning and decision-making under the project. Under RUDP 2, the project has taken a highly participatory approach to upgrading by establishing community upgrading committees in each of the settlements. Each committee is expected to participate in the planning, design, and implementation process, and provide project oversight. Dedicated focus group discussions with women and other minority groups would be facilitated to ensure that selected investments are gender-inclusive and equitable. The committees would also serve as institutional mechanisms through which community needs are reflected in the investments and social safety net responses are better coordinated.

87. Government resources to finance payment of compensation to PAPs need to be made available as soon as PAPs are identified. Compensating PAPs was a critical bottleneck in the implementation of works in the Agatare settlement. Slow progress with establishing compensation budgets and then releasing payments to PAPs slowed down the handover of construction sites to contractors, and thus delayed down works. Although minimizing resettlement (through the application of flexible infrastructure standards) will help in limiting the size of compensation payments, these are likely to remain substantial. A more effective transfer mechanism needs to be established through which budgets for PAP compensation are made available. Under the RUDP 2, the government has committed to contribute US\$15 million to finance anticipated resettlement and compensation costs. These funds will be reflected in the annual budgets of the project’s implementing agencies.

88. An integrated approach to urban upgrading and flood risk management is needed to enhance resilience and mitigate the impacts of climate change. Urban upgrading under the RUDP primarily financed the construction of roads and formalized drainage in the CoK, which can intensify stormwater runoff and erosion downstream thereby increasing flood risk and wetland deterioration in the adjacent wetland buffer zones. Households residing in the unplanned settlements are particularly vulnerable to the impacts of urban flooding due to the city’s hilly terrain, which necessitates an integrated approach to urban upgrading and flood risk management. Such an approach would aim to increase infiltration capacity, retain stormwater and reduce the speed of stormwater runoff through the integration of gray infrastructure with nature-based solutions (or green infrastructure). Green infrastructure interventions can also provide social, recreational, economic, and environmental benefits to residents.

89. Districts’ involvement in contract management, procurement, and safeguards monitoring and implementation is important to strengthen decentralization in Rwanda. Decentralization helps to promote well-managed urbanization by giving decision-making responsibility to officials who best understand local needs and context. However, opportunities to strengthen district capacities under the RUDP may have been missed by centralizing management of some project functions (especially procurement of the CSCs and contractors, review of feasibility studies and DEDs, M&E and progress reporting, and contract management). Making the best use of LODA as a capacity-building entity while streamlining decision-making in and funds flow to districts with appropriate fiduciary and safeguards controls would strengthen decentralization in Rwanda. Under the RUDP 2, project implementation units have been established in each



district, each staffed with a project focal person with a background in urban planning or engineering and one safeguards specialist. These are expected to strengthen districts' involvement in implementing the project, and in turn to strengthen capacity of districts for decentralized management.

90. Institutional strengthening and capacity development at the city level requires greater focus and more attention if they are to result in substantial improvements in urban management. While the RUDP was able to strengthen district-level infrastructure management capacities (planning, design, procurement, supervision), broader institutional and capacity development for urban development proved much more challenging. In retrospect, RUDP's capacity development activities would have benefitted from: (a) a clearer operational focus, (b) better and more regular coordination, follow-up and support, and (c) greater attention to urban management arrangements. The RUDP 2 has thus been designed to: (a) focus on prioritized core urban management functions, and (b) ensure local level coordination, monitoring, and support for capacity development activities through district and CoK project implementation units. In addition, the RUDP 2 includes capacity development activities to strengthen urban management in secondary cities by assisting with the establishment and operationalization of City Management Offices²⁰ in district administrations.

91. Clarity on the roles and responsibilities of implementing agencies is key to enhancing vertical and horizontal coordination. Strong coordination is required at the national level and across various ministries involved in infrastructure development, local governance, and urban management; between national and sub-national levels; and between district authorities and their citizens. In particular, project management capacity gaps slowed down project implementation due to the lack of clarity on the roles and responsibilities of the MININFRA PCU and LODA SPIU. Future operations will benefit from clearly stated management responsibilities assigned to each agency participating in the project.

92. The need to attract and retain quality project staff throughout implementation is of utmost importance. Delays in hiring project staff and high staff turnover—problems for many Bank-financed projects in Rwanda—delayed project implementation. Several factors have contributed to these staffing issues, including: (a) project staff are usually hired as fixed-term contract staff and government procedures tend to be cumbersome and slow; (b) the hiring process often does not start until after a project has been approved or declared effective; (c) the government overestimates how much work existing staff could manage; (d) people with the required technical skills and relevant project management experience are few in Rwanda; and (e) short contract durations of one year discourages qualified candidates from applying. While this is a portfolio-wide issue, future urban operations may consider various retention measures such as extending the duration of contracts up to three years with an initial probationary period of 6–12 months, improving remuneration benefits, and collaborating with local universities on broad training programs to increase the potential pool of specialists.

²⁰ The 15th National Leadership Retreat headed by President Kagame ratified a resolution to support the development and expansion of secondary cities. The Ministry of Local Government announced to the mayors of the six districts (Huye, Muhanga, Musanze, Nyagatare, Rubavu, and Rusizi) in February 2020 of the establishment of City Management Offices, which was considered an important milestone in advancing the government's decentralization agenda.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: To provide access to basic infrastructure in selected urban centers of the participating districts

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of people in urban areas provided with access to all-season roads within a 500 meter range under the project	Number	36,299.00	118805.00	88,000.00	153,254.00
		31-Jan-2016	30-Jun-2021	30-Jun-2021	30-Jun-2021

Comments (achievements against targets):

The counting methodology for the road beneficiaries and direct project beneficiaries was erroneously reversed and the target presented in the PAD and ISRs was for the total number of project beneficiaries, not just those benefiting from roads.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Land Area provided with	Hectare(Ha)	0.00	3479.00		7,906.75



drainage services financed under the project		31-Jan-2016	30-Jun-2021		30-Jun-2021
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00	88000.00	118,805.00	154,599.00
		31-Jan-2016	30-Jun-2021	30-Jun-2021	30-Jun-2021
Female beneficiaries	Percentage	0.00	51.70		51.70

Comments (achievements against targets):
 The counting methodology for the road beneficiaries and direct project beneficiaries was erroneously reversed and the target presented in the PAD and ISRs was for the total number of road beneficiaries only.

Objective/Outcome: To enhance urban management in selected urban centers of the participating districts.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increase in share of	Percentage	3.46	10.00		15.40



maintenance expenditures of district budget		31-Jan-2016	30-Jun-2021		30-Jun-2021
<p>Comments (achievements against targets): The baseline was recalculated from 6.50 percent to 3.46 percent to be consistent with the revised formula used.</p>					

A.2 Intermediate Results Indicators

Component: Provision of Basic Infrastructure in Secondary Cities

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Urban roads rehabilitated or constructed	Kilometers	0.00 31-Jan-2016	81.00 30-Jun-2021		89.32 30-Jun-2021
<p>Comments (achievements against targets):</p>					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Standalone drains constructed or rehabilitated under the project	Kilometers	0.00 31-Jan-2016	44.00 30-Jun-2021		29.95 30-Jun-2021



Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Participants in consultation activities during project implementation (number)	Number	0.00	700.00	1,000.00	1,175.00
		31-Jan-2016	30-Jun-2021	30-Jun-2021	30-Jun-2021
Participants in consultation activities during project implementation - female	Number	0.00	350.00	500.00	398.00
		31-Jan-2016	30-Jun-2021	30-Jun-2021	30-Jun-2021

Comments (achievements against targets):

The targets for years 2, 3 and 5 presented in the PAD and ISRs were incorrectly set – targets were intended to be cumulative.

Component: Upgrading of Unplanned Settlements in the City of Kigali

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Unplanned settlement area upgraded	Hectare(Ha)	0.00	86.00		111.00
		31-Jan-2016	30-Jun-2021		30-Jun-2021

Comments (achievements against targets):



Component: Technical Assistance for Sustainable Urban Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
District system for tracking business activity operational.	Text	No standard system in place 31-Jan-2016	System for tracking business activity fully operational. 30-Jun-2021		Business tracking system developed and integrated into LODA MEIS. 30-Jun-2021

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Districts use GIS as key planning tool	Text	0.00 31-Jan-2016	Four districts demonstrate use of GIS in strategic investment planning and annual planning procedures 30-Jun-2021		All Districts demonstrate the use of GIS in strategic urban investment planning and annual planning process. 30-Jun-2021



Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
District infrastructure management system for road and drainage assets operational	Text	No standard system in place 31-Jan-2016	Second year O&M plan implemented in at least four districts 30-Jun-2021		No standard system in place 30-Jun-2021

Comments (achievements against targets):



B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1 To provide access to basic infrastructure in selected urban centers of the participating districts	
Outcome Indicators	<ol style="list-style-type: none"> 1. People in urban areas provided with access to all-season roads within a 500-meter range under the project (number) 2. Land area provided with drainage services (hectares) 3. Direct project beneficiaries (number), of which female (percent)
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. Urban roads rehabilitated or constructed (kilometers) 2. Standalone drains constructed or rehabilitated under the project (kilometers) 3. Participants in consultation activities during project implementation (number), of which female (number) 4. Unplanned settlement area upgraded (hectares)
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<p>Component 1:</p> <ol style="list-style-type: none"> 1. Some 89.32 kilometers of asphalt roads rehabilitated or constructed 2. Some 29.95 kilometers of standalone drains rehabilitated or constructed 3. Some 1,175 people consulted, of which 398 were female <p>Component 2:</p> <ol style="list-style-type: none"> 4. Some 111 hectares of unplanned settlement area upgraded; 9.2 kilometers of roads, 19.1 kilometers of pedestrian walkways, 7.4 kilometers of stormwater drains constructed; and 599 streetlights installed.
Objective/Outcome 2: To enhance urban management in selected urban centers of the participating districts	
Outcome Indicators	<ol style="list-style-type: none"> 1. Increase in share of maintenance expenditures of district budget (percent)
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. District system for tracking business activity operational 2. Districts use GIS as key planning tool 3. District infrastructure management system for road and drainage assets operational
Key Outputs by Component	Component 3:



(linked to the achievement of the Objective/Outcome 2)

1. Template and system for tracking business activities developed and integrated into LODA's MEIS
2. Six city brand and marketing strategies developed and aligned with districts' Local Economic Development Strategy and District Development Strategy
3. Report on District Revenue and Expenditure Management Strategies for the Six Secondary Cities
4. Six districts using GIS in strategic investment planning and annual planning procedures

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Meskerem Brhane	Task Team Leader
Jonas Ingemann Parby	Co-Task Team Leader
Mulugeta Dinka	Procurement Specialist
Lillian Brenda Namutebi	Financial Management Specialist
Svetlana Khvostova	Environmental Specialist
Yasmin Tayyab	Social Specialist
Abdu Muwonge	Team Member
Alice Usanase	Team Member
Belinda Mutesi	Team Member
Christopher J. Banes	Team Member
Enagnon Ernest Eric Adda	Team Member
John Kalisa	Team Member
Joseph A. Gadek	Team Member
Kaushal Jhalla	Team Member
Lucy Kang'arua	Team Member
Maiada Mahmoud Abdel Fattah Kassem	Team Member
Megha Mukim	Team Member
Sandrine Twagirimana	Team Member
Stephen Mugendi Mukaindo	Team Member
Sung Heng C. Kok Shun	Team Member
Tharcisse Musabyimana	Team Member
Uwagaga Francoise Kayigamba	Team Member
Supervision/ICR	
Narae Choi	Task Team Leader (Supervision)
Abebaw Alemayehu	Task Team Leader (Supervision, ICR)
Zishan Karim	Co-Task Team Leader (Supervision)
Mulugeta Dinka, Tesfaye Ayele	Procurement Specialist(s)
Enagnon Ernest Eric Adda, Stephen Diero Amayo, Mkombozi Bosco Karake	Financial Management Specialist(s)
Emmanuel Muligirwa, Ruth Tiffer-Sotomayor	Environmental Specialist(s)
Gibwa Kajubi, George Bob Nkulanga	Social Specialist(s)
Antoinette Kamanzi	Team Member
Chantal Umulinga K	Team Member



Christopher J. Banes	Team Member
Esther B. Mutamba	Team Member
Herve Habonimana	Team Member
Isabel Margarita D. Cantada	Team Member/ICR author
John Kalisa	Team Member
Joseph A. Gadek	Team Member
Michael Winter	Team Member
Mihaly Kopanyi	Team Member
Mwiseneza Huguette	Team Member
Njavwa Namposya Chilufya	Team Member
Samuel Ngethe Mbachia	Team Member
Sonia M. Wheeler	Team Member
Sung Heng C. Kok Shun	Team Member
Tharcisse Musabyimana	Team Member
Wendy Schreiber Ayres	Team Member/ICR author

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY15	19.039	237,930.22
FY16	22.894	243,010.97
Total	41.93	480,941.19
Supervision/ICR		
FY16	1.000	9,875.06
FY17	18.103	185,867.83
FY18	26.442	166,049.64
FY19	36.677	447,861.75
FY20	32.007	198,907.17
Total	114.23	1,008,561.45



ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)	Percentage of Approval (%)
Component 1: Provision of Basic Infrastructure in Secondary Cities	80.00	72.43	90.54
Component 2: Upgrading of Unplanned Settlements in the City of Kigali	10.00	10.49	104.88
Component 3: Technical Assistance for Sustainable Urban Management	3.00	0.92	30.54
Component 4: Support for Project Management	2.00	5.39	269.47
Advance payment for components 1, 2, 3 and 4		6.20	
Total	95.00	95.42	100.44



ANNEX 4. SECONDARY CITIES' INFORMATION

Table 1A: Asphalt roads rehabilitated or constructed under component 1 (in kilometers)

Cities	Phase 1		Phase 2	
	Planned (at appraisal)	Actual	Planned (at October 2019 implementation support mission)	Actual
Muhanga	4.96	5.06	5.72	7.27
Huye	4.48	5.36	4.68	6.37
Nyagatare	3.98	3.91	11.81	14.12
Rusizi	4.67	5.11	5.2	5.8
Rubavu	3.85	3.89	5.89	5.97
Musanze	4.66	4.58	6.43*	6.70
TOTAL	26.60	27.91	39.73	46.23

*Musanze roads include associated drains

Table 2: Standalone drains rehabilitated or constructed under component 1 (in kilometers)

Cities	Phase 1		Phase 2	
	Planned (at appraisal)	Actual	Planned (at October 2019 implementation support mission)	Actual
Muhanga	1.14	0.97	0.83	0.93
Huye	4.04	4.41	1.54	1.33
Nyagatare	2.17	2.20	1.36	1.09
Rusizi	0.38	0.45	1.02	1.17
Rubavu	1.91	0.85	5.97	2.27
Musanze	0.98	0.92	-	1.52
TOTAL	10.62	9.8	10.72	8.31



ANNEX 5. EFFICIENCY ANALYSIS

1. An ex-post update of the economic efficiency analysis carried out for the RUDP at appraisal stage shows that the economic benefits of the investments are substantial and well above the cost of capital. This analysis follows the same methodology as the analysis presented in the PAD. However, this analysis covers all the investments made under the project, while the analysis in the PAD included only a subset of investments that had been identified at appraisal. Therefore, the NPVs of the end-of-project analysis are much higher than those in the PAD, because the costs are also higher. Details of the assumptions used in the analysis and the NPVs and IRRs are below.

Roads and drainage systems

2. Benefits of investments in urban roads and drainage systems in the six secondary cities. Some 83 percent of the RUDP funds for infrastructure were spent on roads, drainage works, pedestrian walkways, and streetlights in the six secondary cities benefiting from the project.

- **Capital and maintenance costs.** A total of US\$72.43 million was spent to construct 74.14 kilometers of roads with associated drainage infrastructure, pedestrian walkways and streetlights and 18.11 kilometers of stand-alone drainage systems. The annual cost for maintenance is estimated to be 5 percent of the capital cost over a period of 20 years.
- **Benefits.** The main benefits associated with improved roads and drainage systems are: (a) savings in travel time cost; (b) reductions in costs of routine maintenance of the road and drainage infrastructure, (c) reductions in costs to repair property damage due to flooding, and (d) an increase in rental value of properties adjacent to the new roads and drainage systems.
- **Discount rate.** A discount rate of 5 percent was used, the same rate as used in the appraisal stage economic analysis.

3. The main data and assumptions underlying the analysis are:²¹ (a) the construction period was two years, (b) the benefits start to flow from year three and continue for 20 years, (c) 153,500 people living in the six cities in 2021 benefit from the improved infrastructure with population growing by an average of 5.1 percent until 2040, (d) 33 percent of the population travels to work for 240 work days a year and reduce their travel time by 3/4 of an hour per day due to improved roads and reduced flooding, (e) the average hourly wage is US\$1.00 an hour in 2021 and rises by 7 percent a year in line with inflation, (f) property damage declines by 10 percent across the six cities, (g) rental values increase by 15.5 percent per year due to improved infrastructure across the six cities,²² and (h) routine maintenance costs decline by 5 percent per year across the six cities. The NPV and IRR are presented in table 1, below.

Table 1: Economic analysis for the roads and drainage systems constructed in six secondary cities

Roads and drainage systems	At Appraisal ²³		At closing	
	NPV	IRR	NPV	IRR
	US\$37.92 million	14%–20%	US\$195.0 million	18.3%

²¹ All elements of the model except for (a) and (b) are assumptions.

²² A recent study showed that house rents are 12–19 percent lower in areas of cities in Ethiopia, Ghana, Madagascar, Tanzania exposed to flood risks. See Alvina Erman and Ingrid Dallmann. Forthcoming. "Putting a price on safety—a hedonic price approach to flood risk in African cities." *Journal of Economic Literature*.

²³ The calculations at appraisal covered only investments that had been identified at that time. The economic analysis carried out for the ICR covers all investments carried out under the project.



4. The roads and drainage investments in the six secondary cities remain viable even with changes in costs and benefits (table 2). The value of the investments is affected more by a reduction in benefits than by an increase in costs.

Table 2: Sensitivity analysis for the roads and drainage systems constructed in six secondary cities

	Scenario 1 (cost up by 10%)	Scenario 2 (benefits down by 10%)	Scenario 3 (costs up by 10% and benefits down by 10%)
Net present value	US\$184.4 million	US\$170.4 million	US\$160.8 million
Internal rate of return	16.9%	16.9%	15.5%

Informal settlement upgrading in the CoK

5. **Benefits of upgrading informal settlements in the CoK.** Details of the efficiency analysis are below.

- **Capital and maintenance costs.** A total of US\$10.49 million was spent to construct 9.2 kilometers of roads, 19.1 kilometers of pedestrian walkways, and 7.41 kilometers of stand-alone drains, and to install streetlights throughout the settlement. The annual cost of maintenance for the roads and drainage systems is estimated to be 5 percent of the capital cost of over a period of 20 years.
- **Benefits.** The main benefits from the settlement upgrading include (a) time savings of pedestrians due to new walkways and drainage systems, (b) reduced property damage from flooding due to construction of drainage systems, (c) increased rental value of properties, and (d) enhanced profits for businesses due to streetlights, which can operate for longer hours.
- **Discount rate.** A discount rate of 5 percent was used, the same rate as used in the appraisal stage economic analysis.

6. **The main data and assumption underlying the analysis for upgrading roads and walkways of settlements in the CoK are:**²⁴ (a) the construction period was two years, (b) the benefits start to flow from year three and continue for 20 years, (c) the number of people benefiting in 2021 is 26,000 and grows by the average of 4 percent per year thereafter, (d) 33 percent of the population travels to work for 240 work days and reduce their travel time by 1/2 hour per day due to improved roads and reduced flooding, (e) the average wage is US\$1.00 an hour in 2021 and rises by 7 percent a year in line with inflation, (f) property damage declines by 10 percent, (g) rental values increase by 15.5 percent per year due to improved infrastructure, (h) routine maintenance costs of roads decline by 5 percent per year, and (i) the benefits of streetlights arising from increased profit of businesses rises by 7 percent a year in line with inflation. The NPV and internal IRR are present in table 3, below.

Table 3: Economic analysis for the investments to upgrade informal settlements in the CoK

Roads and drainage systems	At Appraisal ²⁵		At closing	
	NPV	IRR	NPV	IRR
	US\$10.27 million	14%	US\$20.8million	14.5%

7. The investments to upgrade informal settlements in the CoK remain viable even with changes in costs and benefits (table 4). The value of the investments is affected more by a reduction in benefits than by an increase in costs.

²⁴ All elements of the model except for (a) and (b) are assumptions.

²⁵ The calculations at appraisal covered only investments in streetlights. The economic analysis carried out for the ICR also covers investments in roads and drainage systems that were constructed in informal settlements under the project.



Table 4: Sensitivity analysis for the investments to upgrade informal settlements in the CoK

	Scenario 1 (cost up by 10%)	Scenario 2 (benefits down by 10%)	Scenario 3 (costs up by 10% and benefits down by 10%)
Net present value	US\$19.4 million	US\$18.4 million	US\$17.0 million
Internal rate of return	13.4%	13.6%	12.5%

Non-quantifiable benefits

8. Although, the above analyses included all costs of construction, not all benefits of the infrastructure are quantifiable, due to a lack of data. Details of benefits of the roads, drainage systems, pedestrian walkways, and streetlights that have not been quantified in the above analysis are below.

- **Roads.** Non-quantified benefits include reduced vehicle maintenance and operating costs (the benefits of reduced travel times and increased rental values are captured in the quantified analysis above).
- **Drainage systems.** The non-quantified benefits include (a) reduced loss of income from businesses whose hours are curtailed, and reduced access due to flooding; (b) lower maintenance costs for vehicles; and (c) reduced costs of illness associated with exposure to polluted and stagnant water. The drainage systems are also contributing to disaster risk management and urban resilience, areas of increasing importance to the Bank.
- **Pedestrian walkways.** The non-quantified benefits of pedestrian walkways include reductions in fatal or serious injuries due to vehicle-pedestrian accidents (the benefits of reduced travel times and increased rental values are captured in the quantified analysis above).
- **Streetlights.** The non-quantified benefits of streetlights include (a) heightened sense of security at night which allows people to walk rather than take motorized transport to their destinations, and (b) reduced accidents between vehicles and between vehicles and pedestrians.

10. **The procedures implemented by the implementing agencies under the RUDP have resulted in adequate value for money of investments.** Priority investments were identified through consultations with residents of the urban areas. Procurement was through international and national competitive bidding procedures to ensure value for money in procurement. Moreover, both the national and district governments maintain complaints handling mechanisms to allow for citizens to bring suspected cases of fraud and corruption to the attention of the authorities. Collectively, these procedures provide reasonable assurance that investments in cities are providing value for money. Indeed, the annual audit reports of the Office of Auditor General of Rwanda noted that the investments supported under the RUDP were realizing value for money in utilization of public funds.

11. **Institutional benefits were substantial.** The RUDP provided TA and capacity building support in core areas of urban development and management. Details are presented in the efficacy section on component 3. In addition, the RUDP team led the preparation of the follow-on RUDP 2.

12. **Administrative efficiency was substantial.** All activities except for those affected by the earthquake in Rubavu were completed by the original project closing date. In addition, nearly all of the IDA Credit had been disbursed.



ANNEX 6. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

The Permanent Secretary of the Ministry of Infrastructure, Patricie Uwase, provided the government's comments in an e-mail to the Bank team dated December 13, 2021. The comments are below.

“The government agrees with the ratings of relevance, efficacy, efficiency, quality of monitoring and evaluation, and Bank performance, analysis of compliance with Environment and Social Safeguards, financial management, procurement, and the lessons learned. However, the government team observed some statements that need to be rephrased to reflect realities and figures to be corrected.”



ANNEX 7. SUPPORTING DOCUMENTS

Project Documents

Financing Agreement, April 6, 2016.

Disbursement Letter, April 6, 2016.

Project Appraisal Document (Report No. PAD1609-RW), March 8, 2016.

Rwanda Country Partnership Strategy FY2014-2018 (Report No. 87025-RW), May 1, 2014.

Rwanda Country Partnership Framework FY21-2026 (Report No. 148876-RW), July 9, 2020.

Rwanda Systematic Country Diagnostic (Report No. 138100-RW), June 25, 2019.

Rwanda Country Portfolio Performance Review Report, June 2019.

Performance and Learning Review of the Country Partnership Strategy (Report No. 106731-RW), March 20, 2017.

Aide Memoires, 21 in total from December 2014 to June 2021.

Implementation Support Reports, 12 in total from June 2016 to July 2021.

Midterm Review, September 27, 2018.

Quarterly, annual and semi-annual progress reports prepared by the RUDP coordination team.

Borrower's Implementation Completion and Results Report, September 15, 2021.

Borrower's Environmental, Safety and Health Compliance Report – RUDP Phase 2 Civil Works, July 8, 2021.