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The World Bank

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Report No: PAD5550

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED SECOND ADDITIONAL CREDIT IN THE AMOUNT OF US\$76.0 MILLION FROM THE IDA SCALE UP WINDOW (SUW)

AND A

PROPOSED GRANT
IN THE AMOUNT OF US\$9.0 MILLION
FROM THE LIBERIA RECONSTRUCTION TRUST FUND

TO THE REPUBLIC OF LIBERIA

FOR THE

RURAL ECONOMIC TRANSFORMATION PROJECT November 28, 2023

Agriculture and Food Global Practice Western and Central Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective Oct 31, 2023)

Currency Unit = Liberia Dollar

LRD 191.50 = US\$1

FISCAL YEAR January 1 - December 31

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Country Director: Pierre Frank Laporte

Regional Director: Chakib Jenane

Practice Managers: Abel Lufafa, Ibou Diouf

Task Team Leaders: Kadir Osman Gyasi, Tojoarofenitra Ramanankirahina

ABBREVIATIONS AND ACRONYMS

| AADT | Appual Average Daily Traffic |
|---------|---|
| | Annual Average Daily Traffic |
| AF | Additional Financing |
| AM | Accountability Mechanism |
| BFS | Biodiversity Field Survey |
| CCDR | Country Climate and Development Report |
| CE | Citizen Engagement |
| CPF | Country Partnership Framework |
| CRI | Corporate Results Indicator |
| CRW-ERF | Crisis Response Window – Early Response Financing |
| E&S | Environmental and Social |
| EIRR | Economic Internal Rate of Return |
| ESCP | Environmental and Social Commitment Plan |
| ESF | Environmental and Social Framework |
| ESIA | Environmental and Social Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMP | Environmental and Social Management Plan |
| FBO | Farmer-Based Organization |
| FCV | Fragile Conflict and Violence |
| FIDIC | International Federation of Consulting Engineers |
| FM | Financial Management |
| GCRF | Global Crisis Response Framework |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gas |
| GoL | Government of Liberia |
| GRC | Grievance Redress Committee |
| GRM | Grievance Redress Mechanism |
| GRS | Grievance Redress Service |
| HDM | Highway Development and Management Model |
| IDA | International Development Association |
| IFR | Interim Financial Report |
| IIU | Infrastructure Implementing Unit |
| LIBRAMP | Liberia Road Asset Management Project |
| LMP | Labor Management Plan |
| LRTF | Liberia Reconstruction Trust Fund |
| M&E | Monitoring and Evaluation |
| MoA | Ministry of Agriculture |
| MPW | Ministry of Public Works |
| NPV | Net Present Value |
| OPCS | Operations Policy and Country Services |
| PAPD | Pro-Poor Agenda for Prosperity and Development |
| PDO | Project Development Objective |
| PFM | Public Finance Management |
| PIU | Project Implementing Unit |
| PPAD | Pro Poor Agenda for Prosperity and Development |
| PPSD | Project Procurement Strategy for Development |
| PPP | Purchasing Power Parity |
| RAI | Rural Accessibility Index |
| RAP | Resettlement Action Plan |
| RETRAP | Rural Economic Transformation Project |
| RPF | Resettlement Policy Framework |
| SDR | Special Drawing Rights |
| SEA/SH | Sexual Exploitation and Abuse / Sexual Harassment |

| SECRAMP | Southeastern Corridor Road Asset Management Project |
|---------|---|
| SEP | Stakeholder Engagement Plan |
| SUW | Scale-Up Window |
| US\$ | United States Dollars |

Liberia

Rural Economic Transformation Project Second Additional Financing

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| Country | Country Product Line | | Tean | n Leade | er(s) | |
|--|---------------------------------|-----------------------|---|--|--------------------------------|---|
| Liberia | IBRD/IDA | | Kadi | r Osma | n Gyasi | |
| Project ID | Financing Inst | rument | Resp | CC | Req CC | Practice Area (Lead) |
| P175263 | Investment Project Financing | | SAW (104 | | AWCW1 (6547) | Agriculture and Food |
| mplementing Agend | ey: Ministry of Agricult | ure | | | | |
| Is this a regionally to project? | agged | | | | | |
| No | | | | | | |
| Bank/IFC Collabora | tion | | | | Joint Level | |
| Yes | | | | | Complementary requiring active | or Interdependent project coordination |
| Approval Date | Closing | Closing Date Guarante | | | Environmental a | nd Social Risk Classification |
| 04-Jun-2021 | 30-Jun-2 | | | | Substantial | |
| Financing & Implen | nentation Modalities | | | | | |
| [] Multiphase Prog | rammatic Approach [N | ЛРА] | | [] Co | ntingent Emergen | cy Response Component (CERC |
| [] Series of Project | s (SOP) | | | [√] Fragile State(s) | | |
| [] Performance-Ba | sed Conditions (PBCs) | | | [] Small State(s) | | |
| [] Financial Interm | ediaries (FI) | | | [] Fragile within a Non-fragile Country | | |
| [] Project-Based G | uarantee | | | [√] Conflict | | |
| [] Deferred Drawd | own | | | [] Responding to Natural or Man-made disaster | | |
| [] Alternate Procurement Arrangements (APA) | | | [] Hands-on Expanded Implementation Support (HEIS) | | | |

Development Objective(s)

To improve productivity and market access for small holder farmers and agri-enterprises for selected value chains in project participating counties.

Ratings (from Parent ISR)

| | | Latest ISR | | | | |
|--|-------------|-------------|----|----|----|----|
| | 13-Sep-2021 | 08-Sep-2023 | | | | |
| Progress towards achievement of PDO | MS | S | S | S | S | S |
| Overall Implementation Progress (IP) | MS | S | S | S | S | S |
| Overall ESS Performance | S | S | S | S | S | S |
| Overall Risk | S | S | S | S | M | M |
| Financial Management | MS | MS | MS | MS | MS | MS |
| Project Management | S | S | S | S | S | S |
| Procurement | MS | MS | MS | MS | MS | MS |
| Monitoring and Evaluation | S | S | S | S | S | S |

BASIC INFORMATION – ADDITIONAL FINANCING (Rural Economic Transformation Project Second Additional Financing - P181083)

| Project ID | Project Name | Additional Financing Type | Urgent Need or Capacity Constraints |
|------------|---|---------------------------|--|
| P181083 | Rural Economic Transformation Project Second Additional | Scale Up | No |

| | Financing | | | | | |
|---|----------------------|----------------|--|----------------------------|--|--|
| Financing instrument | Product line | Ар | proval Date | | | |
| nvestment Project Financing | IBRD/IDA | 08 | 08-Dec-2023 | | | |
| Projected Date of Full Disbursement | Bank/IFC Collab | oration | | | | |
| 30-Oct-2029 | No | | | | | |
| s this a regionally tagg | ged project? | | · | | | |
| No | | | | | | |
| inancing & Implemen | tation Modalities | | | | | |
|] Series of Projects (S | OP) | |] Fragile State(s) | | | |
| [] Performance-Based Conditions (PBCs) | | | [] Small State(s) | | | |
|] Financial Intermedia | aries (FI) | I | [] Fragile within a Non-fragile Country | | | |
|] Project-Based Guar | antee | 1 | [] Conflict | | | |
|] Deferred Drawdowi | n | |] Responding to Natural o | or Man-made disaster | | |
|] Alternate Procurem | ent Arrangements (A | APA) [|] Hands-on Expanded Imp | plementation Support (HEIS | | |
|] Contingent Emerge | ncy Response Compo | onent (CERC) | | | | |
| Disbursement Summar | ry (from Parent ISR) | | | | | |
| Source of Funds | Net Commitments | Total Disburse | ed Remaining Balance | Disbursed | | |
| IBRD | | | | % | | |
| IDA | 85.00 | 23.47 | 7 61.53 | 28 % | | |
| Grants | | | | % | | |
| DPOJECT EINIANCING I | DATA – ADDITIONAL | FINANCING (Ru | ral Economic Transformati | on Project Second Addition | | |

SUMMARY (Total Financing)

| | Current Financing | Proposed Additional Financing | Total Proposed Financing |
|--------------------|-------------------|-------------------------------|--------------------------|
| Total Project Cost | 59.00 | 93.00 | 152.00 |
| Total Financing | 59.00 | 93.00 | 152.00 |
| of which IBRD/IDA | 55.00 | 76.00 | 131.00 |
| Financing Gap | 0.00 | 0.00 | 0.00 |

DETAILS - Additional Financing

World Bank Group Financing

| Non-World Bank Group Financing | | | |
|---|-------|--|--|
| IDA Credit | 76.00 | | |
| International Development Association (IDA) | 76.00 | | |

Non-World Bank Group Financing

| Counterpart Funding | 8.00 |
|-----------------------------------|------|
| Borrower/Recipient | 8.00 |
| Trust Funds | 9.00 |
| Liberia Reconstruction Trust Fund | 9.00 |

IDA Resources (in US\$, Millions)

| | Credit Amount | Grant Amount | SML Amount | Guarantee Amount | Total Amount |
|-----------------------|---------------|---------------------|------------|---------------------|--------------|
| Liberia | 76.00 | 0.00 | 0.00 | 0.00 | 76.00 |
| Scale-Up Window (SUW) | 76.00 | 0.00 | 0.00 | 0.00 | 76.00 |
| Total | 76.00 | 0.00 | 0.00 | 0.00 | 76.00 |

COMPLIANCE

Policy

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

| [] Yes [✓] No | |
|--|--|
| Does the project require any other Policy waiver(s)? | |
| [] Yes [√] No | |

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

| E & S Standards | Relevance |
|---|------------------------|
| Assessment and Management of Environmental and Social Risks and Impacts | Relevant |
| Stakeholder Engagement and Information Disclosure | Relevant |
| Labor and Working Conditions | Relevant |
| Resource Efficiency and Pollution Prevention and Management | Relevant |
| Community Health and Safety | Relevant |
| Land Acquisition, Restrictions on Land Use and Involuntary Resettlement | Relevant |
| Biodiversity Conservation and Sustainable Management of Living Natural Resources | Relevant |
| Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities | Not Currently Relevant |
| Cultural Heritage | Relevant |
| Financial Intermediaries | Not Currently Relevant |

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Transport

Climate Change and Disaster Screening

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

| PROJECT TEAM | | | |
|---------------------------------------|--|----------------------|-------|
| Bank Staff | | | |
| Name | Role | Specialization | Unit |
| Kadir Osman Gyasi | Team Leader (ADM Responsible) | Agriiculture | SAWA1 |
| Tojoarofenitra Ramanankirahina | Team Leader | Transport | IAWT3 |
| Oyewole Oluyemi Afuye | Procurement Specialist (ADM Responsible) | Procurement | EAWP2 |
| Sydney Augustus Olorunfe Godwin | Financial Management Specialist (ADM Responsible) | Financial Management | EAWG2 |
| Aloysius K Kotee | Environmental Specialist (ADM Responsible) | Environment | SAWE4 |
| Sarah Antwi Boasiako | Social Specialist (ADM Responsible) | Social Development | SAWS1 |
| Adetunji A. Oredipe | Team Member | Agriculture | SAWA1 |
| Aguiratou Savadogo-Tinto | Peer Reviewer | Transport | IAET1 |
| Akhilesh Ranjan | Social Specialist | Social Development | SAWS1 |
| Alari Hasanatu Ijileyoh Mahdi | Team Member | Private Sector | EAWF2 |
| Caroline Nelima Wambugu | Window Manager | Trust Fund | AWMLR |
| Chidozie Onyedikachi Anyiro | Team Member | Agriculture | SAWA1 |
| Damon C. Luciano | Team Member | Transport | IEAT1 |
| Edith Ruguru Mwenda | Counsel | Legal | LEGAM |
| George Amoasah | Environmental Specialist | Environmental | SAWE4 |
| Ines Melissa Emma Attoua Etty | Team Member | Disbursement | WFACS |
| Kelvin Doesieh | Team Member | Agriculture | SAWA4 |
| Mack Capehart Mulbah | Team Member | Social Protection | HAWS3 |
| Maiada Mahmoud Abdel Fattah Kassem | Team Member | Disbursement | WFACS |
| Manievel Sene | Peer Reviewer | Agriculture | SAWA1 |
| Michel De Marigny | Team Member | Disbursement | WFACS |
| | | | |

| Ndiga Akech Odindo Negede Lewi Teklemariam | Counsel Team Member | Transport | LEGAM IAWT3 |
|---|---------------------|----------------------|----------------|
| Negeue Lewi Tekiemanam | ream Member | Transport | IAWIS |
| Patience Nyenpan | Team Member | Operations | AWMLR |
| Rohan G. Selvaratnam | Team Member | Agriculture | SAWA1 |
| Samuel Taffesse | Peer Reviewer | Agriculture | SAWA1 |
| Vaanii O. Baker | Team Member | Agribusiness | CAFA2 |
| Yeyea Gloria Kehleay Nasser | Team Member | Operations | AWMLR |
| Zephaniah J Smith | Team Member | Financial Management | EAWG2 |
| Zinnah S Mulbah | Team Member | Environment | SAWE4 |
| Zoe Quoi Diggs Duncan | Procurement Team | STEP | AWMLR |
| Extended Team | | | |
| Name | Title | Organization | Location |

I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Introduction

1. This project paper seeks the approval of the Executive Directors to provide an IDA credit in the amount of US\$76 million, from the Scale-Up Window (SUW) as additional financing (AF) to the Liberia Rural Economic Transformation Project (RETRAP, P175263). The project will also be co-financed by a grant from the Liberia Reconstruction Trust Fund in the amount of US\$9.0 million. This would be the second AF and will be used to scale-up work on establishing basic road connectivity, which is vital to food production, livelihoods strengthening, social inclusion, resilience building, and overall competitiveness of Liberia's economy.

B. Country Context

2. Liberia's economy has been on a recovery path after facing a series of detrimental external shocks between 2014 and 2020. These shocks ranged from the Ebola outbreak, plummeting prices of iron ore and rubber, the economic implications of the United Nations peacekeeping forces' withdrawal, extreme weather occurrences, to the devastating effects of the COVID-19 pandemic. Consequently, the country's per capita Gross Domestic Product (GDP) declined by a cumulative 15.4 percent, increasing the rate of extreme poverty [share of the population living with less than US\$2.15 (2017 PPP) per day] to one-third, and the rate of absolute poverty [share of the population living with less than US\$3.65 per day] to twothird¹. This setback undid nearly half of the progress made between 2003 and 2013. Additionally, when gauged by regional and international metrics, Liberia's non-monetary poverty indicators, encompassing access to healthcare, education, and basic utilities, are notably low. There are pronounced disparities, particularly between rural and urban areas and across genders, stemming from unequal access to resources like productive assets, infrastructure, public services, and markets. Nevertheless, from late 2019 onwards, the nation's authorities have made commendable efforts to reinstate macroeconomic stability and bolster growth. Demonstrating resilience, the economy grew by 5 percent in 2021 and 4.8 percent in 2022, even in the face of global challenges like the Russia's invasion of Ukraine and broader economic uncertainties.

C. Sector Context

3. Agriculture plays a key role in Liberia's socio-economic development. The sector is a primary livelihood for more than 60 percent of the population and contributes almost 37 percent of the country's GDP. Additionally, agriculture contributes about 14 percent of the country's export revenues and foreign exchange earnings. It also provides raw materials for manufacturing industries such as rubber and palm oil, which are vital exports for the country. The sector has the potential to alleviate poverty and also stem rural-urban migration, which is a key development concern for the country.

4. Although the country is endowed with favorable climate and soils necessary to underpin a vibrant

Macro-Poverty Outlook (MPO) https://thedocs.worldbank.org/en/doc/bae48ff2fefc5a869546775b3f010735-0500062021/related/mpo-lbr.pdf

agriculture sector, the performance of the sector has historically been low. As an example, crop productivity, a useful indicator of sector performance is still low – even by the already modest standards in the subregion – rice yields stand at 1.48 Mt/ha, compared to 2.9 Mt/ha in Cote d'Ivoire and Ghana while cassava yields stand at 8.1 Mt/ha, compared to 23.0 Mt/ha in Ghana and 14.5 Mt/ha in Sierra Leone).²

- 5. Among others, performance of the sector is constrained by poor road access/connectivity even in areas with high agricultural potential. Large parts of Liberia's northeast, and much of the central, coastal, and southeastern regions do not have access to all-weather roads. The Rural Accessibility Index (RAI), a measure of the share of the rural population living within 2km of an all-weather road, was estimated at 41.9 percent, meaning that an estimated two thirds of Liberians (approximately 2.3 million people) reside more than two kilometers from an all-season road.³ In most rural districts, RAI is less than 10 percent, implying that the bulk of rural communities are largely physically isolated. This poor connectivity undermines sector performance and competitiveness as farmers and agribusinesses face considerable challenges accessing both input and output markets as well as other basic services. As a result, smallholders tend to sell produce in local markets where prices are relatively lower, and a significant share of the country's production is wasted through postharvest losses thus undermining farmer incomes and overall national food security.
- 6. Despite the Government's current initiative to rehabilitate the main roadways and some key feeder roads in productive areas, more work is needed to improve roads and bridges in remote rural areas. The Government of Liberia (GoL) has promoted a comprehensive road network and investment in strategic roads, including the Southeastern Corridor, to improve agriculture sector performance and overall competitiveness. Parts of this corridor which could provide reliable connectivity through an important rice production area (Nimba county) and establish basic east-west national road connectivity while enhancing regional connectivity (including Trans Africa Highway Seven), remain unfinanced. The proposed AF responds to the Government's request to construct this remaining undeveloped section of this important Southeastern Corridor with due consideration to climate change impacts on the resilience and sustainability of the road network in Liberia.
- 7. Although Liberia's road network provides sufficient spatial coverage, poor road conditions limit mobility and access in most areas of the country making most of the roads unpassable during rainy seasons and rendering many rural communities isolated, sometimes for weeks at a time. Liberia has a road network of about 13,019 km in length. With a road density of 13.42 kms per 100 km² of land, it is reasonably comparable with that of other countries in the region. The length of non-urban roads is 12,453 km of which about 5.6 percent of the road length is paved, and 94.4 percent is unpaved⁴. The length of urban roads is 566 km of which only 36 percent is paved. Road conditions in 2019 by surface type indicate that more than 60 percent of the paved road length is in good condition, about 12.8 percent in fair condition and 26.7 percent in bad condition. About 22.5 percent of unpaved roads are in good condition, 46.5 percent in fair condition and 31 percent are in bad condition. The relatively higher figure in the good conditions of paved is due to the major investments on the few major corridors that were paved over the last decade.

-

² FAO Statistics.

³ Spatial Analysis of Liberia's Transport Connectivity and Potential Growth (English). International Development in Focus Washington, D.C.: World Bank Group.

⁴ Road Sector Development Program (RSDP), June 2023

8. The road network in Liberia is vulnerable to climate change. The exposure of Liberia's road network to climate variability and change is projected to increase⁵. Climate change is enhancing the road network vulnerability, acting as a threat multiplier. Increased frequency of intense rainfall is expected. Changes in precipitation, temperature, and flooding can damage roads and bridges, increasing annual maintenance costs, causing delays for passengers, and reducing labor productivity⁶.

D. Consistency with the Country Partnership Framework

- 9. The proposed AF aligns with the Country Partnership Framework (CPF) for Liberia for FY19-FY24 (Report number 130753-LR) and the World Bank Group Strategy for Fragility, Conflict, and Violence 2020-2025 (FCV Strategy). Project investment in road infrastructure in southeastern Liberia directly contributes to CPF I.2, "A more conducive environment for commercial agriculture, fishery, forestry, and rural development", Objective III.7, "Improved access to utilities, markets, and community services", and Objective III.8, "by increasing local resilience to shocks including climate-related shocks".
- 10. The proposed AF is consistent with Liberia's Revised Nationally Determined Contribution (NDC)⁷. As an adaptation target in the transport sector, Liberia commits to ensure low-income population can have better connectivity to reach jobs, education, and healthcare services, and improved access to economic and social opportunities. Adaptation measures in the NDC include continuation of road upgrading and construction, such as ensuring increased resilience of infrastructure to anticipated climate and extreme weather events. The proposed AF is also consistent with Liberia's National Adaptation Plan⁸. Implementation of climate-proofing investment in the road sector in rural areas is among the adaptation strategies to reduce the risk and vulnerability to climate change impacts.
- 11. The proposed AF is also fully aligned with the Pro Poor Agenda for Prosperity and Development (PAPD), the 5-year development agenda of Liberia. Through the investment in this critical road corridor, this proposed AF contributes to the objective 3.51 "transforming the road infrastructure" under Pillar 3 "the economy and the jobs" According to the PAPD, the road deficit remains one of the binding constraints to Liberia's development. Lack of access to all-weather road continues to impede the movement of goods and services, equipment, and machinery for production which directly affects the poor and vulnerable population. Road investments will not be pursued in a silo but will be linked to development corridors in important sectors such as agriculture.

E. Parent Project Implementation

-

⁵ For 1901 - 2016, mean annual precipitation is 2,500 mm, and mean monthly precipitation of the country varies from 27 mm in January to 400 mm in September.

⁶ According to the Liberia Country Climate and Development Report (CCDR), Liberia is one of the world's lowest emitters of greenhouse gases, and as it develops, Liberia will need to focus on adaptation measures. The modeling results in the CCDR show large increases in both maintenance costs and travel delays. Impacts are generally higher under the wet/warm scenario than the dry/hot scenario because extreme precipitation and flooding cause the greatest damage to roads and bridges. By 2050, delays could reach 12.5 million additional hours relative to the baseline. Annual weather-driven repair costs over 2031–50 could rise to \$900 per km.

⁷ https://unfccc.int/sites/default/files/NDC/2022-06/Liberia%27s%20Updated%20NDC RL FINAL%20%28002%29.pdf

⁸ https://unfccc.int/sites/default/files/resource/LIBERIA_ NAP_ FINAL_ DOCUMENT.pdf

- 12. The original project (RETRAP) in the amount of IDA US\$55 million was approved by the World Bank Board of Directors on June 4, 2021. An additional financing from the World Bank's Crisis Response Window Early Response Financing (CRW-ERF) in the amount of IDA US\$30 million was approved on December 22, 2022, to help the Government of Liberia to respond to food, employment, and resilience crisis. The current closing date is June 30, 2029. The Project Development Objective (PDO) is to improve productivity and market access for smallholder farmers and agri-enterprises for selected value chains in project participating counties. The project components and costs are summarized below:
- 13. **Component 1**: Improving the Enabling Environment for Agribusiness Development (US\$3.0 million): The objective of this component is to improve the enabling environment for agribusiness development in Liberia through the following interventions: (i) building the capacity of public agribusiness services to deliver quality services to private investors, including smallholder farmers; (ii) enhancing value chain coordination and public-private dialogue; and (iii) supporting agricultural research and development and extension.
- 14. **Component 2**: Enhancing Competitiveness and Market Access through Productive Alliances (US\$18 million). The aim of this component is to support smallholders and commercially oriented farmers to improve their capacity, operate competitively, and establish more reliable linkages with buyers. Component 2 provides matching grants to farmers to support pre-investment activities that are designed to pave the way for the development of proposals for investment subprojects.
- 15. **Component 3**: Agri-Marketing and Road Infrastructure Investments (US\$31.5 million) which aims to improve access to markets through the rehabilitation of 40 km of the Southeastern Corridor in Liberia, including construction of short-span critical cross-drainage structures, and modernization of selected agrimarkets. This component complements World Bank engagements in Liberia's Transport sector. 9
- 16. **Component 4**: Project Coordination and Management and Contingency Emergency Response (US\$6.5 million) which supports: (i) establishing appropriate coordination, Monitoring and Evaluation (M&E), and communication regarding project implementation; and (ii) ensuring that the GoL is better equipped to respond to crises and emergencies.; and
- 17. **Component 5**: Support to Food Security (US\$30 million) focusing on stimulating a food supply response through emergency production support to affected communities, while also addressing the underlying vulnerability to any such future shocks on food security. This component finances: (i) support for increased food production; (ii) support to rural community infrastructure; and (iii) support to strengthening food crisis prevention and monitoring systems.
- 18. Overall, RETRAP progress towards achieving the PDO and implementation progress are rated Satisfactory. The adoption of improved technologies has resulted in an increase in cassava yield from the baseline figure of 6 tons per hectare to 10 tons (i.e. 66 percent increase compared to the end of project target of 30 percent) whilst rubber yield has slightly increased from 1.2 Mt/ha to 1.4 Mt/ha (representing

⁹ The RETRAP project complements a program of support to Liberia's road sector by the World Bank and other Development Partners. The World Bank is supporting institutional, policy, and capacity development needs through the Southeastern Corridor Road Asset Management Project (SECRAMP, P149279), Liberia Road Asset Management Project (P125574), and an ongoing Analytical Sector Activity for Regional Connectivity in the Mano River Union Countries (P179978).

16.67 percent increase over the baseline compared to the end of project target of 30 percent). About 13,585 farmers (5,613 females), representing 56.7 percent of the the end of project target of 24,000 have adopted climate-smart agriculture and household nutritional practices. An average increase of 32 percent (against the target of 30 percent) has been recorded in the marketed volume of locally produced agricultural commodities by project-supported Farmer-Based Organizations. The contract for the design and construction of the 40 km road section from Tappita to Toe-Town has been signed and is expected to start after the completion of RAP implementation and Biodiversity Field Survey which is a disbursement condition. The financial management rating is Moderately Satisfactory, mainly because of delays in the documentation of some expenditures. The project has drawn up an action plan and is currently implementing mitigation measures to ensure that the PIU maintains a strong financial management system and undertakes monthly documentation of expenditures. There is no outstanding audit report. The procurement implementation arrangement on the project remains the same. The International Procurement Specialist will continue to collaborate with the procurement specialist with IIU, in view of the complex works procurement packages to be implemented. The procurement performance rating remains Moderately Satisfactory. Safeguards performance is rated satisfactory, and the project is up to date on all legal covenants.

II. DESCRIPTION OF ADDITIONAL FINANCING

- 19. The proposed AF will mainly finance the scaling-up of road rehabilitation under the parent project. The road corridor to be rehabilitated has been prioritized for its contribution to market access and overall food security. Key revisions to the parent project will include: (i) changes in project costs and modification of activities; and (ii) changes in the results framework. The AF will deploy additional credits in the amount of US\$76 million from IDA, an additional grant in the amount of US\$9.0 million from the Liberia Reconstruction Trust Fund, and a counterpart funding of US\$8 million to finance a specific 10 km road rehabilitation.
- 20. By upgrading from unpaved to paved road, this proposed AF is transformative in adapting Liberia's road network to increased climate change risks which is a threat to connectivity and food security across the country. With the paved surface and other resilient designs, the proposed road is expected to remain passable throughout the year and withstand potential heavy rainfall and flooding.
- 21. The 85 km road from Toe-Town to Zwedru and the Ivory Coast border under this proposed additional financing will complement the following achievement and the on-going activities financed by the World Bank in Liberia: (i) 248 km road corridor improvement from Monrovia to Ganta and the Guinea border (LIBRAMP P125574); (ii) 100 km Southeastern Corridor improvement from Ganta to Saglepie and Tappita¹⁰ (SECRAMP P149279); and (iii) 40 km Southeastern Corridor improvement from Tappita to Toe-Town (parent project). This will also complement the African Development Bank funded 166 km road improvement between Kelipo, Fishtown, Harper, and Havala on the Southeastern corridor.

F. Change to project activities/costs

22. Component 3 (Agri-Marketing and Road Infrastructure Investments) costs will increase by US\$93

¹⁰ The 39 km between Ganta and Saglepie is entirely financed by the GoL

million (US\$76 million from IDA, US\$9 million from the LRTF, and US\$8 million counterpart funding) to scale-up investments in infrastructure. The AF scale-up activities will focus mainly on financing: (i) the construction of an additional 85 km road of which 75 km is on the Southeastern Corridor; (ii) climate-resilient spot improvements to feeder roads leading to the corridor; (iii) the related monitoring, Environmental and Social (E&S), and climate adaptation consultancy services¹¹; (iv) the associated Human Resources operating costs; (v) a cost overrun / funding gap of US\$5.25 million on the 40 km road from Tappita to Toe-Town under the parent project; and (vi) a contingency for resettlement and physical / price adjustment (see Table 1).

- 23. The 85 km road includes 75 km segment from Toetown to Zwedru on the Southeastern Corridor and a 10 km spur connecting the Southeastern Corridor to the Ivory Coast border¹². This road section links the southeastern part of Liberia, where about a third of its population dwells, to the capital city of Monrovia as well as the Freeport of Monrovia. This investment is key to providing an economic lifeline for inaccessible rural areas that are strongly vulnerable to climate change impacts and with high incidence of poverty. It will also support the economic integration of the region with the rest of Liberia and neighboring countries and foster regional trade with Côte d'Ivoire and Guinea. In addition, the construction upgrade of this segment to an all-weather standard will contribute to improvement in market access, reduce logistical cost, reduce post-harvest losses, boost agricultural sector competitiveness, and improve rural livelihoods and food security.
- 24. The road will be constructed under a design-build approach based on an existing conceptual design. Works will include full construction of a climate-resilient two-lane carriageway (3.75-meter-wide lanes and 1.5-meter paved shoulders) with bituminous surfacing along the existing right-of-way, with associated drainage structures, and road furniture. In the urbanized zones, the road section will have 1.5-meter-wide block paved pedestrian walkways on both sides with climate-resilient features, wide concrete side drains to accommodate heavy precipitation, and disability inclusive access as required. The works will also provide several cross-drainage structures, culverts, and bridges over streams and rivers. The pavement will have a 20-year design life. The designs and works will also incorporate road safety measures through pre-investment, design, and post-construction safety audits. Spot improvements on critical sections of feeder roads, severely affected by climate change impacts, that link targeted agricultural production zones and the primary road corridor will also be financed following design parameters that increase resiliency to climate change and extreme weather events. Table 1 and table 2 below present respectively the breakdown costs of the proposed additional financing and the changes in the overall project costs.

¹¹ Some of these activities will be retroactively financed.

¹² The 10 km spur will be financed entirely by counterpart funding.

Table 1: Breakdown costs of the proposed 2nd additional financing

| Activity | Amount ¹³ (US\$ m) | Comment |
|---|-------------------------------|---|
| Works on the 75 km Toe-Town Zwedru road corridor Climate-resilient works on feeder roads | 64.45 | |
| Works on the 10 km from the road corridor to the Ivory Coast Border | 8.0 | The Government of Liberia has committed to finance the 10 km road works between Toe-Town and the Ivory Coast border using their own funds. |
| Monitoring Consultant Services on the 75 km + 10 km road | 3.22 | |
| Cost overrun on the 40 km Tappita Toe-Town road works | 2.75 | Road activity budget in the parent project: US\$30 million 40 km road works contract after bidding: US\$32.75 million |
| Funding gap on the Monitoring Consultant Services of the 40 km Tappita Toe-Town road | 2.5 | Monitoring services for the 40 km road: US\$2.5 million |
| ESIA (Environmental and Social Impact Assessment) of the 75 km + 10 km road | 0.36 | For retroactive financing. These studies could not be financed by the parent project as the completion of a BFS is |
| BFS (Biodiversity Field Survey) of the 40 km road under the parent project and the 75 km + 10 km road | 0.8 | a disbursement condition for the entire road component (works + consulting services). This will be revised in the proposed AF so that the BFS will only hold up the road works. |
| Staff costs for the implementation of the road activity | 1.77 | IIU staff costs |
| Contingency | 9.15 | For social and environmental safeguards management, physical, and price contingency |
| Total | 93.0 | US\$76 million IDA, US\$9 million LRTF, US\$8 million GoL |

Table 2: Revised project costs (IDA, LRTF, and counterpart funding)

| Project component | | Costs (US\$ million) | | | |
|-------------------|--|----------------------|----------------------------|--------------------|---------------------------------------|
| | | Original | Changes including first AF | Proposed second AF | Changes including first and second AF |
| 1. | Improving the enabling environment for agribusiness development | 6.0 | 3.0 | - | 3.0 |
| 2. | Enhancing competitiveness and market access through productive alliances ¹⁴ | 12.5 | 14.0 | - | 14.0 |
| 3. | Agri-marketing and road infrastructure investments ¹⁵ | 31.5 | 31.5 | 93.0 | 124.5 |
| 4. | Project coordination and management and contingency emergency response | 5.0 | 6.5 | - | 6.5 |
| 5. | Support to food security | | 30.0 | - | 30.0 |
| | Total | 55.0 | 85.0 | 93.0 | 178.0 |

G. Changes to the Results Framework

25. While the PDO remains unchanged, the results framework has been streamlined and adjusted to reflect the additional 85 km resilient road. A summary of the changes is in the Table 3 below.

 $^{^{\}rm 13}$ The US\$9 million LRTF will only finance works.

¹⁴ The GoL has committed a US\$4 million contribution to Component 2.

 $^{^{15}}$ The GoI has committed a US\$8 million contribution to finance the 10 km Toe-Town Ivory Coast border road works in Component 3.

Table 3: Summary of the changes in the results framework

| · | 1 | Comments |
|--|---------|--|
| Indicator | Status | Comments |
| PDO indicators | | |
| Farmers reached with agricultural assets or services | Revised | The target values have been increased to reflect the additional activities (from 24,000 to 30,000, and from 9,600 to 12,000 for female farmers) |
| Increase in marketed volume of locally produced | Revised | The target values have been increased to reflect the additional |
| agricultural commodities by project supported Farmer-Based Organisations (FBOs) | | activities (from 20 or 30 percent to 50 or 70 percent). |
| Reduction in transportation time | Revised | This indicator has been disaggregated in 3: (i) between Tappita and Toe-Town for the 40 km road corridor under the parent project; (ii) between Toe-Town and Zwedru for the 75 km road corridor under the IDA financing of the proposed AF2; and (iii) in the 10 km spur connecting the corridor with Ivory Coast border |
| Reduction in transportation time disaggregated by type of vehicle | Dropped | This has been dropped given the complexity to get accurate data on them. |
| Passengers and the freights volumes | Dropped | These indicators have been dropped given the difficulty to get data on them. |
| Direct project beneficiaries of which female | Revised | The target values have been revised to reflect the additional road (from 96,000 to 160,000) |
| Intermediate Results Indicators | | |
| Grievances registered related to delivery of project benefits that are actually addressed (Number) | Revised | This indicator is replaced by "Percentage of project related grievances that are addressed" |
| Climate-resilient roads constructed | New | This indicator has been introduced to replace the "Roads constructed – rural" and "Roads constructed – non rural". The target values have been revised to include the 85 km additional road |

H. Beneficiaries

26. Direct beneficiaries of the AF include targeted farmers, and users of road transport services. Most of the beneficiaries are rural households and communities who will benefit from access to an all-weather road. Improved road conditions along the additional 85 km of the corridor will also directly benefit transport service providers in the form of reduced vehicle operating costs, reduced travel times, and – potentially – increased demand for their services and access to new markets. Those living along the southern section of road corridor will benefit directly from establishment of all-weather road connectivity to the rest of Liberia. It has been estimated that about 900,000 people will be impacted directly or indirectly by the project.

I. Lessons Learned and Reflected in the Project Design

27. The project design builds on lessons from projects implemented in the agricultural sector and in the implementation of the parent RETRAP. Some of the lessons reflected in the project design include a design-build approach for the works. It has been more successful than the widely utilized International Federation of Consulting Engineers (FIDIC) approach in the country's low-capacity and high-risk

environment. Combining design and construction increases contract amount; hence, makes it more attractive to internationally reputable firms. Otherwise, because of higher mobilization costs and other risks in Liberia, selection of firms and procurement can be difficult and face delays.

III. KEY RISKS

- 28. The overall risk rating of the proposed AF is commensurate with the risk rating of the parent project and is assessed as "Moderate." The risk mitigation measures specified in the parent project remain relevant.
- 29. **Fiduciary risk is Substantial**. The continued engagement of development partners in the Public Financial Management (PFM) and procurement implementation has resulted in an enhanced fiduciary environment in Liberia, including improved capacity. Despite the progress made in improving the fiduciary system, with proper attention to value for money, there are still opportunities for ensuring proper use of project funds for intended purposes. Gaps in existing capacity for project management could also lead to delayed progress in implementing project activities and achieving targets. <u>Mitigation</u>: This project will support capacity building of the existing PIU to manage the fiduciary aspects of the project and underlying internal controls, as well as efficient procurement processes and contract management system.
- **Environmental and Social risks are Substantial.** The project's adverse environmental and social risks and impacts mainly emanate from interventions under Components 2 and 3 of the project. The project will intervene in sensitive areas characterized by severe climate events, the possible occurrence of few patches of natural habitats in the area of influence of the roads and possible occurrence of some animal species of conservation value such as the critically endangered Western Chimpanzee (Pan troglodytes verus), invasive species, including pests; involuntary resettlement and land acquisition, challenges of the client managing resettlement impacts in past projects, risks of Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH), exclusion of the poor and vulnerable from project benefits, elite capture, and labor influx due to the proposed road construction are potential environmental and social risks and impacts associated with the additional 85 km of road development under the AF. Implementation arrangements from the parent project will be retained in full. Mitigation: The AF will build directly on relevant E&S standards and structures put in place under the parent project. Implementation arrangements from the parent project will be retained in full. The parent project Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (RPF), the Stakeholder Engagement Plan (SEP), Environmental and Social Commitment Plan (ESCP), Labor Management Plan (LMP), and Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) Action Plan will be updated to cover the entire 125km corridor and disclosed 90 days after effectiveness to guide the mitigation of the environmental and social risks of the activities proposed under the AF. The project will prepare an ESIA and ESMP for the proposed 85 km prior to the finalization of road design. Due to the possible occurrence of few patches of natural habitats in the area of influence of the 40 km road under the parent project and possible occurrence of some animal species of conservation value, the project is required to conduct a Biodiversity Field Survey (BFS) prior to civil works as enshrined in the parent project ESCP. The ESIA and ESMP of both 40 km and 85 km segments will be updated to incorporate BFS findings and related Biodiversity Management Plan ninety days (90) after the approval of the Biodiversity Management Plan. The Environment risks rating may be reviewed based on the findings of the BFS. The Resettlement Action Plan (RAP) which covers the parent project corridor (40 km) remains adequate; a new cut-off date will be set

to prepare a new RAP for the AF corridor (85 km). The RAP will be disclosed and implemented prior to commencement of works on the 85 km road corridor.

31. Climate and disaster risks: Climate and disaster-risk screening examined the potential impacts of climate and geophysical hazards on the Project's physical components. The Climate and Disaster-Risk Screening report shows that the Project is moderately exposed to drought, extreme precipitation, flooding, and extreme temperatures. Mitigation: The Project will (i) build the capacity of implementing agencies at the county and district level to identify and proactively address climate vulnerabilities; (ii) build capacity at the community level to address climate vulnerabilities; and (iii) identify and invest in climate-resilience activities (productive investments and infrastructure).

IV. APPRAISAL SUMMARY

A. Economic and Financial Analysis

32. The economic analysis of the 85 km resilient road shows that this proposed road investment is economically viable. The economic analysis was updated for the entire corridor using a re-calibrated Highway Development and Management Model (version 4, or HDM-4) workspace for Liberia, and based on the following assumptions: (i) a service life of 20 years; and (ii) a discount rate of 6 percent. Benefits considered in the economic analysis include: the road user cost savings, vehicle operation costs, and travel time costs for passengers and cargo¹⁶. The analysis was carried out for the two sections of road (Tappita-Zwedru, 74.5 km and Toe Town-Cote D'Ivoire Border, 10.5 km) separately and combined. The table 3 below summarizes findings of the economic analysis, showing that economic returns on the proposed investments are high in all cases, ranging from 8.6 percent to 13.1 percent, and this is confirmed by a sensitivity analysis of the robustness of the results. Even if construction costs increase by 20 percent and the traffic volume growth decreases by 20 percent, the economic returns on investments are still viable.

Table 4: Summary Economic Evaluation Indicators

| Economic Evaluation | Toe-Town Zwedru Road (74.5km) | Zwedru to Ivory Coast Border (10.5km) ¹⁷ | Toe-Town Zwedru Ivory Coast Border (85km) |
|--|----------------------------------|---|---|
| Economic Internal Rate of Return (EIRR) | 13.4 | 8.6 | 13.1 |
| Net Present Value (NPV) (US\$, millions) | 67.1 | 1.36 | 68.5 |
| NPV- to Capital Costs Ratio | 0.82 | 0.25 | 0.78 |
| Sensitivity Results | | | |
| NPV/EIRR (20% decrease in traffic growth rate) | 45.9/11.4 | 0.54/7.1 | 46.4/11.2 |
| NPV/EIRR (20% increase in construction costs) | 51.9/11.0 | 0.35/6.6 | 52.2/10.8 |
| NPV/EIRR (20% decrease in traffic growth rate plus 20% increase in construction costs) | 30.8/9.2 | -0.48/5.2 | 30.3/9.0 |

33. The estimated net greenhouse gas emissions for the road investment are positive. Using HDM,

¹⁶ The Road Safety Screening and Assessment Tool (RSSAT) is not applicable to construction of new roads and has therefore been omitted from the analysis.

¹⁷ The traffic on the Toe Town is low due to its deteriorated condition and the HDM-4 analysis assumed 50 percent of the traffic on the Tappita-Zwedru Section will be generated in the opening year.

the vehicle emissions under two scenarios (with and without project investments) over a 20-year analysis period were estimated. The net vehicle emission amounts are equivalent to the difference under these two scenarios. The estimated net total vehicle emissions for the proposed investment is approximately 72,000 tons, which is equivalent to approximately 3,600 tons per year.

B. Technical

- 34. Selection of the 85 km segment of the Southeastern Corridor and linked feeder roads for the AF was based on several criteria. These include: (i) their importance to unlocking Liberia's largely unrealized agricultural potential; (ii) their contribution to increased competitiveness of locally produced agriculture products; (iii) the potential reduction in transport costs, which is key to reducing food prices and improving food security; (iv) its contribution to delivery of basic public services; (v) its contribution to trade and development through improved regional integration ¹⁸; and (vi) their vulnerability to climate change impacts.
- 35. The project will complete the missing link, the Côte D'Ivoire Border Toe Town Zwedru (85 km), on the Southeastern Road Corridor of Liberia 19, which is key to provide economic lifeline for inaccessible rural areas with high and worsening poverty. It will also support economic integration of the region with the rest of Liberia and neighboring countries and foster regional trade with Côte d'Ivoire and Guinea. The existing road is mostly a gravel single carriageway with widths varying from 6 8 meters (m). Surface conditions vary by section, with only less than 1 km of road paved in Zwedru. Over the years, repeated grading has lowered critical sections to below the original ground level. This has created an entrenched cycle of "ponding" on the carriageway, resulting in significant rutting under truck loads and further deterioration of the road, making the road inaccessible during most of the rainy season spanning May to October.
- 36. The climate-resilient road upgrading works will utilize standard construction methods for asphalt concrete roads with granular base which are appropriate for the anticipated traffic composition. Current traffic levels are estimated at 313 and 23 annual average daily traffic (AADT) for the Toetown Zwedru section of the road (73.5 km), and Toe Town to Cote D'Ivoire border (10.5 km) sections respectively with the lower traffic volumes reflecting the poorer road conditions. Annual traffic growth of 6 percent (0-5 years), 5 percent (5-10 years) and 3 percent (10-20 years) is adopted to estimate AADT at Target Completion Date. The design and build contract format (with minimum specifications) is appropriate for the project context because it shifts the design and construction risks to the private sector, which is better equipped to anticipate and manage those. This approach has been successfully used for construction of road and bridge infrastructure in prior IDA-financed projects in Liberia.
- 37. The operation is aligned with the goals of the Paris Agreement on both adaptation and mitigation.
- 38. Assessment and reduction of adaptation risks: The operation supports rural road works without

¹⁸ The corridor is part of the Trans–West African Coastal Highway or TAH 7 is a transnational highway project to link 12 West African coastal nations, from Mauritania in the north-west of the region to Nigeria in the east.

¹⁹ The Ganta to Sagleipie road section (38.67km) and Saglepie to Tappita (61km) is being developed by the Government of Liberia through the National Road Fund (NRF) and the World Bank and the Liberia Reconstruction Road Trust Fund (LRTF) respectively. While the Tappita to Toe Town (40km) is being upgraded under Parent Project (RETRAP).

capacity expansion. The main climate and disaster risks likely to affect the project investments are flooding, and rainfall. The project design takes into consideration the precipitation and flooding risks that threaten the outcomes of the project, considering its interventions include the promotion of bioengineering during road rehabilitation will stabilize slopes and mitigate landslide risks, and incorporation of climate-resilient design standards that will ensure resilience, as described in above sections. Therefore, the operation adequately reduces the physical climate risks to the Project outcomes, and the project's climate resilience and adaptation design considerations limit the exposure to an acceptable level of residual risk.

- 39. Assessment and reduction of mitigation risks: The activities financed by this project are either universally aligned or have a low risk of preventing the country's transition to low-carbon development pathways, given its contribution to more efficient mobility in low-traffic zones and more sustainable transportation. The Project design is indeed incorporating: (i) the rehabilitation of rural roads which do not lead to capacity expansion for private motor vehicles in low-traffic zones; and (ii) the construction and maintenance of the storm water drainage system without expanding or promoting expansion into areas of high carbon stocks or high biodiversity areas.
- 40. There is no change to the implementation arrangements under the proposed AF. The Ministry of Agriculture (MoA) will remain the main entity responsible for the project. The PIU of the parent project will retain the overall responsibility over the coordination, supervision, fiduciary, and environmental and social safeguards compliance, as well as monitoring and evaluation of AF supported activities. The Ministry of Public Works (MPW) will be responsible for activities related to road infrastructure. The Infrastructure Implementation Unit (IIU) of MPW, which is implementing the IDA-financed transport projects, will continue to be responsible for implementing the civil works.

C. Financial Management

41. The RETRAP AF will be implemented using the World Bank Directive: Financial Management Manual for World Bank Investment Project Financing Operations, and World Bank Guidance: Reference material - Financial Management in World Bank Investment Project Financing Operations (Catalogue Number OPCS5.05-GUID.02). The financial management arrangement of the second Additional Financing will remain the same as the original project. The World Bank conducted a simplified Financial Management (FM) assessment of the Ministry of Agriculture to determine continued adequacy of the existing financial management systems and to determine whether the PIU has acceptable FM arrangements in place that satisfy the World Bank's minimum requirements. These arrangements would ensure that the implementing entity (a) use project funds only for the intended purposes in an efficient and economical way; (b) prepare accurate and reliable accounts as well as timely periodic financial reports; (c) safeguard assets of the project; and (d) have acceptable auditing arrangements. In view of this, FM aspects have been reviewed, and the FM arrangements (covering budgeting, accounting, financial reporting, internal control, fund flow, and auditing) currently in place under the parent project will be maintained. For the purposes of the AF, the PIU will: (i) update the current accounting manual; and (ii) customized the existing accounting software to include the account of the AF to generate the Interim Financial Reports (IFRs) 45 days after the end of each calendar quarter and financial statements annually. The General Audit Commission which is currently the external auditor for the parent project will conduct a consolidated audit of the parent, additional financing, and the trust fund and submit the audited financial statements

- six (6) months after the end of the fiscal year. However, the second AF will have two additional designated accounts preferable opened at a commercial bank for the receipt of funds and will be managed by the Client. Appropriate checks and balance measures will be instituted within the PIU as requirements to provide reasonable assurance in this respect.
- 42. A retroactive financing clause has been introduced in the proposed AF for the acceptance of payments prior to the AF signature date, with specific provisions for withdrawals. Notably, expenditures are permissible up to certain aggregate amounts, offering flexibility in managing financial transactions. For payments made before the signature date but on or after June 1, 2023, under Category (8a) of Eligible Expenditures, an aggregate sum not exceeding \$2,000,000 may be withdrawn. Similarly, for payments falling within Category (8c) of Eligible Expenditures, an aggregate amount not surpassing \$4,000,000 may be withdrawn under the same conditions. This retroactive financing provision aims to accommodate financial needs while ensuring adherence to the stipulated limits and categories, providing a structured and accountable approach to project funding.
- 43. The overall FM risk of the project remains Substantial given among other things, the inherent risk associated with the systemic weaknesses in public financial management at the national level.

D. Procurement

44. The procurement performance of the parent project is rated Moderately Satisfactory. All works, goods, and services for the AF will be procured according to the procurement arrangements of the parent project. All procurement activities will follow the Investment Project Financing (IPF) Procurement Regulations. The international procurement consultant hired under STAR-P will continue to provide procurement support to the national procurement consultant. The existing Project Procurement Strategy for Development (PPSD) for the parent project provides sufficient market analysis and recommendations for commencing procurement of the additional road works. The parent project PPSD has been updated to reflect the current market changes and price variations. Upon approval of the AF2, all procurement activities under the project will be implemented via electronic platform, Systematic Tracking of Exchanges in Procurement (STEP).

E. Legal Operational Policies

| | Triggered? |
|---|------------|
| Projects on International Waterways OP 7.50 | No |
| Projects in Disputed Areas OP 7.60 | No |

F. Environmental and Social

45. RETRAP is implemented under the World Bank Environmental and Social Framework. The implementation and monitoring of environment and social risks management for the parent project has been rated Satisfactory while E&S risks remain Substantial. These ratings are based on the environmental and social performance of the original project till date. The client has the full complement of Environmental and Social Specialists at MoA and IIU as agreed in the parent project Environment and

Social Commitment Plan (ESCP). The ESIA for the 40 km road identified some potential project risks and adverse impacts on biodiversity including critically endangered chimpanzees along the proposed road corridor and these impacts are likely to be applicable to the 85 km corridor. The project will conduct surveys on biodiversity for the 40 km road under the parent project and the 85km road under the AF. Meanwhile, the Client continues to undertake appropriate actions to manage its Environmental and Social Management Framework, including: (i) Environment and Social Screening of proposed subproject activities using the project environmental and social screening checklist in the parent project Environment and Social Management Framework (ESMF) and preparation of the required instruments to manage potential risks; (ii) setting up of the district level Grievance Redress Committees (GRCs) and strengthening the capacity of the community level GRCs in project counties; and (iii) conducting environmental and social training plan for key PIU staff, selected grantees and other project stakeholders. The project has also developed and disclosed its Integrated Pest Management Plan as effectiveness condition of the first AF on the MOA website, 18TH January 2023.

- 46. The parent Project ESMF, RPF SEP, LMP are updated ninety (90) after project effectiveness and ESIA, ESMP for the 40 km road corridor will be updated ninety days (90) of after effectiveness adopting the Biodiversity Management Plan to include findings from the BFS. The GoL will prepare ESIA, BFS and RAP for the proposed additional 85 km road segment and implement prior to commencement of civil works.
- 47. The project SEA/SH risk is substantial. A SEA/SH prevention plan will be updated ninety (90) after project effectiveness to mitigate potential SEA/SH risks related to the project interventions. This plan will be updated based on lessons from the ongoing SEA/SH mitigation approach developed and being rolled out in the Southeastern Corridor Road Asset Management Project (SECRAMP, P149279). It will include identification of appropriate mitigation and response mechanisms proportionate to the project SEA/SH risk level which include, at a minimum, identification of service providers for survivors of SEA/SH, establishment of a survivor-centric and confidential referral pathway, codes of conduct for project workers, and public outreach and education.
- 48. **Gender**. The parent project acknowledged that there is profound inequality between women and men in Liberia, which ranks 156th out of 162 countries on the inequality index between the sexes²⁰. Liberia's significant strides toward economic growth, educational parity, and greater protections for women's rights have not yet translated to equal opportunities for women. Women still comprise the majority of laborers in the informal economy with 74 percent²¹ of all female workers in the informal sector, and 41 percent of university-educated women working informally, compared to 24 percent of university-educated men.
- 49. Women rely heavily on agriculture for employment and income and have been greatly affected by the current food insecurity crisis. The underdeveloped and gender-blind infrastructure adds additional challenges for women particularly in rural areas. Investment in mobility infrastructure particularly in rural environments may help women increase their income, as it ensures access to markets where they can sell their products. As in the parent project, the monitoring and evaluation will collect sex-disaggregated data.

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²⁰ United Nations Development Program, UNDP, 2019

²¹ Council on Foreign Relations (CFR), 2022

- 50. The parent project has been gender-tagged. The proposed additional financing is expected to be gender-tagged since it will implement the same activities and will use the same gender indicators as the parent project.
- 51. Citizen Engagement (CE). The well-established CE mechanisms being implemented under the parent project will still apply. These mechanisms ensure an inclusive and participatory decision-making approach throughout processes, from selecting specific sites and ensuring the adequate targeting of vulnerable people and communities, to establishing solid management mechanisms that contribute to sustainability of investments and prevent future possible conflicts. The established citizen satisfaction survey and GRM will continue under the Additional Financing. Citizens affected by the construction activities along the proposed 85km road corridor will use the local community grievance redress structures to resolve complaints related to the proposed road construction and spot improvement activities. Citizen engagement will also be tracked through the indicators on beneficiaries satisfied with the delivery (timely and quality) of project benefits and percentage of grievances raised in the GRM that are addressed.
- 52. The project will also mobilize the local community for some aspects of the road works such as vegetation cover bolstering and soils stabilization that will be implemented using labor-based approach. In addition, participatory decision making will be embedded in the identification of the climate-resilient spot improvements to feeder roads leading to the corridor, and adequate arrangement will be made to ensure access/voice of women and other vulnerable groups are guaranteed in the participatory processes.
- 53. **Climate Change**. Investments in road rehabilitation under Component 3 will incorporate modern, climate-smart infrastructure standards that increase resilience. The project area is at high risk of river flooding, with potential for damaging and life-threatening river floods occurring and affecting the road network. Considering the dependence of rural areas on unpaved roads and the high susceptibility of unpaved roads to degradation under adverse weather conditions (e.g., high rainfall), the impacts of future climate change on the road network will be taken into consideration in the infrastructure design. Increased temperatures and frequency of intense precipitation will likely lead to compromised pavement integrity, increased instability, or loss of embankments, wash away of roads, affecting structural integrity, and damage and/or destruction of bridges and culverts. To minimize these risks, the project will enforce the use of bioengineering, which involves the use of vegetation either alone or in conjunction with other civil engineering structures including bituminous surface sealing and critical cross-drainage structures. A summary of mitigation and adaptation activities is included in Table 5 below.

Table 5: Summary of mitigation and adaptation activities

| Climate Adaptation | Climate Mitigation | | |
|---|---|--|--|
| Component 3: Agri-Marketing and Road Infrastructure Investments (US\$85.0 million) The objective of this component is to improve access to markets through the rehabilitation of existin roads, construction of short-span critical cross-drainage structures, and modernization of selected agr markets. The AF will finance the scale-up of investments in infrastructure aiming to close the gap in roa infrastructure which is a major constraint to ensuring food security in Liberia | | | |
| This subcomponent will reinforce climate- adaptive and climate-resilient infrastructure | The proposed activity has the potential for climate mitigation: Bioengineering during road rehabilitation | | |

| Clin | nate | Δd | an | ıta | tı | α r | î |
|------|------|------------|----|-----|----|------------|---|
| | | | | | | | |

Climate Mitigation

Component 3: Agri-Marketing and Road Infrastructure Investments (US\$85.0 million)

The objective of this component is to improve access to markets through the rehabilitation of existing roads, construction of short-span critical cross-drainage structures, and modernization of selected agrimarkets. The AF will finance the scale-up of investments in infrastructure aiming to close the gap in road infrastructure which is a major constraint to ensuring food security in Liberia

along the main corridor by ameliorating the impact of climate-induced weather hazards on the safety and economy of local communities and the potential effects on last-mile infrastructure—specifically, the effects of climate-induced heavy rains and resulting landslides, surface run-off from slopes, and increased water flows in gullies, drainage channels, and rivers, which damage transport and market infrastructure.

Along the feeder roads, 100 percent of the project funding will go to the financing of climate-resilient measures (spot improvements works) to build strong resilience and redundancy of the rural/feeder road network in precise locations selected based on the vulnerability level of said road links.

will stabilize slopes and mitigate landslide risks, aiding in carbon sequestration and reducing Greenhouse Gas (GHG) emissions. Renewable energy and energy-saving infrastructure will be considered wherever possible, which will also reduce GHG emissions. Road development and rehabilitation will incorporate modern, climate-smart infrastructure standards that increase resilience. The project will enforce the use of bioengineering, which involves the use of vegetation either alone or in conjunction with other civil engineering structures.

V. WORLD BANK GRIEVANCE REDRESS

54. Grievance Redress. Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VI SUMMARY TABLE OF CHANGES

| | Changed | Not Changed |
|--|---------|-------------|
| Results Framework | ✓ | |
| Components and Cost | ✓ | |
| Reallocation between Disbursement Categories | ✓ | |
| Implementing Agency | | ✓ |
| Project's Development Objectives | | ✓ |
| Loan Closing Date(s) | | ✓ |
| Cancellations Proposed | | ✓ |
| Disbursements Arrangements | | ✓ |
| Legal Covenants | | ✓ |
| Institutional Arrangements | | ✓ |
| Financial Management | | ✓ |
| Procurement | | ✓ |
| Implementation Schedule | | ✓ |
| Other Change(s) | | √ |

VII DETAILED CHANGE(S)

COMPONENTS

| Current Component Name | Current Cost (US\$, millions) | Action | Proposed Component Name | Proposed Cost (US\$, millions) |
|--|----------------------------------|-----------|--|--------------------------------|
| Improving the Enabling Environment for Agribusiness Development | 3.00 | No Change | Improving the Enabling Environment for Agribusiness Development | 3.00 |
| Enhancing Competitiveness and Market Access through Productive Alliances | 18.00 | No Change | Enhancing Competitiveness and Market Access through Productive Alliances | 14.00 |

iLap Category Sequence No: 7

| Agri-Marketing and Road Infrastructure Investments | 31.50 | | | Agri-Marketing an Road Infrastructur Investments | | 124.50 |
|--|----------------|-------------------|---------------|--|------------------|------------------|
| Project Coordination and Management and Contingency Emergency Response | 6.50 | 6.50 No Change Pr | | Project Coordinati and Management Contingency Emer Response | and | 6.50 |
| Support to Food Security | 30.00 | No Ch | ange | Support to Food Security | | 30.00 |
| TOTAL | 89.00 | | | , | | 178.00 |
| REALLOCATION BETWEEN DISB | URSEMENT CATEG | ORIES | | | | |
| Current Allocation | Actuals + Comn | nitted | Pr | oposed Allocation | | cing % Total) |
| | | | | | Current | Proposed |
| DA-69000-001 Currency: L | JSD | | | | | |
| Lap Category Sequence No: 1 | Current | Expend | diture C | ategory: GD,WK,NC | S,CS,Tr,Oc Pt A, | B.1,C.2&D.1 |
| 12,612,500.00 | 5,492,138.20 | | 12,612,500.00 | | 100.00 | 100.00 |
| Lap Category Sequence No: 2 | Current | Expend | diture C | ategory: Matching G | Frants GD,NCS8 | TR PtB.2 |
| 11,500,000.00 | 3,824,801.82 | | 11,500,000.00 | | 100.00 | 100.00 |
| Lap Category Sequence No: 3 | Current | Expend | diture C | ategory: GD,WK,NC | S&CS Pt C.1 | |
| 30,000,000.00 | | 0.00 | | 30,000,000.00 | 100.00 | 100.00 |
| iLap Category Sequence No: 4 | Current | Expend | diture C | ategory: Emergency | Expenditures F | t D.2 |
| 0.00 | | 0.00 | | 0.00 | 100.00 | 100.00 |
| iLap Category Sequence No: 5 | Current | Expend | diture C | ategory: Refund of F | reparation Adv | ance |
| 750,000.00 | 75,8 | 314.20 | | 750,000.00 | | |

Current Expenditure Category: Interest Rate Cap or Collar premium

| | 0.00 | 0.00 | | 0.00 | | |
|------------------------------|-----------------------------|---------------------|------------------------------|---------------|------------|--|
| iLap Catego | ory Sequence No: FEF | Current Expend | liture Catego | ry: FRONT END |) FEE | |
| | 137,500.00 | 137,500.00 | | 137,500.00 | | |
| Total | 55,000,000.00 | 9,530,254.22 | 5 | 5,000,000.00 | | |
| Expected D | isbursements (in US\$ | 5) | | | | |
| Fiscal Year | | Annual | | Cumulativ | ve . | |
| 2021 | | 0.00 | | 0.00 | | |
| 2022 | | 2,786,388.00 | | 2,786,388 | 8.00 | |
| 2023 | | 5,910,368.00 | | 8,696,750 | 6.00 | |
| 2024 | | 8,933,640.00 | | 17,630,39 | 96.00 | |
| 2025 | | 11,110,280.0 | 0 | 28,740,6 | 76.00 | |
| 2026 | | 12,736,520.0 | 0 | 41,477,19 | 96.00 | |
| 2027 | | 13,089,616.0 | 0 | 54,566,83 | 12.00 | |
| 2028 | | 13,257,348.0 | 0 | 67,824,10 | 60.00 | |
| 2029 | | 13,224,592.0 | 0 | 81,048,75 | 52.00 | |
| 2030 | | 3,951,248.00 | | 85,000,00 | 00.00 | |
| SYSTEMATI | C OPERATIONS RISK | -RATING TOOL (SORT) | | | | |
| Risk Catego | | | st ISR Rating | Curr | ent Rating | |
| Political and | d Governance | | Moderate | • M | loderate | |
| Macroecon | omic | | Moderate | • M | loderate | |
| Sector Stra | tegies and Policies | | Low | • Lo | ow . | |
| Technical D | esign of Project or Pr | rogram | Low | • Lo | ow | |
| Institutiona Sustainabili | l Capacity for Implen ty | nentation and | Moderate | • M | loderate | |
| Fiduciary | | | Substantia | l St | ubstantial | |
| Environme | nt and Social | | Substantia | l Su | ubstantial | |

| Stakeholders | Moderate | Moderate |
|--------------|----------------------------|----------------------------|
| Other | Moderate | Moderate |
| Overall | Moderate | Moderate |

LEGAL COVENANTS – Rural Economic Transformation Project Second Additional Financing (P181083)

Sections and Description

The Recipient shall, within ninety (90) days of adopting the Biodiversity Management Plan, update the ESIA and ESMP, in form and substance acceptable to the Association.

The Recipient shall, within ninety (90) days of effectiveness, update the ESMF, LMP, GBV/SEA/SH Action Plan, RPF, and SEP.

Conditions

| Type Effectiveness | Financing source IBRD/IDA | Description The Recipient has updated, adopted and submitted to the Association, the Project Operations Manual, in form and substance satisfactory to the Association. |
|-----------------------|---------------------------|--|
| Type Disbursement | Financing source IBRD/IDA | Description No withdrawal shall be made under Categories 3 and 8 (b) unless the Recipient has carried out a biodiversity field surveys, and prepared, adopted and disclosed the Biodiversity Management Plan in form and substance acceptable to the Association. |

VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Liberia

Rural Economic Transformation Project Second Additional Financing

Project Development Objective(s)

To improve productivity and market access for small holder farmers and agri-enterprises for selected value chains in project participating counties.

Project Development Objective Indicators by Objectives/ Outcomes

| Indicator Name | PBC | Baseline | | | End Target | | |
|---|---------|---------------------------|----------------------------|-------------|-------------------|-----------|-----------|
| | | | 1 | 2 | 3 | 4 | |
| Improve Productivity and Mar | ket acc | ess for SHFs & Agri-enter | prises for selected VCs in | project PCs | | | |
| Farmers reached with agricultural assets or services (CRI, Number) | | 0.00 | 2,096.00 | 8,000.00 | 12,000.00 | 24,000.00 | 30,000.00 |
| Action: This indicator has beer Revised |) | | | | | | |
| Farmers reached with agricultural assets or services - Female (CRI, Number) | | 0.00 | 1,258.00 | 4,800.00 | 7,200.00 | 9,600.00 | 12,000.00 |
| Action: This indicator has been Revised | | | | | | | |
| Farmers reached with climate-smart agricultural | | 0.00 | 2,096.00 | 8,000.00 | 12,000.00 | 24,000.00 | 30,000.00 |

| Indicator Name | PBC | Baseline | | End Target | | | |
|--|-----|----------|-------|------------|-------|-------|-------|
| | | | 1 | 2 | 3 | 4 | |
| assets (Number) | | | | | | | |
| Action: This indicator has been Revised | | | | | | | |
| Increased yield of targeted agricultural produce by project- supported farmers, disaggregated by targeted commodity (Percentage) (Percentage) | | 4.80 | 10.00 | 10.00 | 20.00 | 30.00 | 30.00 |
| Increased yield of cassava by project- supported farmers (Percentage) | | 0.00 | 10.00 | 10.00 | 20.00 | 30.00 | 30.00 |
| Increased yield of rubber by project- supported farmers (Percentage) | | 0.00 | 10.00 | 10.00 | 20.00 | 30.00 | 30.00 |
| Increased yield of pork by project- supported farmers (Percentage) | | 0.00 | 10.00 | 10.00 | 20.00 | 30.00 | 30.00 |
| Increased yield of poultry by project- supported farmers (Percentage) | | 0.00 | 0.00 | 10.00 | 15.00 | 20.00 | 20.00 |
| Increase in marketed volume of locally produced agricultural commodities by project supported FBOs, disaggregated by targeted commodity (Percentage) | | 0.00 | 10.00 | 15.00 | 25.00 | 40.00 | 50.00 |
| Action: This indicator has been Revised | | | | | | | |
| Increase in volume of sales of cassava produced by | | 0.00 | 0.00 | 10.00 | 35.00 | 55.00 | 70.00 |

| Indicator Name P | PBC | Baseline | | End Target | | | |
|---|-------------------|----------|-------------------------|----------------------------|-------------------------|--------------|-------|
| | | | 1 | 2 | 3 | 4 | |
| project-supported FBOs (Percentage) | | | | | | | |
| Action: This indicator has been Revised | | | | | | | |
| Increase in volume of sales of rubber produced by project-supported FBOs (Percentage) | | 0.00 | 0.00 | 10.00 | 25.00 | 40.00 | 50.00 |
| Action: This indicator has been Revised | | | | | | | |
| Increase in volume of sales of pork produced by project-supported FBOs (Percentage) | | 0.00 | 0.00 | 10.00 | 25.00 | 40.00 | 50.00 |
| Action: This indicator has been Revised | | | | | | | |
| Increase in volume of sales of poultry produced by project-supported FBOs (Percentage) | | 0.00 | 10.00 | 15.00 | 25.00 | 40.00 | 50.00 |
| Action: This indicator has been Revised | | | | | | | |
| eduction in transportation ime (Percentage) (Percentage) | | 0.00 | 0.00 | 0.00 | 30.00 | 40.00 | 50.00 |
| action: This indicator has been evised | Ration This in | | vised to reflect the ac | dditional 75 km road const | ruction financed by IDA | and the LRTF | |
| Reduction in transportation time between Tappita and Toe Town (Percentage) | | 0.00 | 0.00 | 0.00 | 40.00 | 45.00 | 50.00 |

| Indicator Name | PBC | Baseline | | End Target | | | |
|--|-----|----------|-----------|------------|-----------|------------|------------|
| | | | 1 | 2 | 3 | 4 | |
| Action: This indicator has been Revised | | | | | | | |
| Reduction in transportation time between Toe-Town and Zwedru (Percentage) | | 0.00 | 0.00 | 0.00 | 30.00 | 40.00 | 50.00 |
| Action: This indicator has been Revised | | | | | | | |
| increase in traffic (passenger and freight) volumes (Percentage) | | 0.00 | 0.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| Action: This indicator has been Marked for Deletion | | | | | | | |
| Direct project beneficiaries (Number) | | 0.00 | 10,000.00 | 40,000.00 | 90,000.00 | 130,000.00 | 160,000.00 |
| Action: This indicator has been Revised | | | | | | | |
| Number of females (Number) | | 0.00 | 4,000.00 | 16,000.00 | 36,000.00 | 52,000.00 | 64,000.00 |
| Action: This indicator has been Revised | | | | | | | |
| Reduction in food insecure people in project targeted areas (Percentage) | | 0.00 | 10.00 | 15.00 | 20.00 | 25.00 | 25.00 |

Intermediate Results Indicators by Components End Target Indicator Name PBC Baseline **Intermediate Targets** 2 3 4 1 Improving the Enabling Environment for Agribusiness Development Policies/ laws/ regulations 0.00 0.00 2.00 3.00 3.00 3.00 supported (Number) PPD organizations and FBOs receiving technical assistance 0.00 5.00 35.00 50.00 65.00 65.00 or training (Number) Project beneficiaries reached with new climate smart 0.00 1,000.00 6,000.00 8,000.00 14,000.00 16,000.00 technologies (Number) **Enhancing Competitiveness and Market Access Through Productive Alliances** Sub-projects prepared 0.00 25.00 75.00 100.00 120.00 150.00 (Number) Farmers adopting improved agricultural technology, 0.00 4.000.00 8.000.00 16,000.00 20,000.00 24,000.00 disaggregated by gender (Number) of which female (Number) 0.00 2.000.00 5,600.00 8.000.00 9.600.00 9.600.00 Farmers linked to off-takers 0.00 4,000.00 8,000.00 16,000.00 22,000.00 24,000.00 (Number) Women farmers accessing agricultural matching grants for 0.00 0.00 1,000.00 2,000.00 3,000.00 4,000.00 the first time (Number) Women in target areas accessing investment financing 15.00 15.00 20.00 25.00 30.00 30.00 for agriculture (all sources of finance) (Percentage)

| Indicator Name | | Baseline | Intermediate Targets | | | | End Target | |
|--|------------------|------------------------------------|--------------------------|----------------------------|-----------------------|--------|------------|--|
| | | | 1 | 2 | 3 | 4 | | |
| Agri-Marketing and Road Infra | astructi | ure Investments | | | | | | |
| Climate resilient roads constructed (CRI, Kilometers) (Kilometers) | | 0.00 | 0.00 | 20.00 | 70.00 | 100.00 | 115.00 | |
| Action: This indicator has bee Revised | Ration To ref | nale: lect the additional 75 km | road financed by IDA-LRT | F and the climate-resilier | nt design of the road | | | |
| Roads constructed - rural (CRI, Kilometers) (Kilometers) | | 0.00 | 0.00 | 10.00 | 30.00 | 40.00 | 40.00 | |
| Action: This indicator has been Marked for Deletion | | | | | | | | |
| Roads constructed - non- rural (CRI, Kilometers) (Kilometers) | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Action: This indicator has been Marked for Deletion | | | | | | | | |
| Commercial facilities/markets constructed/rehabilitated (Number) | | 0.00 | 0.00 | 5.00 | 10.00 | 10.00 | 10.00 | |
| Project Coordination and Mar | nageme | nt and Contingency Emer | gency Response | | | | | |
| Percentage of project related grievances that are addressed (Percentage) | | 0.00 | 70.00 | 75.00 | 80.00 | 85.00 | 90.00 | |
| Action: This indicator has been Revised | า | | | | | | | |
| Farmers using market information (Percentage) | | 0.00 | 0.00 | 20.00 | 30.00 | 50.00 | 50.00 | |

| Indicator Name | PBC | Baseline | | Intermediate Targets | | | | | |
|--|-----|----------|-------|----------------------|-----------|-----------|-----------|--|--|
| | | | 1 | 2 | 3 | 4 | | | |
| Reports produced through MIS system (Number) | | 0.00 | 15.00 | 30.00 | 50.00 | 70.00 | 80.00 | | |
| Beneficiaries satisfied with delivery (timeliness and quality) of project benefits (percentage) disaggregated by gender (Percentage) | | 0.00 | 60.00 | 75.00 | | | 75.00 | | |
| Action: This indicator has been Revised | | | | | | | | | |
| Female Beneficiaries satisfied with delivery (timeliness and quality) of project benefits (percentage). | | 0.00 | 30.00 | 40.00 | 50.00 | 60.00 | 75.00 | | |
| Support to Food Security | | | | | | | | | |
| Community infrastructure developed or rehabilitated (Number) | | 0.00 | 60.00 | 90.00 | 110.00 | 120.00 | 120.00 | | |
| Project beneficiaries of the Cash-for-works program and nutritional support (Number) | | 0.00 | 0.00 | 3,000.00 | 4,500.00 | 5,000.00 | 5,000.00 | | |
| Project beneficiaries of the Cash-for-works programme and nutritional support (Female) (Number) | | 0.00 | 0.00 | 1,200.00 | 1,600.00 | 2,000.00 | 2,000.00 | | |
| Increase in subsistence consumption (Percentage) | | 0.00 | 0.00 | 10.00 | 20.00 | 30.00 | 30.00 | | |
| Area cultivated for food production with the distributed inputs by the beneficiaries (Hectare(Ha)) | | 0.00 | 0.00 | 12,000.00 | 18,000.00 | 24,000.00 | 24,000.00 | | |

| | Monitoring & | Evaluation Pla | n: PDO Indicators | | |
|--|--|-----------------------|---|---|------------------------------------|
| Indicator Name | Definition/Description | Frequency | Datasource | Methodology for Data Collection | Responsibility for Data Collection |
| Farmers reached with agricultural assets or services | | Quarterly | Administrative record | Farmers record | CLF and Consultants |
| Farmers reached with agricultural assets or services - Female | | | | | |
| Farmers reached with climate-smart agricultural assets | | Bi-monthly | Survey | Survey among project beneficiaries | CLF and Consultants |
| Increased yield of targeted agricultural produce by project- supported farmers, disaggregated by targeted commodity (Percentage) | Increase in yield per hectare recorded on participating farmers' farm. Baseline information to be established 3 months after project effectiveness and on completion of the ongoing baseline survey. | Annual | Farmer Productivity Recording Template | Farmer Productivity Recording Template | CLF/Service provider |
| Increased yield of cassava by project- supported farmers | | Annual | Farmer Productivity Recording Template | Farmer Productivity Recording Template | Farmer Supported by CLF |
| Increased yield of rubber by project- supported farmers | | Annual | Farmer Productivity Recording Template | Farmer Productivity Recording Template | Farmers supported by CLF |

| Increased yield of pork by project- supported farmers | | Quarterly | Farmers productivity recording template | Farmers productivity recording template | Community level Facilitator |
|---|---|-----------|---|--|--------------------------------|
| Increased yield of poultry by project- supported farmers | | Quarterly | Farmer's Productivity recording template | Farmer's productivity recording template | Community Level Facilitator |
| Increase in marketed volume of locally produced agricultural commodities by project supported FBOs, disaggregated by targeted commodity | | | | | |
| Increase in volume of sales of cassava produced by project-supported FBOs | | Annaul | FBOs sales recording template | FBOs sales recording template | FBOs supported by CLF |
| Increase in volume of sales of rubber produced by project-supported FBOs | Volume of sales refers to the number of units that are sold in a given time period | Annual | FBOs sales recording template | FBOs sales recording template | FBOs supported by CLF |
| Increase in volume of sales of pork produced by project-supported FBOs | | Annual | FBO sales recording template | FBO sales recording template | FBO supported by CLF |
| Increase in volume of sales of poultry produced by project-supported FBOs | | Annual | FBO sales recording template | FBO sales recording template | FBOs supported by CLF |

| Reduction in transportation time (Percentage) | | Annual | Survey | Survey | CLF/Service Providers |
|---|--|----------------------------|---|--|--|
| Reduction in transportation time between Tappita and Toe Town | | Annual | Survey | Survey | CLF/Service Providers |
| Reduction in transportation time between Toe-Town and Zwedru | | Annual | Survey | Survey | CLF/Service Providers |
| increase in traffic (passenger and freight) volumes | This indicator measures the increase in volume of track as a result of improved road. Baseline information to be established 3 months after project effectiveness and on completion of the on-going baseline survey. | Quarterly traffic count | Project Data Base and Survey report | Traffic count on periodic basis | Consultants and CLF |
| Direct project beneficiaries | | Bi-annual | For grants - receipt of inputs received For knowledge sharing activities: training/activi ty log book For roads: number of population along the road corridor | For grants - receipt of inputs received For knowledge sharing activities: training/activity log book For roads: census results | For grants - independent funds manager supported by PIU For knowledge sharing activities: trainer/facilitator For roads: IIU |

| Number of females | "Beneficiaries: grant and knowledge recipients (trainings, workshops) World Bank core indicator - SEE definition in the WB core indicator guidelines" | Bi-annual | For grants: receipt of input received For knowledge sharing activities: training/activi ty log book | For grants: receipt of input received For knowledge sharing activities: training/activity log book | For grants: Independent fund manager supported by PIU For knowledge sharing activities: trainer/facilitator |
|---|--|-------------------|---|--|---|
| Reduction in food insecure people in project targeted areas | This indicator measures the reduction of food insecure people in the targeted areas. The food insecure people are those in phase 3. a and 5 based on the Integrated Food Insecurity Phase Classification (IPC) | Twice per year | Cadre harmonize, Early warning systems report | Cadre Harmonisé methodology | Cadre Harmonisé Office, FAO, PIU |

| Monitoring & Evaluation Plan: Intermediate Results Indicators | | | | | | | |
|---|------------------------|-----------|--|--|--|--|--|
| Indicator Name | Definition/Description | Frequency | Datasource | Methodology for Data Collection | Responsibility for Data Collection | | |
| Policies/ laws/ regulations supported | | Annual | Policies/Law/ Regulations | Policies/Law/Regulations | PIU | | |
| PPD organizations and FBOs receiving technical assistance or training | | Bi-annual | Training and technical assistance logs | Training and technical assistance logs | Service providers or external trainers (if training sessions are outsourced) or by | | |

| | | | | project staff (if training is provided by them) |
|---|-----------|---|--|---|
| Project beneficiaries reached with new climate smart technologies | Annual | Project/Activit y Completion Report | Project/Activity Completion Report | CLF |
| Sub-projects prepared | Bi-annual | Business Plans | Business Plans Service Provider | Service provider supported by CLF |
| Farmers adopting improved agricultural technology, disaggregated by gender | Annual | CLF service provider | Farmers received for inputs/equipment received | CLF - service provider |
| of which female | Annual | CLF service provider | Farmers receipt of inputs/equipment received | CLF service provider |
| Farmers linked to off-takers | Annual | CLF service provider | Contracts and written agreements | CLF service provider |
| Women farmers accessing agricultural matching grants for the first time | Annual | Administrative records | Administrative records and project reports | CLF/M&E |
| Women in target areas accessing investment financing for agriculture (all sources of finance) | Annual | Project reports | Administrative records | CLF/M&E |
| Climate resilient roads constructed (CRI, Kilometers) | Bi-Annual | Road Works Progress Reports | Desk Review of Progress Report, Site Inspection | CLF/ IIU/Contractors |

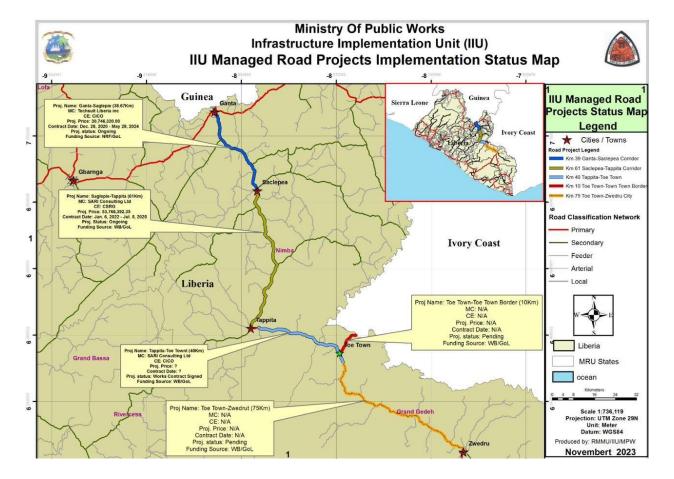
| Roads constructed - rural (CRI, Kilometers) | | Annual | Road Works Progress Reports | Desk review of progress reports, site inspection | CLF/IIU/Contractors |
|---|--|-----------|-----------------------------------|---|---|
| Roads constructed - non-rural (CRI, Kilometers) | Length of road completely constructed in the non-rural area | Annual | Road Works Progress Reports | Desk Review of Progress Reports and Site Inspection | CLF/IIU/Contractors |
| Commercial facilities/markets constructed/rehabilitated | Infrastructure works include: (i) construction of a number of open market sheds and small storage facilities; (ii) construction of selected infrastructure that require specialized handling for agricultural produce; and (iii) Construction of market internal path-ways, drainage infrastructure, and water and sanitation facilities | Bi-annual | Contract Completion Report | CLF, contractor | CLF, contractor |
| Percentage of project related grievances that are addressed | | Annual | GRM | GRM | CLF, contractor |
| Farmers using market information | | Annualy | Reports | Reports, site visits | PIU, CLF |
| Reports produced through MIS system | | Bi-annual | MIS Report | MIS Report | PIU |
| Beneficiaries satisfied with delivery (timeliness and quality) of project benefits (percentage) disaggregated by gender | | Annual | Survey reports | Sample survey of project beneficiaries | Consultants and Community level facilitator |

| Female Beneficiaries satisfied with delivery (timeliness and quality) of project benefits (percentage). | | Annual | Report of survey | Survey of female beneficiaries | Consultants, Third Party Monitor and Community level facilitator |
|---|--|---|---|--------------------------------|--|
| Community infrastructure developed or rehabilitated | The indicator measures the number of Community Agricultural Investment Plans successfully completed. These are plans developed through participatory decisionmaking processes. | Bi-annual | Administrative Record | Project Database | Facilitator/ PIU |
| Project beneficiaries of the Cash-forworks program and nutritional support | This indicator measures the number of beneficiaries participating in the Labourfor-work program. | Number of project beneficiari es of the cash-for- works programm e | Monitoring and Evaluation report | Administrative data | County Level Facilitators, M&E Officers and PIU. |
| Project beneficiaries of the Cash-for- works programme and nutritional support (Female) | | Bi- annually, after 6 months of implement ation | Field Data Collection | Administrative records | County Level Facilitators |
| Increase in subsistence consumption | This indicator measures the percentage Increase in | Semi- annually | Project Beneficiaries | Survey | PIU M&E Officers |

| | consumption of traditional products by farmers' families. | | records | | |
|--|---|--------------------|--------------|---|--|
| Area cultivated for food production with the distributed inputs by the beneficiaries | This indicator captures the amount of cultivated area with the distributed seeds by the beneficiaries in hectares | Semi- annually. | MIS database | Satellite image for cultivated area, Design study for command area. | |

The World Bank

Annex 1: Project map



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