



**The World Bank**

Sierra Leone Connectivity and Agricultural Market Infrastructure Project (P178683)

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# Project Information Document (PID)

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Appraisal Stage | Date Prepared/Updated: 22-Apr-2024 | Report No: PIDA0313

**BASIC INFORMATION****A. Basic Project Data**

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Sierra Leone	WESTERN AND CENTRAL AFRICA	P178683	Sierra Leone Connectivity and Agricultural Market Infrastructure Project
Financing Instrument Investment Project Financing (IPF)	Estimated Appraisal Date 19-Apr-2024	Estimated Approval Date 29-May-2024	Practice Area (Lead) Transport
Borrower(s) Ministry of Finance	Implementing Agency Ministry of Transport and Aviation		

## Proposed Development Objective(s)

To enhance climate-resilient transport connectivity and agricultural market access in selected areas of Sierra Leone.

**Components**

- Resilient Urban Transport
- Resilient Rural Bridges and Link Roads
- Resilient Agriculture Market Infrastructure
- Project Management Support
- Contingency Emergency Response Component (CERC)

**PROJECT FINANCING DATA (US\$, Millions)****Maximizing Finance for Development**

**Is this an MFD-Enabling Project (MFD-EP)?** Yes

**Is this project Private Capital Enabling (PCE)?** Yes

**SUMMARY**

<b>Total Operation Cost</b>	<b>74.00</b>
<b>Total Financing</b>	<b>74.00</b>
<b>of which IBRD/IDA</b>	<b>74.00</b>



Financing Gap		0.00
<strong>DETAILS</strong>		
<strong>World Bank Group Financing</strong>		
International Development Association (IDA)		74.00
IDA Grant		74.00
Environmental And Social Risk Classification		
Substantial		
Decision		
The review did authorize the team to appraise and negotiate		

Other Decision (as needed)

## B. Introduction and Context

### Country Context

1. **Despite significant development progress in the past two decades Sierra Leone remains one of the world's least developed countries.** The country's GDP<sup>1</sup> remains low at USD 4.09 billion in 2022 owing to the challenges in the macroeconomic environment, which is characterized by intensified fiscal pressures, soaring inflation-driven by global supply shocks, and a slow-down of trade activities. In addition, the country faces post-conflict attributes of governance challenges, and political polarization. These economic and political setbacks have increased unemployment and poverty levels within the context of inadequate social safety nets. It is estimated that the poverty rate was 57 percent in 2018. The incidence of poverty varies significantly across the country with nearly three-quarters of the rural population and one-third of the urban population living below the poverty line<sup>2</sup>.

2. **Sierra Leone is highly vulnerable to natural hazards and climate change impacts, which exacerbates the challenges in connectivity.** Sierra Leone ranks 168 out of 185 in the Notre Dame Gain Vulnerability Index<sup>3</sup> denoting high exposure, sensitivity, and low ability to adapt to the negative impacts of climate change. The key climate and

1 <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=SL>

2 <https://www.worldbank.org/en/news/press-release/2022/12/15/sierra-leone-has-opportunity-to-increase-growth-but-faces-challenges-in-improving-citizens-welfare#:~:text=Official%20poverty%20rate%20in%20Sierra,74%20percent%20in%20rural%20areas.>

3 ND GAIN Index, Consulted on October 17, 2023. URL: <https://gain.nd.edu/our-work/country-index/rankings/>



natural hazards present in Sierra Leone are flooding, landslides, extreme heat, and wildfire.<sup>4</sup> Eight major river systems traverse Sierra Leone and monsoons regularly result in river flooding and flooding of low-lying areas known as Boliland. Consistent rainfall during the wet season regularly disrupts the connectivity. Sierra Leone is already experiencing the impacts of climate change. Mean temperatures have been above normal in recent decades and increasing trends are also evident in the frequency of hot days and nights. Average rainfall has been decreasing since 1960 with year-to-year fluctuations, rotating periods of wetter and drier conditions. Sierra Leone has been experiencing more seasonal precipitation changes, with the pre-monsoon period presenting stronger winds and more frequent rainstorms. Climate change is projected to intensify the frequency of heavy rainfall events during the rainy season, leading to increased flood risks for riverine communities. Coastal areas are impacted by sea level rise, coastal erosion and flooding. Some coastal communities lack flood escape routes due to the low elevation of roads. <sup>5,6</sup>

**3. Sierra Leone is among the bottom ten countries on the Human Capital Index (HCI) and requires substantial improvements on access to jobs, markets, and education.** Currently, Sierra Leone's HCI value is 0.36 on a scale of 0-1 and ranks 166 out of the 174 countries<sup>7</sup>. The poor human capital outcomes result from the decline in labor force participation over the past two decades (from 66.3 percent to 54.2 percent). Only less than 10 percent of this labor force is employed in the technical/managerial and skilled manual occupations. Human capital challenges are more concentrated in rural areas, where social economic development is often neglected. As the major port city in Sierra Leone, Freetown has the potential to attract productive firms and skilled workers to cluster together as a hub for exports and to support growing income and living standards across the country. See Annex 4 for details on human capital development in Sierra Leone.<sup>8</sup>

**4. Significant gender gaps exist in human endowment and distribution of economic opportunities.** Sierra Leone ranks 162 out of 169 countries<sup>9</sup> according to the Gender Equality Index, with maternal mortality ratio at 1,120 deaths per 100,000 live births, partially due to constrained accessibility to hospitals, adolescent fertility remains high at 100.9 per 1,000 women within ages of 15-19 and only 33 percent of girls complete secondary school (compared to 53 percent completion rate for boys). Moreover, female participation in the labor force is 51.1 percent, with males earning three times as much as females in wage employment and vulnerable employment<sup>10</sup> is higher among females standing at 92.9 percent compared to 83.1 percent among males<sup>11</sup>.

<sup>4</sup> Think Hazard consulted on 6th November 2023. Available at: <https://thinkhazard.org/en/report/221-sierra-leone>

<sup>5</sup> Climate Change Knowledge Portal, Consulted on 10th April 2024. Available at [URL](#).

<sup>6</sup> National Adaptation Plan. Government of Sierra Leone. 2021. Available at [URL](#).

<sup>7</sup> <https://thedocs.worldbank.org/en/doc/64e578cbeaa522631f08f0cafba8960e-0140062023/related/HCI-AM23-SLE.pdf>

<sup>8</sup> Reviving Urban Development. The Importance of Freetown for the National Economy. The World Bank. 2018.

<sup>12</sup> size is classified into Class A (primary) roads with total length of 2,140km; Class B (secondary) roads with total length of 1,904km; Class F (feeder) roads with total length of 4,152km, and unclassified roads with total length of 3,104km. However, recent surveys suggest the feeder road network is up to 7,500km.

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## Sectoral and Institutional Context

**5. The transport sector of Sierra Leone plays a key role in economic and social development yet is still underdeveloped relative to its need.** The country has eight airports, 800 km of navigable river, 84 km of railways (not operational), and 11,300 km of road network, with limited intermodal integration. The road network<sup>12</sup> plays a dominant role in connectivity but a large percentage of it is in fair or poor condition. As of 2019, about 40 percent of the primary roads were paved, while almost all secondary and feeder roads are unpaved.<sup>13</sup>. The rural area in Sierra Leone is mostly surrounded by rivers, and only one-third of the total population can access the all-season road network<sup>14</sup>. The critical infrastructure gap is the missing hydraulic structures such as bridges which caused inaccessibility for rural population to basic services and the broader road network. The riverine communities depend on manual cable ferries and canoes, which are unavailable in the rainy season due to flood water overflowing the riverbanks creating high risks of accidents. In urban areas, road infrastructure and public transport services are inadequate to meet the increasing mobility demand caused by rapid urbanization and motorization. These infrastructure gaps discourage freight movement, limit all-season access to socio-economic infrastructure and development opportunities,<sup>15</sup> and pose safety risks.

**6. Lacking all-season transport infrastructure poses serious challenges on connectivity in rural and urban areas.**

Sierra Leone faces significant transport challenges characterized by its wide network of river systems, exposure to climate change related natural hazards, and the absence of bridges at river crossings, making it impossible for direct road connectivity. Currently, rural communities rely on manual hand-pulled cable ferries and small paddle boats, for passenger and freight river crossing (See Figure 1a), that are inoperable during the extreme dry season (March-April) when discharge is low and at the peak of the rainy season (August-October) when flood water overflows the riverbank, often at an excess of over 100 meters. Connectivity challenges in rural areas are further intensified by the huge deficit in paved roads and poorly engineered construction. In the northern and southern regions, for example, rural accessibility is estimated to be as low as 2 percent. The lack of access to all-season roads and bridges weakens economic integration and productivity, especially for the agriculture sector, which is predominantly rural and requires improved networks to transport agri-inputs to farmers and produce to urban consumers. Moreover, roads in urban areas are not resilient to climate change related natural hazards and are unable to match the traffic demand, stemming from increasing urbanization. The inefficient use of street spaces, lack of provisions for non-motorized transport, together with road design deficiencies and limited road density, contributes to severe, chronic congestion and road-safety challenges.

**7. The transport service is also inadequate to address increasing mobility needs, especially in Freetown.** As the country's capital, Freetown dominates the country's urban landscape with an increasingly expanding built-up area and rising population from less than 300,000 in 1990s to over 1 million in recent years. However, the city's unstructured growth and geography, surrounded by hills and the ocean, brings with it a series of mobility and connectivity challenges. 25 percent of the population (350,000 people) lack access to transport services because they live farther than 500 meters from bus stops. Accessibility by public transport shows major disparities among neighborhoods, with over 40 percent of the populations of York (in the west) and Waterloo (in the east) chiefdoms lacking easy access to transport services. The traffic demand for public transport (four wheelers) is estimated to

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<sup>13</sup> Sierra Leone: Feeder Road Prioritization Framework: Revised (2019)

<sup>14</sup> <https://documents1.worldbank.org/curated/en/543621569435525309/pdf/World-Measuring-Rural-Access-Update-2017-18.pdf>

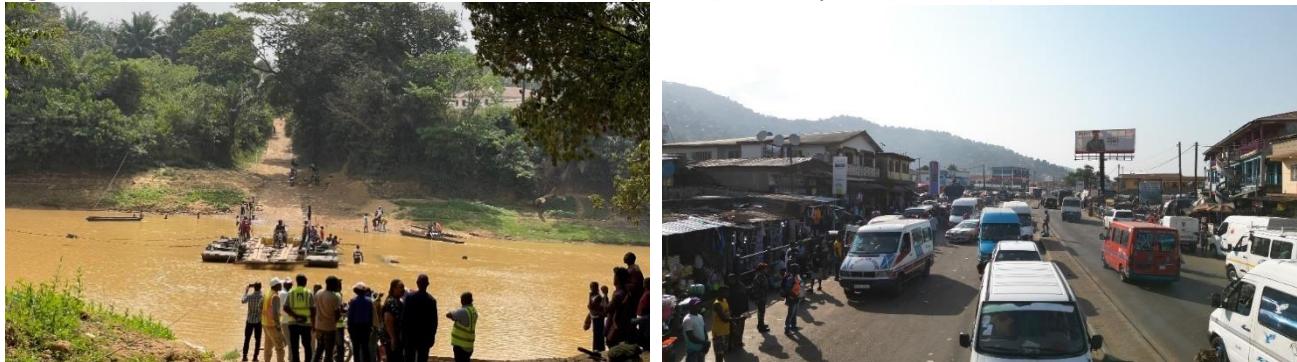
<sup>15</sup> Government of Sierra Leone. National Adaptation Plan 2021. Accessed July 1, 2022. Page 30.

[https://unfccc.int/sites/default/files/resource/SierraLeone\\_iNAP\\_Final.pdf](https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf)



increase to 750,000 trips per day in 2033. Public transport services are experiencing a rapid growth of unregulated informal providers, operating minibuses, locally called poda-podas (see Figure 1b). The lack of regulation and scheduled operations contribute to the high presence of small vehicles on roads, which caused congestion and safety concerns. The minibuses are mostly aged vehicles neither professionally driven nor routinely checked for maintenance, endangering the safety of pedestrians and the health of city residents with high emissions. The inefficient public transport system results in increased time spent on road and productivity losses.

**Figure 1: (a) Cable ferry and small boats at River Panpana (b) Poda-poda (minibus) in Freetown**



**8. Sierra Leone has one of the poorest road safety records globally<sup>16</sup> with ineffective monitoring system and weak enforcement.** The World Health Organization (WHO) estimates that Sierra Leone has 33 road crash fatalities per 100,000 population annually, recording the third highest road crash fatality rate in West African countries.<sup>17</sup> Road crash is the seventh highest<sup>18</sup> cause of early death and disability among the active population group (15-64 years old)<sup>19</sup> with an estimated economic cost amounting to 10 percent of Sierra Leone's GDP.<sup>20</sup> Few road safety policies have been adopted, including age restriction on vehicle imports, however critical gaps in data availability and reliability, policy development, implementation, enforcement and funding remain. There is no systematic database on road safety, and Sierra Leone Road Safety Authority (SLRSA) and the police department collect road incidents manually yet not in a systematic and synchronized way.

**9. The lack of connectivity impedes women's safety and access to health care, education, and economic opportunities.** In rural areas, distance and cost of transportation are often reported as key barriers to accessing social services<sup>21</sup>. Given these constraints women are more likely to travel on foot, often traversing through forested and secluded locations. Much of the transport burden of moving agri-produce falls on rural women who take on the time-consuming responsibility of head-loading crop harvest from farms to either storage, or market, or to the nearest feeder road network accessible to trucks transporting agri-commodities from farm to market. In urban areas, women

<sup>16</sup> For instance, the most recent estimate of road fatalities for Sierra Leone in the World Health Organization Global Road Safety Status Report series is from 2015 [https://www.afro.who.int/sites/default/files/2017-06/9789241565066\\_eng.pdf](https://www.afro.who.int/sites/default/files/2017-06/9789241565066_eng.pdf). The Global Road Safety Facility likewise has not published a country profile for Sierra Leone

<sup>17</sup> WHO, Global Health Observatory. [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/estimated-road-traffic-death-rate-\(per-100-000-population\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/estimated-road-traffic-death-rate-(per-100-000-population))

<sup>18</sup> Road crash accident is the seventh cause of death after (1st Malaria, 2nd HIV/AIDS, 3rd Maternal disorders, 4th Tuberculosis, 5th Diarrheal diseases, 6th Stroke)

<sup>19</sup> IHME (2019). Global Burden of Disease (GBD) result tool: <https://vizhub.healthdata.org/gbd-results/>

<sup>20</sup> Estimated based on the GRSF country profile methodology. <https://www.roadsafetyfacility.org/publications/guide-road-safety-opportunities-and-challenges-low-and-middle-income-country-profiles>

<sup>21</sup> Ibidem



passengers pay, on average, up to 8 percent more than their male counterparts on transportation<sup>22</sup>. The poor lighting of roads, bridges, and walking spaces in the city, adds to the safety concerns particularly for women<sup>23</sup>. These underlying challenges hinder women's accessibility and mobility in cities such as Freetown. In addition, discriminatory norms tend to limit economic opportunities for women in transport sector. In Sierra Leone, women's employment in the transport sector (construction and maintenance, transport services, and transport agencies) is 7.8 percent due to their under-representation in engineering and the lack of requisite skills, cultural concerns, and difficulties in organizing childcare<sup>24</sup>.

**10. Climate change is increasingly affecting rural and urban transport systems and access to agricultural markets.**

A climate and disaster risk assessment found that climate change is expected to exacerbate flooding and other extreme climate events. Of particular concern are the risks associated with bridge, road and markets damage from erosion and sand/debris deposition and assets being washed away due to floods and landslides; extreme heat deterioration of road and bridge pavements; climate shocks and changes in seasons climate with climate change impacting agriculture productivity; and rising temperatures resulting in higher rates of food spoilage during transport and at markets, contributing to food insecurity. The unpaved nature and poor conditions of rural roads, the lack of bridges at climate vulnerable river crossings, and poor traffic management exacerbate adverse climate impacts on connectivity. From 2012 to 2022, climate hazards related to intense rainfall (floods and landslides) caused the death of more than 1,100 people and affected more than 46,000. The 2017 landslip in Freetown<sup>25</sup> resulted in the need for an estimated US\$5.4 million for transport sector recovery alone. In addition, Sierra Leone's transportation sector accounts for 31% of the municipal greenhouse gas emissions in Freetown<sup>26</sup>. Furthermore, transport air pollutant emissions have an adverse impact on public health in urban centers.

#### **Agricultural market access**

**11. Agriculture is an essential pillar for inclusive economic growth in Sierra Leone, accounting for 59 percent of GDP<sup>27</sup> and 43 percent of the employment<sup>28</sup>.** Production activities are scattered across various rural and remote locations with farmers often facing restricted access to production inputs, transportation, storage, and marketing facilities. Women represent 70 percent of the agricultural labor force<sup>29</sup>, often playing important roles in food crop production, harvesting, and marketing activities. However, they often gain minimal benefits from the agricultural sector owing to restrictions on their ownership, access to and control of land, finance, and other critical productive resources<sup>30</sup>. Women also have weaker influence in the marketplace because of restrictions on their mobility, limited access to obtaining business skills and online information, insufficient consultation. A survey revealed the gender gap in Sierra Leone in access to mobile phones and social media use to be 54 percent for men against 46 percent for women. Underlying causes of this situation being among others, include limited digital skills, low-income levels, and cultural norms.<sup>31</sup> Women need to be included and consulted in setting priorities in the design and the operation of

<sup>22</sup> World Bank, 2020. "Invisible travelers": 3 lessons from Freetown to transform urban transport—and your city

<sup>23</sup> [https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/esd\\_mobility\\_report\\_final.pdf](https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/esd_mobility_report_final.pdf)

<sup>24</sup> [https://assets.publishing.service.gov.uk/media/5e18b4eee5274a06b8fa0ad0/Tanzarn-2019-GuidelinesforMainstreamingGenderinRural\\_Transport-ReCAP-GEN2157A-190618.pdf](https://assets.publishing.service.gov.uk/media/5e18b4eee5274a06b8fa0ad0/Tanzarn-2019-GuidelinesforMainstreamingGenderinRural_Transport-ReCAP-GEN2157A-190618.pdf)

<sup>25</sup> <https://public.emdat.be/>

<sup>26</sup> <https://c40cff.org/projects/connecting-the-city-with-a-cable-car-mass-transit-network#:~:text=By%20investing%20in%20public%20transport,total%20municipal%20greenhouse%20gas%20emissions.>

<sup>27</sup> Statistics SL: Report on 2020 and 2021 Real Gross Domestic Product Figures.

<sup>28</sup> [https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=SL&most\\_recent\\_year\\_desc=false](https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=SL&most_recent_year_desc=false)

<sup>29</sup> <https://africa.unwomen.org/en/news-and-events/stories/2017/06/women-in-agribusiness-in-sierra-leone>

<sup>30</sup> Government of Sierra Leone, 2020. Gender in Agriculture Policy. [https://bafs.org.sl/wp-content/uploads/2020/12/Final-MAF-Gender-in-Agriculture-Policy\\_v\\_Jul2020.pdf](https://bafs.org.sl/wp-content/uploads/2020/12/Final-MAF-Gender-in-Agriculture-Policy_v_Jul2020.pdf)

<sup>31</sup> Media Foundation for West Africa. Annual State of Women's Rights Online in Sierra Leone 2022. <https://www.mfwa.org/wp>



infrastructure if it is to have the desired development impact.

**12. The agriculture sector productivity is affected by poor connectivity and infrastructure challenges which are exacerbated by exposure to climate change related hazards.** Sierra Leone's agricultural production involves the cultivation of a wide range of food crops (cassava, maize, millet, cashew, rubber, ginger, vegetables, fruits, and sugarcane); cash crops (such as cocoa, coffee, and oil palm); and the rearing of livestock. Production output of many food crops dwindled over the last few years owing to many factors, including the effects of climate change on seasons and the occurrence of climate shocks, and the lack of connectivity and market infrastructure in rural production centers. In particular, the lack of all-season connectivity has led to rising production cost as farmers must incur higher financial burdens in accessing agri-inputs (fertilizer, seeds, and tractors) and agricultural extension services in distant urban areas, creating a disincentive for rural farmers to scale up production. Additionally, the lack of market infrastructure also pushes farmers to face higher post-harvest losses (20-30 percent of farm produce)<sup>32</sup> and engage in distress sales of produce immediately after harvest even though produce prices are at the lowest.

**13. Building climate-resilient transport infrastructure and agricultural market interventions can stimulate the local economy.** Studies have shown that distribution costs for agri-produce can be as high as U\$2.00 per ton per kilometer – this financial burden reduces profit margins for farmers and agribusinesses. Investment in transport infrastructure and logistics will help overcome these challenges. In particular, the construction of climate resilient bridges and link roads can improve access to all-season transport services and incentivize agri-input services operators, extension services officers, and other service delivery providers to penetrate the market and serve rural farmers. Complementing these investments with improved market interventions can provide farmers with direct access to commodity marketers, aggregators, and traders, allowing them to sell their produce and earn higher incomes. The reduced time and cost of transporting commodities, and the availability of climate resilient storage facilities and markets help cut down post-harvest losses often associated with the delays in delivering commodities. In essence, vertical linkages between farmers and agribusinesses can help create more jobs, stimulate local economic growth, and improve food security.

#### **Institutional context**

**14. The transport sector is mainly managed by three government ministries and their subsidiary agencies.** They are (i) Ministry of Transport and Aviation (MTA), tasked with planning and policy issues as well as managing road safety through its subagency- Sierra Leone Road Safety Authority (SLRSA), and managing urban mobility through recently established Sierra Leone Public Transport Authority (SLPTA); (ii) the Sierra Leone Road Authority (SLRA) responsible for the management of all classes of roads and bridges under the Ministry of Works and Public Assets (MWPA); and (iii) the Ministry of Finance (MoF), which oversees road user charges collected for the Road Maintenance Fund Administration (RMFA). The SLRA handles strategy and planning, the execution of works, including procurement, safeguards, and engineering on the primary network. Road maintenance activities under both SLRA and Local Councils are financed and monitored by the RMFA. The Government of Sierra Leone (GoSL) regulates the testing and licensing of all vehicles and drivers as well as traffic management activities through the SLRSA. In addition, the Sierra Leone Police is responsible for controlling operations and enforcing regulations.

**15. Key challenges in sectoral management include institutional fragmentation, insufficient funding and capacity constraints.** The institutional framework for transport sector management in Sierra Leone is fragmented and lacks systematic coordination among the multiple agencies operating with overlapping responsibilities. Traffic management

content/uploads/2023/04/Report-on-Womens-Rights-Online-in-Sierra-Leone-2022.pdf

<sup>32</sup> <https://www.cahiersagricultures.fr/articles/cagri/pdf/2015/01/cagri2015241p47.pdf>



functions in the city of Freetown, for example, are carried out by three agencies (SLRA, SLRSA, and Traffic Police), but with limited coordination among them. The funding to road investment and maintenance is also insufficient. In 2020, the RMFA collected approximately USD 12.5 million equivalent (172.43 trillion Leones<sup>33</sup>) from a fuel excise tax and vehicle registrations which is a very small fraction of the actual support needed for road maintenance in Sierra Leone. The monitoring and management of the road asset is not systematic and lacks supporting data. The decision making on road maintenance including the budgetary allocation is ad-hoc, normally depending on the urgency of the maintenance need.

**16. The Sierra Leone Ministry of Agriculture and Food Security (MAFS) has a core function to formulate agricultural development policies.** It also advises the Government on such policies relating to its administration and the management of the agricultural sector. Over the past years, MAFS has played important roles in improving rice self-sufficiency, livestock development, crops diversification, forestry, and leveraging technologies to bring agriculture information services to the doorsteps of farmers. In 2010, MAFS launched a roadmap for strengthening the agriculture, forestry and fisheries sectors for improved food security, increased income, and diversified revenues to the national economy. It included programs to: (i) support the rehabilitation and upgrading of feeder roads and (ii) rehabilitation and modernization of existing storage and processing facilities and equipment.

**17. Recognizing the challenges, GoSL has been committed to improve connectivity and accessibility in collaboration with development partners including the World Bank.** Financed by the World bank, the Integrated and resilient Urban Mobility Project (IRUMP)<sup>34</sup> and the Smallholder Commercialization and Agribusiness Development Project (SCADeP)<sup>35</sup> are implementing sustainable solutions in urban mobility, rural connectivity, and agriculture sectors. Particularly, the IRUMP project piloted operation of high-capacity buses with improved road infrastructure (on western corridor), developed and partially implemented the traffic management plan and achieved institutional reforms for the establishment of SLPTA and Metro Transport Company, a formal private bus company which is corporatized from four informal operators' associations. The SCADeP carried out technical and Environmental and Social Impact Assessments (ESIAs) for seven bridges and financed the construction of four of them. Digital systems for managing transport assets and agricultural market information were also developed under SCADeP. Additionally, the European Union Delegation (EU) in Sierra Leone financed a feasibility study for another six bridges.

**18. It is critical to build on the great achievements/outcomes of IRUMP and SCADeP, to scale up the impact of World Bank interventions in Sierra Leone.** Both IRUMP and SCADeP are in their final years of implementation and have achieved significant positive outcomes in both transport and agricultural sectors. The design of CAMIP is, therefore, built on the two projects with the aim of sustaining and scaling up the outcomes, particularly on: 1) improving urban accessibility and mobility in Freetown with quality infrastructure and modernized public transport services; 2) providing an all-season access to resilient bridges and road infrastructure in rural communities; 3) enhancing digital transformation of sectoral management- through the development of a road asset management system and agricultural market information system; and 4) promoting critical sectoral reforms such as the establishment of an urban transport authority and the formalization of bus operation.

## C. Proposed Development Objective(s)

<sup>33</sup> Source : <https://rmfa.gov.sl/financial-statements/>

<sup>34</sup> P164353

<sup>35</sup> P153437

**Development Objective(s) (From PAD)**

To enhance climate-resilient transport connectivity and agricultural market access in selected areas of Sierra Leone.

**Key Results**

- i. Travel time reduction crossing over Panpana, Sewa, Bagru, and Little Scarcies rivers, respectively at Komrabai, Sumbuya, Moselolo, and Kabba via the project constructed bridges (Percentage);
- ii. Volume of marketed agricultural and fisheries products due to project interventions (Percentage).
- iii. Millions of people that benefit from improved access to sustainable transport infrastructure and services (Number, Disaggregated by gender).

**D. Project Description**

**19.** The project offers an integrated and multi-sectoral approach to provide all-season connectivity and access to jobs, markets and services. It will finance resilient infrastructure, green transition of urban transport services, and quality agriculture market facilities. Investments in urban transport will improve the quality of infrastructure and traffic management, with expanded bus services. The investments in rural bridges and link roads will reinforce connectivity for improved farmers' access to markets year-round. Complementary investments in agricultural market infrastructure seek to safeguard farmers from the prices' depreciation due to excess of supply because of the lack of facilities. The combination of improved access and availability of market infrastructure will open new economic opportunities for farmers. In addition, the project will invest in digital systems and institutional capacity to help the GoSL improve the technical and regulatory foundations to address sectoral challenges. The project design is built on the interventions of IRUMP and SCADeP and will be further informed by technical studies funded by the Project Preparation Advance (PPA)<sup>36</sup>. Annex 2 provides further details on project component description.

**Component 1 : Resilient Urban Transport**

**20.** This component (est. US\$ 17 million, financed by IDA) builds on IRUMP concepts and objectives to improve climate resilience and the green transition of urban transport system in Sierra Leone. It will provide technical assistance to strengthen institutional reform and support human capital development in the transport sector, advance the operationalization of the traffic management plan and strengthen aspects of integration, inclusiveness, and safety. These measures include scaling up high-capacity public transport services with private sector participation, improving urban transport infrastructure against flooding and landslides, the promotion of non-motorized transport (NMT) and safety measures. This component includes the following activities:

- a) **Technical assistance to develop transport strategies and build institutional capacities of transport Ministries, Departments and Agencies (MDAs) (est. US\$2 million).** To address climate risks and promote low-carbon sustainable development, this subcomponent will support the development of (i) a national transport strategy with integration of climate resilience and GHG mitigation measures, (ii) urban mobility plan for Freetown incorporating climate resilience, GHG mitigation, and women's mobility patterns and needs and (iii) national road safety guidelines and database. It will also strengthen the capacity of transport institutions (such as Sierra Leone Public Transport Authority) to develop and implement sustainable transport strategies that integrates measures to reduce

<sup>36</sup> The PPA is effective since March 1, 2024 and finances preparatory studies regarding technical, ES and fiduciary aspects.



vulnerability to climate disasters (flooding and landslides), reduce congestion, and reduce greenhouse (GHG) emissions and air pollution. Support will be provided for capacity development and awareness raising activities on road safety and the professionalization of bus operators to strengthen public transport, enhance transport sector management and promote human capital development with a gender perspective in collaboration with the universities.

- b) **Strategic Resilient Infrastructure Investment (est. US\$5 million).** This subcomponent will support strategic investment on resilient urban transport infrastructure to promote integrated public transport and NMT with climate resilience and safety measures, as well as finance the associated supervision and environmental and social (E&S) cost of the civil works. The civil works will expand safety features and consist of spot improvements of the priority public transport corridors<sup>37</sup> to enhance safety, climate resilience, improvement of corridor intersections to prioritize bus lanes, improvement of pedestrian infrastructure with guard railings on selected locations along the eastern corridor and upgrading/construction of bus stops/terminals and depots<sup>38</sup>. The selection of civil works will be based on the update on residual activities from IRUMP and technical studies and informed by the urban transport study financed by the PPA.
- c) **Expanding the modernization of public transport system (est. US\$10 million).** This subcomponent will increase the coverage of modernized bus services in Freetown with inclusive private sector participation and effective traffic management. It will scale up the fleet renewal and emission reduction initiative undertaken in IRUMP and follow the similar approach of "Lease-Operate-Own". In particular, the MTA will procure additional high-capacity buses, lease them to the private operators who will operate the buses on assigned routes, pay leasing fees to the SLPTA on a regular basis, and own the buses at the end of the concession. This scheme mobilizes private capital through the concession contract, while resolving the financial constraints of the private sector in fleet capital investment. The concession contract may also include provisions for the bus operators to promote women's employment in bus operations. It will also finance ancillary facilities and digital systems for bus operation such as a fare collection system and real-time passenger information system. The prioritization of bus routes, sizing of the fleet, and the design of the concession will be informed by various technical studies on urban transport under IRUMP and PPA. This subcomponent will increase the attractiveness of the public transport system and include appropriate measures for women's safety. It will promote a modal shift from two/three wheelers and minibuses to higher capacity buses that provide more comfort to women, with CCTV cameras to track and reduce incidences of harassment/violence. .

In addition, this subcomponent will advance the operationalization of the traffic management plan, which was developed and partially implemented under IRUMP, and strengthen the aspects of public transport integration, inclusiveness, and safety. The specific activities may include implementing policies and regulations for instance on bus priority lanes and road safety, installing traffic signals and road markings in priority intersections/corridors to implement the bus priority lanes policy, expanding the hybrid solar-grid street lighting on pedestrian pathways to improve personal safety, especially for women and other vulnerable groups, therefore making non-motorized transport more attractive and promoting modal shift from higher carbon transport modes.

<sup>37</sup> Road network from the Central Bus station through Wilberforce Street, Sani Abacha, Kissy Road, Bai Bureh Road to Jui. The improvements are expected to cover up to 2.7 km of the eastern corridor and include the installation of bus shelters with Real Time Passenger Information. Detailed designs have been prepared for Jui and River No.2. Support will be extended to ensure the continuity of these critical infrastructure for bus operations on the eastern corridor.

<sup>38</sup> As part of IRUMP implementation, land has been secured for the construction of bus depots and a terminal at CBS, Jui, River No.2 and Approved School



## Component 2: Resilient Rural Bridges and Roads

21. This component (est. US\$ 44 million, financed by IDA) will provide climate resilient bridges and their link roads for all-season rural connectivity and support life-cycle management of transport assets. The proposed bridges and associated link roads were selected primarily based on the climate change related hazards present in the locations, the vulnerability of the communities served and their connectivity benefits. Complementing the bridge construction with technical assistance aims to provide support for monitoring exposure to climate change related natural hazards, assessing vulnerabilities to adverse climate change impacts, and identifying climate change-related risk situations. The component is expected to bring substantial climate change resilience benefits for communities by improving access to markets, jobs and services in the rainy and extreme dry seasons. It will include the following activities:

- a) **Construction of four climate-resilient long-span bridges<sup>39</sup> and their link roads (est. US\$38 million)** The subcomponent will finance four bridges Moselolo, Sumbuya, Komrabai and Kabba and their link roads. The design and construction of the bridges and roads will apply climate change resilience measures and engineering standards against climate risks. The engineering designs for construction will follow environmentally friendly norms and design parameters that increase resilience to climate change and extreme weather events by (i) aligning with climate-proofed technical design parameters for rural infrastructure and access roads, (ii) incorporating use of weather resistant materials to withstand extreme weather events, and (iii) right-sizing drains and culverts to accommodate heavy precipitation, limit erosion, and maintain existing watersheds. The “Green Roads for Water Concept”<sup>40</sup> will also be implemented along the bridge link/access roads, where and when technically justified. This component would also finance relevant consulting services for supervision as well as the E&S costs<sup>41</sup> associated with the civil works. The feasibility studies and conceptual designs of the four proposed bridges have already been completed under the support of SCADeP (three) and EU (one) funding. The concept design of the link roads and an update to the feasibility studies will be carried out under the PPA.
- b) **Support outstanding resilient bridge works under SCADeP. (est. US\$ 4 million)** This subcomponent will contribute to the on-going construction of 4 resilient bridges under SCADeP which currently has a financing gap. The 4 bridges<sup>42</sup> are Tomparie, Manowa, Mattru and Gendema of which the contracts have been signed and the works already started a year ago. As of mid-March 2023, the progress of Tomparie, Manowa, Mattru, and Gendema bridge construction are respectively 30%, 48%, 42%, and 25%. The total cost of the four (4) signed contracts is US\$33.1 million against a total budget of US\$26.2 million under SCADeP. This leaves a funding gap of US\$6.9 million which was initially planned to be filled by the government fiscal support. Considering the fiscal stress, this subcomponent will address part of the financial gap to support quality completion of the bridge works. It will only be triggered after full utilization of SCADeP resources.
- c) **Supporting climate resilient life-cycle management of road and bridge assets (est. US\$1 million).** This subcomponent will support the development of a digital bridge management system (BMS)<sup>43</sup> and the operationalization of the road asset management system (RAMS) which was developed under SCADeP. It will also

<sup>40</sup><sup>40</sup> Van Steenbergen, Frank W. M.; et al. *Green Roads for Water : Guidelines for Road Infrastructure in Support of Water Management and Climate Resilience (English)*. International Development in Focus Washington, D.C.: World Bank Group. Available at [URL](#).

<sup>41</sup> This may include support to the national displacement secretariat.

<sup>42</sup> Tomparie and Manowa (contract signed on October 5, 2022 in the amount of US\$14,908,999.15) and Mattru and Gendema (contract signed on April 4, 2023 in the amount of US\$18,214,495.66)

<sup>43</sup> Technical assistance on BMS tool will include the software, data collection, and user guidelines to support efficient monitoring and informed decision making on bridge construction and maintenance. In addition, the component will support the integration of the BMS with existing Road Asset Management System (RAMS) which was established under SCADeP.



provide guidelines, procedures and data collection on life-cycle asset management to inform decision making and prioritize investments in enhanced rehabilitation/maintenance works against climate risks. The system development, operationalization and integration will provide evidence-based analysis and optimize the planning, budgeting and management of the bridge and road assets.

- d) **Technical assistance and institutional capacity building in road sector (est. US\$1 million).** This subcomponent will promote a resilient and inclusive road network by financing technical studies to update the five-year strategic development plan of the road sector considering climate risks and to develop a national guideline on climate resilient design standards for bridge and roads construction that can inform the next generation of resilient infrastructure. It will also support SLRA and relevant institutions to build institutional capacity on climate resilient transport asset management systems<sup>44</sup>, provide training on rural road maintenance to local communities through the ongoing collaboration between SLRA and local councils. The activities will fully incorporate gender perspectives to ensure the sufficient participation of women.

### **Component 3: Resilient Agricultural Market Infrastructure<sup>45</sup>**

22. **Complementing transport connectivity with market infrastructure, this component (est. US\$8 million) seeks to strengthen the resilience of agricultural value chains and reduce farmers' vulnerability to climate and disaster risks.**

The agricultural market infrastructure component will promote the climate resilience of local communities by providing reliable year-round access to markets and by extension improve food security and local incomes. Specifically, the construction design and upgrade of the market infrastructure will follow climate change and disaster-resilience informed building codes and measures, potentially including integrating tree planting activities to capture and sequester carbon and protect users from extreme temperature and establishing a maintenance system to regularly check for deficiencies. The investment will provide reliable access and operation of market facilities year-round, contributing to addressing food security issues, as well as increasing local incomes, especially for women since they make up the majority of the labor force in agricultural marketing activities. The interventions aim to complement component 1 and 2 to benefit the overall agriculture value chain and create more business opportunities. It will include the following activities:

- a) **Developing resilient agricultural market infrastructure within the catchment areas of the four climate resilient bridges (est. US\$6 million).** The investments will focus on constructing new infrastructure, and on rehabilitating and upgrading existing infrastructure that supports the aggregation, storage, processing, and trading of agricultural products as well as the required equipment and related support to promote climate-resilient and safe commodity value chains. Specifically, the support will focus on rehabilitation and upgrade of existing open markets with storage and processing facilities; construction of new aggregation centers; provision of facilities for specialised handling of produce; and the construction of internal market pathways, drainage, and water and sanitation facilities (with separate bathrooms and changing rooms for men and women) in selected market centers. It is envisaged that the project will employ the use of solar power to generate energy for powering lighting, cooling and other electrical systems. Solar water heating systems will be used to provide hot water for cleaning and sanitation purposes. The selection criteria for facilities and upgrades will be based on a technical assessment integrating exposure to climate change related hazards, infrastructure vulnerabilities and gender considerations to reduce post-harvest losses. The ongoing assessment, funded by the PPA, will adopt participatory processes, collect gender-disaggregated data and

<sup>44</sup> Capacity building activities will focus on training to improve the technical expertise and skills of SLRA staff, including the local and national level engineers, to supervise bridge works and support the continuous operations and use of the BMS to support informed decision making on maintenance and disaster emergency planning. In addition, training will be delivered on feeder road maintenance to support human capital development in the local communities and promote employment opportunities for women.

<sup>45</sup> Agricultural market infrastructure here refers broadly to those physical and virtual structures that supports the aggregation, storage, processing, transportation, and distribution of agricultural products.



prioritize the perspectives of women given their central role in agricultural value chain.

- b) **Upgrading of the Agricultural Market Information Systems (AMIS) (est. US\$1million).** An AMIS has been established by the MAFS as part of on-going initiatives to strengthen access to market for key agricultural commodities in Sierra Leone. The upgrade will incorporate additional modules, including an online platform (Farmers Business Network) to connect farmers and buyers and eliminate the need for middlemen, information on weather and climate forecasts relevant for agriculture production and distribution. It will specifically support the development of an AMIS Mobile App, integration of an integrated voice response system, a secured payment system, farmer profiling, warehouse ticketing platform, weather information and among other valuation information to promote efficient use of the AMIS. . The project will collaborate with women's organizations and NGOs to train rural folks, especially women on how to effectively use the AMIS.
- c) **Capacity building and training for institutional stakeholders and value chain actors, including farmers, processors, and traders (est. US\$1 million).** These activities seek to support value chain actors in developing a culture of entrepreneurship, innovation, and continuous learning to adapt to changing market dynamics and consumer preferences. Specifically, it will involve workshops and training sessions to strengthen the capacities of MAFS staff and value chain actors, with a priority for women's empowerment in the agri-value chain, focusing on the following topical areas: market analysis techniques (demand, trends, and competitive dynamics), post-harvest handling techniques to reduce food spoilage and waste, quality standards and certification requirements, formal market access (supermarkets, restaurants, and export markets), use energy-efficient and climate-smart agriculture practices in their businesses, the use of ICT with integrate gender-sensitive and socially inclusive approaches, and among other relevant topical areas to be identified based on needs assessment.

#### **Component 4: Project Management Support**

23. This component (est. US\$5 million, financed by IDA) will support project management-related costs and develop the capacity of project staff in the identification, evaluation and implementation of climate resilience and emissions mitigation solutions. Specifically, the allocated funds will broadly cover the cost of: (i) consulting services, (ii) incremental operating costs, and (iii) training for project management staff. Financing support under this component will cater to all aspects of project management including but not limited to recruitment and staff training on procurement and financial management, the environmental and social safeguards implementation and compliance, monitoring and evaluation, communication, and knowledge management. Providing project management support will help establish the required technical abilities to deliver results and sustain impact. In all the proposed training for project staff, provisions will be made to integrate climate resilience and mitigation management.

#### **Component 5: Contingent Emergency Response Component (CERC)**

24. This component (US\$0.00 million) will allow for the rapid reallocation of World Bank project proceeds in the event of a natural or man-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. This component can be activated should there be a need to redirect some project resources to respond to an emergency. These resources would be pooled with those coming from other projects financed by the World Bank in the country. An Immediate Response Mechanism Operational Manual will have to be prepared separately and approved by the World Bank, in line with guidance provided under OP10.00 paragraph 12. If this component is activated, the project will be restructured to reallocate funds, revise the PDO and indicators, and detail the implementation arrangements.

25. The project is estimated to cost \$74 million sourced from IDA. The detailed costs are presented in table 2.

Table 2: Project Cost and Financing Sources (indicative, in million US\$)



<b>Components</b>	<b>Estimated Cost (US\$)</b>
<b>Component 1: Resilient Low-Carbon Urban Transport</b>	<b>\$17,000,000</b>
Technical assistance to develop transport strategies and build institutional capacities	\$2,000,000
Strategic investments in resilient urban transport infrastructure	\$5,000,000
Expansion of bus operation in Freetown and traffic management	\$10,000,000
<b>Component 2: Resilient Rural Bridges and Link Roads</b>	<b>\$44,000,000</b>
Construction of four climate-resilient long-span bridges and their link roads	\$38,000,000
Supporting the outstanding bridge works under SCADeP	\$4,000,000
Supporting life-cycle management of road and bridge assets	\$1,000,000
Technical assistance and institutional capacity building in the road sector	\$1,000,000
<b>Component 3: Resilient Agriculture Market Infrastructure</b>	<b>\$8,000,000</b>
Agricultural market infrastructure construction/upgrade	\$6,000,000
Agricultural market information system upgrade	\$1,000,000
Capacity development and training	\$1,000,000
<b>Component 4: Project Management Support</b>	<b>\$5,000,000</b>
<b>Component 5: Contingency Emergency Response Component (CERC)</b>	0
<b>Total</b>	<b>\$74,000,000</b>

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

#### Summary of Screening of Environmental and Social Risks and Impacts

26. The project's environmental risk is Substantial. This is to account for the project scope, nature, and environmental sensitivity, especially component 2 which involves the construction of 4 long-span bridges with impacts on water quality and users downstream of the bridges. Issues related to the construction phase including noise, air quality, and management of waste are contributing factors to the risk rating. Furthermore, occupational health and safety of the workers and the community would need to be considered and properly managed. The project's social risk is Substantial. The is related fto mainly to: (i) physical and economic displacement and loss of assets and/or income due to project activities; (ii) Sexual Exploitation and Abuse (SEA)/Sexual Harassment (SH) risks associated with labor and civil work; (iii) elite capture in market infrastructure creation or upgrading interventions; and (iv) social exclusion of vulnerable groups such as persons with disability, women including small traders, the landless, and elders in the consultations process and access to benefits and development opportunities. Other risks include potential for child labor; community health and safety concerns; disruption of traditional livelihoods; and local conflicts among project beneficiaries related to benefit sharing.



## E. Implementation

### Institutional and Implementation Arrangements

27. **The project implementation is structured in a three-layered institutional arrangement: (i) National Project Steering Committee (PSC), (ii) Project Coordination and Implementation Unit (PCIU) and (iii) Focal Points (FPs).** Annex 1 provides the organogram of implementation arrangements. The NPSC will provide policy guidance, advisory, and oversight support to ensure effective coordination of all the project components by the PCIU. It will consist of memberships from sector ministries and agencies and chaired by the MTA – as the key sector ministry. The specific responsibilities of the NPSC will include but are not limited to (i) approving the annual work plans and procurement plans; (iii) reviewing progress in the implementation of the work plans and other aspects of project performance, including taking responsibility for fiduciary oversight responsibilities following World Bank procedures on financial management and procurement; and (iv) ensuring that there is effective implementation coordination, especially between the PCIU and the FPs. The tenure of the NPSC will be consistent with the project implementation period.
28. **A PCIU will be hosted in MTA to coordinate and supervise all day-to-day implementation of the project activities, including being responsible for the fiduciary aspects.** MTA demonstrates readiness in terms of human and other resource capacities already in place from its establishment of a project implementing agency for IRUMP. Currently the IRUMP PIU has been assigned by MTA to prepare the CAMIP and implement the PPA activities. MTA will convert the IRUMP PIU into CAMIP PCIU upon project effectiveness. The existing key staff of the IRUMP PIU including the project coordinator, project engineer, safeguard specialist, M&E specialist, communication officer, and urban planner will remain as the key staff in the CAMIP PCIU for project implementation. The PCIU will recruit a procurement specialist and a financial specialist before project approval. Main functions of the PCIU will include: (i) coordinating the project implementation of project components and ensuring synergies between activities; (ii) managing project funds with appropriate financial records, internal management control, and regular external audit (in collaboration with the Audit Authority in the country); (iii) preparing and implementing Annual Work Plans and Budgets aggregating the needs of all project implementing institutions; (iv) identifying potential service providers, organize their procurement activities, negotiate and sign contracts, and carry out all procurement work related to the project as per the approved procurement plans; and (v) preparing quarterly, semi-annual and monitoring and evaluation (M&E) reports.
29. **Although the PCIU oversees project coordination, implementation of activities under Components 2, and 3 will lean on technical support from two FPs.** These FPs are experienced representatives from: (i) the SLRA for Component 2, and (ii) MAFS for Component 2 subcomponent (b) and Component 3 through SCADeP PIU. With their high-level expertise in rural bridges and link roads, and agricultural market infrastructure, they will provide technical oversight support to the PCIU, ensuring that activities are implemented following sector-specific best practices, standards, and minimum requirements. The FPs' support would be required during (a) the preparation of work plans/programs, budgets, and safeguards instrument; (b) the development of draft ToRs and bidding documents for the activities; (c) the negotiation and finalization of bidding and contracts; (d) the monitoring and reporting of progress on all activities under specific project components. The detailed arrangement, roles and responsibilities of the institutions will be laid out in the PIM.



## The World Bank

Sierra Leone Connectivity and Agricultural Market Infrastructure Project (P178683)

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Sierra Leone Connectivity and Agricultural Market Infrastructure Project (P178683)

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