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Report No: PAD4449

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US\$500 MILLION
TO THE

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

FOR A

INCLUSIVE CONNECTIVITY AND DEVELOPMENT PROJECT

September 8, 2021

Transport Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective July 30, 2021)

Currency Unit = Sri Lanka Rupees (LKR)

LKR 199.90 = US\$1

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ASMP	Agriculture Sector Modernization Project
BD	Bid Documents
BoQ	Bill of Quantities
CGESP	Codes of Good Environmental and Social Practice
CIDA	Contracting Industry Development Authority
CQS	Consultants' Qualifications Selection
CRIP	Climate Resilience Improvement Project
DA	Designated Account
EIRR	Economic Internal Rate of Return
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plans
ESU	Environment and Social Unit
FLFP	Female Labor Force Participation
FM	Financial Management
GBV	Gender Based Violence
GDP	Gross Domestic Product
GHG	Green House Gas
GoSL	Government of Sri Lanka
GRC	Grievance Redress Committees
GRM	Grievance Redressal Mechanism
GRS	Grievance Redress Service
IPF	Investment Project Financing
IUFR	Interim Unaudited Financial Reports
LMP	Labor Management Procedure
MGS	Matching Grants Scheme
MoA	Ministry of Agriculture
MoH	Ministry of Highways
MOU	Memorandum of Understanding
MPSPCLG	Ministry of Public Services, Provincial Councils and Local Government
NAOSL	National Audit Office of Sri Lanka
NDC	Nationally Determined Contributions
NPV	Net Present Value
OICP	Open International Competitive Procurement
ONCP	Open National Competitive Procurement
PDO	Project Development Objective

PIC	Project Implementing Consultants
PIU	Project Implementation Unit
PLR	Performance Learning Review
POM	Project Operations Manual
PP	Procurement Plan
PPSD	Project Procurement Strategy for Development
PRDA	Provincial Road Development Authority
PSI	Project Safety Impact
PT	Project Team
RAMS	Road Asset Management System
RDA	Road Development Authority
RED	Road Economic Decision
RFB	Request for Bids
RFP	Request for Proposals
RPF	Resettlement Policy Framework
RSSAT	Road Safety Screening and Assessment Tool
SDG	Sustainable Development Goals
SEP	Stakeholder Engagement Plan
SPD	Standard Procurement Documents
STEP	Systematic Tracking of Exchanges in Procurement
TCAMP	Transport Connectivity and Asset Management Project
UNDB	United Nations Development Business
WBG	World Bank Group



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The World Bank

Inclusive Connectivity and Development Project (P176164)



DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Sri Lanka	Inclusive Connectivity and Development Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P176164	Investment Project Financing	Substantial

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
30-Sep-2021	31-Oct-2026

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to provide safe, efficient and climate resilient connectivity and strengthen agricultural supply chains to empower project communities in selected districts of Sri Lanka.

Components

Component Name	Cost (US\$, millions)
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Enhancing Safe and Climate Resilient Transport Connectivity	448.75
Enhancing Supply Chain and Access to Services for Farmers	50.00
Contingent Emergency Response	0.00

Organizations

Borrower: Democratic Socialist Republic of Sri Lanka

Implementing Agency: Ministry of Highways

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	558.00
Total Financing	558.00
of which IBRD/IDA	500.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	500.00
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Non-World Bank Group Financing

Commercial Financing	58.00
Unguaranteed Commercial Financing	58.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2022	2023	2024	2025	2026	2027
Annual	75.00	100.00	100.00	125.00	70.00	30.00
Cumulative	75.00	175.00	275.00	400.00	470.00	500.00



INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

Agriculture and Food

Climate Change and Disaster Screening

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

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

COMPLIANCE

Policy

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

Yes No

Does the project require any waivers of Bank policies?

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	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).

Legal Covenants

Sections and Description

The Borrower shall, not later than three (3) months after the Effective Date (or such other date which the Bank has confirmed in writing to the Borrower is reasonable and acceptable under the circumstances), establish and thereafter maintain, until the completion of the Project, a National Steering Committee, with composition, resources, and terms of reference acceptable to the Bank, to ensure institutional ownership and coordination of Project activities at the national level, monitor the Project implementation progress and carry out quarterly reviews, and provide overall oversight and guidance, such Committee to be chaired by the Ministry of Highways and comprise relevant stakeholders, all as set forth in the POM. [LA, Schedule 2, Section I.A.2]

Sections and Description

The Borrower shall ensure that, not later than three (3) months after the Effective Date (or such other date which the Bank has confirmed in writing to the Borrower is reasonable and acceptable under the circumstances), RDA



shall establish and thereafter maintain, until the completion of the Project, a Project Team, (“PT”), to carry out the day-to-day overall Project coordination, management and implementation, (other than financial management and reporting, which will be carried out by MoH), procurement administration, environmental and social standards compliance, and monitoring and evaluation of the Project’s performance, said PT to be headed by a dedicated Project director, and comprised of adequate professional and administrative staff in numbers, with qualifications and experience and under terms of reference satisfactory to the Bank, including, but not limited to, a procurement specialist, a financial management specialist, other key technical officers, and staff from the MoA to carry out activities under Part B of the Project in coordination and consultation with the MoA and other relevant stakeholders to identify and assess the investment requirements under Part 2 of the Project, all as set forth in the POM and the MGOM, and including: (a) an environmental and social unit (“ESU”); and (b) (i) a Matching Grants team under the MoH, which will include staff assigned from the MoA, to handle day-to-day administrative, management and monitoring functions for the Matching Grants Scheme; (ii) an Approval Committee, to take all decisions on awarding Matching Grants, comprised of public and private sector representatives including representatives from the Treasury Department, MoA, and other key stakeholders; (iii) a Technical Review Group (“TRG”) to carry out technical, business and economic appraisal of the Matching Grants proposals and make funding recommendations to the Approval Committee; and (iv) an Appeals Body to handle potential appeals, complaints and grievances from Beneficiaries; all as set forth in the Matching Grants Operations Manual. [LA, Schedule 2, Section I.A.3]

Sections and Description

The Borrower, through RDA, shall ensure that, not later than three (3) months after the Effective Date (or such other date which the Bank has confirmed in writing to the Borrower is reasonable and acceptable under the circumstances: (a) Project Implementation Units (“PIUs”) will be established under the PT at the regional level, for either a single province or for a few provinces to coordinate Project activities at the local level, said PIUs to be comprised of adequate professional and administrative staff in numbers, with qualifications and experience and under terms of reference satisfactory to the Bank, including an environmental officer and a social officer appointed by the ESU, and; (b) Project Implementing Consultants (“PICs”) with qualifications and experience and under terms of reference satisfactory to the Bank to be appointed for each region in line with the PIUs for the supervision of designs and civil works, and to include inter alia a team leader, resident engineers, assistant resident engineers, site engineers, an environment specialist a social specialist, technical officers and administration staff, all as set forth in the POM. [LA, Schedule 2, Section I.A.4]

Sections and Description

The Borrower shall, through the RDA, carry out the Project in accordance with the MOUs, the POM, MGOM, and this Agreement. [LA, Schedule 2, Section I.B.1]

Sections and Description

Not later than three (3) months after the Effective Date (or such other date which the Bank has confirmed in writing to the Borrower is reasonable and acceptable under the circumstances), the Borrower, through RDA, shall prepare and adopt the Project Operations Manual (“POM”) and: (a) carry out the Project in accordance with the POM; and (b) not amend, revise or waive nor allow to be amended, revised or waived, the provisions of the POM or any part thereof without the prior written agreement of the Bank. [LA, Schedule 2, Section I.B.2]

Sections and Description



Not later than three (3) months after the Effective Date (or such other date which the Bank has confirmed in writing to the Borrower is reasonable and acceptable under the circumstances), the Borrower, through RDA in consultation with the MoF, MoA and other key stakeholders, shall prepare and adopt the Matching Grants Operations Manual (“MGOM”) and: (a) carry out the Matching Grants Scheme in accordance with the MGOM; and (b) not amend, revise or waive nor allow to be amended, revised or waived, the provisions of the MGOM or any part thereof without the prior written agreement of the Bank. [LA, Schedule 2, Section I.B.4]

Sections and Description

The Borrower has through the RDA, entered into a Memorandum of Understanding (“MOU”), in form and substance acceptable to the Bank, with each province’s council or relevant local authority setting forth the roles and responsibilities of RDA and the respective provincial authority regarding the rehabilitation/improvement and transfer of the completed road sections to the respective province and other infrastructure to the relevant authorities. The Borrower shall not amend, revise or waive nor allow to be amended, revised or waived, the provisions of the MOUs or any part thereof without the prior written agreement of the Bank. [LA, Schedule 2, Section I.B.6 and Section I.B.7]

Sections and Description

The Borrower, through the RDA’s PT, shall make Matching Grants available to Beneficiaries for eligible Sub-projects in accordance with eligibility criteria and procedures acceptable to the Bank, as set forth in the MGOM. [LA, Schedule 2, Section I.C.1]

Sections and Description

The Borrower, through the RDA’s PT, shall provide a Matching Grant on a non-reimbursable basis to a Beneficiary under a Matching Grant Agreement with the respective Beneficiary on terms and conditions approved by the Bank, as set forth in the MGOM, which shall include, inter alia, the following: (a) the Borrower shall obtain rights adequate to protect its interests and those of the Bank, including the right to: (i) suspend or terminate the right of the Beneficiary to use the proceeds of a Matching Grant, or obtain a refund of all or any part of the amount of the Matching Grant then withdrawn, upon the Beneficiary’s failure to perform any of its obligations under the Matching Grant Agreement; and (ii) require each Beneficiary to: (A) carry out its Sub-project with due diligence and efficiency and in accordance with sound technical, economic, financial, managerial, environmental and social standards and practices satisfactory to the Bank, including in accordance with the provisions of the Anti-Corruption Guidelines applicable to recipients of loan proceeds other than the Borrower; (B) provide, promptly as needed, the resources required for the purpose; (C) procure the goods, works and services to be financed out of the Matching Grant in accordance with the provisions of this Agreement; (D) maintain policies and procedures adequate to enable it to monitor and evaluate in accordance with indicators acceptable to the Bank, the progress of the Sub-project and the achievement of its objectives; (E) (1) maintain a financial management system and prepare financial statements in accordance with consistently applied accounting standards acceptable to the Bank, both in a manner adequate to reflect the operations, resources and expenditures related to the Sub-project; and (2) at the Bank’s or the Borrower’s request, have such financial statements audited by independent auditors acceptable to the Bank, in accordance with consistently applied auditing standards acceptable to the Bank, and promptly furnish the statements as so audited to the Borrower and the Bank; (F) enable the Borrower and the Bank to inspect the Sub-project, its operation and any relevant records and documents; and (G) prepare and furnish to the Borrower and the Bank all such information as the Borrower or the Bank shall reasonably request relating to the foregoing. [LA, Schedule 2, Section I.C.2]



Sections and Description

The Borrower shall exercise its rights under each Matching Grant Agreement in such manner as to protect the interests of the Borrower and the Bank and to accomplish the purposes of the Loan. Except as the Bank shall otherwise agree, the Borrower shall not assign, amend, abrogate or waive any Matching Grant Agreement or any of its provisions. [LA, Schedule 2, Section I.C.3]

Sections and Description

In order to ensure the proper implementation of contingent emergency response activities under Part C of the Project (“Emergency Response Part”), the Borrower shall: (a) prepare and furnish to the Bank for its review and approval, an Emergency Response Manual (“ERM”) which shall set forth detailed implementation arrangements for the Emergency Response Part, including: (i) any institutional structures or arrangements for coordinating and implementing the Emergency Response Part; (ii) specific activities which may be included in the Emergency Response Part, Eligible Expenditures required therefor (“Emergency Expenditures”), and any procedures for such inclusion; (iii) financial management arrangements for the Emergency Response Part; (iv) procurement methods and procedures for the Emergency Response Part; (v) documentation required for withdrawals of Emergency Expenditures; (vi) environmental and social management arrangements and instruments for the Emergency Response Part; and (vii) any other arrangements necessary to ensure proper coordination and implementation of the Emergency Response Part; (b) afford the Bank a reasonable opportunity to review the proposed ERM; (c) promptly adopt the ERM for the Emergency Response Part as accepted by the Bank and integrate it as an annex to the POM; (d) ensure that the Emergency Response Part is carried out in accordance with the ERM; provided, however, that in the event of any inconsistency between the provisions of the ERM and this Agreement, the provisions of this Agreement shall prevail; and (e) not amend, suspend, abrogate, repeal or waive any provision of the ERM without the prior written approval by the Bank. [LA, Schedule 2, Section I.F.1]

Sections and Description

The Borrower, through RDA, shall furnish to the Bank for approval as soon as available, but in any case, not later than November 30 of each year during Project implementation, a proposed annual work plan and budget (“Annual Work Plan and Budget”) for the Project and the updated Procurement Plan for each subsequent fiscal year, of such scope and detail as the Bank shall have reasonably requested, except for the annual work plan and budget for the first Fiscal Year which shall be furnished prior to the commencement of the relevant activities under the Project. The Borrower shall, not later than two (2) months after furnishing each Annual Work Plan and Budget referred to in the preceding paragraph to the Bank, finalize and adopt, and thereafter ensure that the Project is carried out in accordance with, such plan and budget as agreed in writing with the Bank. [LA, Schedule 2, Section I.E.1 and Section I.E.2]

Sections and Description

The Borrower shall, throughout the implementation of the Emergency Response Part, maintain the institutional structures and arrangements referred to in the ERM, with adequate staff and resources satisfactory to the Bank. [LA, Schedule 2, Section I.F.2]

Sections and Description

The Borrower shall: (a) on or about two and a half (2.5) years after the Effective Date, prepare and furnish to the Bank a mid-term report, in such detail as the Bank shall reasonably request, documenting progress achieved in the



carrying out of the Project during the period preceding the date of such report, taking into account the monitoring and evaluation activities performed pursuant to Part A above, and setting out the measures recommended to ensure the continued efficient implementation of the Project and the achievement of its objectives during the period following such date; and (b) review with the Bank such mid-term report, on or about the date six (6) weeks after its submission, and thereafter take all measures required to ensure the continued efficient implementation of the Project and the achievement of its objectives, based on the conclusions and recommendations of the mid-term report and the Bank’s views on the matter. [LA, Schedule 2, Section II.B]

Sections and Description

The Borrower shall undertake no activities under the Emergency Response Part unless and until the following conditions have been met in respect of said activities: (a) the Borrower has determined that an Eligible Crisis or Emergency has occurred, has furnished to the Bank a request to include said activities in the Emergency Response Part in order to respond to said Eligible Crisis or Emergency, and the Bank has agreed with such determination, accepted said request and notified the Borrower thereof; and (b) the Borrower has ensured the preparation and disclosure of all environmental and social instruments as may be required for said activities in accordance with the ERM, the Bank has approved all said instruments, and the Borrower has ensured the implementation of any actions which are required to be taken under said instruments. [LA, Schedule 2, Section I.F.3]

Sections and Description

The Borrower shall furnish to the Bank each Project Report not later than one (1) month after the end of each calendar quarter, covering the calendar quarter. [LA, Schedule 2, Section II.A]

Conditions

Type	Financing source	Description
Disbursement	IBRD/IDA	No withdrawal shall be made for payments made prior to the Signature Date; except that withdrawals up to an aggregate amount not to exceed seventy-five million Dollars (\$75,000,000) may be made for payments made prior to this date but on or after October 31, 2020, for Eligible Expenditures under Category (1).
Disbursement	IBRD/IDA	No withdrawal shall be made for payments under Category (2), unless and until the Matching Grants Operations Manual (MGOM), satisfactory to the Bank, has been prepared and adopted by the Borrower.
Disbursement	IBRD/IDA	No withdrawal shall be made for Emergency Expenditures under Category 3, unless and until the Bank is satisfied, and notified the Recipient of its satisfaction, that all of the following conditions have been met in respect of said expenditures: (i) the Borrower has



		<p>determined that an Eligible Crisis or Emergency has occurred, has furnished to the Bank a request to include the proposed activities in the Emergency Response Part in order to respond to said crisis or emergency, and the Bank has agreed with such determination, accepted said request and notified the Borrower thereof; (ii) the Borrower has ensured that all environmental and social instruments required for said activities have been prepared and disclosed, and the Borrower has ensured that any actions which are required to be taken under said instruments have been implemented, all in accordance with the provisions of Section I.F of Schedule 2 of the LA; (iii) the entities in charge of coordinating and implementing the Emergency Response Part have adequate staff and resources, in accordance with the provisions of Section I.F of Schedule 2 of the LA, for the purposes of said activities; and (iv) the Borrower has adopted the ERM, in form and substance acceptable to the Bank, and the provisions of the ERM remain - or have been updated in accordance with the provisions of Section I.F of Schedule 2 of the LA so as to be - appropriate for the inclusion and implementation of the Emergency Response Part.</p>
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I. STRATEGIC CONTEXT

A. Country Context

1. **Sri Lanka is a lower-middle-income country with a total population of 21.8 million and a Gross Domestic Product (GDP) per capita of US\$3,852 (2019).** Following 30 years of civil war that ended in 2009, the economy grew at an average 5.3 percent during 2010-2019, reflecting a peace dividend and a determined policy thrust towards reconstruction and growth; however, growth slowed in the last few years. The country has been gradually transitioning from a predominantly rural-based production economy towards a more urbanized economy oriented around manufacturing and services. Sri Lanka has also made notable strides in reducing poverty and sharing prosperity among the less well-off. The US\$3.20 poverty headcount rate declined from 19.4 percent in 2009/10 to 9.2 percent in 2019. Extreme poverty is rare and concentrated in some geographical pockets. Social indicators, including human capital outcomes and high literacy rates, compare favorably with those in middle-income countries.

2. **Weak fiscal buffers and a high debt burden have constrained the government's ability to support growth and facilitate economic transformation.** Sri Lanka's revenue collection (12.6 percent of GDP, 2019) is low relative to its peers. As a share of GDP, the Public and Publicly Guaranteed debt rose from 85.3 percent in 2015 to 94.3 percent in 2019. With approximately 50 percent of debt foreign exchange denominated, the government's refinancing requirements are expected to remain high in the short to medium-term.

3. **The COVID-19 induced crisis is exerting a severe impact on the economy, while exacerbating an already challenging macroeconomic situation.** Real GDP contracted by 3.6 percent in 2020. Key transmission channels include a decline in export earnings (tourism, textiles, tea) and subdued domestic demand. The pandemic triggered sharp jobs and earnings losses in the informal sector and some formal sectors such as the apparel industry. As a result, poverty is expected to have increased to 12.5 percent in 2020. The combined effect of a pre-COVID stimulus package and the impact of COVID-19 on government revenue and expenditures have worsened fiscal balances.

B. Sectoral and Institutional Context

4. **Rural areas form a significant part of Sri Lanka's economy, yet they lag behind urban areas in terms of development, resilient connectivity and accessibility to basic services and economic opportunities.** The rural population accounts for over 80 percent¹ of Sri Lanka's total population and contributes to 52.7 percent² of the country's labor force. Over 90 percent of the poor reside in rural areas.

¹ Economic and Social Statistics of Sri Lanka 2020, Central Bank of Sri Lanka - https://www.cbsl.gov.lk/sites/default/files/cbslweb_documents/statistics/otherpub/ess_2020_e1.pdf

² Economic and Social Statistics of Sri Lanka 2020, Central Bank of Sri Lanka - https://www.cbsl.gov.lk/sites/default/files/cbslweb_documents/statistics/otherpub/ess_2020_e1.pdf



Among those working in the rural sector, only 35 percent are women³. Rural areas are also characterized by higher fertility and mortality than urban areas.⁴

5. **The agriculture sector remains vital for the Sri Lankan economy.** With the majority of the working age rural population engaged in agricultural activities⁵, it forms the primary source of livelihood for rural communities. The agriculture sector contributes 6.9 percent to GDP and employs approximately 27 percent of the population who are highly vulnerable to the variability in rainfall due to climate change. It also provides raw materials to the food and beverage manufacturing sectors, which contribute to around 26 percent of GDP.

6. **Gaps in infrastructure and services still limit the growth of the smallholder agriculture sector.** Additional investments are required to realize the potential of the smallholder agriculture sector to further diversify into high value produce and to effectively link farmers to markets. The country was ranked 94th in the 2018 World Bank Logistics Performance Index, primarily due to underperformance in trade and transport related infrastructure, and the quality of logistics services. Inadequate infrastructure, such as collection centers, warehouses and cold storage facilities, poor road connectivity and inadequate transport facilities, has resulted in increasing post-harvest losses (which are estimated at 30 to 40 percent of commercial production⁶) and high logistics costs. Currently there are 14 Dedicated Economic Centers which function as wholesale markets for produce; however, these facilities lack critical infrastructure such as cold storage, grading/sorting capacity and digitalization. Addressing these shortfalls and strengthening agro-logistics to reduce post-harvest losses requires improving the value chain from farmer to consumer, whether in domestic or export markets; this requires collaboration between the public and private sectors.

7. **Road transport, being the only mode of transport in many rural areas, plays a key role in connecting the rural population with economic opportunities and social services.** In Sri Lanka, it is estimated that roads carry 95 percent of passengers and 98 percent of freight. Therefore, uninterrupted road connectivity is critical for the rural communities to access health care, education, employment opportunities, and other basic services. The agriculture sector, which is the main source of livelihood for the rural community, is also entirely dependent on the road network to deliver inputs and connect farmers to domestic and international markets. As small-scale producers (whose average farm size is less than two hectares) are dominant in the sector, a dense road network is required to connect farmers to these markets and to reduce post-harvest losses.

8. **Only 13 percent of rural roads are paved, resulting in poor accessibility and connectivity, and poor road safety, as well as high transportation costs for the rural community to access basic services and economic opportunities.** Sri Lanka has a classified road network of approximately 119,480 km, comprising: (i) national highways - Classes A and B (12,380 km, 10 percent); (ii) provincial roads - Classes

³<http://www.statistics.gov.lk/GenderStatistics/StaticInformation/ContributiontoEconomy/EconomicallyActivePopulationbySectorAndSex2017-2019> (Accessed 25th March 2021)

⁴ Aging population of Sri Lanka – A thematic Report based on Census of Population and Housing 2020, Department of Census and Statistics - https://srilanka.unfpa.org/sites/default/files/pub-pdf/UNFPA%20Ageing%20Monograph%20Report_0.pdf

⁵ Aging population of Sri Lanka – A thematic Report based on Census of Population and Housing 2020, Department of Census and Statistics - https://srilanka.unfpa.org/sites/default/files/pub-pdf/UNFPA%20Ageing%20Monograph%20Report_0.pdf

⁶ Pre-Feasibility study for cooling and cold-chain technology for agriculture and agribusiness development - final report, April 2019



C and D (18,900 km, 16 percent); and (iii) local/rural roads - Class R (88,200 km, 74 percent). While nearly all national roads are paved, only 67 percent of the provincial roads and 13 percent of rural roads are paved and in good condition. Road safety in Sri Lanka is the worst in the region with annual fatalities of about 3,000, which are twice the average rate in high-income countries and five times that of the best performing countries.

9. **The poor rural road conditions also lead to increased vulnerability in the face of climate events or other public health emergencies (such as the COVID-19 pandemic). Transport disruptions due to climate change impacts, such as intense rainfall and subsequent flooding and slope failures/ landslides, represent a major hurdle for the provision of sustainable and resilient access to social and economic facilities to rural farmers and communities.** Sri Lanka is highly prone to extreme climate related events, with consequences such as flooding and landslides, which in turn cause road damage and transport disruptions that are expected to increase in the future. The total assessed damages and losses to the transport sector due to the 2017 floods and landslides⁷ are LKR 13,076.2 million (US\$87.17 million). Public bus services, which operated on the damaged roads, or went under water, were interrupted during the flooding. The Rapid Post Disaster Needs Assessment (2017) notes that the impacts of climate induced disasters, especially landslides, were disproportionately larger for the poorest segments of the population. Local transport infrastructure (including rural and provincial roads, which are the only mode for rural farmers to reach markets) is more vulnerable to floods, coastal inundation and slope failures/landslides. This is due to a lack of strategic network planning to select the most vulnerable areas and climate-smart investment prioritization, generally poor design standards that do not account for increased climate variability, and the lack of adequate maintenance. The impact of the climate induced rainfall variability has resulted in increasing the already large maintenance backlog, increased and frequent emergency rehabilitation, the loss of agricultural harvest, and damages to arable land. Given the limited resources, the intent is thus to better plan, prioritize and design rural road and community infrastructure investments, taking into account the climate vulnerability area maps in order to withstand the impacts of climate change.

10. **Institutional fragmentation, insufficient funding for new roads and for maintaining existing roads, lack of systematic resilience planning and inadequate capacity at the local level are key institutional challenges to providing all weather access roads for the rural communities.** National highways fall under the Ministry of Highways (MoH) and are managed by Road Development Authority (RDA); provincial roads are managed by the Provincial Councils through their nine provincial road agencies (Provincial Road Development Authorities / Departments (PRDA/Ds) in coordination with the Ministry of Public Services, Provincial Councils and Local Government (MPSPCLG); and the management of local/rural roads is the responsibility of over 300 separate Municipal Councils, Urban Councils, and Pradeshiya Sabhas⁸. Such a large number of road management agencies (approximately one for every 330 km of roads) is inefficient and is a barrier to growth in institutional and technical capacity.

11. **As part of the Government of Sri Lanka's (GoSL's) national development strategy "Vistas of Prosperity and Splendour", agriculture is prioritized as a driver of economic growth and to become a "global player" based on the smallholder model.** The Agriculture Sector Modernization Project (ASMP,

⁷ Sri Lanka Rapid Post Disaster Needs Assessment 2017

⁸ 24 Municipal Councils, 41 Urban Councils, 276 Pradeshiya Sabhas



P156019)) which is financed by the World Bank and the European Union⁹, supports increased agriculture productivity, improved market access, and enhanced value addition for smallholder farmers and agribusinesses.

12. The GoSL has also prioritized improving accessibility and connectivity of rural Sri Lanka through the 100,000 km rural roads development program, which is a part of the national development strategy.

The program is underpinned by GoSL’s vision to enhance rural connectivity by improving the growing proportion of the provincial and rural road network that is in poor condition¹⁰. It is expected to build on ongoing provincial and rural road initiatives financed by the World Bank and the Asian Development Bank (ADB). The ADB has financed the US\$1.7 billion “Integrated Road Investment Programs” (iRoad I and II), which cover the rehabilitation of almost 7,000 km of predominantly rural roads implemented solely by the RDA. The World Bank’s ongoing Transport Connectivity and Asset Management Project (TCAMP) is financing the rehabilitation of about 400 km of provincial roads. While these programs have been quite successful in improving connectivity for some rural communities, they cover less than 10 percent of the overall GoSL program. The GoSL is now scaling up by building on the lessons learned and establishing a comprehensive system to enhance rural connectivity in an inclusive manner and to improve rural livelihoods.

C. Relevance to Higher Level Objectives

13. The project is well aligned with the World Bank Group’s Sri Lanka Country Partnership Framework (CPF) for FY17–FY20 that was discussed by the Board on June 28, 2016 (Report No. 104606-LK) and was updated by the Performance Learning Review (PLR) of the CPF FY17–FY21 (Report No. 135126-LK). It contributes directly to Pillar 2 of the PLR that seeks to promote inclusion and opportunities for all by improving access to basic services and economic opportunities in rural areas, and by reducing regional disparities in economic development. The development of green and climate resilient transport and agro-logistics infrastructure, promoting the use of sustainable resources, and mainstreaming climate resilience practices in planning and investments will contribute to achieving Pillar 3 of the PLR, which aims to promote green growth and resilience. The project will also help improve the economic contribution of the lagging regions, and thereby contribute to improving the economic competitiveness of the country (Pillar 1 of the PLR). The project also aligns with the World Bank’s Sri Lanka Climate Change Action Plan.

14. Project implementation will begin during the COVID-19 pandemic and will extend through the post-pandemic recovery period. The COVID-19 pandemic has taken a significant human and economic toll throughout the world, and Sri Lanka is no exception. The outbreak of COVID-19 is expected to dampen growth significantly through reduced export earnings, reduced private consumption, and reduced investments in the short term (see Annex 1 for more detail). Improved transport connectivity and accessibility, and improved efficiency in supply chains will help vulnerable communities in rural areas and help reinvigorate the rural economy that has been affected by the pandemic. The program will also create

⁹ Originally US\$125 million equivalent and currently processing US\$28 million additional financing with a 18 month extension

¹⁰ The 100,000 km of rural roads to be improved comprises 33 percent of the 18,900 km of provincial roads and 87 percent of the 69,300 km rural roads in poor condition, together with additional roads currently in good condition which would fall into poor condition category over time due to delayed or poor maintenance



many short-term employment opportunities, which will help expedite the overall post-pandemic economic recovery of the country.

15. **The project is part of the GoSL’s national development program.** As part of a broader initiative, the project is envisaged to be a fully integrated rural development program to improve road infrastructure, develop passenger transport infrastructure, agro-logistics, and economic centres and community facilities in rural and remote areas. The development agenda highlights the importance of climate change and disaster risk management, and stresses that all infrastructure development in rural areas needs to be resilient to climatic vulnerabilities.

16. **The expected results of the project will contribute directly to achieving a number of Sustainable Development Goals (SDGs).** The program will contribute to achieving SDG 1: No poverty, as it specifically targets vulnerable and poor populations in rural areas of the country. The project’s focus on building resilient infrastructure, including all-weather roads, and institutionalizing sustainable development practices will contribute to the achievement of SDG 9: Industry innovation and infrastructure. The focus of SDG 11: Sustainable cities and communities is supported by the project’s target of ensuring access to safe, affordable, accessible, and sustainable transport systems for all and improving road safety, with special attention to the needs of vulnerable communities. The project will also directly contribute to SDG 13: Climate action in mitigating the impacts of climate change by reducing GHG emissions through improved road quality, which will also ultimately facilitate improved public transport.

17. **The project will provide incentives for private capital mobilization.** Under Component 2, the project will support a matching grants program to leverage private investments in agro-logistics, that will encompass areas such as introducing innovation in agricultural value chains, improving market access for smallholder producers, and supporting green and climate resilient technologies. The matching grants would mobilize private capital from recipients amounting to US\$58 million.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

18. The Project Development Objective (PDO) is to provide safe, efficient and climate resilient connectivity and strengthen agricultural supply chains to empower project communities in selected districts of Sri Lanka.

PDO Level Indicators

19. The proposed PDO Indicators are:

Climate Resilient Accessibility



- i. Project beneficiaries with improved climate resilient road access to markets, schools and health facilities in selected districts in project-financed areas (number, gender disaggregated)

Efficiency

- i. Number of smallholder farmers with reduced travel time to output markets in selected districts in project-financed areas (gender disaggregated)
- ii. Average sales of agriculture products in selected districts in project-financed areas (measured by the increase in average sales due to project interventions)

Safety

- i. Proportion of project-financed roads with safety audits (Percentage)

B. Project Components

20. The project comprises two components, as summarized below. Annex 3 provides the detailed project description and Annex 4 provides detailed interventions to increase climate resilience.

Component 1: Enhancing Safe and Climate Resilient Transport Connectivity (US\$448.75 million)

21. **Sub-Component 1.1. Improving road transport connectivity (US\$435.00 million):** Support for planning, review and monitoring, knowledge sharing, design, civil works, and contract management related to rehabilitation/improvement, and maintenance of an estimated 3000 km of priority rural roads¹¹ spread across all the nine provinces including, *inter alia*: (i) item-rate civil work contracts, including three-year performance-based maintenance contracts to ensure the preservation of road assets¹², where resilience, accessibility, connectivity, and mobility are enhanced to withstand the future climate change impacts; (ii) exploration of innovative maintenance contracts involving local communities/micro-enterprise contractors, with a strategy and action plan to engage women's community road maintenance groups trained in climate-smart techniques; (iii) procurement of modular bridges, and related goods and equipment; and (iv) road safety audits and incorporation of roads safety interventions in design, construction and maintenance.

22. Retroactive financing will be used for some of the civil works realized under the GoSL's broad 100,000 km road program, which may also include some Force Account works executed inhouse by the RDA in accordance with the clause 6.54 and 6.55 of the Procurement Regulations whilst meeting the requirements as outlined under subsequent Para 33 and 58 of this document subject to the Bank's review and agreement to ensure they comply with Procurement Regulations and the Bank's fiduciary and E&S requirements. Force Account is only applicable to the activities proposed under Retroactive Financing.

¹¹ "Rural Roads" means rural roads, provincial roads or low-grade national roads that provide connectivity for rural communities.

¹² The maintenance cost of contracts that go beyond the project period will be funded by the GoSL



23. **Sub-Component 1.2. Improving institutional and policy framework of the road sector (US\$5.00 million):** (i) support for the formulation of a strategy to consolidate and manage rural roads systematically to improve transport connectivity for the rural population under the Borrower's 100,000 km rural roads program with climate change and resilience planning as part of the decision-making process; (ii) reviewing the institutional set up to identify opportunities for streamlining the structural set-up and mandates of public institutions responsible for managing the road sector including road safety, and climate agendas, with particular emphasis on the provincial and rural network; and (iii) exploring different mechanisms to improve financing of road construction and maintenance of rural roads within the governing framework.

24. **Sub-Component 1.3. Road sector and community capacity enhancement (US\$8.75 million):** (i) Support on building the immediate and medium-term capacity on safe and climate resilient road development of the relevant stakeholders in the road sector, including public sector institutions, service providers in the construction industry and communities, and (ii) financing of Project management costs and Incremental Operating Costs for Components 1 and 2 of the Project.

Component 2: Enhancing Supply Chain and Access to Services for Farmers (US\$50.00 million)

25. **Sub-Component 2.1. Improving / establishing post-harvest centers (US\$10.00 million):** Support for the construction and/or rehabilitation of post-harvest centers, including produce handling, storage, processing and provision of other post-harvest facilities as needed, adjacent to the road networks being improved under the project.

26. **Sub-Component 2.2. Improving economic centres / wholesale markets (US\$12.00 million):** Assessing 20 (14 existing and 6 planned) public-owned dedicated economic centres to identify the investment needs (such as market sheds, storage/warehousing facilities, and produce handling), in conjunction with an institutional review to improve management of the facilities, including possibilities of bringing in private sector management and investments of rehabilitation and/or construction of facilities, as well as, climate-resilient designs for the selected investments, where required, based on relevant screening, and promotion and maximization of the use of renewable energy.

27. **Sub-Component 2.3. Supporting green and efficient value chains (US\$25.00 million):** Support for promoting and leveraging private investment in green agro-logistics infrastructure and services, including Matching Grants Scheme targeting eligible investments by agribusinesses, such as upgrading/establishing cold storage facilities/packhouses, ambient warehouses, and processing facilities; digital enablement of logistics facilities and transportation services; and innovative and green transport and logistics solutions.

28. **Sub-Component 2.4. Supporting research and development targeting value addition and agro-logistics (US\$3.00 million).** Support for research and development, including policy analysis, to support appropriate technology and institutional frameworks for improved processing and value addition, agro-logistics, strengthened sector institutions and enhanced private sector participation.

Component 3: Contingent Emergency Response (US\$0.00 million)

29. Provision of immediate response to an eligible crisis or emergency, as needed.



C. Project Beneficiaries

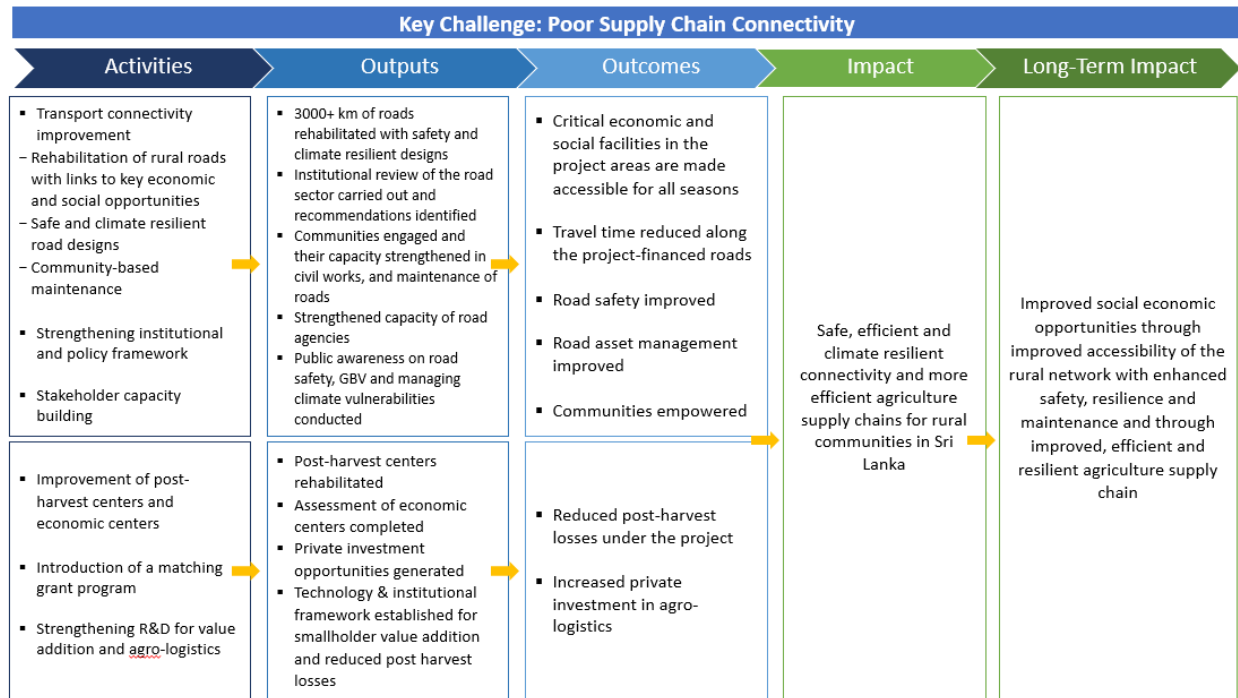
30. The direct beneficiaries of the project are 16 million residents of the rural communities (of whom six million are estimated to be women). The project will in particular benefit the rural communities made vulnerable by the COVID-19 pandemic through the employment opportunities created by community engaged public works / routine road maintenance and capacity building. Businesses and enterprises engaged in agro-logistical elements of value chains will benefit from the matching grant scheme, and through those investments small-scale producers will benefit from increased volume, quality of produce and lower transaction costs. Transport operators will benefit from the improved quality of roads, resilience, and efficiency in their services leading to lower operational costs and improved revenues. The capacity building and innovative road management strategies will help strengthen institutional capacities of the road agencies for sustaining the investments.

31. Enhancing the efficiency of the supply chain will benefit the rural community by: reducing post-harvest losses; enabling smallholding farmers to consistently deliver quality produce to remunerative markets; increasing trade volume; reducing logistics cost; enhancing the engagement of rural households in post-harvest logistics activities; enhancing access to off-farm employment; and enhancing the role of smallholding farmers in post-harvest, processing and trading activities. The efficiency gains will help to generate jobs, increase rural household income, and eliminate extreme poverty and foster shared prosperity. Supply chain efficiency improvements will also contribute to decarbonizing the food value chain.

D. Results Chain

32. The proposed theory of change of this project is illustrated in Figure 1.

Figure 1. Project Theory of Change



E. Rationale for Bank Involvement and Role of Partners

33. Basic road access to social and economic opportunities is a public function. The World Bank has a long history and substantial experience in the design and efficient implementation of rural roads programs, including in Bangladesh, Nepal, Peru, and China. A notable example is the World Bank’s support for the Pradhan Mantri Gram Sadak Yojana (PMGSY) program in India that has to date completed about 650,000 km¹³ of rural road improvements and is estimated to have benefited around half of the country’s population. WB intervention helps governments develop systems to manage such large programs by focusing on the most appropriate design standards, network planning and implementation.

34. This project will also build on the Bank’s ongoing engagement in the provincial road sector through TCAMP and the ASMP in the agriculture sector. The World Bank has supported inclusive development, integrating rural roads with economic and social development, such as agro-logistics, gender and promoting private sector participation in the rural economy, as well as related policy requirements. A key value addition of the Bank will be in integrating the expertise of different sectors and thematic areas to develop a comprehensive program to maximize the development impact.

F. Lessons Learned and Reflected in the Project Design

35. The project design draws on the experience of other infrastructure projects of a similar nature:

¹³ <http://omms.nic.in/>, accessed January 21, 2021.



- a. **Rural roads enable improved connectivity, though for this to be transformational for agriculture requires a comprehensive approach covering the full value chain.** Rural roads developed in isolation of associated infrastructure and services to support local economic activities including agriculture, limits their impact on supporting the higher-level goals of improving livelihoods and economic outcomes.
- b. **Standardized prioritization framework for road investments.** Experience from both the ADB funded iRoad projects and the World Bank funded TCAMP has identified gaps in systematic and standard prioritization of road investments at the provincial and local levels, which may ignore criteria such as agriculture potential and linkages to critical associated infrastructure. The standardized selection criteria and operationalization of the RAMS in the project provinces is expected to address these gaps and institutionalize investment prioritization practices.
- c. **Financing for road improvements and maintenance at the local level.** Project experience and analysis carried out through TCAMP illustrate that there is little incentive at the local level to maintain roads, partly due to the inadequacy of funds. The project will seek different contracting and funding mechanisms, as well as community-based maintenance, which provincial/local authorities could utilize to manage road improvements and maintenance at the local level.
- d. **Climate resilience and road safety.** The project draws from experience and technical interventions to improve climate resilience in infrastructure under the Sri Lanka Climate Resilience Improvement Project (CRIP, P146314), among others. The project will also operationalize the recommendations of the Bank’s road safety country brief “Delivering Road Safety in Sri Lanka” (2019) in its investments.
- e. **Creating a platform for multisectoral collaboration and Private Capital Mobilization.** The project will create a platform to maximize socio-economic impacts for the rural community by leveraging private investments to bring efficiency to supply chains and for agri-businesses. The agriculture sector is driven by private entities, including farmers; for supporting private goods in the sector, private investment and management is preferable as it will improve overall efficiency. Public investment is justified where private capital is limited, for example where potential returns are limited due to low value/ volume of produce. Local collection centers are an example of where public funding is justified, though even in these cases private management solutions may be available.
- f. **Institutional and capacity enhancements.** The project will address capacity gaps identified under TCAMP among local level road agencies and contractors on technical and contract management aspects, as well as in the use of innovative investment methods and planning systems.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements



36. A National Steering Committee, chaired by the MoH, will be established for the oversight of the entire project. The Committee will monitor the Project implementation progress and provide overall oversight and guidance and carry out quarterly reviews. It will comprise relevant stakeholders, including the MPSPCLG, MoA, Chief Secretaries of the nine provincial councils, representatives of the Treasury Department and other relevant Ministries.

37. The Road Development Authority (RDA) under the MoH will be the implementing agency of the project. A dedicated Project Team (PT) is appointed within the RDA, and is headed by a dedicated project director, a senior procurement specialist, finance manager/senior finance management specialist technical officers and an Environment and Social Unit (ESU). Additional staff such as deputy directors, engineers, agriculture specialists, financial management (FM) support staff, and environment and social specialists will be further added to the PT to ensure adequate implementation capacity for the project. The PT will coordinate, as necessary, with the RDA's Environmental and Social Division, the Planning Division and the Research and Development Division for overall project management.

38. All activities under Component 2 will be implemented by the PT under MoH in coordination and consultation with the Ministry of Agriculture (MoA) and other relevant stakeholders to identify and assess the investment requirements. The PT will work in close consultation with a technical team appointed under the MoA to carry out activities under Component 2. The Governance Structure of the Matching Grants Scheme (MGS) would include the following institutional entities: a) Matching Grant Team which will handle day to day administrative, management and monitoring functions and will include staff assigned from the MoA; b) Approval Committee which take all decisions on awarding grants, and its members will include public and private sector representatives including from Treasury Department, MoA, Export Development Board, Chamber of Commerce and Board of Investment; c) a Technical Review Group (TRG) which will carry out technical, business and economic appraisal of the grant proposals and make funding recommendations to the Approval Committee, and will be composed of reputed experts with the necessary expertise and experience in technical and business aspects of agro-logistics; and d) an Appeals Body which will handle potential appeals, complaints and grievances from grant stakeholders and would be led by senior, high ranking official from MoF. Detailed implementation arrangements, including the roles and responsibilities of the above entities will be outlined in a matching-grants Operations Manual, together with the detailed procedures for the identification, preparation, assessment, approval and implementation of projects supported under the scheme.

39. Project Implementation Units (PIUs) will be established under the PT at the regional level for either a single province or for a few provinces to coordinate project activities at the local level. PIUs will consist of technical officers and an Environmental Officer and a Social Officer appointed by the ESU and will be staffed through secondment from RDA or recruitment where necessary. Project Implementing Consultants (PIC) will be appointed for each region in line with the PIUs for the supervision of designs and civil works. PICs will include a Team Leader, Resident Engineers, Assistant Resident Engineers, Site Engineers, an Environment Specialist, a Social Specialist, Technical Officers and administration staff (Annex 2).



40. MoH has entered into memoranda of understanding (MoUs) with the provincial councils/local authorities to rehabilitate/improve road sections and transfer them to the relevant authorities on completion of the works.

B. Results Monitoring and Evaluation Arrangements

41. Community monitoring groups will be appointed with the participation of local residents in the project financed areas to monitor project activities at the field level. The project will either utilize existing community groups that are in place to manage / monitor community activities or appoint new committees. Divisional level committees headed by the Divisional Secretaries and district level committees headed by District Secretaries will monitor and report on activities at a divisional / district level. Relevant representatives of the provincial and local road agencies will take part in these committee meetings to ensure coordination.

42. A Quarterly Project Monitoring Report will be submitted to the World Bank by the RDA. The report will provide key information, such as the progress of civil works, main issues, status of disbursements, compliance with environmental and social standards, management and resolution of grievances and compliance with the legal covenants included or referred to in the legal agreement for the loan. These reports will be used to assess progress toward the achievement of the PDO and the end targets of the project's results indicators. A midterm review will be scheduled within 30 months of the effectiveness of the loan.

C. Sustainability

43. Sustainability will be ensured primarily through: (i) the institutionalization of a road investment prioritization framework which helps evidence-based, systematic prioritization of investments based on optimum economic, climate, environmental and social impacts; (ii) the incorporation of adaptation and mitigation interventions to strengthen climate resilience of the infrastructure; (iii) an emphasis on the maintenance of infrastructure through performance based maintenance contracts, the development of financing strategies to sustain maintenance capacity at the local level, and capacity building for road agencies on road maintenance and the engagement of communities in maintenance work; and (iv) empowering communities to engage in civil works, maintenance and monitoring of project activities; (v) promotion of private sector participation in agribusiness and agriculture supply chain improvement; (vi) improved management of collection centers and economic centers, including the enhanced participation of farmer groups (for local collection centers) and private sector managers.

IV. PROJECT APPRAISAL SUMMARY

A. Technical and Economic Analysis

(i) Technical Analysis



44. **Overall scope of work and technical interventions.** The project roads will be a part of the broader 100,000 km rural roads improvement program and this operation is designed to better define the program. The program’s rationale to unlock rural development and improve resilience provides the necessary technical underpinning. The Government is in the process of setting up the institutional capacity for the program, its nucleus being the RDA. The Government has also allocated significant financial resources for the program in 2021¹⁴. A key intervention of the project is to establish a systematic investment prioritization framework and a cross-sectoral collaboration platform, and to introduce sustainable and climate resilient investment methods. This will be complemented through the institutional assessment and capacity development carried out under Components 1.2, 1.3, and 2.4, which will help institutionalize these practices.

45. The focus on improving rural connectivity as an enabler for rural development, particularly through the agricultural sector in a climatically vulnerable environment, has informed the technical choices in the design of the operation. The roads selected for improvement under the project will be prioritized based on a comprehensive set of criteria, including: (i) population distribution; (ii) poverty level; (iii) connectivity to the national road network; (iv) accessibility to trade and agriculture value chains; (v) climate and disaster vulnerabilities; and (vi) connectivity to essential community and social services and employment opportunities. Equity considerations will be addressed by providing the provinces an “unlimited shopping list” approach, before the final screening of project roads. All investments will be screened and assessed for environmental and social impacts and mitigation measures will be identified. Community consultations via transect walk will be used to validate and augment the selections and prioritization. The use of environmentally friendly materials and construction methods will be promoted. Other road improvements will include the enhancement of climate resilience along vulnerable road sections (see Annex 4) and road safety improvements such as crash barriers, signage, road markings and a series of structured community awareness campaigns.

46. The road improvement works will be packaged for implementation through item-rate contracts, coupled with performance-based road maintenance to ensure climate resilience throughout the life cycle of the roads. Service providers will be required to maintain the roads after the construction phase, with their payments based on performance against prescribed service levels. The contracts will typically include one to two years of road improvement, followed by a three to five-year maintenance period. The project will explore the potential for establishing community-based maintenance contracts for routine / periodic maintenance of these roads beyond the project period.

47. The operation will create special demands on the construction industry, including a spike in the need for scarce road construction material, possible shortfall in private sector capacity and the need for additional public sector fiscal space. An initial audit of road construction material showed a potential for latent road construction material that could be exploited. The packaging of road rehabilitation contracts will be customized to attract a broad spectrum of contractors. The current budgetary provision for road rehabilitation demonstrates the government’s commitment to expanding the fiscal space to accommodate the program. To address implementation and post-project concerns (such as the uptake of various project outputs or the custody and maintenance of rehabilitated roads), the design provides for a multi-stakeholder steering committee to manage and implement an MOU between the stakeholders.

¹⁴ Government has provided US\$1.2 billion in its 2021 budget in support of the implementation of the program.



48. A list of potential post-harvest centers for agriculture produce in Rathnapura District is being identified for rehabilitation. Standard designs would be used to enable farmers to aggregate, sort and grade, wash and clean, pack, and temporarily store produce. In subsequent years, investments would be identified jointly with the roads to be supported, based on an analysis of gaps/needs for climate vulnerability and the improved functioning of agriculture markets, in consultation with the private sector and representatives of the farming community, and consistent with the country's agriculture development strategy. This will draw on the analysis conducted under the ASMP. The project will explore appropriate mechanisms for operations, management and maintenance of these infrastructure, including community-based models and private sector participation.

49. **Matching Grants:** The scheme proposed under the project is based on good practices and lessons learned from the ongoing ASMP, and programs in other countries that are funded either by the World Bank or by other donors. Under ASMP, the program has been successful in introducing innovation in the sector, increasing both the quantity and quality of agricultural produce traded in domestic and export markets, and linking smallholder farmers to higher value markets. It has been effective in leveraging private capital for these investments. The demand-driven approach and the requirement for a matching contribution will increase the likelihood that successful applicants are responsive to the end market. Under ASMP, the proportion of the investment financed by the grant changes dependent on the size of the investment, with grants constituting a smaller share of larger investments, and also have been used to target specific groups such as women entrepreneurs and businesses in the under-represented Northern and Eastern regions. The grants have therefore been effective in achieving the broader objectives of social targeting, creating jobs, introducing innovation and linking smallholder farmers to markets. Accordingly, an average grant share of 30 percent has proven to be an appropriate level of support to encourage agribusinesses to apply and achieve the ASMP's objectives, and this will be applied to ICDP. To ensure the participation of smaller firms and female entrepreneurs, the project would also support training and technical assistance in proposal writing, business planning and management.

50. **Road Safety.** Road safety assessment has been carried out for selected Front Runner roads using the Road Safety Screening Appraisal Tool (RSSAT). The average Project Safety Impact (PSI)¹⁵ metric for each road group was 0.86, indicating an overall reduction of 14 percent fatalities predicted for the project scenario compared to the current baseline condition (the PSI range was 0.66 to 0.98). Among road-users, bicyclists have the highest (unsafe) PSI values, although bicycle traffic is low and is not a critical concern. Safety measures such as road signs, barriers, traffic calming and pavement markings are currently absent and these will be established under the project scenario, in particular to cope with the higher traffic flows post-project. Crash data on fatalities and serious injuries are not available for these road sections and therefore road safety benefit is not captured in economic assessment; however, the RSSAT analysis will be revised once this information is available during implementation. The project will include road safety awareness campaigns and audits of the conceptual designs as well as the project roads before, during and after construction.

(ii) Economic Analysis

¹⁵ A relative safety outcome score, normalized to one, indicating the expected number of fatalities in the project road compared to the based to the current condition (e.g., a value if 0.9 indicates 10 percent reduction in crash fatalities compared to current conditions).



51. **Component 1: Enhancing Safe and Climate Resilient Transport Connectivity.** A formal economic analysis was conducted for the 22 roads (about 77 km) that constitute the “front runner investments” at a cost of US\$7.02 million¹⁶. The overall NPV of the front runner roads selected for upgrading is US\$4.23 million. Twenty of the 22 roads have an EIRR of above 6 percent¹⁷ and the other two roads have an EIRR of 0.7 percent and 3.5 percent, because of low traffic flows; however, they are critical for improving connectivity of the network linking with national roads (see details in Annex 3). The preparation of these front runner roads also serves as a pilot to standardize road selection, environmental and social screening, technical designs, and bid document preparation, and can be scaled up efficiently for other roads.

52. **CO2 Emissions.** The gross estimated CO2 emissions over the 20-year period are 269,127 tons, while the estimated net CO2 emissions are 2,280 tons. The observed increase in CO2 emissions is due to the generated traffic and the increase in vehicle speeds on the rehabilitated roads. The inclusion of the social cost of CO2 emissions has a negligible impact on the EIRR for CO2 emission under either the low or high-cost scenarios.

53. **Component 2: Enhancing Supply Chain and Access to Services for Farmers.** A formal economic analysis will not be conducted. For the matching grant program, each proposal will be required to have economic and financial analyses. The economic benefits are expected to include increased smallholder returns from agriculture through improved access to agriculture markets, both for inputs and outputs, with new market opportunities, contributing to increased incomes and employment opportunities. These benefits would result from: (i) the upgrading of rural roads to increase access to markets and the reduction of costs associated with transportation; (ii) improved post-harvest centers for handling, storage and preservation of agriculture produce, thereby reducing wastage and increasing the value of smallholder production, while also giving greater flexibility to farmers on the timing of sales leading to improved prices and incomes; (iii) improved product processing, packaging, and marketing, including better market differentiation through product grading at market aggregation centers; and (iv) advantages from economies of scale in product marketing from aggregation. Indirect benefits are expected to include: (i) improved quality and reduced costs of forward and backward linkages of farmers to markets and higher-up value chain operators; (ii) increased awareness of post-harvest technology; (iii) new models of small producers and private enterprises working together, for example in the transportation and storage of agriculture produce; and (iv) improved nutrition of consumers through diversification of agriculture away from rice and increased production of nutrient rich products, in particular fruits and vegetables; and (v) improved institutional capacity of key Ministries and government agencies to develop a modern agriculture policy framework.

B. Fiduciary

(i) Financial Management (FM)

¹⁶ 1 US\$1 = LKR200 (<https://www.cbsl.gov.lk/en/rates-and-indicators/exchange-rates>, retrieved 19. 4. 2021)

¹⁷ A EIRR of 6 percent is generally considered adequate for project acceptance when the project yields significant social benefits which cannot be quantified.



54. MoH, will be responsible for overall FM under the project. RDA would be under MoH. A FM assessment of the implementing agency was conducted and is found to be satisfactory along with proposed risk mitigatory measures being introduced by PT in due course. A finance manager would be appointed for the project. Proposed FM arrangements have been designed to be in accordance with the fiduciary requirements of the World Bank Operational Policies for Investment Project Financing. It has been agreed that all project payments would be centrally handled through the project team at MoH. The responsibility and accountability of handling all aspects related to project funds and managing project FM arrangements would rest with project team at MoH. The MoH has had a satisfactory track record of managing FM aspects in a few prior World Bank-financed operations. The FM risk is assessed as Substantial for this project.

55. Disbursements will be report based using Interim Unaudited Financial Reports (IUFs) reflecting six-month forecasted expenditures. A Designated Account (DA) would need to be opened at the Central Bank of Sri Lanka. The PT will submit IUFs for the project within 45 days of the end of each quarter. The project would be subjected to an internal audit. The external audit of the project will be carried out by the National Audit Office of Sri Lanka (NAOSL). Audited annual project financial statements should be submitted to the World Bank within six months of the end of financial year. The details of the project FM arrangements on component 1 and particularly on Component 2 including for matching grants for agro-logistics will be included in the Project Operations Manual (POM). There are no overdue audit reports or ineligible expenditures for any other projects implemented by MoH.

(ii) Procurement

56. The World Bank Procurement Regulations for IPF Borrowers (Procurement in Investment Project Financing, Goods, Works, Non-Consulting and Consulting Services Fourth Edition, November 2020) will be applicable for carrying out project procurements. The details of the project procurement arrangements will be described in the POM.

57. RDA will be the key Implementing Agency for all procurement activities of the project and the PT has been identified for the project. The procurement capacity assessment noted that RDA has previous experience in implementing World Bank financed projects, including the Road Sector Assistance Project and CRIP. The procurement team identified in the PT comprises a senior procurement officer/specialist, supported by two junior staff. While the Senior Procurement Officer has the experience in working with the ADB iRoads project, the junior engineers would require formal procurement training and on the job training.

58. The RDA has prepared and finalized the Project Procurement Strategy for Development (PPSD). The PPSD illustrates a comprehensive summary of the front runners, key procurements that are planned for the first eighteen months, the proposed high value procurements, assesses market and implementation risks and mitigations measures to ensure smooth implementation of procurement throughout the project period. The key contracts that present a potential market risk are: (i) Rehabilitation/ improvement and maintenance of rural roads in Sabaragamuwa, Central, North Central and North Western Provinces, and Uva and Southern Provinces; (ii) Supervision consultancy contracts for Central, North Central and North Western Provinces and Uva and Southern Provinces; (iii) Consultancy for



capacity building and research on green and cost-effective solutions in road construction; and (iv) Furniture and office equipment procurement. The PPSD assesses the market conditions for these packages and proposes market approaches to mitigate these risks.

59. The Procurement Plan (PP) covers the procurements of the first eighteen months for approximately US\$91 million and includes: twelve works packages; five Goods/Non-consulting services packages; and seven Consulting services packages. Retroactive financing would be utilized for certain contracts which shall be subject to the Bank’s review to determine their eligibility for Bank financing in accordance with clause 5.1 and 5.2 of the Bank’s Procurement Regulations. The Bank’s procurement tracking tool STEP (Systematic Tracking of Exchanges in Procurement) will be utilized to prepare and submit the PP for the Bank’s review and no objection. More details are discussed in Annex 2. The PP will be updated biannually and as the need arises, to reflect project implementation needs.

C. Legal Operational Policies

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

D. Environmental and Social

60. The Environmental and Social risk classification for the Project is set at ‘Substantial’ because the exact nature of project activities, designs, and locations have not yet been determined. Road rehabilitation under Component 1 and the rehabilitation/construction associated with agro-logistics, community infrastructure, and potential activities financed via the matching grant scheme under Component 2, are likely to be small to medium scale and located within urban settlements, villages and agricultural areas. Construction works will mainly occur within the existing right-of-way of the roads and the existing footprints of agro-logistics facilities.

61. Land acquisition may be required either for road widening or for the construction of agriculture/community infrastructure in some cases, which may lead to potential physical and/or economic displacement, loss of crops/structures, disruption to public utilities, communal properties, etc. However, the land required is envisaged to be small scale, mostly linear and narrow strips, which can be either public or private. Voluntary Land Donation will be acceptable only when the borrower can demonstrate the provisions as set in Environmental and Social Standard (ESS) 5 are followed. These include that the potential donor is informed and consulted about the choices, the choice of refusal is an option, the amount of land required is minor and will allow the participating households to maintain livelihoods at current levels, no physical relocation is involved, and consent is obtained from users in case of communal land. Any land acquired for the purposes of this project will be funded by the GoSL.

62. Rehabilitation of some old cold-storage and other facilities may involve the handling of hazardous chemicals or (removed) asbestos in accordance with the Environmental and Social Management Framework (ESMF). During construction period, there may be impacts associated with dust and noise



pollution, use of natural resources such as sand and aggregates, and occupational health and safety risks. Specific to the road rehabilitation/improvement works, off-site activities may include the operation of contractor-owned quarries, borrow pits and asphalt plants, which if not managed properly, may cause localized adverse impacts. These potential risks and impacts are predictable, temporary and/or reversible, low in magnitude, site-specific, without the likelihood of impacts beyond the footprint of the project, and manageable through the implementation of engineering measures and good construction site management. However, the large number of sub-projects across the country adds to the management complexity and the associated social and environmental risks.

63. Risks associated with labor influx, including those relating to sexual harassment/exploitation and abuse, are assessed to be minimal since civil works are expected to be carried out by domestic companies employing local labor. However, the project will have to avoid, minimize and mitigate associated risks. These may include inadequate coordination between concerned agencies, limited personnel dedicated for managing environmental and social issues, public grievances from construction-related damages and land acquisition, and political interference during the selection of roads and community infrastructure. Other potential risks may include the exclusion of vulnerable and disadvantaged groups, the indigenous Vedda community, and awardees of the matching grants from decision-making as well as from project benefits, insufficient consultation with stakeholders during the formulation of road sector development strategy, the policy framework for agro-logistics, and other implementation-related activities.

64. To address these risks and potential impacts, the RDA has developed the following instruments in line with the World Bank's ESF and GoSL's environmental and social laws and regulations: an Environmental and Social Commitment Plan (ESCP), listing specific actions and timelines; an overarching Environmental and Social Management Framework (ESMF) that includes a negative list, procedures for screening, assessing and mitigating E&S risks and impacts, a monitoring and reporting framework, institutional arrangements for the management of E&S issues, and capacity building as well as occupational health and safety plans in line with the ESF. As per the ESMF, all road improvement and community and agro-logistics infrastructure works will be screened, assessed, and managed for E&S risks via site-specific due diligence instruments. These include the environmental and social screening form, detailed Environmental and Social Impact Assessments (ESIAs) where required, Environmental and Social Management Plans (ESMPs), and for low-risk activities, Codes of Good Environmental and Social Practice (CGESPs). These instruments will be applied and prepared during project implementation, when the locations, technical designs and the nature of the works are clearly defined. Other documents include: Labor Management Procedures (LMP) to identify labor requirements and manage project-related labor risks and issues; a Resettlement Policy Framework (RPF) that includes guidelines for assessing risks and impacts associated with involuntary resettlement, procedures for voluntary land donation, entitlements for compensation of losses, and organizational responsibilities; and a Stakeholder Engagement Plan (SEP) that provides a systematic approach to engaging with stakeholders throughout the project life cycle. These documents have been cleared by the World Bank and have been disclosed by the GoSL and the World Bank¹⁸.

¹⁸ (i) ESFP: GoSL -

[https://www.rda.gov.lk/supported/noticeboard/publications/esd/Environmental%20and%20Social%20Commitment%20Plan%20\(ESCP\)%20for%20Disclosure.pdf](https://www.rda.gov.lk/supported/noticeboard/publications/esd/Environmental%20and%20Social%20Commitment%20Plan%20(ESCP)%20for%20Disclosure.pdf) (August 3, 2021); World Bank - <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/893891627575824550/environmental-and-social-commitment-plan-escp-inclusive-connectivity-and-development-project-p176164> (July 29, 2021)



65. Pursuant to the ESMF guidance, environmental and social screening have been carried out for the 22 roads identified as part of the immediate road improvements. Based on the preliminary designs, screening, and community consultations, these roads have been assessed to have low and moderate risks and impacts. Therefore, in line with the ESMF, the RDA has prepared 13 ESMPs and nine CESGPs, which have been reviewed by the World Bank and have been disclosed (ESMF Volume 3). These documents will be finalized with the project designs and included in the bid documents, as per the ESMF and the milestones indicated in the ESCP.

66. RDA's Environmental and Social Division (ESD) will be the main focal point for the ESF implementation and specific staff will be assigned within the RDA to ensure that the due diligence processes set forth via the ESCP and all project specific instruments on E&S, monitoring and reporting, are conducted accordingly. RDA is assessed to have good capacity for E&S management. The capacity of the ESD, the RDA PT and the provincial PIU teams will be further strengthened to manage project activities across the country. The ESMF has a specific capacity building plan for all project implementing stakeholders, including RDA, PIUs and PICs.

F. Climate Change and Disaster Screening and Climate Co Benefits

67. **Climate Change and Disaster Screening.** A screening of the proposed project for climate change and disaster risks was undertaken using the World Bank Climate and Disaster Risk Screening Tool and the related project risk is rated Moderate. Climate related events that already affect roads and other infrastructure in Sri Lanka (including flooding, landslides, excessive heat, storm surge, and cyclones) are projected to be of increased intensity due to climate change. Project interventions in hilly areas could be

(ii) ESMF Volume 1: GoSL -

https://www.rda.gov.lk/supported/noticeboard/publications/esd/IRCDP_ESMF_Volume1_Revised_after_QAST_review_clean.pdf (August 3, 2021); World Bank - <https://documents1.worldbank.org/curated/en/943901627588224151/pdf/Environmental-and-Social-Management-Framework-ESMF-Inclusive-Connectivity-and-Development-Project-P176164.pdf> (July 29, 2021)

(iii) ESMF Volume 2: GoSL -

https://www.rda.gov.lk/supported/noticeboard/publications/esd/IRCDP_ESMF_Volume2_Revised_after_QAST_review_clean.pdf (August 3, 2021); World Bank - <https://documents1.worldbank.org/curated/en/376271627938995238/pdf/Environmental-and-Social-Management-Framework-ESMF-Inclusive-Connectivity-and-Development-Project-P176164.pdf> (August 2, 2021)

(iv) ESMF Volume 3 (ESMPs and CGESPs): GoSL -

https://www.rda.gov.lk/supported/noticeboard/publications/esd/IRCDP_ESMF_Volume%203_Revised%20after%20QAST_clean.pdf (August 3, 2021); World Bank - <https://documents1.worldbank.org/curated/en/930421627588392904/pdf/Environmental-and-Social-Management-Framework-ESMF-Inclusive-Connectivity-and-Development-Project-P176164.pdf> (July 29, 2021)

(v) SEP [Revised]: GoSL -

[https://www.rda.gov.lk/supported/noticeboard/publications/esd/Revised%20Stakeholder%20Engagement%20Plan%20\(SEP\).pdf](https://www.rda.gov.lk/supported/noticeboard/publications/esd/Revised%20Stakeholder%20Engagement%20Plan%20(SEP).pdf) (August 6, 2021); World Bank - <https://documents1.worldbank.org/curated/en/769551627989045252/pdf/Revised-Stakeholder-Engagement-Plan-SEP-Inclusive-Connectivity-and-Development-Project-P176164.pdf> (August 3, 2021)

(v) LMP: GoSL -

[https://www.rda.gov.lk/supported/noticeboard/publications/esd/Labor%20Management%20Procedures%20IRCDP%20P176164_for%20disclosure%20\(1\).pdf](https://www.rda.gov.lk/supported/noticeboard/publications/esd/Labor%20Management%20Procedures%20IRCDP%20P176164_for%20disclosure%20(1).pdf) (August 3, 2021); World Bank - <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/601551627578559461/labor-management-procedures-inclusive-connectivity-and-development-project-p176164> (July 29, 2021)

(vi) RPF [Revised]: GoSL -

https://www.rda.gov.lk/supported/noticeboard/publications/esd/Revised%20Resettlement%20Policy%20Framework_IRCDP%20P176164%20Aug2021.pdf (August 6, 2021); World Bank - <https://documents1.worldbank.org/curated/en/790691627991615686/pdf/Revised-Resettlement-Framework-Inclusive-Connectivity-and-Development-Project-P176164.pdf> (August 3, 2021)



highly exposed to extreme precipitation and flooding, and slope failures/landslides. Project interventions in coastal areas are exposed to frequent inundation.

68. **Climate Co-Benefits.** The project addresses the identified climate and disaster vulnerabilities at all stages of the infrastructure life cycle, including: (i) better planning/prioritization of roads, based on the climate vulnerability of locations and communities (Subcomponent 1.1); (ii) improved resilience through climate resilient design features in road improvements to mitigate the impact of flooding and landslides in particular, and through the use of materials and nature-based solutions to withstand the adverse impact of climate change induced disasters (Subcomponent 1.1); (iii) climate-resilient maintenance of project investments (Subcomponent 1.1), particularly before and after the monsoon season, to mitigate the impacts of intense rainfall events; and (iv) capacity building for policy-makers on resilience planning (Subcomponent 1.2) and for road agencies, contractors and local communities to apply a climate resilient life cycle approach through the development of a planning tool, resilient designs and training (Subcomponent 1.3). Nature based solutions with community participation will be applied to mitigate slope failures in hilly areas and erosion in coastal zones. The locations of post-harvest centers and economic centers (Subcomponents 2.1 and 2.2) will be screened for climate change induced disasters prior to construction to ensure access during floods/landslides, and climate-resilient designs will be developed. The use of renewable energy for market and storage facilities will be supported. Subcomponent 2.3 supports enhancement of resource efficiency in supply chains and cleaner transport and logistics solutions.

F. Gender

69. **Gender gap.** Female Labor Force Participation (FLFP) in Sri Lanka is at 34.2 percent (less than half of the male labor force participation of 73.5 percent) and is 35 percent against 64 percent¹⁹ in the rural sector. In 2019 it was reported that that 9.2 percent of employed men work in “transportation and storage”, with only 0.62 percent women in this sector²⁰. Within the Provincial Road authorities’, women comprise 39 percent of contractual labor²¹. These numbers could be further reduced due to the impact of the COVID-19 pandemic; it is estimated that of the 800,000 additional “newly poor” people expected as a result of the crisis, 52.3 percent are females²². The reasons for low female employment rates include expectations of women’s household roles and responsibilities, including care for children and the elderly which falls disproportionately on women, human capital mismatch, and gender discrimination in terms of wage gaps and gender-based violence²³. Additional factors in this sector include the lack of basic facilities, hard and unsafe working conditions, and family and societal disapproval for such work^{24, 25}.

¹⁹ Department of Census and Statistics. Sri Lanka Labour Force Survey. Annual Report 2019

²⁰ Department of Census and Statistics. Sri Lanka Labour Force Survey. Annual Report 2019.

²¹ Analysis conducted by the Project Management Unit (PMU) of the Transport Connectivity and Asset Management project under the Ministry of Provincial Councils and Local Government of labor and gender distribution of all provincial road authorities

²² Kim, Y, de Silva, T (2021) The COVID-19 impact on livelihoods and poverty in Sri Lanka World Bank, (Draft) February 2021.

²³ Solotaroff, Jennifer L., George Joseph, and Anne T. Kuriakose. 2017. “Getting to Work: Unlocking Women’s Potential in Sri Lanka’s Labor Force.” Overview booklet. World Bank, Washington, DC

²⁴ <https://economynext.com/sri-lanka-women-workers-challenged-by-family-attitude-transport-harassment-75956/> (accessed 5th May 2021).

²⁵ Casabonne, U., Jimenez Mota, B. F., & Muller, M. (2015). Roads to agency: effects of enhancing women’s participation in rural roads projects on women’s agency-a comparative assessment of rural transport projects in Argentina, Nicaragua, and Peru (No. 99173, pp. 1-84). World Bank.



70. Studies have shown that women’s participation in construction, rehabilitation, maintenance, and management of transport infrastructure offer unprecedented income generation opportunities for women and can contribute to challenging the traditional gender roles in the male-dominated transport sector²⁶. When women work in groups, it has helped them to overcome social barriers and has helped increase their employment and earning opportunities by increasing their negotiating power and their access to training and skill development opportunities²⁷. Among the key learnings from successful World Bank supported projects that have increased women’s employment in the road sector is the importance of conducting community outreach and sensitization to gain the acceptance of spouses and community members, as well as diversifying the assignment of tasks to prevent gender-segregation and provide sufficient training to prepare women for tasks with which they are not familiar²⁸.

71. **Gender actions.** The project will address the gender gaps in women’s participation in transport-related civil works, maintenance, and management of the constructed roads, and in rural employment at large. It will form women’s community road maintenance groups (CMGs) to address the underlying constraints to women’s participation in rural transport works. The project will a conduct tailored communication campaign to inform women of opportunities related to road maintenance and rehabilitation, as well as raise awareness on social norms that limit women’s engagement in the road sector. It will implement a package of training and awareness raising activities, and also provide support services. The trainings for the CMGs will: (i) build skills related to road rehabilitation and maintenance; (ii) develop financial literacy; (iii) provide additional livelihood skills to supplement work in the CMGs; and (iv) identify and report GBV incidents.

72. The following indicators will be used to measure the effectiveness of the project’s gender activities to address the gap of FLFP: percentage of women employed in road maintenance work under the project (for gender tagging). The project will take additional gender actions to improve women’s and schoolgirls’ access to paved roads. Women in the CMGs will also be mobilized in the planning processes in order to identify priority infrastructure improvements needed for women and girls. The project will also assess increased access to paved roads for females, including: (i) number of women that have access to paved all weather roads in selected districts in project-financed areas; and (ii) number of schoolgirls that have access to paved all weather roads to schools in selected districts in project-financed areas.

G. Citizen Engagement

73. The project will have a robust citizen engagement approach to contribute to the achievement of the PDO. The approach includes:

- a. Consultations with key stakeholders (i.e., local communities, road users) during the selection, design and implementation of roads as well as other ancillary infrastructure and service improvements, via transect walk/field visits, focus groups and round table discussions.

²⁶ Casabonne, U., Jimenez Mota, B. F., & Muller, M. (2015). Roads to agency: effects of enhancing women’s participation in rural roads projects on women’s agency—a comparative assessment of rural transport projects in Argentina, Nicaragua, and Peru (No. 99173, pp. 1-84). World Bank.

²⁷ Identification of Economic Opportunities for Women’s Groups and Communities, ILO, Geneva, Switzerland

²⁸ <https://www.worldbank.org/en/topic/gender/publication/roads-to-agency-promoting-womens-participation-in-rural-transport-projects> (Accessed 4th May 2021)



- b. Engagement of local communities in monitoring rehabilitation and maintenance of roads and other ancillary infrastructure (through community monitoring groups).
- c. The establishment of a four-tiered Grievance Redressal Mechanism (GRM) to process complaints or grievances related to project activities, including GBV and personal safety-related complaints that are received in-person, via email/letter, and/or telephone calls.
- d. Beneficiary feedback mechanisms, such as satisfaction surveys to: (i) track users' perception of the accessibility and safety of rehabilitated roads and improved ancillary infrastructure; (ii) assess the impact of training and capacity building carried out under the project.

74. The beneficiary feedback indicators of the project include: (i) number of community groups actively engaged in project monitoring activities; and (ii) percentage of beneficiaries satisfied with improved roads in selected districts in the project-financed areas.

V. GRIEVANCE REDRESS SERVICES

75. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

VI. KEY RISKS

76. The overall risk of to achieving the PDO is rated Substantial, based on the political, macroeconomic, sector strategies, institutional, fiduciary, environment and social, and stakeholder risks involved. The key risks rated Substantial, or High are described in the following paragraphs.

77. **Macroeconomic risk is rated Substantial.** Macroeconomic vulnerabilities remain high due to weak fiscal buffers, high levels of indebtedness, and large refinancing needs. While the macroeconomic situation is not expected to hamper immediate project implementation, fiscal risks remain elevated. Public investment could be reduced significantly to manage the fiscal pressures from revenue shortfalls and the need to create space for additional COVID-19 related expenses. However, the project is expected to generate both immediate and long-term economic benefits that will help revive the economy and the



government has expressed its firm commitment to the continuation of this flagship economic revival program, of which the project is a part.

78. **Sectoral Strategies and Policy risk is rated Substantial.** The thrust of current policy in the agriculture sector supports the commercialization of smallholder farming through the introduction of productivity enhancing technologies, improving market linkages and an increasing role for the private sector. Under this approach, there are opportunities for smallholder diversification into higher value crops and products that necessitate improved agro-logistics to create better functioning value chains linking farmers to consumers. Concerns on the environmental and health impacts of agro-chemicals have led to the April 2021 policy announcement targeting the end of agro-chemicals usage in the country. The roadmap for implementing this policy is not yet in place; however, it is acknowledged that it would impact yields and hence the volume of produce transported and traded in the country. This would have risks for both public and private investments in agro-logistics, including the scale, scope and location of investments. The Bank is working with Government to explore pragmatic approaches to rebalancing the use of organic and inorganic fertilizers, including an increase in the production of organic fertilizer.

79. **Institutional capacity risk for implementation and sustainability is rated Substantial.** Most of the roads that will be improved under the project are under the purview of provincial and local road authorities, which have significant capacity constraints, particularly in terms of maintenance and investment prioritization. The institutional arrangements proposed under the project - where RDA carries out the improvement of the roads and transfers the assets back to the provincial/local authorities - could potentially create disincentives for the provincial/local authorities to properly maintain the rehabilitated roads. The project has therefore proposed contracts that include three to five years of maintenance post construction, and a comprehensive capacity building program under Component 1 to address the capacity gaps, the development of a financing strategy for the maintenance of roads at the local level which will incentivise better management of roads, and the engagement of provincial/local road agencies in the project from the beginning to ensure institutional ownership. Further, RDA does not have previous experience in managing a matching-grants scheme which will require significant handholding and capacity development. The project will facilitate knowledge sharing and learning from the experience of ASMP.

80. **Fiduciary risk is rated High.** RDA has inhouse experts to handle road construction projects, however with the increasing demand in the sector it is difficult for the existing staff to handle the workload. Moreover, the experience of the procurement staff in handling procurement under Bank financed projects is limited. Under the present constrained environment, implementation challenges are likely to occur due to the size of the contracts and the inherent market risks in the construction industry. All road contracts under the project (Class C, D and E/R) will be centrally managed by the RDA, although ownership remains with the PRDAs and Local Authorities (LAs). The ambiguities in the ownership of the roads under PRDA and the LAs may pose a challenge in contract administration, specifically during maintenance. RDA has already entered MOU with the Provincial Councils and LAs to formalize the arrangement; this may, however, pose an implementation challenge on the ground. Limited resources in terms of availability of technical staff, contractors and materials are the other factors attributing to this. The recent GOSL decision to abolish existing PMUs and the reluctance to form PMUs in infrastructure projects may have implications for project implementation, however the RDA has assigned some staffs to the PT to carry out fiduciary functions until they establish a permanent fully fledged staffing arrangement.



Construction contracts will include maintenance of the roads for another three years, which may require continued support from the RDA. In addition to that, scarcity of resources in the areas of human resources and materials will be a challenge. Non-availability of adequate staff to absorb the additional workload will be an internal challenge, as also the lack of contract administration capacity in the existing workforce. Non-availability of experienced contractors is an external limitation, which is aggravated by the lack of a proper mechanism to penalize poor performers/non-performers. Procurement risk is therefore rated 'High'. The risks and the proposed mitigation measures are depicted in Table 2.1 in Annex 2.

81. **Environmental and Social risk is rated Substantial.** The potential environmental and social risks and impacts are predictable and are expected to be temporary and/or reversible, low in magnitude, site-specific and without the likelihood of impacts beyond the project's footprint. Because the subprojects' details and their locations are largely undetermined yet, their monitoring and supervision will be challenging. The provincial and local authorities, and to some extent the RDA, have limited experience and capacity to implement the project in accordance with the Bank's new ESF. The sector also has a poor record of workers' safety, including work zone fatalities. For each of the ESF's environment and social standards which are relevant for this project, the Environmental and Social Commitment Plan (ESCP) lists specific actions to implement, mitigation measures to be put in place, timeframe by which to implement actions, monitoring and reporting requirements, and agency responsible for overseeing proper implementation. In addition to the disclosed ESMF, RPF, SEP, and LMP, which will guide the project in meeting environmental and social standards, ESMPs have been prepared for each of the first batch of roads identified during the appraisal. The WBG Environmental, Health, and Safety Guidelines (known as the "EHS Guidelines"), policies and standards of the GoSL, as well as contractors' safety ratings and prior records will be used by the PIU to proactively manage workers' safety risks.

82. **Stakeholder risk is rated Substantial.** The multisectoral scope of the project requires the engagement of, and coordination among, various stakeholders. In addition to the provincial and local road agencies mentioned above, the financing of agro-logistics and other infrastructure improvements will require close coordination with other stakeholders (such as the MoA, MPSPCLG, the Urban Development Authority, Municipal Councils, private investors, civil society organizations, community-based organizations, and local communities). To ensure close collaboration and supervision, the project has proposed the establishment of Divisional and District level committees to coordinate activities at the local level and a National Steering Committee (with the participation of all key stakeholders) to coordinate and collaborate at the national level. As this project is part of a program that has been identified as a national priority, overseen by the Presidential Secretariat, stakeholder coordination risk will be further mitigated.

83. **Other risks: Impact of the COVID-19 pandemic on project implementation is rated High.** The pandemic related restrictions (travel and movement restrictions etc.) and the precautionary measures required could lead to potential delays in the immediate term of project implementation. The project will assess such impacts and plan as necessary to address potential delays, drawing on the experience of preparing the front runner investments as well, while ensuring adherence to the national and World Bank guidelines for COVID-19 management.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Sri Lanka

Inclusive Connectivity and Development Project

Project Development Objectives(s)

The Project Development Objective (PDO) is to provide safe, efficient and climate resilient connectivity and strengthen agricultural supply chains to empower project communities in selected districts of Sri Lanka.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Climate Resilient Accessibility			
Project beneficiaries with improved climate resilient road access to markets, schools and health facilities in selected districts in project-financed areas (gender disaggregated) (Number)		0.00	323,614.00
Efficiency			
Number of smallholder farmers with reduced travel time to output markets in selected districts in project-financed areas (gender disaggregated) (Text)		To be assessed during year 1 implementation	To be determined based on baseline during year 1 implementation
Average sales of agriculture products in selected districts in project-financed areas (Text)		To be assessed during year 1 implementation when interventions are identified	To be determined based on baseline during year 1 implementation
Safety			
Proportion of project-financed roads with safety audits (Percentage)		0.00	10.00



Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Enhancing Safe and Climate Resilient Transport Connectivity			
Number of Kms of rural roads upgraded with safety measures (Kilometers)		0.00	3,000.00
Travel time along the project-financed roads (percentage reduction) (Percentage)		0.00	20.00
Percentage of women employed in road maintenance work under the project (Percentage)		0.00	15.00
Percentage of beneficiaries satisfied with improved roads in selected districts in project-financed areas (gender disaggregated) (Percentage)		0.00	50.00
Number of women that have access to paved all weather roads in selected districts in project-financed areas (Number)		262,554.00	427,554.00
Number of school girls that have access to paved all weather roads to schools in selected districts in project-financed areas (Text)		To be assessed during year 1 implementation	To be determined based on baseline during year 1 implementation
Number of community groups actively engaged in project monitoring activities (Number)		0.00	9.00
Climate resilient road maintenance plans prepared on an annual basis (Yes/No)		No	Yes
An institutional framework for road management developed (Text)		No institutional framework for road management in place	An institutional framework for road management developed
Number of road safety awareness campaigns completed during project implementation (Number)		0.00	9.00
Enhancing Supply Chain and Access to Services for Farmers			
Number of storage/collection centers/wholesale markets constructed or rehabilitated (Number)		0.00	18.00



Indicator Name	PBC	Baseline	End Target
Percentage of beneficiaries satisfied with improved agro-logistics infrastructure (collection centers / wholesale markets) in selected districts in project-financed areas (gender disaggregated) (Text)		To be obtained via satisfaction surveys carried out prior to infrastructure rehabilitation	To be determined based on baseline during year 1 implementation

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Project beneficiaries with improved climate resilient road access to markets, schools and health facilities in selected districts in project-financed areas (gender disaggregated)	Measures the the number of beneficiaries with improved climate resilient road access to markets, schools and health facilities in a select few project-financed districts. End target is calculated based on the sample project beneficiaries in project-financed areas in Rathnapura, Matale and Anuradhapura districts who will benefit with improved climate resilient road access due to project interventions. Corresponding gender disaggregated numbers for	Quarterly	Quarterly Project Monitoring Report	Surveys, public consultations	RDA



	the end target are as follows: Male - 158,614; Female - 165,000				
Number of smallholder farmers with reduced travel time to output markets in selected districts in project-financed areas (gender disaggregated)	Measures the number of smallholder farmers with improved accessibility to output markets in select few project-financed districts.	Quarterly	Quarterly Project Monitoring Report	Surveys, public consultations	RDA
Average sales of agriculture products in selected districts in project-financed areas	Measures the increase in average sales of agriculture products resulting from improvements in quantity and quality of products through project interventions, including matching grants. The indicator would be measured for farmers and agribusiness organizations.	Quarterly	Quarterly Project Monitoring Report	Market data, public consultations	RDA in consultation with MoA
Proportion of project-financed roads with safety audits	The indicator measures the percentage of project financed roads that have road safety audits completed.	Quarterly	Project progress reports of the supervision consultants / Quarterly Project Monitoring Report	Project supervision	RDA



Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of Kms of rural roads upgraded with safety measures	Measures improved road safety in project financed areas	Quarterly	Project progress reports of the supervision consultants / Quarterly Project Monitoring Report	Project supervision	RDA
Travel time along the project-financed roads (percentage reduction)	Measures the average reduction in travel time along the project financed roads. For the target value, on a 2.5 km rural road, assumed current operating speed is 40 km/hr which rises to 50km/hr.	Quarterly	Quarterly Project Monitoring Report	Surveys and manual assessment of travel time	RDA
Percentage of women employed in road maintenance work under the project	Measures the increased employment of women in road maintenance work in project financed road work. End target is estimated taking into consideration the recent project experience by the RDA and the proposed activities	Quarterly	Quarterly Project Monitoring Report	Project supervision	RDA



	under this project to improve female employment in road maintenance work.				
Percentage of beneficiaries satisfied with improved roads in selected districts in project-financed areas (gender disaggregated)	Measures the public feedback on the road improvements in select few project-financed districts. The baseline is estimated as the percentage of population satisfied with the existing condition of the candidate roads in Rathnapura, Matale and Anuradhapura districts based on a sample of 203 people surveyed by the RDA E&S division. Surveys and community consultations for this has been restricted due to prevalence of COVID-19. End target is estimated based on the baseline and will be verified through a satisfaction survey carried out at the end of road rehabilitations.	Annual	Quarterly Project Monitoring Report	Surveys	RDA
Number of women that have access to paved all weather roads in selected districts in project-financed areas	Measures the women's improved accessibility to paved, all weather roads in select few project-financed districts. Baseline estimate	Quarterly	Quarterly Project Monitoring Report	Surveys, public consultations	RDA



	is calculated as existing female population in Rathnapura, Matale and Anuradhapura districts who already have access to paved, all weather roads. End target is calculated by adding the incremental number of female beneficiaries who will have access to improved roads under this project to the baseline estimate.				
Number of school girls that have access to paved all weather roads to schools in selected districts in project-financed areas	Measures the number of school girls benefited by improved access to schools through paved, all weather roads in select few project-financed districts.	Quarterly	Quarterly Project Monitoring Report	Surveys, public consultations	RDA
Number of community groups actively engaged in project monitoring activities	Measures the improved community participation in project monitoring activities	Quarterly	Quarterly Project Monitoring Report	Project progress meetings	RDA
Climate resilient road maintenance plans prepared on an annual basis	Measures the adoption of climate resilient road maintenance practices by the RDA	Annual	Quarterly Project Monitoring Report	Project progress meetings	RDA
An institutional framework for road management developed	Measures steps taken to improve road management practices in the country's	Annual	Quarterly Project Monitoring	Project progress meetings	RDA



	road sector		Report		
Number of road safety awareness campaigns completed during project implementation	Measures the increased awareness around road safety among the communities in project financed areas	Annual	Quarterly Project Monitoring Report	Road safety campaign records / meeting minutes	RDA
Number of storage/collection centers/wholesale markets constructed or rehabilitated	Measures the improved agro-logistics infrastructure in project financed areas	Quarterly	Project progress reports of the supervision consultants / Quarterly Project Monitoring Report	Project supervision	RDA in consultation with MoA
Percentage of beneficiaries satisfied with improved agro-logistics infrastructure (collection centers / wholesale markets) in selected districts in project-financed areas (gender disaggregated)	Measures the public feedback on the agro-logistic infrastructure improvements in select few project-financed districts.	Annual	Quarterly Project Monitoring Report	Surveys	RDA in consultation with MoA



ANNEX 1: Sri Lanka: World Bank COVID-19 Response Program

COUNTRY: Sri Lanka Inclusive Connectivity and Development Project

The Impact of the COVID-19 Pandemic on Sri Lanka

- COVID-19 has caused a severe impact on the economy and the welfare of the people of Sri Lanka.** In the early months of the pandemic, the government of Sri Lanka imposed curfews and limited hours for essential business. These orders were mainly lifted on July 1, 2020, and only a few restrictions remained. In the past few weeks, the number of COVID cases has continued to climb steadily as the country witnessed another wave of COVID-19. The cumulative number of cases exceeded 370,000 in August 2021, a 1.8 percent fatality rate and an 85 percent recovery rate. With an aim to vaccinate 60 percent of the population in 2021, the government was able to vaccinate 4,017,085 with the two doses and 12,019,193 with one dose. Also, the government has ordered over 30 million doses of COVID-19 vaccines from multiple suppliers. These doses are expected in batches during the year 2021.
- The COVID-19 crisis caused a significant economic contraction and welfare losses.** In 2020, Sri Lanka's economy contracted by 3.6 percent, the worst performance on record, due to declining export earnings (tourism, textiles, tea) and subdued private consumption and investment. Mobility restrictions, weak demand, and input shortages together severely affected activities in most sectors. Losses in jobs and earnings have been widespread. While various livelihoods support measures by the government likely helped buffer the shock, the US\$3.20 poverty rate is expected to have increased to 11.7 percent in 2020. Short-term inequality is expected to have deteriorated as poor households suffered disproportionately larger income losses. Tourism, apparel, construction, mining, and several other manufacturing sectors significantly suffered. Small and Medium Enterprises (SMEs) reported larger contractions compared to large establishments. While formal businesses received some concessions including debt moratoria and working capital loans at concessionary rates from banks, informal businesses received limited support. As a result, asset quality and earnings of the financial businesses are expected to deteriorate, reflecting the impact of decelerating loan recoveries and shrinking margins.
- The COVID-19 pandemic, together with the adverse impacts on revenue from the stimulus package and lower imports, further worsened Sri Lanka's already fragile fiscal situation.** Revenue collection declined to 9.2 percent of GDP in 2020 from 12.6 percent in 2019, with significant drops in major taxes such as value-added, income, and import taxes. Expenditures increased due to rising public health costs, cash transfers to the COVID-19 affected households and a rising wage bill. Meanwhile, rigid expenditure structure continued to constrain fiscal space, with interest payments absorbing 71.7 percent of total revenues. Low revenues and rising expenditures sharply widened the fiscal deficit to 14.0 percent of GDP in 2020, further increasing PPG debt to 112.4 percent of GDP.²⁹ Total debt service excluding the Treasury bill rollover reached an unprecedented level at 141.4 percent of total revenue in 2020. Weak

²⁹ World Bank staff calculations based on the Annual Report of Ministry of Finance, 2020



fiscal buffers, high indebtedness, and rising external vulnerabilities have exerted downward pressure on the country's credit rating.³⁰

4. The Government of Sri Lanka has responded to the crisis through several response measures.

Fiscal support was offered to vulnerable groups, including the payment of an LKR 5,000 allowance to Samurdhi beneficiaries, farmers, tourism sector employees, disabled persons, senior citizens and dry rations for families who are undergoing quarantine of 2 weeks (approximately 0.8 percent of GDP). The payment deadlines for income tax, VAT and certain other taxes have been extended. Other measures announced include tax exemptions for imported masks and disinfectant, price ceilings on essential food items as well as concessional loans and food allowances for low-income consumers (beneficiaries of the Samurdhi program). The President also established a Task Force on Economic Revival and Poverty Eradication and a special fund for containment, mitigation, and social welfare spending, inviting local and foreign tax-free donations.

5. The Central Bank of Sri Lanka (CBSL) eased monetary policy substantially. The CBSL reduced monetary policy rates by 200 basis points since March 2020 before increasing them by 50 basis points in August 2021.

The required reserves ratio of commercial banks was lowered by 3 percentage points, the liquidity coverage and net stable funding ratios have been reduced to 90 percent and the interest rate on CBSL advances to banks has been lowered by 650 bps. Commercial banks cannot declare dividends, share buy backs or increase payments to directors until end-2020. There has been a debt repayment moratorium, including a moratorium until April 2021 on bank loans for the tourism, garment, plantation and IT sectors, and SMEs, with CBSL providing refinancing and concessional lending facilities of 1 percent of GDP, partially supported by a CBSL guarantee. In addition, the construction sector is eligible to borrow from banks with government guarantees. There was a three-month moratorium on small-value personal banking and leasing loans. The interest rate on credit cards, overdrafts and pawning facilities will be capped. Financial institutions are also requested to reschedule non-performing loans, while capital conservation buffers and loan classification rules have been relaxed.

6. The WBG Country Partnership Framework (CPF) FY17-21 continues to be relevant but in order to tackle the unprecedented threats posed by the COVID-19 crises,

the World Bank shifted its focus aiming at striking a balance between helping Sri Lanka address its immediate health needs, address the short and medium-term needs from the COVID-19 crisis and focus on the long-term economic path to bolster economic recovery. **First, supporting immediate response to the crisis,** via an emergency project of US\$ 128.6 million approved on April 3, 2020. This was topped up with US\$ 88.96 million of additional financing, mostly reallocated from other ongoing projects (US\$ 60 million from three projects) to provide cash transfers to the vulnerable. In April 2021, the Bank approved an additional financing of US\$81 million for the COVID-19 Emergency Response and Health Systems Preparedness project. **Second, repurposing and restructuring of the World Bank Social Safety Net Project,** to disburse US\$ 45 million as temporary payments to low-income households. **Third, triggering the Contingency Emergency Response Components (CERCs)** of US\$ 56 million in four ongoing projects (in health, education, agriculture, and local development), repurposed and pooled for COVID-19 support in food security, education, transport and ICT.

³⁰ International credit rating agencies downgraded the sovereign (Fitch: CCC, S&P: CCC+, and Moody's: Caa1



7. **The World Bank, IFC, and MIGA will continue to collaborate closely in implementing major shifts to address the needs of the Government of Sri Lanka.** A Systematic Country Diagnostic update is being prepared in FY21. **The World Bank continues to collaborate closely with the government of Sri Lanka to align the existing portfolio with the government priorities.**

8. **The Inclusive Connectivity and Development Project is consistent with the World Bank Group Country Partnership Framework (CPF)** as it provides safe, efficient and climate resilient connectivity and efficient agriculture supply chains for rural communities in Sri Lanka. It is consistent with the Performance and Learning Review of the Country Partnership Framework for Sri Lanka for the Period FY17-FY21. It contributes directly to Pillar 2 of the PLR that seeks to promote inclusion and opportunities for all by improving access to basic services and economic opportunities in rural areas, and by reducing regional disparities in economic development. The development of green and climate resilient transport and agro-logistics infrastructure, promoting the use of sustainable resources, and mainstreaming climate resilience practices in planning and investments in the sector will contribute to achieving Pillar 3 of the PLR, which aims to promote green growth and resilience. The project will also help improve the economic contribution of the lagging regions, and thereby contribute to improving the economic competitiveness of the country (Pillar 1 of the PLR). The project also aligns with the World Bank's Sri Lanka Climate Change Action Plan.

9. **In addition, the Inclusive Connectivity and Development Project is also aligned with the WBG Approach Paper “Saving Lives, Scaling Up Impact and Getting Back on Track”**, contributing to one of the four pillars of the Approach Paper: Working to Build a More Resilient Recovery. The project supports COVID-19 recovery through Pillar 4 Strengthening Policies, Institutions and Investments for Rebuilding Better by focusing on investments in core infrastructure. The rehabilitated, safe and climate resilient rural road network connecting to social and economic opportunities as well as efficient agro-logistics are critical for post-pandemic economic recovery.

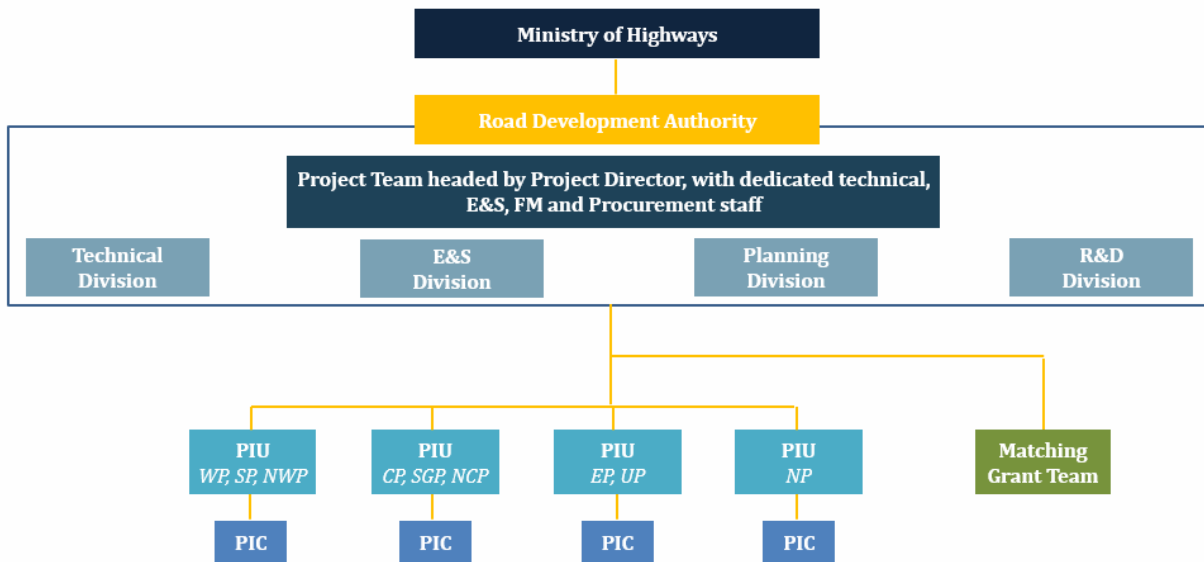


ANNEX 2: Implementation Arrangements and Support Plan

COUNTRY: Sri Lanka
Inclusive Connectivity and Development Project

Implementation Arrangements

Organization Structure of the Implementing Agency



Procurement

1. Country procurement environment. Sri Lanka has a strong procurement regime. Procurement process in the country is governed by the Guidelines issued by the Department of Public Finance to supplement Financial Regulations. This comprehensively covers all aspects of procurement of Goods, Works and Consulting Services. The Guidelines compare favorably with international best practice and UNCITRAL model and procurement law. The National Procurement Commission which had been established under the Nineteenth Amendment to the Constitution to strengthen good governance and excellence in public sector procurements has now been abolished by the twentieth Amendment. The basic contract law has no specific provision directly bearing on Public Procurement. Other than the Financial Regulations and the Guidelines, there is no separate body of laws that regulates Public Procurement. Regulatory and Legal framework including tax regime does not pose any additional procurement risk and impact on cost.

2. The construction industry in Sri Lanka faces some challenges such as long delays in the design phase, inappropriate/excessive design standards/parameters, inappropriate packaging and slicing of contracts, complicated procurement arrangement and scarcity of construction material. In addition to these the limitation of technical staff, non-availability of adequate experienced contractors and more



importantly lack of contract administration capacity are some of the critical administrative issues that need to be addressed in order to achieve the desired results.

3. **The Contracting Industry Development Authority (CIDA)** (formerly ICTAD) is mandated to regulate the contracting industry and provide registration, classification of contractors as well as to provide capacity building to contractors and government officials. It is observed that CIDA is not fully functional in all these areas. The country specific Standard Bidding Documents (SBDs) issued by the then National Procurement Agency for Goods and Non-consulting services and Works SBDs issued by the CIDA are being used.

4. **Procurement Capacity and Risks Assessment.** The Bank procurement team conducted the procurement risk assessment of RDA, and the possible risks and the appropriate mitigation measures are shown in Table 2.1.

Table 2.1. Procurement Risks and Mitigation Measures

Risk Description	Description of Mitigation
Lack of a strong regulatory framework after abolishing the NPC through the 20 th Amendment.	<ul style="list-style-type: none"> • Check for compliance against Procurement Regulations (PR) throughout the operation. • Ensure that national contracts are issued in compliance with the PR and the SPDs of the Bank and subject to Bank national conditions. • National Guidelines and SBDs may be used if required with the prior consent of the Bank. • Procurement decisions will be taken ensuring transparency and in a timely manner.
Inadequacy of technical staff and they are overloaded with the high influx of infrastructure projects in the country. This is aggravated by the poor capacity of staff in contract administration.	<ul style="list-style-type: none"> • Identify a separate team to carry out procurement and ensure sustained staffing arrangements throughout. • If needed, hire subject experts during implementation. • Strengthen the procurement staff through capacity building training. • Agree on the detailed procurement section in the POM.
All road contracts under the project (Class C, D and E/R) will be centrally managed by the RDA, although those are owned by the Provincial Road Development Authorities (PRDAs) and the Local Authorities (LAs).	<ul style="list-style-type: none"> • MoUs to be entered into with the Provincial Councils and LAs to formalize the arrangement. • Transferring of road maintenance arrangements/ responsibilities from the RDA to PRDA and the LAs need to be clearly spelled out in the MoU.
High value contracts are formed by consolidating the small contracts to one package. Front-runners proposed for the first year mainly in Sabaragamuwa Province (hilly topography-mostly affected by adverse	<ul style="list-style-type: none"> • Size and the nature of packages to be determined considering all attributes. • Adopt ‘multiple contracts’ (consolidated packages) which will allow small contractors to win low value items and would also attract larger contractors.



Risk Description	Description of Mitigation
<p>weather conditions).</p> <p>There is a scarcity of experienced contractors and the road experts.</p>	<ul style="list-style-type: none"> • Above arrangements would encourage small-scale contractors from the locality to participate. This may provide a solution for mobilization difficulties in the locality.
<p>Difficulty in smaller contractors having limited financial and technical resources to implement the contracts in a timely manner.</p>	<ul style="list-style-type: none"> • Post qualification criteria to be strengthened. • A comprehensive Contract Management plan to be developed.
<p>Collusive practices among contractors and high transaction costs for contract management.</p>	<ul style="list-style-type: none"> • Market analysis through PSD should help mitigate these risks. There are well laid out procedures in place for bidding, evaluation and contracting. RDA to diligently use them in procurement.
<p>Project duration of five years vs. the magnitude of the Works to be carried out is overwhelming in the current context. Scarcity of materials, as there are many infrastructure projects in the country. Non-availability of experienced contractors, and lack of a proper mechanism to penalize poor performers/non-performers.</p>	<ul style="list-style-type: none"> • Explore re-cycling of materials where possible, after quantifying project requirements. • Identifying borrow pits as early as possible. Contractors tend to form JVs to distribute the risk rather than compete as a Single Entity. • Stringent analysis needs to be done using information available in the CIDA website. • New entrants are required to register in CIDA and these contractors need to be encouraged. • Arranging road shows to discuss challenges in the industry and how to overcome this collectively as a group.
<p>Difficulty in obtaining bid security, specifically by small-scale contractors and non-availability of Construction Guarantee Fund facilitated by the CIDA.</p>	<ul style="list-style-type: none"> • Alternative of obtaining Bid Security Declaration instead of Bid Security.
<p>Poor planning and incomplete designs and delays in finalizing PP, leading to extensive delays in the award of contracts. The absence of technology support has adversely affected effective monitoring, and has resulted in weak contract administration.</p>	<ul style="list-style-type: none"> • Implementation of appropriate procurement planning mechanisms and diligent monitoring through the STEP. • Set up a mechanism/tool to monitor the progress of contracts under implementation. • Ensure designs, BoQs, BDs and other procurement documents are ready and agreed well in advance to not to hinder progress.

5. **Applicable procurement Procedures.** The World Bank Procurement Regulations for IPF Borrowers- (*Procurement in Investment Project Financing, Goods, Works, Non-Consulting and Consulting Services Fourth Edition, November 2020*) will be used for carrying out project procurements under the IPF components.



6. **World Bank's Standard Procurement Documents.** The World Bank's Standard Procurement Documents (SPDs) shall be used for all contracts as specified in the PP tables in STEP, unless otherwise agreed with the Bank.
7. **Procurement methods.** All methods and approaches contained in the Procurement Regulations and as agreed in the PPs may be used under the project.
8. **Procurement of Works.** Works to be procured under the Project will include: Rehabilitation/improvement and maintenance of (576.34 kms in Sabaragamuwa, Central, North Central, North Western, Uva and Southern Provinces) approx. amounting to \$74 million. The first four packages include all the activities planned for Sabaragamuwa Province which amounts to US\$ 11.06 million for a length of 77 km of front runner roads. Although this qualifies for international competition, due to geographic location and the terrain it would be difficult for an international Bidder to adjust to the local environment. Further international contractors are unlikely to show any interest in rehabilitation and construction of rural roads which are scattered all over the country and the current market condition in the pandemic will be unfavorable to the international Bidders. In order to reduce the number of procurements and the number of contracts to a manageable level, 'multiple contracts' (consolidated packages) will be adopted where possible by consolidating and combining the contracts where feasible.
9. **Procurement of Goods.** Goods to be procured under the Project will include office furniture (US\$0.15 million); office equipment (US\$0.05 million); desktop computers and laptop computers (\$0.15 million); software (\$0.05 million)
10. **Selection of Consultants.** Selection of consultants under the project will include: four Supervision consultancy contracts for civil works in Sabaragamuwa, Central and North Central, North Western, and Southern and Uva Provinces (US\$3.56 million) and Consultancy contract for E&S compliance, Capacity Building and Research on Green and Cost-Effective Solutions in Road Construction (US\$13 million).
11. **National procurement procedures.** In accordance with the Procurement Regulations for IPF Borrowers, when approaching the national market, as agreed in the PP in STEP, the country's own procurement procedures may be used in agreement with the Bank. For the procurement of Goods, Works and Non-consulting services, when national open competitive procurement arrangements are used as set forth in Sri Lanka's Procurement Guidelines 2006, such arrangements shall be subject to paragraph 5.4 of the Bank's Procurement Regulations and the following conditions:
 - a) Only bidding documents acceptable to the Bank shall be used for all national open competitive procurement.
 - b) The request for bids/request for proposals document shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming the application of, and compliance with, the Bank's Anti-Corruption Guidelines, including without limitation the Bank's right to sanction and the Bank's inspection and audit rights.
 - c) The eligibility of bidders shall be as defined under Section III of the World Bank Procurement Regulations for IPF Borrowers (Procurement Regulations). Accordingly, no bidder or potential



bidder shall be declared ineligible for contracts financed by the Bank for reasons other than those provided in Section III of the Procurement Regulations.

12. **Operations Manual.** The GoSL procurement procedures will be clearly identified in the Procurement Chapter of the Project Operations Manual, which will be reviewed by the Bank. The Manual will be reviewed regularly and updated in consultation with the Bank to meet project needs.

13. **Complaint handling mechanism.** To promote an open, fair, and transparent procurement process, the implementing agencies will administer a complaint handling system for the project. The composition of the complaint handling committee, the form of the complaint register, response time, decision-making mechanism, and other features will be described in the Operational Manual and will be subject to the World Bank’s review and clearance.

14. **Disclosure.** The following documents shall be disclosed on the RDA/ MoH website and on the United Nations Development Business (UNDB) website via STEP updates: (i) PP and updates; (ii) specification for Goods and equipment as soon as these are prepared; (iii) invitation for bids for Goods and Works for all (national and international) as well as Request for Quotation method; (iv) request for expressions of interest for selecting/hiring of Consulting services; (v) contract awards of Goods and Works procured using Open International Competitive Procurement (OICP) and Open National Competitive Procurement (ONCP) procedures; (vi) list of contracts/purchase orders placed by the PT using Shopping procedures; (vii) short list of consultants; (viii) contract awards of all consultancy services, including individual consultants; and (ix) list of contracts following Direct Selection.

15. The following details will be updated on the United Nations Development Business (UNDB) website via STEP updates: (i) invitation of bids for the procurement of Goods and Works using Open International Competitive Procurement (OICP) procedures; (ii) request for expressions of interest for Consulting services with estimated cost greater than US\$ 200,000; (iii) contract award details for all procurement of Goods and Works using Open International Competitive Procurement (OICP) procedure; (iv) contract award details for all consultancy services with estimated cost more than US\$ 200,000; and (v) the list of contracts/purchase orders placed following Direct Selection or Selection based on the Consultants’ Qualifications Selection (CQS) procedures.

16. **Methods of Procurement.** The procurement methods and thresholds indicated in Table 2.1 will be used for procurement under the project.

Table 2.2. Applicable Procurement Methods and Types of Review

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts/Processes Subject to Prior Review
Works	≥US\$10,000,000	OICP	All contracts above US\$ 5,000,000
	<US\$10,000,000	ONCP	
	≤ US\$50,000	Shopping	



Goods and Non-consulting Services	≥ US\$1,000,000	OICP	All contracts above US\$ 1,500,000
	< US\$1,000,000	ONCP	None
	≤ US\$50,000	Shopping	None
Consulting Services (Firms)	> US\$500,000	All competitive methods; advertise internationally	All contracts over US\$ 500,000 equivalent
	≤ US\$500,000	All competitive methods; advertise locally	none
	< US\$300,000	CQS	
		Selection of Particular Types of Consultants - UN Agencies	All contracts
Individual Consultants		IC (Open/Limited)	All contracts over US\$200,000 equivalent

** All direct / Single Source contracts will be subject to the same thresholds as above, however, will need to be justified at the time of the clearance of the PP. This will bring the prior reviews in line with OPCS mandated thresholds.

17. The **PPSD**, which describes the procurement packages, their market risks and mitigations, will be annexed to the Operations Manual.

18. **STEP.** In accordance with paragraph 5.9 of the Procurement Regulations, the Procurement Plan (PP) tracking tool, STEP is in place to prepare and submit PPs for the Bank’s review and no objection, and to communicate various other procurement-related transactions with the Bank.

Financial Management (FM)

19. FM responsibility for all components will rest with the FM staff of the PT that will be established under MoH. World Bank loan proceeds will be used to finance eligible expenditures necessary to meet the development objectives of the project with due attention to considerations of economy and efficiency in accordance with the provisions of the legal agreement. If the World Bank determines that the loan has been used to finance ineligible expenditures, the amounts used for such expenditures shall be refunded to the World Bank by the GoSL.

20. **FM staffing.** The head of finance appointed in the project team and FM support staff will handle project funds. It is envisaged that the FM Unit of the project team will be headed by a qualified and experienced finance manager who would preferably have prior experience in FM under the World Bank- or donor-financed projects. The finance manager will work on a full-time basis and provide guidance and direction to ensure that the FM arrangements are implemented to the satisfaction of the GoSL and the World Bank. FM support staff assigned or recruited for the operation by MoH will work under the finance manager to support the management of routine accounting and FM activities of the project. The finance manager in the PT will be responsible for managing day-to-day FM activities for the project, which may include (a) project budgeting, disbursement planning, and forecasting; (b) operating the DA, including



claiming replenishments, disbursing funds, and making required payments; (c) maintaining books and records for project financial transactions; (d) submitting quarterly IUFs; (e) preparing annual project financial statements; and (f) interacting with project internal and external auditors on audit issues and follow-up & submission of audit reports (f) overall responsibility for FM aspects for component 2 including for matching grants and any other requests related to FM that may arise under the project.

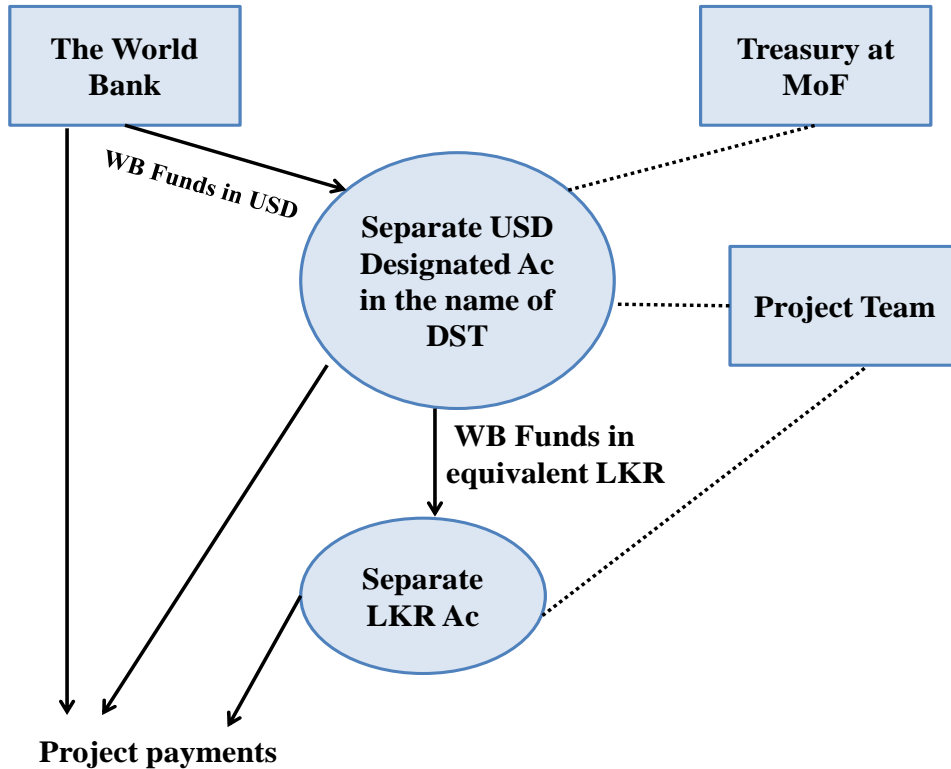
21. **Budgeting.** The PT will forecast the required resources to be budgeted for the project and these forecasts will need to be incorporated in the overall MoH budget estimates, which are then submitted to the Department of National Budget of the Ministry of Finance. A separate budget code (line item) will be set up for the project under the MoH. The PT will prepare detailed implementation plans in line with the detailed project budget to clearly specify the funding requirements for the project components and activities. The PT can implement the activities under the project by using the budgetary provision provided under foreign funds. Counterpart funds may also be requested as required to finance salary/salary top ups of regular government staff that may get assigned to work for the project.

22. **Fund flow and disbursement arrangements.** A separate Designated Account (DA) will be opened for the project, which will be operated and managed by the PT. which will maintain separate sets of accounts for the project. Disbursement of funds will be report based. The PT will submit quarterly IUFs to the World Bank within 45 days of the end of each quarter. The World Bank will advance funds to the DA to meet forecasted expenditures for six months, as reflected in the IUF. Withdrawal applications will be prepared by the PT and replenishments to the DA will be based on the IUFs approved by the World Bank. The format of IUFs has been agreed and is attached to the Disbursement and Financial Information Letter.

23. The PT will also open a dedicated Sri Lanka rupee account to make payments for eligible expenditures and track the inflow and outflow of project funds. Exchange losses arising from the transfer to the Sri Lanka rupee account will not be considered eligible expenditure and will not be absorbed under the loan. The PT will have the option of requesting direct payments to suppliers by either the Central Bank of Sri Lanka, using the proceeds in the DA, or the World Bank against the loan for large payments. All payments related to the project will be handled centrally by the PT, and no funds will be transferred to any other agency/unit. All fund transfers will be between bank accounts and no cash transfers will take place, except for petty cash.



Figure 2.2. Funds Flow Diagram (WB Funds)



24. **Accounting policies and procedures.** Accounting practices of the project will be governed by the GoSL Financial Regulations and applicable circulars. Bank accounts will be reconciled on a monthly basis, and trial balances and financial statements will be prepared on a monthly basis to facilitate monitoring the progress of the project. The accounting and FM staff in the PT will coordinate closely with technical staff, where a systematic verification of invoices needs to be carried out before payment.

25. **Accounting system.** An automated accounting system will be introduced to manage the accounting aspects of the project. This system will be used for the generation of financial information by creating relevant modules/ledgers and chart of accounts. A separate chart of accounts and separate ledgers will be established for the project. The accounting system will facilitate the generation of expenditure reports by budget classification/components and subcomponents and enable comparison with the budget/components and effective monitoring of expenditure.

26. **Internal audit.** An internal auditor/internal audit firm will carry out the internal audit of the project under the overall guidance of the Secretary. The internal auditors will assess whether the funds have been disbursed on time and used effectively and efficiently for the intended purposes. This will provide further assurance on the legitimacy and the eligibility of the payments made from the loan proceeds. The findings of the internal audit will be reviewed by an Internal Audit Committee appointed for the project. The RDA will share the internal audit reports with the World Bank at agreed intervals.



27. **External audit and audit reports.** The annual external audit of the project financial statements will be carried out by the National Audit Office of Sri Lanka (NAOSL) and the audit report along with the Management Letter (ML) will be submitted by the PT to the World Bank within six months after the end of the financial year. Audit reports received by the World Bank will be disclosed on the World Bank’s external website for public access.

Table 2.3. Audit Reports

Implementing Agency	Audit Report	Auditor	Date
PT	Annual project financial statements and ML	Auditor General	June 30 each year

28. **Financial covenants.** The financial covenants related to the project will include (a) audited annual project financial statements to be submitted to the World Bank no later than the first six months of the following financial year and (b) IUFs to be submitted to the World Bank no later than 45 days following the end of the reporting quarter.

29. **FM Supervision.** Bank FM supervision for this project will consist of desk reviews of internal and external audit reports, including verification of the adequacy of the resolution of major audit observations and reviews of quarterly IUFs, supplemented by dialogue with the PT staff as needed, especially during the initial years of project implementation. FM supervision missions will be conducted at least once every six months. Other supervision tools and resources, such as transaction reviews and site visits, will be used to periodically monitor the adequacy of the FM system. In addition to the regular FM implementation support, the World Bank team will provide training, capacity building, and knowledge sharing for FM staff, internal audit staff, and the external audit staff, as required.

30. **Disbursement categories.** The World Bank will finance 100 percent of eligible expenditures for goods, works, non-consulting services, consulting services, training and workshops, and incremental operating costs of the project, including taxes.

Table 2.4. Disbursement Categories

Category	Amount of the Loan Allocated (expressed in USD)	Percentage of Expenditures to be financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services, Incremental Operating Costs and Training and Workshops for the Project	473,750,000	100%
(2) Matching Grants for Part B.3 of the Project	25,000,000	30%
(3) Emergency Expenditures	0	100%
(4) Front-end Fee	1,250,000	Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07 (b) of the General Conditions



(5) Interest Rate Cap or Interest Rate Collar premium	0	Amount due pursuant to Section 4.05 (c) of the General Conditions
TOTAL AMOUNT	500,000,000	

31. **Disbursement Condition.** Disbursements from the World Bank for the Matching Grants will be made after the Matching Grants Operations Manual has been adopted outlining the respective institutional responsibilities and cooperation arrangements, including FM arrangements.

32. **Incremental Operating Costs (IOC).** IOC means incremental expenditures incurred on account of management, implementation, and monitoring and evaluation, of the Project, including, but not limited to, maintenance of vehicles and equipment, fuel, office supplies, utilities, consumables, office rental and maintenance, bank charges, advertising expenses, travel expenses (including per diems, accommodation), and salaries, allowances and benefits of selected contracted staff, *but excluding salaries and salary top-ups of civil servants of the Borrower and other regular Government staff.* In the event any civil servant/regular Government staff is deputed/assigned to work for the project, such staff salaries & salary top ups should be absorbed by counterpart funds, based on a Government devised incentive program.

33. **Retroactive financing.** As requested by the Borrower, retroactive financing will be available for eligible expenditures under Component 1 and disbursement category 1, up to an aggregate amount not to exceed US\$75 million equivalent for payments made during the twelve months period up to the date of signature of the loan agreement. The Bank will review these expenditures to determine their eligibility for Bank financing. The Bank will review whether the activities are in line with the PDO/Project description and payments were made for items/activities procured in accordance with the Bank’s Procurement Regulations. These would also be subject to the Bank’s fiduciary and E&S requirements. The Borrower should demonstrate that it has the following in place: (i) adequate E&S risk mitigation procedures and staff; (ii) functioning Grievance Mechanism; (iii) E&S screening documents demonstrating risk assessments of the retroactively-financed sub-projects; and (iv) C-ESMPs or other sub-projects’ documentation showcasing applied mitigation measures proportionate to the identified E&S risks. In this case, the retroactive expenditure would primarily consist of civil works, consultancies and IOC. During project preparation the Bank assesses the project’s fiduciary and E&S arrangements. These arrangements are monitored and updated as needed during project implementation. The borrower records expenditures and transactions, including those subject to retroactive financing, using the agreed fiduciary and E&S systems.

34. **Matching Grants.** Component 2 includes supporting a matching grant program targeting eligible investments by agribusinesses. MoH/RDA may not have/have limited expertise to carry out the interventions listed under the component. Hence a sound mechanism may need to be developed to manage the matching grants including the applicable FM arrangements. Participating eligible business organizations will be considered as service providers and payments for these entities will be specified in the contractual agreements to be entered between MoH and the business organizations. The criteria to be considered in the matching grants process are included in the POM. Payments would be released in tranches, based on milestones. Beneficiaries of matching grants will confirm expenditures in their reports to claim replenishments from the project. The matching grant review committee established under MoH,



which will be a part of the PT, will review expenditures to ensure that funds are used for intended purposes. The recognition of expenditures in the IUFR would be at the point of reporting the use of funds by such business organizations. The PT would consolidate the IUFR, including the use of matching grants funds reported by the business organizations on a regular basis based on statement of expenditures, etc. Supporting documents would need to be attached and retained by the business organizations as evidence of payments incurred by matching grants funds. The internal audit and external audit would also cover a sample of such grants in as part of their audits.

35. Following criteria may also need to be considered in the matching grants process
- a) Business organizations considered should be in good financial health, clean audits, good track record, etc;
 - b) Grant proposals should be evaluated and scored with a clear methodology before selection
 - c) Business organizations should provide evidence that they have the funds available for their pre-agreed share of investment;
 - d) Matching grants should be awarded in tranches (eg in about 3 or 4 tranches, and at a minimum 2 tranches);
 - e) The first matching grant tranche (say 10 percent of total) should be given only after the business organization puts down their initial contribution.
 - f) The second tranche should be awarded after the company puts down at least 50 percent;
 - g) Verification by an accredited third party should be used by stages before each tranche is released;
 - h) Bank supervision may cover a representative sample of grant recipients.

Implementation Support

36. The PT will be provided with required training and capacity building for procurement, FM and ESF compliance to address the gaps identified through the capacity assessments. Additional support for supervision, technical design and ESF activities (such as screening) will be procured from the market, as necessary. The project includes provisions for specific capacity improvements such as climate resilient practices in road improvement, road safety measures and bidding for all relevant stakeholders in the public sector as well as in the local construction industry.

37. Specific training and capacity building on managing a Matching Grants Scheme will be provided for the relevant teams. Knowledge sharing, including lessons learnt, will be facilitated with the team handling the MGS activities under ASMP. The World Bank team will closely work with the MGS team to identify the capacity gaps and make provisions for necessary training.

38. The World Bank team expects to work closely with the PT throughout the implementation of the project with at least two supervision missions per year to review the progress of the project and address any deviations from expected implementation levels.



ANNEX 3: Detailed Project Description

COUNTRY: Sri Lanka

Inclusive Connectivity and Development Project

Component 1: Enhancing Safe and Climate Resilient Transport Connectivity (US\$448.75 million)

- 1. Sub-Component 1.1. Improving road transport connectivity (US\$435.00 million).** This sub-component will finance planning, review and monitoring, knowledge sharing, design, civil works, and contract management related to rehabilitation/improvement and maintenance of an estimated 3,000 km of priority rural roads in all nine provinces. It will also finance road safety audits and the incorporation of road safety interventions in design, construction and maintenance. The roads will be selected and prioritized for rehabilitation based on a prioritization framework using a comprehensive set of criteria, including climate and disaster vulnerabilities, improved connectivity of smallholder farmers to major agriculture economic centres and wholesale markets, connectivity to other social and economic facilities (such as hospitals and schools), and potential environmental and social impacts. During the first year, an estimated 500 km of road sections will be selected based on the prioritization framework developed under the project. The detailed design of about 77 km of roads to be rehabilitated or upgraded as “front runner investments” is complete and is being procured as part of the first-year activities.
- 2.** All selected rural roads financed under the project will be improved to withstand climate risks. Risk-based planning will be carried out through the integration of climate hazard maps to assess the vulnerability of the road sections, damages caused by such disasters and the impact of climate events on accessibility. The principles and intended outcomes of the network-level prioritization of the rural roads and details related to the adaptation measures are described in Annex 4.
- 3.** Specific improvements will include: (i) strengthening and sealing existing pavements, and improving and resizing culverts, bridges and other drainage structures; (ii) enhancing climate resilience to withstand flooding and landslides through bioengineering solutions to protect road slopes, improving drainage capacity and the use of resilient pavement materials (see Annex 4 for details); and (iii) improving safety features through alignment improvements, providing crash barriers, signage, and road markings. The use of innovative and sustainable construction materials will be explored to reduce costs and the impact on environment, as well as to optimize the use of scarce local materials.
- 4.** The contracts will be item-rate based and will include three-year performance-based maintenance for the preservation of road assets, enhanced resilience to climate events, and service levels. The project will explore the use of innovative maintenance contracts involving local communities/micro-enterprise contractors, with a clear strategy and action plan to form women’s community road maintenance groups to manage road maintenance activities.
- 5. Support in the management of connectivity emergencies.** Damage to road infrastructure due to natural disasters such as floods and washaways is common in Sri Lanka. There is therefore a need to improve institutional capacity to manage these occurrences. For this purpose, the MoH will acquire a set of modular bridges and related tools, equipment, and materials to be used as needed across the entire network to maintain connectivity. This procurement will be limited to a maximum value of US\$5 million.



6. This component will also support the carrying out of feasibility studies, preparation of project reports and bid documents, management of the procurement process including bid evaluations, supervision of contracts, technical audits and investigations, and other related work.

Details of the Front Runner Investments

7. Twenty-two roads have been prepared for immediate rehabilitation. The main issues with respect to these roads are:

- a. Located in highly vulnerable zones –These roads are subject to heavy flooding (the risk is assessed as very high compared to the rest of the country) that needs to be mitigated to ensure access of poor rural communities to key economic centers.
- b. Poor surface conditions – The road surface has deteriorated in most sections, with high severity distresses. The majority were macadam type roads.
- c. Non-standard road design – These roads did not have a standard design with respect to cross section profile, vertical and horizontal alignment.
- d. Poor drainage – There is limited or no drainage provision along these roads; this severely affects the road function during rainfall events and the long-term resilience of the pavement structure during frequent inundation.
- e. Lack of road safety infrastructure – There were no sign boards, road markings, or roadside barriers at hazardous locations along these roads, and no speed management measures near high-risk locations, such as schools and built-up town areas.

Selection of Province for Front Runner Roads

8. Rathnapura District in Sabaragamuwa Province is particularly susceptible to weather related impacts. The Rathnapura meteorological station received a rainfall of 3672 mm in 2019 (the highest value recorded in 2019 in the country) and the highest number of rainy days (219). Sabaragamuwa Province performs poorly in many socio-economic indicators:³¹

- a. 3rd lowest mean household income level (Rs. 49,057).
- b. 3rd lowest literacy level (91.5 percent) in the country.
- c. Highest rate (5.1 percent) of children who are not attending school.

9. The province is also in line with other key objectives of the project:

- a. 44.9 percent of the employment is in the agriculture, forestry, and fisheries sector. However, it only contributes nine percent of the Provincial GDP.
- b. 13.1 percent of the average household expenditure for non-food items is on transport, the highest among all provinces.
- c. Motor vehicle registrations in the Sabaragamuwa give an indication of the level of motorization, especially for small vehicle categories such as motorcycles and three-wheelers,

³¹ Central Bank of Sri Lanka, Annual Report 2020, Special Statistical Appendix



which are used for short distance trips. There are more than 260,000 three-wheelers and motorcycles registered in Sabaragamuwa Province, which is nearly 75 percent of the total vehicle fleet. There was a significant vehicle growth rate during the period 2010-2018, when the total number of vehicle registrations increased from 161,242 to 356,964, i.e., at 10.42 percent GAGR; the majority of this growth is attributed to the increase in motorcycles and three-wheelers.

- d. Ratnapura District recorded a significant increase in road accidents during 2008-2017, an increase of 70 percent (6.07 percent CAGR)³². Although data is not available separately for national and rural roads, this suggests that road infrastructure has not improved sufficiently to reduce road accidents.

10. **Sub-Component 1.2. Improving institutional and policy framework of the road sector (US\$5.00 million).** The sub-component aims to improve the overall management of the road sector to sustain and increase efficiencies and improve its ability to respond to evolving connectivity needs and challenges. It includes the following:

- a. Formulating a practical strategy to consolidate and manage rural roads systematically in order to improve transport connectivity for the rural population under the GoSL's 100,000 km rural roads program, with climate change and resilience planning as part of the decision-making process. This will include developing a rationalized road improvement program targeting the provincial and rural road network as a blueprint on which this and other investments in non-national roads would be implemented.
- b. Reviewing the institutional set up to identify opportunities for streamlining the structure and mandates of public institutions responsible for managing the road sector, including the road safety and climate agendas, with particular emphasis on the provincial and rural network. This will involve an in-depth study of the institutional and policy level challenges faced by the sector, including stakeholder consultations. The study will particularly focus on the best way to consolidate the management of Class C and below roads.
- c. Exploring different mechanisms to improve the financing of resilient road construction and maintenance of rural roads within the governing framework.

11. **Sub-Component 1.3. Road sector and community capacity enhancement (US\$8.75 million).** This sub-component will focus on building the immediate and medium-term capacity of the relevant stakeholders in the road sector.

12. *Capacity building for public sector institution*

- i. *Road management practices.* This will include support for improving existing road network planning and investment by drawing in from the "Integrated Planning Model for Resilient Transport Networks in South Asia", developed by the World Bank under the Climate Support Facility (CSF) grant. It will also support the adoption of the Road Asset Management System (RAMS) at the provincial level. This activity will support training for engineers and technicians

³² H.R.Pasindu, Analysis of Road Accidents in Sri Lanka 2008-2017, Report prepared for the World Health Organization



- in identified areas for road planning, design, construction and maintenance. A rapid needs assessment will be carried out to identify requirements for the adoption of Information and Communication Technology (ICT) facilities, engineering quality assurance facilities, research and other operational equipment to the institutions, and the procurement of such facilities.
- ii. *Climate resilient road network planning, design, maintenance and knowledge development.* This will provide training on climate resilient network planning, in particular prioritizing roads for rehabilitation based on the level of climate vulnerability, use of sustainable materials and construction methods and nature-based solutions to mitigate landslides, assistance in reviewing and updating road sector designs, standards and guidelines to incorporate climate resilience aspects as well as the development and adoption of technical guidelines on bioengineered solutions for rural and peri-urban road construction.
 - iii. *Road safety management.* This will support establishing and strengthening a dedicated road safety unit in RDA, updating and implementing national road safety action plans, rock fall management and mitigation, and the rollout of the crash data management system throughout the country³³.
 - iv. RDA and local contractors will be provided training and awareness sessions on sexual harassment and gender-based violence (GBV), particularly on prevention and management of complaints in road development activities.
13. *Capacity building for service providers in the local construction industry.* This will support capacity building for contractors in the local road construction industry on bidding, road safety standards, climate resilient road construction/maintenance, and the institutionalization of practices related to occupational and public health, as well as safety and environmental management.
14. *Capacity development for communities.* This will include capacity building and training for local community groups, including youth and women, in areas such as managing local development activities, including road maintenance and monitoring of roads and other infrastructure improvement works, community-based landslide monitoring and mitigation, and preserving bio-engineering and nature-based solutions, as well as climate and disaster risk management and preparedness planning. This will also support raising awareness and education on road safety, GBV and support services among communities in project financed areas.
15. *Incremental cost of project implementation.* This will finance eligible project management costs, such as costs associated with travel, office space, IT equipment and facilities, workshops, and other incidental expenses.

Component 2: Enhancing Supply Chain and Access to Services for Farmers (US\$50.00 million)

16. ***Sub-Component 2.1. Improving / establishing post-harvest centres (US\$10.00 million).*** The sub-component will support the construction and/or rehabilitation of post-harvest centres adjacent to the road networks being improved under the project. The post-harvest centres will typically serve farmers in

³³ A crash data management system has been piloted in ninety police stations in Western Province



approximately a two km surrounding area. Standard designs would be used for the post-harvest centers, that will enable farmers to aggregate, sort and grade, wash and clean, pack, process and temporarily store produce. There would be access points for farmers to unload produce and for buyers to load. A few collection centres for agriculture produce in the Rathnapura District are being identified for improvement. In subsequent years, investments would be identified jointly with the roads to be supported. The management and operation of these facilities would be carried out by the private sector and farmer organizations, as appropriate. This will replicate successful models currently being used in Sri Lanka with either management by a private company (such as the supermarket retailer Cargills) and/or management by farmer producer groups / cooperatives, as demonstrated under the ASMP. Capacity development will be provided to farmer groups to ensure that skills are in place to operate the facilities. Climate-resilient designs will be developed for the selected post-harvest centers based on relevant screening. The cooling/freezing facilities in the post-harvest centers will be operated using renewable energy where possible, as detailed in Annex 4.

17. **Sub-Component 2.2. Improving economic centers / wholesale markets (US\$12.00 million).** The 20(14 existing and 6 planned) dedicated economic centers (functioning as wholesale markets) around the country serve as publicly managed wholesale markets and handle the majority of fresh horticulture produce in the domestic marketing system. Although more integrated supply chains are becoming increasingly common and bypass economic centers, the centers continue to be important, in particular for rural farmers who are less connected. During the first year of the project, an assessment will be conducted to identify urgent investment needs in economic centers (market sheds, storage/warehousing facilities, produce handling etc.) in conjunction with an institutional review to improve the management of these facilities, including the prospects for bringing in private sector management. This would include a review of the Dambulla public storage facility that is currently under construction. Climate-resilient designs will be developed for the selected investments where required, based on relevant screening. The use of renewable energy will be promoted and maximized as detailed in Annex 4.

18. **Sub-Component 2.3. Supporting green and efficient value chains (US\$25.00 million).** Many aspects of the value chain are private goods, and the project would provide a mechanism to incentivize investments by the private sector to improve the agro-logistics sector. This sub-component would promote and leverage private investment in agro-logistics infrastructure and services to improve the efficiency of agriculture markets sourcing from the smallholder communities served by the public infrastructure provided under the project (roads, collection centers, etc). To achieve this, the project would fund a Matching Grant Scheme (MGS) to support these investments. A matching grant is a non-reimbursable transfer of funds to a beneficiary to match a specified contribution from the beneficiary to support the planning and implementation of an agreed intervention leading to a desired outcome. The matching grants would mobilize private capital from recipients amounting to US\$58 million.

19. The intended Matching Grant beneficiaries are businesses and enterprises engaged in all aspects of agro-logistics, including transportation, storage, handling, packaging and trade. All beneficiaries of Matching Grants are required to contribute their share of financing for the investment from their own capital, including from commercial sources of credit.

20. The MGS would support eligible investments by agribusinesses. The intended outcome of these investments is to benefit small-scale producers in the project areas. All proposals for investments would



therefore need to demonstrate how they would provide green and efficient services or infrastructure which benefit smallholder producers, including for crops and livestock, for example by providing a service directly targeting smallholders, providing infrastructure which would enable the beneficiary to increase the volume of produce sourced from smallholders, or reduce marketing costs which can demonstrably increase prices received by farmers. Priority would be given to women-owned and managed agribusinesses and to investments which can demonstrate impacts on female producers. Eligible investments could therefore include:

- i. Enhancing storage and processing capability by upgrading/ establishing cold storage facilities/ packhouses, ambient warehouses, and processing facilities.
- ii. Digital enablement of logistics facilities and transportation services, including digital enablement of aggregation, processing and wholesale/distribution platforms to support the flow of information on processing, trading, transaction, storage, and logistics activities.
- iii. Enhancing the provision of innovative and green logistics services, including:
 - a) Enhancing end-to-end handling and transportation services:by supporting handling service providers to offer logistics services and deliver commodities to exporters and domestic retailers.
 - b) Promoting clean transportation by deploying electric and solar battery run three-wheeler pickups, four-wheeler pickups, and small trucks for first-mile connectivity.

21. A negative list of items that would not to be financed under the MGS will be included in the Operations Manual. This would include investments that are assessed to have high environmental and social risks, including land acquisition, that are proposed by publicly owned companies, and that will not benefit the target group of smallholder farmers and producers.

22. Specifically, the sub-component would support:

- a) **Awareness campaigns**, including public advertisements and information workshops, to alert potential applicants of the matching grant scheme, including the eligibility criteria and terms and conditions, and the availability of technical assistance. A range of media would be used for the campaign, including newspapers, radio, television, social media and a specific internet site. Each advertisement campaign will be followed by national and regional workshops, which would target interested applicants. National and regional workshops would be essential to convey more detailed information on the processes and procedures involved in the MGS.
- b) **Technical assistance** provision to businesses that are planning to apply for the grant to guide them on meeting the requirements of the scheme, including social and environmental aspects. For smaller enterprises considering an application to the MGS, a service will be provided from the matching grants team established in the RDA, on request, to provide additional support for preparing the proposal (both the initial concept note and the full proposal). This would help ensure that all eligible enterprises, including those owned and managed by women, receive this tailored support to help develop the technical and commercial aspects of the proposals and ensure compliance with all requirements.



- c) **Matching grants.** The key features of the matching grants are: (i) the grant would be between US\$20,000 to US\$300,000; and (ii) the grant would finance a maximum of 30 percent of the investment. Therefore, the maximum investment to be financed would be US\$1 million (including a matching grant of US\$300,000 and a beneficiary contribution of US\$700,000). Applicants must be able to demonstrate that they have prior approval for their matching component (i.e. up to 70 percent of the investment financing). IBRD financing for the grant would be in the nature of joint co-financing. Details will be outlined in the Matching Grants Operations Manual.

23. An Operations Manual will be prepared to guide the implementation of the MGS. This Manual will guide the Matching Grants team in the RDA, the relevant implementation agencies and all other stakeholders engaged in the planning, execution, management, monitoring and evaluation, and technical/financial auditing of the MGS. A multi-step process will be specified in the Operations Manual.

24. **Sub-Component 2.4. Supporting research and development targeting value addition and agrologistics (US\$3 million).** Support for research and development, including policy analysis, to support appropriate technology and institutional frameworks for improved processing and value addition, agrologistics, strengthened sector institutions and enhanced private sector participation., including:

- i. **Supporting research and development** for technologies to reduce post-harvest losses, improve produce handling, enable improved packaging, labelling and branding, improved product traceability, and increased value addition within agriculture supply chains.
- ii. **Strengthening sector institutions and coordination / networks between them**, including universities and research organizations, by supporting institutional development activities of the entities.
- iii. **Supporting policy and regulatory framework development and promotion**, to enable small-holding farmers manage collectively and/or in partnership with intermediaries and traditional traders, the transaction risks associated with cost of searching, negotiation and verification, and soliciting handling and transportation services competitively.
- iv. **Enhancing private sector participation by promoting place-based policies to attract and enable the private sector**, including clustering economic activities (by establishing special economic zones, SEZs) around transport nodes/transport corridors, developing infrastructure and skills, as well as enhancing the policy environment.

Component 3: Contingent Emergency Response (US\$0.00 million)

25. This component will allow for rapid reallocation of 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. To trigger this component, the GoSL would need to declare an emergency or a state of a disaster or provide a statement of fact justifying the request for the activation of the use of emergency funding. To allocate funds to this component the GoSL may request the World Bank to re-allocate project funds to support response and reconstruction. If the World Bank agrees with the determination of the disaster, and associated response needs, this proposed component would draw resources from the



unallocated expenditure category and/or allow the government to request the World Bank to re-categorize and reallocate financing from other project components to cover emergency response and recovery costs. This component could also be used to channel additional funds should they become available as a result of an emergency. Disbursements would be made against a positive list of critical goods or the procurement of works, and consultant services required to support the immediate response and recovery needs. An Operations Manual will apply to this component, which will be part of the project operations manual, detailing financial management, procurement, safeguards and other necessary implementation arrangements following the World Bank guidelines and regulations.



ANNEX 4: Building Climate Resilience

COUNTRY: Sri Lanka Inclusive Connectivity and Development Project

Climate Change Vulnerability Context

1. Climate-related hazards pose a significant threat to economic and social development in Sri Lanka. Germanwatch's 2019 Global Climate Risk Index ranks Sri Lanka as the second-most climate change affected country in the world.³⁴ Climate hazards in Sri Lanka include floods, droughts, landslides, storm surge and cyclones. Climate change projections also suggest that the dry zones will become dryer and the wet zones will become wetter, with rainfall from the southwest monsoon projected to increase by 48 percent by 2050 and to decrease by 27–29 percent from the northeast monsoon.
2. These climate and natural disaster related vulnerabilities represent a major hurdle for the provision of sustainable and resilient transport services and access to social and economic facilities to rural farmers and communities. Extreme climate related events, flooding and landslides in particular in rural areas, cause road damage and transport disruptions that are expected to increase in the future. The Sri Lanka Rapid Post Disaster Needs Assessment (2017) notes that the impacts of climate induced disasters, especially landslides, were disproportionately larger for the poorest sectors of population. Local transport infrastructure, including rural and provincial roads, the only mode for rural farmers to reach markets, is thus more vulnerable to disaster risks due to a lack of strategic network planning, lack of climate-smart investment prioritization, generally poor design standards that do not account for increased climate variability, and lack of adequate maintenance. During the floods and landslides of 2017, transport was the second most affected sector after housing, with damage and losses amounting to LKR 13,076.2 million (US\$87.17 million). The impact of these disasters has resulted in increasing the already large road maintenance backlog, increased emergency rehabilitation requirements for the road network, and broader negative socio-economic impacts, including the loss of agriculture harvests and damages to arable land.
3. Considering Sri Lanka's high ranking on the Global Climate Risk Index and the above-mentioned climate change impacts on the transport sector, the need for a review of potential vulnerability and the necessary resilience measures is particularly compelling for the road network. With the current limited funding resources, the project's intent is thus to better plan and prioritize rural road and other infrastructure investments at the network level, based on the level of climate vulnerability to ensure sustained economic growth in rural areas.
4. In addition to the negative impacts of climate change on road transport, natural disasters also have direct implications on the agriculture sector in terms of direct crop losses and post-harvest losses. Post-harvest losses in Sri Lanka are predicted to further increase due to climate change, as warmer and wetter conditions increase fungal outbreaks of crops in storage, produce erratic pest outbreaks, and cause

³⁴ German watch 2019: Global Climate Risk Index 2019
(https://germanwatch.org/sites/germanwatch.org/files/Global%20Climate%20Risk%20Index%202019_2.pdf)



physical climate damage to road and agro-logistic infrastructure, including floods and landslides, thus preventing produce from reaching the consumer.

Specific Project Activities Addressing Climate Resilience and Mitigation

5. A specific approach was developed under this project to help improve climate-resilient road accessibility to socio-economic centers, markets, schools, and hospitals in the rural areas of Sri Lanka, as shown by the project's expected outcomes. Given the transport and economic losses from flooding, landslides, etc., the civil works component has been designed with climate resilience as the core focus to ensure the delivery of resilient transport and agro-logistics services at all times. This would be achieved by improving the planning and prioritization of investments in areas affected by climate change impacts through the use of GIS based planning and asset management tools, in addition to rehabilitating/paving all prioritized unpaved roads, i.e., gravel roads that would not necessarily have been paved/prioritized otherwise.

6. The issue of climate change will be addressed at the core of project design through adaptation and resilience measures from the planning and design stage, to the construction and subsequent maintenance period, to emergency planning (with capacity building to communities on disaster preparedness). As mentioned above, planning and design interventions will be informed by a network-level climate risk assessment (e.g., for more strategic prioritization of investments) and through technical standards (e.g., sizing of drainage structures, slope and soil protection measures, and use of resilient green and gray technology). The project will further focus on institutionalizing these practices within the road sector (under Components 1.2. and 1.3.) to ensure that climate vulnerabilities are given due consideration in investment decisions beyond the project for increased sustainability and impact on the country's economy.

7. While nearly 100 percent of national roads are paved, only 67 percent of the provincial roads and 13 percent of rural roads are paved and in good condition. Unpaved or gravel surfaced roads are more prone to washouts than paved roads during and after the monsoon seasons, resulting in disrupted transport services and access, and in disproportionately high cost of rehabilitation to bring them back to service. Component 1 will thus support and enhance the resilience of rural communities through the prioritization, rehabilitation, and upgradation of unpaved rural roads to paved roads to withstand climate vulnerabilities and to provide all-weather connectivity to critical socio-economic facilities.

8. The project will achieve the following:

(a) *Resilience Planning*. Better resilience planning will be achieved through the selection of roads based on climate vulnerability. The analysis (for all roads under the project) will be based on an integrated database that includes connection with agriculture, markets, schools, health centers, and flood and climate vulnerabilities. The analysis will then prioritize rural road investments by evaluating development gains from three dimensions: (i) promoting economic growth; (ii) promoting human development; and (iii) increasing climate resilience. The intended outcomes of the network-level prioritization of the rural roads are:



- Promoting economic growth. By integrating agricultural production data and market location data, this analysis evaluates the accessibility of rural farmers to markets as the key indicator to foster economic growth. It detects which rural road improvement interventions will lead to most accessibility gains for agriculture products and rural farmers at the network level. Accessibility is measured as the ability of rural farmers to reach collection centers/points and wholesale markets within a certain time.
- Promoting human development. This analysis uses location data of schools and hospitals to evaluate the accessibility of rural residents to key social services as the indicator to foster human development. It detects which rural road improvement interventions will lead to most accessibility gains for rural residents to reach the closest schools and hospitals within a certain time.
- Enhancing climate resilience. By integrating planning with the hazard maps, this analysis evaluates the vulnerability of rural roads to floods, landslides and other risks and the impact of disruptions to accessibility for economic growth and human development at the network level. Road vulnerability to climate and disaster risk is assessed by the exposure levels from flood / landslide maps and the type and condition of roads. This analysis detects which and what types of rural road improvement interventions will lead to most resilience gains overall for rural road infrastructure, as well as for the users to access key services.

(b) *Engineering and design.* Improved engineering will be implemented through incorporating climate resilient design features in road improvements to mitigate the impact of flooding and landslides. Adaptations solutions will be used to enhance the climate resilience of the current unpaved rural road infrastructure, including surface sealing/resilient pavement, raising flood-prone road sections above flood levels, constructing concrete pavement in selected flood vulnerable locations, strengthening or replacing bridges with the design structure to adapt to the changing hydrology and flooding risks in the area, improving the capacity of drainage systems, and introducing bioengineering solutions and nature-based solutions (such as grasses and tree planting as standalone practices or together with engineering solutions) to improve road slope protection.

(c) *Maintenance.* Climate-resilient maintenance is a critical part of project investments, and this component will support the development of climate resilient road maintenance plans (e.g., before the monsoon season).

(d) *Capacity building.* The capacity of the client to apply a climate resilient life cycle approach will be increased through the strengthening and/or operationalization of relevant systems (including the integrated planning model and Road Asset Management System) and training for road agencies, contractors and local communities.

9. Improved riding quality through the investments planned under Component 1 will also reduce fuel consumption and carbon emissions, as calculated as part of the GHG accounting. Road upgrading will reduce congestion, thus reducing vehicle fuel consumption and emissions.



10. Under Component 2, recognizing the direct impact of climate change on the transport and agricultural sectors as mentioned above, the project design ensures resilient transport connectivity to post-harvest centers and markets, as well as resilient design for the construction/rehabilitation of post-harvest centers, markets. Resilient design elements and construction techniques described in the table below will be calibrated and embedded in the building designs, based on relevant feasibility and design studies. These investments are expected to greatly minimize food waste, and thus the amounts of organic material entering landfills and decomposing on-site.

11. Efficient agro-logistics under Component 2 will also promote decarbonizing in the agriculture/food supply chain by enhancing the use of solar power for processing, handling, and trading activities at post-harvest centers and economic centers. Deploying electric and solar battery run three-wheeler pickups and small trucks will help achieve the ZERO carbon emission target from the first-mile agricultural/food supply chain transportation services. Digitizing freight transportation services will contribute to the reduction in carbon emissions by optimizing loads and reducing empty backhaul by scheduling delivery/collection from truck call points and/or warehouses/packhouses/processing facilities, while synchronizing transshipment to rail and/or waterways. The reduction of post-harvest losses will contribute to eliminating food wastage and improve solid waste management. The latter will also help produce clean energy.

12. With targeted investments for green and efficient value chains under Component 2.3, efficiencies gained from these activities (that are substantially more efficient than the replaced technologies or processes) will substantially reduce emissions. Supply chain connectivity enhancement will enable the improvement of the entire first-mile roads connecting smallholding farmers to collection points and wholesale markets, which will in return reduce traffic congestion and carbon emission. The supply chain analysis to be carried out in during the implementation of the front runner roads will estimate the carbon emission reduction from the agro-logistics interventions.

Table 4.1. Component-wise Climate Co-Benefits from Adaptation and Mitigation

Activities	Adaptation Actions	Mitigation Actions
Component 1: Enhancing Safe and Climate Resilient Transport Connectivity (US\$448.75 million)		
Sub-component 1.1: Improving road transport connectivity (US\$435.00 million)	<ul style="list-style-type: none"> • All road investments will be prioritized at the network-level based on climate vulnerabilities (resilience planning). • US\$400 million will support rehabilitation and improvement of prioritized rural roads with the core objective of withstanding climate vulnerabilities in the most vulnerable and poorest rural areas to provide economic opportunities. • Among the recommended interventions, resilient surface sealing is key; road pavements will be raised where required, and embankments will be protected as a mitigation measure against flooding. Low viscosity bituminous products, 	<ul style="list-style-type: none"> • Improved riding quality will reduce fuel consumption and carbon emissions, as calculated as part of the GHG accounting. Road upgrading will reduce congestion and vehicles in return will consume less fuel and reduce emissions.



Activities	Adaptation Actions	Mitigation Actions
	<p>with lower potential for bleeding and rutting will be considered for use in the wearing course in view of the projected raise in temperature. Slope stabilization measures, such as gabions and berms, will be provided to counteract the effects of landslides and storm surges where appropriate. The use of bio-engineering and nature-based solutions, such as grass and tree planting to improve road slope protection, will be maximized. The design of drainage structures will take the effects of more frequent and increased precipitation and potential changes in land use into consideration. The use of innovative and sustainable construction material will be explored to reduce costs and the impact on the environment, as well as to optimize the use of limited local materials.</p> <ul style="list-style-type: none"> • The road contracts will include three-to-five-year performance-based maintenance of roads. They will specifically include performance requirements for the improved preservation of road assets, enhanced resilience to climate events, and maintain service levels during the maintenance phase. The project will explore the potential for establishing community-based maintenance contracts for routine / periodic maintenance beyond the project period. 	
<p>Sub-component 1.2: Improving institutional and policy framework of the road sector (US\$5.00 million)</p>	<p>This sub-component will support the enhancement of the road sector policy framework and capacity building of policymakers. Financing under this component will help institutionalize climate change and resilience planning/financing practices (paras 6. and 8. above) through:</p> <ul style="list-style-type: none"> • Identification of current institutional and policy gaps and provision of recommendations to better integrate climate resilient development practices in investment prioritization and decision-making processes of the road sector. • Identification of opportunities for streamlining the structural set-up and mandates of public institutions responsible for managing the road sector, including road safety and climate agendas. 	



Activities	Adaptation Actions	Mitigation Actions
	<ul style="list-style-type: none"> • Piloting and institutionalizing financing mechanisms for climate-resilient rural road construction and maintenance, and disaster risk management. 	
<p>Sub-component 1.3: Road sector and community capacity enhancement (US\$8.75 million)</p>	<p>This sub-component will directly support capacity building on climate resilient life cycle road management through:</p> <ul style="list-style-type: none"> • Enhancement of the existing network level planning for climate-resilient access with the operationalization of the integrated planning module (for capital works) and operationalization of a Road Asset Management System (RAMS) (for maintenance works) with climate related data. • Building the capacity of RDA in implementing these improved tools. • Support RDA in reviewing and updating road sector design and construction standards, specifications, guidelines, and business processes to incorporate climate resilience, with a particular focus on: <ul style="list-style-type: none"> ○ The development and integration of a new technical guidance manual on resource efficiency in road construction, which will include reusing construction waste material for road, drainage and culvert design and construction, the use of alternative materials to bitumen and others. ○ The development of country specific resilient design standards, construction guidelines, and best practices for nature-based solutions for road infrastructure, including slope stabilization for landslide mitigation and erosion control on roads, standard designs for landscaping and greening along road corridors, and drainage solutions to drain excess water from the slopes through plants (evapo-transpiration) and the use of drainage. ○ The development and adoption of technical guidelines on specific screening and design criteria for the rehabilitation and construction of rural roads located within the buffer zones of protected areas to 	



Activities	Adaptation Actions	Mitigation Actions
	<p>minimize biodiversity loss and habitat connectivity.</p> <ul style="list-style-type: none"> ○ Land use planning based on vulnerability maps. ● Training for both road agencies and contractors on climate resilient road network planning, use of sustainable materials and construction methods, and nature-based solutions to mitigate landslides in road construction and climate resilient road maintenance practices. ● Capacity building to communities on community-based landslide monitoring and mitigation and climate related disaster preparedness planning. 	
Component 2: Enhancing Supply Chain and Access to Services for Farmers (US\$50 million)		
<p>Sub-component 2.1: Improving / establishing post-harvest post-harvest centers (US\$10.00 million)</p>	<ul style="list-style-type: none"> ● Climate-resilient design will be developed for the rehabilitation of post-harvest centers, with the following considerations where applicable: <ul style="list-style-type: none"> ○ resilient building structure and reinforced corners and exteriors ○ raised platforms/occupied spaces (adjusted above flood level) where required to enhance resilience against heavy rainfall and flooding ○ improve drainage control and prevent intrusion into buildings ○ protect mechanical and electrical equipment from flooding ○ provide backup power with islanding capability, in case of power outage during a post-climatic event ○ provision of on-site shelters for increased resilience and safety of farmers and users in case of severe climatic events. 	<ul style="list-style-type: none"> ● Reduce carbon emissions by enhancing vehicle efficiency through the consolidation of freight and reducing empty backhaul. ● Promoting the use of solar power for primary processing activities, handling services and lighting of post-harvest centers. ● Provision of electric and solar battery charging facilities. ● Reduction of post-harvest losses and therefore the potential to reduce the associated carbon emissions.
<p>Sub-component 2.2: Improving economic centers / wholesale markets (US\$12.00 million)</p>	<ul style="list-style-type: none"> ● Climate-resilient design will be developed for the construction/rehabilitation of economic centers with the following considerations, where applicable: <ul style="list-style-type: none"> ○ resilient building structures with reinforced corners and exteriors ○ raised platforms/occupied spaces (adjusted above the flood level) where required to enhance resilience against 	<ul style="list-style-type: none"> ● Promoting the use of solar power for markets/centers (e.g., lighting). ● Provision of electric and solar battery charging storage facilities. ● Reduction of post-harvest losses and



Activities	Adaptation Actions	Mitigation Actions
	<p>heavy rainfall and flooding</p> <ul style="list-style-type: none"> ○ improve drainage control and prevent intrusion into buildings ○ protect mechanical and electrical equipment from flooding ○ install sewer backflow preventers ○ provide backup power with islanding capability in case of power outage during post-climatic event ○ provision of on-site shelters for increased resilience and safety of farmers and users in case of severe climatic events 	<p>therefore the potential to reduce the associated carbon emissions.</p>
<p>Sub-component 2.3: Supporting green and efficient value chains (US\$25.00 million)</p>		<ul style="list-style-type: none"> ● The entire sub-component finances targeted investments for resource efficiency in agricultural processes and supply chains. (cf. para 12 above and Annex 3). ● Decarbonizing the agriculture/food supply chain by deploying electric and solar battery run three-wheeler pickups and small trucks. Leveraging the electric and solar battery technology logistics services in the agriculture supply chain is targeting ZERO emission in the long run. ● Digitizing freight transport will reduce carbon emissions by load optimization and reducing empty backhaul.
<p>Sub-component 2.4: Supporting Research and Development for Value Addition and</p>		<ul style="list-style-type: none"> ● The agro-logistics policy will promote the efficiency of agricultural processes and supply chains, as well as



Activities	Adaptation Actions	Mitigation Actions
Agro-logistics (US\$3.00 million)		decarbonizing logistics services in the agriculture/food supply chain by enhancing the use of solar power for processing, handling, and trading activities at post-harvest centers and economic centers. The policy incentives for increased efficiency and for deploying electric and solar battery run vehicles and digitizing freight transportation services will significantly contribute to the reduction of carbon emissions.

13. The project will monitor the progress of these activities through the following indicators:
- a. PDO indicator: Project beneficiaries with improved climate resilient road access to markets, schools and health facilities in selected districts in project-financed areas.
 - b. Intermediate indicator: Climate resilient road maintenance plans prepared on an annual basis.