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November 7, 2019

Closing Date: Tuesday, November 26, 2019 at 6:00 p.m.

FROM: Vice President and Corporate Secretary

Timor-Leste – Timor-Leste Branch Roads Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed credit to Timor-Leste for a Timor-Leste Branch Roads Project (IDA/R2019-0308), which is being processed on an absence-of-objection basis.

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Report No: PAD3216

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 42.5 MILLION
(US\$59.0 MILLION EQUIVALENT)

TO THE

DEMOCRATIC REPUBLIC OF TIMOR-LESTE

FOR A

TIMOR-LESTE BRANCH ROADS PROJECT

November 1, 2019

Transport Global Practice
East Asia And Pacific Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective June 30, 2019)

Currency Unit = United States Dollar (US\$)

SDR 0.71932 = US\$1

US\$1.39021 = SDR 1

FISCAL YEAR

January 1 - December 31

Vice President: Victoria Kwakwa

Country Director: Rodrigo A. Chaves

Regional Director: Ranjit Lamech

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ABBREVIATIONS AND ACRONYMS

AADT	Annual Average Daily Traffic
ADB	Asian Development Bank
ADN	Agência de Desenvolvimento Nacional (National Development Agency)
CAFI	Conselho de Administração do Fundo Infraestrutura (Council for the Administration of the Infrastructure Fund)
CERC	Contingent Emergency Response Component
CESMP	Contractor's Environmental and Social Management Plan
CO ₂	Carbon Dioxide
DA	Designated Account
DED	Detailed Engineering Design
DFAT	Department of Foreign Affairs and Trade
DG	Director General
DRBFC	Directorate of Roads, Bridges and Flood Control
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
ESHS	Environmental, Social, Health and Safety
ESMP	Environmental and Social Management Plan
EU	European Union
FM	Financial Management
GBV	Gender-based Violence
GDP	Gross Domestic Product
GoTL	Government of Timor-Leste
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IAU	Inspection and Audit Unit
ICB	International Competitive Bidding
ICR	Implementation Completion and Results Report
IDA	International Development Association
ILO	International Labour Organization
IPF	Investment Project Financing
IRI	International Roughness Index
JICA	Japan International Cooperation Agency
Km	Kilometers
LARAP	Land Acquisition and Resettlement Action Plan
MPS	Major Project Secretariat
MPW	Ministry of Public Works
MSSI	Ministry of Social Solidarity and Inclusion
MTC	Ministry of Transport and Communications

NGO	Non-Governmental Organization
NPC	National Procurement Commission
NPV	Net Present Value
OHS	Occupational Health and Safety
OP/BP	Operational Policy/Bank Procedure
PAD	Project Appraisal Document
PDO	Project Development Objective
PMU	Project Management Unit
POM	Project Operations Manual
RCRP	Road Climate Resilience Project
RED	Roads Economic Decision Model
R4D	Roads for Development
ROW	Right of Way
RP	Resettlement Plan
RPF	Resettlement Policy Framework
SCD	Systematic Country Diagnostic
SDP	Strategic Development Plan
SDR	Special Drawing Rights
SEA	Sexual Exploitation and Abuse
SORT	Systematic Operations Risk-rating Tool
TA	Technical Assistance
TLBRP	Timor-Leste Branch Roads Project
TOR	Terms of Reference
TSMP	Transport Sector Master Plan
TST	Technical Support Team
US\$	United States Dollar

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Timor-Leste	Timor-Leste Branch Roads Project	
Project ID	Financing Instrument	Environmental Assessment Category
P155203	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

☐ Multiphase Programmatic Approach (MPA)	☒ Contingent Emergency Response Component (CERC)
☐ Series of Projects (SOP)	☒ Fragile State(s)
☐ Disbursement-linked Indicators (DLIs)	☒ Small State(s)
☐ Financial Intermediaries (FI)	☐ Fragile within a non-fragile Country
☐ Project-Based Guarantee	☐ Conflict
☐ Deferred Drawdown	☐ Responding to Natural or Man-made Disaster
☐ Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
19-Nov-2019	31-Dec-2025

Bank/IFC Collaboration

No

Proposed Development Objective(s)

Improve road access, safety, and climate resilience on the Gleno–Maubisse Corridor and, in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency

Components

Component Name	Cost (US\$, millions)
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Component 1: Gleno–Maubisse Corridor Upgrading and Road Safety Improvement	65.81
Component 2: Institutional Strengthening and Project Management	5.00
Component 3: Contingent Emergency Response	0.00

Organizations

Borrower: Democratic Republic of Timor-Leste
Implementing Agency: Ministry of Public Works

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	70.81
Total Financing	70.81
of which IBRD/IDA	59.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Development Association (IDA)	59.00
IDA Credit	59.00

Non-World Bank Group Financing

Counterpart Funding	11.81
Borrower/Recipient	11.81

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Timor-Leste	59.00	0.00	0.00	59.00
National PBA	59.00	0.00	0.00	59.00



Total	59.00	0.00	0.00	59.00
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Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026
Annual	1.79	3.72	5.33	8.89	14.82	17.73	6.74
Cumulative	1.79	5.50	10.83	19.72	34.53	52.26	59.00

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

Climate Change and Disaster Screening

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

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial



5. Institutional Capacity for Implementation and Sustainability	● High
6. Fiduciary	● High
7. Environment and Social	● Substantial
8. Stakeholders	● Moderate
9. Other	
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

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants



Sections and Description

Schedule 2, Section I.A(3). The Recipient shall ensure that the PMU is adequately staffed and funded throughout the implementation of the Project satisfactory to the Association.

Sections and Description

Schedule 2, Section I.B. The Recipient shall ensure that the Project is carried out in accordance with the arrangements and procedures set out in the Project Operations Manual acceptable to the Association.

Sections and Description

Schedule 2, Section I.C(1). The Recipient shall prepare Annual work plan and budget for the following Fiscal Year by agreed dates and thereafter ensure that the Project is carried out in accordance with each of such Annual Work Plan and Budget in a manner satisfactory to the Association.

Sections and Description

Schedule 2, Section I.D. The Recipient shall ensure that all measures necessary or appropriate to ensure compliance with the Safeguards Instruments throughout the implementation of the Project in a manner satisfactory to the Association.

Sections and Description

Schedule 2, Section I.D(5). The Recipient shall maintain, throughout Project implementation, and publicize the availability of a grievance redress mechanism, in form and substance satisfactory to the Association and take all measures necessary to implement the determinations made by such mechanism in a manner satisfactory to the Association.

Sections and Description

Schedule 2, Section I.D(8). The Recipient shall ensure that the obligation to comply with the relevant Safeguard Instruments are incorporated: (a) in the contracts between the Recipient and the relevant contractors and any entity (including any engineer) supervising the Project's civil works; and (b) in the contracts between the relevant contractors and the contractors' subcontractors, as may be applicable.

Sections and Description

Schedule 2, Section I.D(9). The Recipient shall ensure that all the bidding documents and contracts include the obligation of the relevant contractors and subcontractors to: (a) adopt and implement measures to assess and manage the risks and impacts of labor influx and workers' camps including occupational health and safety and gender-based violence; and (b) adopt and enforce codes of conduct that should be provided to and signed by all workers; as applicable to such civil works commissioned or carried out pursuant to said contracts.

Sections and Description

Schedule 2, Section I.E. The Recipient shall, not later than six (6) months after Effective Date prepare and furnish to the Association for its review and approval, a Contingent Emergency Response Component Project Operations Manual ("CERC POM").

Sections and Description

Schedule 2, Section II.2. The Recipient shall carry out, jointly with the Association not later than three (3) years after



the Effective Date or such other date as may be agreed with the Association, a mid-term review of the Project (the “Mid-Term Review”).

Conditions

Type	Description
Effectiveness	The PMU has been duly established and adequately staffed as per Section I.A.3 of Schedule 2 to the Financing Agreement.
Type	Description
Effectiveness	The Project Operations Manual has been prepared as per Section I.B. of Schedule 2 to the Financing Agreement.



I. STRATEGIC CONTEXT

A. Country Context

- 1. Geography and demography.** Timor-Leste is a diverse, small island nation on the edge of Southeast Asia. A former Portuguese colony, Timor-Leste neighbors Indonesia and Australia and occupies the eastern half of the island of Timor in the Timor Sea, which connects with the Pacific Ocean to the East, Indian Ocean to the West, and South China Sea to the North via the Java Sea. It includes two other small islands (Atuaro and Jaco) and a small coastal enclave (Oecusse) in the western half of the Timor island. Measuring 14,874 square kilometers, one quarter of the country is classified as agricultural land and just 2.5 percent classified as urban land. The population density is relatively low, with about 1.296 million inhabitants in 2017. Most Timorese live in the western part of the country, which includes the capital city, Dili.
- 2.** The Timorese people descend from Austronesian, Melanesian, and proto-Malay populations, with some Western influence since the 16th century. There are 32 indigenous languages still spoken as mother-tongues in Timor-Leste today, with only 30 percent speaking the national language Tetum as a mother-tongue, and a further 55 percent speak it as a second language. As much as 98 percent of the population is Roman Catholic, with only 0.5 percent reporting a faith other than Christianity.
- 3.** More than half of Timor-Leste's population is under 20 years old. Estimates from the latest living standards survey show the poverty rate based on the national poverty line fell from 50.4 percent in 2007 to 41.8 percent nationwide in 2014. Poverty is a highly rural phenomenon, with 80 percent of the poor living in rural areas. The Central region has experienced the fastest fall in poverty. Despite having the lowest poverty rate, poverty in the Eastern region increased slightly between 2007 and 2014. Poverty incidence remains highest in the Western region, and particularly its rural areas. While rural areas concentrate most of the poor, Dili has the single largest cluster of poor people, where around 15 percent of the poor live (about 80,000 people). Poverty rate is higher in rural areas, at 47 percent (corresponding to 390,000 people), compared to 28 percent (100,000 people) in urban areas. Over half (53 percent) of all Timor-Leste's poor are in the Central region, the most populous area, which includes Dili and the district of Ermera. The other 28 percent of the poor live in the West and 19 percent in the East.
- 4. Economy.** Timor-Leste's gross domestic product (GDP) per capita was slightly under US\$2,000 in 2016, while non-oil GDP per capita was about US\$1,350. Non-oil GDP growth performance was disappointing in the early years of independence, but that changed markedly in 2007. Between 2007 and 2016, average annual growth was 6.9 percent and real GDP per capita rose by more than 4 percent per year on average. At the heart of this improvement was a decision to considerably scale up public expenditure, particularly on infrastructure projects and cash transfers. This increased spending was made possible with financing from the Petroleum Fund – a sovereign wealth fund that was established in 2005. With parliamentary approval, successive governments have been able to withdraw large amounts of resources that are held in the Fund. One petroleum field is now active (Bayu-Undan) but production is expected to stop in 3-4 years. The Petroleum Fund balance has been declining since 2014, owing to lower petroleum-related receipts and larger withdrawals. Economic growth in the non-oil sector has also slowed, averaging 4 percent per year between 2013 and 2016. The economy is estimated to have contracted in both 2017 and 2018 due to political and economic uncertainty. The mid-2017 elections led to a minority government that was not able to pass its program in parliament, and a new election was then called for May 2018. Without a state budget for the first 9 months of 2018, the economy suffered due to low public spending and low consumer confidence. Economic growth is forecast to resume in 2019 and reach about 5 percent by 2021.



5. **Agriculture and tourism have been identified as priority economic sectors in both the Timor-Leste Strategic Development Plan (SDP) 2011-2030 and the VIII Constitutional Government Program 2018-2023.** They are important contributors to the domestic economy, with agriculture representing 16 percent of (non-oil) gross value added and tourism estimated to account for 20 percent of (non-oil) exports. Although employment in agriculture has declined from 78 percent shortly after independence to 56 percent in 2015, the sector remains a key source of income for most of the population – especially for the poor. Increasing agricultural productivity is vital, but it is equally crucial to link farmers to domestic and international markets. Improving access to markets by reducing travel times and costs is therefore key for the development of the sector. Tourism is an important sector for stimulating economic diversification and job creation, especially for women and youth, and is already a key source of foreign exchange. With nearly 75,000 foreign visitors in 2017, generating US\$78 million in travel services receipts, the sector still has significant potential to grow. Timor-Leste can become an attractive tourist destination, especially given its environmental and cultural assets. Nonetheless, the sector faces some challenges, one of which relates to poor domestic connectivity. Improving access to tourist sites would contribute to expand the current offerings and stimulate demand.

6. **Vulnerability to climate change and natural disasters.** The country's tropical climate experiences distinct wet and dry seasons. Cyclones affect Timor-Leste often and bring heavy rains, as do seasonal monsoon rains, which cause human and economic losses. Located in the "Pacific Ring of Fire", the country faces a substantial risk of earthquakes and potentially tsunamis in a few points on the southern coast, especially affecting public infrastructure. Timor-Leste's mountainous terrain is prone to intense rainfalls, flooding, and frequent landslides, which often damage or destroy public infrastructure and homes. In January 2012, a landslide in Ainaro district caused damage to 70 houses, while another landslide in Aileu district on the same day caused damage to 15 houses.¹ Destructive winds and droughts further endanger agricultural productivity. Though climate change is likely to result in relatively severe weather variation, extreme events and sea-level rise, Timor-Leste's vulnerability to natural disaster is not considered to be extraordinarily high. However, with 42 percent of its population living below the poverty line, its capacity to cope and respond to these risks means that extreme events have a greater negative impact on people than in most other countries. According to projections, Timor-Leste's future climate is summarized as follows: (i) temperatures will increase by 0.4-1.0 degree Celsius by 2030; (ii) rise in number of hot days; (iii) increase in wet season rainfall; (iv) extreme rainfall days likely to occur more often; and, (v) decrease in frequency of tropical cyclones, but likely increase in intensity of cyclones.

7. **GoTL has a clear intention to address climate risks.** Timor-Leste is already experiencing the adverse effects of climate change and recognizes it will seriously undermine efforts towards resilience building, sustainable development and eradicating poverty. Timor-Leste continues to revise its policies in energy and climate change sectors in line with its sustainable development and has put in place institutional arrangements to manage its response to climate change.²

8. **Gender equality has been a fundamental principle in the country's developmental efforts and remains key to achieving sustainable development into the future.** School enrollment has rapidly increased, with girls' rate exceeding boys at each level of schooling. In 2010, 94 percent of primary school age girls and 92 percent of boys were enrolled in school. Significant gender inequalities remain – including high rates of violence against women and barriers to reproductive health care. Domestic violence is pervasive, maternal mortality remains high, and significant gender gaps continue in labor market and local governance participation. Early pregnancy is also major concern, with almost one-quarter of women in the country having a baby by the time they are 20. Early pregnancies are often swiftly followed by

¹ World Bank, Building Disaster/Climate Resilience in Timor-Leste, May 2015.

² E.g.: establishment of (i) National Directorate for Climate Change that serves as the hub of all GoTL engagement in climate change; (ii) focal points for Green Climate Fund and United Nations Framework Convention on Climate Change; and, (iii) Center for Climate Change and Biodiversity in cooperation with the National University of Timor-Leste.



marriages; 19 percent of girls are married by the time they are 18.

B. Sectoral and Institutional Context

9. **Road network.** Roads are the primary mode of transport in Timor-Leste. The country has an extensive road network totaling 6,941 km, consisting of 1,427 km of national roads; 812 km of district roads; 1,975 km of core rural roads; and, 3,567 km of non-core rural roads.³ The main network corridor runs along the northern fringe of the country from the Indonesian border in the west through the capital Dili and then eastward to the second largest city, Baucau, and beyond. The road network in the west is reasonably dense, serving a strong agricultural region. In the rest of the country, the road network consists of five north-south connectors linking the northern corridor across the mountainous spine to the east-west road along the southern coastal plain. These main road corridors are important as they connect potentially promising agricultural areas and new oil industry-related developments along the southern coast to the main population and more developed areas along the northern coast.

10. Nevertheless, much of this network is still in poor condition, mainly due to unsuitable design and underinvestment in maintenance. The results of the 2015 survey indicated that 13 percent of rural roads were rated good, 30 percent fair, 44 percent poor, and 13 percent very poor.⁴ Timor-Leste's slope instability and frequent landslides also pose a challenge to the provision of road transport. Data from 2011 study revealed that two-wheel drive cars could only drive at reasonable speeds on 20 percent of the national road network, and more than 6 percent were in such a poor condition that it was only passable by four-wheel drive vehicles. A deteriorated road network makes travel time longer, vehicles operating costs higher, and rural communities more isolated. It also has a negative impact on livelihoods and key basic services including employment, health, and education. In many cases, however, the roads were also not properly designed and lack sufficient drainage capacity. Due to the steep terrain, ground conditions, and local climate, slope instability is a major problem. Combined with the shortage of maintenance funds, these factors resulted in a necessary focus on emergency repairs and not systematic maintenance.

11. **Branch Roads on the Gleno–Maubisse corridor.** The branch roads play an important role for central Timor-Leste, linking its east to its west, while also serving transit traffic along the project road and on connections to the Dili–Ainaro (improved under the ongoing World Bank-funded Timor-Leste Road Climate Resilience Project) and the Gleno–Tibar corridors. The Gleno–Maubisse corridor starts at the city of Gleno, passes through the towns of Ermera, Letefoho, Hatubuilico, and Aituto and ends at the town of Maubisse. Gleno is a city 30 km to the southwest of Dili and is the capital of the municipality of Ermera. Maubisse is a historic town in the hills 70 km south of Dili, in Ainaro District. It is a popular tourist destination and a weekend visiting spot for people from the capital. Agricultural activities are evident along the corridor. The Ermera district concentrates particularly coffee producers. The Hatubuilico town is on the route to Timor-Leste's top tourist destination, Mount Ramelau. GoTL anticipates that in addition to the main goal of enhancing connectivity in the project areas, the project would help develop the agricultural and tourism sectors by improving road access specifically to the country's highest coffee producing areas and tourist destinations. TLBRP will improve the Gleno–Letefoho and Letefoho–Hatubuilico Junction sections of the corridor, while a second phase of the project will improve the Hatubuilico Junction–Aituto section and the links to the towns of Ermera and Hatubuilico. The section between Aituto and Maubisse was already improved.

12. **Traffic.** Overall traffic is low in Timor-Leste, only the northern link between the Indonesian border and Dili, and from Dili to the eastern region, having non-motorcycle traffic above 1,000 vehicles per day. Notwithstanding, there has

³ MPWTC, Rural Roads Master Plan, Investment Strategy 2016-2020, September 2015.

⁴ MPWTC, Rural Roads Master Plan, Investment Strategy 2016-2020, September 2015.



been rapid growth in the vehicle fleet with annual growth of about 28 percent between 2010 and 2013. Motorcycles make up approximately three-fourths of the fleet. In the proposed project roads, traffic is low with an Annual Average Daily Traffic (AADT) of 843 on the Gleno–Letefoho section and 418 on the Letefoho–Hatubuilico Junction section, based on the Classified Traffic Counts conducted in May 2018, with 69 percent being motorcycles.

13. **Road safety.** Timor-Leste’s poor road infrastructure condition and susceptibility to climate change and natural disasters make road safety measures utmost important for the well-being of road users. In 2016, according to the World Health Organization, road fatality rate was 12.7 fatalities per 100,000 population,⁵ with 161 estimated road traffic deaths in Timor-Leste that year.⁶ GoTL is in the process of developing a National Road Safety Plan that will be guided by the road safety activity framework set out in the Decade of Action for Road Safety 2011–2020. With the current administrative structure, the National Directorate of Road Safety is under the Ministry of Defense and Security; however, it is anticipated that responsibilities will be shifted to a National Land Transport Authority in coordination with Directorate of Land Transport, Timor-Leste National Police and other Government stakeholders, in leading efforts to address road safety and reduce road trauma. Improving safety of road infrastructure is the responsibility of the Directorate of Roads, Bridges and Flood Control (DRBFC).

14. **Road maintenance.** Effective road maintenance is essential to reduce high exposure to climate change and natural disasters, as well as prevent high costs for rehabilitation and reconstruction. In 2016, GoTL allocated US\$4 million to routine and periodic maintenance of national, district, and urban roads, while allocating US\$10 million for rural roads. A similar amount was allocated in 2017. The proposed budget to the Maintenance Department is just over US\$3 million, against a budget request of US\$13.6 million. Although the road maintenance department has increased its capacity in past years and has managed a number of maintenance contracts, it still lacks the necessary capacity and resources to keep up with the national roads alone, which have recently been upgraded. Periodic maintenance on national roads is rarely done and routine maintenance is done using one-year output-based contracts. Most of the maintenance budget is spent on emergency works.

15. **Institutional framework.** GoTL has prepared the SDP 2011–2030 to set out the development vision and long-term guide, which aims to rehabilitate all the existing roads by 2020, and establish a comprehensive road maintenance program by 2030, which seems very ambitious. The SDP includes a transport policy statement to provide the legal framework for transport infrastructure and services, as well as to defining the organization and management of the transport system in Timor-Leste.

16. To meet this vision and the connectivity objectives of the SDP, a Transport Sector Master Plan (TSMP) launched in March 2018 sets out to develop an ‘integrated transport framework of systems, services and facilities required to facilitate and underpin inclusive economic and social development’, which has targets for road upgrading that are more realistic. A key policy objective within the roads subsector is ‘to develop the core road network with major urban roads, roads linking municipalities to each other, upgraded municipal roads linking municipal centers with sub-municipalities, and rural roads that provide access to villages and the more remote areas.’ Improvements in all levels of road network – national, municipal, urban and rural road infrastructure – are to be constructed and maintained with proper standards and in good condition.

17. In terms of climate change policy, the Ministry of Commerce, Industry and Environment has been given a mandate

⁵ The road fatality rate is comparable to that in Indonesia (12.2) and below that of Papua New Guinea (14.2) but higher than that in Fiji (9.6).

⁶ World Health Organization, Global Status Report on Road Safety 2018, Geneva.



to coordinate climate change related issues. Timor-Leste signed Intended Nationally Determined Contribution in 2017, demonstrating the country's overall commitment towards the climate change agenda. However, both the SDP and TSMP are somewhat silent on how the transport sector will address climate resilience and disaster risk reduction.

18. In June 2018, the Eighth Constitutional Government was sworn in, and the former Ministry of Public Works, Transport and Communications was separated into (i) the Ministry of Public Works (MPW); and, (ii) the Ministry of Transport and Communications (MTC). MPW is responsible for the design, execution, coordination and evaluation of the policy defined and approved by the Council of Ministers in the areas of public works, urban planning, housing, water supply, distribution and management, sanitation and electricity; while MTC is responsible in the areas of civil, maritime and air transport, auxiliary services, communications, postal services, telegraph, telephone and other telecommunications and meteorological and geophysical services. The DRBFC under MPW is responsible for planning, developing, and maintaining national road network, including rural roads.⁷

C. Relevance to Higher Level Objectives

19. **A cornerstone of the World Bank Group's FY2013–FY2017 Country Partnership Strategy for the Democratic Republic of Timor-Leste focuses on building core infrastructure to connect communities to services and markets and reduce transaction costs.**⁸ More recently, the Timor-Leste Systematic Country Diagnostic (SCD) presents a key set of priorities along three pathways towards achieving the twin goals - of ending extreme poverty and boosting shared prosperity - through: (i) continuing to invest in human capital and improved service delivery; (ii) sustained economic growth and private sector job creation; and, (iii) sustainable management of both the natural environment and public finances.⁹ Successive governments have highlighted the priority of rebuilding Timor-Leste's connective infrastructure to support stronger economic growth. The project is well aligned with the objective of developing multi-purpose, proper and resilient connective infrastructure, since a large part of poor and vulnerable people live in rural areas and depend on transport for access to employment, markets, health, education, and social services. The forthcoming Country Partnership Framework for the period FY2019–FY2023 includes raising productivity through investments in connective infrastructure as a focal area, with the reduction in travel costs and travel time between farms and markets as a key outcome.

20. **The proposed project is also consistent with the SDP 2011–2030 and TSMP.** The project contributes to the SDP 2011–2030's objective of achieving 'national integration' by enhancing connections across the Timorese people in urban and rural areas. It also supports the SDP, of which the investment program focuses on rehabilitation and maintenance of existing infrastructure, including improvement of national and district roads to an international standard with drainage and slope protection works. Furthermore, the proposed investments are aligned with the TSMP's objectives, particularly core road network development, transport connectivity enhancement, and access improvement to rural villages and the more remote areas.

21. **The project supports the World Bank Group's twin goals of eliminating extreme poverty and boosting shared prosperity by providing a large share of the population with improved road access and contributing to more efficient access to markets and services.** Significant inequalities are observed in Timor-Leste in access to services. As indicated in

⁷ DRBFC has six line departments: (i) Roads Department; (ii) Projects Department; (iii) Analysis and Evaluation Department; (iv) Construction Department; (v) Maintenance and Conservation Department; and, (vi) Highways Construction and Management Department. These departments are supported by (i) Cooperation and Training Department; and (ii) Admin and Finance Support Unit.

⁸ World Bank, Country Partnership Strategy for the Democratic Republic of Timor-Leste for the period FY2013–FY2017, February 2013.

⁹ World Bank, Timor-Leste Systematic Country Diagnostic, 2018

the SCD, transport connectivity and proximity to secondary schools and healthcare facilities are lower, particularly among poor households in rural areas. The project will support improving connectivity, access to markets and services, and directly benefit road users on the project roads traversing coffee producing areas and connecting to the country's highest tourism destination. Improved access to markets and services along the road corridor will benefit a large share of population and contribute to national integration and economic development.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

22. The Project Development Objective (PDO) is to improve road access, safety, and climate resilience on the Gleno–Maubisse Corridor and, in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency.

PDO Level Indicators

23. The project will measure progress against the following proposed PDO-level results indicators:
- (a) Passenger car travel time on the project roads (Minutes);
 - (b) Number of villages with road safety measures (Number); and,
 - (c) Roads upgraded with climate resilience measures (Kilometer).

Intermediate Indicators

24. The project will monitor the following intermediate indicators during project implementation:
- (a) Roads rehabilitated (Kilometers);¹⁰
 - (b) Number of people with enhanced access to transportation services (Number);
 - (c) Design and construction stages technical audits on the project road including road safety and climate resilient aspects (Yes/No);
 - (d) National and district roads with updated road condition and traffic survey (Kilometers);
 - (e) National roads under multi-year maintenance contracts supported by the project (Kilometers);
 - (f) Adoption of CERC manual (Yes/No);
 - (g) Grievances responded and/or resolved within the stipulated service standards (Percentage); and,
 - (h) Percentage of women working on maintenance activities of multi-year maintenance contracts supported by the project (Percentage).

¹⁰ This is one of the World Bank's Corporate Results Indicators (CRI) used in the road sector and is divided into (i) Rural; and, (ii) Non-rural Roads.



B. Project Components

25. **Component 1: Gleno–Maubisse Corridor Upgrading and Road Safety Improvements (estimated cost US\$65.8 million equivalent, of which US\$54.0 million financed by IDA).** This component consists of the civil works activities to be undertaken on the Gleno–Maubisse corridor and the road safety activities on the rest of the network. The activities include:

- (a) **Sub-component 1.1: Gleno–Letefoho and Letefoho–Hatubuilico Junction road sections upgrading (estimated cost US\$63.8 million equivalent, of which US\$52.0 million financed by IDA).** This component would upgrade the Gleno–Letefoho (25.8 km) and Letefoho–Hatubuilico Junction (18.5 km) road sections of the Gleno–Maubisse corridor (66.1 km) to national roads standards and will provide for maintenance of the road sections for three years after the defect liability period. The designs will incorporate climate resilience considerations, considering: (i) pavement upgrading with selective widening to bring the project roads to national standards (i.e., 6 m carriageway, 2 m shoulders, and 1 m drainage); (ii) improvement of drainage structures to meet forecasted rainfall volumes and intensities; and, (iii) construction or reinforcement of slope stabilization structures, including installation of bioengineering measures. Where roads pass through urban areas, attention will be given to safety improvements, orientation signage, bus stops, and sidewalks. GoTL proposed as a first phase of a program to improve the Gleno–Maubisse corridor, the two project road sections (totaling 44.3 km) based on the prioritization results of the feasibility study and the readiness for implementation. GoTL will define the second phase of the upgrading of the Gleno–Maubisse corridor¹¹ during implementation and envisages that this will be financed under an additional financing of TLBRP or as a new standalone project. This sub-component will finance the upgrading works and related supervision consultancy, the updating of the Gleno–Letefoho engineering design and safeguards documents, and maintenance for three years of the project roads, as well an allocated amount of US\$4.0 million equivalent, to be used for the upgrading of the Gleno–Letefoho section if needed according to the revised engineering design.
- (b) **Sub-component 1.2: Road Safety Improvements on National Roads (estimated cost US\$2.0 million equivalent financed by IDA).** This sub-component will cover civil works and/or goods to address road safety issues on roads other than on the Gleno–Maubisse corridor roads, such as road signage and pavement markings or black spot improvements, subject to a prioritization exercise. The project will support GoTL in identifying the locations of the road safety interventions and will confirm the scope of Sub-component 1.2 during implementation with support of a road safety advisor hired under the project.

26. **Component 2: Institutional Strengthening and Project Management (estimated cost US\$5.0 million equivalent financed by IDA).** This component aims at strengthening capabilities within MPW and DRBFC on issues related to road assets management, road safety and road maintenance. It will finance technical assistance, equipment, and operational costs associated with the implementation of the project. It will also finance studies required for the preparation of potential future investments in the road sector. This component is split into three sub-components, as detailed below.

- (a) **Sub-component 2.1: Technical Assistance (estimated cost US\$2.0 million equivalent financed by IDA).** This sub-component involves knowledge, capacity building, data and funding to support transport sector

¹¹ The remaining roads to be improved on the Gleno–Maubisse corridor are: (i) Hatubuilico Junction to Aituto road section (11.9 km); and, (ii) the links to the corridor of the towns of Ermera (4.8 km) and Hatubuilico (5.2 km). The road section between Aituto and Maubisse (9.9 km) was already improved under RCRP.



development. Technical Assistance activities include: (i) data collection on road inventory, traffic and condition on national and district roads (about 2,240 km) to update the Road Asset Management System¹² network data for supporting monitoring, planning and programming of road works; (ii) piloting of multi-year performance-based maintenance contracts on national roads¹³ through contractors using community-based groups with female participation, including strengthening supervision activities done by DRBFC; (iii) road safety capacity building program within MPW through the hiring of a road safety advisor to DRBFC;¹⁴ (iv) geotechnical capacity building program within MPW through the hiring of a geotechnical advisor to DRBFC;¹⁵ and, (v) training activities for MPW and related entities staff.

- (b) **Sub-component 2.2: Design of Future Projects (estimated cost US\$1.0 million equivalent financed by IDA).** This sub-component will finance feasibility/technical studies and designs required for the preparation of potential future investments in the road sector (about 40 km). It will finance the preparation of the second phase of the program to improve the Gleno–Maubisse Corridor, including: (i) the 5.2 km Hatubuilico Junction–Hatubuilico town section; and, (ii) the 4.8 km Humboe junction–Ermera town section, and other road sections, totaling about 30 km, to be selected during project implementation by GoTL and the World Bank.
- (c) **Sub-component 2.3: Project Support Contingency (estimated cost US\$2.0 million equivalent financed by IDA).** This sub-subcomponent will finance operational costs associated with implementation of the project, funding Project Management Unit (PMU) staff and operating costs, if needed, as well as gender-based violence (GBV) and sexual exploitation and abuse (SEA) prevention measures, and goods needed by the project. It also includes yearly audits of the project accounts that MPW will submit to the World Bank.

27. **Component 3: Contingent Emergency Response (US\$0 million).** Since Timor-Leste will remain vulnerable to climate change and severe weather events, even with the successful implementation of the first two components, supporting post-disaster recovery is an important feature of the project. This zero-dollar component is designed to provide swift response in the event of an Eligible Crisis or Emergency, by enabling GoTL to request the World Bank to reallocate project funds to support emergency response and reconstruction. The project will prepare a Contingent Emergency Response Component (CERC) Project Operations Manual (POM) within six months of project effectiveness (see Annex 3).

C. Project Beneficiaries

28. **Consumers, producers and traders along the Gleno–Maubisse corridor will benefit from reduction in transit costs and times for goods and passengers and from increase in agricultural and tourism activities.** The main beneficiaries of the project will be the 188,838 people (male 95,738, female: 93,100), accounting for 16 percent of the

¹² ILO, ADB and JICA are supporting the development of the Road Asset Management System. It is noted that climate features will be incorporated into the system.

¹³ GoTL will implement the maintenance contracts on Lots 1 and 3 of the ongoing RCRP (around 40 km) and other national roads to be selected by MPW during project implementation.

¹⁴ The tasks will include: training of MPW staff, assessment of national and district roads for road safety risks, preparation of road safety improvement works program, and road safety audits of project designs. GoTL expects the assignment to last for 8 months spread over two years.

¹⁵ The tasks will include: training of MPW staff, assessment of national and district roads for geotechnical hazards, preparation of road geotechnical remedies works program, and geotechnical audits of project designs. GoTL expect the assignment to last for 12 months spread over two years.



total population, living in the two districts (Ainaro and Ermera) directly served by the project road.¹⁶ These people will benefit from improved road access to markets and services along the project road and on connections to the Dili–Ainaro and the Gleno–Tibar corridors, with better road conditions resulting in reduced travel times and lower public transport costs. In some cases, the public transport options will likely also be improved, with buses and microlets complementing the trucks, pick-up or four-wheel drive vehicles on some routes, thereby increasing the safety and comfort of passengers using these services.

29. **Agricultural activities.** The proposed project road runs along the areas that produce various crops, including rice, maize, cassava, sweet potato, vegetables, beans, coffee, coconut, and fruits. Among these, coffee is Timor-Leste's second largest export commodity (after petroleum products) and the unique Timorese Arabica Robusta hybrid variety is well-regarded as an organic, single-source product, earning between US\$10 million and US\$20 million annually. While coffee producers are located throughout the country, they are concentrated particularly in Ermera district. It is anticipated that the proposed project will generate traffic associated with agricultural productivity in response to access improvements. Furthermore, better road access provided to farms will help reduce cost on road transportation, thus creating a higher value for the farm products and as a result bring a better income to the farmers and rural households. Road improvements will also improve access to markets and social services for women who play an essential role of providing for their families through their contributions to agriculture, fisheries, and raising livestock.¹⁷

30. **Tourism activities.** Hatubuilico town is on the route to Timor-Leste's top tourist destination, Mount Ramelau. The Ministry of Tourism recently reported 30,000 visitors (both domestic and international) to the mountain within the last 6 months alone. The Asia Foundation tourism survey found in 2017 that 90 percent of leisure travelers to the Ainaro district visited to hike Mount Ramelau and they would have passed through Hatubuilico town. To reach Hatubuilico, the road from Dili to Maubisse and continuing to Aituto is already vastly improved, and Hatubuilico has sufficient accommodation, guides and tourist facilities – the main obstacle holding back this town is the poor road conditions of the roads from Hatubuilico to Maubisse and from Hatubuilico to Gleno. GoTL anticipates that the project will help develop the tourism sector by improving road access to one of the country's most important tourist destination. In addition, there are plans to develop eco-tourism in the areas along the project road.

31. **Women as beneficiaries.** The project will improve access to markets and social services, which will have a positive impact on women who rely mostly on public transport for their mobility. Improvements in women's mobility will also contribute to their empowerment as family duties are a major constraint to women's participation in the labor force. These family duties may include subsistence agriculture activities where women are producing foods for the family, which is not counted as being in the labor force. Due to the improved roads, public transport services will become both safer and more frequent. Safety is a major issue to pedestrians, especially women and children who tend to walk mostly as their main mode of transport. The project will improve safety to pedestrians thorough the provision of speed reduction measures, sidewalks and signalized crossings near schools, markets and health facilities. In addition, the project will incorporate bus shelters on project design. The participation of women in all community consultations will be ensured and promoted. Resettlement activities will deal with both men and women including equal compensation for both.

D. Results Chain

32. TLBRP adopted a theory of change approach that is illustrated in Figure 1 below.

¹⁶ 2015 census figures.

¹⁷ Timor-Leste: Gender Country Assessment. Asian Development Bank. 2014.

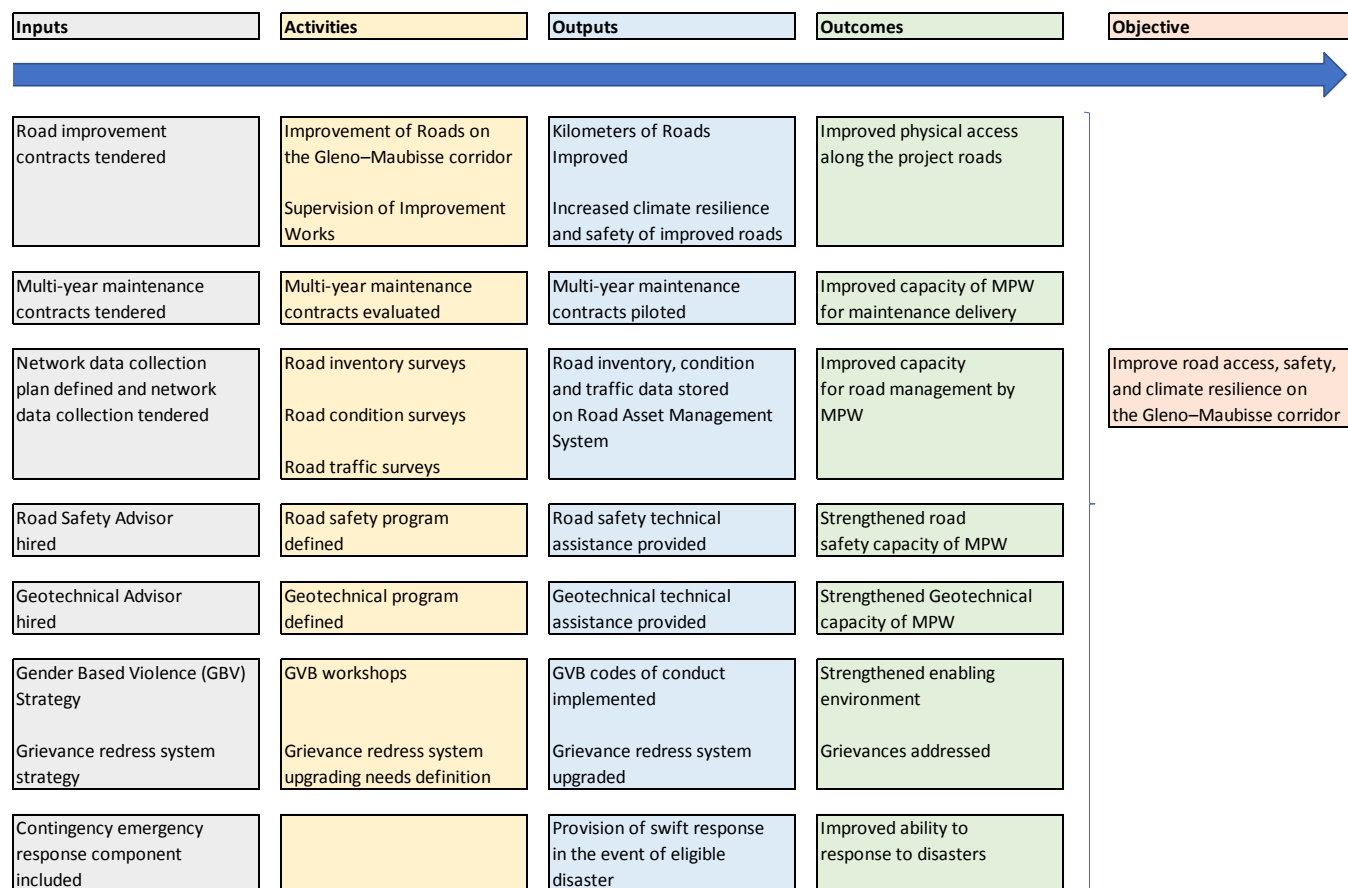


Figure 1: Theory of Change for Timor-Leste Branch Roads Project

E. Rationale for World Bank Involvement and Role of Partners

33. **Public sector financing is the proper vehicle for financing the proposed road improvements.** The project roads are public goods with levels of traffic that cannot be used to recover investment and maintenance costs directly through road-based tariffs. While the proposed multi-year road construction and maintenance contracts will promote private sector involvement in road upgrading and maintenance through a longer-term contract, no private financing is anticipated at this stage except for the possible introduction of road user charges. Nevertheless, the project will contribute to an increase in tax revenues collected from increased activities in agriculture and tourism that will generate more financial resources and will address transport connectivity bottlenecks related to tourism and agriculture development that will help unlock private investment in these sectors.

34. **Beyond financing, the World Bank's value added is in addressing key sectoral challenges in roads investment planning and prioritization, and sustainable asset management and maintenance.** The World Bank brings expertise in areas such as construction quality control, environmental and social management, and fiduciary controls. In addition, the World Bank has a strong value proposition to bring international best practice to support safe and climate resilience-oriented technical solutions in road designs.



35. **The project will complement ongoing investments by other donors, such as ADB, JICA, DFAT, and EU, to improve the road network of Timor-Leste.** The World Bank is financing the improvement of the 110 km north-south Dili–Ainaro corridor (passing through Maubisse) under the Road Climate Resilience Project (RCRP). The Asian Development Bank (ADB) has financed a series of transport sector projects, including national roads improvements along the north coast of the country, is co-financing with the Japan International Cooperation Agency (JICA) the upgrade of the Dili–Bacau road, and in February 2018 approved of a new project to upgrade the 58 km north-south Baucau–Viqueque road (GoTL signed the Loan Agreement on November 2018). The European Union (EU) has investments in rural and district roads currently under implementation.¹⁸ With the assistance of the Australian Department of Foreign Affairs and Trade (DFAT), the International Labour Organization (ILO) is assisting DRBFC to implement the Roads for Development (R4D) program that aims to ensure that women and men in rural Timor-Leste are deriving social and economic benefits from improved rural road access and has introduced rural roads maintenance regimes using trained community maintenance groups. GoTL expects that overall about 560 km or 39 percent of the most important sections of the national road network will be upgraded by the end of 2019.

36. **The project will complement institutional development activities by other donors.** ADB is financing the preparation of a comprehensive strategy and plan for road maintenance and strengthen the existing DRBFC maintenance unit, complementing JICA’s capacity building efforts and support to establish a road fund. ILO has implemented the R4D program that secures proper routine maintenance of rural roads by contracts that are performance-based and include the participation of local people, including women, on the routine maintenance works. All donors are working to establish a road asset management system by financing its development and network data collection.

F. Lessons Learned and Reflected in the Project Design

37. The project draws upon the experiences of RCRP and other donor-funded projects which have invested in similar road upgrading activities in Timor-Leste. Lessons learned specifically applicable to this project include:

- (a) **Flexibility and hand-holding in implementation.** Uncertainties and delays need to be factored into the project design and implementation process and schedule. Timor-Leste is a young nation that is still building its institutions and establishing rules and procedures. Therefore, in such a fragile context, flexibility, pragmatism and intensive hand-holding should be reflected in the project design and implementation.
- (b) **Improvement of safeguards procedures.** Processes to compensate people affected by the civil works did not exist and had to be established under RCRP, which caused delays on the compensation payments and road works. Similarly, environmental rules and procedures have evolved during RCRP implementation. TLBRP will make sure that GoTL concludes the process for compensations before the start of the civil works and will strengthen the environmental supervision of the civil works.
- (c) **Strengthening procurement and contract management functions.** The Government’s existing procurement management structure requires the procurement process of high value/complex contracts to be carried out centrally by the National Procurement Commission (NPC), while the PMU may carry out the remaining procurement under the project. Building on this arrangement, under TLBRP, the POM will make clear the

¹⁸ The link between the Gleno–Maubissi corridor and Ermera section connects with the 11.8 km Ermera–Fatubessi section where EU is providing grant for rehabilitation under the Road Network Upgrading Project. It is planned that this rehabilitation work will be completed by the end of 2019.



division of work, roles, responsibilities and accountabilities of NPC and PMU, including their consultants, in carrying out the procurement process under the project. TLBRP will also provide capacity building support, as well as include specific measures for enhancing due diligence and oversight of procurement and contract management under the project to ensure compliance with the World Bank Procurement Regulations and Anti-Corruption Guidelines.

- (d) **Incorporating geotechnical studies in design.** The engineering design of the project roads under RCRP did not consider extensively the geotechnical conditions of the terrain along the project roads resulting on some road works failures that require costly repairs. For TLBRP, technically-sound engineering designs will be prepared reflecting local conditions and incorporating climate risks including flooding, landslides, sea-level rise, and extreme heat. MPW will hire an international geotechnical expert to provide support on this matter.
- (e) **Technical assistance coordination.** There are various initiatives by development partners to address road maintenance and road asset management. However, these efforts have largely been fragmented and driven primarily by development partners' individual technical assistance and capacity support programs. TLBRP will fully coordinate its technical assistance activities with other donors to complement them.
- (f) **Continuation of using the joint PMU for all donor-financed projects.** This is an efficient way to implement projects since it enables sharing staff, experts and facilities, avoids reinventing the wheel under each project and facilitates problem solving across the board. TLBRP will have the same RCRP implementation arrangements. However, to help improve communication between the World Bank and the PMU, the project will have a World Bank Project Officer who will be dedicated to working on World Bank-funded projects. Furthermore, to strengthen the engagement of DRBFC in project implementation the Technical Support Team (TST) has been introduced as part of the new PMU structure to review engineering designs and undertake works supervision. With 10 DRBFC staff assigned to the TST, the new PMU will be better integrated into DRBFC, thereby ensuring ownership and sustainability of the project. This will also ensure smooth transition of the responsibility for the road back to DRBFC at the end of the project.
- (g) **Using well-tested labor-intensive, community-based road maintenance approaches.** Labor-intensive and community-based road maintenance have been implemented by development partners such as DFAT (through ILO) and ADB in the context of other road sector improvement projects in the country. TLBRP will adapt many valuable lessons, including those on the participation of communities and women, the provision of training and equipment, the strengthening of a sense of local ownership, and the management and transferability of funds from road maintenance activities to continue provide development benefits to the context of Timor-Leste.
- (h) **Mitigation of GBV risks in road projects.** The project's approach to mitigate and respond to address GBV risks, including SEA risks, is based on previous activities developed in similar country contexts and lessons learned from prior projects and international experience. GBV is a significant issue in Timor-Leste. GBV activities, ranging from prevention to provide support services to survivors of any GBV incidents, will be based on the approach recommended by the "Good Practice Note for Addressing Gender-Based Violence in Investment Project Financing involving Major Civil Works" issued by the World Bank in September 2018. The project will also have a dedicated GBV GRM to make sure that survivor information remains confidential and services are provided with survivor's consent.



III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

38. The executing agency will be the Council for the Administration of the Infrastructure Fund (CAFI),¹⁹ while the implementing agency will be MPW through DRBFC. The project will be implemented by the multi-donor PMU responsible for managing ADB, JICA, and World Bank projects, including RCRP on the Dili–Ainaro road. The PMU manages externally supported major road upgrading projects, being a single PMU in charge of project monitoring and reporting as well as the safeguards assessments and monitoring system, thereby reducing the project management costs. The PMU, headed by a Project Manager, reports to MPW and is staffed with local and international consultants.²⁰ In December 2018, GoTL started a process of restructuring the staffing of the PMU to promote more effective capacity building of MPW staff, include more MPW staff to support the PMU activities, and strengthen the management of the PMU's portfolio of projects, with an intention to integrate the PMU more into the MPW structure. As of July 2019, the restructuring of the PMU is ongoing with support of ADB, World Bank and other donors (See Annex 1). GoTL will strengthen the PMU staff under the project by hiring a World Bank Project Officer who will be dedicated to World Bank-funded projects. The NPC²¹ handles all public procurement above a value of US\$1 million and will procure all contracts under the project following World Bank Procurement Regulations. The project implementation period will be about six years with an expected closing date of December 31, 2025.

39. **Project Operations Manual (POM).** The PMU will implement the project following a POM, which contains detailed information on the project implementation arrangements and processes, including procurement, financial management (FM) and safeguards. The POM will be adapted from the RCRP POM.

B. Results Monitoring and Evaluation Arrangements

40. The Results Framework presents the indicators and baseline data to monitor the outputs and outcomes of the proposed project. Data needed for monitoring and evaluation (M&E) of Component 1 consists of: (a) passenger cars travel times; (b) kilometers of roads upgraded with climate resilience measures; and, (c) number of villages with road safety measures. MPW will collect these data as part of its annual network-level surveys. MPW will report the outcome indicators in its annual report and the output indicators in the semi-annual reports. Key data needed for M&E of Component 2 consists of: (a) kilometers of national roads under multi-year maintenance contracts; and, (b) kilometers of national and district roads with updated road condition and traffic survey.

41. Reporting on the requirements set forth in the EMP and RAP and RPF will be prepared by the PMU and submitted quarterly to the World Bank for review. A PMU Engineer will monitor and report progress on design and construction. The PMU will include experts in engineering designs, safety, environmental, social and contract management among others. In addition, semi-annual implementation progress reviews shall be carried out each year jointly by the Borrower

¹⁹ CAFI is the government's infrastructure fund, which is administratively and technically supported by the government's Major Projects Secretariat.

²⁰ In 2018, the PMU had 22 established positions. Among these, 16 were employed (of which eight were international) and six were about to be or planned to be employed. However, in 2019, the PMU is undergoing a restructuring of its staff, thus, starting on January 2019, the contracts of the international consultants were not renewed (See Annex 1).

²¹ NPC was established under Decree Law 14/2011. NPC's directive is to handle all project procurement activities, i.e., with value of more than US\$1 million and to provide procurement services to the line ministries and other public entities in major infrastructure projects and achieve proper transparency for the State procurement process.



and the World Bank. These reviews will cover: (a) progress in meeting the PDO; and, (b) overall project performance against project monitoring indicators. A Mid-Term Review will be undertaken not later than three years after the Effective Date to more comprehensively assess implementation progress and set out any measures to make sure continued efficient implementation and the achievement of the PDO by the project's closing date.

C. Sustainability

42. **Investments made by the project are expected to be sustainable.** The primary measure of sustainability is whether the project will provide satisfactory ride quality and safety over the design life. Updating of the road asset management system with the support of the World Bank and other donors will allow planning and programming of maintenance works along the corridor after construction completion and on the entire road network. The project will ensure the sustainability of investments by the maintenance carried out by multi-year performance-based maintenance contracts to be setup as part of the project. TLBRP will pursue the necessary financial arrangements for a sustainable maintenance program for the road network, supporting the possible implementation of a road fund.

IV. PROJECT APPRAISAL SUMMARY

A. Technical and Economic Analysis

Technical

43. **The project roads are in very poor condition.** They have damaged pavement or no pavement at all, lack of drainage and protection structures, and missing road safety equipment. The project will upgrade the project roads widening the existing roads to 6.0 m, following the existing roads alignment to minimize land acquisition, resettlement, earthworks and other costly construction requirements. It will strengthen the subbase and base courses and will include a 50 mm asphalt concrete surface layer. It will further improve climate resilience, drainage, slope protection measures, retaining structures and bioengineering measures, based on hydrology, hydraulic and geotechnical analyses. To improve road safety, the project will implement safety barriers and speed reduction measures where pedestrian traffic is high, such as near schools, clinics government offices, and markets, including proper, bump strips, line markings and road signing. In addition, the project will include sidewalks and bus stops on populated areas as necessary.

44. **The project will limit the civil works to upgrading of the project roads to national standards to improve the climate resilience, road pavement ride quality and safety of pedestrians and motorized and non-motorized traffic and implement road safety works.** MPW has hired design consultants who are working on the engineering designs and the safeguards documentation. The respective detailed designs and bidding documents will be completed before project effectiveness.

45. **Adaptation and mitigation climate change co-benefits are expected.** The project will contribute to the overall national climate policy objective. A key requirement of the design process will be to address climate vulnerability of the roads improved. In addition to the incorporation of these considerations into the actual designs, a geotechnical expert will be hired under the project who will evaluate the road network hazards including climate risks. The results could be used in a multi-criteria analysis for selecting future road investments in Timor-Leste. Moreover, the project will also finance consultancy services for an independent technical auditor to check the quality of the project roads, including climate resilience and road safety aspects. Climate co-benefits will come from improved drainage, slope stabilization

measures (including the planting of trees/grass/bushes as bioengineering measures) on mountainous roads, all-weather surfaces, and sidewalks and bus stops that will support public transit and pedestrian mobility. In addition, effective and timely maintenance is the most important measure to mitigate the damage in the event of increased extreme weather resulting from climate change, and these initiatives will contribute toward the improvement in the climate resilience of the project roads. The project will help the implementation of maintenance contracts on national roads, including service levels proper for national roads. The project will support planning and programming of road rehabilitation and maintenance works by supporting the road network data collection for the road asset management system.

Economic Analysis

46. **The project will improve the Gleno–Maubisse corridor to provide better rural connectivity.** The roads to be upgraded are in very poor condition and represent a constraint to regional transport connectivity. The proposed project will achieve improved riding quality and safety of journeys, thereby causing a reduction in vehicle operating costs and travel time and providing more reliable access to economic centers. The overall impact will be to provide an improved regional transport link, which will not only generate road user benefits but also create productivity gains across the agricultural and tourism sectors. In addition to these economic gains, the upgraded roads will provide improved access to social infrastructure and services.

47. **A traditional Cost Benefit Analysis was done using the Roads Economic Decision (RED) Model,** which estimates the annual road agency and user's costs (vehicle operating costs, travel time costs, and CO₂ emission costs) over the evaluation period. The economic evaluation considers an evaluation of 20 years, a discount rate of 6 percent, and a conversion factor of 0.85 to estimate economic costs. The project roads are unpaved roads in poor to very poor condition with an average international roughness index (IRI) ranging from 16 to 20.0 m/km. The current AADT ranges from 418 to 843 vehicles per day of which around 70 percent are motorcycles.

48. The overall economic internal rate of return (EIRR) of the project is 14.6 percent and the NPV is US\$50.9 million. Both road sections have EIRRs above 6 percent, ranging from 11.3 percent to 16.6 percent. If construction costs were 20 percent higher and the annual traffic growth rates were 20 percent lower, the overall EIRR will reduce to 9.5 percent. Switching values analysis shows that construction costs would have to increase by 106 percent for the overall EIRR to reach 6 percent. Table 1 summarizes the outcomes of the economic evaluation, with more details provided in Annex 4.

Table 1: Economic Evaluation Results

No	Road Section	EIRR (%)	NPV (M US\$)	B/C Ratio
1	Gleno–Letefoho	16.6%	39.47	2.4
2	Letefoho–Hatubuilico Junction	11.3%	11.44	1.6
Total		14.6%	50.91	2.1

49. The net CO₂ emissions over the 20-year evaluation period are 8,824 tons, corresponding to 441 tons per year. The gross emissions without the project are 83,041 tons while the gross emissions with the project are 91,865 tons. The increase in the CO₂ emissions is due to the generated traffic.



B. Fiduciary

Financial Management

50. The World Bank carried out an initial FM assessment of the implementing agency to determine whether their FM systems have the capacity to produce timely, relevant and reliable financial information on project activities. The assessment also aimed to determine if the accounting systems for project expenditures and underlying internal controls are adequate to meet fiduciary objectives, allow the World Bank to monitor compliance with agreed implementation procedures, and appraise progress towards the PDO.

51. The PMU has experience in managing donor-funded projects, including the ongoing World Bank-financed project. TLBRP faces three major risks: (i) limited FM staff capacity at the PMU; (ii) adequacy of counterpart funds; and, (iii) reliability of the accounting and reporting system. These risks will be mitigated by (i) providing technical assistance (National FM Consultants) to assist the financial unit at PMU; (ii) ensuring counterpart funds are available during the project life as stated in the Financing Agreement; and, (iii) using free balance or another application for accounting and reporting purposes by the PMU. Overall, the project's FM risks are assessed as substantial and the proposed FM arrangements will satisfy the World Bank's minimum requirements under BP/BD October 1, 2018.

Procurement

52. Procurement under the project will be conducted in accordance with the World Bank Procurement Regulations for IPF Borrowers (issued in July 2016 revised November 2017 and August 2018), and the provisions stipulated in the Financing Agreement, approved procurement plan and POM. NPC will be responsible and accountable for carrying out procurement of high value/complex contracts (above US\$1 million) under the project, while the remaining procurement activities will be procured under the responsibility and accountability of MPW/PMU. MPW/PMU will also be responsible for the planning, coordinating, monitoring and consolidated reporting of the overall procurement under the project. While NPC and MPW have experience in carrying out procurement under World Bank-financed projects applying the previous Procurement/Consultant Guidelines, this will be the first time that they will be applying the World Bank Procurement Regulations. Furthermore, all the PMU staff/consultants who were supporting procurement under the ongoing World Bank-financed project have left and the PMU is currently being re-organized and re-staffed. The procurement risk and mitigation measures under the project are elaborated under the Fiduciary Risk section. Details of the procurement management arrangements, including capacity building and agreed risk mitigation measures, will be specified in the POM.

C. Safeguards

53. **The preparation of safeguards documents for Sub-component 1.1 is aligned with the nature, scale, and potential environmental and social impact of the proposed project.** Based on potential risks and impacts, the project triggers OP/BP 4.01 on Environmental Assessment, OP/BP 4.04 Natural Habitats, OP/BP 4.11 Physical Cultural Resources, OP/BP 4.12 Involuntary Resettlement, and OP/BP 4.10 Indigenous Peoples. The primary project investment supports national road rehabilitation works along the Aituto–Hatubuilico–Letefoho–Gleno corridor. The current scope of the project (Phase 1) covers road upgrading Hatubuilico–Letefoho–Gleno section where many economic activities take place (Sections 2 and 3 with an approximate length of 44.3 km). Section 1 (Aituto–Hatubuilico), which was originally planned is currently out of the project scope and hence, a further assessment on this section will be provided once decisions on financing have been made (Phase 2). The project's overarching objective is to improve road access, safety, and climate



resilience on the Gleno–Maubisse corridor, which is envisaged to improve connectivity to district towns and accelerate local and regional economic development from tourism activities and agriculture. Furthermore, TLBRP is also designed to enable climate change resilience through improvements in drainage structures to meet forecasted rainfall volumes and intensities, which require construction or reinforcement of slope stabilization structures.

54. While the overall project impact is believed to be positive, potential adverse environmental and social impacts associated with the civil works are anticipated. Such impacts will be mostly limited to construction related impacts, which are expected to be temporary, occurring mostly along the alignment of the selected road sections and mostly confined to the right of way (ROW). Potential direct environmental and social impacts generally result from site clearing, digging, excavations, cut and fill activities, operations of construction equipment and vehicles, sourcing of materials (river gravels and sands) and spoil disposal. Based on the baseline information and the results of environmental and social impact assessments in Sections 2 and 3, these potential impacts can be avoided and/or minimized through site selection, careful designs and good construction practices, or otherwise effectively mitigated during construction by use of appropriate mitigation measures in the ESMP. Potential environmental and social aspects during the operation phase, which stems from increased traffic and road safety risks have also been considered. Some potential impacts are expected to occur at offsite locations or outside the ROWs, and these are associated with slope cutting for widening and spoil material disposal as well as operations of ancillary facilities such as quarries, asphalt mixing plants, batching plants, and workers' camps. The construction or operation of these facilities will require their own site-specific ESMP (i.e., CESMP) in addition to the overarching requirements in the ESMP, which will be prepared by the contractors and further reviewed and approved by the PMU and the World Bank. Since not all potential locations for these associated facilities have been identified/confirmed at the time of SEIS/ESIA development process, the siting and management of these facilities will also be subject to review and clearance by the PMU and World Bank.

55. Land acquisition and asset removal, particularly productive agricultural crops will likely have livelihoods impacts. While potential impacts on livelihoods are expected to be overall moderate and short-term since the road upgrading works follow the existing road carriageway and affected households are expected to relocate in-situ, several households may likely experience more severe impacts than the rest due to a combination of losses, which include agricultural land, productive crops (particularly coffee), as well as impacts on residential and/or commercial structures. Impacts tend to be more significant in Section 2 where 12 households (105 Project Affected People) are anticipated to be relocated in-situ. In section 3, seven households (47 Project Affected People) are anticipated to be relocated in situ. Engineering design is currently in the process of finalization for Sections 2 and 3 and impact avoidance considerations, particularly to minimize resettlement impacts in Section 2 are currently being developed. There are approximately 4 households in Section 2 and 13 households in Section 3 who will likely suffer from such combination of losses. These households, in addition to single-headed households (i.e., widows, widowers), people with disabilities and the elderly, have been categorized as vulnerable. These vulnerable households will be entitled to additional livelihoods assistance and land replacement, subject to further impact validation following the detailed engineering design (DED) finalization. These agreed measures have been reflected in the Land Acquisition and Resettlement Action Plan (LARAP), which will be subject to World Bank clearance.

56. Land acquisition and resettlement planning and budget have been established in the LARAP based on an initial impact assessment with reference to the draft DEDs, which are yet to be finalized for both Sections 2 and 3. Widening of road sections, which also involves slope cutting and spoil material disposal, requires land taking, removal of permanent and semi-permanent structures and trees. The project impacts include loss of different types of agriculture land, residential land, government land, residential structure, commercial structure, ancillary structures, and trees/crops due to land acquisition and land clearance. Previous road experiences in Timor-Leste also show that improper spoil



material disposal may potentially affect private properties, including coffee plantations. In addition, slope cutting in a geographically unstable area, as experienced in RCRP, may increase the likelihood of landslides, and hence have impacts on private land, particularly coffee plantations. The scale of the potential impacts associated with land acquisition for each section is summarized as follows:

- (a) **Section 2 Hatubuilico–Letefoho:** land acquisition and potential impacts on residential properties, including associated assets such as kiosks are mostly anticipated in Suco (administrative posts or villages) Haupu, which is relatively peri-urban compared to other Sucos along the entire corridor. Within the proposed new alignment, 12 permanent housing units and one semi-permanent residential structure will be either partially or fully affected. Since such structural demolition will compromise the existing structures, these affected households may likely be relocated. In addition, 11 semi-permanent kiosks will likely be affected and similarly need to be relocated. In-situ relocation is currently being sought by GoTL to minimize potential impacts on livelihoods, which will be subject to a further assessment once the DED has been finalized.
- (b) **Section 3 Letefoho–Gleno:** impacts on agricultural land, particularly coffee plantations, tend to be greater in this section compared to Section 2. Based on an initial DED, there is a total estimate of 19,263 coffee trees owned by 71 Project Affected People which need to be removed for road widening and slope stabilization. With regards to impacts on residential and commercial structures, eight households need to be relocated and 10 commercial structures, which include permanent and semi-permanent kiosks and workshops will likely be affected. Similar with the above, in-situ relocation as well as engineering measures to minimize potential impacts/footprints are currently being sought.
- (c) **GoTL Emergency Road Project:** at the preparation stage of the project, DRBFC commissioned an “Emergency Roads” project in select segments of Section 3 to address road damages and blockages due to land-slides. Construction activities cover road widening and basic repairs of the existing road infrastructure such as installation of road-side drainage and retaining walls in some critical/landslide prone segments. A total length of 8.35 km (STA 37+450 to STA 40+900 and STA 46+100 to STA 51+000) has been completed as of October 2018 and additional 5.6 km length (from STA 31+900 to STA 37+500) has been included as part of the project activities. Existing impacts have been documented through a tracer assessment, which forms the project’s overall ESIA. The tracer indicates that there are 49 land owners in Suco Humboe, Goulolo and Haupu whose land parcels, including coffee plantations were impacted to a varying degree. No impacts on residential and commercial structures were reported. Some of these coffee tree owners reported to have received compensation from the contractors at varying amounts. Hence, GoTL has agreed to incorporate corrective measures in the LARAP to ensure compliance with OP/BP 4.12.

57. **OP/BP 4.10 was triggered on the premise of precautionary measures to address safeguards requirements under Sub-component 2.2 on Design of Future Projects. No impacts on Indigenous Peoples are envisaged under Component 1.** The ESIA and the World Bank’s due diligence process have confirmed that there are no vulnerable groups with characteristics established under OP/BP 4.10 in all five affected Sucos in both Sections 2 and 3. A screening process to identify the presence of community groups who meet the World Bank’s criteria for the identification of Indigenous Peoples has been conducted as part of the ESIA consultations. The assessment indicates that while Suco communities who reside along the road corridors still preserve some forms of allegiance to their kinships and observance to traditional systems and institutions to a varying degree, these communities represent the dominant group in the region. No ethnic



minorities nor traditionally distinct groups or with collective attachment to geographically distinct habitats or ancestral territories were observed in the entire road corridor. Land and its associated properties are mostly privately-owned, although there are some cultural sites (i.e., Uma Lulik) that are collectively owned by Suco communities or kinfolds where potential impacts have been avoided in the proposed road alignments. The majority of the communities in Section 2 primarily consists of settled rural agriculturalists, with coffee being the main commodities. Whereas in Section 3, a mixed group of rural and peri-urban populations were observed and coffee farming, small-enterprises (i.e., kiosks, food stalls) and trades jobs represent the main livelihoods sources. Tetum, which is a lingua franca in Timor-Leste, is the main language spoken in the region. An Indigenous Peoples Planning Framework has been included in Annex 9 of the ESMP to serve as a safeguards instrument to address OP/BP 4.10 under Sub-component 2.2 on Design of Future Projects.

58. Aerial mapping and ground-truthing indicate that the protected forest in Section 2 has already been degraded. There is no longer primary forest and the area is accessible due to the presence of an existing road and settlements at both ends of the section. The road passes through in whole or in part the Mount Tatamailau/Ramelau protected areas which are governed through the GoTL Decree 05/2016, which overlaps with a Key Biodiversity Area for Birds as indicated in the Integrated Biodiversity Assessment Tool. Nonetheless, the boundaries for Tatamailau (Ramelau) Mountain's protected areas have not been defined. With very little natural tree cover remaining, there are no endangered plants and animal species, including the birds listed in IUCN red-list category. No such birds were reported to exist in the project area by the community. Nevertheless, OP/BP 4.04 is triggered with the premise to ensure that the project operates thoughtfully in these protected areas, even though the boundaries/markings have not been defined. The nature of the project will focus on ground construction works; therefore, potential risks on birds' movement shall be manageable. The project will apply land clearing procedures considering the prevention of adverse impacts on birds' nests and their habitats. The project requires the mobilization of a bird specialist to carry out further screening prior to construction and impact monitoring during construction. Guidelines for construction within the protected area section are given in the ESMP.

59. OP/BP 4.11 on Physical Cultural Resources was triggered to ensure proper impact mitigation measures in relation to management of risks and impact on existing historical, archaeological and cultural sites and objects along the road corridors. Several historical, religious and cultural sites and objects along the road corridors have been identified in the ESIA. These includes sacred trees, cultural objects and traditional houses of cultural, religious and social values to the communities along the road corridors. Efforts have been made to avoid potential impacts on these Physical Cultural Resources (PCRs) through engineering measures. These include road re-alignment and installation of protective measures, such as retaining walls and fences. In the event that unidentified PCRs were discovered during pre-construction and construction activities, a "chance finds" procedure has been developed and is included in the project's ESMP. The project will require contractors to integrate such a procedure in their Contractors' ESMP.

60. Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risks are considered moderate. The gender analysis²² done specifically to support the review of GBV risks under the project has reported that four in ten (40 percent) ever-married women have experienced spousal violence whether physical, sexual, or emotional. More than one-third (37 percent) of ever-married women experienced spousal violence in the last 12 months.²³ The GBV risks for the project are considered moderate, including the risks of SEA, in the areas of the project as assessed through the risk assessment tool of the World Bank. To mitigate the identified moderate risk for GBV and SEA in the project areas, a GBV

²² Gender equality, gender-based violence and social and disability inclusion Timor-Leste - road climate resilience project. JU,S Jurídico Social Consultoria. www.jus.tl

²³ RDTL General Directorate of Statistics, Ministry of Planning and Finance and Ministry of Health, *Timor-Leste Demographic and Health Survey (TLDHS) 2016 Key Findings*, 2018, p.15 [hereafter cited as 2016 TLDHS Key findings]



prevention and response framework was developed based on the Good Practice Note for Addressing Gender-Based Violence in Investment Project Financing involving Major Civil Works (September 2018) and will include: (i) a detailed risk assessment of SEA risks for the project areas; (ii) the provision of services ranging from prevention to incident resolution by bridging the gap between existing national and local services for addressing GBV and the hiring of a specialized non-governmental organization (NGO) to provide additional related support services as needed; (iii) addressing GBV risks through the procurement process with the adoption of Codes of Conduct by any contractor working on the project; and, (iv) the setting up of an Accountability and Response Framework that is based on existing community responsibilities for handling of GBV allegations and establish a Grievance Redress Mechanism (GRM) designed specifically for reporting GBV and SEA incidents and to respect confidentiality in coordination with local leading partners. Annex 5 provides details of the project's approach and highlights the country's existing strong service delivery model for GBV survivors.

61. **Labor-related risks are considered moderate.** A road construction project with an average length of 25 km will typically require 250 temporary road construction workers to be mobilized at a time by a contractor. Most of these workers are usually locally sourced from the affected Sucos and employed as semi-skilled and non-skilled workers. In all five Sucos affected, communities express their aspirations to be involved in road construction works and there appears an adequate local workforce to be mobilized. Road engineers and skilled workers are usually foreign workers, with typically a smaller ratio to the overall workforce (one fifth). Incoming foreigners would typically reside in an enclosed camp near the construction site and language barriers can be anticipated. However, some of these workers may have been rotated from other road projects in Timor-Leste and some basic understanding of the language and culture can be expected. While the overall number of foreign workers appears to be relatively small, the presence of construction workers concentrated in specific sites over an extended period (can be up to 30 months) may present potential environmental and social implications. In addition to the GBV prevention mechanism, a Labor Influx Management Procedure as well as a safeguards incident response procedure have been prepared as part of the project's ESMP.

62. **A TOR which also contains a framework guideline for the development of ESMP, LARAP and Indigenous Peoples Plan serves as the safeguards instruments for TA Sub-component 2.2 Design of Future Projects.** This sub-component will finance feasibility/technical studies and designs required for selected road rehabilitation (about 40 km). Road segments that are currently being considered for the feasibility/technical studies to improve the Gleno–Mauhis Corridor include (i) the 5.2 km Hatubuilico Junction–Hatubuilico town section; and, (ii) the 4.8 km Humboe junction–Ermera town section. GoTL and the World Bank will select the remaining 30 km road sections to be designed during project implementation. As of the date of the project approval, the World Bank financing for the constructions of potential future road projects has not been committed. Potential environmental and social risks and impacts from the above proposed road sections will be assessed through separate ESIA's and accordingly the associated risk mitigation instruments (ESMPs and LARAPs) will be prepared as part of the TA support to GoTL. In conjunction with the Interim Guidelines on the Application of Safeguard Policies to Technical Assistance (TA) Activities in Bank-Financed Projects and Trust Funds Administered by the World Bank (issued January 2014), a Terms of Reference (TOR) for these environmental and social studies has been developed and included as part of the project's overall ESMP. Since the studies under Sub-component 2.2 are expected to result in new road investments in the future, the application of the World Bank's Environmental and Social Safeguards Policies is warranted.

63. Project information has been disclosed in Tetum to potentially affected communities using village information boards and Suco chiefs prior to initial engagements. Following such disclosure, a series of initial engagements/consultations and field assessments were held at the Suco/village level during September 12–26, 2018 involving affected communities and district government officers. These engagements/consultations have been documented in the ESIA



Section 11 and Appendix 5. Key concerns from these activities have been reflected in the project's environmental and social analysis and integrated into the DED. The public consultation for the project at national level was held on May 23, 2019 in Dili following the in-country safeguards documents disclosure on MOF's website on May 2, 2019. Input from public consultation was incorporated in the final safeguards documents (ESIA, ESMP and LARAP) and disclosed in-country on July 3, 2019 and through the World Bank's external website on June 28, 2019.²⁴

64. **While for the past few years, MPW's capacity to manage road projects has been significantly ramped-up with technical support from both national and international experts in the PMU, recent changes in staffing with discontinuation of international staff, have adversely impacted the PMU's current capacities to provide oversight and address environmental and social issues emerging from the current road construction activities.** At present there are only one national environmental specialist and one national social specialist employed by PMU with direct responsibility for addressing environmental and social issues for preparation and implementation of all donor-funded projects. Measures to address this issue have been considered under the current project's proposal. The World Bank requested MPW to revisit the existing PMU's structure and offers financing under the proposed project to build in-house capacity within the PMU and MPW as well as external capacity of key agencies responsible for the management of environmental and social aspects of the project. Some of the key gaps that need to be addressed include recruitment of an international environmental and social manager, additional social/resettlement and environment officers to assist the existing national specialists, and a gender/social development specialist. In addition, under a TA component of the TLBRP, there will be financing made available for training and capacity building activities for PMU staff as well as relevant stakeholders. PMU will be financed by donors and the World Bank will provide input to the TOR of the positions to be hired. The TOR for the PMU Environmental and Social Safeguards team will include provisions of advisory services and training to relevant authorities responsible for the management of protected areas, particularly the Department of Protected Areas and National Parks of the Ministry of Agriculture and Fisheries.

65. **Grievance Redress Mechanisms.** 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.

66. The GRM developed under RCRP addresses citizen engagement, by enabling project beneficiaries/affected people to present their complaints about project activities. The GRM will be improved under TLBRP and other donor's projects by strengthening the complains logging system, promoting social consultations, and by including on the PMU staff a Communications Specialist and a Gender Specialist in addition to the Social Safeguards Specialist already in place. The effectiveness of the GRM will be measured using an indicator in the Results Framework: "Grievances responded and/or resolved within the stipulated service standards". The indicator checks if the GRM fulfils, annually on average, the defined services standards for responding to and ideally resolving complaints considering: High/Medium/Low priority to be 5/10/30 working days respectively.

²⁴ It should be noted that these safeguards documents are titled under RCRP rather than TLBRP as the consulting service for the feasibility study and detailed engineering design (which includes the preparation of the safeguards documents) was financed under RCRP.



D. Gender

67. **Since the country's independence in 2002, GoTL has emphasized gender equality as an important goal in national development.** Considerable progress has already been made in addressing inequalities through legislation, policy development, institutional mechanisms, and raised public awareness.²⁵ Political participation and economic empowerment are particularly crucial as the conflict left nearly half of Timorese women widowed and sole providers for their family. Creating a new constitution has provided an opportunity for women's human rights, and a Gender and Constitution Working Group was set up with support from the United Nations (UN) Women and its partners to make sure that women's rights were included in the new constitution. This resulted in guarantees of equality between women and men, and a declared state aim to promote and guarantee equal opportunities in the political and social sphere for all. A recent amendment to the electoral law states that 33 percent of the political parties' lists must be women candidates, resulting in 38 percent of seats in the National Parliament being women, the highest rate in the Asia Pacific region.

68. **Gender gaps remain significant in Timor-Leste, including in labor force participation.** It is estimated that nearly 56 percent of men are classified as active in the labor force (or economically active) compared with only 27 percent of women. Likewise, while the proportion of wage-earning jobs has tripled over the last decade, this has benefited men more than women. In 2010, 31 percent of employed men were in wage-earning jobs, an increase of 17 percentage points since 2001. By contrast, only 19 percent of employed women were in wage-earning jobs, up 10 percentage points since 2001. Women are also more likely than men to be in vulnerable employment, which tends to lack stable income and benefits. This is particularly so for rural women: 87 percent of working rural women are in vulnerable jobs compared with 78 percent of rural men.

69. **Timor-Leste already has several good practice experiences in increasing women's participation in the labor market by improving training and employment opportunities.** The R4D program, implemented by the Ministry of Public Works, is the leading national rural roads program. The goal of the program for women and men in rural Timor-Leste is to derive social and economic benefits from improved and year-round road access. The program is increasing capacity of both the government and contractors while promoting the use of labor-based methods. The program involves the local communities in rehabilitation and maintenance works, providing rural people with short-term work opportunities. In 2013, 30 percent of the unskilled workers from the communities were women for maintenance of rural roads, while the percent is now zero for national roads. The rural roads program is closely monitoring the impacts on women and men and intends to increase women's participation in construction work in the future through application of gender-sensitive approaches, such as gender awareness raising at the community level, and allowing women to work only part time.

70. **The project will seek to promote employing women in the context of Routine Roadside Maintenance works implemented by local Community Maintenance Groups on national roads.** Involving women's groups and communities in non-technical routine roadside maintenance would provide income to people with limited access to income earning opportunities, particularly women and youth. It would also increase the local sense of ownership for a road and begin to build a "culture of maintenance." The project will support the gender action plan prepared by ADB for the Baucau to Viqueque Highway Project that promotes gender awareness and trainings, capacity building to DRBFC including women staff, facilitating gender participation and monitoring in projects, all consultations including women, opportunities for

²⁵ Timor-Leste: Gender Country Assessment. Asian Development Bank. 2014.

women's employment, and equal pay for equal work between male and female workers. This impact on the gender gap will be measured through the use of an indicator in the Results Framework: "Percentage of women working on maintenance activities of multi-year maintenance contracts supported by the project". The baseline is 0 as there are no women yet working on maintenance activities on the national roads, while the target value is 30 percent.

V. KEY RISKS

71. The overall implementation risk rating is Substantial. The most relevant risks and associated risk management measures are discussed as follows:

- (a) **Political and Governance.** The political and governance risk to the delivery of the development objective is assessed as Substantial. Political risks arise from tensions between the president and the parliamentary majority, possible shifting alliances within the coalition government, and the struggle over economic rents. Governance risks are found in institutional shortcomings in the budget, public finance management, public investment decision-making, an investment environment that is not sufficiently rules-based, and a weak judiciary. To mitigate the risk, the proposed project has focused on the government's priorities in the road development strategy.
- (b) **Macroeconomic.** The macroeconomic risk is assessed as Substantial. Timor-Leste's medium-term economic prospects hinge on prudent fiscal management, including that of the Petroleum Fund. High public spending coupled with low domestic revenues (i.e., excluding petroleum-related revenues) are a threat to economic stability – owing to the depletion of the Petroleum Fund and the low quality of public spending. This risk can be mitigated through the World Bank's growing engagement on fiscal management issues.
- (c) **Sector Strategies and Policies.** The sectoral strategies and policies risk is assessed as Substantial. The SDP and TSMP acknowledge the expectation to reform organizational structures, including establishment of respective authorities, while also looking to develop institutional capacity, including laws, regulations and policies, that may affect the performance of the implementing agencies. Policies and procedures related to medium-term expenditures for road maintenance have yet to be embedded in practice and pose a risk to the long-term sustainability of road assets. This issue is being addressed by the preparation of a national road network strategy and plan, led by ADB, that will include a concept design for a sustainable road maintenance program.
- (d) **Technical Design.** The technical design risk to the delivery of the development objective is assessed as Substantial due to difficult terrain and geotechnical issues that will pose technical design and construction challenges. The Engineering Design of the project roads under preparation is expected to provide technical design solutions that account for expected traffic, climate and the roads terrain characteristics, and included climate-proofing features such as slope protection, bioengineering, soil stabilization, and moisture resistance of asphalt layers.
- (e) **Institutional Capacity.** This risk to the delivery of the development objective is assessed as High, mainly due to the current transition period of the restructuring of the PMU, which significantly limited its capacity. The government capacity to manage large road investments has somewhat improved in recent years, although there is a pressing need to transfer skills within MPW to ensure long-term sustainability



of this capacity. All donors support the GoTL decision to create a more effective multi-donor PMU that is more integrated within the MPW structure. The mitigation of this risk is addressed through covenants for the government to ensure that: (i) sufficient budget allocation and prompt payment to PMU staff and consultants, (ii) the PMU is fully staffed with qualified experts, and (iii) international experts engage in transfer of skills and provide capacity building to MPW staff.

- (f) **Fiduciary.** Fiduciary risks are assessed as High. FM has three major risks: (i) limited FM staff capacity at the PMU; (ii) adequacy of counterpart funds; and, (iii) reliability of the accounting and reporting system. These risks will be mitigated by (i) providing technical assistance (National FM Consultants) to assist the financial unit at PMU; (ii) ensuring counterpart funds are available during the project life as stated in the Financing Agreement; and, (iii) using free balance or other application for accounting and reporting purposes by the PMU. The key procurement risks include (i) processing delays due to lack of experience in the World Bank Procurement Regulations; (ii) fraud and corruption risks associated with falsification of bid documents by bidders and the generally vulnerable governance environment, and the insufficient capacity of NPC/MPW and auditors to detect integrity related issues in procurement; (iii) lack of a reliable procurement complaints management system; (iv) inadequate maintenance of procurement records and data; and, (v) weak contract management resulting in multiple contract variation orders and delayed completion. The mitigation measures include: (i) a qualified procurement consultant will be hired to support PMU including providing advice, guidance and training to MPW and NPC staff on applying the World Bank Procurement Regulations, improving procurement record keeping systems, maintaining and publishing up-to-date data, and regular monitoring and reporting of procurement performance, for all of which the responsibility and accountability for implementation and compliance shall remain with MPW and NPC for their respective procurement; (ii) training will be provided on Procurement Regulations and on prevention and detection of red flags in procurement including due diligence for verification of bidders' qualification information and securities before award of contract; (iii) the POM will clearly set out the detailed procurement management arrangements under the project including division of work, roles, responsibilities and accountabilities of NPC and MPW/PMU monthly reporting requirements including through the required use of the World Bank's Systematic Tracking of Exchanges in Procurement (STEP) system; and, (iv) the consultant firm for supervision of the construction works will support developing contract management capacity of MPW staff.
- (g) **Environmental and Social.** The environmental and social risk to the delivery of the development objective is assessed as Substantial. An Environmental Category B operation is proposed considering the type of activities, locations of the project activities, scale of the proposed project, as well as the nature and magnitude of its potential environmental and social impacts. The key risks associated with the proposed road rehabilitation project are generally generated from the activities of site clearing, digging, excavations in the pre-construction phase, and the cut and fill activities, operation of construction equipment, sourcing of materials (river gravels and sands) and spoil disposal in the construction phase. Some impacts are expected to occur at offsite locations such as quarry sites and spoiled material disposal sites. These impacts can be avoided or minimized through site selection, careful designs and good construction practices, or otherwise effectively mitigated during construction by use of appropriate mitigation measures. Another key risks will be generated from the land acquisition and asset removal, particularly productive agricultural crops will likely have livelihoods impacts, working within the protected areas even though aerial mapping and ground-truthing indicated that the protected forest in Section 2 has already been degraded in addition to the risks of GBV and SEA and labor-related risks. Specific to Section 3, parts



of this section have been widened through support from the ongoing GoTL's emergency road rehabilitation, which involved cut and fills in several areas. An initial tracer assessment has been conducted, noting that the extent and magnitude of environmental and social impacts remain to be observed since the construction works are expected to continue (to be confirmed on the completion date) and hence, needs to be updated prior to the commencement of construction activities. Under this ongoing emergency project, impacts associated with slope cutting, improper soil disposal, lack of proper soil compacting and stabilization as well as construction-related impacts such as absence of dust suppression, Protective Personal Equipment as well as road-safety measures were reported. The World Bank has agreed with MPW to integrate remedial measures into the DED to address these ongoing impacts, in addition to compensation of lost assets (i.e., land and coffee trees) prior to the start of construction activities. An Environmental and Social Impact Assessment, an Environmental and Social Management Plan, and a Resettlement Action Plan have been prepared and publicly disclosed according to GoTL regulations and the World Bank policy (OP/BP 4.01). The ESMP covers, among others, labor influx management and occupational health and safety (OHS), including topics such as GBV, child abuse and exploitation, requirements for the facilities at workers' camps, and a GRM. Free, prior and informed consultations with local people, relevant officials/community leaders have been conducted and documented on the project design, its potential impacts, and the proposed environmental and social mitigation measures.



VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Timor-Leste

Timor-Leste Branch Roads Project

Project Development Objectives(s)

Improve road access, safety, and climate resilience on the Gleno–Maubisse Corridor and, in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Improve road access on the Gleno–Maubisse corridor								
Passenger car travel time on the project roads (Minutes)		130.00	130.00	120.00	90.00	75.00	75.00	75.00
Improve safety on the Gleno–Maubisse corridor								
Number of villages with road safety measures (Number)		0.00	0.00	0.00	3.00	6.00	6.00	6.00
Improve climate resilience on the Gleno–Maubisse corridor								
Roads upgraded with climate resilience measures (Kilometers)		0.00	0.00	9.30	31.40	44.30	44.30	44.30



Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Component 1: Gleno–Maubisse Corridor Upgrading and Road Safety Improvement								
Roads rehabilitated (CRI, Kilometers)		0.00	0.00	9.30	31.40	44.30	44.30	44.30
Roads rehabilitated - rural (CRI, Kilometers)		0.00	0.00	9.30	31.40	44.30	44.30	44.30
Roads rehabilitated - non-rural (CRI, Kilometers)		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of people with enhanced access to transportation services (Number)		0.00	0.00	38,000.00	133,000.00	189,000.00	189,000.00	189,000.00
Design and construction stages technical audits on the project road including road safety and climate resilient aspects (Yes/No)		No	Yes	Yes	Yes	Yes	Yes	Yes
National and district roads with updated road condition and traffic survey (Kilometers)		0.00	500.00	1,000.00	1,500.00	2,240.00	2,240.00	2,240.00
Component 2: Institutional Strengthening and Project Management								
National Roads under multi-year maintenance contracts supported by the project (Kilometers)		0.00	0.00	10.00	40.00	60.00	60.00	60.00
Percentage of women working on routine maintenance activities of multi-year maintenance		0.00	0.00	0.00	30.00	30.00	30.00	30.00



Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
contracts supported by the project (Percentage)								
Component 3: Contingent Emergency Response								
Adoption of CERC manual (Yes/No)		No	Yes	Yes	Yes	Yes	Yes	Yes
Citizen Engagement								
Grievances responded and/or resolved within the stipulated service standards (Percentage)		0.00	75.00	75.00	75.00	75.00	75.00	75.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Passenger car travel time on the project roads	Passenger car travel time as a result of upgrading the project roads	Annual	Supervision consultant's progress reports	The travel time will be computed by measuring the travel time of a four-wheel drive passenger vehicle travelling at normal conditions.	PMU



Number of villages with road safety measures	Implementation of road safety improvements	Annual	Supervision consultant's progress reports	The six villages at the following locations will be checked for presence of road safety measures: Section 2: STA 19+700, STA 27+620, and STA 31+100 Section 3: STA 41+220, STA 45+400, and STA 49+560	PMU
Roads upgraded with climate resilience measures	Upgrading of Gleno–Letefoho and Letefoho–Hatubuilico Junction road sections with climate resilience measures.	Continuous	Supervision consultant's progress reports	The kilometers of roads upgraded with climate resilience measures (i.e., proper drainage and slope protections) will be measured.	PMU

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Roads rehabilitated		Continuous	Supervision consultant's progress	The kilometers of roads upgraded with climate resilience measures (i.e., proper drainage and slope protections) will be measured.	PMU



Roads rehabilitated - rural		Continuous	Supervision consultant's progress reports	The kilometers of roads upgraded with climate resilience measures (i.e., proper drainage and slope protections) will be measured.	PMU
Roads rehabilitated - non-rural		Continuous	Supervision consultant's progress reports	Reviewing reports	PMU
Number of people with enhanced access to transportation services	This is a new IDA19 indicator for the Transport GP	Annual	Supervision consultant's progress reports for the distance of roads upgraded and 2015 census for the number of beneficiaries	The number of people with enhanced access to transportation services will be measured as proportion of the roads upgraded. Number of people = Total Population * Percent of Total Roads Upgraded.	PMU
Design and construction stages technical audits on the project road including road safety and climate resilient aspects	Design and construction stages technical audits to confirm road safety and climate resilient issues properly addressed	Twice	Supervision consultant's progress reports	The indicator will check if design and construction stages technical audits on the project road, including road safety and climate resilient aspects, were	PMU



				done by a road safety expert and a geotechnical expert.	
National and district roads with updated road condition and traffic survey	Data collection on road inventory, traffic and condition on national and district roads	Continuous	Supervision consultant's progress reports	The indicator measures the kilometers of national and district roads in which a road condition and traffic survey was done during the project implementation.	PMU
National Roads under multi-year maintenance contracts supported by the project	Implementation of multi-year maintenance contracts with project support	Quarterly	Supervision consultant's progress reports	The indicator measures the kilometers of national roads under multi-year maintenance contracts supported by the project.	PMU
Percentage of women working on routine maintenance activities of multi-year maintenance contracts supported by the project	The percentage of women performing routine maintenance work	Quarterly	Supervision consultant's progress reports	The indicator measures the average percentage of women working on routine maintenance activities of multi-year maintenance contracts supported by the project.	PMU
Adoption of CERC manual	A manual is prepared and formally adopted on how to trigger and implement the	Once	CERC Manual	The indicator checks if the CERC manual was adopted.	PMU



	CERC of the project.				
Grievances responded and/or resolved within the stipulated service standards	The project's grievance redress mechanism (GRM) defines services standards for responding to and ideally resolving complaints (High/Medium/Low priority 5/10/30 working days respectively)	Continuous	Project website	The indicator checks if the grievance redress mechanism (GRM) fulfills, annually on average, the defined services standards for responding to and ideally resolving complaints considering: High/Medium/Low priority to be 5/10/30 working days respectively.	PMU



ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Timor-Leste Timor-Leste Branch Roads Project

1. The implementation arrangement of TLBRP will follow the same implementation arrangements of RCRP and the road projects being financed by ADB and JICA. The executing agency will be CAFI, the government's infrastructure fund administratively and technically supported by the government's Major Projects Secretariat. The implementing agency will be MPW through DRBFC. The project will be implemented by the multi-donor PMU, which is responsible for managing ADB, JICA, and World Bank-funded national road upgrading projects.
2. The PMU manages externally supported major road upgrading projects, being a single PMU in charge of project monitoring and reporting as well as the safeguards assessments and monitoring system, thereby reducing the project management costs. The PMU will undertake the day-to-day project management and assist the NPC with the preparation of bidding documents for civil works and TOR for consultants' services. The NPC, of which directive is to provide procurement services to the line ministries and other public entities in major infrastructure projects and achieve proper transparency for the State procurement process, handles all public procurement above a value of US\$1 million and will procure all works and services under the project in accordance with the World Bank Procurement Regulations.
3. The PMU is under the responsibility of MPW, is headed by a Project Manager, and was staffed with local and international consultants. In 2018, the PMU had 22 established positions, which were sufficient for its activities. However, in December 2018 GoTL started a process of restructuring the staffing of the PMU to promote more effective capacity building of MPW staff, include more MPW staff to support PMU activities, and strengthen the management of the PMU's portfolio, with an intention to integrate the PMU more into the MPW structure. As the first step of the restructuring, MPW instructed the discontinuation of the international advisors in October 2018 with effect of December 31, 2018. Following the discontinuation of the international advisors, the PMU is staffed only by the Project Manager, supported by secretaries and the Finance Administrator, who has support of local staff. The local specialists, including the Project Manager, are under contract with MPW, and they are not staff of MPW; thus, formal departmental knowledge transfer is not being provided. Since January 2019, the PMU has suffered from a shortage of capacity and resources, which is impeding the progress of all development partners' national road upgrading projects. However, as of July 2019, the restructuring of the PMU is ongoing with the new organization structure defined (Figure 2),²⁶ 10 DRBFC staff assigned to the TST as part of the PMU, and draft TORs for five international staff and one national staff prepared.²⁷ Once the restructuring is finalized, it is expected that the PMU staffing will go back to the same levels as in 2018. The PMU staff will be strengthened under TLBRP and RCRP by the financing of a World Bank Project Officer, who will focus on these World Bank-funded projects, and, if needed, other possible staff to be decided during the restructuring process.

²⁶ This is the organization structure updated based on the discussion at the negotiations held on July 25-26, 2019.

²⁷ These include Chief Technical Advisor, Environmental and Resettlement Specialist, Road Construction Advisor, Contract/Quantity Engineer, and Communications Specialist for international staff, and Project Manager for national staff.

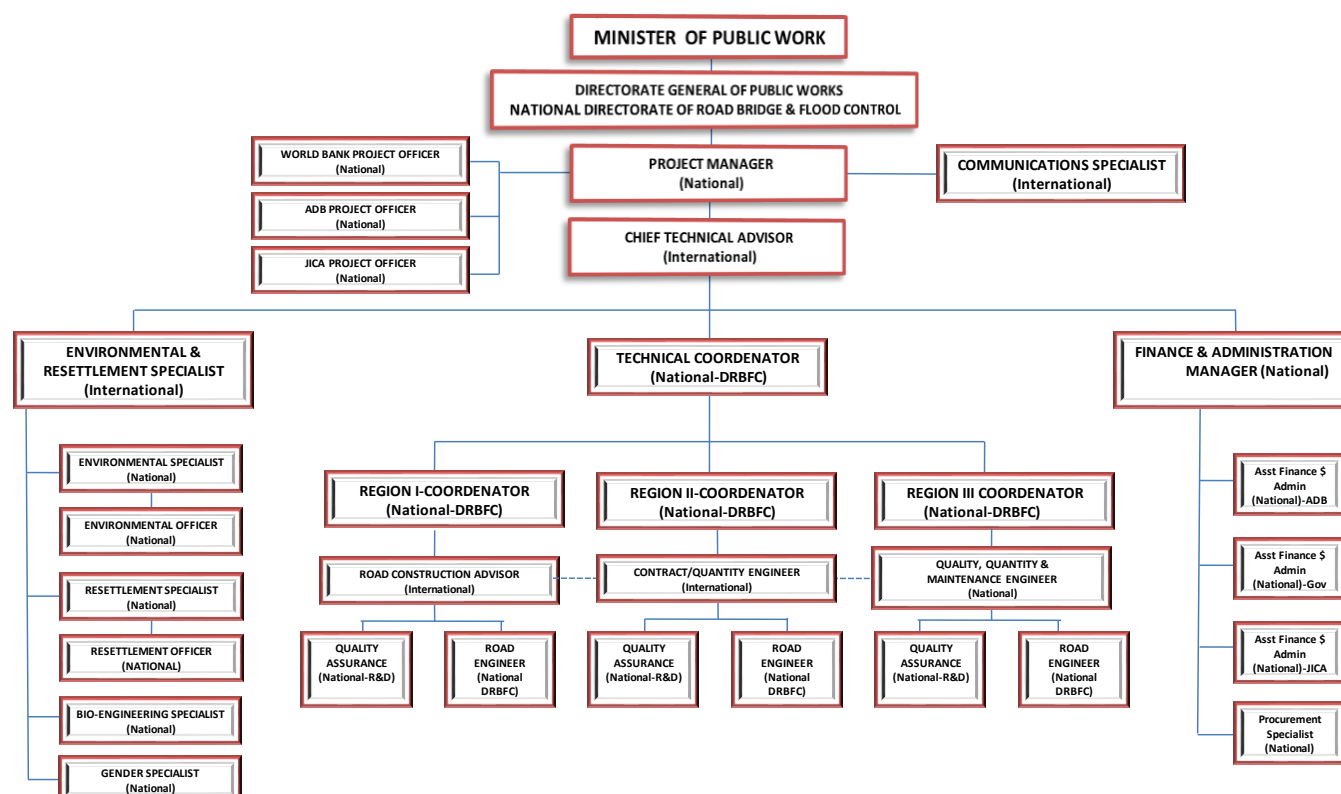


Figure 2: New Organization Structure of Project Management Unit

4. The restructuring of the staffing of the PMU and any changes to the institutional structure within MPW might result in greater capacity constraints and overall implementation delays. To mitigate these risks, the POM will describe smooth transition mechanisms for ensuring adequate availability of key PMU staff and preservation of institutional memory in a manner acceptable and satisfactory to the World Bank.

5. Procurement under the project shall be conducted in accordance with the World Bank Procurement Regulations for IPF Borrowers (issued in July 2016 revised November 2017 and August 2018), and the provisions stipulated in the Financing Agreement, approved procurement plan and POM. The expected procurement packages includes mainly civil works contracts for road upgrading construction and maintenance, road safety improvement on national roads which will be procured through Open International Competitive method, and consultant services for technical assistance including supervision consultant, feasibility study and detailed design of additional road segment which will be selected mostly through the Quality and Cost Based Selection method and some contracts for individual consultants to be selected competitively.

Financial Management

6. **Budgeting.** The project budgeting system will follow the government budgeting system. The project budget is included in the annual government budget (budget book). After parliament approval and President sign off, the budget becomes effective. There is a budget risk due to the delay in issuing a budget document. This is a recurring issue very year. Budget for FY2019 was not received by PMU until mid-February 2019. The delay results in project implementation



delay. PMU needs proactive work with Director General (DG) Budget, MOF to acquire budget documents after the President signed.

7. **Accounting and Reporting.** All financial transactions are recorded in the government accounting system and included in government financial reports. The government use Free Balance application. The Free Balance is run and managed by DG Treasury, MOF. The FM unit in the PMU uses excel to record the financial transaction and prepares a separate set of project financial reports. GoTL must prepare and submit to the World Bank not later than 45 days after the end of each calendar quarter, interim unaudited financial reports for the project covering the quarter. There are risks on reliability and timeliness of financial reports. These risks will be mitigated through: i) PMU needs to maintain its record in excel and moving forward adapting the government free-balance will be reviewed. If there is a need, a separate accounting software may be recommended. ii) PMU conduct reconciliation payment on monthly basis.

8. **Internal Control.** The internal control arrangements are reasonably adequate. There is segregation of duties on accounting and treasury. There are number of steps prior to a project payment. After engineer reviewed, PMU requests DG and Ministry approval. The payment request will be submitted to National Development Agency (ADN) and Major Project Secretariat (MPS) before forwarding to DG Treasury. After approval of DG Treasury, PMU that manage the special account (DA), will submit a payment request to the World Bank for direct payment or issue a bank check for payment below US\$200,000. However, the process is lengthy and sometimes it may take two months before a third party received their payment. A simplification payment process should be considered to make it more efficient and effective, i.e., more authority to PMU and DG treasury to review and verify prior to a certain limit of payment.

9. **Internal Audit.** Inspection and Audit Unit (IAU) of Line Ministry plays internal audit function for the ministry. The IAU conducts internal audit and submits the reports to the minister. However, the IAU audit assignment are mostly compliance audit. There was no internal audit assignment for the last two years due to no budget provided. IAU only conducted a join review with technical directorate. The World Bank will continue to have dialogue with the government on this issue.

10. **External Audit.** The Financial Management Unit in PMU is responsible for preparing the project financial statements. The financial statements are prepared based on records maintained by PMU. The audit of these statements will be carried out by private auditor, instead of Camara de Contas (Supreme Audit Institution) as the latter has limited resources to conduct audit for the World Bank-financed projects. The annual audit report will be furnished to the World Bank no later than six months after the end of the Government's fiscal year. The auditor will use agreed audit TOR.

11. **Disbursement Arrangements.** The applicable disbursement methods are reimbursement and advance to the designated account (DA). The DA will be used to finance eligible project expenditures. Direct payment and special commitment methods are also available to the project, if needed. DA will be opened in US Dollar at a commercial bank acceptable to the World Bank. PMU will be responsible for managing, reconciling the DA and preparing applications for the withdrawal application duly approved by DG Treasury before their submission to the World Bank. The ceiling of the advance to DA will be US\$200,000, and minimum application size for reimbursement, direct payment and special commitment is US\$40,000 equivalent. Applications for advances to the DA shall be submitted together with the reporting on use of DA funds, which consists of Statement of Expenditures (SOE); a sample SOE is attached to the Disbursement and Financial Information Letter. All documentation for expenditures submitted for disbursement will be retained by the PMU and be made available to the auditors for the annual audit, and to the World Bank and its representatives, if requested.



12. Table 2 shows the project withdrawal categories.

Table 2: Project Withdrawal Categories

Category Description	Amount of the Credit Allocated (in US\$ million)	Percentage of expenditures to be Financed (inclusive of Taxes)
(1) Works under Part 1.1 of the Project	48,580,000	80
(2) Works under Part 1.2 of the Project; Goods, non-consulting services, consulting services, Training and Workshops, Operating Costs for Parts 1 and 2 of the Project	10,420,000	100
(3) Emergency Expenditures for Part 3 of the Project	0	100
TOTAL	59,000,000	

13. **Flow of Funds.** PMU will execute the project budget and administer it. Except for petty cash, all third parties' invoices (suppliers/consultants) will be submitted to the project engineer before PMU processing. PMU will review and verify the invoices and relevant supporting documents; then submit it to DG MPW and Minister for approval. After ministry approval, a payment request goes to ADN and MPS for further review and approval. After MPS approval, the document goes to DG Treasury prior to return to PMU. A bank transfer and a check will be issued for payment less than US\$200,000; or send to the World Bank for a direct payment. Counterpart funds of US\$11.81 million will be used to co-finance civil works of Sub-component 1.1 of the project.

14. **Supervision Plan.** Risk-based supervision of project FM will be conducted. This will involve a review of the project FM system, including project expenditures, accounting, reporting and internal control framework. It will also include the review of external audit reports, and the follow-up of these audit findings. FM supervision will be conducted by a World Bank FM Specialist/Analyst on a bi-annual basis.

15. **Implementation Support Plan.** This is based on previous experience and lessons learned from other road sector projects in the region, as well as the project's risk profile. The approach is to provide ongoing and regular implementation support.

16. MPW has had experience with a World Bank-financed project, and their capacity to manage large road investments has somewhat improved in recent years; however, there is a pressing need to transfer skills within MPW to ensure long-term sustainability of this capacity. In addition, with the departure of all the international consultants in December 2018, the PMU is suffering from a shortage of capacity and resources, which is impeding the progress of all development partner's national road upgrading projects. It is expected that additional support may be required from the World Bank, along with the PMU to ensure that there is effective coordination and capacity building support.

17. MOF, in consultation with MPW will determine the appropriate timing of semi-annual reviews, taking into consideration the availability of participants. The World Bank implementation review will cover non-technical aspects of the support including: (i) FM; (ii) procurement; (iii) implementation arrangements; and, (iv) safeguards. In addition, field visits will also be undertaken to project sites. To the greatest extent possible, the Task Team will accommodate any written request for 'as-needed' support for the project, including fiduciary aspects.

18. Each implementation support mission will result in the production of a joint Aide-Memoire that will be discussed



at a wrap-up meeting to be chaired by MOF. It is envisaged that the Aide-Memoire will provide an overall view of the current situation relating to project implementation, including findings and observations from the World Bank. Representatives from the relevant GoTL agencies will be invited to attend the kick-off, wrap-up as well as technical meetings. Furthermore, any adjustment requiring more frequent reviews will be discussed, agreed upon, and documented in the Aide-Memoire.

19. A 'mid-term' review mission will be held not later than three years after the Effective Date of the project, or such other period as may be agreed with the World Bank. It is envisaged that the mid-term review will be conducted at either the halfway point of the project period or when the funds are 50 percent disbursed and provides an opportunity to review the project and take stock of implementation progress. Following the mid-term review, adjustments to project support may be required, including a project restructuring and/or possible additional financing from any other sources based on the implementation experience. The Task Team will work with MOF and MPW to clarify the requirements necessary to effect any changes. Any changes to the project that require amendments to the Financing Agreement will require a formal request from the Government's signatory to the Financing Agreement.

20. Six months prior to the closing date of the project, GoTL will commence the preparation of its Implementation Completion and Results Report (ICR). The World Bank ICR author will participate in the final implementation review and will gather the necessary information to help prepare the ICR.

21. Missions to support the implementation of TLBRP will be carried out every 4–6 months. At least once per year the missions will include technical, fiduciary and safeguards team members, who will provide input into infrastructure design and construction, carry out post reviews on contract management, review safeguards compliance, and provide formal training where required. The implementation support plan will be reviewed annually to ensure that it meets the support needs of the project. The estimated level of annual support needed to implement TLBRP is identified in Table 3.



Table 3: Implementation Support Plan

Focus of Implementation Support

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Project launch and start-up	Task Team Leader Operations Officer Transport Analyst Highway Engineer Procurement FM Environment Social Gender Specialist Administrative Support		
12-60 months	Project implementation	Task Team Leader Operations Officer Transport Analyst Highway Engineer Procurement FM Environment Social Administrative Support		
Other		GBV Specialist		

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	8 per year	3 per year	
Operations Officer	8 per year	3 per year	
Transport Analyst	8 per year	3 per year	
Highway Engineer	4 per year	2 per year	
Procurement Specialist	3 per year	2 per year	
FM Specialist	3 per year	2 per year	
Environment Specialist	3 per year	2 per year	
Social Specialist	3 per year	2 per year	



Gender Specialist	3 per year	1 per year
Administrative Support	3 per year	0 per year

Partners

Name	Institution/Country	Role
Asian Development Bank (ADB)	Multilateral Development Agency	Ongoing activities in the sector of a similar nature which we will leverage and complement.
Japan International Cooperation Agency (JICA)	Bilateral Development Agency	Ongoing activities in the sector of a similar nature which we will leverage and complement.
International Labour Organization (ILO)	United Nations Agency	Ongoing activities in the sector of a similar nature which we will leverage and complement



ANNEX 2: Detailed Project Description

COUNTRY: Timor-Leste Timor-Leste Branch Roads Project

1. TLBRP will support GoTL to improve the ride quality, climate resilience and safety of the Gleno–Maubisse corridor, strengthen the capacity of MPW to manage road assets, and in the event of an eligible emergency, provide an immediate response to the emergency. The proposed PDO is to be achieved through the following components: (i) Component 1: Gleno–Maubisse Corridor Upgrading and Road Safety Improvements (US\$65.81 million equivalent); (ii) Component 2: Institutional Strengthening and Project Management (US\$5.0 million equivalent); and, (iii) Component 3: Contingent Emergency Response (US\$0 million). Table 4 presents the project components with tentative cost estimates and expected outputs:

Table 4: Timor-Leste Branch Roads Project Components

	WB	Co-financing	Total
Component 1 - Gleno–Maubisse Corridor Upgrading and Road Safety Improvements	54.00		65.81
1.1 Gleno–Letefoho and Letefoho–Hatubuilico Junction Sections Upgrading and maintenance (44.3 km)	52.00		63.81
- Upgrading and maintenance of Letefoho–Hatubuilico Junction Road Section (18.5 km)	18.72	4.55	23.27
- Upgrading and maintenance of Gleno–Letefoho Road Section (25.8 km)	26.64	6.48	33.12
- Unallocated	3.22	0.78	4.00
- Supervision of Project Road Sections Upgrading and Update Design of Gleno–Letefoho Road Section	3.42		3.42
1.2 Road Safety Improvements on National Roads	2.00		2.00
Component 2 - Institutional Strengthening and Project Management	5.00		5.00
2.1 Technical Assistance	2.00		2.00
- Network Data Collection on National and District Roads (2,240 km)	0.40		0.40
- Pilot Long-Term Maintenance Contracts on National Roads	1.00		1.00
- Road Safety Capacity Building within MPW (8 months international advisor)	0.15		0.15
- Geotechnical Capacity Building within MPW (12 months international advisor)	0.25		0.25
- Training and Capacity Building Activities for MPW and Related Entities	0.20		0.20
2.2 Feasibility Study and Design of Future Projects (Link to Hatubuilico and Link to Ermera totaling 10 km plus other road totaling 30 km)	1.00		1.00
2.3 Project Support	2.00		2.00
Component 3 - Contingent Emergency Response	0.00		0.00
3.1 Contingency Emergency Response	0.00		0.00
TOTAL	59.00	11.81	70.81



2. **Component 1: Gleno–Maubisse Corridor Upgrading and Road Safety Improvements.** This component has two sub-components: Sub-component 1.1 on Gleno–Letefoho and Letefoho–Hatubuilico Junction road sections upgrading and maintenance for three years (US\$63.81 million equivalent), and Sub-component 1.2 on road safety improvements (US\$2.00 million equivalent). The component includes upgrading construction costs, maintenance, and consultancy costs to update the engineering design of Gleno–Letefoho section and supervise the road works on both sections.

3. The Gleno–Maubisse corridor starts at the city of Gleno, passes through the towns of Ermera, Letefoho, Hatubuilico, and Aituto and ends at the town of Maubisse, with a total length of 66.1 km. Gleno is a city 30 km to the southwest of Dili located in the suco of Riheu being the capital of the municipality of Ermera and having a population of 8,907 in 2015. Maubisse with 6,646 inhabitants is a historic city in the hills 70 km south of Dili, in Ainaro District. It is a popular tourist destination and a weekend visiting spot for people from the capital. The national road from Dili to Maubisse and continuing to Aituto is being improved under RCRP, while the national road from Dili to Gleno was already rehabilitated with ADB financing; thus, the Gleno–Maubisse corridor connects two national roads in good condition providing good access to Dili. The Gleno–Maubisse corridor is composed on a series of road sections (Table 5). Aside from the Aituto to Maubisse road section that is already improved under RCRP, all other road sections are narrow unpaved roads that are in poor to very poor condition. The Gleno–Maubisse corridor has also two links to the towns of Hatubuilico and Ermera.

Table 5: Overview of the Gleno–Maubisse Corridor

Gleno–Maubisse Corridor Road Sections		
Road Section	Length (km)	Phase
Gleno–Letefoho	25.8	First Phase
Letefoho–Hatubuilico Junction	18.5	First Phase
Hatubuilico Junction–Aituto	11.9	Second Phase
Aituto–Maubisse	9.9	Already Improved
Gleno–Maubisse Corridor Road Links		
Hatubuilico Junction–Hatubuilico Town Link	5.2	Second Phase
Humboe Junction–Ermera Town Link	4.8	Second Phase
Total	76.1	

4. The upgrading works under Component 1 will include the upgrade and rehabilitation of drainage systems, including ditches and culverts, as well as slope stabilization measures as appropriate including installation of bioengineering measures. These structures will enhance resilience to handle heavy rains, prevent erosion, as well as prevent road deterioration due to potential landslides. Maintenance of the road sections is included for three years after the defect liability period.

5. The upgrading of the Gleno–Maunisse corridor will be done in two phases: (i) first phase, financed under TLBRP, which will upgrade the Gleno–Letefoho and the Letefoho–Hatubuilico Junction road sections, totaling 44.3 km; and, (ii) second phase, which will upgrade the Hatubuilico Junction–Aituto road section and the links to Ermera and Hatubuilico. TLBRP will finance the first phase of the upgrading works, while the second phase is envisaged to be financed by an additional financing of TLBRP or a standalone new project. TLBRP will finance only the first phase due to budget constraints. The road sections included on the first phase were selected because of their priority on the feasibility study



(higher traffic and economic return) and for readiness for implementation. In terms of the project readiness for the second phase, the feasibility study and detailed design for the Hatubuilico Junction–Aituto road section are under finalization, while those for the links to Ermera and Hatubuilico will be conducted under TLBRP.

6. The length of the Gleno–Letefoho road section is 25.8 km, with an existing carriageway of 5-7 meters (5–7.5 meters of ROW). The current traffic is 843 vehicles per day with 64 percent motorcycles. Several parts of this section have been widened through the ongoing GoTL’s road emergency project, which started in 2018 and is expected to conclude by the end of 2019. Some of these road works were not considered on the engineering design; thus, the supervision consultant will be tasked to update the design of the Gleno–Letefoho section prior to the start of the road works. The length of the Letefoho–Hatubuilico Junction road section is 18.5 km, with an existing carriageway of 3-4 meters (4-5 meters of ROW). The current traffic is 418 vehicles per day with 79 percent motorcycles. Topographical feature on which the road traverses includes mountainous terrain and the road is in very poor condition along narrow widths.

7. The Letefoho–Hatubuilico Junction road section will be upgraded during the first year of the project, while the Gleno–Letefoho road section will be improved in the second year once its engineering design is updated considering the ongoing emergency works on this section. An unallocated amount of US\$ 4.00 million equivalent was reserved in case the Gleno–Letefoho road section will require more resources for its upgrading.

8. The project will ensure that the improvement of the Gleno–Maubisse corridor is executed taking into consideration proper road safety standards and practices; however, the rest of the national roads network also requires some physical interventions to improve road safety; thus, TLBRP will allocate some funding for road safety improvements to be done on national roads, such as road signage and pavement markings or black spot improvements. The scope of the roads safety improvements sub-component will be defined during implementation by MPW with support of a road safety advisor, to be financed under the project, who will work within MPW to strengthening its road safety activities.

9. **Component 2: Institutional Strengthening and Project Management (US\$5.0 million equivalent).** This component aims at strengthening capabilities within MPW and DRBFC on issues related to road assets management, road maintenance, road safety, and climate resilience issues. It will finance studies required for the preparation of potential future investments in the road sector that will include proper climate resilience and safety features. It will finance a capacity building program for MPW and related entities. It will also finance technical assistance, equipment, audits and operational costs associated with the implementation of the project.

10. **The technical assistance sub-component (US\$2.0 million equivalent).** With support from ILO, ADB and JICA, a Road Asset Management System is being developed for Timor-Leste that will evaluate the road network to support monitoring, planning and programming of road works. TLBRP will support this effort by financing a road network data collection campaign to update the Road Asset Management System with national and district roads data (around 2,240 km). It is envisaged that the network data collection will be done by a local private company, managed by MPW, and will focus on inventory, road pavement ride quality (roughness) and traffic data collection, for which comprehensive data is not available since around 2010.

11. ILO has assisted implementation of the R4D program that has included rehabilitation and maintenance of rural roads, and capacity development for government and private sector stakeholders. The R4D secures proper routine maintenance of rural roads by contracts that are performance-based and include the participation of local people, including women, on the routine maintenance works. It is envisaged that this maintenance model can be adapted to



national roads. TLBRP will promote proper maintenance on national roads, including local participation, by funding the implementation of multi-year performance-based maintenance contracts on national roads. It is envisaged that TLBRP will finance a pilot program of maintenance contracts to be defined during the project implementation, together with MPW, ADB and JICA. Including on the program will be Lots 1 and 3 of RCRP (around 40 km), which will require maintenance by 2020.

12. TLBRP will finance a road safety capacity building program within MPW, by hiring an international road safety expert to work within MPW to transfer his/her knowledge and to support MPW's road safety activities. The tasks of the consultant will include: training of MPW staff, assessment of national and district roads for road safety risks, preparation of road safety improvement works program (e.g., black spots, roads signs, etc.), and road safety audits of project designs. The assignment is expected to last for 8 months spread over two years. The consultant will help MPW define the best use of the US\$2 million equivalent assigned on TLBRP for civil works or goods for road safety improvements.

13. TLBRP will finance a geotechnical capacity building program within MPW, by hiring an international geotechnical expert to work within MPW to transfer his/her knowledge and to support MPW's geotechnical activities. The tasks will include: training of staff MPW, assessment of road damages observed on roads just upgraded, assessment of national and district roads for geotechnical hazards, preparation of road geotechnical remedies works program (e.g., rockfall, landslides, etc.) incorporating climate risks, and geotechnical audits of project designs. The assignment is expected to last for 12 months spread over two years.

14. TRBRP will finance a training and capacity building program for MPW staff and related entities that will focus on procurement, project management, road construction and maintenance quality control and environmental and social issues.

15. **The design of future projects sub-component (US\$1.0 million equivalent).** TLBRP will also finance feasibility studies and designs required for the preparation of potential future investments in the road sector that will include proper climate resilience and road safety features. The road section to be designed (around 40 km) will include: (i) the 5.2 km Hatubuilico Junction–Hatubuilico town section; and, (ii) the 4.8 km Humboe junction–Ermera town section. The selection of the remaining 30 km priority road section will be done during the project implementation taking advantage of the results of the road network condition and traffic survey and the road safety and geotechnical analysis of the network.

16. **The project support contingency sub-component (US\$2.0 million equivalent)** This sub-subcomponent will finance operational costs associated with implementation of the project, such as financing PMU staff, GVB and SEA prevention measures, and goods needed by the project. It also includes yearly audits of the project accounts to be submitted to the World Bank.

17. **Component 3: Contingent Emergency Response (US\$0 million).** This zero-dollar component is designed to provide swift response in the event of an Eligible Crisis or Emergency, by enabling GoTL to request the World Bank to reallocate project funds to support emergency response and reconstruction (See Annex 3).



ANNEX 3: Contingent Emergency Response Component

COUNTRY: Timor-Leste Timor-Leste Branch Roads Project

1. The contingent emergency response component (CERC) is a contingent financing mechanism available to gain rapid access to financing to respond to a crisis or emergency and provides for immediate rehabilitation or reconstruction needs without needing to first restructure the original project; thus, facilitating rapid implementation. The CERC minimizes time and effort needed to make available uncommitted funds from an Investment Project Financing (IPF) to finance urgent needs. Following an eligible crisis or emergency, the Borrower may request the World Bank to re-allocate project funds to support emergency response and reconstruction. This component would draw from the uncommitted credit resources under the project from other project components to cover emergency response. Consistent with OP/BP 8.0 the CERC does not finance humanitarian assistance or relief.
2. Timor-Leste is susceptible to crisis events and has been impacted in the past by geophysical and weather-related extreme events. Having the CERC contributes to a robust and meaningful rapid response capacity and overall helps to build a holistic disaster risk management strategy. The inclusion of the CERC in an investment operation provides advantages in that it establishes an *ex-ante* mechanism through which Timor-Leste can rapidly fund its post-disaster needs and reduce the need for a project restructuring to use allocated financing to respond to post-disaster priorities.
3. The reallocation of funds in an emergency would not cause serious disruption to the project as Timor-Leste has had previous experience in dealing with crisis or emergency events. In addition, the sector is frequently called upon to handle aspects of emergency response following extreme events. The inclusion of the CERC in the project will help to support the road sector, which is susceptible to crisis events.
4. Key principles relevant to CERCs include: (i) focus on activities that can readily be implemented on the ground considering the circumstances; (ii) favor smaller-scale, local activities that generate buy-in and goodwill; (iii) keep the scope simple and realistic, especially where local conditions do not allow much situational analysis; and, (iv) take advantage of working with and completing the activities of development partners to maximize impacts.
5. **Activation Criteria.** The project-specific CERC will be funded under the TLBRP budget. Following an eligible crisis or emergency, the CERC would be implemented in accordance with the rapid response procedures governed by the World Bank under OP/BP 8.0 *Rapid Response to Crises and Emergencies*. In addition, the provisions of the IPF Policy, paragraph 12, regarding “Projects in Situations of Urgent Need of Assistance or Capacity Constraints” apply to CERCs when they are triggered. The funding provision for the CERC is SDR 0.00 million, however can be increased by drawing down against uncommitted IDA funds under other components if necessary. Disbursement conditions would define the circumstances under which the CERC funds would become available.
6. Upon the “Declaration of Disaster”, the Recipient will undertake the necessary steps to complete a rapid initial impact assessment with the objective of identifying a list of potential activities for inclusion. Upon compilation of the list of potential activities, GoTL will review and select those for financing under the CERC based on: (i) eligibility and safeguard criteria outlined in the Financing Agreement; and, (ii) national priorities.
7. The request to trigger the CERC and seek approval of activities to be eligible expenditures for financing under Disbursement Category 3 will be communicated to the World Bank by Timor-Leste in a letter. The letter should include



information pertaining to: (i) the nature of the emergency, its impacts and confirmation of causal relationship (as supported by the “Declaration of Disaster”) between the event and the need to access the financing allocated to Disbursement Category 3; (ii) the nature of emergency activities (brief description); and, (iii) the CERC action plan of activities.

8. The Financing Agreement stipulates the establishment of adequate implementation arrangements, satisfactory to the World Bank, including staff and resources for implementation of activities under Component 3: Contingent Emergency Response, to the World Bank for its review and approval. The project will prepare a CERC POM within six months of project effectiveness. The manual will detail: (i) the process for triggering the CERC; (ii) the proposed emergency activities to be financed by the proceeds of the CERC; and, (iii) the coordination and implementation arrangements related to the execution of the activities.

9. At the start of project implementation, a CERC Manual will be prepared providing specific details on how the CERC will be triggered and implemented. This will be done by the PMU. This manual will emphasize the importance of addressing the risks of increased GBV and human trafficking as these cases tend to increase in a post-disaster situation. As part of the CERC Manual, a CERC-ESMF will be developed which will indicate the kinds of emergency response actions that can proceed with no additional environmental or social assessment, and which ones would require assessment (and at what level) prior to being initiated.



ANNEX 4: Economic Analysis

COUNTRY: Timor-Leste Timor-Leste Branch Roads Project

A. Economic Evaluation Assumptions

1. **To ensure that the project generates sufficient economic benefits that warrant the investments, a Cost Benefit Analysis was conducted for the project roads using the Roads Economic Decision (RED) Model Version 4.0²⁸ that computes annual road agency and users' costs for each project alternative over the evaluation period.** RED computes first the quantities of resources consumed and vehicle speeds and then multiplied the resources by unit costs to obtain total vehicle operating costs, travel time costs and CO₂ emissions costs. The resources and vehicle speeds are related to traffic volume and composition, and road surface type, geometric characteristics, and roughness.
2. **The quantified benefits computed by RED comprise savings in vehicle operating costs, travel time costs, and road maintenance costs due to the road improvements.** For the RED calculations, the following assumptions were applied:
 - (a) A discount rate of 6 percent and an evaluation period of 20 years.
 - (b) A conversion factor of 0.85 to convert financial costs into economic costs to remove taxes from financial costs.
 - (c) The road works will commence in 2020 and will have a duration of three years.
 - (d) The average daily traffic annual increase rate is 7.0 percent per year for passenger vehicles and 5.5 percent per year for trucks from 2020 to 2029 decreasing to 5.0 and 4.0 percent per year respectively thereafter, based on estimated GDP growth projections.²⁹
 - (e) Generated traffic is calculated based on a price elasticity of demand equal to 1, which corresponds to generated traffic being around 66 percent of normal traffic.
 - (f) Social cost of carbon of US\$80 per ton equivalent in 2020 increasing to US\$122 per ton in 2039 equivalent, based on the high scenario for social cost of carbon derived from the 2017 World Bank guidance note on shadow price of carbon in economic analysis.³⁰
3. **Table 6 presents the vehicle fleet economic unit, basic characteristics, and the traffic composition on the project roads.**

²⁸ RED is a software tool for the analysis and appraisal of road maintenance, improvements and investment decisions on low volume roads developed by the World Bank and the Sub-Saharan Africa Transport Policy Program.

²⁹ The IMF predicts that the GDP will increase on average by 5.4 percent per year from 2019 to 2023. An elasticity of 1.3 was applied for passenger vehicles and of 1.0 for trucks.

³⁰ The guidance note presents low and high scenarios of the social cost of carbon over time, from which the high scenario was used due to positive net CO₂ emission of the project.



Table 6: Vehicle Fleet Economic Unit Costs, and Characteristics

	Motorcycle	Delivery	4 Wheel	Light Truck	Medium Truck	Light Bus	Medium Bus
New Vehicle Cost (US\$)	2,000	40,000	35,000	30,000	35,000	35,000	40,000
New Tire Cost (US\$)	24	133	133	122	122	109	122
Fuel Cost (US\$/liter)	1.21	1.21	1.21	1.24	1.20	1.21	1.24
Lubricant Cost (US\$/liter)	5.30	5.30	5.30	5.30	5.30	5.30	5.30
Maintenance Cost (US\$/hour)	2.17	6.67	11.00	6.67	9.00	6.67	6.67
Crew Cost (US\$/hour)	0.00	1.05	1.30	1.05	1.30	0.65	2.70
Annual Overhead (US\$/year)	0	0	0	0	0	0	0
Interest Rate (%)	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Work Time (US\$/hour)	3.75	3.75	3.75	1.50	1.50	1.50	1.50
Annual Utilization (km)	12,000	35,000	35,000	35,000	50,000	60,000	60,000
Annual Utilization (hours)	600	1000	1,000	1,000	2,500	2,500	2,500
Service Life (years)	10	10	12	8	12	10	10
Number Passengers (#)	1	6	2	2	2	12	26
Operating Weight (tons)	0.2	1.8	1.5	3.5	7.5	2	4
Traffic Composition (%)	70%	8%	2%	16%	1%	1%	2%

4. **The project roads to be improved to national standards under the project totals 44.3 km.** The existing project roads are narrow unpaved roads in poor to very poor condition.³¹ The current average annual daily traffic on the existing roads ranges from 418 to 843 vehicles per day of which around 70 percent are motorcycles.

5. **Table 7 presents the basic current roads characteristics.**

Table 7: Basic Road Characteristics

No	Road Section	Length (km)	Surface			Traffic (AADT)	Motorcycles (%)
			Terrain	Type	Condition		
1	Gleno–Letefoho	25.8	Hilly	Unpaved	Poor	843	64%
2	Letefoho–Hatubuilico Junction	18.5	Hilly	Unpaved	Very Poor	418	79%
Total		44.3				666	70%

6. **The total financial capital cost for the road works is estimated at US\$60.39 million³² corresponding to an average unit cost of US\$1.36 million per km.** Table 8 presents the road works characteristics.

³¹ The average roughness of the project roads now is around 16 to 20 IRI, m/km. The improved paved roads in good condition will have an estimated average roughness of around 3 IRI, m/km.

³² Financial costs include taxes and contingencies.



Table 8: Road Works Characteristics and Costs

No	Road Section	Road Work	Initial Investment (US\$ M)	Total Cost per Km (US\$ M/km)
1	Gleno–Letefoho	Upgrading to National Standards	37.12	1.44
2	Letefoho–Hatubuilico Junction	Upgrading to National Standards	23.27	1.26
Total			60.39	1.36

B. Economic Evaluation Results

7. **The overall EIRR of the project is 14.6 percent and the NPV is US\$50.9 million corresponding to a B/C ratio of 2.1.** Normal traffic benefits account for 66.6 percent of the project benefits, generated traffic benefits for 23.5 percent, salvage value for 10.3 percent, and CO₂ and emissions benefits for -0.4 percent.

8. **Table 9 presents the economic evaluation results per road section.**

Table 9: Economic Evaluation Results

No	Road Section	EIRR (%)	NPV (M US\$)	B/C Ratio
1	Gleno–Letefoho	16.6%	39.47	2.4
2	Letefoho–Hatubuilico Junction	11.3%	11.44	1.6
Total		14.6%	50.91	2.1

9. **Sensitivity analysis shows that the project is economically justified even if construction cost is 20 percent higher or if the project benefits are 20 percent lower or both.** If construction costs were 20 percent higher and the project benefits were 20 percent lower, the EIRR would drop to 9.5 percent. Switching values analysis shows that construction costs would have to increase by 106 percent for the EIRR to reach 6 percent.

10. **Table 10 presents the sensitivity analysis results.**

Table 10: Sensitivity Analysis Results

Indicator	Road Section	Sensitivity Analysis			
		Base	A: Costs+20%	B: Benefits-20%	C: A & B
EIRR (%)	Gleno–Letefoho	16.6%	14.0%	13.4%	11.1%
	Letefoho–Hatubuilico Junction	11.3%	9.2%	8.8%	6.8%
	Total	14.6%	12.2%	11.7%	9.5%
NPV (US\$ M)	Gleno–Letefoho	39.47	33.64	25.75	19.93
	Letefoho–Hatubuilico Junction	11.44	7.79	5.51	1.86
	Total	50.91	41.44	31.26	21.78



C. GHG Accounting

11. **The total gross Carbon Dioxide (CO₂) emissions over the 20-year evaluation period under the without-project scenario are estimated at 83,041 tons and under the with-project scenario at 91,865 tons resulting in a net increase of CO₂ emissions of about 8,824 tons, or 441 tons per year.** The increase in GHG emissions is attributed to the generated traffic.

D. Public Sector Financing and World Bank Value Added

12. **Private sector financing is the appropriate vehicle for financing the proposed road improvements.** The project roads are public goods with levels of traffic that cannot be used to recover investment and maintenance costs directly through road-based tariffs. Any further attempts to raise funds from the users would cause undue burden to road users living in regional areas and could jeopardize the economic improvements otherwise anticipated to arise from accelerated agricultural and tourism developments. Nevertheless, the project will contribute to an increase in tax revenues collected from increased activities in agriculture and tourism that will generate additional financial resources and will address transport connectivity bottlenecks related to tourism and agriculture development that would help attract private sector capital.

13. **Beyond financing, the World Bank's value added is in addressing key sectoral challenges in roads investment planning and prioritization, and sustainable asset management and maintenance.** The World Bank brings expertise in areas such as construction quality control, environmental and social management, and fiduciary controls. In addition, the World Bank has a strong value proposition to bring international best practice to support safe and climate resilience-oriented technical solutions in road designs.



ANNEX 5: Mitigating and Responding to GBV, including SEA

COUNTRY: Timor-Leste Timor-Leste Branch Roads Project

1. **The project's approach to mitigate GBV risks, including SEA risks, is based on the lessons learned from other projects** and the "Good Practice Note for Addressing Gender-Based Violence in Investment Project Financing involving Major Civil Works" issued by the World Bank in September 2018. A specialized NGO will be recruited to implement GBV and SEA prevention measures identified for the project. With its well-developed service delivery model and existing shelter network, Timor-Leste has a strong framework in place for providing support to GBV survivors. Limited human capacity and financial support, including in the project areas, can limit the effectiveness of the existing framework and will require the support of a specialized NGO to complement existing GBV prevention measures.

Risk Assessment

2. **Country Context.** The GBV risk identified under the project is that violence against women is widespread and socially accepted. The GBV risk for the project is considered moderate. This evaluation is based on the World Bank's GBV risk assessment tool. This risk level is moderate because it is anticipated that the project will lead to a significant influx of male workers in the project areas but works will take place in communities where GBV rates can be high given the overall high prevalence of GBV in the country, and in areas where there are high levels of poverty as well, making community populations more vulnerable to GBV risk.

3. Reports on GBV estimates for Timor-Leste are primarily on prevalence of Intimate Partner Violence, which is reported as high in the country. SEA and workplace harassment have also been reported as high. The 2016 Timor-Leste Demographic and Health Survey conducted by the General Directorate of Statistics, Ministry of Finance in collaboration with the Ministry of Health also reported that physical violence to be more prevalent in rural, rather than urban, areas, and among women with lower levels of education and in lower wealth quintiles.

4. A 2018 Safe Cities and Safe Public Spaces by UN Women concluded that 'although there is no organized and regularly collected data on prevalence and incidence specifically of sexual harassment in public spaces (including all types: verbal, gestural/visual/physical), it appears to be a widely prevalent and disturbing problem for women and girls'; and that 'almost every respondent (women or men) shared that sexual harassment of women in public spaces is an everyday and "normal" occurrence.'³³ The study identified the following groups as specifically targeted for sexual harassment and sexual violence in public spaces: young women and teenagers going to school, young girls going to fetch water or firewood, LGBT, any woman ('as long as it is a woman'), disabled women, old women, women in offices and patients of doctors.

5. **Legal Framework for addressing GBV.** The Civil Service Commission in recent years has significantly stepped up its action on sexual harassment, acknowledging it as a widespread issue in Timor-Leste. The country has adopted a set of laws and regulations that provide guarantees of right and protection for women. The legal framework includes the criminalization of several GBV offences, with heavy imprisonment punishment. Any sexual act with children younger than 14 years old is a serious criminal offence. Rape and other form of sexual abuse are also criminalized. While judicial

³³ UN Women, *Safe Cities and Safe Public Spaces – Summary of the findings from the Safe Dili Scoping Study on sexual harassment and other forms of sexual violence in public spaces*, 2018, section 5



authorities need improvement on their capacity to deal with sexual offences, an increased accountability for sexual offences is noticeable and generally reported by interested groups.

6. Legislative measures that have come into effect include the Law against Domestic Violence, passed in 2010 naming domestic violence a public crime, and the National Action Plan on GBV, a strategy of prevention and provision of services for survivors of GBV and domestic violence. The Plan sets out the framework for implementing legislation, developing partnerships across government and civil society, and monitoring the effectiveness of initiatives to eradicate GBV. Despite the adoption of these laws against domestic violence, GBV remains a critical issue for women in post-conflict Timor-Leste. Domestic violence is the most reported case to the Vulnerable Persons Unit of the National Police, a unit set up with assistance from the UN specifically for vulnerable people including women, children and the elderly. Timorese women have described domestic violence as normal and sometimes, a daily occurrence.

7. The Government has prepared a (second) National Action Plan on GBV for 2017-2020 that clearly describes the referral network operating in Timor-Leste (rede referál) as a network of service providers that provide support and referral to GBV survivors.³⁴ Through this network, practitioners advocate against GBV in all its forms, monitor the protection situation of women, girls and other at-risk groups and ensure timely access to appropriate support and care services. The Ministry of Health, the Ministry of Education, the Ministry of Social Solidarity and Inclusion (MSSI), the National Police of Timor-Leste (PNL), prosecutors are also an integral part of the GBV referral network.³⁵ Standard Operational Procedures regulating coordination, case management, daily management of shelters were introduced in 2011 and continue to be revised and updated through MSSI and its partners. It is acknowledged that at times civil society service providers find challenges in ensuring sufficient knowledge in relation to the applicable legal and regulatory framework.

8. Prevention and redress measures, including survivors' specialized services form part of the institutional and policy framework. State financing of social protection services to women and children victim of violence, while not sufficient, is sizeable. MSSI coordinates – a referral network (rede referál) where police authorities together with civil society organizations work together at the Municipal level to provide complementary security, social, psychological and legal support to GBV survivors.

9. **Stakeholder engagement and capacity to respond to GBV.** The health sector plays a crucial role in the prevention and elimination of GBV in Timor-Leste. Research shows that women exposed to violence tend to visit health services more often than non-abused women. This allows health care providers a crucial opportunity to detect and care for women living with violence. In recognition of this, the establishment of “safe spaces” (fatin hakmatek) in national and regional hospitals began in 2002. The hospital staff receive training in how to deal with GBV cases and some are trained in conducting forensic examinations and documenting evidence for investigation and prosecution. There is a need to increase the health sector capacity to respond to GBV. Health care workers at district health posts and health centered need training in GBV case identification and management, issues surrounding gender and power relations, ethics, and counseling skills. The project team has identified and reviewed the capacity of civil society organizations, including national NGOs, that are specifically active in the prevention and response to GBV.

³⁴ Government resolution 25/2017, *National Action Plan on Gender-based Violence 2017-2021*, DEFINITIONS [hereafter cited as NAP on GBV]

³⁵ RDTL Law Against Domestic Violence No 7/2010, Article 14.2; Ministério da Solidaridade Social, *Prosedimentu Operativu Normalizadu kona-ba jestaun no koordenasaun atu ajuda vitima violénsia doméstika, violénsia seksuál no forma seluk ba violénsia hasoru ba feto no labarik*, Abril 2017, p.10 [hereafter cited as 2017 SOP on coordination of GBV victim support - while initial standard operational procedures developed with UNFPA assistance were available in English and Tetum, this revised SOP merging several previous standards is only available in Tetum]



10. Temporary and long-term safe accommodation, medical treatment, psycho-social support and counselling, forensic examination, and legal assistance are among the services provided to GBV survivors in Timor-Leste. While there may not be direct support services available in the exact location of the project sites (Ermera and Ainaro municipalities), several nearby civil society service providers offer several services, including free transport to GBV victims when available. A mapping of existing services available shows that services provided include physical protection, social, psychological and legal support. Services providers work together within an umbrella coordinating framework – rede referál or referral network – where under the direct coordination of MSSI, public social support officers, police authorities together with civil society organization work together at the Municipal levels to provide complementary security, social, psychological and legal support to GBV survivors. The location of the services provided within the Dili–Ainaro Road project area is illustrated in the map (Figure 3).



Figure 3: Location of the services provided within the Dili–Ainaro Road project areas

11. Police is an integral partner of the referral network for support to GBV victims. The Vulnerable Persons' Unit of the PNTL has the main responsibility for responding to and investigating domestic violence. The unit is under the Criminal Investigation Service at the national level and the Criminal Investigation Section at the municipal level and deploys officers at the Administrative Post level. Its role and structure lack formal recognition within the organic structure of PNTL. In practice community police deployed at village level (OPS) are also frequently the first point of contact in responding to domestic violence cases.



12. In recent years, efforts to build gender capacity of those village-based community police officers (OPS) as well as village council members have increased. They jointly sit on community policing councils (KPKs) that are involved in conflict resolution but also often act as a pathway for GBV complaints. Standard operational procedures approved by police command in 2017 highlight mandatory crime reporting obligations of police and village chiefs, emphasize confidentiality in GBV cases, link in the KPK with GBV referral network and in general aim to increase gender-sensitivity of police and community representatives.³⁶

13. Services are only provided after the GBV victim gives free and informed consent.³⁷ The victim can approach any service within the network and they are linked through regular coordination meetings and since recently also through a mobile application and website for women and children victims of violence: the Hamahon (“giving shelter”) app which helps police, service providers, and women find contact information for support services. The platform also enables service providers to easily update their contact information and flag inactive phone numbers. Service providers and representatives from GoTL took part in the design and testing process to ensure that the app addresses their needs.³⁸

14. MSSI officials are the key entry point for the referral network on government side. A (general) Social Technical Officer is present in every administrative post, and one Social Technical Officer specialized in child protection and one focusing on the women’s protection each are stationed at municipality level.³⁹

15. In the country, ‘Fatin Hakmatek’ is a safe and secure location providing care, temporary accommodation (one or two days and nights), and access to specialized services for victims of sexual violence, and/or domestic violence, and/or child abuse or neglect, and/or trafficking. It may be located at a regional hospital or clinic. All Fatin Hakmateks operate free of charge to clients and based on non-discrimination. Victims are usually referred to crisis accommodation by a hospital or clinic, the police, other service providers, by the victims’ family or neighbors, or go to the accommodation themselves. There is also ‘Uma Mahon’ that offers services like the ones of the Fatin Hakmatek (offering care, accommodation and access to services) but for longer term (more than two nights), and shelters should be located in secure and relatively secret locations (see Table 11 for organizations working on GBV issues in Timor-Leste). Shelters at present are mostly funded by MSSI, international donors and Church, and all shelters operate free of charge to clients.

³⁶ General Commander PNTL, *Norma Organizaun no Prosedimentu ba Ofisial Polisia Suku* and *Norma Organizaun no Prosedimentu ba Konsellu Polisiamentu Komunitáriu*, May 3, 2017

³⁷ 2017 SOP on coordination of GBV victim support p.5&6; RDTL Law Against Domestic Violence No 7/2010, Article 5-7.

³⁸ Hamahon app was designed by Catalpa International and launched by The Asia Foundation and the Timor-Leste Government in December 2018 - see <https://hamahon.tl/> and <https://asiafoundation.org/2018/12/06/the-asia-foundation-timor-lestes-nabilan-program-and-australian-government-launch-hamahon-giving-shelter-app-and-media-kit/>

³⁹ 2017 SOP on coordination of GBV victim support p.4



Table 11: NGOs and other humanitarian organizations working on GBV issues and active in Timor-Leste

Organizations	Focus Areas and locations
PRADET (Psychosocial Recovery and Development in East Timor)	Presently operates all fatin hakmateks in Timor-Leste and provides victims of domestic violence, sexual assault and child abuse with safety, emergency counselling, medical treatment and forensic examination of injuries and psycho-social consequences of violence; and with ongoing referral to appropriate agencies or services. The medical forensic examination is documented in a protocol that has legal value as it has been endorsed by the Ministry of Health and is regularly used as evidence in court. PRADET currently has a presence in four locations: Dili, Oecusse, Suai and Maliana. Geographical coverage of municipalities is as follows: FH Dili covers Manatuto, Aileu, Liquisa no Ermera. FH Suai covers Ainaro no Same, FH Baucau covers Lospalos no Viqueque. FH Oecussi covers the Special Autonomous Region of Oecussi.
Uma Mahon Salele	In Dili, Maliana and Suai, cater for women and their children. Suai shelter is a “transit shelter” offering a maximum of a week accommodation. Uma Mahon Salele: Provides accommodation and care to women with children and persons with disabilities. It is located in Maudemo - Salele Village of Administrative Post of Tilomar in Covalima municipality. Uma Mahon Paz: Accommodation for women with children located in Baucau new town. Uma Mahon Luzeiro: Accommodation for abandoned women with children. It is located in Fuiloro, Lospalos Forum Peduli Wanita offers accommodation in Oecusse FFCJ (Fundasaun Forum Comunicação Juventude Oratorio Dom Bosco) offers Accommodation for women and children in Santa Cruz, Dili KHC (Knua Haberan Comunidade) - Uma Paz: Accommodation for women with children in Uma Quic/Beobe, Viqueque
ALFeLa	The sole civil society organization currently specialized in legal assistance to women and children who are victims of violence. While in the RDTL legal system it is the prosecutor who represents the interests of victims in criminal GBV cases in court, ALFeLa accompanies victims in the judicial process, explaining proceedings, liaising with police, prosecutors and judicial officers, as well as appearing as the victim’s lawyer in court in civil aspects of GBV cases. ALFeLa currently has offices in Dili, Baucau, Suai and Oecussi.
Casa Vida	Center in Dili offers emergency care, and accommodation to unaccompanied minors and assist with their rehabilitation and integration back into the community. It operates several shelters in Dili.

16. Within the project-affected construction areas in Ainaro and Ermera, survivors of GBV have very limited access to locally present social services and legal assistance. Services are located within regional scope, often placed in Suai town in Covalima municipality and in Maliana town in Bobonaro municipality (see Table 12 for the GBV services available in Suai and Dili). GBV survivors in the project areas can have access to Fatin Hakmateks in Dili and Suai; and can call PRADET to seek assistance with transport if needed and available. At the Administrative Post levels, there is the presence of low-level social welfare officers to serve as liaison with the referral network service providers and specialized police. A prosecution office in Ermera Municipality capital provides additional criminal investigation support considering that this municipality has some of the highest prevalence of crimes, including those related to GBV. Social protection services, in the form of shelters providing psychosocial and medical support, and legal support to survivors only exist in Suai, with those residing in Ainaro Municipality accessing Suai based services and those in Ermera travelling to Dili.



Table 12: Safe sites accessible for GBV survivors in project areas

Transit Shelter in Suai (Uma Tránsito Fokupers): Operated by the local NGO Fokupers. Transit shelter serves victims requiring support between 3 days to a week. Include general counselling and psychosocial support services. If longer residency support is required victims are either transferred to Suai or Dili shelters, depending on personal factors. Serviced by two staff with technical training on social services. No access to vehicle so when requiring transport of the victims (to medical examination or to court hearing, for example) uses vehicle of other Referral Network participating NGO. In 2018, this shelter served 54 clients (women and girls) with 5 of them being from Ainaro Municipality (including 1 victim from Maubisse).
Emergency Shelter (PRADET) in Suai: temporary accommodation (one or two days and nights), and access to specialized services for victims of sexual violence, and/or domestic violence, and/or child abuse or neglect, and/or trafficking. Provision of emergency medical support and forensic service for evidence collection. Located within Suai hospital facilities.
Shelter in Suai (Uma Mahon Salele): run by religious group, it focuses on providing shelter for people with disabilities. Receive state funding.

17. Police at village, administrative post and municipal level (specialized investigators of a Vulnerable Persons' Unit present at administrative post level) and government social workers at administrative post and municipal level are present in the project areas' Fatin Hakmatek.

Mitigation, Reporting and Monitoring Measures

18. **Safeguards.** The project's safeguards documents (ESIA, ESMP and LARAP) have also been prepared to consider GBV/SEA risks and provide mitigations measures for addressing these risks. The ESMP for the project, which covers the project roads, includes specific recommendations for mitigating GBV/SEA risks and requirements to address these risks, as well as other environmental, social, health and safety (ESHS) risks.

19. **Procurement process and contractor's responsibilities.** GBV risks will be addressed through the procurement process by setting specific requirements for the works contractor and the supervision consultant. In practice, the bidding documents will reflect the findings of the SEIS/ESIA and the requirements of the ESMP to address GBV risks and other ESHS and OHS risks. As road works under the project will induce some labor influx, there is a risk of GBV, SEA incidents. To mitigate this risk, labor influx will be minimized and the contract documents for works and supervision will require that all workers adhere to a code of conduct and that GBV mitigation measures are included in the Contractor's Environmental and Social Management Plan (CESMP). Bidding documents will clearly define GBV mitigation measure requirements and expectations.

20. **GBV support services.** The project has identified that the country has a strong legal, policy and institutional framework to support GBV mitigation and provide support services with several NGOs with experience and expertise in GBV to train workers and inform communities to mitigate the risk of GBV, as well as to provide support funded by the project to survivors who request assistance and/or referrals to support services, as appropriate. Services provided include psychological, legal and medical support to survivors.

21. The project will recruit a specialized NGO with experience and expertise in GBV to train workers and inform communities to mitigate the risk of GBV, as well as to provide support funded by the project to survivors who request assistance and/or referrals to support services, as appropriate. GBV awareness training and relevant capacity building activities will be provided by the specialized NGO and relevant government representatives working on the project to provide them with the skills and knowledge on how to incorporate gender into the project cycle, including integration of prevention and response to GBV in the anticipated rural road maintenance works.



22. Establishing GBV-specific protocols in the Grievance Redress Mechanism (GRM) and community participation.

The proposed project's GRM will have multiple channels to ensure that GBV-related complaints are registered in a safe and confidential manner. The GBV dimensions of the GRM will be handled by the specialized NGO in coordination with the PMU to ensure that any GBV complaint receives immediate care and appropriate referral in a confidential and survivor-centered approach. A specific GBV GRM will be developed for the project. The project GRM will register information only on the nature of the complaint, if to the best of its knowledge the perpetrator is associated with the project and, if possible, the sex and age of the perpetrator. The GBV GRM will follow the national referral protocol in place for the entire response procedure in case of GBV and SEA incidents as defined at the national level through the Ministry of Social Affairs with support from the Ministry of Health. Village focal points will serve as entry point for GBV survivor communication and referral support in the project area. This is important as communities and service providers have reported about the police not registering GBV complaints or not investigating in a timely and effective manner.⁴⁰ The accountability and response mechanism for resolving GBV cases will identify who specifically will be responsible for handling complaints to seek resolution and appropriate sanctions.

23. A GBV complaints management committee will also be established and trained to serve as an entry point for referring survivors to GBV care services through its Complaints' committees which will be integrated by trusted community-based organizations. Case management of GBV incidents will be coordinated at the regional level with the various essential services (health, justice, police, psychosocial (including social and economic integration)). This component is the responsibility of the key ministries that will provide the appropriate services and that the specialized NGO will ensure GBV survivors can have adequate access. Follow-up coordination of the provision services, any technical assistance coordination meetings and data sharing impact evaluation will be carried out.

24. Capacity building, community dialogue and awareness raising. It is anticipated that the project will finance capacity building of MPW and PMU on environmental and social safeguards. In addition, the project will seek to promote behavioral change by organizing information campaigns that will aim to raise GBV awareness in the project area.

25. Monitoring. The supervision consultant will be required to have adequate environmental and social expertise. The consultant will monitor the fulfilment of GBV-related obligations by the contractor in its CESMP that include a code of conduct and ESHS and OHS standards. The specialized NGO will also monitor regularly that provisions and responses to GBV are put in place by the contractor and functioning.

⁴⁰ Delaying tactics such as police sending the victim home promising to 'look into it later' are for example documented in the following research: The Asia Foundation (ATJ), *"Ami Sei Vítima Beibeik": Looking to the needs of domestic violence victims*, Timor-Leste, 2012. Also, the Timor-Leste National Human Rights Institution/Ombudsman office (Provedoria for Human Rights and Justice) has developed a specific category of human rights violation on the issue of failure to register complaints by formal justice actors – an indication of the widespread nature of the issue.



ANNEX 6: Map of Timor-Leste with Project Site

COUNTRY: Timor-Leste
Timor-Leste Branch Roads Project

