



**ASIAN INFRASTRUCTURE  
INVESTMENT BANK**

PD000618-LAO  
November 6, 2024

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**Project Document  
of the Asian Infrastructure Investment Bank  
Sovereign-backed Financings  
Lao People's Democratic Republic  
National Road 13 South Extension Improvement and Maintenance Project**

## Currency Equivalents

(As of November 24, 2023)

Currency Unit	–	Lao Kip (LAK)
LAK 1.00	=	CNY 0.000344
CNY 1.00	=	LAK 2,906.00

## Fiscal Year

January 1-December 31

## Abbreviations

AADT	Annual Average Daily Traffic
AIIB	Asian Infrastructure Investment Bank
ADB	Asian Development Bank
ADFD	Abu Dhabi Fund for Development
ASEAN	Association of Southeast Asian Nations
COI	Corridor of Impact
DBMOT	Design, Build, Maintain, Operate and Transfer Methodology
DoR	Department of Roads, MPWT
DPF	Department of Planning and Finance
DPWT	Provincial Department of Public Works and Transport
EIRR	Economic Internal Rate of Return
ES	Environmental and Social
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FM	Financial Management
GMS	Greater Mekong Sub-region
GoL	Government of the Lao People's Democratic Republic
GRM	Grievance Redress Mechanism
IDA	International Development Association
IMF	International Monetary Fund
IRAP	International Road Assessment Program
LTS	Long-Term Strategy
MCDF	Multilateral Cooperation Center for Development Finance
MDB	Multilateral Development Bank
MPWT	Ministry of Public Works and Transport
NDC	Nationally Determined Contribution
NPV	Net Present Value
NR13	National Road 13
NR13N	National Road 13 North
NR13S	National Road 13 South
NR13SE	National Road 13 South Extension
O&M	Operation and Maintenance
OPBRC	Output and Performance-based Road Contract
PA	Paris Agreement
PCU	Project Coordinating Unit

PDR	People's Democratic Republic
PPM	Project-affected People's Mechanism
PPSF	Project Preparation Special Fund
RF	Road Fund
RP	Resettlement Plan
SC	Specific Criteria
SDG	Sustainable Development Goal
SFW	Special Fund Window
VOC	Vehicle Operating Cost
VOD	Value of Delays
WB	World Bank

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**1. Summary Sheet**  
**Lao People’s Democratic Republic**  
**National Road 13 South Extension Improvement and Maintenance Project**

Project No.	000618
Borrower	Lao People’s Democratic Republic (Lao PDR)
Project Implementation Entity	Department of Roads (DoR), Ministry of Public Works and Transport (MPWT)
Sector / Subsector	Transport / Roads (non-urban)
Project Objective	To enhance connectivity by improving the road condition, safety, and climate resilience of targeted critical sections of the National Road 13.
Project Description	<p>The proposed project aims to improve, rehabilitate, and maintain a critical 50 km section of NR13, which serves as the sole access route from the South to the capital city of Vientiane. This section begins at KM21 in the area near Don Noun in Vientiane Capital and extends southwards to KM71 in Xaysavang village, located in Thaprabath District, Bolihamxay province.</p> <p>The first 20 km of this section will be expanded from two to four lanes and the following 30 km will undergo rehabilitation. The road improvement and maintenance will be carried out through a 10-year Output- and Performance-Based Road Contract (OPBRC) under the Design, Build, Maintain, Operate, and Transfer (DBMOT) method.</p> <p>The proposed project will also carry out capacity-building activities to strengthen MPWT staff’s capacity in managing road assets. These include designing and implementing OPBRC, addressing road safety and climate resilience issues, and preparing future projects for improving and maintaining other critical sections of NR13.</p> <p>The components and their financing sources are as follows:</p> <p><b>Component 1 (financed jointly by AIIB, Abu Dhabi Fund for Development (ADFD) and Government of Lao PDR (GoL)).</b> Road Improvement, Rehabilitation, Maintenance and Operation.</p> <p><b>Component 2 (financed by AIIB).</b> Provision of Monitoring, Technical assistance, and preparation of future investments.</p>
Implementation Period	Start Date: December 31, 2024 End Date: December 30, 2030
Expected Loan Closing Date	June 30, 2031
Cost and Financing Plan	Project Cost: USD 74.3 Million

	<p>Financing Plan:</p> <ul style="list-style-type: none"> <li>• AIIB: CNY 280,500,000 (equal to USD 40,000,000)</li> <li>• Abu Dhabi Fund for Development (ADFD) (Co-financier): USD 20 million</li> <li>• Government of Lao PDR (GoL): USD 12 million</li> <li>• Multilateral Cooperation Center for Development Finance (MCDF): USD 0.7 million</li> <li>• Project Preparation Special Fund (PPSF): USD 1.6 million</li> </ul>
Size and Terms of AIIB Loan	<p>CNY 280,500,000 (equal to USD 40,000,000)</p> <p>Term: a final maturity of 29 years, including 10 years grace period.</p>
Environmental and Social Category	B
Risk (Low/Medium/High)	Medium
Conditions for Effectiveness	<ul style="list-style-type: none"> <li>• The Department of Road (DoR) has completed eighty percent (80%) of the resettlement work in accordance with the Resettlement Plan, including compensation;</li> <li>• The Project Co-financiers' Agreement has been executed on behalf of the Bank and the Co-financier, and all conditions precedent to its effectiveness (except for the effectiveness of this Loan Agreement) have been satisfied; and</li> <li>• The MPWT has reviewed and updated the payment procedure guideline previously prepared for NR13S to the satisfaction of the Bank.</li> </ul>
Key Covenants/Conditions for Disbursement	<p>Borrower to:</p> <ul style="list-style-type: none"> <li>• Through MPWT, inform AIIB about the results of the review and of any changes in legislation or regulation related to axle load restrictions which may be necessary to ensure effective axle load control.</li> <li>• Furnish to the AIIB, no later than November 30 of each year, an annual work plan and budget for the Project for the following Fiscal Year and implement the activities under the Project during the relevant Fiscal Year in accordance with such plan and budget.</li> <li>• Through MPWT allocate enough funds and complete the Public Utility Relocation by September 30, 2025.</li> <li>• Adopt a sustainability plan, not later than twelve (12) months prior to the Closing Date. This plan will specify actions and budget designed to ensure the continued and effective implementation of the OPBRC beyond the Closing Date. It will include, inter alia, financial, institutional sustainability, and monitoring and supervision measures to be put in place by MPWT for the remaining period of the operation and maintenance phase of the OPBRC contract.</li> </ul>
Retroactive Financing (Loan % and dates)	None
Policy Waivers Requested	None

Policy Assurance	The Vice President, Policy and Strategy, confirms an overall assurance that the Bank is in compliance with the policies applicable to the Project.
Economic Capital (Ecap) Consumption	USD 9.63 million (29.64%).
Project Approval (Indicative) (Board/President)	President

President	Jin Liqun
Vice President, Region 1	Rajat Misra
Director General, Region 1	Rajat Misra
Team Leader	Wenyu Gu, Senior Investment Operations Specialist
Team Members	David Rollinson, Senior Environmental Specialist Jiaqi Su, Economic Analyst Liu Yang, Counsel Moohyun Cho, Project Consultant Nurul Mutmainnah, Financial Management Associate Pilar Lopez Camacho, co-Project Team Leader Rizal Rivai, Procurement Consultant Tian Chang, Project Assistant Victoriano Macasaquit, Social Development Specialist

## 2. Project Description

### A. Overview

1 **Background.** Lao People's Democratic Republic (PDR) is a landlocked country in Southeast Asia, bordered by China, Viet Nam, Cambodia, Thailand, and Myanmar. Its central location among the Greater Mekong Sub-region (GMS) countries, some of which are the world's fastest growing economies<sup>1</sup>, is a significant asset. With an efficient infrastructure network, Lao PDR has strong potential to increase trade with and attract investment from these countries. This can drive economic growth in Lao PDR and help diversify its economy away from agriculture, mining, and hydropower generation of which it is currently dependent on. Regional connectivity is of critical importance in this regard and is a key part of the government's strategy.

2 The Government of Lao PDR (GoL) envisions transforming the country from being landlocked to becoming a landlinked hub. To achieve this, GoL has been investing in expanding the highway network along the regional economic corridors, airport expansion, upgrading inland waterway transport, and developing railways in line with the GoL's Ninth Five-Year National Socio-Economic Development Plan (2021-2025). The Plan emphasizes the upgrading of transport infrastructure to meet Association of Southeast Asian Nations (ASEAN)<sup>2</sup> standards, coupled with the development of logistics industry as a national strategic investment priority to achieve economic integration with neighboring countries.

3 Due to its unique geography and topography, Lao PDR is highly vulnerable to climate risks and natural disasters, such as droughts, floods, and storms. In the 2023 Inform Risk Index<sup>3</sup>, Lao PDR ranks 91<sup>st</sup> out of 191 countries, indicating high levels of natural disaster, with extremely high exposure to flooding where it ranked 6<sup>th</sup>. In recent years, the country has experienced several costly natural disasters, including two extreme floods in 2013 and 2018. The 2018 flood had a significant impact on the country's physical infrastructure, damaging one-fifth of the road network, including sections of National Road 13 South. More recently, in August 2022, heavy rains and storms affected approximately 40,000 people, causing damage to housing, agricultural land, roads, and bridges. Climate change is expected to intensify these events. Projections indicate rising temperatures along with an increase in the intensity and frequency of extreme events, including heavier rainfall and higher flooding risks. These conditions pose a serious threat to economic activities. Annual flood losses account for about 3 percent of GDP and have associated impacts on health, education, nutrition, and poverty<sup>4</sup>. Vulnerability and losses may be

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<sup>1</sup> Viet Nam, Cambodia and Myanmar are among the 15 fastest growing economies in 2019. GDP annual growth in 2019 was 7.4% (Viet Nam), 7.1% (Cambodia), 6.8 % (Myanmar). The GDP growth in 2019 in China was of 2.2% and in Thailand -6.2%. Source: World Development Indicators (WDI), World Bank, 2019.

<https://databank.worldbank.org/source/world-development-indicators>

<sup>2</sup> Per the Ninth Five-Year National Socio-Economic Development Plan (2021-2025), 2,800 km of land transport infrastructure, including roads, bridges, and expressways as part of the Asian Highway Network along the economic corridors connecting the countries in the region, will be built, upgraded, rehabilitated and maintained in accordance with ASEAN technical standards.

<sup>3</sup> European Commission. INFORM Index for Risk Management. Lao PDR Country Profile 2023.

<https://drm.kc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile>

<sup>4</sup> 2021 Progress Report. Lao PDR – United Nations. Partnership Framework 2017 – 2021.

<https://laopdr.un.org/en/176688-lao-pdr-united-nations-partnership-framework-sustainable-development-2021-progress-report>

exacerbated if infrastructure planning fails to consider climate disaster risks and mitigation measures.

4 **Lao PDR Transport Network.** Road transport, spanning approximately 7,846 km, is the primary mode of transportation for connecting Lao PDR with its neighboring countries and within the country itself. It accounts for over 90 percent of total passenger–kilometers traveled and 80 percent of freight–kilometers. Air travel plays a limited but important role in providing access to remote areas, while water transport is used for transportation along navigable waterways. The rail network in Lao PDR is currently limited to the 414 km Lao-China Railway Line, which began operating in December 2021. This railway line connects the capital city of Vientiane with the town of Boten on the China border, providing not only a connection to China but also to the entire Belt and Road Initiative (BRI) network via the city of Kunming (China).

5 Being a landlocked country with only a single railway corridor, the national road network plays a crucial role in providing both national and international connectivity. However, a significant portion of this network suffers from low capacity and poor quality. More than 60 percent of the network of national roads is classified as being in poor or in bad condition<sup>5</sup>. Furthermore, effective road asset management remains a pressing issue due to factors such as subpar construction quality, inadequate contractor control by the Ministry of Public Works and Transport (MPWT), and overloading trucks active in both national and international freight transportation. The risk of road network deterioration is further compounded by Lao PDR's high vulnerability to climate and disaster risks, particularly floods and landslides (as previously mentioned).

6 **Project background.** These challenges described above are particularly visible along the National Road 13 (NR13), a North-South transport corridor that spans 1,500 km. NR13 comprises NR13 North (671 km) from the capital Vientiane to Boten on the Chinese border and NR13 South (829 km) from the capital to the Cambodian border. NR13 serves as the backbone of the country's road network. The main sections of this road were completed in 1997 and have not been rehabilitated since then, receiving only periodic and emergency maintenance. However, NR13 plays a vital role both for internal connectivity (linking 10 of the 17 provinces of the country) and international linkages.

7 To improve the conditions of NR13, the GoL has initiated a long-term program aimed at upgrading, rehabilitating, and maintaining several sections of the road. This program receives financial support from various International Financial Institutions (IFIs). As part of the program, MPWT has placed a strong emphasis on high-quality project preparation. This includes integrating climate resilience and road safety measures into the road design. MPWT is also adopting modern contracting methodologies, specifically Output and Performance-Based Road Contracts (OPBRC) under the Design, Build, Maintain, Operate, and Transfer (DBMOT) method.

8 The OPBRC contracting model leverages the capacity of the private sector and ensures long-term maintenance and better risk sharing between the public and private sectors. The OPBRC model provides incentives to contractors to deliver high-quality works to avoid costly repairs at later stages. The OPBRC contracting model is already being used under the NR13

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<sup>5</sup> Logistics Capacity Assessments (LCAs). <http://lca.logcluster.org>

North project (L0066A)<sup>6</sup>, which runs from Sikeut in Vientiane capital to Phonhong in Vientiane province (KM12 to KM70). The NR13 North is jointly co-financed by the World Bank (WB) and AIIB. Likewise, the NR13 South project (L000373)<sup>7</sup>, which is part of the NR13 South program, is also applying the OPBRC contracting model. It spans from Vientiane South through Bolikhamxai to Khamouane province (KM71 to KM346), with funding from the World Bank (WB), European Investment Bank (EIB) and AIIB. Both projects are under implementation, with the rehabilitation works expected to be completed in 2023 and 2024 respectively.

9 **Project Rationale.** The proposed 50 km road section is located between the sections covered under the ongoing NR13 North project and NR13 South program. This section is not included in either of the aforementioned projects. It begins at KM21 in the area near Don Noun in Vientiane Capital and extends southwards to KM71 in Xaysavang village, Thaprabath District, Bolikhamxay province. Approximately 60 percent of this 50 km section is in poor condition, with severe cracking, raveling, and numerous potholes, leading to its deterioration. As a result, this section is increasingly becoming a major bottleneck between NR13 North and South. Moreover, NR13 South serves as the only international corridor linking Vientiane to southern Lao PDR and the Cambodian border. Its strategic importance lies in providing an efficient and reliable complement to the Lao-China Railway Corridor. This enhances land-based access to international markets, thereby transforming Lao PDR from a landlocked country to a land-linked hub. Consequently, the proposed project focuses on improving and maintaining this specific section of the NR13 South.

10 The proposed project (along with the ongoing NR13 North and NR13 South projects) is listed as one of the high-priority projects in the Five-Year Development Plan 2021-2025 of MPWT. Further, all these projects support the development of the North-South Economic Corridor, which is highlighted as a key priority in the GMS Transport Sector Strategy 2030<sup>8</sup>.

11 **Project Description.** The proposed project aims to improve, rehabilitate, and maintain a critical 50 km section of NR13, which serves as the sole access route from the South to the capital city of Vientiane. This section begins at KM21 in the suburban area of Vientiane Capital and extends southwards to KM71 in Xaysavang village, located in Thaprabath District, Bolikhamxay province.

12 The first 20 km of this section will be expanded from two to four lanes and the following 30 km will undergo rehabilitation. Road improvement and maintenance will be carried out through a 10-year OPBRC contract under the DBMOT method.

13 Additionally, the proposed project will support capacity-building activities to strengthen MPWT staff's capacity in managing road assets. This includes designing and implementing OPBRC, addressing road safety and climate resilience issues, and preparing future projects for upgrading and maintaining critical sections of NR13.

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<sup>6</sup> National Road 13 Improvement and Maintenance Project  
<https://www.aiib.org/en/projects/details/2019/approved/Lao-PDR-National-Road-13-Improvement-and-Maintenance-Project.html>

<sup>7</sup> Climate Resilience Improvement of National Road 13 South Project (Section 3)  
<https://www.aiib.org/en/projects/details/2020/approved/Lao-PDR-Climate-Resilience-Improvement-of-National-Road-13-South-Project.html>

<sup>8</sup> [GMS Transport Sector Strategy 2030](#)

14 **Project Objective.** The project objective is to enhance connectivity by improving the road condition, safety, and climate resilience of targeted critical sections of the NR13.

15 **Expected Results.** At completion, MPWT and AIIB will assess the project's effectiveness by monitoring if the travel time has been reduced. Additional indicators can be found in Annex 1.

16 **Expected Benefits and Beneficiaries.** The beneficiaries of this project are (a) approximately 48,286 households and 255,207 people living in two districts of Vientiane capital (Xaithany and Park Ngum) and in the district of Thaphabath in Bolikhamxai province, (b) road users on the country's main north-south trunk road in Bolikhamxai and Vientiane Capital, (c) women and vulnerable groups, and (d) MPWT.

17 **How will these groups benefit in general?** These groups benefit in general because the project will spur economic development. It will do this because it will save travel time and transportation costs, and therefore make local products more competitive in international and domestic markets.

17.1 **How will road users benefit?** Road users will benefit because the project will remove the existing bottleneck<sup>9</sup> between NR13N and NR13S. This will improve both North-South regional and international connectivity and bring even greater near-term and long-term social benefits and economic gains.

17.2 **How will women and socially excluded groups benefit?** Women and socially excluded groups will benefit because the project will improve access to public services and markets and create jobs for those groups.

17.3 **How will MPWT benefit?** MPWT will benefit because the project will improve its capacity in preparing and using of the OPBRC contracting modality. This, in turn, can extend the road lifecycle and will pave the way for increased private sector participation in the road sector.

## **B. Rationale**

18 **Strategic fit for AIIB.** The project aligns with AIIB's strategies, including cross-border connectivity, green infrastructure, technology-enabled infrastructure, trunk linkages, and upgrading of existing infrastructure.

18.1 **How does it align with cross-border connectivity?** The project aligns with cross-border connectivity because the NR13 is a North-South corridor (1,500 km long) that connects Lao PDR with China in the North and with Cambodia in the South. It comprises NR13 North (671 kilometers) from Vientiane Capital to Boten on the Chinese border and NR13 South from Vientiane Capital to the Cambodian border (829 kilometers).

18.2 **How does it align with green infrastructure?** The project aligns with green infrastructure because the project is aligned with the climate mitigation and adaptation goals of the Paris Agreement (PA) as per AIIB PA alignment methodology (see paragraph 52).

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<sup>9</sup> The rehabilitation of the NR13S from Vientiane Capital (km 21 intersection) to Xaysavang village (km 71) Thaprabath District, Bolikhamxay province, is located between NR13N and NR13S.

- 18.3 **How does it align with technology-enabled infrastructure?** The project aligns with technology-enabled infrastructure as it will improve the road lifecycle. This improvement will be achieved by adopting an innovative contracting model (Output- and Performance-Based Road Contract - OPBRC) under Design, Build, Maintain, Operate and Transfer (DBMOT) method. Additionally, the project will introduce modern dynamic weighing technology for controlling truck overloading and enforcing axle load limitations. It will also enhance road safety and incorporate features to increase climate resilience.
- 18.4 **How does it align with trunk linkages?** The project aligns with trunk linkages because the NR13 links 10 of the 17 Lao provinces and is the backbone road of the country, linking the northernmost province of Luang Namtha through the capital city of Vientiane and all the way to the southernmost province of Champasak.
- 18.5 **How does it align with the upgrading of existing infrastructure?** The project aligns with the upgrading of existing infrastructure because the project will make the road more climate-resilient, reduce vehicle operating costs and travel time, increase the accessibility of enterprises, increase labor productivity, reduce road fatality rates, and lead to a lower fuel consumption and carbon emission by improving the road's condition over more than 10 years.
- 19 **Value addition by AIIB.** AIIB adds value to the project because it:
- 19.1 demonstrates how to strengthen the project preparation from technical, procurement, and environmental and social (ES) aspects, and
- 19.2 shares knowledge about innovative designs, climate resilience, road safety, modern contracting methodologies, and road asset management.
- Specifically, AIIB
- 19.3 mobilized funds from the Abu Dhabi Fund for Development (ADFD) as a co-financier to bridge the funding gap of the proposed project and also mobilized a grant from the Multilateral Cooperation Center for Development Finance (MCDF) to support the project preparation activities, and
- 19.4 enhance the project's quality, by leveraging experience and lessons learned from the NR13 North and South Projects. This includes:
- 19.4.1 drafting the overall work program at the beginning of the project and updating it periodically to ensure the client and other key stakeholders are aligned and focused on the big picture, and
- 19.4.2 summarizing the issues and challenges faced in previous projects and proposing appropriate mitigation measures.
- Particularly, the Bank prioritized the environmental and social project preparation activities one year before the expected start date of the works. This has been achieved by mobilizing the Multilateral Cooperation for Development Finance (MCDF) grant to support ES preparation. This included updating the Environmental and Social Impact Assessment (ESIA) and Resettlement Plan (RP) documents prepared in 2019 and supporting the RP

implementation. This approach will facilitate a smooth start of implementation as soon as the contractor is selected and mobilized.

- 19.4.3 supporting the Department of Roads (DoR) in conducting public consultations in both the preparation and implementation stages to enhance the project's social inclusivity. This includes considering the interests of people living along the road corridor, as well as drivers, policemen and government officials.
  - 19.5 provide extensive technical assistance to MPWT to enhance its capacity in understanding and managing OPBRC contracts. This includes training and hands-on support in preparing OPBRC-related tender documents and future contract management. Technical assistance also includes:
    - 19.5.1 helping the DoR add axle-loading control stations in the project tender documents to address the issue of truck overloading and avoid the premature deterioration of roads.
    - 19.5.2 applying rated selection criteria for a civil works contract for the first time, to prevent procurement scenarios where the lowest price automatically wins the contract without regard to quality, while encouraging bidders to prepare high-quality technical bids.
    - 19.5.3 permitting the contractor to prepare the detailed road design in stages (segment-wise), instead of requiring all detailed design reports within the first six months.
  - 19.6 strengthen climate-resilience and road safety features in the updated conceptual design, as well as the corresponding requirements in the OPBRC tender documents for the final design to be prepared by the winning bidder. This ensures that all these technical features are incorporated into the detailed design and implemented by the contractor.
  - 19.7 embed a sub-component to assist MPWT in carrying out technical preparation activities for other critical road sections (projects) listed in MPWT's five-year plan (2021-2025). This will enhance the readiness of future projects.
- 20 **Value addition to AIIB.** The project adds value to AIIB because it will:
- 20.1 give AIIB the opportunity to be a lead financier in Lao PDR, which will:
    - 20.1.1 develop the Bank's experience in leading co-financed projects, which in turn will bring more opportunities to co-finance other future projects along with other financial institutions; and
    - 20.1.2 build valuable partnerships with the MCDF and ADFD (this is the first project to be co-financed with ADFD).
  - 20.2 strengthen the continuity and the long-term strategic partnership with the client in the transport sector.
  - 20.3 position AIIB as a partner of choice in financing transport projects in Lao PDR.

- 20.4 provide staff with opportunities to enhance and apply innovative contract models, as well as climate-resilient, safe infrastructure, and strategic infrastructure investment planning.

21 **Lessons learned from previous projects.** We have learned from earlier road projects financed by AIIB and other MDBs, particularly the NR13 Projects financed by AIIB (L0066A and L000373) that we need to.

- 21.1 ensure that pre-construction activities such as land acquisition and relocation of public utilities, are mostly completed before the start of civil works.

**How will we do that?** We did that by:

- 21.1.1 mobilizing an MCDF grant to support the RP implementation and the public utility relocation as early as possible. This will help us to avoid potential delays and to minimize contractor claims related to public utility relocation as well as resettlement.
- 21.1.2 identifying the Corridor of Impact (COI) of the road and encouraging DoR to formally hand it over to the Public Works and Transport Institute (PTI) in writing. DoR has accomplished this with support from the concept design review consultant and the ES preparation consultant, to avoid any confusion before and during the preparation and implementation of the RP.
- 21.2 ensure adequate project management capacity.

**How will we do that?** We will do that by:

- 21.2.1 ensuring that DoR has established a separate Project Coordinating Unit (PCU), which will become the Project Management Unit (PMU) once the President approves the project. The PCU has a dedicated and experienced project coordinator/manager to oversee the overall management of the proposed project. Additionally, PCU has qualified staff to carry out the day-to-day management of the contracts funded under the project, particularly the OPBRC Monitoring Consultant contract. This will avoid overloading the existing PMUs of the earlier NR13 projects.
- 21.2.2 considering previous experiences and lessons learned from ongoing NR13 projects funded by AIIB and other financiers. The Director General of DoR, who has actively participated in these projects will ensure close coordination between the PMUs of the various projects.
- 21.2.3 engaging a project management consultant through the MCDF grant, mobilized by the Bank. The consultant has been working for PCU since April 2023.
- 21.2.4 providing hands-on support in project preparation, and collaborating on customized training programs and knowledge-sharing workshops. In November and December 2022, a road safety workshop and an OPBRC pre-procurement workshop were organized, respectively. Another post-procurement (pre-bid opening) workshop will be conducted approximately one and a half months after the disclosure of the OPBRC tender documents (TDs).

21.3 enhance the OPBRC precreation and implementation.

**How will we do that?** We will do that by:

21.3.1 increase awareness during the bidding stage by conducting a two-day pre-bid opening workshops for potential bidders.

(i) understand the OPBRC model better and therefore prepare well-informed bids, in terms of potential risks and risks sharing arrangements between the employer and contractor, compared to the traditional unit-rate contract model (FIDIC Red book<sup>10</sup>).

(ii) understand the rated criteria selection method and key elements valued in the TDs.

(iii) learn from the key challenges faced by ongoing OPBRC projects.

21.3.2 utilize rated criteria to give more weight to bidding documents of good quality, rather than solely focusing on bid prices (see 19.5.2).

21.3.3 enhance the conceptual design (see 19.6).

21.3.4 introduce truck weighing stations (More details can be found in paragraph 57)

21.4 streamline the payment procedures to contractors because an efficient and effective processing of contractors' bills is essential for effective contract execution.

How will we do that? We will do that by asking MPWT to review further and update the payment procedures guideline, which was previously prepared for NR13S. This will be a condition for the loan's effectiveness.

## C. Components

22 Based on the request of the GoL and the technical discussions, the proposed project consists of the following two components:

(i) **Component 1 – Road rehabilitation, improvement, maintenance, and operation (USD64 million).** This component will support road improvement and rehabilitation works, as well as road operation and maintenance services on NR13, as follows: (a) the 20-km section (from KM 21 to KM 41) starting from the area near Don Noun in Vientiane Capital will be rehabilitated and expanded from two to four lanes, (b) the subsequent 30-km section (from KM 41 to KM 71) extending to Xaysavang village, Thaprabath District, Bolihamxay province will be rehabilitated and (c) both road sections totaling 50 km will be operated and maintained, with this project Component 1 supporting the first five years and the GoL funding the remaining five years. The component also includes the construction and operation of two axle load control stations. The works and services described above will be carried out through a long-term (10-year) OPBRC using the DBMOT method. The component will be financed by AIIB, ADFD and GoL counterpart funds.

(ii) **Component 2 – Provision of monitoring, technical assistance, and other consultancy services (USD8.3 million).** This component will provide technical and management support to the implementing entity, with the objective of ensuring project's

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<sup>10</sup> <https://fidic.org/books/construction-contract-2nd-ed-2017-red-book>.

readiness, quality and results, including OPBRC Monitoring Consultancy and safeguard preparation support, preparation of future investment projects, training and capacity building, project management and implementation support, and operating costs. Component 2 will include the following seven sub-components:

- a. **Sub-component 2.1 – OPBRC monitoring consultancy service (USD4 million).** This sub-component will finance a consultant firm to provide high-quality technical monitoring, environmental and social monitoring, and project management services to the implementing entity, as well as verify the compliance by the OPBRC's contractor with the provisions and requirements of the contract.
- b. **Sub-component 2.2 – Consultancy services for the preparation of ES documentation and RP implementation support (USD0.45 million).** This sub-component, financed by the MCDF grant, will review and update the ES documents and help the implementing agency implement the RP, thereby ensuring that the project is aligned with AIIB's ES standards. Also, an individual project management consultant has been engaged to support the PCU.
- c. **Sub-component 2.3 – Bridge safety study (USD0.5 million).** This sub-component will finance a consulting firm to conduct a bridge safety survey for the bridge over the Nam Ngum River, which was built in the 1980s and currently has a load restriction of 40 tons. The study will assess the structure's safety and propose necessary retrofitting measures if needed.
- d. **Sub-component 2.4 – Preparation of future investments for critical sections of NR13 (USD1.6 million).** This sub-component will finance technical assistance to prepare future investments in other critical sections of the NR13, including technical design studies and related Environmental and Social assessments.
- e. **Sub-component 2.5 – Technical assistance and capacity building for the preparation, procurement, and management of OPBRC (USD0.25 million).** This sub-component, financed by the MCDF grant, will involve the engagement of an individual OPBRC expert to support the project on the preparation of the OPBRC documentation, including the review of the bidding documents, tender evaluation report, etc. as well as the support during the OPBRC's implementation.
- f. **Sub-component 2.6 –Capacity building activities and other services (USD0.8 million).** This sub-component will involve the engagement of individual consultants to support project management and provide capacity building services for the implementing entity, including training, workshops and/or study tours. Other consultancy services, such as external technical and financial audits, are also expected to be covered under this sub-component. Details are under discussion with the MPWT. This sub-component will be solely financed by AIIB.
- g. **Sub-component 2.7 – Operating costs (USD0.7 million).** This sub-component will finance incremental operational cost associated with the project implementation when needed. Details are under discussion with the MPWT. This sub-component will be solely financed by AIIB.

**D. Cost and Financing Plan**

23 The indicative costs and financing plan for the project are outlined below in Table 1.

**Table 1: Project Cost and Financing Plan (USD m)**

Item	Project Cost	Financing				
		AiIB	ADFD	MCDF <sup>11</sup>	PPSF	GoL*
<b>Component 1: Road Improvement, Rehabilitation, Maintenance and Operation</b>	<b>64**</b>	<b>34</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>10</b>
<b>Component 2: Provision of Monitoring, Technical Assistance, and other consultants</b>	<b>8.3</b>	<b>6</b>	<b>-</b>	<b>0.7</b>	<b>1.6</b>	<b>-</b>
Sub-component 2.1: OPBRC Monitoring Consultancy Services	4	4	-	-	-	-
Sub-component 2.2: Consultancy Services for the ES preparation and RP implementation support (including one individual consultant)	0.4	-	-	0.4	-	-
Sub-component 2.3: Bridge safety study	0.5	0.5	-	-	-	-
Sub-component 2.4: Preparation of future investments	1.6	-	-	-	1.6	-
Sub-component 2.5: Technical assistance and capacity building for the preparation, procurement, and management of OPBRC	0.25	-	-	0.25	-	-
Sub-component 2.6: External audit, individual financial management consultant, project management consultant, capacity building program, and other consultant services	1.05	1	-	0.05	-	-
Sub-component 2.7: Operating cost	0.5	0.5	-	-	-	-
<b>Land Acquisition and Resettlement***</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>
<b>Total Cost</b>	<b>74.3</b>	<b>40 (53.8%)</b>	<b>20 (27%)</b>	<b>0.7 (1%)</b>	<b>1.6 (2.2%)</b>	<b>12 (16%)</b>

Note: \*Counterpart funds will come from the Road Fund.

\*\* Contingencies are already embedded in project cost. Any additional contingencies will be covered by the government.

\*\*\* Counterpart funds amounting to 24 billion Lao Kip (equivalent to USD 1.2 million) from the Road Fund (RF) have been allocated to the Ministry of Public Works and Transport (MPWT) for land acquisition. Compensation payments will commence in December 2023.

24 **ADFD financing.** ADFD's strategy focuses on assisting developing countries with the necessary funding to undertake vital projects on their development agenda, specifically infrastructure projects, to contribute to their sustainable economic growth. Since the project is included in the GoL's Ninth Five-Year National Socio-Economic Development Plan, the project is fully in line with ADFD's investment strategy. As this is the first time for ADFD to finance a project

<sup>11</sup> The MCDF agreement has been signed on October 11, 2022, and become effective.

in Lao PDR, it will strengthen ADFD's presence in ASEAN countries and consolidate its experience in road projects.

25 **Co-financing arrangement.** AIIB and ADFD will jointly finance the project, with AIIB serving as the lead co-financier. AIIB and ADFD have discussed and reached an agreement on the draft co-financing arrangements. In regard to the project activities financed fully or partially by the loan proceeds (including those activities financed by ADFD), AIIB's policies and procedures will be applied. These include safeguards, procurement, financial management, project monitoring, and reporting.

26 **MCDF grant.** The proposed project has leveraged the MCDF grant to bring the project to international IFI environmental and social standards, and to provide capacity-building support to improve the institutional know-how and capacity of the DoR to better prepare and implement OPBRC projects within Lao PDR. The grant contributes to the project objective of improving the connectivity infrastructure in Lao PDR. The grant has financed three key consulting contracts: ES consulting, the OPBRC individual expert consulting, and the project management consulting. The outcomes of these activities are fully aligned with MCDF objectives. Furthermore, this grant demonstrates how MCDF objectives and priorities can be translated into action on the ground even amid many implementation challenges and in low-capacity environments.

27 **PPSF grant.** The PPSF committee has endorsed the proposed grant support. GoL plans to submit the request in 2024.

28 **Special Fund Window (SFW).** The project is eligible for the SFW support considering that Lao PDR is categorized as International Development Association-only country by the World Bank and that the Project is a sovereign-backed financing fully aligned with AIIB's thematic priorities.

29 The GoL requested the use of the SFW for this loan through a letter dated May 18, 2023. As per the current availability of the SFW, AIIB will provide up to USD2.5 million SFW for this loan. USD2.5 million SFW is equivalent to the indicative buy-down rate of 31 bps, based on the amortization profile and Loan details.

30 **Counterpart funding sources.** Counterpart funds will be provided by the RF (more information can be found in paragraph 63), covering the cost of USD12 million for land acquisition and partially funding road maintenance services. The land acquisition cost has been included in the annual work budget plan for 2023 as a priority, as per MPWT's five years plan (2021-2025). The GoL has fully allocated the funds for land acquisition (Lao Kip 24 billion, equivalent to USD 1.2 million), and compensation payments will commence shortly. Therefore, the Bank expects that compensation payments will reach 80 percent by November 2024, which will fulfill one of the loan effectiveness conditions.

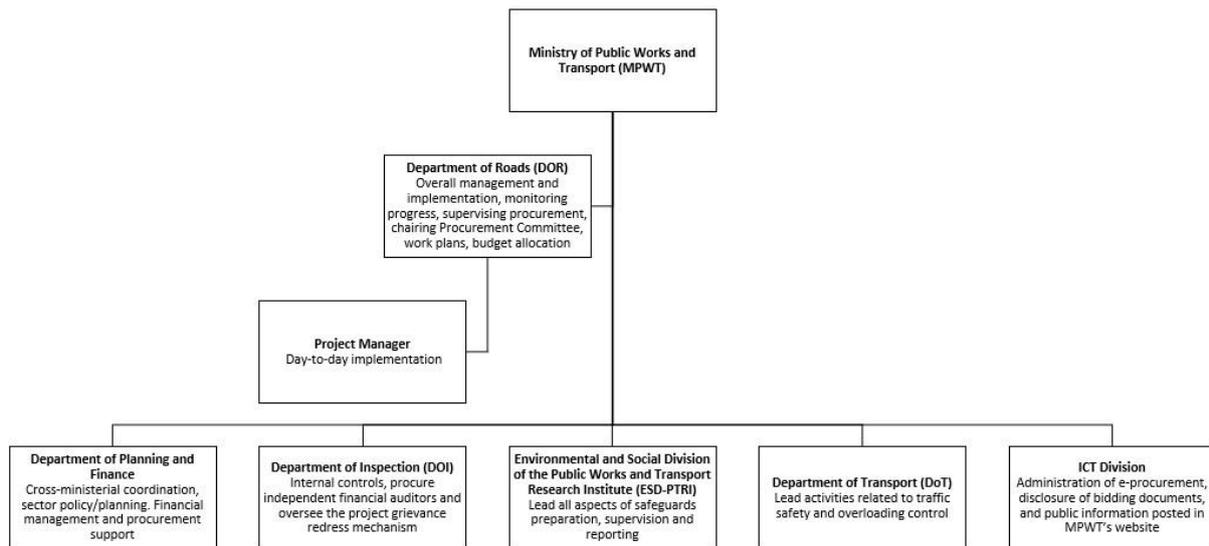
## **E. Implementation Arrangements**

31 **Implementation period.** The project implementation period will span from December 31, 2024, to December 30, 2030.

32 **Implementation Management.** MPWT will be the project implementing entity. The project will be implemented through a team of dedicated professionals (Project Management Unit, PMU) within the existing structure of MPWT/DoR, with clear roles and responsibilities. The project will receive overall policy and strategic guidance from the Project Steering Committee chaired by the

Vice-Minister of MPWT and co-chaired by the Vice-Governors of Vientiane Capital and Bolikhamxay Province, with representatives from the Ministry of Finance (MOF), Ministry of Planning and Investment (MPI), Ministry of Natural Resources and Environment (MONRE), and MPWT’s Department Directors directly involved in the project implementation (see Figure 1). The Project Steering Committee will be supported by a secretariat led by the Director General of MPWT’s DoR and comprising representatives of related departments.

**Figure 1: Implementation Arrangement**



**33 Project Implementation.** The Director General of DoR is the key management representative responsible for project execution. The Director General is supported by a Project Manager responsible for the overall management and implementation of the project. This includes monitoring project progress, supervising the procurement processes, chairing the Procurement Evaluation Committee, reviewing work plans, and allocating funds to road improvement, operation and maintenance works during the post-construction period. DoR has established a Project Coordinating Unit (PCU, to become PMU during project implementation) led by a Project Manager. The PCU/PMU is responsible for managing the day-to-day project preparation/implementation, including the management of the contracts funded under the project, particularly the OPBRC Monitoring Consultant contract. Further details of the project implementation arrangement are presented in Annex 2.

**34 Procurement Evaluation Committee.** MPWT has established a Procurement Evaluation Committee. The Director General of DoR will serve as the Chair of the Committee. The Committee’s membership includes representatives from the Department of Planning and Finance (DPF), the Department of Transport (DoT), the Provincial Department of Public Works and Transport (DPWT) of MPWT, as well as the Procurement and Price Monitoring Division (PPMD) of the State Assets Management Department under MoF, along with the Project Manager, who will be appointed by DoR after the project approval.

**35 Monitoring Consultant.** The PMU’s Project Manager will delegate a large part of the day-to-day management of the OPBRC to the monitoring consultant. The delegation includes procurement and contract management support, monitoring of the OPBRC implementation progress, as well as Environmental and Social (ES) management activities. The Monitoring

Consultant's primary responsibility is the continuous verification of the contractor's compliance with the numerous requirements of the OPBRC contract and Specifications. The Bank has supported the Department of Roads (DoR) in drafting the consultant's terms of reference. The procurement of the monitoring consultant is at an advanced stage, and the consultant is expected to start services in December 2024.

36 **Procurement.** Procurement will be conducted in accordance with the provisions of AIIB's Procurement Policy (revised June 26, 2024) and the AIIB Directive on Procurement Instructions for Recipients (July 26, 2024). AIIB's standard procurement documents will be used for goods and consulting services procurement, and the World Bank Standard Procurement Document for OPBRC and the WB Sample Specifications have been used as the basis for elaborating the OPBRC tender document and specifications.

37 A PCU<sup>12</sup> was established under MPWT and has the responsibility for implementing the project and managing the procurement under this Project, including updating the procurement plan (PP), preparing the tender documents, carrying out procurement, and issuing the Project Procurement Report as part of the Project Progress Report. The PCU is supported by a procurement consultant (financed by MCDF). The tender evaluation will be conducted by the Procurement Evaluation Committee (PEC). The PCU is also supported by the Monitoring Consultant in managing and monitoring contracts, and an individual project management consultant in overall project activities.

38 During the Appraisal mission in September 2023, the Project Delivery Strategy (PDS) and the Procurement Plan were agreed with the Bank, and they will be updated, as necessary, during the Project implementation. The procurement under this Project will include the following:

38.1 **Civil Works:** A 10-year Output- and Performance-based Road Contract (OPBRC) package is to be procured for the rehabilitation, improvement, and operation of NR13 South between KM 21-71 (estimated amount of USD 64 million). The procurement will follow the International Open Competitive Tendering (IOCT), using the one-stage, two-envelope system, without prequalification. The Contract includes 3 years for the rehabilitation/improvement works, as well as operations and maintenance (O&M) during the full 10-year contract period. The AIIB and ADFD funding will cover all rehabilitation and improvement works during the first three years. AIIB may also cover some O&M costs for the first two years of the seven-year O&M phase if there are remaining funds, while the Government of Lao PDR's counterpart funds will cover the remaining O&M costs in the subsequent years. The tender evaluation will make use of rated criteria to evaluate the Technical Part of the bids. A weighted scoring system will be applied to combine the final evaluation of the Technical and Financial bids to determine the successful tenderer, corresponding to the most advantageous bid. An Advance Procurement actions are currently underway to ensure that the Contract will be signed and implemented right after the Loan effectiveness.

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<sup>12</sup> The PCU will become Project Management Unit (PMU) with the endorsement of the Minister of MPWT after the proposed project is approved by AIIB's President.

38.2 **Goods:** There will be procurement of vehicles, motorbikes, and office equipment. All contracts are expected to be small (estimated less than USD 0.21 million) and simple. Accordingly, the Requests for Quotation (RFQ) method will be used.

38.3 **Consultant Services:** The Consultant Services under the project will include the following:

38.3.1 OPBRC Monitoring Consulting Firm: This is a 5-year contract, and Advance Procurement actions are currently underway for this Package to ensure that the Consultant is on board by the time of Loan effectiveness. The selection follows International Open Competitive Selection (IOCS) with the Quality and Cost Based Selection (QCBS) method being applied.

38.3.2 A Financial Management Consultant will be hired through the Selection Based on Consultant's Qualification (CQS) Method. In addition, there will be an External Auditor for the Project. To maintain consistency and the same standard across the different road projects, and considering the small estimated amount, the same External Auditor currently working for the NR13 North Project (jointly financed by the World Bank and AIIB) and the Lao Road Sector Project 2 (LRSP 2, the World Bank financed) projects) will be employed, through an amendment to the existing contract.

39 **Financial Management.** The Department of Planning and Finance (DPF) of MPWT will be responsible for the overall financial management of the project, for both AIIB's loan and MCDF grant financing. The DPF has adequate experience managing donor-funded projects, including NR13 improvement and Maintenance Project and Climate Resilience Improvement of NR13S Project (Section 3) that are currently under implementation stage. The DPF team that will manage the project's financial management consists of two divisions with a total of thirteen personnel, five in the accounting unit and eight in the disbursement unit. One additional Financial Management (FM) consultant will be hired to support financial reporting and payment processing, considering the increase in the number of projects being managed by DPF and the limited number of personnel within DPF. The department applies an automated accounting system "Accpac" which allows proper accounting and reporting of project transactions by sources of funds, project components, and categories. In addition, the DPF has adequate internal controls in place to ensure that funds are used for the intended purposes. The payment process under DPF is considered to be very robust, however, the processing time for payment to contractors/service providers as well as withdrawal applications are quite lengthy. This payment process will be closely monitored by AIIB to ensure that the time-bound procedures outlined in the recently revised payment procedure guidance note are adhered to, thereby ensuring timely processing of project transactions. The processes, procedures and controls as documented in MPWT's Financial Management Manual will also apply to this project.

40 Financial audits for AIIB's loan and MCDF grant financing will be carried out by a private external auditor, with terms of reference acceptable to AIIB. The TOR of ongoing projects (NR13 North and South) have been shared with AIIB. The Bank has reviewed and approved the terms of reference (TOR) for the external audit in March 2024. The loan will require an annual audit, while only a single audit covering the duration of MCDF grant will be required. The audit report (including management letter) will be submitted to AIIB not later than six months after the end of

each fiscal year and not later than six months after the grant closing date, for the loan and grant respectively.

41 **Annual Work Plan and Budget (AWPB).** MPWT will prepare an AWPB covering all sources of project financing and submit it to the Bank for no objection, not later than November 30 of each year. The AWPB will clearly indicate sources of financing (AIIB, ADFD and GoL) for activities under each component and sub-component. AIIB and ADFD will review and provide their no objections to the AWPB prior to implementation.

42 **Monitoring and Evaluation.** The PMU will monitor the project, supported by the monitoring consultant, and prepare monthly or quarterly progress reports and share them with AIIB. As one of the main means of monitoring project implementation, the reports will highlight the status of achievement of agreed targets for monitoring indicators and detail implementation progress in every aspect of the project.

43 **AIIB's Implementation Support.** AIIB and ADFD will carry out joint implementation support missions and site visits to the project sites, as needed, to monitor progress. AIIB, ADFD and the borrower will jointly carry out a midterm review mission, 30 months after the implementation start date.

### 3. Project Assessment

#### F. Technical

44 **Project Design.** The project road is 50 km long and consists of two different sections.

44.1 The first section spans 20 km and is situated in a semi-urban environment with relatively high traffic volumes, resulting in occasional congestion during certain times of the day. To support continued economic and social growth, it is necessary to expand the road from two lanes to four lanes and implement suitable road safety measures for all types of traffic, including pedestrians and non-motorized vehicles.

44.2 The second section is 30 km long and passes through a rural area and several villages. In this section, only rehabilitation of the existing road, minor widening of shoulders, and the addition of road safety measures are required.

45 Both road sections have a relatively simple and partially semi-urban arterial road design, with suitable horizontal and vertical alignments, and good soil conditions. The road mainly traverses flat terrain with an annual rainfall of approximately 2200-3250 mm. The only section that may require realignment is a relatively sharp horizontal curve with a small radius of 230m. This realignment is necessary to meet the minimum design criteria and the associated designed travel speed of 80 km/h.

46 Furthermore, an engineering firm has enhanced the climate-resilience and road safety features in the revised conceptual design. For more information, please refer to Paragraphs 53, 54, 55, and 56.

47 **Technical design.** Under the OPBRC contracting method, the Employer prepares only an indicative design for the information of bidders. The final design is to be prepared by the winning bidder who then also takes on full responsibility for the design and provides an extended defects warranty for the road until the end of the 10-year OPBRC contract period. MPWT prepared a conceptual engineering design for the project in 2019, financed by the Special Fund grant from AIIB under NR13N, taking into consideration the ASEAN standards, existing structural strength, traffic characteristics and volume, road safety, and climate and disaster risks. The pavement proposed in the original conceptual design was of the cement concrete type.

48 To be consistent with the ongoing NR13S Project (L000373) and to optimize the rehabilitation cost, MPWT subsequently decided to change the pavement design to an asphalt concrete pavement. With support from AIIB, MPWT has engaged two consulting firms to: i) review and update the conceptual design, including the estimated cost, traffic analysis, and climate change analysis, and ii) strengthen the road safety design and add construction safety requirements. These two assignments were completed in November 2023. The findings and specific requirements identified under these two consultancy services were incorporated into the updated conceptual design and included in the tender documents for information of the bidders. The required technical features must later be included by the successful bidder in his detailed design and implemented by the contractor. AIIB has used the remaining funds from the NR13S Project (L0373A) to finance these two consulting contracts.

49 **OPBRC contracting method.** The proposed OPBRC contracting modality to be used under this project is similar to the DBMOT contracting model. This enables greater participation of the private sector in designing and executing road investments and efficient allocation of risks between the Government and the private sector to achieve higher quality results and services. Under the OPBRC/DBMOT concept, the contractor is paid by the Employer through periodic performance-based lump-sum payments for completed milestones of the rehabilitation and improvement works if all performance requirements are met. There are also monthly lumpsum payments for maintaining the road infrastructure at the service levels stipulated in the OPBRC Specifications. The role of MPWT (the Employer) and of the Monitoring Consultant who is working for the Employer will be to enforce the contract, by verifying compliance by the contractor with the specified quality requirements, service levels and with all applicable national legislation and regulations. The OPBRC/DBMOT approach is expected to improve road investment and maintenance efficiency by transferring design, construction, operation, and maintenance risks to the contractor. Fixed lump-sum payments linked to meeting specified performance indicators will incentivize the contractor to manage the transferred risks better and deliver the agreed service levels. This is expected to result in a lower life cycle cost of the road for the Government and higher quality road services for road users, therefore, better road asset management for the government.

50 **Market sounding.** Both ongoing NR13N and NR13S projects have received positive responses from the market in terms of willingness by contractors to bid for OPBRC and by consultants to submit proposals for monitoring consultant services, with a large number of contractors (31 bidders under NR13N, 33 firms under NR13S), and consulting firms (28 firms under NR13N, 22 firms under NR13S) participating in the bidding process. To further assess the market readiness for OPBRC/DBMOT in Lao PDR and enhance the understanding of OPBRC and the lessons learned from the ongoing OPBRC projects, the Bank team organized an OPBRC pre-procurement workshop on December 8 and 9, 2022. The main objectives of the pre-procurement workshop were: (i) to take stock of the experience and the lessons learned from the preparation and implementation of the earlier and currently ongoing OPBRC contracts in Lao PDR and (ii) to make specific recommendations for the preparation of the bidding document for the new OPBRC (NR13SE), including the contract document as well as the specifications. The recommendations shall take into account the lessons learned (refer to paragraph 21) and help avoid the problems experienced under the ongoing OPBRC projects. (More details on lessons learned are presented in Annex 2).

51 The participants in the pre-procurement workshop included staff of DoR, contractors and consultants involved in the preparation and implementation of the ongoing OPBRC contracts, and contractors and consultants interested in participating as bidders for NR13SE. The workshop also helped enhance MPWT staff and potential bidders' understanding of the OPBRC contracting modality and is expected to improve the quality of OPBRC procurement under the new project.

52 Another OPBRC workshop was held in Vientiane on January 23 and 24, 2024, for contractors who had purchased the OPBRC tender documents. The main objective was to ensure that the potential bidders have a clear understanding of the contractual requirements and of how to prepare their bids and calculate their bid price in a realistic way. The workshop was also open to DoR staff as a capacity building measure.

53 **Climate resilience aspects in technical design.** The engineering consulting firm updated the conceptual design of the road, taking into account the potential risks posed by ongoing climate change. The findings are summarized in a "climate-resilience improvement report," which outlines the identified climate risks and the proposed mitigation measures. The primary risk identified is related to increased average precipitation, particularly intense rainfall and storms that may result in widespread flooding or flash floods. Although the project road section is not prone to flooding, it is necessary to incorporate proper drainage structures and technical features to handle the expected increase in rainfall intensity and quantity. This includes allowing water absorption from road drainage into adjacent terrain and lower soil layers. The detailed risk evaluation has resulted in specific requirements in the technical specifications: (i) the replacement of existing drainage structures (such as culverts) with ones of higher capacity, and (ii) the construction of new drainage structures where none existed before (50-km long ditch and additional culverts).

54 These mitigation measures are included in the updated conceptual design. The winning bidder will further develop and implement these measures to ensure that the road is resilient against future climate-related events. This will help minimize the risk of premature failure and excessive damage. The engineering consultant has also assessed the cost of these measures (with an indicative estimated cost of USD2.6 m).

55 **Paris Agreement Alignment (PAA).** The Project aligns with the PA's goals in terms of mitigation (building block {BB}1) and adaptation (BB2)<sup>13</sup> as summarized below.

55.1 **BB1: PA Alignment in Climate Mitigation.** The project, which includes a 20 km road section capacity expansion from two to four lanes, is not automatically aligned with the PA. Based on AIIB PA alignment methodology, after assessment, the project is considered aligned with PA concerning climate mitigation.

55.2 **BB2: PA Alignment in Climate Adaptation.** The project adopts a climate resilience design approach, incorporating adequate climate adaptation measures and its implementation is consistent with national strategies on climate adaptation. Therefore, the project meets all three steps of AIIB's PA methodology for assessing climate adaptation alignment with the PA.

56 **Road safety.** Some road safety-related issues are being experienced on the ongoing projects financed by AIIB and other IFI's. However, MPWT does not have a road safety technical standard, particularly for road design and construction works, to prevent and mitigate road safety risks. To support MPWT in holistically addressing road safety issues, the Bank provided support to DoR in hiring a specialized road safety consulting firm. This resulted in the completion of a detailed road safety audit of the earlier conceptual design and the introduction of a very substantial volume of new and additional road safety improvements in the updated conceptual design. The main objective of the road safety audit was to provide detailed recommendations on additional road safety measures and/or design changes needed to ensure that the road sections comply with international good practices and norms in road safety. The objective was fully achieved. Additionally, this road safety audit developed construction safety requirements to be followed by

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<sup>13</sup> The assessment was conducted using AIIB; "Guidance Note on Assessing Financing Operations' Alignment with the Paris Agreement at AIIB. Version 1.0"; June 2023.

the contractor during the implementation of the works and services. (More details can be found in Annex 2, lessons learned).

57 **Gender and other vulnerable groups.** Road users include pedestrians and other vulnerable road users, many of whom are women, and children. Based on the specific mobility patterns of women and vulnerable people, the project road design will include gender-sensitive and community-sensitive elements to address their mobility needs.

58 During the preparation of the project resettlement plan, the PCU and the Bank, with support from E&S and Road Safety Audit consulting firms, conducted joint consultations with women and vulnerable groups. These consultations identified their concerns and the barriers they face, including safety issues. Accordingly, the project design has added three pedestrian overpasses, additional traffic lights, improved street lighting, upgraded or new pedestrian paths/sidewalks, enhanced bus shelters (especially in village areas), and other gender-informed features.

59 This approach will be supplemented with other interventions during the project implementation, such as road safety awareness campaigns for women and vulnerable groups, and technical training for MPWT staff to understand and address the mobility needs of women through appropriate design solutions.

60 **Overloading control.** The review of the conceptual design of the road by an engineering consulting firm included a truck weighing campaign covering 400 loaded trucks. The campaign produced up-to-date information on the current extent of truck overloading along NR13, indicating that a large percentage of the trucks using NR13 are overloaded. This overloading damages the road and reduces its service life. In line with recent decisions made by the GoL, the mandate for control of truck overloading and enforcement of axle load limits has been transferred to DoR. DoR will create the necessary administrative and organizational structures for carrying out this function and will develop a plan for implementing effective axle load control on the National Road Network. MPWT will carry out a review of: (i) the current legislation and regulation on axle load restrictions, and (ii) the enforcement measures included in the legislation, in particular to determine if the level of penalties is sufficient for deterring truck operators from overloading. MPWT will inform AIIB about the results of the review and of any changes in legislation or regulation related to axle load restrictions which may be necessary to ensure effective axle load control.

61 The OPBRC contract will include constructing two truck weighing stations (one in each direction of traffic) with high-speed dynamic Weigh-in-Motion for pre-selection of potentially overloaded trucks and low-speed dynamic weighing for enforcement purposes. The new weighing stations will be operated by the OPBRC contractor, and the presence of police officers will be required for imposing fines on overloaded trucks.

62 **Operation and Maintenance.** The OPBRC/DBMOT contract will have a 10-year implementation period. Rehabilitation and improvement works are expected to be completed within the first three years. Maintenance services will start at the beginning of the contract and continue until the end. The AIIB financing is expected to end after five years. The payments during the remaining five years of the OPBRC contract and the O&M costs after the OPBRC contract will be borne by GoL (Road Fund). The OPBRC monitoring consulting firm will provide training and hands-on capacity building measures to ensure that MPWT is fully equipped with the necessary tools and knowledge to carry out supervision and monitoring of the maintenance

services for the five years following the end of AIIB financing and project closure. MPWT will also gain experience from the ongoing NR13N project and NR13S program, which uses the same OPBRC/DBMOT contracting method.

63 **Road Fund (RF).** The RF was established in 2001 to mobilize funds from road users for the maintenance of public roads. The RF primarily allocates more than 80 percent of its annual budget to the rehabilitation and maintenance of the national road and other friendship bridges<sup>14</sup>.

64 Based on the RF financial status analysis report, prepared by DPF<sup>15</sup> in May 2023, the RF's revenue in 2022 increased by 13.43 percent compared to 2021. MPWT anticipates further revenue growth due to several positive factors, including China lifting travel restrictions in early 2023 and efforts to increase other revenue resources, namely Annual Road TAX and toll services.

65 Further, the maintenance of ASEAN highways is the top priority for the RF. The project is part of ASEAN highway 11, which is given higher priority than other national highways. The project is also listed as a high-priority project in the MPWT's five-year plan (2021-2025). Additionally, MPWT will submit a sustainability plan, to be submitted no later than 12 months before the loan closing date, outlining actions and budgets to ensure the project's effective implementation even after the closing date.

## **G. Economic and Financial Analysis**

66 **Economic analysis.** A Cost-Benefit Analysis (CBA) was conducted to calculate the Economic Internal Rate of Return (EIRR) and Net Present Value (NPV) of the road improvement, based on a standard methodology for the appraisal of road investments. The main economic benefit of the project is the travel time savings for passengers due to the improved driving speed. The other benefits are reduction of accidents and fatalities, a reduction of GHG emissions and a reduction of road operating costs and avoided maintenance costs. The EIRR of the project is 20.2 percent, and the NPV is USD 66.03 million (at a discount rate of 9 percent). The EIRR is well above the opportunity cost of 9 percent, and therefore, the proposed project is considered economically viable. Further details of the economic analysis are presented in Annex 6.

67 **Financial analysis.** As the road of the proposed project will not be tolled and will be wholly financed by the public sector, a financial analysis will not be conducted.

## **H. Fiduciary and Governance**

68 **Procurement.** The new Law on Public Procurement No. 30/NA dated 2 November 2017 adopted by the National Assembly in November 2017 (which became effective on 17 April 2018) provides the foundation for public procurement. The Minister of Finance through a MoF's Instruction No. 0477/MoF dated 13 February 2019) instructs all government agencies on the implementation of the Procurement Law and establishes the Procurement and Price Monitoring Division (PPMD) of State Assets Management Department under MoF, who is responsible for regulating the GoL procurement processes. However, the law is yet to be fully enforced, and the PPMD capacity is not yet strengthened. Open competitive bidding is the default method, with

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<sup>14</sup> There are four friendship bridges linking Lao PDR with Thailand.

<sup>15</sup> Road Fund Secretariat is under the jurisdiction of the Department of Planning and Finance, Ministry of Public Works and Transport.

other methods permitted for contracts below thresholds. The Methodology for Assessing Procurement Systems (MAPS) for Lao PDR is currently still ongoing, to update the progress update of the improvement of the Lao PDR public procurement system. The MAPS Report is expected to be released in 2024. Under the current national legal framework on procurement, there is no issue on the use of AIB Procurement Policy and PIR for AIB financed projects.

69 Under the current practice, MPWT is fully responsible for managing and carrying out procurement for its projects. DoR of MPWT has a rich experience in implementing projects financed by AIB and other MDBs, such as the WB and Asian Development Bank (ADB), and that qualified staff has been assigned to the project preparation. The project manager will be responsible for procurement during project implementation, with the support of an individual consultant financed under the project. The current procurement organization setup is considered as adequate for implementing project procurement.

70 The main procurement risk is the procurement delay, due to (i) inadequate capacity of procurement staff, (ii) delay in the tender evaluation process by the Procurement Evaluation Committee, and (iii) inconsistency of law and regulation pertaining to procurement. To mitigate the risk, the following actions have been put in place: (i) use of Bank Procurement Policy and PIR in lieu of the national procurement law, (ii) conducting advance procurement actions for key procurement packages (i.e. the OPBRC Road Construction Work, and the hiring of Monitoring Consultant), (iii) assigning an adequate Project Manager assisted by a qualified procurement consultant, and (iv) the Project Manager as a member of Procurement Evaluation Committee, so that the evaluation can be done on a timely manner. Overall Procurement Risk after mitigation is considered Medium.

71 **Financial Management.** An assessment of Financial Management (FM) was conducted during the appraisal stage and concluded that the proposed FM arrangements are satisfactory to the Bank and can provide accurate and timely information on the status of the funds. The main risk factors noted are timeliness and adequacy of budget allocation for all sources of financing, excessive delays in contractual payments and increased workload which may overstretch the current staff capacity. These risk factors will be mitigated through close monitoring of budget plan preparation for the project by both DPF and AIB, closer monitoring of the payment process to ensure compliance with the recently revised payment procedure guidance note, a setup of a dedicated verification team to review claims from contractors/vendors, and the hiring of an additional FM consultant.

72 **Financial Management Staffing.** The recent restructuring of the MPWT combined the Department of Planning and the Department of Finance (DOF), forming the Department of Planning and Finance. DOF previously managed the FM function of the AIB-funded projects, however, despite the reorganization, the staffing arrangement and the overall mechanism for budgeting, flow of funds, accounting, internal controls, financial reporting and audit arrangement will remain the same as under previous projects. The FM personnel arrangement for loan financing will also be applied to MCDF grant. Given the limited number of personnel within DPF and the total number of projects managed by MPWT, an additional FM consultant will be hired to support the project for both loan and grant. The FM consultant will be responsible mainly during implementation phase and hired throughout the project period.

73 **Budgeting.** The project will maintain budget arrangement similar to those under the previous AIIB-funded projects in Lao PDR. The counterpart fund allocation of USD12 million will come from RF, covering the land costs and the maintenance costs for the last five years OPBRC contract.

73.1 Land costs. As of now, the budget for land acquisition have been fully allocated by the Government.

73.2 Maintenance costs. MPWT will adopt, not later than twelve (12) months prior to the Closing Date, a sustainability plan. This plan will specify actions and budget designed to ensure the continued and effective implementation of the OPBRC beyond the Closing Date. It will include, inter alia, financial, institutional sustainability, and monitoring and supervision measures to be put in place by MPWT for the remaining period of the operation and maintenance phase of the OPBRC contract.

74 **Disbursement.** The project will apply advance and direct payment as disbursement methods of Loans and MCDF grant. The MPWT will prepare a separate withdrawal application to AIIB and ADFD for disbursement under Component 1: Road Improvement, Rehabilitation, Maintenance and Operation. The withdrawal application documents will be submitted to AIIB (softcopy and hardcopy) after approval from MoF is obtained.

75 Direct Payment method will be used for payments with the threshold of 100,000 USD, mainly for construction contract. Under direct payment, the disbursed amounts will be transferred directly from AIIB to contractors, upon request from MOF and approval from AIIB. During construction period, Advance Payment method will be used for incremental operating cost that will be financed from AIIB loan proceeds. Under advance method, a designated account in USD will be opened at the Bank of Lao PDR, managed by the National Treasury of MoF.

76 In case there are remaining funds from loan near the closing date, the project plans to utilize the loan proceeds to finance the O&M cost. To process with remaining balance utilization, the project will have to extend project closing date through loan amendment. For such O&M cost-related payment, direct payment and advance method will be selected. For direct payment, the project will submit application in CNY, that is equivalent to Lao Kip (LAK) estimation per each transaction. This is based on the agreement that the AIIB and ADFD funds will jointly cover the costs of rehabilitation and improvement works during the first three years. If there are remaining funds, AIIB may also cover some O&M costs for the initial two years of seven-year O&M phase. Meanwhile, under advance method, the MPWT will manage the designated account in USD and pay the contractors in LAK subsequently. In addition, the MPWT will also be responsible for preparing periodic DA reconciliation and disbursement application to replenish the DA.

77 The disbursement arrangements, including the minimum value for the direct payment and type of supporting documents needed under each disbursement method, will be guided by the AIIB disbursement letter for the loan. For MCDF grant, the selected disbursement method will remain as direct payment, as per disbursement letter dated October 2022.

78 **Accounting and Financial Reporting.** The accounting system, internal control, and financial reporting arrangements will follow the Financial Management Manual of MPWT. The project's transactions will be accounted and reported on the accrual basis of accounting. However, for financial reports submitted to AIIB, one statement shall reflect the position of the project on a cash-basis for reconciliation with Bank's records. DPF will be required to provide both consolidated

unaudited interim financial reports. The unaudited financial reports, which will cover a semi-annual period (Jan-June and Jul-Dec), should be submitted to AIIB within 45 days of the end of the reporting period. The project's financial reports will be audited annually by a private external auditor. However, in the case of the MCDF grant, a single audit covering the entire grant duration will only be required six months after the grant's closing date.

79 **Governance and Anti-corruption.** AIIB is committed to preventing fraud and corruption in the projects it finances. It places the highest priority on ensuring that projects are implemented in compliance with AIIB's Policy on Prohibited Practices (2016). Implementation will be monitored regularly by AIIB staff. The Bank will reserve the right to investigate, directly or indirectly through its agents, any alleged corrupt, fraudulent, collusive, coercive, or obstructive practices, and any misuse of resources and theft or coercive practices relating to the project, and to take necessary measures to prevent and redress any issues in a timely manner as appropriate. Detailed requirements and reference to the Bank's Policy on Prohibited Practices will be specified in the Loan Agreement and the Project tender documents. AIIB will monitor the tender preparation and evaluation tasks under the project.

## I. Environmental and Social

80 **Environmental and Social Policy and Categorization.** AIIB's Environmental and Social Policy (ESP), including the Environmental and Social Standards (ESSs), and Environmental and Social Exclusion List (ESEL), is applicable under the proposed project. ESS 1 (Environmental and Social Assessment and Management) and ESS 2 (Involuntary Resettlement) will apply to the proposed project. No Indigenous Peoples/Ethnic Minority groups are collectively attached to the project area. Therefore, ESS 3 Indigenous Peoples is not applicable per the Bank's ESP. Based on the available information, including several site missions by the project team, the project has been categorized as Category B. This is because the anticipated project's Environmental and Social (E&S) risks and impacts are expected to be localized and of a temporary nature. The E&S risks and impacts are not unprecedented to the project area and can be mitigated through effective E&S management.

81 **Instruments.** In 2019, MPWT prepared an Environmental and Social Management Framework (ESMF), a Resettlement Planning Framework (RPF), and an Ethnic Groups Engagement Framework (EGEF) for the NR13 South project in accordance with AIIB ESP. Considering that this project is located on the same road as the NR13 South project, these frameworks and the latest version of the AIIB's ESP (November 2022) formed the basis for DoR's preparation of the ESIA, Environmental and Social Management Plan (ESMP); Resettlement Plan (RP) and Stakeholder Engagement Plan (SEP) for this project.

82 **Environment Aspects.** The proposed project aims to have positive impacts on the environment by reducing emissions and noise. This will be achieved by improving the condition of the road and reducing congestion. Additionally, the number of road incidents or accidents is expected to decrease. However, during the rehabilitation stage, there will be some negative environmental impacts in the 20 km section where the road will be expanded from two to four lanes. However, the impacts are expected to be minimal in the remaining 30 km section, as the existing alignment will be utilized.

83 The construction phase will likely have negative environmental impacts, including noise, dust, and gas emissions. It may also involve the disposal of solid and hazardous wastes, water

contamination, siltation of water bodies, blockage of drainage, soil erosion and contamination, and removal of vegetation. These impacts are caused by various construction activities such as batching, asphalt plants, construction camps, heavy machinery use, and site management issues related to an influx of workers (e.g., hygiene and sanitation, community health and safety). Additionally, traffic disruption and Occupational Health and Safety (OHS) risks for construction workers are factors to consider. Road incidents or accidents may also contribute to pollution. These impacts will likely be specific to the project areas and their surroundings.

84 Additionally, the ESIA has identified the need for the felling of at least 458 trees as part of the site preparation works. Although several tree species designated for felling appear on the International Union for Conservation of Nature Red List, these species primarily exist within an urban environment and are scattered across private land lots, such as in ornamental gardens. The Corridor of Impact (COI) is in a highly human-modified landscape, with 98 percent of the COI being the existing road. No natural habitat nor critical habitat exists within the right of way. This context significantly reduces the potential environmental impact of tree felling. Nonetheless, the ESIA includes provisions for tree transplantation or compensatory planting supported by local authorities and communities to minimize impacts wherever possible. Such initiatives will lessen the environmental impact and relocate these species to more ecologically valuable areas, thereby enhancing their contribution to the natural ecosystem.

85 The ESIA addresses the above-described impacts. The ESMP includes mitigation measures for the identified risks and adverse impacts including the preparation of stand-alone OHS Management Plan for the project prior to the work commencement. The ESMP also includes a monitoring plan, environmental code of practices, reporting mechanism and roles and responsibilities of the key institutions for its implementation. The ESMP will be included in the OPBRC contract and specifications. A site-specific ESMP will be prepared by the contractor prior to the construction (C-ESMP).

86 **Climate Change Risks and Opportunities.** The project is expected to create a positive impact by improving climate resilience of the road and reducing Green House Gas (GHG) emissions per vehicle kilometer traveled. The project aims at improving the climate resilience of the existing road, as discussed in paragraph 53. The design and improvement will ensure that stormwater can discharge properly, minimizing the impact to the road and adjacent surroundings.

87 **Social Aspects.** The project is expected to largely generate positive social benefits for the local population, including improved travel conditions and better road safety, as well as reduced transportation costs, travel time and congestion. These benefits are in addition to improved health outcomes due to long-term reduction in noise and dust. Productivity gains for agricultural businesses, increased competitiveness, and contribution to the growth of the local economies are also expected, together with increased access to markets and social services - particularly with respect to education. Other benefits include improved connectivity between rural and urban centers, and between the southern provinces and Vientiane capital area.

88 **Land Acquisition and Resettlement.** The project will not involve any physical relocation of permanent structure and/or involve major resettlement of people. The Detailed Measurement Survey (DMS) was conducted based on the confirmed COI from 16 January 2023 to 16 February 2023. The DMS indicated that the Project will affect 556 Project Affected Households (PAHs) comprising 3,078 Project Affected Persons (PAPs), including 1,371 females, across 21 villages in three districts and two provinces. However, during the Post Appraisal Mission conducted from

September 16 to 20, 2024, the DoR and the Public Works and Transport Institute (PTI) reported that the number of PAHs decreased from 556 to 344. The PAHs for housing structures and shops will construct their new housing and/or shops within the existing land plot area covered in the land title/certificate. Other impacts involve secondary structures like porches of shops, gates, fences, signs, and drainage systems. A safety or buffer zone of 1.5 meters will be established.

89 Additional adverse social risks and impacts during the construction phase include temporary business disruption due to land closure or restricted access, temporary restriction of access to houses, shops, temples and graves, temporary disruption of the water and electricity supplies, impacts on schools, in terms of safety and access, potential labor influx and the conduct of road workers during construction, and health and safety issues for the communities along the road. The negative social impacts and risks during the operation and maintenance phase are mostly associated with noise and road accidents. The ESMP includes measures to address the above impacts, including a chance finds procedure for archaeological, historical, and sacred sites.

90 The PCU/PMU, under DoR at MPWT, is responsible for the implementation of the project. This includes contracting and supervising all consultants to ensure the effective implementation of the Environmental and Social Management Plan, Resettlement Plan, and Stakeholder Engagement Plan. Specifically, the Environment Research and Natural Disaster Prevention Division of the Public works and Transport Institute under MPWT, with support from the OPBRC Monitoring Consulting firm, is responsible for monitoring and supervising E&S safeguards and providing technical assistance and capacity building for the project.

91 **Gender Equality and Social Inclusion (GESI).** Aligned with GoL's efforts, a GESI Framework has been developed for the project with the aim to: (i) enhance the participation of women and vulnerable groups in project-related activities through public consultations at each phase of the project; (ii) provide women and vulnerable groups with road safety and accessibility measures; (iii) promote equal opportunities for female employment; and (iv) strengthen the technical capacity of MPWT staff. The GESI Framework outlines guiding principles for the effective incorporation of GESI considerations as an integral part of the proposed project. These considerations are translated into specific actions in the GESI Action Plan, which forms part of the ESIA. The implementation of the GESI Framework is expected to result in positive outcomes, as detailed in the Project Results Framework and Monitoring (Annex 1).

92 Overall, the GESI Framework and GESI Action Plan will benefit all inhabitants living in the project area, especially women, elderly persons, and children who use the road daily for school, market, etc. They will enjoy safer, more accessible, and more pleasant roadside environments. Additionally, motorcycle and truck drivers will experience significantly improved driving conditions. Other direct beneficiaries include women employees and, more broadly, MPWT staff, whose technical skills and capacities will be further enhanced.

93 **Occupational Health and Safety, Labor and Employment Conditions.** The ESMP has identified OHS risks during the entire OPBRC contract period. The OHS requirements will be included in the contractor's site specific ESMP. Additionally, the ESMP addresses various other issues such as labor influx, working conditions, labor payments, inadequate sanitation facilities for women, labor disputes or grievances, Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and code of conduct. The client will ensure that the bidding documents include clauses pertaining to these requirements. Furthermore, the client will oversee the contractors' compliance

with applicable labor laws and regulations, as well as the adoption and enforcement of codes of conduct for all workers.

94 **Stakeholder Consultation and Information Disclosure.** Consultations were carried out during the conduct of E&S studies, development of the ESMP; RP and SEP including the update of the ESIA. During construction, the client is required to regularly conduct consultations with local communities and report monthly. The E&S documentation were disclosed in English and Lao language at the MPWT website on August 30, 2023, and Bank’s website on September 08, 2023.

95 **Project Grievance Redress Mechanism (GRM).** A multi-tier Grievance Redress Mechanism (GRM) has been in operation and functioning since the implementation of the NR13 South project financed by AIIB. It will be further improved during the implementation of this project. The GRM covers four types of grievances and has been in place from pre-construction to the construction and operation of the project. These include grievances from: a) community members, including the public and other stakeholders; b) households affected by land acquisition, both those with land titles and those without; c) SEA/SH victims; and d) contractor’s workers. The project staff, village committees, and contractors will receive training and information from the PCU on GRM procedures prior to and during implementation. Additionally, the project will utilize the existing GRM of the MPWT through the MPWT website, which allows for online feedback or complaint submission in Lao and English at <https://www.mpwt.gov.la/complaint>. Information about the GRM was disseminated along with AIIB’s Project-affected People’s Mechanism (PPM) through the disclosure of E&S documentation on August 30, 2023.

96 **AIIB Independent Accountability Mechanism.** The Project-affected People’s Mechanism (PPM) has been established by the Bank to provide an opportunity for an independent and impartial review of submissions from Project-affected people who believe they have been, or are likely to be, adversely affected by AIIB’s failure to implement its ESP in situations when their concerns cannot be addressed satisfactorily through the Project-level GRM, or through the processes of the Bank’s Management. For information on AIIB’s PPM, please visit: <https://www.aiib.org/en/policies-strategies/operational-policies/policy-on-the-project-affected-mechanism.html>

**J. Risks and Mitigation Measures**

97 Based on the current assessment, discussions with DoR, and review of available documents, the Bank has assigned an overall “Medium” risk rating to the project.

**Table 2: Summary of Risks and Mitigating Measures**

<b>Risk Description</b>	<b>Assessment Ratings (High, Medium, Low)</b>	<b>Mitigation Measures</b>
<p><b>Timely availability of counterpart funds.</b></p> <p>The macroeconomic situation is challenging because of natural disasters, in particular</p>	<p>Medium</p>	<p>Risks are partly mitigated by fiscal consolidation plans expected to be driven by more robust revenue collection and continued controls on overspending. Ongoing reforms aimed at strengthening</p>

<p>with the impact of a lingering Covid-19 pandemic that has put pressure on the fiscal position of the country, high fiscal and current account deficits, as well as public debt levels. Limited fiscal space reduces the ability of GoL to fund maintenance of public assets, including infrastructure.</p>		<p>Procurement and FM, along with the approval of the public debt management law, should enhance the MoF's role and capacity in improving public finance and debt management.</p> <p>Specifically, the RF, the source of counterpart funding, will cover the land costs and the O&amp;M costs for the last five years. According to the RF analysis report dated May 24, 2023, and the findings of the appraisal mission in September 2023:</p> <p>Land costs:</p> <ul style="list-style-type: none"> <li>• As of now, funds for land acquisition have been fully allocated by the Government.</li> </ul> <p>O&amp;M costs:</p> <ul style="list-style-type: none"> <li>• The RF's revenue in 2022 increased by 13.43 percent, and MPWT anticipates further revenue growth due to several positive factors, including China lifting travel restriction in January 2023 and efforts to increase other revenue resources, namely Annual Road TAX and toll services.</li> <li>• Maintenance of ASEAN highways, including the project, which is part of ASEAN highways 11, is given top priority over other national highways. The project is listed as a high-priority project in the MPWT's five-year plan (2021-2025).</li> </ul> <p>Additionally, if the Government was unable to cover the costs, the following options could address the potential funding gaps:</p> <ul style="list-style-type: none"> <li>• AIIB could consider using any remaining funds to cover the O&amp;M costs for the last five years.</li> </ul>
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		<ul style="list-style-type: none"> <li>Alternatively, the Government could consider additional financing from ADFD to bridge the potential gap.</li> </ul>
<p><b>Institutional Capacity for Implementation and Sustainability Risks</b></p> <p>MPWT has experience in implementing MDB’s projects and is familiar with AIIB’s procedures from ongoing two projects.</p> <p>However, the internal approval process within MPWT for procurement of works and consultant contracts is lengthy, which could delay project preparation and implementation.</p> <p>In addition, although MPWT has experience in the preparation of OPBRC contract through ongoing OPBRC projects, knowledge, and experience in managing OPBRC contracts remain limited.</p> <p>Moreover, the project could potentially overload the implementation agency which has limited resources and capacity.</p>	<p>Low</p>	<p>The Bank team has been working closely with the client, providing hands-on support. The project is in an advanced stage and demonstrates high readiness.</p> <ul style="list-style-type: none"> <li>Assignment of two full-time DoR staff to the project: a project coordinator with MDB working experience, set to become the project manager upon the project approval, and a junior technical staff member.</li> <li>Onboarding of a local consultant for procurement and overall project management support in September 2022, and an OPBRC expert in November 2022.</li> <li>Engagement of three consulting services since April 2023 for ES preparation and RP implementation, conceptual design review and road safety audit. These consultants have completed over 80 percent of their services.</li> <li>The procurement process for a monitoring consultant is underway, with onboarding expected in December 2024.</li> <li>The OPBRC Tender Documents were disclosed in December 2023, and the contractor is anticipated to join in December 2024.</li> </ul>
<p><b>Climate risk analysis and mitigation measures.</b></p>	<p>Low</p>	<p>An independent consulting firm was engaged to review the conceptual design, assess climate risks, and propose mitigation measures. They submitted a detailed assessment on November 25,</p>

		<p>2023, which identified climate risks and suggested mitigation strategies. The client has incorporated these measures into the OPBRC tender documents, included in the detailed design, and will be implemented by the contractor.</p>
<p><b>Procurement</b></p> <p>A full-time project coordinator, who will become the project manager after loan approval, has been assigned to handle daily procurement activities. However, the limited number of personnel in the PCU for project procurement could lead to delays. Additionally, the internal review and approval procedures within the MPWT and Lao Government may cause further delays.</p>	<p>Medium</p>	<p>An experienced procurement consultant has been engaged to support the PCU/PMU during project preparation and implementation. Additionally, an OPBRC expert has been hired to offer high-quality support in procurement and contract management. The Bank team will also maintain close collaboration with the PCU, continuing to provide hands-on support.</p> <p>Advance procurement actions are underway for road construction and the selection of a Monitoring Consultant. Two OPBRC workshops were held in September 2023 and January 2024, aiming to attract potential bidders and to enhance the PCU's and potential bidders' understanding of OPBRC.</p> <p>Moreover, the Bank team has discussed streamlining internal review and approval procedures with the MPWT.</p>
<p><b>Financial Management</b></p> <p>There is a limited capacity and a small number of personnel within DPF, which may affect the timely and proper execution of FM responsibilities.</p> <p>Delays in the preparation of budget allocations, coupled with limited overall fiscal capacity, present risks in light of macroeconomic situation.</p> <p>The lengthy payment process to contractors and service providers could impact compliance with contractual</p>	<p>Medium</p>	<p>Experienced FM consultants will be hired, and the Bank team will provide training and hands-on support. A timely budget plan for all financing sources must be prepared and submitted to the MOF, ideally at least six months before the start of the fiscal year. The payment procedure guideline, including processing lead times, has been revised and approved by the AIIB and WB for the NR13S project. The project team will closely monitor project transactions to ensure compliance with these revised guidelines.</p>

<p>agreements, project implementation, and overall disbursements.</p>		
<p><b>Environmental and Social</b> PCU has limited capacity resources in E&amp;S preparation and implementing the RP and public utility relocation.</p>	<p>Low</p>	<p>PCU will receive support from the Department of Roads and the Environment Research and Disaster Prevention Division/Public Works and Transport Institute. These entities have acquired knowledge and years of experience in implementing and monitoring E&amp;S aspects of national road projects, collaborating with other Multilateral Development Banks (MDBs).</p> <p>A qualified consulting firm, supported by the MCDF grant, conducted the E&amp;S preparation work. This same firm is also assisting with the RP implementation, which is expected to be completed by Q4 2024. Additionally, once onboarded, the monitoring consultant will provide support to the client during the project implementation stage.</p> <p>The PCU will submit annual E&amp;S monitoring reports to the Bank for review based on the agreed format. In addition, the Bank team will conduct regular project implementation monitoring and support missions, typically twice per year, though this may be adjusted as needed to assist the PCU in implementing the project.</p>

**Annex 1: Project Results Framework and Monitoring**

<b>Project Objective</b>	To enhance connectivity through improving the road condition, safety, and climate resilience of targeted critical sections of the National Road 13.								
<b>Indicator Name</b>	<b>Unit of Measure</b>	<b>Baseline Data</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>End Target</b>	<b>Frequency</b>	<b>Responsibility</b>
		<b>2024</b>					<b>2029</b>		
<b>Project Objective Indicators</b>									
1. Reduced travel time	Minutes	75 (a)	N/A	N/A	N/A	N/A	32	First year of operation	MPWT
<b>Intermediate Results Indicators</b>									
2. Reduction in average International Roughness Index (IRI) for finished sections	Number	7	3	3	3	3	3	Annual	MPWT
3. Road safety: Increase in average IRAP star rating of the project road	Number	1	1	1	3	3	3	First year of operation	MPWT
4. Kilometers of roads constructed or rehabilitated	km	0	10	30	50	50	50	Annual	MPWT
5. Kilometers of roads maintained at normal Service Level under the OPBRC contract	km	0	10	30	50	50	50	Annual	MPWT
6. Kilometers of drainage system (concrete 36.1 Km and earthen drain 14.2 Km, total 50.3 Km)	km	0	10	40	50.3	50.3	50.3	Annual	MPWT
7. Capacity building: Total number of MPWT staff	Number (cumulative)	0	2/20	4/40	6/55	6/55	6/55	Annual	MPWT

<b>Project Objective</b>	To enhance connectivity through improving the road condition, safety, and climate resilience of targeted critical sections of the National Road 13.								
<b>Indicator Name</b>	<b>Unit of Measure</b>	<b>Baseline Data</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>End Target</b>	<b>Frequency</b>	<b>Responsibility</b>
		<b>2024</b>					<b>2029</b>		
received training on OPBRC (female staff/total staff)									
8. Capacity building: Total number of MPWT staff received training on road safety (female staff/total staff)	Number (cumulative)	0	1/8	4/16	6/24	6/24	6/24	Annual	MPWT
9. Study Tour (including project management, climate resilience, and other relevant topics) <sup>1</sup>	Number (cumulative)	0	0	1	2	2	2	Annual	MPWT

(a) Based on the concept design, the current travel time by bus (40 kilometers per hour) from the beginning to the end of the project road in 2019.

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<sup>1</sup> One study tour for senior staff and another for technical staff.

## Annex 2: Sovereign Credit Fact Sheet

1. Lao PDR is a lower middle-income country with GDP per capita of around USD2,000 and population of around 7.5 million. A gradual recovery from a covid-induced recession is taking place, with growth of around 2 percent in 2021 and 2022, and projected at 4 percent in 2023.
2. Lao PDR is currently under macroeconomic stress. Due to adverse external conditions, high debt service payments and low reserves, the currency has sharply depreciated (lost 50 percent of its value) and inflation has surged to over 40 percent in early 2023.
3. The authorities responded with policy tightening. Thanks to decisive fiscal consolidation, mainly by freezing public investment projects, the fiscal deficit declined to around 1.5 percent of GDP in 2021 and 2022, from 5.6 percent in 2020. However, the sharp depreciation increased interest payments, aggravated fiscal imbalances, and the deficit is expected at around 3.5 percent in 2023 and beyond.
4. The current account deficit widened to 6 percent of GDP in 2022, but is currently easing, and projected at 2.6 percent of GDP in 2023, thanks to import compression and some improvement in exports. Reserves, at around USD1.1 billion, are inadequate, per IMF standards. Reserves cover around 1.6–1.9 months of imports and less than 12 months of debt service payments.

Table A2.1: Selected Macroeconomic Economic indicators

Selected Economic Indicators	2020	2021	2022	2023	2024	2025
GDP growth 1/	-0.4	2.1	2.3	4.0	4.0	4.1
Inflation 1/ 2/	3.2	5.3	39.3	16.9	3.0	3.0
Fiscal balance	-5.6	-1.3	-1.6	-3.4	-3.5	-3.4
Public debt (incl. guarantees)	76.0	92.4	128.5	121.7	118.8	114.7
Gross public financing needs	..	5.4	7.7	16.3	13.4	15.1
Current account balance	-5.1	-0.6	-6.0	-2.6	-6.1	-7.7
Total external debt	119.4	128.1	164.8	154.5	148.2	135.0
Gross external financing needs	..	2.8	11.2	18.5	18.2	21.1
Gross reserves (USD billion) 2/ 3/	1.3	1.3	1.1	1.1	..	..
Exchange rate (LCU/USD) 2/ 4/	9,296	11,205	17,341	20,704	..	..

Source: IMF WEO Oct 2023 and IMF Country Report 2023/171, in percent of GDP, unless stated otherwise

Notes: 1/ change y/y in percent; 2/ end of period, 3/ in millions of USD. 4/ data from central bank, for 2023: as of Nov 30

5. Total public and publicly guaranteed debt reached 128 percent of GDP. Debt is high due to past spending on large investment projects, which had not brought commensurate economic returns, according to observers, and further due to the sharp depreciation. Debt is concentrated in the energy sector, particularly *Electricité du Laos*, which accounts for over 30 percent of total PPG debt. By these metrics, according to the IMF, the country is under debt distress and public debt is deemed unsustainable. Lao PDR's credit rating, by Moody's, is Caa3 stable.
6. Without a decisive resolution, and despite tight policies, it would take a long time to bring debt back to safer levels. There has been debt reprofiling done during 2020-22 with Lao PDR's largest bilateral creditor, outside of the regular debt resolution frameworks, but information is scant. Lingering data transparency and reliability concerns complicate fiscal assessment.

7. Going forward, growth should stabilize at around 4-4.5 percent, which is decent, but much lower than the pre-pandemic average of 7.2 percent during 2010-19. Growth potential is supported by large investments in transport and logistics infrastructure (the recently opened Lao PDR-China high-speed railway, the rehabilitation of the trunk road, the dry port, etc.).

8. However, with low reserves, high debt service payments and uncertain market access, debt concerns will continue in the medium- and longer-term. Concerns are that Lao PDR would require continued support from its largest bilateral creditor to stay liquid. Such support is expected to be forthcoming.