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Public

Environmental and Social Data Sheet

Overview

Project Name:	Lao National Road NR13 South (FL 20190324)
Project Number:	2020-0079
Country:	Lao PDR
Project Description:	The project consists of the rehabilitation and improvement of National Road 13 (NR13) South for approximately 275km from Km71 in Thaprabath District, Bolikhamxay Province to Km346 in Thakhek District, Khammouane Province.
EIA required:	No
Project included in Carbon Footprint Exercise ¹ :	Yes

Environmental and Social Assessment

Environmental Assessment / Legislation

In Lao PDR, the Environmental Protection Law (EPL), 1999 established a framework for management of environmental resources. The Environment Impact Assessment (EIA) Decree No.1770/STEA issued the first EIA regulation in 2000. This was followed by the Decree on the Implementation of the EPL in 2002 and was revised in 2010 by Decree on EIA No.112/PM, 2010. This prescribed the thematic issues to be covered and the outputs expected at the different stages of the EIA process (pre-construction, construction, operation and termination stages) and identified the following categories of investment projects requiring environmental and social assessments:

- Category 1: Investment projects, which are small or create fewer impacts on the environment and society, and require Initial Environmental Examinations (IEE);
- Category 2: Large investment projects which are complicated or create substantial impacts on the environment and society, and require EIAs.

The Ministry of Natural Resources and Environment (MoNRE) is the lead ministry responsible for implementation of the EPL and its regulations. The Provincial Department of Natural Resources and Environment (PONRE) is responsible for the IEE appraisal process and conducts an administrative and technical review of the IEE report. Upon approval, PONRE issues an Environmental Compliance Certificate (ECC).

Environment Impact

The project consists of the rehabilitation and improvement of NR13 South for approximately 275km from Km71 in Thaprabath District, Bolikhamxay Province to Km346 in Thakhek District, Khammouane Province.

The project is divided into 4 sections as follows:

- Section 1: 39km between km71 to km111;

¹ Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO₂e/year absolute (gross) or 20,000 tonnes CO₂e/year relative (net) – both increases and savings.

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- Section 2: 79km between km111 to km190;
- Section 3: 78km between km190 to km268;
- Section 4: 78km between km268 to km346.

If the project were in the EU, this kind of road rehabilitation works would fall under Annex II of the EIA directive, or if no significant environmental impacts are expected, would fall outside the scope of the EIA directive. Under the Environmental Protection Law of Laos, road rehabilitation projects are screened by the competent authority.

The Article 11 of the EIA Decree No. 21/GOL stipulates that IEE is required for investment projects and activities that are in the Category 1 and the Ministerial Decision No. 8056/MONRE stipulates that Improvement or Rehabilitation of National, Provincial, District and Rural Roads is categorized under Category 1. Therefore, for this project, in accordance with the requirements, the Promoter has screened out the EIA and has prepared two IEEs as follows:

- IEE covering Km71 to Km247 in Bolikhamxay province;
- IEE covering Km247 to Km346 in Khammouane province.

Both the IEEs were submitted to the PONRE of Bolikhamxay and Khammouane in October 2020. The two IEEs were approved by the respective PONRE and required ECC were issued in December 2020.

Three project alternatives were examined in the concept design and IEE preparation process:

- Option 1: The width of the Right of Way (ROW) from 9m to 12m along the existing alignment from km71 to km346;
- Option 2: Improve the road condition following the existing ROW of 9m throughout the road project; and
- Option 3: Improve the road condition along the existing alignment following the existing ROW of 9m with widening in some sections where resettlement impacts and land acquisition are either unanticipated or negligible.

From the social and environmental assessment, the Promoter decided to choose Option 3 for the project. The IEEs along with ESMP include expected impacts and the mitigation measures. The table below provides a summary of the key impacts and the mitigation measures during construction and operation:

Expected impact	Mitigation measures
Emission of harmful substances during construction activities	<ul style="list-style-type: none"> • Equipping the emission stationery facilities with relevant air-cleaning; • The contractor to water the road to protect dust pollution, especially during the dry season.
Noise pollution during construction	<ul style="list-style-type: none"> • Making noise-protection barriers if necessary between the noise sources and the receptors; • Contractors to provide adequate information on the rehabilitation implementation period and a contact person in case local community wants to complain; • Contractor to conduct bi-weekly community meetings with locals to provide details of construction activities and temporary crossing facilities where required.
Loss of fertile soil, vegetation. Impacts on natural vegetation and embankment. Landslide, erosion and water	<ul style="list-style-type: none"> • Topsoil stripping and piling separately from the lower soil layer and other materials; • Water-diversion channels to be made along the perimeter of the topsoil fill and to be protected against

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contamination of rivers/streams along the watercourse.	scattering by the wind blow.
Risks of pollution of surface and ground waters and soils	<ul style="list-style-type: none"> • Drainage channels with stone filters to prevent water contamination; • Treatment systems to prevent the propagation of the pollutants in case of emergency spills.

Bio-diversity

The project is situated in the Central Indochina Dry Forests ecoregion and the habitats surrounding the project footprint are fragmented. The Deciduous and Semi-Evergreen Forest located in the vicinity of the project, have been almost entirely degraded and a significant proportion has been converted to modified habitat types including cultivated land (i.e. rice fields). The entire Project footprint is dominated by modified habitats.

National Protected Area Network

According to the approved IEE, the project is not expected to have any impact on the network of National Biodiversity Conservation Area (NBCA) and the closest and most relevant NBCA to the project are listed as follows:

- Nam Kading NBCA – Located in BKX and approximately 5km away from NR13 South;
- Phou Khao Khoay NBCA - Located approximately 5km from the NR13 South project.

Provincial Protected Areas (PPA)

In Lao PDR, PPAs have been designated for conservation or protection as they provide locally significant watershed or conservation value. The below sites are located at least 5km from the NR13 South project:

- BKX province: Houay Ngoua, Phou-Ngou, Phou-Kadan, Phou-Kout; and
- KM province: NameSNam, Pathambing.

Important Bird Areas (IBA)

The closest and most relevant IBAs and Key Biodiversity Areas (KBAs) are located more than 10km from NR13 South project and they are listed below:

- Khammouane Limestone, Nakai Plateau, Hin Namno, Phou Khao, Eastern Bolikhamxay Mountains and Nam Kading Key Biodiversity Area.

NR13 South project lies entirely outside the boundaries of NBCA, PPAs, IBAs and KBAs. Therefore, the project has no impact on these protected sites.

Climate change

The project is in line with Lao's PDR first Intended Nationally Determined Contribution (NDC)². This document specifies the need to increase the resilience of infrastructure to climate change (adaptation) and to one Nationally Appropriate Mitigation Action (NAMA) feasibility study that identified the development of the road network as a first objective, which will reduce the number of kilometres travelled by all vehicles (mitigation).

The main objective of the project is to improve access to social services and markets (leading to improved livelihoods and poverty alleviation), enhance the efficiency of the road network, and transport in the project area and southern part of Lao PDR, including by adapting the design of the road to impacts from climate change. The road works will improve both international, regional, southern and north-eastern of Lao PDR connectivity and climate adaptation, through the provision of improved ride quality, surface structures that can better

² [Lao PDR First NDC.pdf \(unfccc.int\)](#)

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withstand heavy rainfall, construction of additional drainage structures, and raising the road embankment in flood-prone areas.

The Promoter has the intent to implement a design for NR13 South project which is adapted to the impacts of climate change and which aims to ensure that the road is open to traffic at all times, including during rainy season, episodes of intense rain and in case of other major climate-related events. According to the Promoters Climate Vulnerability report storm intensity, flooding, runoff, landslide and slope erosion are the main climate risks to the project. The promoter has incorporated the findings of the specific project studies into the project design to adapt the project to the identified climate risks in accordance with the applicable technical codes in Lao PDR.

Flooding has been identified as the main significant climate threat for the project. The Promoter has explicitly addressed this potential vulnerability through adapted conceptual designs. The Climate adaptation interventions are based on updated climate assessments that take into account the expected climate change effects. Measures included are adapted designs for bridges, culverts, drains and ditches, elevating flood prone road sections, proposed asphalt road construction for more stability during floods and adapted river bank protections in selected locations.

EIB Carbon Footprint Exercise

The project is included on the following basis:

- Estimated annual third party greenhouse emissions (vehicular use, from existing and generated demand) from the use of the project in a standard year of operation;
- Forecast absolute (gross) emissions are 196,000 tonnes of CO₂ equivalent per year; and
- Forecast emissions increase at approximately 1,500 tonnes of CO₂ equivalent per year.
- The project boundaries are:
 - “Baseline case”, the existing national network (NR13) South for approximately 275km from km71 in Thaprabath District, Bolikhamxay Province to km346 in Thakhek District, Khammouane Province; and
 - “With project case”, the rehabilitated road has the same project length as above.
- The baseline is the forecast third party emissions, in the absence of the project, from the existing network within the project boundary as defined above. The emissions forecasts are based on Services’ assumptions on traffic, traffic growth/generation, speed flow, infrastructure capacity and fuel consumption.

The Bank’s emissions model shows relative at 1.5 ktonnes GHG a year and absolute at 196 ktonnes GHG a year. The reduction in emissions due to better surface/less rolling friction is cancelled out by the increase in average speeds and the result is a marginal increase of less than 1% over the 20-year reference period.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment

The Promoter prepared an Environment and Social Management Framework (ESMF) including a Resettlement Policy Framework (RPF) as well as an Ethnic Groups Engagement Framework (EGEF). In accordance with the ESMF, a separate Resettlement Action Plan (RAP) was prepared for all of the four sections. The RAP was submitted in October 2020 and is acceptable to the Bank. The impacts anticipated from the works will mainly be within the

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existing right of way (which is 25 meters from the centreline of the national road) as defined under the National Road Law, 2016, but will still require land acquisition of private and government land.

	Section 1	Section 2	Section 3	Section 4
Project Affected Persons (PAPs)	553	807	1,006	583
Project Affected Households (PAHs)	130	160	177	176
Number of PAH entirely relocated	0	13	0	5
Vulnerable Household (lose more than 10% of their total productive asset)	81	95		93

The above figures will be updated during the implementation. Other potential social risks arising due to the project are: i) poor application of relevant labour standards related to employee working conditions during construction and operation; and ii) poor occupational and community health and safety during construction. These will be addressed primarily through the inclusion of contractual obligations for the first tier suppliers and contractors, which will be enforced by the Promoter's supervision consultant.

According to the Promoter, as part of the project's resettlement policy, PAHs will be provided with sufficient time and support to rebuild their houses and shops if part of their property is affected prior to the commencement of civil works. The project will ensure that PAPs are able to continue with access to their houses and their present livelihood activities during project implementation. Impacts on their livelihood and business will be minimized through close and effective contract management and work supervision by Project Management Unit (PMU) and the supervision consultant to ensure that ESMP is effectively complied.

The RAP implementation is expected to start in Q2 2021. MPWT is the implementing agency with the overall responsibility of RAP implementation for all four sections. The RAP implementation will be subject to internal and external monitoring. The PMU will carry out internal monitoring of the implementation. The works supervision consultant will carry out the external monitoring of the RAP implementation. Contractors shall ensure occupational and community health & safety as part of their works contracts. In addition, Road Safety Audits were carried out for the conceptual design in accordance with the Road Infrastructure Safety Management Directive (2008/96/EC).

Ethnic Groups in the Project Area

The project (section 3 km190 to km268) is expected to have an impact on the Indigenous peoples / minority ethnic groups (EGs) such as Khmu and Hmong. The project section 1, 2 and 4 has no impact on the Indigenous peoples / minority EGs. Based on the current conceptual design and resettlement planning, a total number of PAHs for section 3 is estimated at 177 households, which comprise 154 households of Lao Loum, 1 household of Khmu and 22 households of Hmong groups. The impacts of Khmu and Hmong families are mainly on their livelihood activities. The Promoter conducted consultation meetings with the minority ethnic groups in June 2020 and their views/concerns were taken into account in the Ethnic Groups Engagement Plan (EGEP) preparation. The Public Works and Transport Research Institute (PTRI) and the PMU carried out further consultation on the draft EGEP in August 2020.

The EGEP for section 3 includes an action plan based on a detailed social assessment, an inclusive consultation with representatives of the EGs and free, prior and informed consultation (FPIC). The key actions included in the action plan are:

- Establishing project grievance redress mechanism (GRM) with participation from EGs;
- nominating EGEP-focal persons both in PTRI and construction supervision consultants;

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- Continued consultations with ethnic groups during the construction and operation and maintenance (O&M) phase of the project including free, prior, and informed consultations (FPIC) on a regular basis;
- Participation of ethnic groups in monitoring the implementation of EGEP, ESMP and RAP.

Gender and Minorities Impacts

During the design and implementation phase, the Promoter with the guidance from the EIB, WB and AIIB will undertake a project gender analysis. The analysis will assess potential opportunities to enhance the operation's positive impact on gender equality and provide related recommendations to be considered during the implementation stages.

Public Consultation and Stakeholder Engagement

During the concept design, the Promoter carried out public / village consultation meetings in all major villages along the alignment in June 2020. Feedback from these meetings were incorporated into the conceptual design, RAP, EGEP and ESMP mitigation measures. The stakeholder consultation was held in November by the two PONREs (Bolikhamxay and Khammouane province). Following the stakeholder consultation, Bolikhamxay and Khammouane PONREs approved the IEE and issued ECC in December 2020.

Conclusions and Recommendations

The project implementation is within the existing right of way and is expected to have limited negative environmental impacts during construction and operation. The residual impact after mitigating measures is expected to be limited and is adequately addressed in the project's management plans included in the IEE, EGEP, ESMP and RAP.

Prior to disbursement against this allocation, the promoter shall be required to meet the disbursement conditions agreed under the Lao Resilient Framework Loan ESDS. In addition, the following specific conditions will apply for this specific project.

Before first disbursement the Promoter shall provide to the Bank the following:

- (a) Evidence that FPIC has been signed by the elderly of the indigenous people;
- (b) Final RAP, ESMP and EGEP to the satisfaction of the Bank;
- (c) Satisfactory evidence of approval of the RAP by the competent authority;
- (d) Satisfactory evidence of implementation of the RAP;
- (e) Evidence that all impact management measures identified in the ESMP and measures on occupational and community health & safety have been incorporated into the construction and supervision contracts;
- (f) Evidence that monitoring of RAP is part of the supervision consultants ToR;
- (g) Evidence that the Grievance Mechanism for the sub-project is operational;
- (h) Confirmation that the PMU and supervision teams includes environmental and social experts; and
- (i) Evidence that provisions and requirements for the respect of ILO conventions have been included in the construction and supervision contracts

Before the second disbursement the Promoter shall provide to the Bank the following:

- a) Project gender analysis report to the satisfaction of the Bank.

Before each disbursement the Promoter shall provide to the Bank the following:

- (a) Satisfactory evidence of implementation of the RAP.

The Promoter shall undertake to submit to the Bank the following documents:

- 1. Evidence that the implementation of RAP and ESMP, as agreed with the Bank, is in accordance with its respective schedules;

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2. Report on the status of the RAP implementation, including any unexpected events and any updates of the RAP;
3. Evidence of the satisfactory implementation of the project gender analysis recommendations;
4. Evidence that the Grievance Mechanism for the sub-project is operational;
5. Confirmation that the PMU and supervision teams includes environmental and social experts;
6. Confirmation that monitoring of RAP is part of the supervision consultant;
7. Present mid and end of term evaluation of RAP(s) implementation prepared by a third party.
8. Evidence of the satisfactory implementation of the EGEP;
9. During the construction works the Promotor should monitor and give regular updates on the respect of the fulfilment of ILO conventions by main contractors and subcontractors.

The Promoter shall submit the documents corresponding to Undertakings, points 1) to 9) above on, at least, a 6-monthly basis.

Under the conditions indicated above, the project is acceptable for EIB financing from an environmental and social perspective.