

KINGDOM OF CAMBODIA

Nation Religion King

MINISTRY OF RURAL DEVELOPMENT

Cambodia Southeast Asia Disaster Risk Management project II (P177185)



Site-Specific

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

for TK2 Bridge (PK9+726) in Tuol Khleang village, Preah Theat commune,
Ou Reang Ov district, Tboung Khmum province

10 February 2022

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Abbreviations

AH	Affected Household
C-ESMP	Contractor-Environmental and Social Management Plan
COI	Corridor of Impact
COVID-19	Corona Virus Infection Disease 19
KH-SEADRM2	Cambodia Southeast Asia Disaster Risk Management Project 2
DDIS	Detailed Design Implementation and Supervision (Consultants)
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
IESIA	Initial Environmental and Social Impact Assessment
IP	Indigenous Peoples
IPPF	Indigenous Peoples Planning Framework
IPP	Indigenous Peoples Plan
LMP	Labor Management Procedures
MRD	Ministry of Rural Development
OHS	Occupational Health and Safety
PDRD	Provincial Department of Rural Development
RGC	Royal Government of Cambodia
ROW	Right of Way
RP	Resettlement Plan
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEO	Social and Environmental Office
SEP	Stakeholder Engagement Plan
UXO	Unexploded Ordinance
WB	The World Bank

Executive Summary

Introduction

The project development objective is to support resilient reconstruction of vulnerable rural transport infrastructure affected by the 2020 floods and recurring flood events, mainstream Disaster Risk Management in government processes, and to provide immediate and effective response in case of an Eligible Crisis or Emergency. This objective will be achieved through implementation of various activities that are organized into four project components. Detailed descriptions of each component can be found section 1.2 of this ESMP and in the project Environmental and Social Management Framework (ESMF).

This ESMP is prepared to identify and assess the environmental and social risks and impacts from the new bridge construction activities. The ESMP covers site specific environmental and social risks and impacts anticipated as a result of construction of new bridges at the existing TK2 bridge location. The environmental and social risks and impacts anticipated in this ESMP are based on a) scope and nature of bridge, and b) exclusion/ineligibility criteria such as exclusion of new bridge requiring full Environmental Impact Assessment according to the national legislation (See more details at Chapter 2 below). The ESMP also provides impacts screening and assessment checklist and identification and preparation of risk management tools to be prepared during project implementation.

The ESMP has been prepared based on the following key steps:

- Review the previous MRD's similar projects, and meetings/discussion with the MRD team;
- Review of relevant country's legal and institutional framework;
- Review detailed design and discuss with the design team;
- Assess the environmental and social impacts based on the nature and scope of the civil works and field observation;
- Conduct virtual consultation with the Provincial Department of Rural Development (PDRD), local authorities, and potential affected household, both permanently (one household) and temporarily during construction process;
- Propose mitigation measures;
- Disclose draft ESMP for consultation with affected and interested stakeholders;
- Finalize ESMP, incorporating feedback from consultation meetings with local stakeholders.

The MRD is responsible for ensuring the preparation and implementation of an acceptable project ESMP. Detailed implementation arrangement is fully described in Section 8 of this ESMP.

The Site-Specific ESMP is a project-specific source document detailing the environmental and social protection requirements to avoid, mitigate and minimize the adverse impacts. The ESMP's primary purpose is to ensure that the environmental requirements and social commitments associated with the project are carried forward into implementation and operational phases of the project and are effectively managed. The specific objectives of this ESMP are as hereunder: The objectives of this ESMP include but not limited to:

- Ensuring compliance with the applicable national laws, regulations, standards, and guidelines;
- Ensuring that there is sufficient and timely allocation of resources, including budget, for implementation of ESMP-related activities;
- Ensuring that environmental and social risks associated with this ESMP is appropriately identified and managed;
- Responding to emerging and unforeseen environmental and social issues not identified during the subproject preparation; and
- Providing feedback for ongoing improvement in environmental and social performance.

This national legal framework includes laws and regulations, such as Sub-Decree, Prakas, Guidelines, Standards, and international conventions and treaties that are currently effective and are most relevant to the Project will be applicable to the project.

This ESMP will briefly describe only a key national legal framework that is applicable to the project specifically to disaster management and bridge construction.

Prakas on Classification of Environmental and Social Impact Assessment for Development Project issued on 03 February 2020, regulates that the bridge improvement/construction projects that are less than 30 ton of weight support does not require preparation of Initial or full environmental impact assessment. The construction of TK2 bridge will be less than 30 ton of weight support. So initial or full environmental impact assessment for the TK2 bridge is not required. Despite of this, the project still follows other national regulations such as Law on Environmental Protection and Natural Resources Management (NS/RKM/1296/36) and Sub-Decree on Environmental Impact Assessment Process #72 ANRK.BK (1999) that are currently effective and are relevant to the TK2 subproject. Detailed description can be found in the project ESMF.

Screening for Environmental and Social Risks and Impacts

The screening for environmental and social risks and impacts on TK2 bridge was carried out by the PDRD with the remote support from SEO and an E&S consultant on 16 and 17 November 2021 using screening checklist (Annex 1) to screen for environment and social risks and impacts that are potentially associated with the TK2 bridge construction. Initial screening results indicated that most of the environmental and social risks and impacts related to the reconstruction of the TK2 bridge are from low to moderate.

Environmental Risks and Impacts

Based on the site visit assessment, the construction of TK2 bridge has no major adverse impacts on environment. The impact on environment is rated from low to moderate and site specific at the construction location. The impacts mainly related traffic congestion and safety management in particularly during day and night time, noise and vibration control, construction debris management, wastewater management, water quality control, stockpile storage management, and diversion of water flow management. However, these impacts can be minimizing by applying good construction practices and good engineering design of detour bridge as well as with a close supervision and monitoring. The risks from UXO is also considered moderate. Although the bridge construction Tbound Khmum provinces that is used to experience armed conflict aerial bombardment, ground to ground offensive and landmine warfare in 1970s, the project required that a safety screening/assessment and removal of UXO shall be carried out by Cambodian Mine Action Centre (CMAC) or certified organization before starting the civil works. The detailed impacts are described in Table 5.

Social Risks and Impacts

The potential social impacts from construction of TK2 bridge are also considered low. The land area where the existing TK2 bridge is situated is public land. However, as the new TK Bridge will be widened and extended in length on both sides of the bridge, one household who own a small thatch house (8.5m²) located 15m away from the bridge may be affected. It cannot be confirmed at this stage if this house is a permanent residence of this 3-member household, or it is small house set up temporarily by the household to attend their crop (maize) in their farmland of 6,000m² nearby. Consultation with this household on 27 November 2021 indicated that the household is located in Peam Prathnous commune which belongs to Kampong Cham province. The household has lended part of their farm land to local government to set up a detour road to maintain traffic flow through this area. More consultation with this household and relevant local authorities of Kampong Cham will be carried out in December 2021 to confirm to confirm how the household would be affected. No construction will be carried until land and housing status associated with this household are clearly identified and compensation/support are carried out as per project's Resettlement Planning Framework. Screening for the presence of IP(s) in the footprint of new TK2 bridge and in the potential area of influence (as per this ESMP) were conducted based on two consultation meetings with local authorities and PDRD on 17 and 18 November, and a site visit on 27 November. Based on these consultation meetings and review of secondary data, it is confirmed that no Indigenous Peoples are present within the TK2 subproject's footprint and potential area of influence. As per project's ESMF, some social risks are anticipated. These are primarily related to occupation health and safety (OHS) associated with an estimated total of 140 workers that may be mobilized to the construction site and campsite, such as risks related to lack

or improper use of personal protection equipment (PPE), lack of awareness of workers on safety measures when construction take place in isolated area where construction supervision as well as compliance with safety measures (on the part of workers) may be overlooked. Other risks related to OHS of workers are related to contraction and transmission of COVID-19, and sexually transmitted diseases such as HIV/AIDS. Other social risks that come under community health and safety (CHS) are related to labor influx, including sexual exploitation and abuse/sexual harassment, risks of COVID-19 contraction from migrant workers, risk of conflicts between migrant workers and local communities, and risks related to road traffic safety. These risks will be re-assessed before construction takes place and before selected contractor is mobilized to construction site, and will be updated in this ESMP and disclosed for public consultation before bridge reconstruction.

Mitigation Measures

The mitigation measures to address all environmental and social risks and impacts (as a result of the construction of TK2 bridge) is shown in Table 5. The mitigation measures for the ESMP will be implemented along with the mitigation approach and measures set forth in the project ESMF and in accordance with government's and Ministry of Health's guideline on COVID-19 Preventive measures e.g. social distancing, wearing masks, temperature check, etc. As part of overall mitigation approach, all identified environmental and social risks and impacts are will addressed also through an ESMP that will be prepared by the selected contractors (C-ESMP). The C-ESMP will be approved by PMU prior to Contractors' implementation.

Environmental and Social Monitoring Program

While awarded contractor and sub-contractor, if any, will be responsible for day to day implementation of this ESMP, through C-ESMP, including reporting, PMU/SEO will be responsible for periodic monitoring and evaluation of C-ESMP implementation. PMU's DDIS consultant and construction supervision consultant will also be responsible for review of C-ESMP and day-to-day supervision of contractor's E&S implementation process. Check list and specification for regular monitoring arrangement will be developed and PMU/SEO field team members who will be trained for monitoring and inspection of the works. PMU's SEO team will carry out weekly monitoring undertakings using E&S monitoring checklist and with PMU's supervision. Corrective actions will be timely implementation for any E&S non-compliances.

In addition, the project's environmental and social consultants will do monitoring for every six month on ambient air quality, noise and vibration and monthly monitoring on soil, water quality, traffic safety management, solid waste and wastewater management following to the standard requirement by the Ministry of Environment. Results of monthly monitoring will be reported to PMU, and the World Bank and corrective actions will be developed as required based on the conclusion of the findings. PMU will be responsible for issuance of report for monthly environmental and social monitoring and project's progress. The awarded contractor will be required to issue reports to PMU and the World Bank if the work runs into environmental and social issues which are beyond contractors' management capacity. The Contractors will have a duty to immediately and within 24 hours report to the DDIS if any severe environmental and social incident has occurred during construction e.g. clearing of sensitive areas, serious accident cases and fatality, forced or child labor, abuses of community members by project workers (including SEA/SH), trafficking in endangered species, etc. The DDIS and PMU will have a duty to immediately and within 24 hours notify the World Bank of such severe incident.

Consultation and Information Disclosure

During project preparation, four consultation sessions were conducted with potentially affected households and government stakeholders at TK2 bridge location. One household who owns a small cottage may be affected as a result of bridge reconstruction. Consultation with this household was conducted on 27 November 2021. Representative of the cottage owner indicated she is happy with the bridge reconstruction and is willing to relocate if required. She asked for support in provision of replacement land for her relocation. Once project design is finalized, consultation with this household will be carried out and support will be given to avoid/minimize potential impact of the TK2 bridge reconstruction on her housing as well as livelihoods.

Grievance Redress Mechanism

The objective of the project GRM is to provide complainants with redress procedures that are accessible, easily used, and free of charge to enable affected people to raise project related concerns and grievances. The project GRMs provide information on how the complaints are lodged, including forms, channels, particularly steps and time-limit for each step, such as time-limit for acknowledging receipt of complaint, notification of resolution decision, and prescriptive period, etc. During grievance resolution process, where necessary, dialogues will be hold between project's designated GRM unit/personnel and the aggrieved people to promote mutual understanding and collaboration among relevant parties for effective resolution. This ESMP has four grievance redress procedures (Chapter 7) which aims to cover all type of complaints that are identified with the construction of TK2 Bridge. The project also has an appeal process which complainant can use when they are not satisfied with the complaint resolution decision, or their complaints are not resolved within a specified timeframe.

Estimated Costs for ESMP Implementation

The costs of implementing the ESMP listed below are related to PMU costs in addition to the dedicated safeguards PMU personnel budget line item. The main costs of implementing this ESMP related to institutional capacity and stakeholder capacity building, ongoing consultation facilitation costs, and the PMU on site monitoring and outreach safety programs. The total estimated costs for ESMP implementation is \$44,200.00

1. INTRODUCTION

1.1 Project Rationale

From September to November 2020, Cambodia experienced heavy rainfall across the country. The heavy rains caused extensive flooding in 20 out of 25 provinces, leaving an estimated 800,000 people directly affected, of which 49% (388,000 people) had pre-existing vulnerabilities. The floods have caused damage to key transport infrastructure and loss of economic activities. According to the rapid damage and needs assessment conducted by the World Bank at the request of the Ministry of Economy and Finance (MEF), economic loss due to flooding was estimated at US\$ 448–490 million. Three sectors that were most affected include transport, irrigation, and agriculture. These concentrated in nine provinces. Total costs for rehabilitation of the damaged transport infrastructure were approximately US\$508 million. It was noted that these floods came amidst a drought which did not only cause widespread crop failure, loss of assets, disruption of livelihoods but also exacerbate the inherent vulnerability of numerous households who are disadvantaged and are in areas that are prone to floods, other natural hazards.

The purpose of the second Cambodia Southeast Asia Disaster Risk Management Project (KH-SEADRM 2) is to support the government in its short-term effort to reconstruct the transport infrastructure affected by the flash floods in 2020, thereby resuming overall transport connectivity. In a longer term, the project aims to support the government to enhance its capacity and resilience to future impact of natural disaster risks through improving and mainstreaming disaster risk management (DRM) dimensions into its national long-term disaster risk management strategy, particularly in transport infrastructure. The KH-SEADRM 2 Project is built on the on-going KH-SEADRM project (P160929) and will finance resilient post-disaster road reconstruction of approximately 400km of rural roads and bridges in selected provinces that are affected by floods, including Banteay Meanchey, Battambang, Kampong Speu, Kampong Chhnang, Pursat, Siem Reap and Tboung Khmum provinces. Among these, infrastructure reconstruction activities will be mainly in Banteay Meachey, Battambang, Pursat, and Siem Reap which are among the poorest provinces where rural roads were badly damaged. In addition to support in infrastructure rehabilitation, the project also strengthens institutional capacity in DRM planning in national and rural development sector, including policy making processes. The project will also respond to crisis and emergencies related to natural disaster risks if these happened during project life.

1.2 Project Development Objective and Project Components

Project Development Objective.

The Project Development Objective is to improve the disaster and climate resilience of flood-damaged roads in target areas, improve the capacity of the government to prepare for and respond to emergencies, and provide immediate and effective response in case of an Eligible Crisis or Emergency.

This objective will be achieved through implementation of various activities that are organized into four project components.

Project Components.

- **Component 1: Institutional Strengthening for Disaster Resilience in the Rural Development Sector (US\$3 million IDA credit and US\$0.45 million RETF).** This component will focus on capacity building for disaster risk management, in line with government priorities. KH-SEADRM 1 Subcomponent 1.2. Institutional Strengthening for Disaster Resilience has focused on strengthening of emergency road maintenance, identification of risk reduction investment for the target provinces and improvement of resilient rural road standards. KH-SEADRM 2 Component 1 builds on these efforts to further strengthen DRM mainstreaming at the national level, improving both longer-term risk-informed investment planning and inter-and intra-agency coordination of emergency response and preparedness and post-disaster recovery investment. The following sub-components are proposed and discussions are ongoing to define project activities.
- **Component 2: Resilient Rehabilitation and Reconstruction of Rural Roads and Bridges (US\$106 million IDA Credit).** This component will focus on civil works for the strengthening, climate resilient rehabilitation, safety, and maintenance of selected existing rural transport infrastructure that are

vulnerable to disasters. Building on KH-SEADRM 1 Subcomponent 1.1 Resilient Rural Roads Rehabilitation and Maintenance, KH-SEADRM 2 continues to emphasize on the need to build back better, introducing activities to better align routine maintenance and rural road asset management system with post-disaster response-related project management needs.

- **Component 3: Project Management (US\$ 3 million IDA Credit, US\$1.5 million Counterpart Financing).** This component will support the initial day-to-day coordination, management, and implementation of KH-SADRM 2, while building institutional capacity to sustain investments beyond the project’s closure. Proposed activities include: (i) the recruitment of consultants to support the implementation of all project activities; (ii) procurement management, contract supervision, and financial management, including financial and technical audits (which encompass agreed procedures for emergency situations); (iii) environmental and social risk management, including citizen engagement and grievance mechanisms; (iv) monitoring, review, and evaluation of the project; (v) coordination activities, knowledge sharing, and project outreach and dissemination activities; and (vi) operating costs, including sub-project offices in participating cities equipped with videoconferencing and remote working facilities.
- **Component 4: Contingency Emergency Response Component (CERC) (US\$ 0m).** This component is designed to provide swift response in an event of an Eligible Crisis or Emergency, through reallocating project funds to support emergency response and reconstruction, as needed.

1.3 Project Location, Scope of Works of this ESMP

This document was prepared as a site specific Environmental and Social Management Plan (ESMP) for the construction of a new bridge, known as TK2 Bridge, located in Tuol Khleang village, Preah Theat commune, Ou Reang Ov district, Tboung Khmum province. The new bridge will be constructed at the location where the existing bridge was damaged by the flash flood in 2020 (See photos and location of the bridge in Table 2 (below)).

This ESMP aims to identify and assess environmental and social risks and impacts that are likely associated with the construction of the new TK2 Bridge. The environmental and social risks and impacts anticipated in this ESMP are based on a) scope and nature of TK2 Bridge construction and b) eligibility criteria (as per project’s ESMF) that the construction of the new TK2 Bridge does not require a full Environmental Impact Assessment according to the national legislation (See more details at Section 2.1 below). The ESMP also provides an impact screening and assessment checklist, and identify risk management tools such as Chance Find Procedures, ESCoP, Guideline for Worker’s Camps, Contractor’s General Guideline on COVID-19 Consideration in Construction Works, OHS Guideline, and CoC to be implemented during the implementation of this TK2 bridge subproject. The civil works related to TK2 Bridge will be carried out within the right of way of the TK2 bridge which is 15 m from the centerline. Table 1 (below) describes briefly key information on technical specification of the TK2 Bridge.

Table 1. Technical Specification of TK2 Bridge

Locations	Length (m)	Width (m)	Carriage Way	Number of Span (No.)	Remark
PK9+726, Tuol Khleang Village, Preah Theat Commune, Ou Reang Ov District, Tboung Khmum Province	68	8	6	4	Replacement of Superstructure

Table 2: A summary of E&S baseline information within the Col

Summary of E&S baseline within the Col	New TK2 Bridge Design overlaid on Google Earth Imagery	Photo of Existing TK Bridge Location
<ul style="list-style-type: none"> • The new TK bridge has a total length of 72m. It has a width of 8m and a carriageway of 7m. • The existing bridge is located on vacant, public land. It is located about 0.5–1.0 km away from an area (a small hill/cottage) where local people may occasionally come to pray for good health and safety (See Annex 5). There is a small residential area across the Mekong river (left side of TK2 bridge) which belongs to Peam Prathnous commune (Kampong Cham province). This commune is accessible by local boat (about 1.5 away) and by road through a bridge (about 5- 		

6km) away from the TK2 bridge location. The Mekong river (photo) is the administrative boundary between Tboung Khmum Province and Kampong Cham Province.

- There is an existing detour that was established temporarily to maintain traffic flow.
- There is one household who own a small thatch house (8.5m²) which is potentially within the footprint of the new TK Bridge (See more information on Annex 5). This is also the household that lended government part of their land for temporary detour road.
- Based on the detailed design of TK2 Bridge (See drawing on the right), the new TK2 bridge is located on the existing alignment. This aims to reduce the curve radius (from existing r=60m to new r=70m) to accommodate geological conditions and to enhance traffic safety (through increasing curve radius). The width of the asphalt plant mix pavement on bridge structure will be 6m.

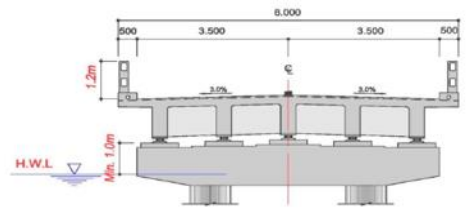
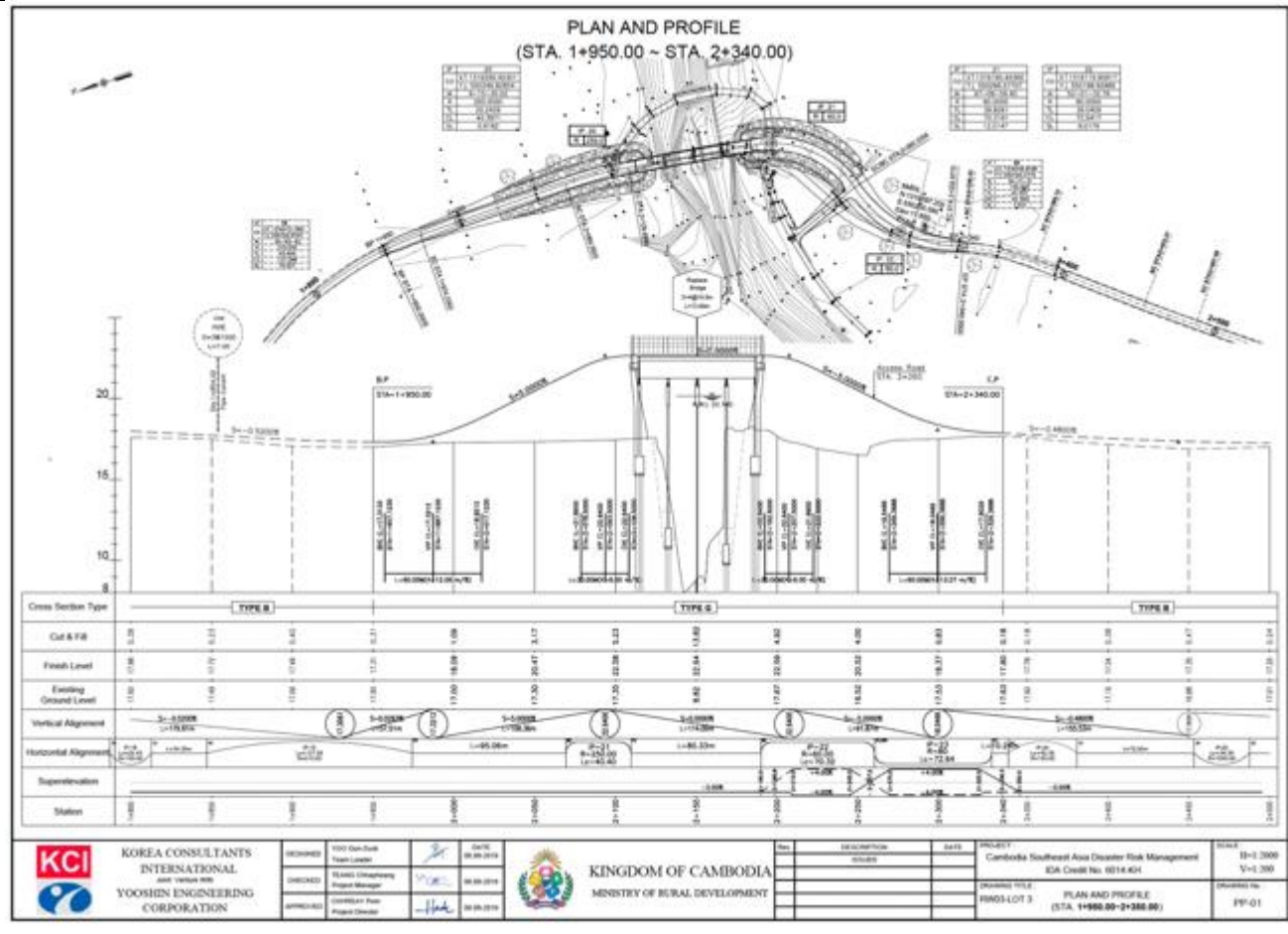
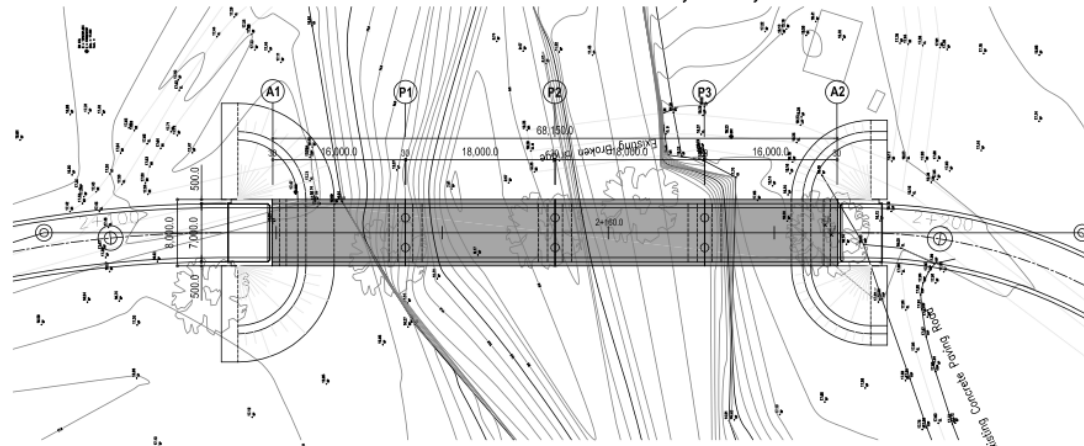


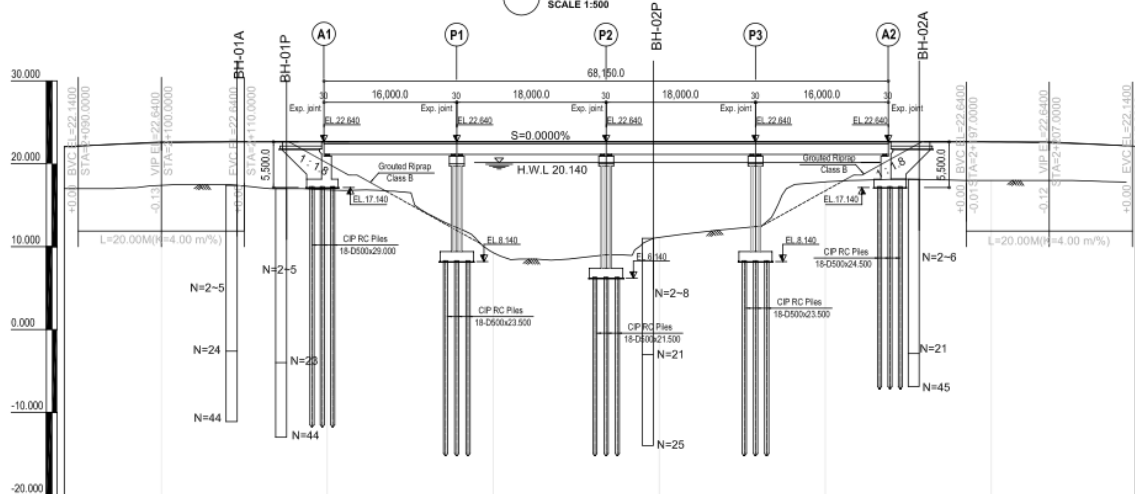
Figure 1-1 Typical Cross Section of Bridge (RC T-beam)



RW3, TK2, BRIDGE

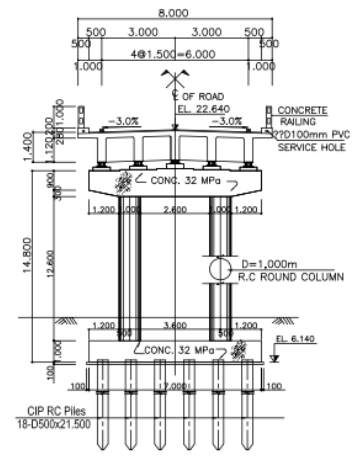


1 PLAN
SCALE 1:500



2 ELEVATION
SCALE 1:500

Vertical Alignment	S=0.000% L=107.0m	
DESIGN LEVEL ON ξ	22.51	22.64
EXISTING GROUND LEVEL ON ξ	17.40	16.85
STATION	160.00	170.00



3 CROSS SECTION
SCALE 1:250

1.5 Methodology of ESMP

The ESMP has been prepared based on the following:

- Review of previous MRD's similar projects, and meetings/discussions with the MRD team
- Review of relevant country's legal and institutional frameworks
- Review of detailed technical design and discussions with the technical design team
- Assessment of environmental and social risks and potential impacts based on the nature and scope of the TK2 bridge. including local socioeconomic, demographic characteristics of the village, commune and district where the bridge is located, field visit on 27 November 2021.
- Proposed mitigation measures (based on identified environmental and social risks and impacts)
- Virtual consultations (on 16 and 17 November 2021) with the Provincial Department of Rural Development (PDRD), other local authorities, and potential affected households and other interested stakeholders in the vicinity of the bridge).

1.6 Preparation of ESMP

The MRD is responsible for preparation and implementation of this ESMP. Detailed implementation arrangement is described in Section 8 of this ESMP.

1.7 Objectives of ESMP

The Site-Specific ESMP provides details on environmental and social risks and potential impacts, mitigation measures, implementation arrangement, including how relevant affected and interested stakeholders, locally, are to be engaged during ESMP preparation and implementation (construction and operation phases). It also sets out grievance redress procedures (in line with the GRM in the project's ESMF) and provides an estimate of costs that are likely involved for the purpose of ESMP implementation during TK2 bridge subproject implementation. The objectives of this ESMP include, but not limited to:

Ensuring compliance with the applicable national laws, regulations, standards, and guidelines;

- Ensuring environmental and social risks and impacts associated with the construction and operation of the TK2 bridge are effectively managed;
- Responsiveness to emerging and unforeseen environmental and social risks not identified during ESMP preparation;
- Ensuring sufficient resources are allocated for timely availability during implementation of ESMP-related activities;
- Serving as a guideline based on which future selected Contractors can use to develop Contractors' ESMP (C-ESMP); and
- Maintaining ongoing engagement of potential project stakeholders, particularly who live in the vicinity of the TK2 Bridge location, as well as relevant authorities at commune, district and provincial levels.

2. LEGAL AND INSTITUTIONAL FRAMEWORK

The national legal framework of the RGC includes laws and regulations, such as Sub-Decree, Prakas, Guidelines, Standards, and relevant international conventions and treaties that are currently effective and are most relevant to the TK2 Bridge subproject. This ESMP describes very briefly only some key national legal framework that is applicable to the TK2 subproject, specifically to disaster management and bridge construction. More details are available in Chapter 2 of project ESMF.

Prakas on Classification of Environmental and Social Impact Assessment for Development Project¹ (issued on 03 February 2020) that regulates that bridge improvement/construction projects which are less than 30 ton

¹ <http://www.cambodiainvestment.gov.kh/wp-content/uploads/2020/02/WhatsApp-Image-2020-02-07-at-10.22.26-AM.jpeg>

of weight support does not require the preparation of initial or full Environmental Impact Assessment. The construction of TK2 bridge will be less than 30 ton of weight support. So, preparation of an initial or full environmental impact assessment is not required. Nevertheless, the project still follows other national regulations such as the Law on Environmental Protection and Natural Resources Management (NS/RKM/1296/36) and Sub-Decree on Environmental Impact Assessment Process #72 ANRK.BK (1999) that are currently effective and are most relevant to the TK2 subproject (See Chapter 2 of project ESMF for detailed description of legal frameworks).

The Law on Disaster Management (NS/RKM/0715/007, dated June 2015) regulates disaster management in the Kingdom of Cambodia. It deals with 1) Prevention, adaptation and mitigation in the pre-disaster period, due to natural or human-made causes, 2) Emergency response during the disaster, and 3) Recovery in the post-disaster period. The Law further creates the National Committee for Disaster Management (NCDM) (Article 7). The NCDM shall establish the sub-national committees for disaster management (Article 9) and take the appropriate measures in defining disaster risk identification and integrating disaster risk reduction into development plans and conducting the disaster risk analysis for any development activity that might cause a high risk (Article 14). The NCDM shall also coordinate all disaster management activities together with ministries institutions, armed forces, the public sector, private and civil society in promoting safety and resilience to disasters. NCDM shall raise the proposal to the Royal Government to consider the possibility of obstructing and protesting against the concerned persons both at home and abroad to be responsible for disaster impact caused by individual or institution (Article 15). The Article 36 states that every individual has the right to participate in the disaster management activities and promote self-protection, disaster risk reduction and ensure the sustainable livelihoods with safety and resilience to disasters.

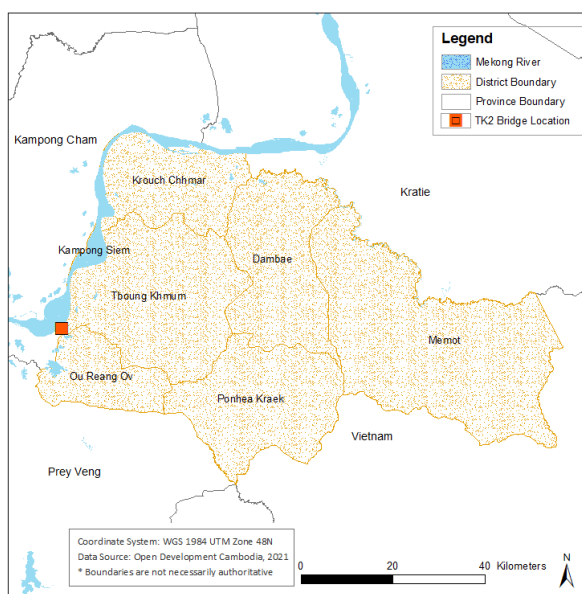
3. BASELINE CONDITIONS

3.1 Physical Conditions

3.1.1 Geography

Tboung Khmum province is situated on the east of Mekong River and approximately 155 km on the north-eastern of Phnom Penh along national road #7. The province is bounded on the west by Mekong and Kampong Cham province, on the north and the east by Kratie and Vietnam (about 142.7 km), and on the south by Prey Veng province.

Figure 1: Bridge location map of Tboung Khmum province



The province has a total land area of 5,250.51 km² and consists of six districts (Tboung Khmum, Ou Reang Ov, Krouch Chhmar, Dambae, Ponhea Kraek, and Memot) and one municipality (Krong Suong). There are 62 communes, two sangkats with a total of 873 villages in the province. According to the national census (2020), the provincial population is 763,735 persons (51.7% is female and 48.3% is male). The total households are 178,942. Average household size is 4.3 person. Figure 1 shows location of the planned construction of the bridge TK2 in Tboung Khmum province. The TK2 bridge is located in Tuol Khleang village, Preah Theat commune, Ou Reang Ov district. The TK2 bridge design was shown overlaid on Google satellite imagery in Figure 2 (below).

Figure 2: TK2 Bridge Design as overlaid on Google Satellite Imagery



3.1.2 Topography and Land Use

Tboung Khmum province is characterized as groups of flat, low-lying plains that are drained by the Mekong River. The majority part of the Tboung Khmum province is covered by plateau featuring

rich volcano soil. The province is generally formed by plateau, watershed lowlands/wetlands, streams, and rivers. Valleys are formed between plateaus, carrying water all the year round. Stream water goes to the Mekong River. The common soil types existing in the project include rich volcanic red soil and sandy soil such as those found near the Mekong River. The province' elevation is between 50 and 200 m above sea level (Tboung Khmum Municipality, 2017).

In term of land use, Tboung province has a total paddy land of about 89,460 ha by 2019 (Tboung Khmum Provincial Department of Planning 2021). Table 2 (below) shows major crops in area and yield over the past five years (2015-2019).

Table 2: Major Crops and Yields in Tboung Khmum Province

No.	Major Crops	2015		2016		2017		2018		2019	
		Area (ha)	Yield (t/ha)	Area (ha)	Yield (t/ha)	Area (ha)	Yield (t/ha)	Area (ha)	Yield (t/ha)	Area (ha)	Yield (t/ha)
1	Rice	88,693	3.38	88,835	3.34	88,935	3.45	89,500	3.54	89,460	3.48
2	Cassava	52,571	20.74	53,690	21.60	53,455	19.51	54,020	19.65	56,265	18.42
3	Corn/Maize	10,428	3.80	9,420	4.82	10,145	4.86	11,580	5.25	12,150	5.20
4	Vegetable	1,991	13.16	2,795	14.78	2,415	13.57	2,125	14.87	1,470	16.89
5	Tobacco	1,230	1.57	1,705	1.38	2,165	1.76	1,600	1.81	1,215	1.79
6	Sugarcane	581	18.62	540	20.85	565	20.22	805	20.50	550	18.77
7	Peanut	1,229	1.73	1,125	1.29	1,120	1.25	710	1.63	295	1.41
8	Mung Bean	1,744	1.49	1,220	1.17	1,330	0.97	635	1.29	340	1.16
9	Soya Bean	933	1.39	755	1.18	390	1.00	360	1.20	-	-
10	Sesame	1,465	0.40	650	0.49	655	0.49	330	0.62	385	0.60
11	Sweet Potato	469	18.51	530	24.23	215	16.79	145	17.59	130	16.69
12	Cashew	1,733	1.57	6,461	1.67	7,637	1.63	8,807	1.65	8,334	1.59
13	Pepper			3,039	5.50	2,645	5.50	2,651	5.30	1,990	3.70
14	Mango	1,744	18.35	-	-	-	-	1,733	16.70	2,071	21.22

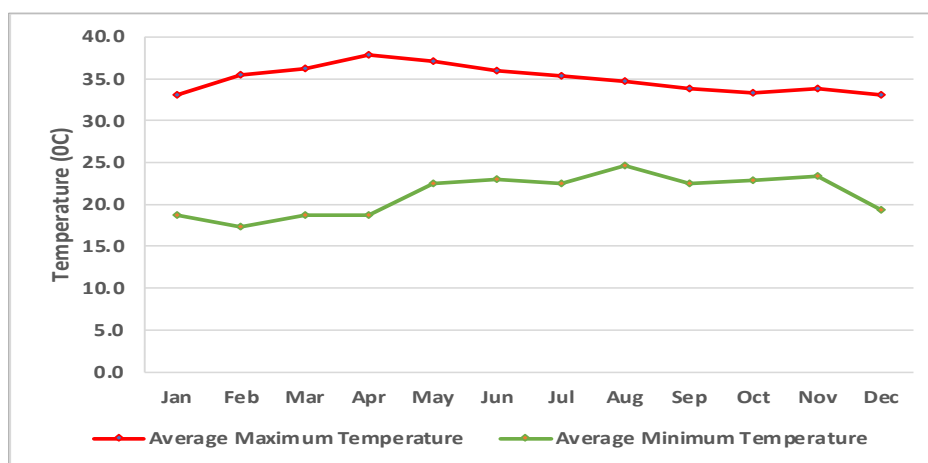
Source: Tboung Khmum Provincial Department of Planning (2021)

3.1.3 Climatic, Meteorological, and Hydrological Conditions

3.1.3.1 Climate Condition

Ambient Temperature: The temperature changes regionally and seasonally. The warmest month is April, when temperature can rise above 38 °C, and the coldest of about 22 °C is January. The average annual temperature is 27 °C. The monthly average highest temperature recorded at Kampong Cham (or Tboung Khmum) station during was 37.8 °C (in April) during 2011 – 2015 period while it was lowest (17.3 °C – 19.4 °C) between December and April during the above period of time (Figure 3).

Figure 3: Average maximum and minimum temperature by month in Kampong Cham (2011-2015)



Source: NIS, 2017

Ambient humidity: Cambodia is characterised with relative humidity throughout the country. This is particularly true in the low-lying area such as Tboung Khmum province where the humidity ranges from 65-70% (January and February) and 85-90% (August and September).

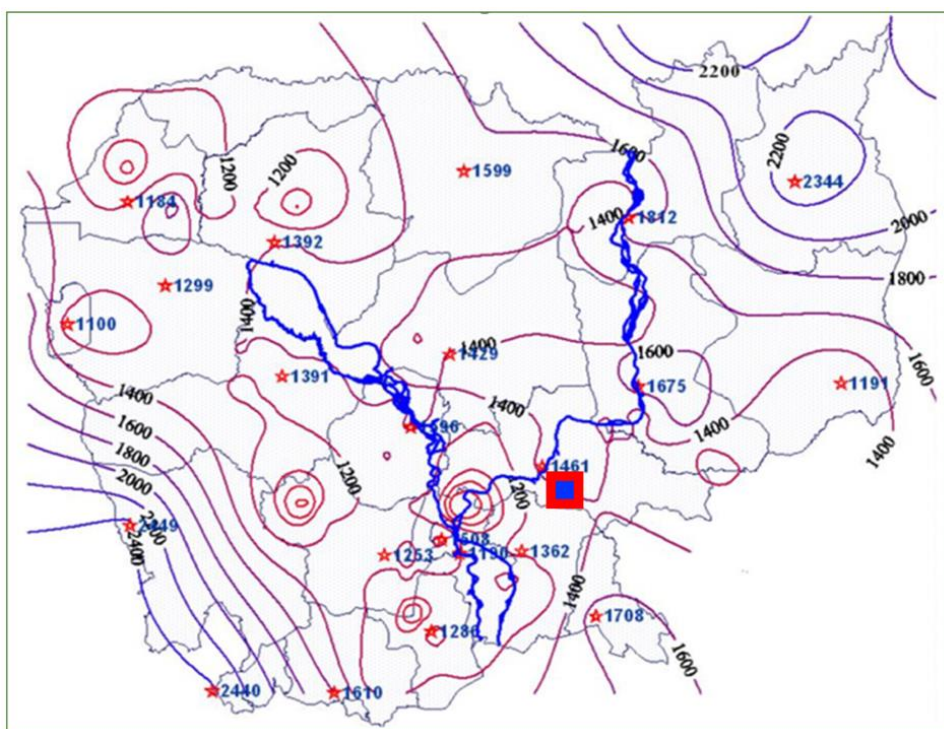
Sunshine: The amount of sunshine throughout the country is good during the period between December and February, and occasionally in March and April depending on the first thunderstorms. Due to the cloudiness brought by the monsoon, the sunshine is typically low from June to October (Pegasusweb, 2021).

Wind: According to the Ministry of Environment (MOE, 2009), the mean wind speed is low throughout the country – around 2m/s. December is known as the month of strong and steady wind which comes from the northern part. Evaporation ranges from 2,000 to 2,200 mm annually. Evaporation is highest during March and April (between 200–240 mm) while lowest in during September and October (120–150 mm).

3.1.3.2 Meteorological Condition

According to Ministry of Water Resources and Meteorology (2014), the alternating monsoon system affects remarkably the overall climate pattern in Cambodia. The southwest monsoon takes place during May and November (wet season) with approximately 90% of annual rainfall. The northeast monsoon, which comes with hot and less humidity, particularly during high potential transpiration, take place during March and April. The rainfall pattern, however, is variable enormously across the country. Annual rainfall is high (2,400 mm) in the Elephant and the Cardamom Mountain (southwestern part of the country) and low (600–800 mm) in the central plains of the Tonle Sap area. In Tboung Khmum province, the annual rainfall is approximately from 1,400–1,650 mm. See Figure 4 (Blue square with red line border indicates the relative location of Tboung Khmum province).

Figure 4: Distribution of Annual Rainfall in Cambodia (1991-2007)

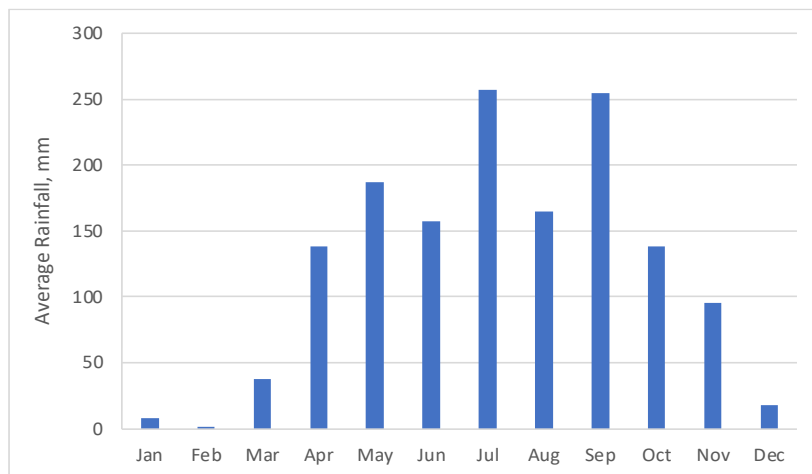


Source: MOWRAM, 2014

It is noted that Tboung Khmum was formed officially in 2014. This was done by the RGC by splitting Kampong Cham province into two areas. Therefore, rainfall data in Kampong Cham is somehow more or less similar to those for Tboung Khmum province.

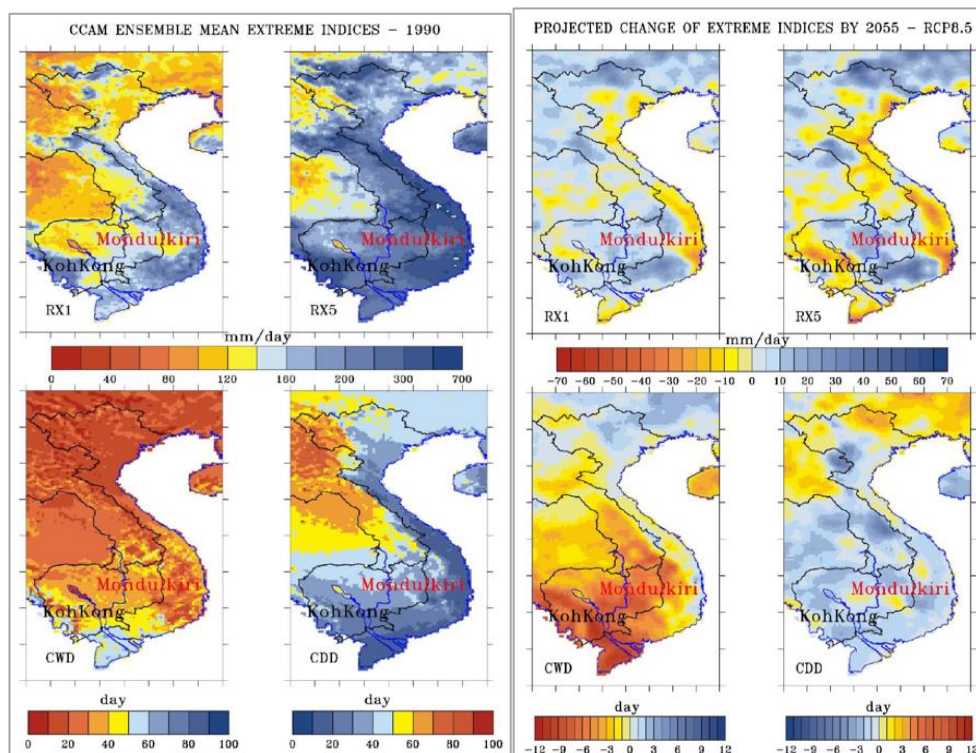
Figure 5 provides average monthly rainfall for five-year period (2011-2015), which shows that high rainfall took place during the wet season (May – November). The highest average rainfall occurred in July and September (approximately 257 mm) while the lowest one took place in January and February.

Figure 5: Kampong Cham's five-year average rainfall by month (2011-2015)



Source: NIS, 2017

Figure 6: (a) Ensemble mean CCAM 10 km simulation mean extreme rainfall indices for the baseline period (20 years centered on 1990).



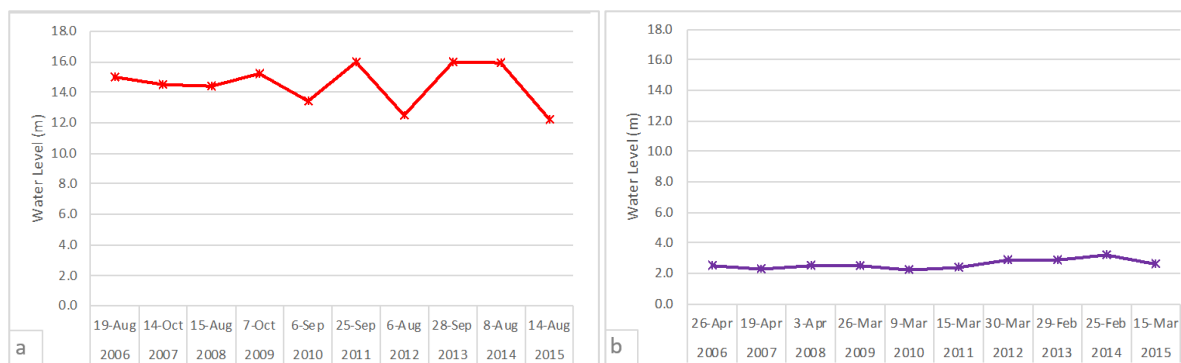
Source: Unknown, 2014

Note: Upper left: RX1 (mm/day), upper right: RX5 (mm/day), lower left: consecutive wet days (CWDs, number of days), lower right: consecutive dry days (CDDs, number of days); (b) Projected CCAM multi-model mean extreme rainfall indices under RCP 8.5 for the 20-year period centered on 2055 relative to the baseline period. Upper left: RX1 (mm/day); upper right: RX5 (mm/day); lower left: consecutive wet days (CWDs, number of days); lower right: consecutive dry days (CDDs, number of days).

3.1.3.3 Hydrological Conditions

Water Level: According to MRC (2021, p. 6), the hydrological regimes of the Mekong mainstream were tracked by water-level gauging at many points on the mainstream and its tributaries.

Figure 7: (a) Kampong Cham’s maximum water level (m), (b) Kampong Cham’s minimum water level (m)



Source: NIS, 2013 & 2017

Kampong Cham is one of the Mekong Region Committee’s (MRC) water-level stations that is monitored by MRC all the year round. The highest maximum water levels in Kampong Cham (or Tboung Khmum) station during 2006 – 2015 were 16 meter – as recorded on 25 September 2011, 28 September 2013, and 8 August 2014 (Figure 7a). Figure 8a shows the lowest minimum water levels (2.30 m) as recorded on 19 April 2007 and 2.20 m – as recorded on 9 March 2010.

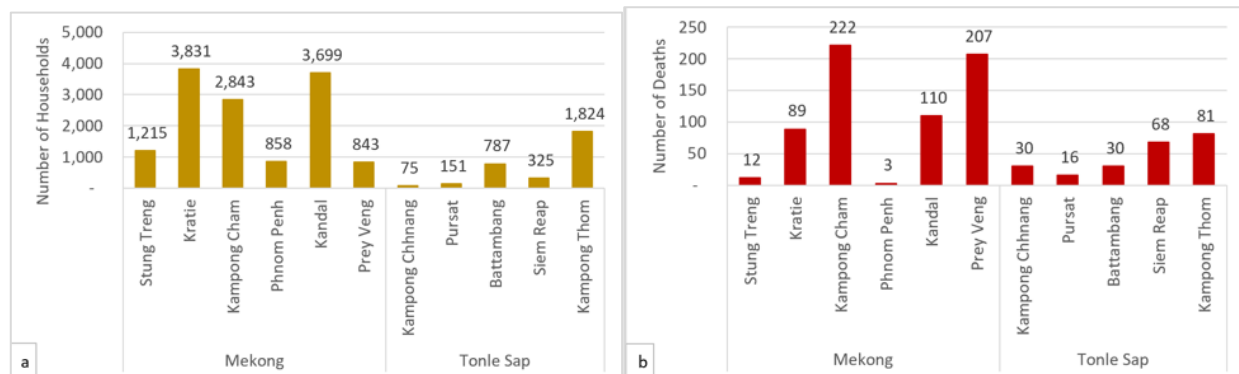
Flooding: Cambodia is one of the other countries situated along the Mekong River and vulnerable to flood events almost every year. The country has experienced almost all types of natural hazards such as flash flood, riverine floods, drought, thunderstorms, dry spells, bank erosion, and other hazards such as fire incidents and epidemics. Flooding is one of the most devastating natural disaster risks in Cambodia. Recurring flooding has historically affected regularly means of livelihoods and living activities of local households and communities, businesses, agricultural products, and infrastructure. Two types of common flood that frequently occur in Cambodia include: (i) flash floods (which is caused by extremely heavy rainfall due to thunderstorms, or dam break of hydropower plant development in countries to the upstream of the Mekong River, or its main tributaries; and (ii) floods from the Mekong River and its major tributaries. Each type of floods varies in terms of occurrence frequency, potential damage, and management measures.

Increasing population, expanding urbanization, floodplain degradation, and human encroachment due to improper infrastructure development are among key factors that explain for recurring flooding. Floods create hazardous conditions, and risks, which make livelihoods of local people more vulnerable.

Figure 8a show the number of households that were affected as a result of flooding between 2000 and 2019 for provinces located along the Mekong River and Tonlé Sap. Data is available only for old Kampong Cham province (which includes also the now Tboung Khmum province). Data on the level of damage due to flooding indicate that the impact due to flood is high in Kampong Cham province (

Figure 8b).

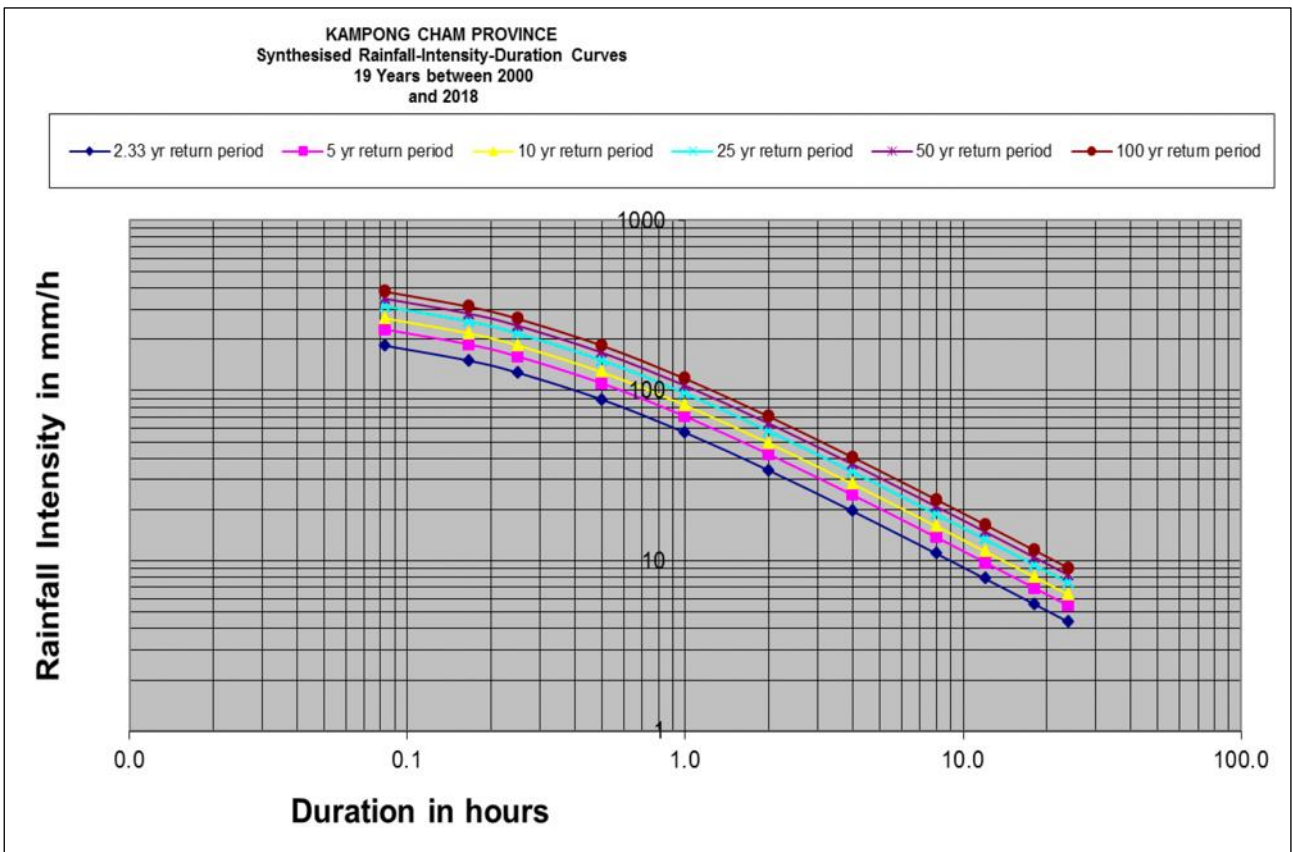
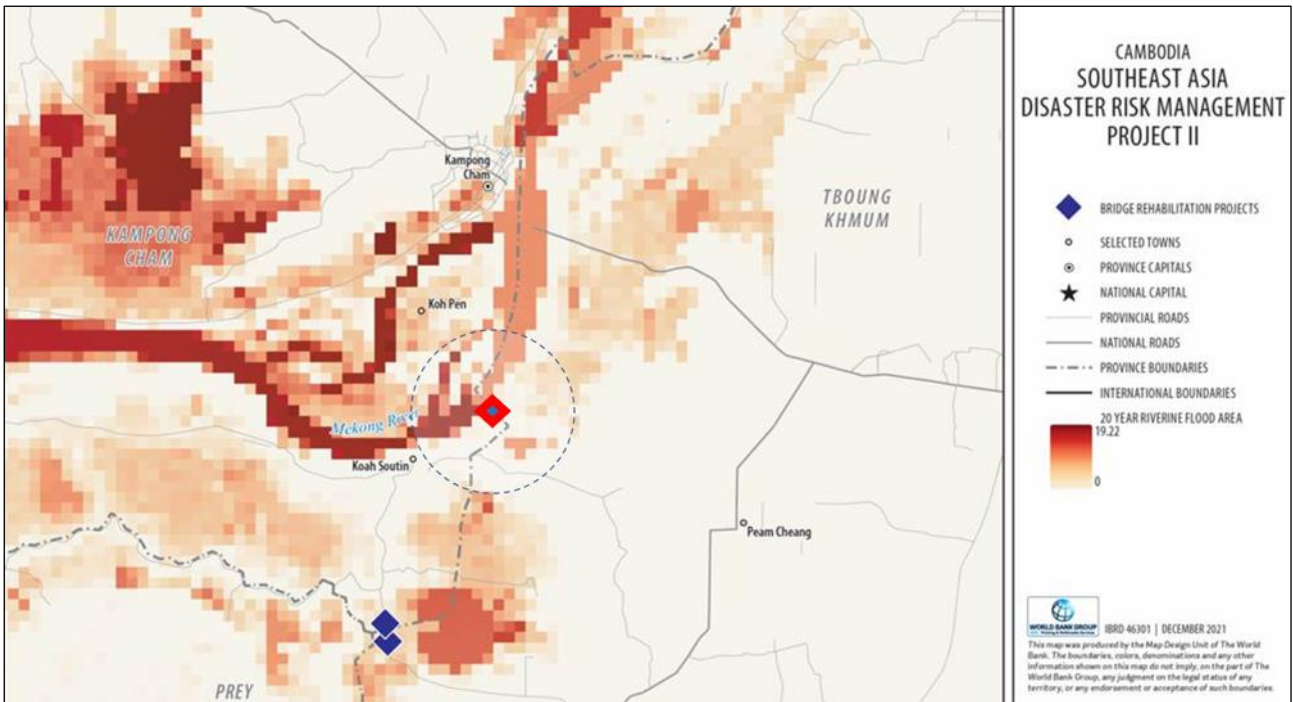
Figure 8: (a) Number of damaged and destroyed households, (b) Numbers of human life loss by floods by province (2000 – 2019)



Source: NCDM, 2020

Floods affect agricultural production almost every year, especially rice which is the main source of livelihoods and incomes for most farmers. As of October 2020, more than 2 million people had been exposed to flooding and some 800,000 people had been directly affected, of which an estimated 388,000 people who are with pre-existing vulnerabilities (households classified as IDPoor) were reportedly in need of humanitarian assistance (OCHA, 2020). According to the World Bank (2019), rice production (accounting for about half of agriculture GDP) experienced a lower growth rate (5.7 percent in 2017) because of the impact of midseason floods, including drought, in some parts of the country. The rice production in wet season remained subdued due to unpredictable weather conditions, which dropped to 8.22 million metric tons (or a 0.6 year-on-year contraction) due to midseason drought and end-season floods in 2020 (WB 2021).

For the location of TK2 bridge, historical flood data suggested that the TK2 bridge location is not subject to remarkable flood depth based on a 20-year return period (See Map below. Red blue diamond indicates the TK2 bridge location). This scenario is supported by historical rainfall data available for the province for the period from 2000 to 2018. The local rainfall is not significant. Nevertheless, since the bridge is located in a floodplain which is morphologically part of the Mekong Delta, and the bridge crosses a natural floodplain drainage channel, the bridge location is subject to seasonal inundation from the Mekong river. Consultation with Tboung Khmum Provincial Department of Water Resources and Meteorology will be conducted (they were not able to attend the consultation meeting conducted on 16 November 2021). (See Minutes of Meeting in Annex 5).



3.1.4 Potential Impacts of Climate change in Cambodia

Cambodia is highly vulnerable to climate change. Climate change has been exacerbating flood risk – through changes in precipitations and sea level rise. Climate change impacts are expected to intensify in the next few decades. These are manifested with more frequent heat waves, forest fires, droughts, thunderstorms, tropical cyclones, and floods. These natural disasters have been recognized as an annual impact of climate change in Cambodia. In addition, climate change also poses a variety of challenges to sustaining economic development in Cambodia. According to NCS (2020b), the country’s annual average GDP growth fell by 6.6%

(with absolute GDP dropped by 0.4% by 2020, 2.5% by 2030, and 9.8% by 2050) due to potential impacts of climate change.

The significantly negative impacts on socio-economic and other key sectors (including agriculture, water resources, ecosystem, forestry, health, energy, transportation, tourism, etc.) were extremely high. Effective climate adaptation measures are required to mitigate the impacts of climate stresses on human made and natural systems. Adaptation measures consist of a multitude of behavioral, structural and technological adjustments. The effective response to the challenges posed by a changing climate is useful to maintain the economic growth in achieving sustainable development of Cambodia. According to the General Secretariat of the National Council for Sustainable Development (NCSDD) (2020), Cambodia has estimated some precursors' emissions due to limited information. These emissions include carbon monoxide (CO), oxides of nitrogen (NO_x), non-methane volatile organic compounds (NMVOCs), and Sulphur dioxide (SO₂). The details of the emissions by sector are provided in Table 4. Of the total emissions, forest and other land use (FOLU) sector was extremely high (91.69%) compared to other sectors, followed by Energy sector (6.40%).

Table 3: Emissions by sector and gas in mass unit (Gg) in 2016

Inventory Sector	CO ₂	CH ₄	N ₂ O	NO _x	CO	NMVOC	SO _x
Energy	8,845.29	23.04	0.61	43.43	160.46	45.03	32.61
IPPU	1,449.46	n/a	n/a	n/a	n/a	n/a	n/a
Waste	525.56	79.70	0.82	n/a	n/a	n/a	n/a
Agriculture	17.42	645.00	7.56	n/a	n/a	n/a	n/a
Forest and Other Land Use (FOLU)	131,011.25	n/a	n/a	n/a	n/a	n/a	n/a
Total (without FOLU)	10,837.73	747.74	8.99	43.43	160.46	45.03	32.61
Total (with FOLU)	141,848.98	747.74	8.99	43.43	160.46	45.03	32.61

Source: NCSDD, 2020

A report by Ministry of Environment (MOE) in 2016 projected that the greenhouse gas (GHG) emission in BAU in 2030 and 2050 will be increased approximately to 20,245 ktCO₂eq./year and 120,523 ktCO₂eq./year, respectively.

3.1.5 Mitigation of Climate Change Impacts through Engineering Design

Under this project, the rapid climate change assessment of adaptation needs undertaken in October 2009 showed that existing climate change projections supported by field observations highlight two major concerns related to current and future climate changes. It is noted, in particular, that the average total annual rainfall appears to be increasing and are poorly distributed over seasons, resulting in increased floods during rainy season as well as increased drought during dry season. Similarly, according to the Department of Climate Change (Ministry of Environment), extreme events such as floods and droughts are projected to increase in frequency and intensity across Cambodia. Flooding and soil moisture content is of primary concern as these may affect the existing roadwork. To address the potential impact of climate change, the project seek to a) protect road/bridge infrastructure from the impacts of climate change and b) ensure road/bridge infrastructure does not increase the vulnerability of the surrounding area due to climate change impacts.

To address hydrological impacts, the project shall ensure roadside and cross drainage systems are appropriately designed, where necessary, to avoid flooding on project roads as well as in the areas surrounding road embankment. In addition, road embankment, bridges and drainage facilities shall be designed based on historical flood data and flood forecasting. Erosion control and slope stabilization measures shall be included in the design, as appropriate, such as side ditches, berms, stone ripraps, and gabions along the road, tree planting in areas of high erosion risk, cross drainage to accommodate floodwater/run-off in case road sections are on elevated fills that will obstruct natural drainage.

3.2 Baseline Environment Quality

3.2.1 Ambient Air quality, Noise and Vibration

Ambient air quality: The data on ambient air quality is not existed at the TK2 bridge location. The ambient air quality is being linked to increases in the number of vehicles, industrial development, and overall urbanization as present. However, the TK2 bridge is located in the rural setting. Due to its distance from major population centers and industrial areas, the baseline ambient air quality is considered good. Ambient air quality is sometime affected by dust from tillage and unpaved road users, including smoke from burning of rice stubble after harvest and burning from swidden cultivation activities.

Noise and vibration disturbance: The data on noise and vibration is also not available for the TK2 bridge location. In Cambodia, noise and vibration disturbance are closely associated to change in the traffic volume, industrial development, and overall urbanization nearby. As the TK2 bridge is located in a rural setting, noise and vibration disturbance are considered minimum.

Surface Water Quality: The data on surface water quality at the TK2 location is not currently available. Based on the commune data (2020), the surface water quality of the area where TK2 bridge is situated is generally in good quality.

Groundwater quality: According to the groundwater analysis report of the Research Development Institute in 2008 using the sampling of 15 tube wells throughout the Preah Theat commune, groundwater quality is rated 45F, which means the general safety level of deep aquifer is extremely low and the aesthetic quality of the water is also poor.

Soil Quality: The data on soil quality is not available in the area where TK2 bridge is situated. Based on visual observation, the soil quality is generally good in the absence of nearby industrial zones or wastewater discharge. As the soil is already fertile, the local communities do not use chemical fertilizers for their agricultural production.

3.1 Biological Resources

The TK2 bridge is not located in any protected areas or ecologically sensitive zones. The TK2 bridge location is characterized by agricultural land dedicated for rice and other crop cultivation.

According to the environmental screening, no vegetation species were identified at the TK2 bridge location, as indicated in the International Union for Conservation of Nature Red List for Cambodia. There are no recorded endangered wildlife species nor natural or critical habitats in the area of influence of the TK2 bridge. There are also no identified ecologically sensitive area surrounding the TK2 bridge.

3.2 Socioeconomic Conditions

3.2.1 Land use

Tboung Khmum province was established on 31 December 2013. The province came into being through Government's dividing the old Kampong Cham Province into two provinces. Tboung Khmum province is characterized by commercialized agriculture which contributes to the growing cash economy. Major crops being grown include rubber, cashew, cassava, pepper, corn, legume and tobacco, and other major crops for domestic use and export including rice and vegetable. Urbanization, agribusiness, industrialization, enterprises are growing rapidly with growing competition for land resources.

The TK2 Bridge is located in Preah Theat commune, Ou Reang Ov district, Tboung Khmum province. The district has a total of 372.73 hectares of land that is current used for residential and agricultural purpose. Currently, 3,991 ha are designated as cropland, of which 934 ha is for rice, 100 ha for maize 62 ha for legume, and 300 ha for cassava, 100 ha for sugarcane, 7 ha for pepper, 20 ha for cashew, and 30 ha for mango. Another 3,600 ha is allocated for rubber plantation. At TK2 bridge location, crops that are commonly grown (in the vicinity of the Bridge) is rice and white maize. There are another 3.283 ha that is categorized as preserved wetland, namely, Boeung Krapit Fishery Community. This community is located in two bordering communes (Mien and Preah Thiet).

3.2.2 Population and Demographic characteristics

Tboung Khmum province is comprised of six districts and one city. The province has 62 communes and two Sangkat, and a total of 873 villages. The total population of the province is 775,296 persons. There is a total of 169,281 households with average household size of 4.6). The province's population density is 148 persons per square kilometres, which is higher than the average population density in the countrywide of Cambodia which is 86 persons per square kilometre. The annual population growth rate is 0.4% during 1998 – 2008, which has declined to 0.2% during 2008 - 2019. Total population of Ou Reang Ov district is 101,881 persons. There are 21,552 households, of which male makes up 48.5% whereas female accounts for 51.5%. Preah Theat commune is home to a total of 15,141 persons (48.7% male, 51.3% female). The total number of households is 3,248 households. Tuol Khleang village has a small population size (1,409 person, 279 households) of which 50.3% is male and 49.7%.

3.2.3 Economic Condition

The province is characterized with high soil fertility, particularly in area located along the Mekong River, and areas that are known as wetland ecosystem. The soil fertility provides favorable condition that support the livelihoods development of the community. Agricultural production is the main source of income. Major crops include rice, other crops, livestock, fishery, as well as other non-farm income generation activities such as small-scale trading, working as hired workers at cassava farms, factories and construction work. Rural roads and bridges are vital to maintaining economic activities, particularly agricultural productions that rely on transportation of farm products to markets, etc. Tuol Khleang village is located 17 km away from the downtown center of Tboung Khmum district. In Preah Theat commune, there are 9 tractors, 47 small and medium size trucks, 5 machines, 15 cars, 2 taxi vans, 2,725 motorbikes, 9 tri-motorcycle taxi, and 1,927 bicycles.

3.2.4 Traffic system

Transportation system connecting with the TK2 construction site is mainly commune road (laterite surface).

3.2.5 Cultural Resources

There are no any cultural properties and archaeological sites within 2km from the TK2 bridge. However, chance finds procedures will be applied if the contractor, during bridge construction, discovers archaeological sites, historical sites, including graveyards and/or individual graves during excavation or construction.

3.2.6 SEA/SH situation

The data on SEA/SH situation at local level and/or in the TK2 area is not available. SEA/SH and violence against women and children continues to occur at an alarming rate in Cambodia especially in areas that have high poverty rate. According to the National Survey on Women's Health and Life Experiences in Cambodia, conducted by the National Institute of Statistics of the Ministry of Planning and Ministry of Women's Affairs in 2015, 20% of Cambodian women reported experiencing physical or sexual violence from an intimate partner.

3.2.7 COVID-19 situation

There have been no COVID-19 cases reported so far in the TK2 area, including commune level. More than 80% of the population in Cambodia have been vaccinated with two doses.

4. ENVIRONMENTAL & SOCIAL IMPACTS

The screening for environmental and social impacts on TK2 bridge was conducted virtually on 16 and 17 November 2021 by MRD PMU and PDRD with the remote support from the Social, Environmental Officers of MRD, and E&S consultant. A field visit to TK2 bridge location was conducted on 27 November to support the virtual meetings (See Annex 2 for screening related to land impact and Annex 4 and 5 related to screening for IP presence in the TK2 bridge subproject area. Screening was done, using the environmental and social screening checklist (See Annex 1) in order to identify potential environmental and social risks and impacts

which may arise due to TK2 bridge construction. The screening found that most of the identified environmental impacts are low to moderate. The social risks and impacts are low (See more details below).

Environmental Risks and Impacts

Based on assessment from the site visit, the construction of TK2 bridge has no major adverse impacts on environment. The impacts are mainly related noise, vibration generated during construction operations, management of construction debris and wastewater, water quality control, management of stockpile storage, waste management, and diversion of water flow management. In addition, during construction, concerns include safety management and traffic congestion, particularly during day and night time. These impacts can be minimized through applying good construction practices and good engineering design of detour bridge, combined with close construction supervision and monitoring. The risks related to UXO is also considered moderate. Tboung Khmum province used to experience armed conflict, aerial bombardment, ground to ground offensive and landmine warfare in 1970s. As such, before bridge construction take place, the project will require that a safety screening/assessment for UXO be carried out, and removal of UXO, if found, shall be carried out by Cambodian Mine Action Centre (CMAC) or certified organization before commencing the civil works. The detailed impacts are described in Table 5. The identified environmental risks and impacts on localized, and are assessed being “Low” to “Moderate”.

Social Risks and Impacts

- *Impact related to Land acquisition:*

According to local authorities who were consulted in the 16 and 17 November 2021 virtual meetings (See Annex 5), a small house (8.5m²) was set up temporarily since 2019 for the purpose of seasonal farming/fishing. The house owner does not live in the house and has a permanent house elsewhere. However, during a field visit conducted on 27 November, consultation with this household indicated that they live in this house permanently. Since this household’s house is located in Kampong Cham province, consultation with relevant authorities of Kampong Cham province will be carried out in December to confirm the land status. Consultation with the owner of the small house will be also consulted again to confirm the land and housing status of the potentially affected house and land, and other assets on land (if any). Consultation, agreement, and compensation payment for the affected small house, and other household’s assets, if any, will be carried and completed before the house is removed to pave the way for TK2 bridge construction. Consultation with the house owner on 27 November indicated that this household had lent part of their farmland to the government to set up the existing temporary detour road to maintain local traffic. The household voluntarily lent the land to government to build the detour road and did not ask for any compensation for that land. This potential impact is considered “low”.

- *Impact related to Indigenous People(s)*

A screening exercise for the presence of IP in the TK2 subproject area was conducted on 16 and 17 November 2021 based on virtual consultation with local people and local authorities at commune, district, and provincial level, and PDRD and based on review of secondary data. A site visit was additionally conducted on 27 November to observe the TK2 bridge site and consult with local people around bridge site. It was confirmed that no any Indigenous Peoples are present in the new TK2 bridge footprint and the potential area of influence (See Annex 4 for Process and Results of Screening of IPs, and Annex 5 for Minutes of Meetings).

- *Risks related to Occupational Health and Safety (OHS)*

Key risks identified for the TK2 bridge construction include risks related to occupational health and safety (OHS) of workers, particularly to the estimated 140 workers that may be mobilized to the construction site and campsite for TK2 bridge construction at peak time during construction stage. Common risks may include, but not limited to, lack of or improper use of personal protection equipment (PPE), lack of awareness of workers on safety measures when construction takes place in isolated area where construction supervision as well as compliance with safety measures (on the part of workers) may be overlooked. Risks related to OHS of workers are related also to contraction and transmission of COVID-19 (among workers, and between workers and community members or other business partners such as suppliers for construction materials, etc). Contracting communicable diseases such as sexually transmitted diseases (e.g. HIV/AIDS) and other non-communicable disease is one common risk at construction sites. The OHS risk is rated from “low” to

“moderate” at this stage and will be re-examined based on assessment of contractors’ capacity to address this risk and Contractor’s C-ESMP that will be prepared for TK2 bridge reconstruction.

- *Risks related to Community Health and Safety (CHS)*

Other social risks that come under community health and safety (CHS) are related to labor influx and traffic safety during bridge construction and operation stages. There are risks associated with contraction and spreading of COVID-19 between migrant workers and local community members during daily construction activities/transactions. There is also risk of conflicts between migrant workers and local communities, and risks related to road traffic safety. These risks will be re-assessed before construction takes place and before selected contractor is mobilized to construction site, and will be updated in this ESMP and disclosed for public consultation before bridge reconstruction. This risk is rated from “low” to “moderate” at this stage and will be examined based on assessment of contractors’ capacity to address this risk, Contractor’s C-ESMP which will be prepared for TK2 bridge reconstruction, consultation with and awareness of local community before and during construction and operation.

- *Risks related to sexual exploitation and abuse/sexual harassment (SEA/SH)*

The risk related to SEA/SH is anticipated. This risk is primarily associated with the labor influx that will be mobilized to support the TK2 bridge construction. As part of preliminary risk assessment, it is known that the community that is nearest to TK2 bridge construction site is Peam Prathnous commune (located in the neighboring Kampong Cham province). People from this commune occasionally cross the Tonle Touch river by boat when they want to go to the village where the TK2 bridge is located in Tboung Khmum province. Commune people may also go across the river to visit the commune where TK2 bridge is located by car through a road about 5-6 km away. Given this condition, interaction between the labor influx and the nearest community is anticipated to be limited due to unfavorable transport and geographical condition.

Presently, SEA/SH incidence can be reported to local police (at commune administrative police station) and commune committee (for women and children at commune hall). There are three local NGOs who are active in providing services related to SEA/SH. These service providers have ongoing collaboration with local authorities and PDWA in Tboung Khmum province, including:

- Cambodian Women’s Crisis Centre (CWCC) (<http://www.cwcc.org.kh/>);
- Cambodian Children’s Fund (CCF/CPU): CCF’s Child Protection Unit, <https://www.cambodianchildrensfund.org/our-mission/child-protection-unit>; and
- Chab Dai Coalition (Chab Dai Cambodia) <https://www.facebook.com/ChabDaiCambodia/>
- Cambodian Children’s Fund Child Protection Unit
- Cambodian Children’s Fund

Given that the potential locations for Contractor’s office and workers’ camp are likely far away from the nearest local residential area, current low incidence related to SEA/SH, and the availability of proposed mitigation measures (See LMP in Annex 5 of ESMF), the risks related to SEA/SH is rated “low” at this stage. The risk of SEA/SH related to TK2 bridge construction will be re-assessed when the contractor is identified and capacity of contractor to address this risk, including Contractor’s ESMP (C-ESMP and C-LMP), can be evaluated.

5. MITIGATION MEASURES

The mitigation measures to address all environmental and social impacts on construction of TK2 bridge is shown in Table 5. The mitigation measures should be implemented along with the project ESMF and follow the government’s and Ministry of Health’s guideline on COVID-19 Preventive measures e.g. social distancing, wearing masks, temperature check, etc.

Table 4. Detailed impacts and mitigation measures for TK2 bridge construction²

Bridge station	Risks, Impacts and Concerns	Mitigation Measures	Responsibility	
			Implementation	Monitoring
Pre-construction phase				
	<ul style="list-style-type: none"> - Traffic safety management - Land clearance (associated with the small house (8.5m²) in Kampong Cham province) - UXOs screening and removal, waste, dust, noise and water pollution - Blocking/or diversion of water flow - Environmental and social impacts related to demolition of the existing collapsed bridge structure 	<ul style="list-style-type: none"> - During pre-construction, good engineering design of detour road must be taken into account to mitigate the impacts: <ul style="list-style-type: none"> ○ The Truss Bridge or R.C Pipe as follow the method statement or approved by engineer shall be constructed for detour road to avoid blocking/or diversion of water flow ○ The design load 25 ton bridge shall be applied for the traffic load passing the temporary bridge ○ Shortening the distance of approach road to detour bridge from approach slap to less than 100 m with a safety manner - Ensure implementation of the detour road plan for TK2 bridge which has already been clearly defined to mitigate the risks and impacts - Safety screening and removal of UXOs must be carried out by CMAC or certified organization and certification letter shall be submitted to PMU before starting the construction activities - Ensure the safety of civil work, all type of mine/UXO must be detected, removed and destroyed at safe location - Maintain on-going consultation/engagement with local authorities and local people in the vicinity of the TK2 bridge location - Contractor to appoint EHS Officer to manage and report on implementation of environmental, health and safety measures - Prepare a contractor’s environmental and social management plan (C-ESMP), including an emergency preparedness and response guideline for construction emergencies and site occupation, health and safety guidelines - Compensation for affected small house (8.5m²) in Kampong Cham province, and other assets on land, if any, will be completed as per project’s RPF. - Mitigation measures are in place for effective management of waste, dust, noise, vibration and water pollution during site clearance. 	Contractor	MRD/PMU/SEO E&S Specialist consultants DDIS

² The mitigation measures for TK2 bridge construction will be implemented along with applicable mitigation measures proposed in the project ESMF and in accordance with Government’s and Ministry of Health’s Guideline on COVID-19 Preventive Measures e.g. social distancing, wearing masks, temperature check, vaccination, etc.

	<ul style="list-style-type: none"> - Lack of a mechanism to address social and environmental complaints 	<ul style="list-style-type: none"> - Establish grievance redress mechanism (GRM) - Make public awareness of GRM - Ensure that name and contact number of representatives of MRD and Contractor are place on the notice board outside the construction site and at local government office (provincial and commune levels), may have in the form of poster - Ensure Contractor’s compliance to ESMP and Annexes is in the contract agreement - Check the campsite and mixing plants, source of materials; waste disposal depot; and areas for parking heavy equipment; That shall be approved before starting the civil work activities. - Contractor is required to develop C-ESMP and submit to PMU before starting the works 	MRD/SEO	MRD/PMU/SEO E&S Speacialist consultants DDIS
Construction phase				
	<ul style="list-style-type: none"> - Traffic congestion and accidents - Construction debris disposal into the water - Blocking/or diversion of water flow - Construction waste cleaning and returning landscape to original/improved condition - Possibility of blocking access to/from nearby farmland of a local household - OHS and community health and safety (CHS) management, including risks of SEA/SH - Soil erosion - Dust pollution 	<ul style="list-style-type: none"> - The existing temporary detour road will be reinforced and maintained for continued use during bridge reconstruction - In case of high flow velocity of water, the protection against erosion of detour road is required - Community shall be informed well in advance of social risks that are related to community health and safety, such as those related to SEA/SH due to labor influx, traffic safety, potential conflicts between migrant workers and local community members. - Consultation with local community and disclosure of project’s GRM, including GRM for SEA/SH, will be conducted as part of updated ESMP, C-ESMP and C-LMP. - Community shall be informed well in advance of any potential disruption to service/operation of public utility, if any. - Assign two flagmen on both sides of the detour road (with walki talki and PPE) to help to navigate the traffic during day time and night time - Install sufficient traffic safety sign, and equipment that meet national guideline or standards or meet international good practices where national standards are absent and most importantly reflection during day time and night times - Install speed slow down sign and safety reminding sign at least 100 m before arriving the detour road (on both sides for two-way traffic). - Conduct water spraying at detour road at least 3-6 times/day or depending on weather and traffic in order to minimize dust 	Contractor	MRD/PMU/SEO E&S Speacialist consultants DDIS

	<ul style="list-style-type: none"> - Noise and vibration control - Stockpile/ storage management - Transportation of construction materials - Solid waste management at workers' campsite - Sanitation issue at workers' campsite - Movement of heavy equipment. 	<ul style="list-style-type: none"> - Avoid using noisy equipments or equipments that generate high vibration - Identify appropriate location for stockpile to avoid stocking at the carriage way or road shoulder or stocking at location nearby water that cause erosion during the rain - Provide temporary safety access road/bridge when there is blockage sloping access paths from village/houses to the road - Manage and clean construction waste properly. Avoid disposing into the water and/or surrounding environment - Bridge demolition can only start after completion of detour bridge is completed and functioning. - Spillage of used oil/lubricants to soil and/or water bodies from generators/machineries for the construction/rehabilitation of the bridges much be avoided/clean properly. 		
Operation phase				
	<ul style="list-style-type: none"> - Blocking/or diversion of water flow - Construction debris falling into the water - Possibility of encroachment for shops/business near the heads of the bridges - Growing vegetation/shrubs which may limit the visibility - Traffic accidents at slope/embankment/bridge abutment 	<ul style="list-style-type: none"> - Detour roads demolition can only start after completion of bridge construction and rehabilitation is completed and functioning. - Avoid disposal waste into water body - Install guiding post and information board to avoid encroachment for shops/business near the heads of the bridges - Clearance vegetation/shrubs regularly to provide clear visibility to road user - Proper maintenance of old bridge structure, signs and marking 	Contractor	MRD/PMU/ SEO E&S Speacialist consultants DDIS

Chance Find Procedure:

During construction, the contractor shall:

- Stop the construction activities in the area of the chance find and report to MRD/Bank as soon as possible for appropriate measures;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until there responsible local authorities or the Department of Culture and Information takes over;
- Notify the Construction Supervision Consultant who in turn will notify responsible local or national authorities in charge (within 24hours or less).
- Relevant local or national authorities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require preliminary evaluation of the findings to be performed. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values.
- Decisions on how to handle the finding shall be taken by the responsible authorities (MRD). This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage.
- If the cultural sites and/or relics are of high value and site preservation is recommended by the professionals and required by the cultural relics authority, the contractor will need to make necessary design changes to accommodate the request and preserve the site.
- Decisions concerning the management of the finding shall be communicated in writing by relevant authorities.

6. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

6.1 Summary of Public Consultation Process

Consultation with stakeholders for TK2 Bridge was conducted in two rounds. The first round was given on 16 and 17 November 2021. The Meeting on 16 November 2021 was held at the office of the Provincial Department of Rural Development (PDRD) of Tboung Khmum Province. The meeting was led by Mr Teang Chhayheang –SEADRM II Project Manager. The participants at the meeting included Mr. Dararath Yem (World Bank’s Consultant), Directors and representatives of involved provincial departments of Tboung Khmum. Due to COVID-19 restriction on social gathering, the meeting was held virtually via video conference using Zoom (See Annex 1 for Minutes of Meeting and List of Participants). The second meeting was being held on 17 November 2021 at Preah Theat District’s Office, Tboung Khmum. The participants included Project Manager (Mr Teang Chhayheang), World Bank Consultant (Mr Dararath Yem), deputy governor of Tboung Khmum district, Administration Chief of Ou Reang Ov district, Commune Chief of Preah Theat Commune, Tuol Meanchey Village’s Chief, Vice-Chief of Tuol Kleang, Preah Theat’s Commune Council, farmers, and staff of project at Provincial Department of Rural Development (See Annex 4 for Process and Results of IP Screening and Annex 5 for the Minutes of Consultation Meeting on 16 and 17 November 2021, and List of Participants). The second round of consultation was conducted on 10 December 2021. The purpose of consultation is to

- Inform local people and interested stakeholders of the purpose of TK2 bridge reconstruction subproject
- Present key information from the draft Environmental and Social Management Plan (ESMP),
- Highlight subproject’s key activities and environmental and social risks and impacts potentially associated with the TK2 bridge reconstruction
- Proposed mitigation measures,
- Grievance Redress Mechanism
- Questions and Answers

6.2 Summary of Public Consultation Results

The consultation with local people and authorities indicated that there is no cultural temple as well as indigenous people communities within the bridge’s potential area of influence. Local participants are generally supportive to the reconstruction of the TK2 bridge. (See Annex 5 and Annex 6 for the Minutes of Consultation Meetings, key feedbacks, and list of participants). The owner of the small house also indicate she is happy to relocate to allow the reconstruction of the bridge (See Annex 7). In the next step, the land status of this household will be verified with local government and the households. Additional consultation will be conducted with the household once impact becomes clearly known. Compensation for this affected household will be conducted in accordance with the project’s RPF before construction of the bridge is carried out.

6.3 Information Disclosure

The Executive Summary of this ESMP was disclosed in Khmer language on MRD’s website on 9 December 2021 and its full English version was disclosed on 21 December 2021 (<https://www.mrd.gov.kh/2021/11/15/4632/#160-seadrm-ii-p1>). The final version of ESMP was disclosed through the same MRD’s website in English on 13 January 2022 and in Khmer on 15 February 2022 (<https://www.mrd.gov.kh/seadrm-ii/>). The final ESMP for TK2 Bridge will also be disclosed in English on the World Bank’s website once cleared by the Bank.

6.4 Consultations during TK2 Bridge Construction

During T2 Bridge implementation and process and before construction, when specific areas such as contractor’s office, workers’ camp, disposal sites for construction debris and construction waste, labor plan, etc. are identified (based on Contract’s ESMP), environmental and social risks and

impacts associated with construction will be disclosed and local people and authorities will be consulted to solicit their feedback.

7. GRIEVANCE REDRESS MECHANISM

The objective of the project GRM is to provide complainants with redress procedures that are accessible, easily used, and free of charge to enable affected people to raise project related concerns and grievances. The project GRMs provide information on how the complaints are lodged, including forms, channels, particularly steps and time-limit for each step, such as time-limit for acknowledging receipt of complaint, notification of resolution decision, and prescriptive period, etc. During the grievance resolution progress, where necessary, dialogues will be held between the project's designated GRM unit/personnel and the aggrieved people to promote mutual understanding and collaboration among relevant parties for effective resolution. The project also has an appeal process which complainant can use when they are not satisfied with the complaint resolution decision, or their complaints are not resolved within a specified timeframe.

7.1 Steps in Grievance Redress

The project will ensure four complaint handling procedures for four types of risks and potential impacts will be in place for use by affected stakeholders. These grievance redress procedures cover complaints related to: 1) land acquisition, 2) labor and working conditions, and 3) sexual exploitation and abuse and sexual harassment (SEA/SH), and 4) general complaints (including complaints related to environmental impact such as dust, noise, vibration, etc. during demolition and reconstruction process). These procedures are established based on the above principles for project's GRM, and in accordance with the requirements set out in pertinent national legislation. The GRM for complaints related to land acquisition is summarized in the project's Resettlement and Policy Framework (RPF). It provides steps to guide complainants through complaint resolution process, including timeframe specified for each step (see RPF for details, placeholder for a link to disclosed RPF). The GRM for workers regarding employment, wages, payment, working conditions, health, safety, etc. follows different procedure and are described in project's Labor Management Procedures. The GRM related to sexual exploitation and abuse/ sexual harassment (SEA/SH) is also established in accordance with the pertinent national laws and the World Bank's guidance on SEA/SH, and is described in project's LMP. It is noted the risks for SEA/SH rated "Moderate" at project level. During project implementation, SEA/SH risk will be evaluated at subproject level taking into account the local SEA/SH status, feedback from local people and other stakeholders (e.g. health services, NGOs...). In case of need, local SEA/SH service provider(s) will be engaged by PMU before Contractor is mobilized to subproject site. Below is a summary for these three GRM procedures that will be used for key issues identified under the project. In addition to these GRMs, different channels are available for receipt of complaints that may arise during construction, such as PMU's GRM focal point, Contractors' GRM focal points, village heads, and other existing channels that local people use, such as commune government, etc.

7.1.1 Redress Procedure for complaints related to land acquisition

In cases where grievance still cannot be resolved, or not resolved to the satisfaction of the person making the complaint, the person has the right to submit a complaint to the District or Province authorities, as desired by the complainant. The Complainant could also decide to submit to complaint directly to the Courts. The complainant will bear the cost for these steps, but will be reimbursed for their expenses by the IA if their complaint is successful.

- ◇ **Step 1 – Commune level.** Aggrieved person (AP) can bring their complaint to the Village Chief or Commune Chief who may be able to resolve issues on the spot. In case the AP is Indigenous People (IP), the aggrieved person may bring their case to the local IP community leader at village/commune level
- ◇ **Step 2 – District level.** AP can skip Step 1 as they wish by lodging a written complaint to the Head of the District Office where the subproject is located. AP can bring a community elderly or representative to mediate the matter at the District level.

- ◇ **Step 3 – Project level (General Department of Resettlement).** The GDR will review the complaint and submit a finding report to the Director General of GDR for a decision. The final report will be completed within 30 working days from the date of complaint receipt and will be submitted to the Director General of GDR for final decision within 5 working days from the date of receipt of the final report.
- ◇ **Step 4 – Provincial level (Provincial Governor's Office).** AP can submit a written complaint to the Provincial Grievance Redress Committee (PGRC) through the Provincial Governor's Office. The decision of the PGRC will be sent to the IRC through the GDR for endorsement before taking remedial action.

If the AP is not satisfactory with a resolution decision made at any of the above steps, they can bring their case to Provincial/Municipal Court at their own cost as per the Law on Expropriation (See details of this GRM in the RPF (Appendix 2 of ESMF, Section 5.2).

7.1.2 Redress Procedure for complaints related to labor and working condition

- ◇ **Step 1 – Employer Level.** Aggrieved person (AP) can submit their grievance to their Employer verbally, in writing, in person or by phone, text message, mail or email (anonymous complaint is accepted) for resolution within two weeks.
- ◇ **Step 2 – PMU level.** If the AP is not satisfied with their Employer's resolution, the Employer will refer the AP to the SEO of the MRD and inform the AP of this referral. MRD'S SEO will resolve the complaint and inform the AP within two weeks and inform the AP of the PMU's resolution result in writing.
- ◇ **Step 3 – Project Steering Committee level.** If the AP is not satisfied with the resolution proposed by PMU (Step 2), PMU will refer the case to the Project Steering Committee of the KH-SEADRM 2 project for a resolution and inform the AP of this referral. Resolution decision will be made no later than three weeks. AP will be informed of the resolution decision in writing. If AP does not agree with the resolution result, they can approach the Labor Inspector of his/her province or municipality.
- ◇ **Step 4 – Court of Law.** If the AP is not satisfied with the above resolution, the AP can initiate a lawsuit to the court of law at any step at their own cost. The decision of the Court will be final (See details of this GRM in the LMP (Appendix 5 of ESMF, Section 10.1 & 10.2).

7.1.3 Redress Procedure for complaints related to SEA/SH

For complaints concerning SEA/SH and are related to project workers, the following channels can be used to submit a grievance. In case a SEA/SH service provider is engaged for a particular subprojects (to be determined based on each subproject, the GRM procedure for SEA/SH will be updated and disclosed for consultation and for potential affected people's information and use at subproject level:

Channel 1 – AP can follow steps outlined in Section 9.1.2 (above) to lodge a SEA/SH complaint related to Contractors' labor.

Channel 2 – Alternatively, AP can lodge their complaint, verbally or in writing, to the GRM Focal Point within the SEO of MRD for advice and resolution. GRM Focal Point for SEA/SH will be trained on standardized procedure for handling SEA/SH grievance to ensure confidentiality.

Channel 3 – If AP wants to bring the case of the Court of Law, AP can follow steps below for prosecution. Prosecution related to SEA/SH is administered under the Criminal Code and the Code of Criminal Procedure, and is as follows:

- ◇ **Step 1 – Judicial Police.** SEA/SH victim or a representative can submit their grievance to a local Judicial Police (JP) Officer. JPs include a) Commune/ Sangkat Chief, b) Commune/ Sangkat/ District/ Provincial/ National Police, and c) District/ Provincial/ National Military Police.
- ◇ **Step 2 – Prosecutor.** Upon receipt of completed record from JP, the prosecutor can make a decision on if the prosecutor will hold a file without processing it further, or conduct

proceedings Against the perpetrator. The prosecutor may bring the case to the Court of Law.

- ◇ **Step 4 – Investigation by Judge.** Investigating Judge will conduct interrogation of the charged person and perform other required investigation procedure.
- ◇ **Step 5 – Hearing.** After issuing an order of indictment, the investigating Judge will submit the case to the trial court president who shall arrange a date for the trial. The decision of the Court on SEA/SH resolution is final (See details of this GRM in the LMP (Appendix 5 of ESMF, Section 10.3)

7.1.4 Redress Procedure for General Complaints

In case individuals, households, or communities are affected by any other aspects, for instance, environmental impacts such as increased dust, noise, or lack of safety measures that increase risks of traffic accident to road users, various channels will be established for convenient use by affected parties. These include:

- **PMU GRM focal point's telephone;**
- **Contractor's hotline:** to report cases that they think contractors can solve timely (contact detail of Contractos will be posted at construction sites, and distributed to IPs (through Subproject Information Booklet) during consultation, and post at public billboard of Commune/Sangkat offices, pagodas, etc.
- **Commune/Sangkat offices**

7.2 Recording Grievances in Logbook

The GRM Focal Point, Project Manager and Project Director within the MRD are responsible for establishment and effective functioning of a Project Grievance database. The MRD'S SEO will register all concerns/grievances that are submitted by project stakeholders into the Project Grievance Logbook (PGL) during project implementation. Data information received will be kept and maintained carefully to ensure privacy and confidentiality, particularly for grievances related to SEA/SH (See Sample PGL for Local and PMU levels). The sample for PMU level can be further elaborated on Excel spreadsheet to effectively manage and maintain the growing database. In case there is serious complaint, such as road accidents, SEA/SH cases, the World Bank shall be notified within 24 hours of complaint receipt and/or report on the incidence (See also Annex 3 of the SEP).

Table 5. Project Grievance Logbook

(Sample for Local Levels)

No .	Name of Complainant (or anonymous)	Addresses	Sex (M/F)	Age	Contact information	Date Received	Details of nature of grievance (environmental impacts, social impacts, labor, health, etc.)	Which of the three GRM that was used? (as described in Chapter 9 (GRM))	Actions taken to resolve grievance, by whom	How many steps that have been used in the relevant GRM	Date grievance was finally resolved/closed ?	Notes

(Sample for PMU Level – to be elaborated on Excel spreadsheet with filter function)

Date Received	Name of Complainant (or anonymous)	Sex (M/F)	Age	Contact information (phone number/email, other channel(s))	Location of Complainants (Province, District, commune, village...)	Form of grievance received (Writing or Verbal (face-to-face, telephone, online), SMS, MRD's comment box in designated Website/Facebook/WhatsApp, etc.	Channel of Receipt (Direct to PMU GRM Focal Point, or Relayed from other channels (provide details))	Key topics of Grievances a) Labor and Working Condition b) Resettlement (incl Voluntary Land Donation) c) SEA/SH d) Environmental impacts e) Community Health and Safety f) Accidents	Nature of complaints? a) Resolution required b) Clarification required c) Suggestion only (for project improvement) d) General Concerns	Step 1 of GRM Procedure			Step 2,3,4 (replicated in Excel spreadsheet)	Closing of Case (At which Steps, date of case closing)	Notes
									Date receipted	Date solved/transferred	Duration spent (in days)				

8. ROLES AND RESPONSIBILITIES FOR ESMP IMPLEMENTATION

8.1 MRD

The MRD is the Implementing Agency (IA). MRD will implement project activities based on the existing institutional arrangement and departments within the MRD. The MRD will ensure implementation of provisions set out in this ESMF are observed fully by all relevant parties, such as local authorities at sub-project level, contractors, sub-contractors, including environmental and social monitoring, evaluation and reporting (See Chapter 10).

The Project Director (PD) at MRD will be responsible for overall guidance, policy advice, internal coordination, discussion and resolution of project related matters with MRD's counterparts who are working in other ministries, and/or other government agencies, etc. The project manager (PM) at MRD will provide day-to-day support to the PD and are responsible for ensuring the Project Operation Manual (POM) is followed, environment and social activities are implemented, and all consultants follow their terms of reference and delivery schedule. The PM will also ensure project activities are carried out in accordance with implementation schedule and within the allocated budget, including ensuring that financial management reports are prepared and submitted on time.

The MRD is responsible for:

- Ensuring the project has adequate staffing (PD, PM, SEO, and environmental and social consultants);
- Provide agreed counterpart funds for project activities in a timely manner;
- Comply with the Environment and Social Commitment Plan (ESCP).

The PD and PM at MRD are responsible for:

- Effective communication between all stakeholders;
- Recruiting consultants;
- Finalizing needed surveys, detailed design, bidding documents, and contract awards;
- Approving Contractor's ESMP (C-ESMP) prior to implementation;
- Monitoring and evaluating project activities and outputs, including periodic reports;
- Involving stakeholders in all stages of project design and implementation as per the SEP;
- Conducting consultations and disclosure of project documents as per the SEP;
- Assuring quality of works, and services of consultants and counterpart staff;
- Establishing a strong financial management system and submit timely withdrawal applications to WB, conduct timely financial audits as per agreed timeframe and take recommended actions;
- Establishing and monitoring project grievance redress mechanism in accordance with the SEP;
- Providing monitoring reports to the World Bank on a quarterly basis, and a project evaluation at the end of the project.

8.2 MRD's PMU

The MRD's PMU will work closely with PDRD in planning and implementation of bridge located within their province. The PDRDs will also supervise project officers at the district-level Department of Rural Development, and are responsible for:

- Executing and monitoring road and bridge civil works in the respective provinces;
- Coordinating effectively with all project stakeholders, including MRD's SEO, consultants, contractors, local authorities, provincial departments and project communities;
- Approving Contractor's ESMP (C-ESMP)'
- Supporting district-level project officers in monitoring and evaluating progress and performance of consultants and contractors;
- Supporting MRD'S SEO to conduct trainings on COVID-19, labor, gender, SEA, SH, VAC, HIV/AIDS, and road safety;
- Supporting MRD'S SEO to disseminate project information and conduct consultation activities, as well as ensuring effective grievance redress resolution within their province;

- Supporting MRD'S SEO to conduct screening and scoping of project roads, and identifying environment, social, land acquisition impacts and screening for presence of IPs in the subproject area;
- Liaising with village authorities in subproject area to encourage vulnerable group to apply for jobs that may be offered by project's contractors;
- Collaborating with relevant departments involved in land acquisition and/or other environment or social mitigation measures.

8.3 Social and Environmental Officers (SEO) of MRD

The MRD will appoint at least one Environmental Specialist, one Social Specialist, and one GRM Focal Point (hereinafter SEOs) for full time support for the project. The SEOs of MRD will be instrumental in ensuring the environmental and social performance of the project. The SEOs, who are supported by DDIS consultants and E&S consultants, will be responsible for ensuring effective environmental and social management for all project activities. The SEOs, DDIS consultants and E&S consultants will work together as a team in which SEOs plays the lead role in E&S monitoring for the whole project. In particular, SEO will review all related project and E&S documents which are prepared by E&S consultants. Where necessary, SEO will conduct site visits, interview contractor, construction supervisors, workers, provincial-level government staff of MRD, local authorities and local communities to collect necessary E&S information for the purpose of internal monitoring. The SEO will monitor Contractors' compliance with C-ESMP and visit each subproject location at least once a month during construction. Upon completion of each site visit, the MRD'S SEO should prepare a Monitoring Report reflecting main issues found, resolution arrangements and timing for the resolution. The SEOs will be responsible for:

- Monitoring performance of environment and social mitigation measures, including road safety;
- Conducting screening and scoping on environment and social impacts (see Annex 1.2), including screening for land acquisition impacts based on the guidance in the RPF and presence of Indigenous Peoples based on the guidance in the IPPF;
- Conducting trainings on road safety, gender, SEA/SH, VAC, labor rights, HIV/AIDS and the grievance redress mechanism to project communities, and monitoring contractor's training for their workers on Workers' Code of Conduct which covers SEA/SH/VAC, and HIV/AIDS;
- Monitoring environmental and social activities of the project, in particular the implementation of the ESMPs for road and bridge subproject, and any other relevant project documents such as RP and IPP;
- Monitor, including ensuring effective functioning of project's Grievance Redress Mechanism and solve grievances submitted to PMU level;
- Leading all stakeholder engagement activities, including information disclosure, consultations, reporting back to stakeholders –as per provisions in the SEP;
- Working closely with Provincial Department of Rural Development, General Department of Resettlement, and other line ministries and/or relevant departments as necessary;
- Prepare monthly reports on E&S implementation and submit to the PM and PD.

8.4 Detailed Design Implementation and Supervision (DDIS) Consultant

The DDIS consultant will be responsible for preparing detailed design, conducting construction supervision, monitoring project implementation, including monitoring and evaluation of the project. DDIS team will appoint experienced Environment and Social officers on their team to be responsible for:

- Leading the drafting of required environment and social documents such as the site-specific ESMPs, RPs, IPPs and updating of the SEP as needed, and any other documents that may be required;
- Review and assess, on behalf of PMU, of whether the construction design meets the requirements of the mitigation and management measures of the C-ESMP;
- Review and endorse contractor's C-ESMP and C'LMP for PMU's approval;
- Working closely with SEO to review environmental compliance at new proposed borrow pits and quarries and advise PMU on whether these are eligible for use by the project;
- Supporting the MRD'S SEO to fulfil their roles, including by conducting capacity building training, helping with work plans, monitoring reports, conducting site visits, etc.;

- Working collaboratively with PDRD and other related departments such as GDR as needed;
- Approving contractors' work statement, construction method, and implementation of subproject ESMPs;
- Monitoring the impact of construction works on the environment and local communities and assisting SEO in preparing monthly E&S implementation progress reports;
- Incorporating into the project design E&S mitigation measures identified in subproject ESMP during subproject design;
- Assisting Project PM and SEO in ensuring that all environmental and social requirements and mitigation measures in subproject ESMP are incorporated in the civil works bidding documents and contracts;
- Assist SEO in establishing the Grievance Redress Mechanism (as described in RPF, IPPF and LMP and summarized in SEP);
- Undertake environmental and social capacity building activities for the SEO as required in Section 7.3;
- Undertake regular monitoring of the contractor's environmental and social performance as scheduled in subproject ESMP;
- Supervise Contractors' compliance with site-specific ESMPs and organize site visits to each subproject;
- Prepare Environmental and Social Monitoring Reports including Project Progress reports and details on the GRM for each ongoing sub-project;
- Review payment requests related to environmental mitigation costs if applicable;
- Support MRD in works related to implementation support missions conducted by the WB;

8.5 Independent Social and Environment Monitoring Consultant (ISEMC)

The E&S consultants are responsible for assisting the ESO in monitoring and reporting on the safeguard implementation performed by the contractors.

- Develop screening checklist to assess risks and potential environmental and social impacts for each subproject;
- Take lead in building capacity for the project (based on list of potential training topics at Section 7.3 (below), including periodic provision of on-the-job training to contractors, SEO and PIU on the implementation and management of E&S risks and impact at subproject level;
- Review C-ESMP and ensure C-ESMP is consistent and cover all risks and potential impacts identified in site-specific ESMP, particularly risks related to OHS, CHS, SEA/SH/VAC taking into account local knowledge and experience in prevention and management of these risks.
- Ensure C-ESMP have actionable plan to addressed identified risks and potential impacts, including allocation of resources to implement fully such actions.
- Make recommendation for improvement before PMU's and PMU's DISS Consultant's approval of C-ESMP;
- Conduct site visit to construction sites and worker camp and make above assessment as part of monitoring and reporting responsibility;
- Develop E&S monitoring checklist and reporting template;
- Participate and support SEO in monthly safeguard monitoring and reporting;

8.6 Contractor's Environmental and Social Management Plan (C-ESMP)

The Contractor's Environmental and Social Management Plan (C-ESMP) will be the Contractors guiding document for the implementation of this ESMP during works the C-ESMP will be reviewed and approved by MRD PMU based on the requirements of the ESMP and will be their management plan for the practical implementing of these requirements. The C-ESMP will contain the contractor's methodology and planning for adhering to their safeguard requirements. Additionally, the C-ESMP will detail how the Contractor plans to resource their team with personnel and financial resources as per the Contract. The Contractor will include sufficient provision in their Bill of Quantities (BoQ) to ensure that the C-ESMP can be developed, implemented and monitored by their Safety, Social and Environment Officer. As this role will be key

personnel within the bid document, the Contractor is obliged to ensure that their BoQ item is sufficient for this person to carry out their duties as required in this ESMP and the contract.

The C-ESMP and associated management plan will be developed, approved and disclosed at construction site, including Contractor's site office and workers' camp, prior to commencement of civil works. The bid documents will require that the C-ESMP be developed by the Contractor's Safety, Social and Environment Officer and after internal review and approval, it will be subject to review and endorsement from the DDIS who will coordinate a review with PMU ES Specialists and PMU's approval. Once the C-ESMP has been approved, it will be disclosed by the Contractor and the PMU using the same methods as required for the ESMP disclosure.

The Contractor is required to produce the traffic management plan and occupational health and safety plan as part of their C-ESMP. These management plans are referred to throughout the ESMP. In addition to these management plans being a requirement for the C-ESMP, they will also be required in as part of the tendering process to demonstrate that the Contractor has started to consider these environmental and social impacts and has the capacity within their team to plan their safeguard management strategies.

8.7 Contractor's Safety, Social and Environment Officer

The contractor shall appoint competent staff(s) as the contractor's on-site safety, social and environment officer (SSEO). The SSEO must be appropriately trained in environmental management and must possess skills necessary to effectively and efficiently all contractor's and subcontractors' personnel engaged under the subproject. The SSEO will be responsible for monitoring and reporting on the contractor's compliance with the C-ESMP requirements. The SSEO's responsibility include, but not be limited to, the following:

- Supervise subcontractors' construction works, including their implementation of the Contractor's LMP and C-ESMP;
- Submit Contractors' LMP and C-ESMP to PMU/DDIS for review and approval prior to commencing staff mobilization to the project site for the awarded assignments;
- Carry out environmental and social site inspections to assess and audit the contractors' site practices, equipment and work methods with respect to pollution control and adequacy of environmental mitigation measures being implemented;
- Monitor E&S compliance with approved C-ESMP and C-LMP and contractual requirements;
- Monitor implementation of environmental and social mitigation measures;
- Prepare audit reports for the site environmental and social conditions;
- Investigate complaints and recommend corrective measures;
- Advise the contractor on environmental and social management improvement;
- Recommend mitigation measures in the case of non-compliance;
- Carry out additional monitoring of noncompliance as instructed by PMU and DDIS;
- Inform the contractor, PMU and DDIS of any environmental and social issues/problems, submit contractor's ESMP Implementation Plan to PMU and DDIS, including relevant authorities, if required by PMU;
- Maintain detailed recording of all site activities related to environment and social issues;
- Appoint qualified staff to undertake necessary actions and measures to ensure labor related issues;
- Work closely with the appointed staff in charge of labor issues to prepare a Labor Management Procedures (Contractor's LMP) and a C-ESMP (Contractor's ESMP) including OHS regulations) which will apply to their contracted workers who work on the projects;
- Maintain recruitment and employment records for contracted workers (including subcontractors), including documentation that verifies minimum labor age as set forth in the Contractor's LMP as well as copies of signed Workers' CoC;
- Provide regular training to contracted workers on issues, but not limited to, such as occupational safety and health, and other social risks such as SEA/SH/VAC, code of conduct to maintain good relationship with local community, etc;

- Require primary supplier to identify and address risks of SEA/SH/VAC, child labor, forced labor, and occupational safety and health for primary supply workers;
- Develop and implement the contractor grievance mechanism based on the GRM set forth in the project's LMP for contracted workers, including ensuring that grievances received from contracted workers are resolved promptly, and reporting the status of grievances and resolutions to PMU/SEO. This grievance mechanism will be part of the Contractor's LMP.
- Ensure that all contractor and subcontractor workers understand and sign the Code of Conduct prior to commencement of the works; maintain them as a record and report on it
- Implement all necessary measures to address the risks of sexual exploitation and abuse (SEA)/sexual harassment (SH) as specified in the contractor's LMP, C-ESMP and ensure full implementation of these measures;
- Develop plans and take actions for prevention and mitigation of COVID-19 outbreaks.

8.8 Compliance with Legal and Contractual Requirements

The contractor and its subcontractors, if any, must comply with the ESMP, C-ESMP, ESCoP, and CoC as well as the national regulations. To ensure that necessary action has been undertaken and that steps to avoid adverse impacts and/or reoccurrence have been implemented, the Project Manager, the SEO, and/or contractor must report to PMU within 24 hours of any serious incidents of non-compliance that may have serious consequence. In the event of working practices being deemed dangerous either by the subproject, the local authorities, or the other concerned agencies, immediate remedial action must be taken by the contractors. The contractor must keep records of any incidents and any corrective action taken. The records of non-compliance that could be practically addressed (not cause serious impacts) will be reported to DDIS with a copy to PMU on a monthly basis.

The contractor will be responsible for dealing with any reports/grievance forwarded by the local communities, authorities, police or other agencies as soon as practicable, preferably within one hour but always within 24 hours. The Project Manager/SEO will monitor and ensure that the contractor has taken appropriate action. Where appropriate, approval remedial actions may require an agreement from the local authorities and/or other government agencies. Procedures should be put in place to ensure, as far as is reasonably practical, that necessary actions can be undertaken to avoid recurrence and/or serious damage.

9. ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

While awarded contractor and sub-contractor, if any, will be responsible for day to day E&S monitoring. PMU/SEO, PMU Construction Supervision Consultant, and independent E&S Monitoring Consultant will be in charge of regular monitoring and inspection. Check list and specification for regular monitoring programs will be developed and PMU/SEO field team members will be trained for monitoring and inspection of the works. PMU/SEO local team will carry out weekly monitoring requirements using the check list and with the supervision of the PMU of MRD, it will take corrective actions for any infringement.

In addition, PMU's environmental and social consultants will do monitoring for ambient air quality, noise and vibration, soil, water quality, traffic safety management, solid waste and wastewater management following standards and requirements in accordance with regulations/guidance of the Ministry of Environment. Results of monthly monitoring will be reported to PMU, and the World Bank. Corrective actions will be taken as required based on the conclusion of the findings. PMU will be responsible for issuance of monthly report for environmental and social monitoring and project's implementation progress. Awarded contractor will be required to submit monthly progress reports to PMU and the World Bank. The Contractors will be responsible for reporting, immediately or within 24 hours, to the DDIS if there is any severe environmental and social incident that has occurred during construction e.g. clearing of sensitive areas, serious accident cases and fatality, forced or child labor, abuses of community members by project workers (including SEA/SH), trafficking in endangered species, etc. The DDIS and PMU will notify the World Bank of such severe incident immediately or within 24 hours, depending on the level of severity.

9.1 Environmental Monitoring Program

The environmental monitoring program is necessary to ensure that effective environmental management is achieved. It requires that appropriate method, equipment and system of controlling and monitoring of changes be in place for monitoring environmental quality. The ambient environmental quality monitoring will be carried out by the contractor and sub-contractor, if any. Details on monitoring parameters are shown in the table below:

Table 6. Environmental monitoring plan during construction phase

Monitoring Parameters	Mitigation Measures	Location	Measurements	Frequency	Responsibility
Air quality (NO ₂ , SO ₂ , CO, TSP, PM ₁₀ , PM _{2.5}) using air quality monitor	<ul style="list-style-type: none"> - Apply water spraying to the construction surface and other piled materials to minimize dust at least 3-6 times per day and/or based on the weather condition - Check and maintains construction machinery regularly to avoid heavy emissions - Monitor/measure particulate matter 	TK2 bridge and surround environment	<ul style="list-style-type: none"> - Site inspection - Visual observation - Monitoring equipment and/or appropriate monitoring methods 	Every 06 months	SEO E&S specialist consultants PMU
Noise and vibration [Equivalent noise (dBA)] using noise and vibration measurement devices	<ul style="list-style-type: none"> - Avoid working during night time - Provide ear set to all workers to prevent noise - Check and maintains construction machinery regularly to avoid noisy and high vibration - Measure noise and vibration level 	TK2 bridges and surround environment	<ul style="list-style-type: none"> - Site inspection - Visual observation - Measuring equipment and/or appropriate monitoring methods 	Every 06 months	SEO E&S specialist consultants PMU
Solid waste management at construction site and worker's campsites (main	<ul style="list-style-type: none"> - Use waste bin with cover to temporarily storage wastes - Avoid dispose wastes into water bodies and/or agricultural fields 	TK2 bridges and surround environment Campsite	<ul style="list-style-type: none"> - Site inspection - Visual observation 	During construction	SEO E&S specialist consultants PMU

contractor and subcontractor)	- Contact local authority to collect waste regularly and manage it properly				
Waterway	Maintenance of well-kept construction site and no discharge of effluents into waterways	Waterway/water bodies close to work sites and base camps	- Site inspection - Visual observation	During construction	SEO E&S specialist consultants PMU
Environmental incident/risk	Apply all mitigation measures	TK2 bridges and surround environment	- Site inspection - Visual observation	During construction	SEO E&S specialist consultants PMU

9.2 Social Monitoring Program

The social monitoring program is also necessary to ensure avoid conflict between contractor and local communities. It requires an appropriate mitigation measures to minimize all the social risks and impacts. The social monitoring program will be carried out by the contractor and sub-contractor if any. Details are shown in the table below:

Table 7. Social monitoring plan during construction phase

Public and OHS	Ensure proper safety measure, PPE, and implementation of OHS plan such as first aid kits, fire fighter...etc.	TK2 bridges and surround environment	- Site inspection - Visual observation	During construction	SEO E&S specialist consultants Independent E&S Monitoring Consultant PMU
Social issues	Avoid any disturbance to local communities	TK2 bridges and surround environment	- Site inspection - Visual observation - Record on GRM	During construction	SEO E&S specialist consultants Independent E&S Monitoring Consultant PMU

10. ESTIMATED COSTS FOR ESMP IMPLEMENTATION

The costs of implementing the ESMP listed below are related to PMU costs in addition to the dedicated safeguards PMU personnel budget line item. The main costs of implementing this ESMP related to institutional capacity and stakeholder capacity building, ongoing consultation facilitation costs, and the PMU on site monitoring and outreach safety programs.

Table 8. Estimated costs for ESMP implementation

No.	Item	Cost (USD)
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1	ESMP technical training to PIU, SEO, Contractor etc.	\$ 5,000.00
2	ESMP awareness raising and sensitization with key stakeholders and communities	\$ 4,000.00
3	Consultation facilitation	\$ 15,000.00
4	Monitoring activities	\$ 10,000.00
5	Community outreach at the project area	\$ 10,000.00
6	Compensation payment for the household with a small house in Kampong Cham province	\$ 200.00
Total		\$ 44,200.00

ANNEXES

Annex 1 – Screening checklist for E&S impacts of bridges construction and rehabilitation

Potential Environmental and Social Impacts to be Addressed							
	Does the subproject entail these environmental impacts?	No	Low	Medium	High	Not known	Remarks
1.	Encroachment on historical/cultural areas	√					<i>No impacts on historical/cultural areas as well as pagoda gate because the detour road is selected at the other side to avoid this impact.</i>
2.	Encroachment on an ecosystem (e.g. natural habitat sensitive or protected area, national park, nature reserve etc....)	√					<i>Provide a map showing the closest locations of these ecosystems to the bridge site.</i>
3.	Disfiguration of landscape and increased waste generation			X			<i>Yes – substantial changes to the landscape</i>
4.	Removal of vegetation cover or cutting down of trees during clearance for construction		√				<i>There are vegetation cover at the shoulder within the Col that is needed to trim or cut</i>
5.	Change of surface water quality or water flows (e.g. Increase water turbidity due to run- off, waste water from camp sites and erosion, and construction waste) or long-term.		√				<i>Construction of detour bridge will increase turbidity, but not affect the water flow because Truss bridge will be constructed.</i>
6.	Increased dust level or add pollutants to the air during construction		√				
7.	Increased noise and/or vibration		√				
8.	Resettlement of households? If yes, how many households?	√					
9.	Use of resettlement site that is environmentally and/or culturally sensitive	√					
10.	Risk of disease dissemination from construction workers to the local peoples (and vice versa)?			√			<i>Increase number of workers and their interaction e.g. to buy food/consuming goods may post moderate risk to community on COVID-19</i>

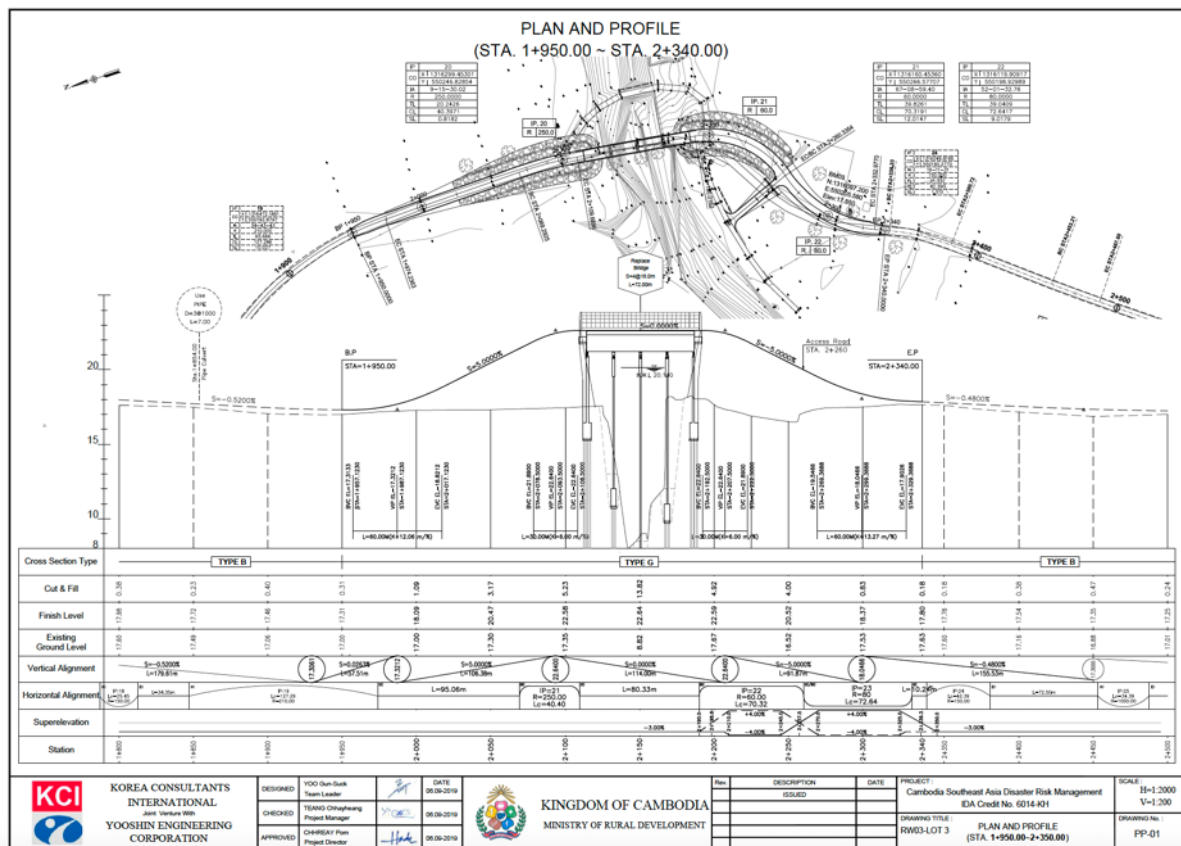
11.	Potential for conflict between construction workers and local peoples (and vice versa)?		√				
12.	Use of explosive and hazardous chemicals	√					
13.	Use of sites where, in the past, there were accidents incurred due to landmines or explosive materials remaining from the war	√					
14.	Construction that could cause disturbance to the transportation, traffic routes, or waterway transport?			√			<i>Impacts are temporary and could be managed by good engineering design and construction good practices and construction control.</i>
15.	Construction that could cause any damage to the existing local roads, bridges or other rural infrastructures?		√				<i>Construction would create temporary impacts on some public infrastructure</i>
16.	Soil excavation during subproject's construction to cause soil erosion			√			
17.	Need to open new, temporary or permanent, access roads?			√			<i>Temporary bridge</i>
18.	Separation or fragmentation of habitats of flora and fauna?	√					
19.	Long-term impacts on air quality	√					
20.	Accident risks for workers and community during construction phase			√			<i>Risks are temporary and could be managed by construction good practices and construction control.</i>
21.	Use of hazardous or toxic materials and generation of hazardous wastes	√					
22.	Risks to safety and human health			√			<i>Traffic accidents and safety management, Covid 19</i>
Does the subproject entail land acquisition or restriction of access to resources?							
23.	Acquisition (temporarily or permanently) of land (public or private) for its development	√					<i>List land areas for permanent and temporary land acquisition, type of soils, duration and purpose of acquisition</i>
24.	Use land that is currently occupied or regularly used for productive purposes (e.g., gardening, farming, pasture, fishing locations, forests)		√				

25..	Displacement of individuals, families or businesses	√					
26.	Temporary or permanent loss of crops, fruit trees or household infrastructure	√					
27.	Involuntary restriction of access by people to legally designated parks and protected areas	√					
<p><i>If the answer to any of the questions 23-27 is “Yes”, please consult the ESMF; preparation of a Resettlement Plan (RP) is likely required.</i></p>							
<p>Does the subproject entail effects on ethnic minority peoples?</p>							
28.	Ethnic minority groups are living within the boundaries of, or nearby, the subproject.	√					
29.	Members of these ethnic minority groups in the area potentially could benefit or be harmed from the project.	√					
<p><i>If the answer to questions 28 or 29 is “Yes”, please consult the ESMF; and preparation of an Ethnic Minority Development Plan (EMDP) is likely required.</i></p>							

Annex 2 – Detailed Technical Designs (overlaid on recent Google Earth imagery)



Existing bridge (right) and existing temporary detour (left)



Detailed TK2 Bridge Plan and Profile



Google Earth Imagery (Overlaid with Detailed Bridge Design)

Annex 3 – Preliminary Inventory of Loss due to Construction of TK2 Bridge

Preliminary screening for the potential impacts of TK2 Bridge construction on land and assets of local people was carried out through two virtual meetings with local authorities (on 17 and 18 November 2021) and through a physical visit (on 27 November 2021) for field observation and informal consultation with local people present in the vicinity of the bridge. The screening indicated that the existing TK2 Bridge is located within the public land (land managed by Tboung Khmum Provincial Department of Management, Urban Planning and Construction). However, when the new TK2 bridge is built, a small house (about 8.5 m² in area, located about 15m from the existing bridge, and in the neighbouring province of Kampong Cham) may be affected as a result of bridge widening. The potentially affected house is made of thatch wall with corrugated steel roof and is currently home to 3 people. This household is potentially affected due to physical resettlement to allow construction of the new bridge. The owner of this house has a plot of farmland nearby (about 6,000 m²) which are cultivated with 2-3 crops per year. The farmland will not be affected by the new bridge structure (based on Google Earth map overlaid with the final bridge design). The potentially affected household informed that they have land title for their existing house and the farmland as mentioned above. The household is currently lending part of their land (part of above 6,000m² plot) to the government who built the detour road to maintain traffic. The households indicated they are happy because the bridge is going to be reconstructed and hope they are compensated with a plot of land to rebuild their house if they have to resettle physically elsewhere to allow bridge reconstruction (See photo below) .





Potentially affected house due to land acquisition for new TK2 bridge construction

Annex 4 – Process and Results of Screening for Presence of IP(s) in TK2 Project Area

IP screening has been conducted in accordance with the guidance stated in Annex 2 of the Indigenous Peoples Planning Framework of Cambodia Southeast Asia Disaster Risk Management Project II (P177185) (MRD, 2021). The screening was conducted based on the virtual consultations conducted with the provincial Departments of Tboung Khmum and local authorities of districts, communes, and villages within the project area were conducted on 16 and 17 November 2021. As part of the screening, field visit was made to the bridge site on 27 November for field observation and consultation with local people who may be present around the bridge site. The screening of the IPs and IP communities originally focused on the footprint of new bridge and the potential area of influence due to bridge construction which was within Tboung Khmum province. However, field visit indicated that a village (located 1-1.5 km from the existing bridge, across the river) is accessible by boat and by road through a road some 5km away. Thus, IP screening has been extended to cover the village which is actually located in Kampong Cham province (a neighboring province).

As reported by the local authorities in Tboung Khmum Province, there is only one indigenous people group, namely Stieng, who live in Dambae district which is about 60-70 km away from the TK 2 Bridge location. This information is consistent with the information from the project's Indigenous Peoples Planning Framework. However, according to the MRD, the Stieng IP in Dambae district has not been yet officially identified as "indigenous minority peoples".

Within this TK2 Bridge location, and further away across the whole commune of Preah Theat, and district of Koh Sotin (where the TK2 Bridge is situated), based on two consultation meetings conducted on 16 and 17 November 2021 with local people and authorities at village, commune, district and provincial levels, combined with review of secondary data collected earlier, no indigenous people were found present in the TK2 Bridge location and the whole district where the bridge is located (See below the Minutes of Meeting for the purpose of screening for IP presence in TK2 project area).

Screening for IP presence in Peam Prathnous commune (in Kampong Cham province) which is located 1-1.5km across the Tonle Touch river indicated that there is no IP present in the commune. The commune of Peam Prathnous is home to 11,107 people (50.73% is male and 49.27% is female). People from this commune occasionally cross the Tonle Touch river by boat when they wish to come to the village where the TK2 bridge is located. Commune people may also go across the river (to the village where TK2 bridge is located) by car through another road about 5-6 km away. It was found that there was no IP that are present in the commune of Peam Prathnous (Kampong Cham province) and the commune of Preah Theat (Tboung Khmum province) where the TK2 bridge is located. There was also no IP found in the potential area of influence of the TK2 bridge construction.

Annex 5 – Minutes of Consultation Meeting (Round 1)

Minutes of Meeting
Screening for the Presence of Indigenous People(s) in TK2 Bridge Area
Meeting with Provincial Departments of Tboung Khmum
Date: 16 November 2021
Time: 14:00 –16:03

1. Introduction of Meeting Objectives

- The Meeting was held at the office of the Provincial Department of Rural Development (PDRD) of Tboung Khmum Province on 16 November 2021. The meeting was led by Mr Teang Chhayheang –SEADRM II Project Manager. The participants at the meeting included Mr Dararath Yem (World Bank’s Consultant), Directors and representatives of involved provincial departments of Tboung Khmum. Due to COVID-19 restriction on social gathering. The meeting was hold virtually via video conference using Zoom (See Annex 1 of this Minutes for the list of participants).
- The meeting was opened by the chairperson, Mr Teang Chhayheang, followed by the self-introduction of meeting participants. Mr Chhayheang provided an introduction on the history of the project and the objectives of the meeting. He showed the location of the bridge using satellite imagery so that participants could recognize the location of the TK2 Bridge, as well as identify the names of village, commune and district in which the bridge is located. After that Mr. Dararath Yem, WB’s consultant (Environment and Social Safeguard Specialist) presented on (i) Purpose of the Screening for the presence of IP people within the bridge’s potential area of influence, and project key activities that are related to the reconstruction of the TK2 bridge which was damaged in 2020 because of the flood. Mr. Dararath Yem also checked for the land status at the existing TK2 bridge location and further beyond the immediate existing bridge site to the extent where the new bridge will be located (once construction is completed) based on the detailed engineering design of the TK2 bridge which was overlaid on the satellite map (Google Map). Mr. Dararath Yem explained to meeting participants that the purpose of screening for IP presence in the TK2 Bridge Project Area and for land status is to support the preparation of Indigenous People Plan (if any), and Resettlement Plan (if any). This screening exercise is also for the purpose of preparation of the Environment and Social Management Plan (ESMP) that supports the reconstruction of the TK2 Bridge.

2. Summary of Meeting Outcomes

- The meeting planned to discuss on three bridges including TK1, TK2, and TK3. However, due to time constraints, only TK2 was discussed in detail. As agreed and confirmed by meeting participants, the TK2 bridge is located in Tuol Kleang village, Preah Theat commune, Koh Sotin district. The TK2 bridge is situated close to the border of Tboung Khmum and Kampong Cham and Provinces. The bridge’s coordinates are identified as E550257.120 and N1316240.480.
- The Director of Provincial Department of Culture and Fine Arts said that it seemed that there is no cultural temple as well as indigenous people or communities within the bridge area. However, he said, he would go to the bridge location and checked also the areas surrounding the bridge to confirm his preliminary feedback. After the investigation conducted on 17

November 2021, the Director of Provincial Department of Culture and Fine Arts and his team confirmed that there are no cultural temple and IP people living within the bridge location, as well as the villages, communes, and the district where TK2 bridge is located. Additionally, he confirmed that the land area where the new TK2 bridge is situated are public land. There are no individual households own any pieces of land within the footprint of the new bridge – based on the the overlay map (as mentioned above).

- Representative of the Provincial Department of Agriculture, Forestry, and Fisheries also clarified at the meeting that no forest conservation area is situated within the bridge area. However, there are two fishery conservation areas that belong to two fishery communities: (i) Beung Krapet Fishery Community (which is located in Mean and Ou Reang Ov commune, Ou Reang Ov district, Tboung Khmum province); and (ii) Samki Maot Khmong Fishery Community located in Tonle Bet and Chiro commune, Tboung Khmum district (See maps of the fishery communities in Annex 2 of this Meeting Minutes.
- The Director of Provincial Department of Environment (PDE) informed meeting participants of PDE's no objection to the construction of the TK2 bridge. He added that Cintri waste collection services will collect unarmful wastes from future construction site and workers' camps, and will dispose the wastes at a landfill site which will be identified. In terms of waste generated from bridge debris, he said that the contractor (once selected by MRD) should discuss with the Provincial Department of Environment to find a proper area for disposal.
- The WB's consultant has asked all provincial Departments to share important data and information which included commune database (2014-2020), three-year provincial investment plan (2014-2020), annual agricultural report (2014-2020), annual environmental report (2014-2020), water level, temperature, water quality, air quality, rainfall, and reservoir or water storage, including information on local capacity. The meeting participants agreed to share the required data and information with the Consultant.
- Unfortunately, Provincial Department of Water Resources and Meteorology could not participate in the Meeting. Yet, Mr Chhayheang informed the Director of Provincial Department of Rural Development to request later on the important data as required by the consultant from the Provincial Department of Water Resources and Meteorology.
- *Conclusion:* The IP Screening Meeting was successfully conducted. The meeting confirmed that no IP Community are present in the TK2 Bridge area/potential area of influence. It was also confirmed that the land area where the new TK2 bridge is to be situated is public land which is managed by local government. So, there is no need for land acquisition for the reconstruction of the TK2 bridge. The meeting participants agreed with the Ministry of Rural Development to move ahead for the construction of the TK2 bridge.



Tonle Touch River



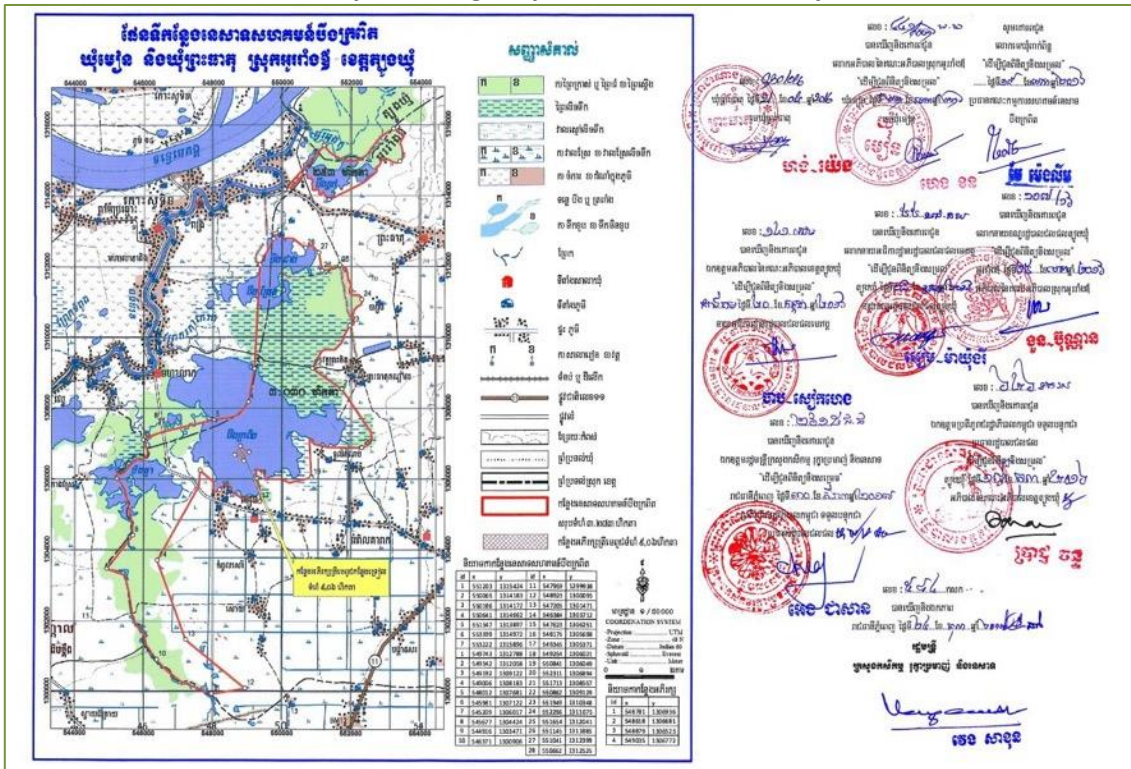
**Village located 1-1.5 km away from TK2 Bridge
(across the Tonle Tough River) in Kampong
Cham province**

3. List of Participants

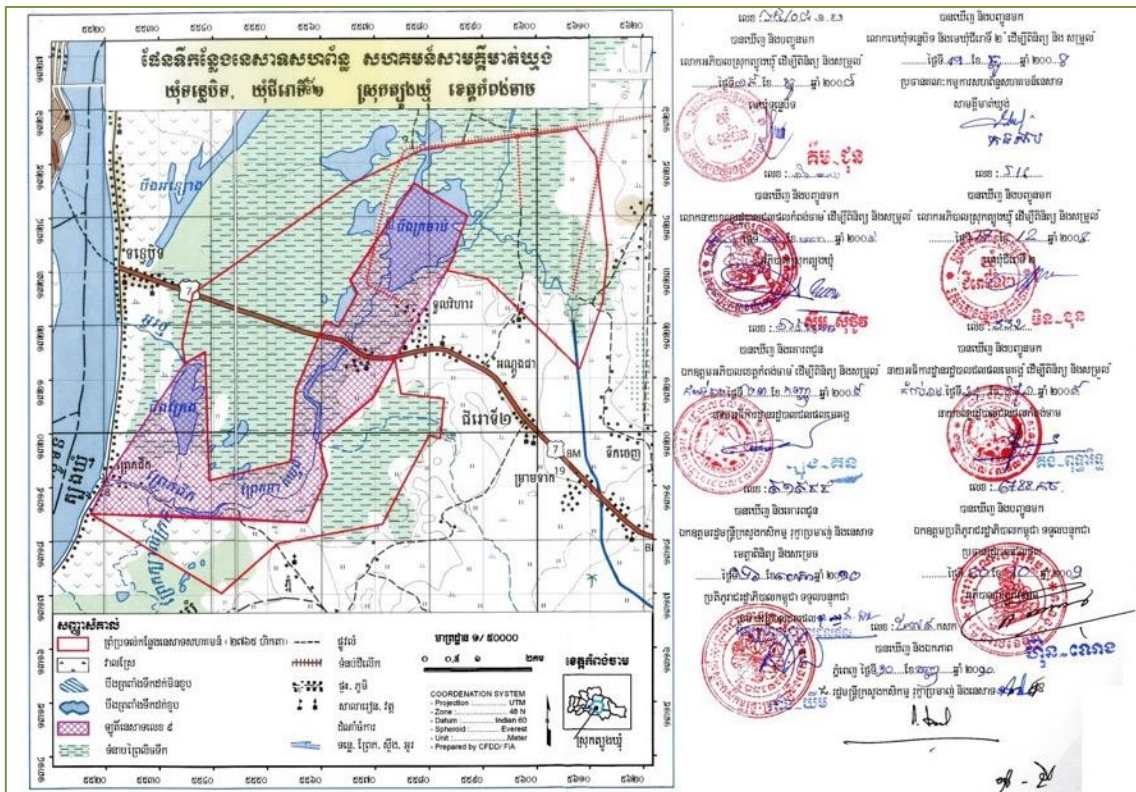
No	Name	Sex	Position/Organisation	Telephone
1.	Dok Savoeun	M	Representative, Provincial Department of Agriculture, Forestry, and Fisheries	(855-96) 353 7984
2.	Kour Hok	M	Director, Provincial Department of Culture and Fine Arts	(855-12) 951 177
3.	Khiev Chakravuth	M	Representative, Provincial Department of Public Work and Transport	(855-12) 365 685
4.	Ret Ratana	F	Representative, Provincial Department of Planning	(855-69) 993 989
5.	Sos Ilyes	M	Director, Provincial Department of Environment	(855-11) 663 958
6.	Hing Sitha	M	Deputy Director, Provincial Department of Land Management, Urban Planning, and Construction	(855-70) 878 284
7.	Teang Chhayheang	M	Project Manager	(855-12) 925 888
8.	Dararath YEM	M	WB Consultant	(855-17) 828 226

4. Maps of Fishery Conservation Areas and Communities

Map of Beung Krapet fisheries community



Map of Samaki Maotkhong fisheries community



5. Meeting Screenshot (from Zoom application)



Minutes of Meeting
Field Visit for Screening of Presence of Indigenous People in TK2 Bridge Area
Meeting with Local Authorities and Communities
17 November 2021
Time: 14:00–16:00

1. Introduction and Meeting Objectives

- The Indigenous People (IP) Screening Meeting was held at Preah Theat District’s Office, Tboung Khmum on 17 November 2021. The participants included Project Manager (Mr Teang Chhayheang), and World Bank Consultant (Mr Dararath Yem) as well as deputy governor of Tboung Khmum district, Administration Chief of Ou Reang Ov district, Commune Chief of Preah Theat Commune, Tuol Meanchey Village’s Chief, Vice-Chief of Tuol Kleang, Preah Theat’s Commune Council, farmers, and staff of project at Provincial Department of Rural Development. A list of participants is attached in *Annex 1* of this minutes.
- The meeting was opened and chaired by Mr Teang Chhayheang and Mr Sambat (Director of Provincial Department of Rural Development, Tboung Khmum. Mr Chhayheang provided an introduction and history of the project and objectives of the meeting. Mr. Dararath Yem showed the location of the bridge (satellite imagery) and map in ArcGIS (involved communes where the bridge was located) to be constructed to participants. It was then followed by the participants introducing themselves. Mr Dararath Yem clarified the purpose of the meeting: (i) Screen indigenous people/community who were living in communes/villages, where the bridge located; (ii) IPs who use the bridge; (iii) Land acquisition of IPs within the bridge location and surrounding districts, communes, and villages; and (iii) Potential land impacts resulting from the bridge construction.

2. Summary of Meeting Outcomes

- The Deputy Chief of Tboung Khmum District clarified that there was no any indigenous people and community living in districts, communes, and villages in the areas where bridge was located.
- One participant said that there was a small house located approximately 3-4 meters on the east side of the bridge. The guy who owned the small house has his home in the village nearby the bridge. He came here to use his small boat to carry any people who crossed the river. The small house and piece of land, on where the small house situated were illegally settled by himself as encroacher prior to the cut-off-date. No competent authorities have permitted. All authorities attended the meeting confirmed that that household would leave his small house if local authorities needed that area to develop or construct the bridge.
- Mr Dararath questioned the meeting of whether any local authorities could issue official letter to proof that there would be no any complaint made by that small house’s guy if the bridge would be constructed and areas surrounding the bridge would be needed by the contractor to be used for construction purpose; for instance, store the construction materials. The representatives of Tuol Kleang and Preah Theat replied that the owner of small house would leave without any complaint and involved local authorities in the meeting agreed to issue the official letter stating that the areas around the bridge were not owned by any persons and private companies. Such official letter would be sent to the Provincial Department of Rural Development, then to Ministry of Rural Development for serving as evidence.

- The participants in the meeting reported that there was a small ancient hill/cottage (where people pray for something) situated about 0.5 – 1 km on the southeastern side of the bridge.
- *Conclusion:* The IP Screening Meeting was successfully conducted. The participants discussed actively in terms of IPs and natural and private properties situated within the bridge areas as well as communes/villages around the bridge area. Similar with the meeting with concerned provincial departments, no IP Community and any pieces of land legally owned by the IPs. A small house will be negatively impacted (physical resettlement) due to the reconstruction of the bridge since it's located within the footprint of the new TK2 bridge. The owner of the house is happy when the bridge will be rehabilitated. The meeting fully agreed with the Ministry of Rural Development to move ahead for the construction of the bridge.

3. List of Participants

No	Name	Sex	Position/Organisation	Telephone
9.	Heng Suthy	M	Deputy Governor, Tboung Khmum District	(855-12) 532 736
10.	Sory Ratha	M	Administrative Chief, Ou Reang Ov District	(855-17) 942 826
11.	Try Peou	M	Commune Chief, Preah Theat	(855-99) 897 222
12.	Mae Menglim	M	Chief of Fisheries Community	(855-88) 722 2760
13.	Khean Thy	M	Member, Prathean Village	(855-97) 225 0060
14.	Sun Sret	M	Chief of Fisheries Community (Maot Khmong)	(855-71) 913 307
15.	Hean Phorn	M	Village Chief, Tuol Meanchey	(855-97) 378 5804
16.	Kong Nareth	F	Vice-chief, Tuol Khleang	(855-88) 203 017
17.	Doung Den	M	Commune Council, Preah Theat Commune	(855-88) 315 7023
18.	Teang Chhayheang	M	Project Manager	(855-12) 925 888
19.	Dararath YEM	M	WB Consultant	(855-17) 828 226

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

បញ្ជីបញ្ជីប្រាក់ប្រតិបត្តិការ

ស្តីពី: **ការប្រើប្រាស់ប្រាក់បញ្ញើ និងប្រាក់បញ្ញើប្រតិបត្តិការ**

ទីកន្លែង: **ភ្នំពេញ** (កម្រិត: **៥**) ថ្ងៃទី: **១៧** ខែ: **១១** ឆ្នាំ: **២០២១**

ល.រ	គោត្តនាម នាម	ភេទ	មុខងារ	អង្គការ	លេខទូរស័ព្ទ	ហត្ថលេខា
១	លី សុខ	ប	អគ្គនាយក	ក្រុមហ៊ុន	០១២៥៣២៥៣៦	
២	សុខ សុខ	ប	នាយកប្រតិបត្តិ	ក្រុមហ៊ុន	០១៧១៤២៥២៦ / ០៨៥៧១៩៥៣៦	
៣	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០១១៩១៧២២២	
៤	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០១១៩១៧២២២២	
៥	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០១១៩១៧២២២២	
៦	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៧១-១១៣១៣០៧	
៧	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០១៧៩៥៥៥៥៥៥	
៨	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	
៩	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	
១០	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	
១១	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	
១២	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	
១៣	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	
១៤	សុខ សុខ	ប	នាយក	ក្រុមហ៊ុន	០៨៥៧១៩៥៣៦	

4. Photos of Meeting with Local People



Annex 6 – Minutes of Consultation Meeting (Round 2)

MINUTES OF MEETING

INFORMATION DISCLOSURE AND CONSULTATION WORKSHOP on ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) IN TK2 BRIDGE AREA, TBOUNG KHMUM PROVINCE

Date: 10 December 2021

Time: 8:00 – 9:45am

Meeting venue: Zoom application (virtual meeting) from MRD and face to face meeting via livestream video in TK2 bridge area, Tboung Khmum province

Facilitator: SEO-MRD

Presenters: Mr. KONG Sopheak and Mr. HOY Sereivathanak Reasey

I. Introduction of Meeting Objectives

1. The virtual meeting was held at the Social and Environmental Office (SEO) of Project Management Unit (PMU), Ministry of Rural Development on 10 December 2021. The meeting was led by Mr. Teang Chhayheang, a SEADRM II Project Manager. The participants at the meeting included Mr. Dararath Yem, a World Bank's Consultant, SEADRM II Project's National Environmental and Social Safeguard consultants, relevant Provincial Departments, civil societies, private companies and local authority. Due to COVID-19 restriction on social gathering, the meeting was held virtually via video conference using the Zoom application and with face to face participants meeting via live stream video from Preah Theat commune, OU Reang Au district, Tboung Khmum province. A list of participants is attached in Annex 1 of this minutes.
2. The meeting was opened and chaired by Ms KONG Saly, followed by the self-introduction of the meeting participants. Mr. Teang Chhayheang presented the background of the project, the project's target provinces and the purpose of the information disclosure and consultation workshop. After that Mr. HOY Sereivathanak Reasey, a National Environmental Safeguard Consultant, presented an executive summary of TK2 Project Environmental and Social Management Plan (ESMP); and the project's Grievance Redness Mechanism (GRM) related to issues of Land Acquisition, Labor Safeguard and SEA/SH.
3. Mr. Pho Chanpiseth, a PIU member of Tboung Khmum provincial Department of Rural Development (PDRD) informed the participants at the meeting venue in Preah Theat commune, Ou Reang Ov district, Tboung Khmum province of the purpose of the workshop.

II. Summary of Meeting Outcomes

4. Mr. TRY Pov, Chief of Preah Theat Commune, said that the bridge reconstruction would bring more benefits to local people. He added that he was happy to support the project in terms of coordination with local communities.
5. Mr. MON Sophan, Village Chief of Toul Kleang Village, said that local people were very happy with the reconstruction of the bridge and suggested having the construction soon.
6. Mr. NGUN Kimhean, a member of Preah Theat's Commune Council, said that the ESMP was well prepared by taking into account the community safeguard as well as GRM for any affected people. He added that it seemed no potential impacts that should be of concerned.

7. Mr. KONG Naret, a Vice-Chief of Toul Kleang Village, raised a perception of the benefit of the bridge connecting the road for transportation of agricultural products, especially for local students to access to schools.
8. Mr. PHO Chanpiseth mentioned that the targeted project area would not affect since the bridge would be reconstructed on the previous location and within the same road alignment on the land of state public properties. He added that the local authorities were informed of the proposed reconstruction of the bridge; and the project had never gotten any complaints from the households living around the project bridge areas.
9. *Conclusion:* The meeting was finished on time without additional questions and suggestions. The participants from local authorities and communities might not be concerned about the negative impacts due to reconstruction of the bridge. They would just like to see the bridge to be reconstructed soon and had not any objection with the reconstruction.

Annex 1: List of Participants

No.	Name	Sex	Position	Institution
1	KONG Saly	F	Representative	PMU-MRD
2	Try Poeuv	M	Chief of Commune	Preah Theat Commune
3	Ngon Kimhean	M	Commune Council	Preah Theat Commune
4	Hean Phorn	M	Chief of Village	Toul Meachey Village
5	Morn Sophan	M	Chief of Village	Toul Kleang Village
6	Kong Nareth	F	Vice-Chief of Village	Toul Kleang Village
7	Ki Sanna	M	PIU	PIU
8	Pho Chanpiseth	M	M & E	PIU
9	Dararath YEM	M	Consultant	WB
10	Thang Dina	F	Officer	SEO-MRD
11	Tip Sophark	F	Officer	SEO-MRD
12	Kong Sopheak	M	Environmental Safeguard Consultant	SEADRM II, MRD
13	Hoy Sereivathanak Reasey	M	Social Safeguard Consultant	SEADRM II, MRD
14	Peng Sinang	F	Chief	District Hall Administration

**ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ**

បញ្ជីចំនួននាម គ្រូបង្រៀនប្រឡងប្រតិបត្តិការងារមហាសាលាវិជ្ជាជីវៈស្រុកស្រែចេញ
ស្តីពី៖ កម្មវិធីបង្រៀនស្រុកស្រែចេញសាលាវិជ្ជាជីវៈស្រុកស្រែចេញ ខេត្តស្រះចេញ
ទីកន្លែងសាលាវិជ្ជាជីវៈស្រុកស្រែចេញ (ស្រុកស្រែចេញ) ថ្ងៃទី 10 ខែ 12 ឆ្នាំ 2021

ល.រ	គោត្តនាម នាម	ភេទ	មុខងារ	អង្គភាព	លេខទូរស័ព្ទ	ហត្ថលេខា
១	ឯក. ណារ.	ស្រី	សម្ម. ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១៩៨៩៧២២២	
២	ឯក. ស៊ីវណ៍	ប្រុស	ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១៧១៩៩៨២២៨	
៣	ឯក. ហ៊ុន ហ៊ុន	ប្រុស	ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១៧៣៧៨៥៨០៤	
៤	ឯក. ណារីន	ស្រី	ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១៧០៥៥៩៨០២	
៥	ឯក. ណារីន	ស្រី	ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១៨៨៤២០៣០១៧	
៦	ឯក. ណារីន	ស្រី	ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១១២០១០២០	
៧	ឯក. ហ៊ុន ហ៊ុន	ប្រុស	ប្រតិបត្តិ	ស្រុកស្រែចេញ	០១៧៦១២៦៥៦	
៨						

Annex 2: Virtual Meeting Screenshot

ផែនការគ្រប់គ្រងបរិស្ថាន និងសង្គម

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១. សេចក្តីផ្តើម

គោលបំណងនៃគម្រោង ជួយដល់ការកសាងឡើងវិញនូវហេដ្ឋារចនាសម្ព័ន្ធផ្លូវជនបទ ឱ្យមានភាពជន់ជញ្ជប់ពីរងការខូចខាតដោយជំនន់ឆ្នាំ២០២០ និងជំនន់ឯទៀតដែលបានកើតឡើង បញ្ឈប់ការគ្រប់គ្រងហានិភ័យគ្រោះមហន្តរាយ និងឆ្លើយតបទាន់ពេល ប្រកបដោយប្រសិទ្ធភាព ក្នុងករណីមានបែកបាក់ ឬគ្រោះអាសន្នកើតឡើងភ្លាមៗ។

ផែនការគ្រប់គ្រងបរិស្ថាន និងសង្គម (ESMP) ជាកំណត់មួយសម្រាប់ការដ្ឋានសាងសង់ស្ពាន TK2 ក្នុងភូមិទួលឃ្លាំង ឃុំព្រះធាតុ ស្រុកអូរព័ងឌី ខេត្តត្បូងឃ្មុំ។ នេះត្រូវបានរៀបចំដើម្បីស្វែងរក កំណត់ និងវាយតម្លៃហានិភ័យ និងផលប៉ះពាល់ផ្នែកបរិស្ថាន និងសង្គម ពីសកម្មភាពនានាពាក់ព័ន្ធការសាងសង់ស្ពានថ្មីនេះ។

ក្រសួងអភិវឌ្ឍន៍ជនបទទទួលខុសត្រូវក្នុងការធានាឱ្យមានការរៀបចំ និងការអនុវត្ត ESMP ដែលអាចទទួលយកបាន។ ការចាត់ចែងលម្អិតសម្រាប់ការអនុវត្តគម្រោង មានចែងក្បោយនៅក្នុងផ្នែកទី៨ នៃESMP នេះ។

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៣. លទ្ធភាពមានផលប៉ះពាល់លើបរិស្ថាន និងសង្គម

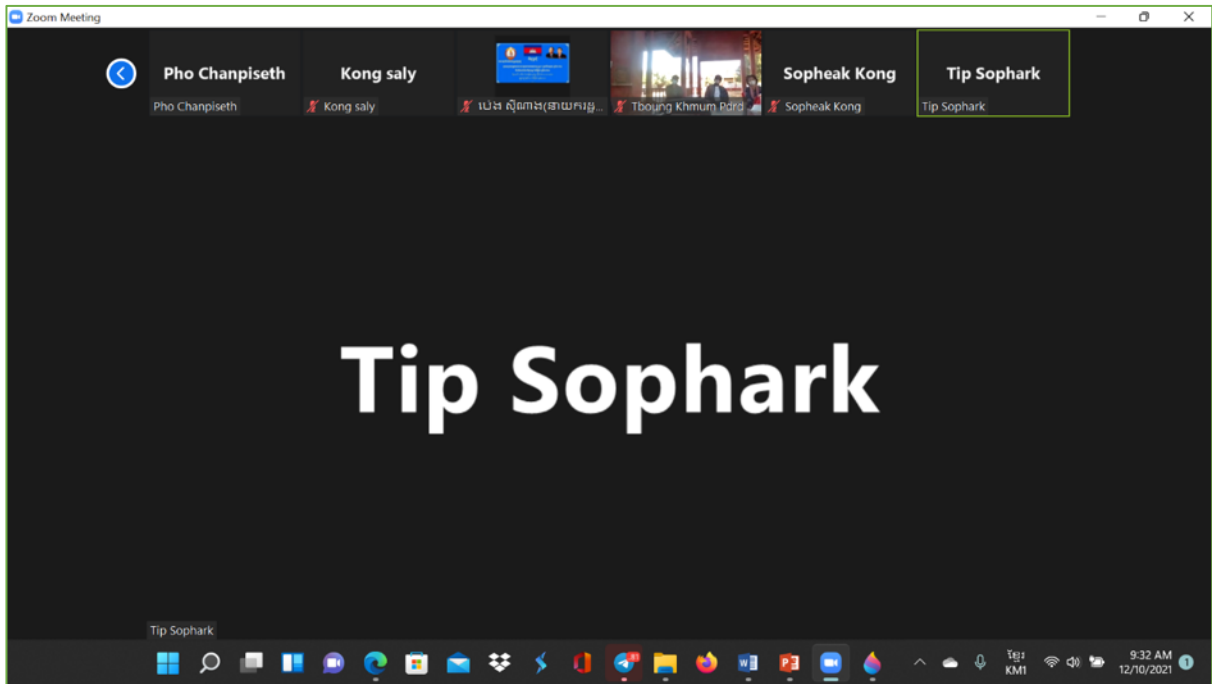
លទ្ធភាពមានផលប៉ះពាល់លើបរិស្ថាន

ផ្អែកលើការវាយតម្លៃនៅទីតាំងថ្នាល ការសាងសង់ស្ពាន TK2 មិនបង្កឱ្យមានផលប៉ះពាល់ព្រហ្មកម្មដល់បរិស្ថានទេ។ ផលប៉ះពាល់លើបរិស្ថានត្រូវបានវាយតម្លៃថាមានកម្រិតទាបទាប និងមានតែនៅតាមទីតាំងជាកំណត់នៃការដ្ឋានសំណង់តែប៉ុណ្ណោះ។

ផលប៉ះពាល់ចម្បងរួមមាន (១) ការកកស្ទះចរាចរណ៍ និងការគ្រប់គ្រងសុវត្ថិភាព ជាពិសេសនៅពេលវេលា និងពេលយប់ (២) ការគ្រប់គ្រងស្មៅខាងទិសជើង (៣) ការគ្រប់គ្រងសំណង់ ការគ្រប់គ្រងទឹកស្អុយ ការគ្រប់គ្រងគុណភាពទឹក (៤) ការគ្រប់គ្រងស្លាកសម្គាល់ និង (៥) ការបង្កប់ប្រូម៉ូបប៊ិក។

ផលប៉ះពាល់ពីយុទ្ធសាស្ត្រទំនាក់ទំនង (UXO) ក៏ត្រូវបានចាត់ទុកថាជាកម្រិតទាបផងដែរ។ តំបន់នេះជាការទម្លាក់គ្រាប់បែក ការវាយឧកតម្រូវសមរម្យលើដី និងគ្រប់ផែនដីក្នុងតំបន់ទំនាក់ទំនង។

ផលប៉ះពាល់ទាំងនេះអាចកាត់បន្ថយបានដោយអនុវត្តច្បាប់កិច្ចការសំណង់ និងការបង្កើតស្នូលដោយបង្កើតផ្លូវសំណង់ អមដោយការត្រួតពិនិត្យ និងការតាមដានឱ្យបានជិតដល់ជាប្រចាំ។ និងធ្វើការសម្រួលយុទ្ធសាស្ត្រទំនាក់ទំនង ពីសំណាក់មជ្ឈមណ្ឌលសកម្មភាពកំចាត់មិនកម្រិត (CMAC) ឬអង្គការសម្រាប់យុទ្ធសាស្ត្រទំនាក់ទំនងដែលមានការទទួលស្គាល់ជាផ្លូវការ ជាមុនសិន។ សេចក្តីលម្អិតអំពីផលប៉ះពាល់មានរៀបចំនៅក្នុងតារាងទី៥។



Annex 3: Tentative Agenda

The Second Cambodia Southeast Asia Disaster Risk Management Project (KH-SEADRM 2)

INFORMATION DISCLOSURE WORKSHOP
on
ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)
IN TK2 BRIDGE AREA, TBOUNG KHMUM PROVINCE

Date: Friday 10, 2021
Time: 8:00-9:35am
Venue: Virtual (Zoom)

Time	Activity	Materials	Responsibility
08:00 – 08:30	Registration/ Rapport building		MRD/SEO
08:30 – 08:05	Opening Remarks by MRD		MRD/representative
08:05 – 08:35	Environmental and Social Management Plan (ESMP) of TK2 BRIDGE	PowerPoint	E&S Consultants
08:35 – 08:55	Grievance Redness Mechanism (GRM)	PowerPoint	E&S Consultants
08:55 – 09:30	Question and Answer (Q&A)	Guiding Questions	SEO/E&S Consultants
09:30 – 09:35	Closing Remarks		MRD/representative

Attached project documents included:

1. TK2 Project's ESMP
2. Presentation slides: (1) TK2 Project's ESMP; and (2) TK2 Project's GRM.

Annex 7 – Minutes of Consultation Meeting (Round 2)

Mission Report

South East Asia Disaster Risk Management II (SEADRM II) Project
27 November 2021

Introduction and Mission Objectives

- 1 The mission location is TK2 bridge (GPS: N1316240.480, E550257.120 locating in Koh Sotin district, Preah Theat commune, Tuol Kleang village, Kampong Cham province) between Kampong Cham and Tboung Khmum province. The mission was made by Mr Dararath YEM (WB's consultant) on Saturday, 27 November 2021 (a day-trip mission). He left Phnom Penh at 8:30 am and arrived at the TK2 bridge around 13:00 pm (took lunch in Kampong Cham town) and returned on the same day arriving Phnom Penh 17:30 pm.
- 2 The mission objectives include (i) visually visiting the TK2 bridge and explore its surrounding areas in relation to settlements and land properties of people living within the TK2 bridge areas (environment and social issues); and (ii) meeting and consulting with those who are living closed to the TK2 bridge and its surrounding areas.

Summary of the Outcomes of the Mission

- 3 There are two houses located on southern side of the bridge, where the small one located on the south-eastern side of the bridge approximately 15 m from the bridge and 7 m from the road that is being rehabilitated by the Ministry of Rural Development. This road is connecting to the TK2 bridge. The other houses (2nd house) are located on the south-western side of the bridge about 100 m from the bridge and along the rehabilitating road.



The 1st house located south-eastern side of the bridge



Photo from the bridge (the 1st house)

- 4 The owner of the 1st house said that she possessed an area of land (approximately 6,000 square meters), where she grew maize/corn and cucumber 2-3 times per year. She said that her land had been issued a land titling from the Kampong Cham provincial authorities (see photos below). She added that the detour road was also her land that she decided to give to local authorities to make a detour road after the bridge was destroyed by flooding.



The 1st house owner is preparing her land for growing crops



Detour Road (from the west side of the bridge)

A detour road between the 1st house and cultivated land

5 She did not remember the year when her father started settling at there, but she remembered that she started living there since she was young (about 8 years old). When asking about whether she was happy if the bridge would be rehabilitated, she said she was glad if the bridge would be reconstructed; and she was happy to resettle if the local authorities requested her to move. Yet, she added that it would be good if the local authorities could provide her with a new resettlement. She knew exactly her house would be impacted by the rehabilitation of the bridge because she heard that the bridge would be widened.

6 The 2nd house is located on the south-western side of the bridge about 100 m from the bridge and along the rehabilitating road. A meeting with the 2nd house owner could not be made due to the absence of the owner. Only their daughters were staying in the house, when asking some questions regarding the land titling and other issues, their daughters said that they knew nothing other than their parents. The below images show the 2nd house location. The 2nd house will not be impacted by the reconstruction of the bridge.



Location of the 2nd house



The rehabilitating road by MRD (Photo from the bridge to the west)

Photo from the bridge side

7 There is a small cottage located on the north-eastern side of the TK2 bridge about 1-1.5 km. There is also a cultivated land closed to the cottage. I was trying to meet the owner, but it seemed difficult to meet while they were not welcome while there was a person spraying pesticide over his cultivated crop. The cottage and the cultivated land over there will not be impacted by the reconstruction of the bridge.



8 There is a village named Peam Prathnous across the Tonle Touch River (small river) about 1.5-2 km from the bridge on west side of the bridge (photos below).



Photo from the bridge to the west side

Village in Kampong Cham province across the Tonle Touch (photo from the bridge to the west side)

9 *Conclusion:* Only the 1st house will be negatively impacted by the reconstruction of the bridge since it's located about 15 m from the bridge. The owner of the 1st house is happy when the bridge will be rehabilitated. The small cottage located on the north-eastern side of the bridge will not be negatively impacted by the bridge rehabilitation. Also, the 2nd house located on the south-western part of the bridge will not be likely to be negatively impacted by the bridge rehabilitation. The TK2 bridge is located between the border of the Kampong Cham and Tboung Khmum province. Any consultative meeting on environmental and social management plan should be made by engaging the concerned provincial departments of the two provinces in order to obtain precisely data and information.