LAO PEOPLE'S DEMOCRATIC REPUBLIC

PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

MINISTRY OF PUBLIC WORKS AND TRANSPORT

DEPARTMENT OF ROADS

Climate Resilient Improvement of National Road 13 South Project

Package 3

Km 190 – Km 268, Length 78 Km

Environmental and Social Management Plan (ESMP)

(Volume II - Attachments)

(Draft)

CONSULTANT:

ISO 9001:2015 CERTIFIED

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ABBREVIATIONS AND ACRONYMS

AF	Additional financing	IUCN	International Union for Conservation of Nature and Natural Resources
AIIB	Asian Infrastructure Investment Bank	KM	Khammouane province
ARAP	Abbreviated Resettlement Action Plan	KM	Kilometer number
AH	ASEAN Highway	Km	Kilometers
AHs	Affected Households	MWG	Monitoring working group
ASEAN	Association of South East Asian Nations	LFND	Lao Front for National Development
AWPB	Annual Work Plan and Budget	LRSP-2	Lao Road Sector Project 2
BD	Bidding Document	LWU	Lao Women Union
BKX	Borikhamxay Province	MAF	Ministry of Agriculture and Forestry
C-ESMP	Contractor-Environment and Social Management Plan	MCIT	Ministry of Cultural, Information and Tourism
COI	Corridor of impacts	MOH	Ministry of Health
COC on GBV	Code of conduct on gender-based violence	MOF	Ministry of Finance
COC on VAC	Code of conduct on violence against children	MONRE	Ministry of Natural Resources and Environment
CSC	Construction Supervision Consultant	MPI	Ministry of Public Investment
DCC	Department of Climate Change Management	MPWT	Ministry of Public Works and Transport
DD	Detailed Engineering Design	NBCA	National Biodiversity Conservation Areas
DMS	Detailed measuring survey	NGOs	None Government Organizations
DNEP	Department of Natural Resources and Environment Policy	PA	Protected Areas (national, provincial, and district)
DOF	Department of Forest	PFA	Protection Forest Area (national, provincial, and district)
DONRE	District Office of Natural Resources and Environment	NR	National Road
DOR	Department of Roads	NTFP	None Timber Forest Products
DOT	Department of Transport	NR13S	Improvement & Maintenance of NR13 South Project from Km71 to Km 346
DPI	Department of Planning and Investment	OP/BP	Operation Policy/Bank Procedure
DPWT	Provincial Department of Public Works and Transport	OPBRC	Output- and Performance-Based Road Contract

DRC	District Resettlement Committee	OPWT	District Office of Public Works and Transport
EA	Environmental Assessment	ODX	Oudomxay Province
ECC	Environmental Compliance Certificate	O&M	Operations and maintenance
ECC	Environmental Compliance Certificate	P3	Package 3
ESCOP	Environmental and Social Code of Practice	PBC	Performance-based contract
EDPD/ PTRI	Environmental Research and Disaster Prevention Division of PTRI	PCR	Physical Culture Resources
EG	Ethic Groups	PONRE	Provincial Office of Natural Resources and Environment
EGEF	Ethnic Groups Engagement Framework	PMU	Project management unit
EGEP	Ethic Groups Engagement Plan	PRC	Provincial Resettlement Committee
ESHS	Environmental and Social Health and Safety	PTRI	Public Works and Transport Research Institute
EHSG	Environmental Health and Safety Guideline	RAP	Resettlement Action Plan
EIB	European Investment Bank	RMF	Road Maintenance Fund
ESMF	Environmental and Social Management Framework	RMS	Road Management System
ESMP	Environmental and Social Management Plan	ROW	Right of ways
EIA	Environment Impact Assessment	RPF	Resettlement Policy Framework
EPL	Environmental Protection Law	SA	Social Assessment
ESCOP	Environmental and Social Code of Practice	SIA	Social Impact Assessment
ESHS	Environmental, Social, Health and Safety	SS-ESMP	Site specific-ESMP
ESIA	Environmental and Social Impacts Assessment	SOP	Standard operating procedures
ESP	Environmental and Social Policy	TA	Technical assistance
ESS	Environmental and Social Safeguards	TOR	Terms of Reference
ESU	Environmental and Social Unit of DPWT	UNDP	United Nation Development Program
GDP	Gross Domestic Product	UNCBD	United Nations Convention on Biological Diversity

GCLS	Grievance and Complaints Logging System	UXO	Unexploded Ordnance
GOL	Government of Lao People's Democratic Republic	VRC	Village Resettlement Committee
GRC	Grievance Redress Committee	WB	World Bank
GRM	Grievance Redress Mechanism	WBG	World Bank Group
GRMS	Grievance Redress Mechanism Services		
IDA	International Development Association (or the WB)		
IEE	Initial Environmental Examination		
INDC	Intended Nationally Determined Contribution		

ATTACHMENT 1A PROJECT ROAD CONDITIONS

1. Site visit was carried out during the week of 28th – 30th August 2019 and these are the main findings along the road corridor Plate 2-1 to 2-16 below illustrate the beginning of the project continues from the previous section (KM 21 to KM 71) is located at Xaysavang Village, Tha Prabath District, Borikhamxay Province, after start point the road width is generally 9 meters width and unpaved shoulder on both sides. Centre line as road marking is present without maintenance. Shoulders are used as parking places and lack of drainage is one of the main constraints. Plate 2-17 to 2-20 show the different type of heavy vehicles identified along the corridor, trucks with tandem axle, single axle, double and triple axles. Since the road is a key connection to China, Vietnam, Thailand and other parts of Lao PDR, it is expected that heavy traffic will be increased when the ASEAN Road Networks are completed. The road design must take into consideration during traffic forecast for the design period.

Plate 0-1: Km 71+000 Start of the Project

Plate 0-2: Km 71+000 Start of the Project

Plate 0-3: Houay Nam Hong Bridge (Km 72+658)

Plate 0-4: Houay Saiphai Bridge (Km 73+730)

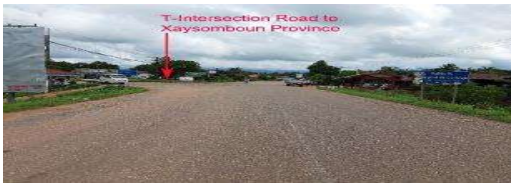


Plate 0-5: T-Intersection Road to Xaysomboun Province

Plate 0-6: Cultural and Tourism Place without a Bus-Bay, No Parking Lane

Plate 0-7: Typical Flood Area

Plate 0-8: High Embankment Section

Plate 0-9: Urban Road in Paksan Township

Plate 0-10: Side Pipe and Drop Inlet are Filled Up by Debris

Plate 0-11: Nam Sane Bridge in Paksane Town is a 2-lane Bridge Bottle Neck to 4-lane Road

Plate 0-12: Nam Kading Bridge

Plate 0-13: Embankment Protection is Required at Nam Kading Chainage

Plate 0-14: T-Intersection to NR8

Plate 0-15: Nam Don Bridge with Surface Deteriorated

Plate 0-16: Typical Hazardous Curves

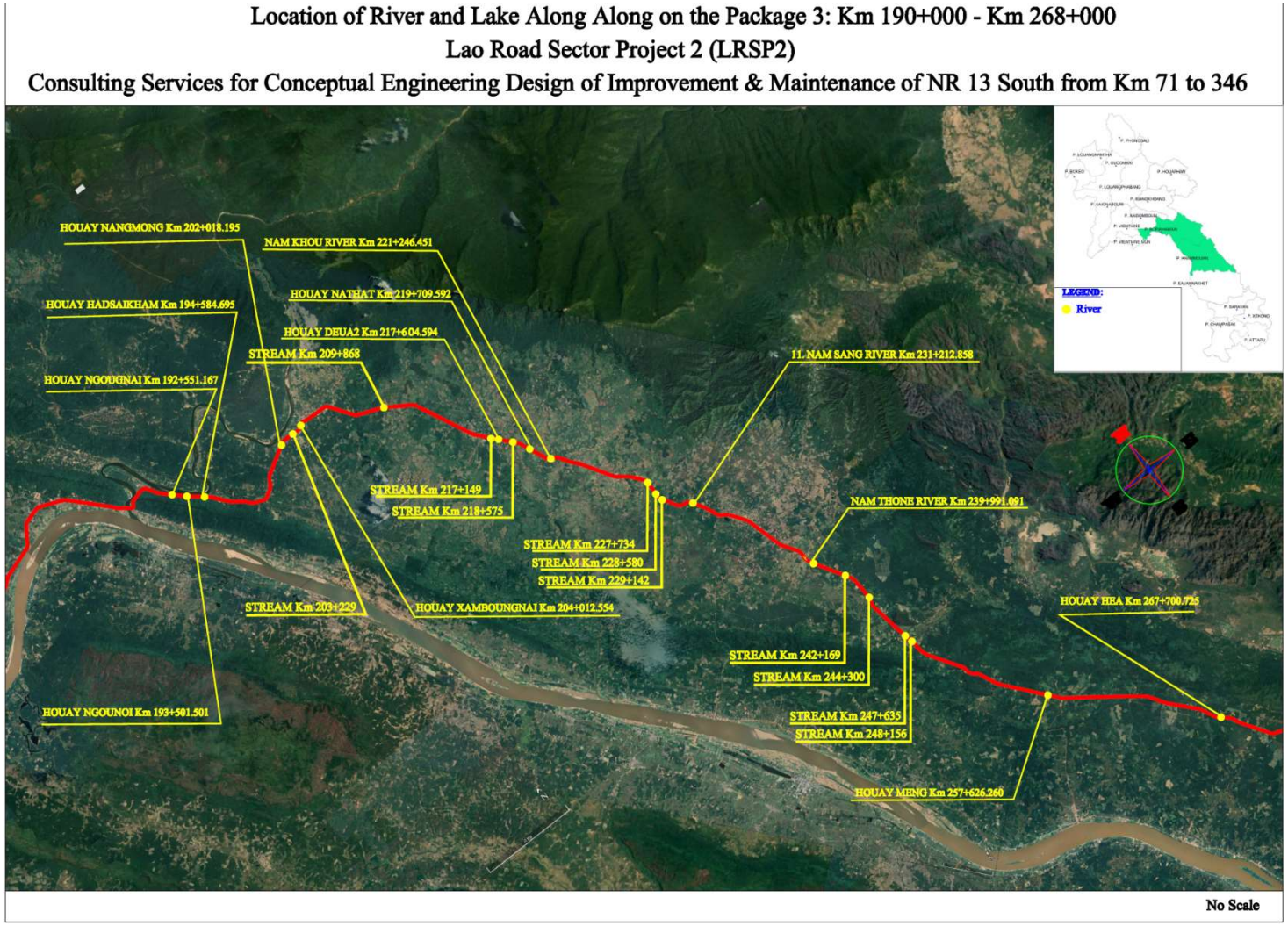
Plate 0-17: Types of Heavy Vehicles Identified on the Road

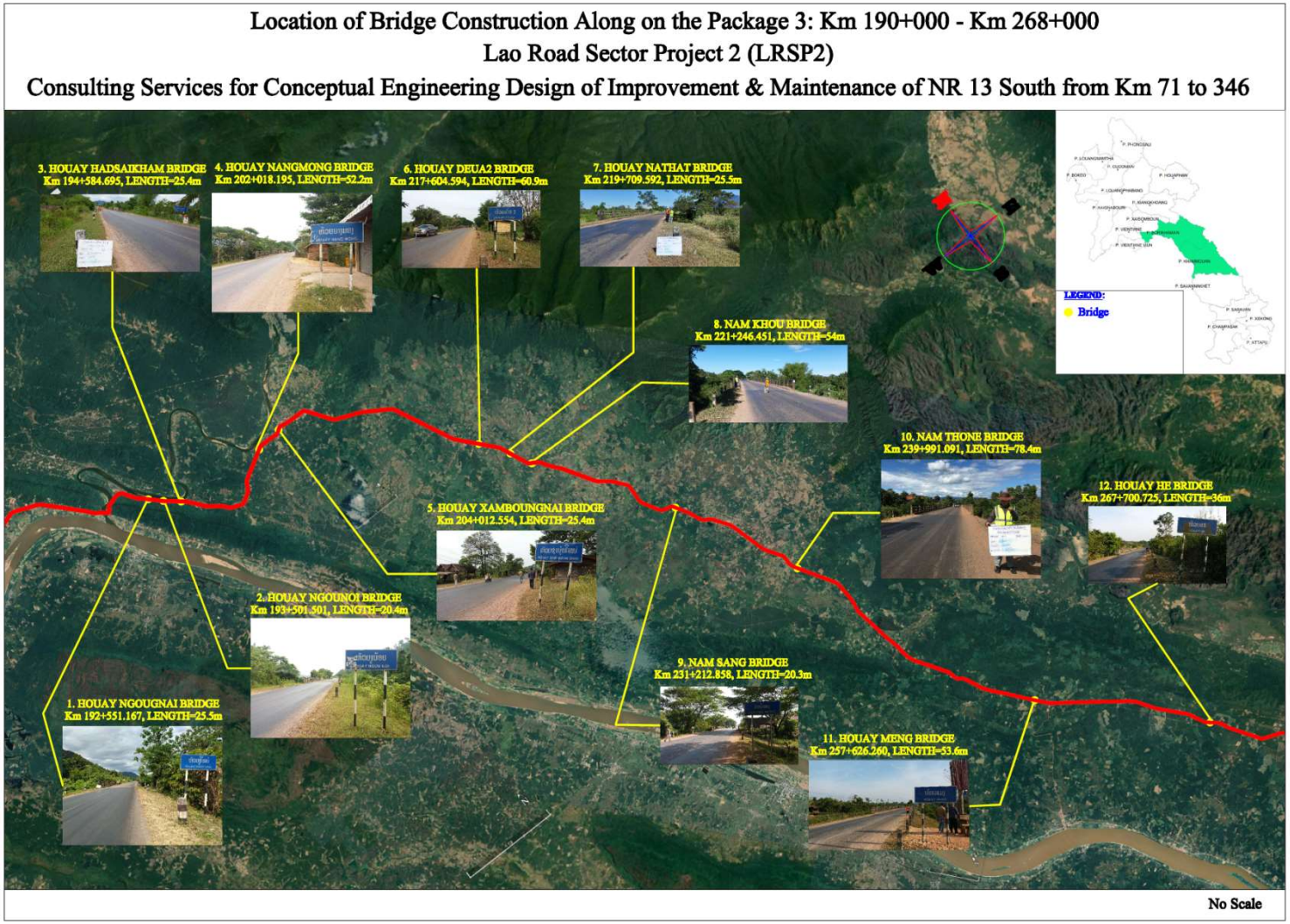
Plate 0-18: Types of Heavy Vehicles Identified on the Road

Plate 0-19: Types of Heavy Vehicles Identified on the Road

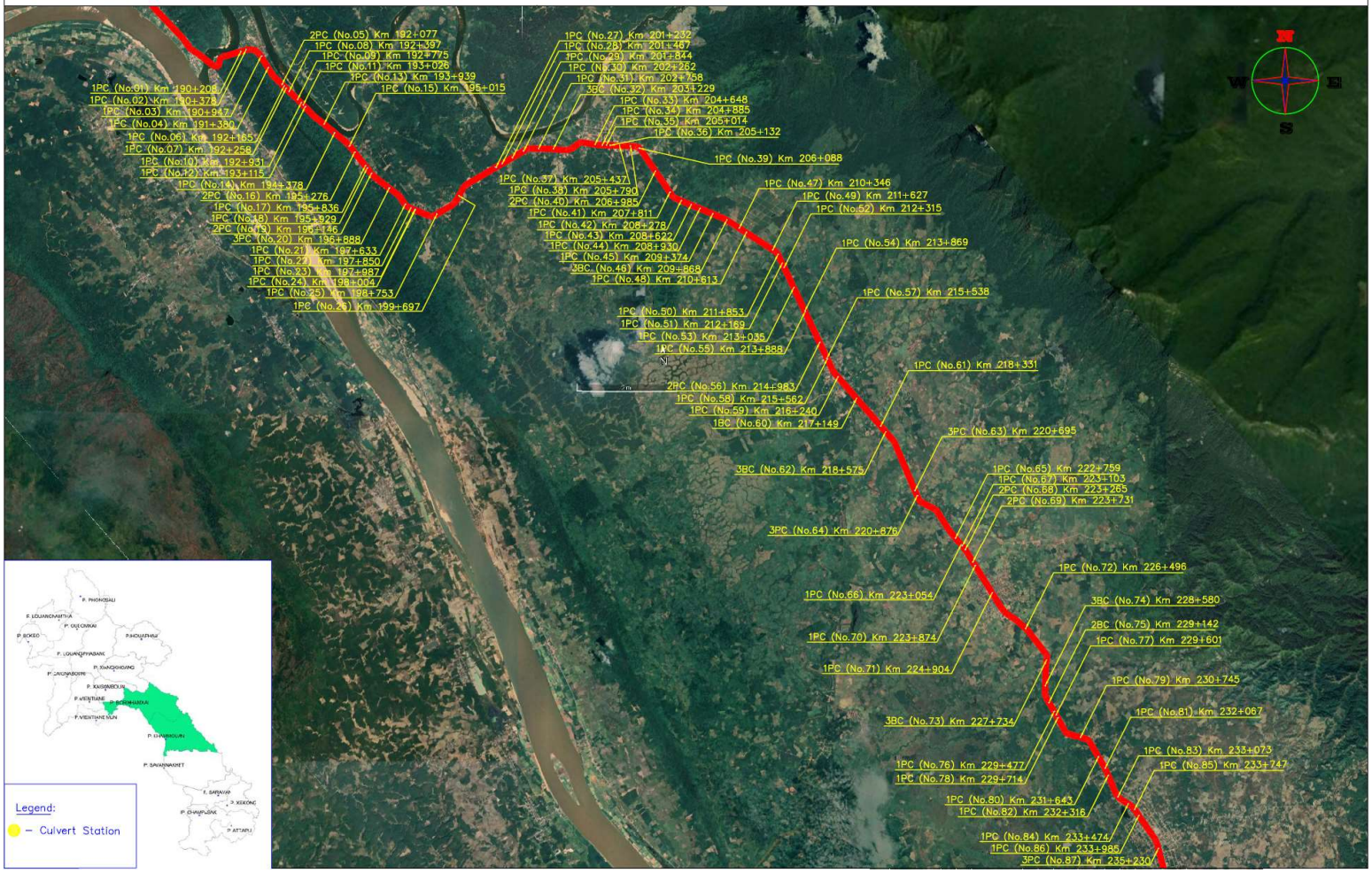
Plate 0-20: Types of Heavy Vehicles Identified on the Road

ATTACHMENT 1B LOCATIONS OF RIVERS, BRIDGE, CULVERT AND DRAINING AND FLOODING POINT LOCATED IN P3



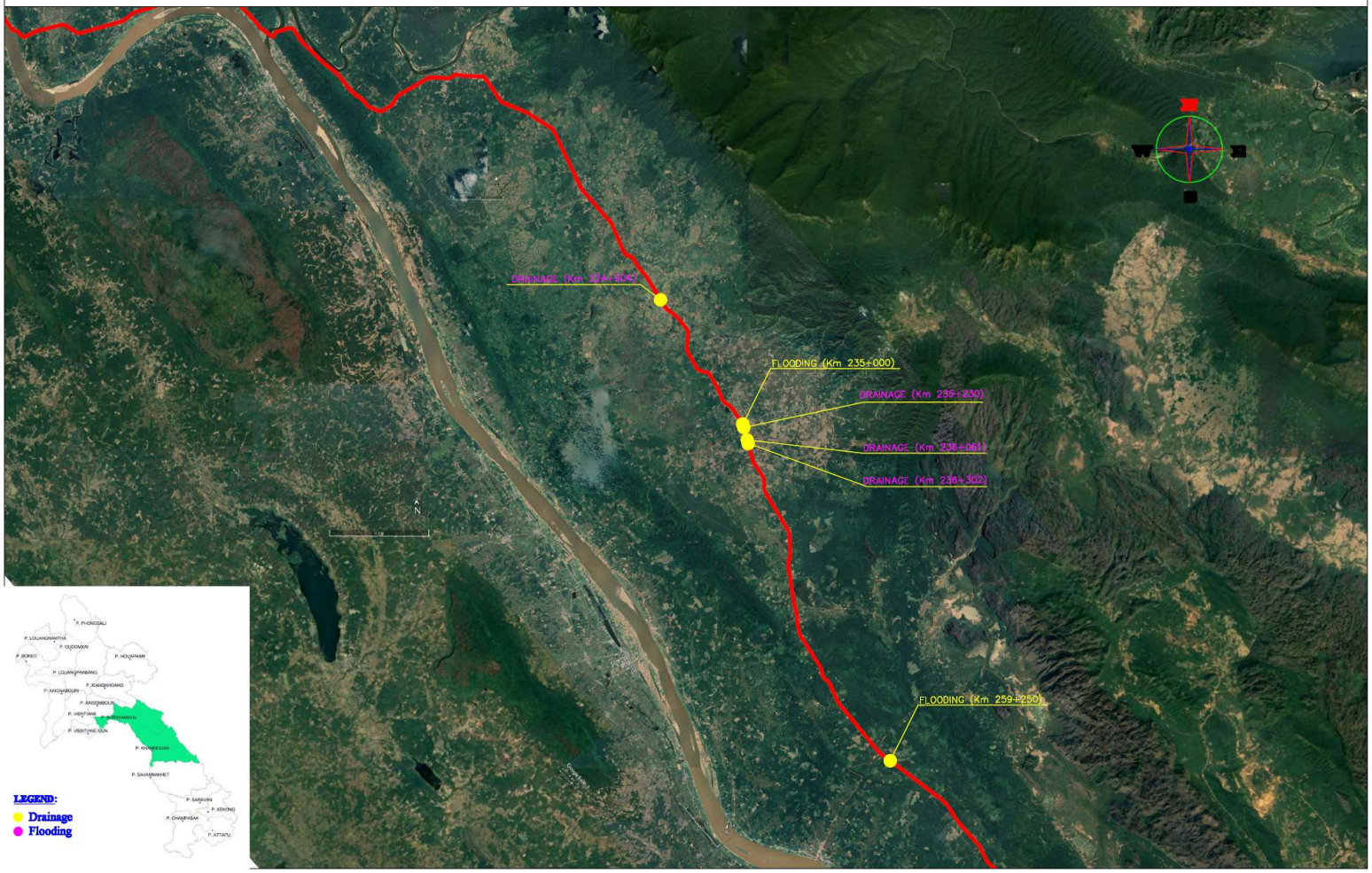

Location of Bridge Construction Along on the Package 3: Km 190+000 - Km 268+000
Lao Road Sector Project 2 (LRSP2)
Consulting Services for Conceptual Engineering Design of Improvement & Maintenance of NR 13 South from Km 71 to 346
3. HOUAY HADSAICHAM BRIDGE
Km 194+584.695, LENGTH=25.4m
4. HOUAY NANGMONG BRIDGE
Km 202+018.195, LENGTH=52.2m
6. HOUAY DEUA2 BRIDGE
Km 217+604.594, LENGTH=60.9m
7. HOUAY NATHAT BRIDGE
Km 219+709.592, LENGTH=25.5m
8. NAM KHOU BRIDGE
Km 221+246.451, LENGTH=54m
10. NAM THONE BRIDGE
Km 239+991.091, LENGTH=78.4m
12. HOUAY HE BRIDGE
Km 267+700.725, LENGTH=36m
5. HOUAY XAMBOUNGNAI BRIDGE
Km 204+012.554, LENGTH=25.4m
2. HOUAY NGOUNOI BRIDGE
Km 193+501.501, LENGTH=20.4m
9. NAM SANG BRIDGE
Km 231+212.858, LENGTH=20.3m
1. HOUAY NGOUGNAI BRIDGE
Km 192+551.167, LENGTH=25.5m
11. HOUAY MENG BRIDGE
Km 257+626.260, LENGTH=53.6m
LEGEND:
Bridge
No Scale

Location of Culverts Installation Along on the Package 3: Km 190+000 - Km 268+000
Lao Road Sector Project 2 (LRSP2)
Consulting Services for Conceptual Engineering Design of Improvement & Maintenance of NR 13 South from Km 71 to 346



Location of Culverts Installation Along on the Package 3: Km 190+000 - Km 268+000
Lao Road Sector Project 2 (LRSP2)
Consulting Services for Conceptual Engineering Design of Improvement & Maintenance of NR 13 South from Km 71 to 346

Location of Drainage and Flooding Along on the Package 3: Km 190+000 - Km 268+000
Lao Road Sector Project 2 (LRSP2)
Consulting Services for Conceptual Engineering Design of Improvement & Maintenance of NR 13 South from Km 71 to 346

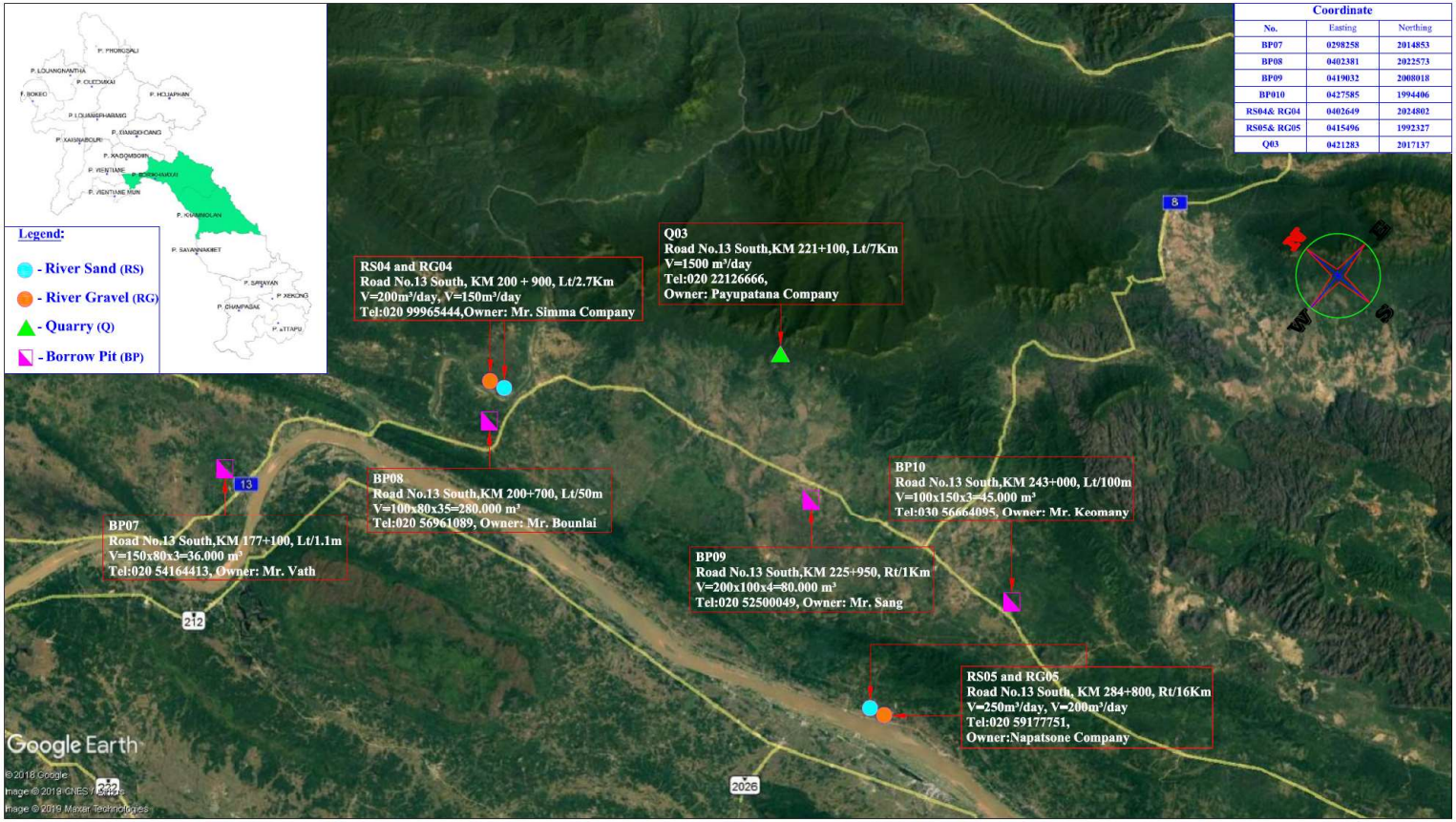


ATTACHMENT 1C MAPS OF MATERIAL SOURCES LOCATED IN P3

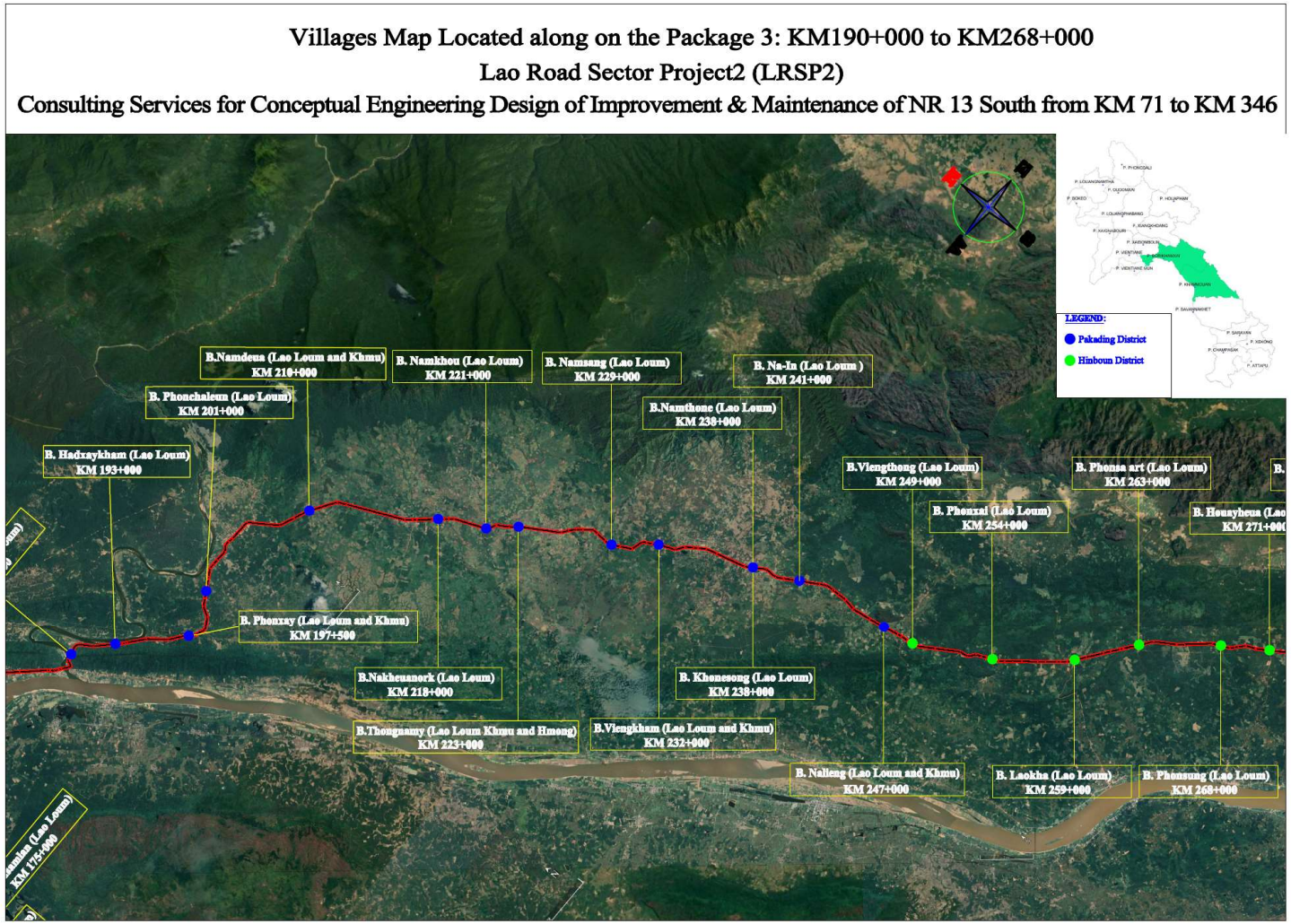
LOCATION MAP OF MATERIAL SOURCES

Lao Road Sector Project2 (LRSP2)

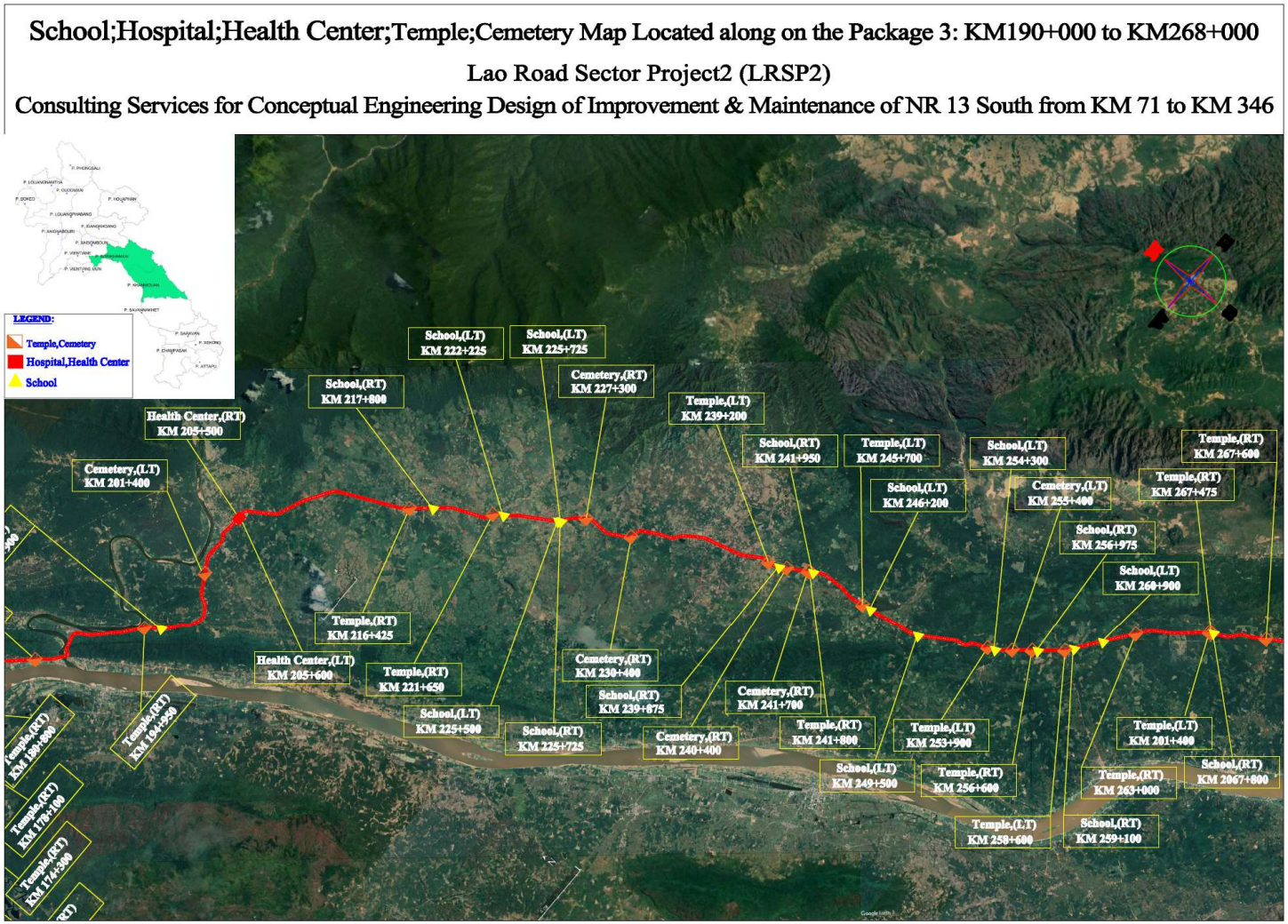
Consulting Services for Conceptual Engineering Design of Improvement & Maintenance of NR13 South from KM71 to KM346



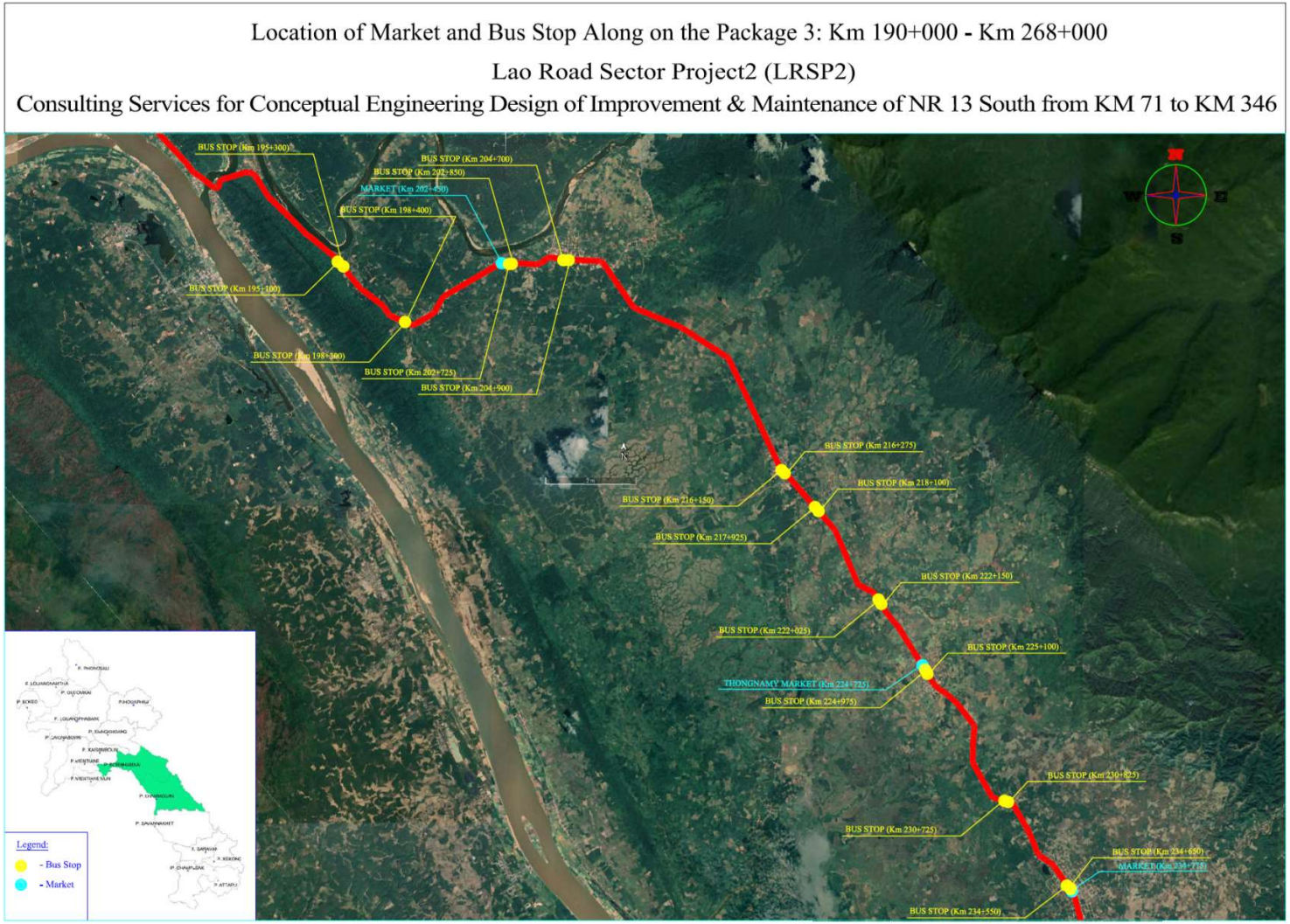
ATTACHMENT 1 D MAP OF VILLAGES LOCATED IN P3



ATTACHMENT 1E MAP OF SCHOOLS, HEALTH CENTERS AND CULTURAL SITES LOCATED IN P3



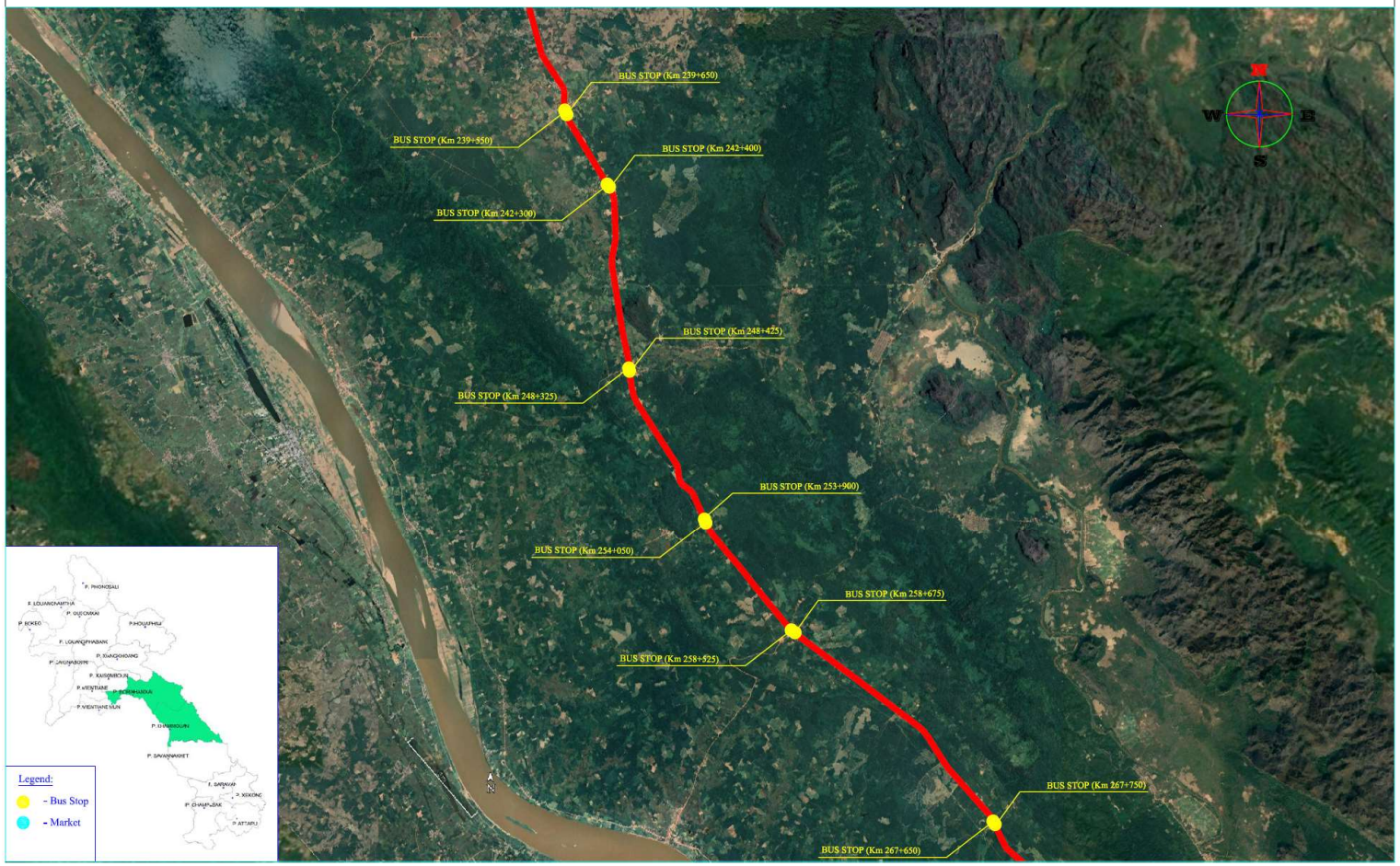
ATTACHMENT 1F MAP OF BUS STOPS AND MARKETS LOCATED IN P3



Location of Market and Bus Stop Along on the Package 3: Km 190+000 - Km 268+000

Lao Road Sector Project2 (LRSP2)

Consulting Services for Conceptual Engineering Design of Improvement & Maintenance of NR 13 South from KM 71 to KM 346



ATTACHMENT 2A DESCRIPTION OF PROJECT WORKS

Location	Description of Project Work	Remarks
Km190-km268	**Expansion:**	
	• Km190+200-Km214+300 Overlay 9m	
	• Km214+300-Km217+525 expansion 12m	
	• Km217+525-Km221+325 Overlay 9m	
	• Km221+325-Km227+400 expansion 12m	
	• Km227+400-Km229+800 Overlay 9m	
	• Km229+800-Km231+150 expansion 12m	
	• Km231+150-Km231+275 Overlay 9m	
	• Km231+275-Km237+800 expansion 12m	
	• Km237+800-Km238+400 Overlay 9m	
	• Km238+400-Km238+900 expansion 12m	
	• Km238+900-Km239+175 Overlay 9m	
	• Km239+175-Km242+100 expansion 12m	
	• Km242+100-Km242+225 Overlay 9m	
	• Km242+225-Km243+900 expansion 12m	
	• Km243+900-Km268+000 Overlay 9m	
	Boxes:	
	• Km203+229 3BC (5.00mx5.00m)	
	• Km209+868 3BC (4.00mx4.00m)	
	• Km217+149 BC (5.00mx5.00m)	
	• Km218+575 3BC (5.00mx5.00m)	
	• Km227+734 3BC (5.00mx5.00m)	
	• Km228+580 3BC (5.00mx5.00m)	
	• Km229+142 2BC (3.50mx3.50m)	
	• Km242+169 3BC (4.00mx4.00m)	
	• Km244+300 3BC (4.00mx3.50m)	
	• Km247+635 3BC (4.00mx3.00m)	
	• Km248+156 3BC (4.00mx3.00m)	
	Bridge:	
	• Km192+550 (Length=25.50m)	HOUAY NGOUYAI
	• Km193+500 (Length=20.40m)	HOUAY NGOUNOI
	• Km194+575 (Length=25.40m)	HOUAY HADXAYKHAM
	• Km202+025 (Length=52.20m)	HOUAY NANGMONG
	• Km204+000 (Length=25.40m)	HOUAY XAMBOUNYAI
	• Km217+600 (Length=60.90m)	HOUAY DEUA 2
	• Km219+700 (Length=25.50m)	HOUAY NATHAT
	• Km221+250 (Length=54.00m)	NAM KHOU
	• Km231+200 (Length=26.27m)	NAM SANG
	• Km239+100 (Length=78.40m)	NAM THONE
	• Km257+625 (Length=53.60m)	HOUAY MAENG
	Bus Stop:	

Location	Description of Project Work	Remarks
	• KM 195+100	RT
	• KM 195+300	LT
	• KM 198+300	RT
	• KM 198+400	LT
	• KM 202+725	RT
	• KM 202+850	LT
	• KM 204+700	LT
	• KM 204+900	RT
	• KM 216+150	RT
	• KM 216+275	LT
	• KM 217+925	RT
	• KM 218+100	LT
	• KM 222+025	RT
	• KM 222+150	LT
	• KM 224+975	RT
	• KM 225+100	LT
	• KM 230+725	RT
	• KM 230+825	LT
	• KM 234+550	RT
	• KM 234+650	LT
	• KM 239+550	RT
	• KM 239+650	LT
	• KM 242+300	RT
	• KM 242+400	LT
	• KM 248+325	RT
	• KM 248+425	LT
	• KM 253+900	LT
	• KM 254+050	RT
	• KM 258+525	RT
	• KM 258+675	LT
	• KM 267+650	RT
	• KM 267+750	LT

ATTACHMENT 2B TRAFFIC SURVEY RESULTS

1. General

1) In order to facilitate the assessment of present and future traffic demands, for the development of need-based infrastructure accurate information and continuous monitoring of traffic by appropriate methods is necessary. This traffic survey was therefore implemented to ensure that sufficient and appropriate data is available to undertake necessary planning, design, construction and maintenance of the NR13 South, which is aimed at meeting the prevailing traffic flow, future traffic growth and loading without considerable deterioration in the quality of service.

2. Traffic Count Survey

2) A comprehensive traffic survey was conducted manually in six locations for NR13 South Project. All surveys were implemented for three consecutive days from 6:00am – 6:00am of the following day by a team of LTEC which comprised of two supervisors and 18 enumerators. The traffic flow data collection team stood by the roadside at appropriate straight road section, counting and classifying the vehicles as they passed. The survey recorded all vehicles moving in one particular direction (southbound and northbound). The survey started from 29th October to 16th November 2019 with the use of field forms, photos, and other survey equipment. Table and Figure below provide detailed stations of traffic flow data collection.

Table 1 Location of Traffic Survey

No.	Chainage	Description of Location	Survey Time	Day
1	Km 92+218	Tha Bok Bridge Straight Line 1	6:00AM – 6:00 AM	3 Day
2	Km 140+162	Nam Ngiep Bridge Straight Line 2	6:00AM – 6:00 AM	3 Day
3	Km 189+040	Nam Kading Bridge Straight Line 3	6:00AM – 6:00 AM	3 Day
4	Km 239+700	Nam Thone Bridge Straight Line 4	6:00AM – 6:00 AM	3 Day
5	Km 280+400	Nam Hinboun Bridge Straight Line 5	6:00AM – 6:00 AM	3 Day
6	Km 346+000	Thakhek Straight Line 6	6:00AM – 6:00 AM	3 Day

3) Manual traffic flow count was categorized by a visual assessment of the vehicle size and configuration of axles. This traffic flow data collection however, classified vehicles into 11 categories based on the local and country traffic context as follow: Bicycle; Hand tractor; Motorcycle; Tuk Tuk, Jumbo; Car, taxi, jeep; Pick up, van; Minibus; Medium truck and bus; Heavy truck & bus; Light truck; and Trailer.

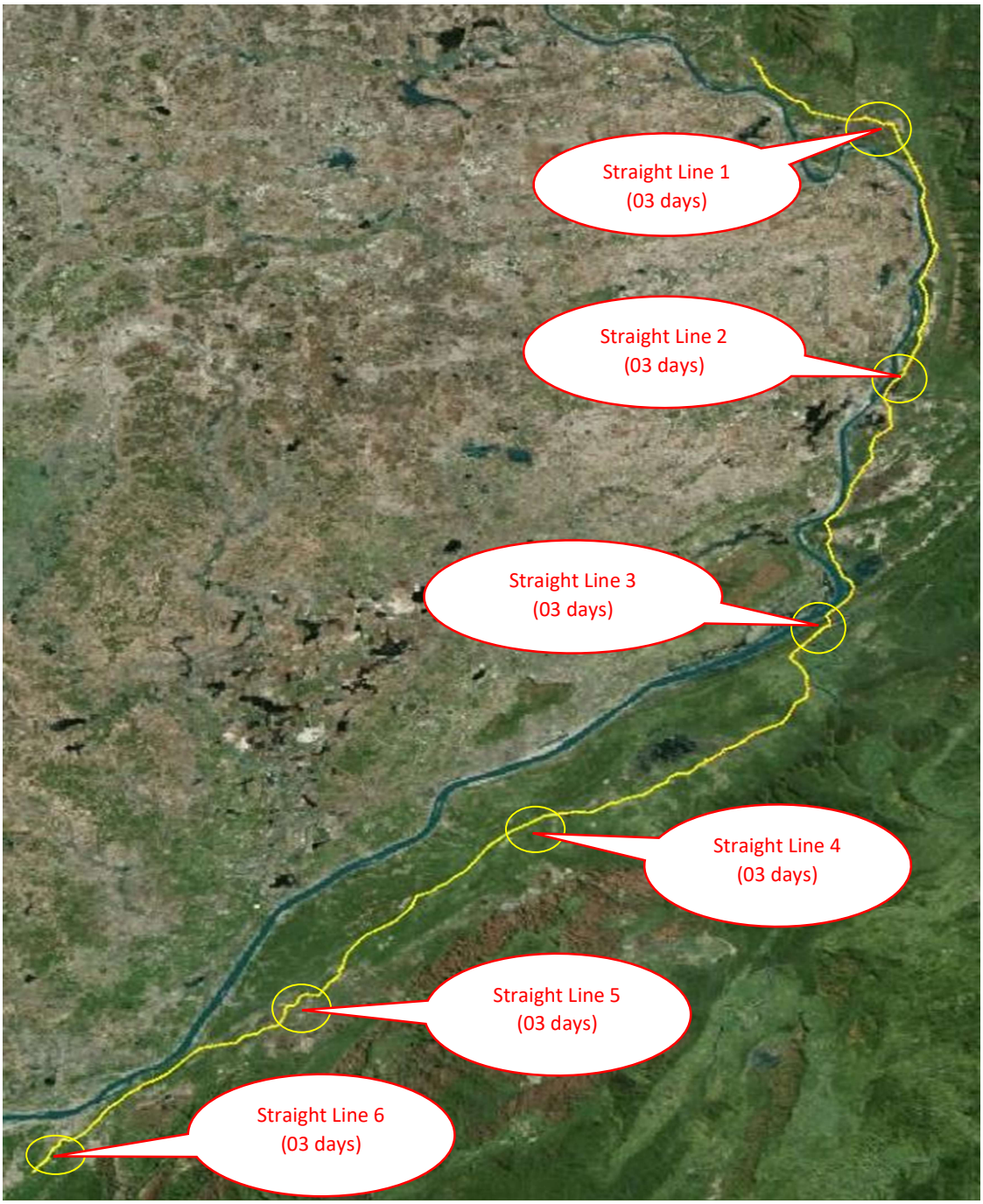


Figure 1: Traffic Flow Counting Stations

a. Tha Bok bridge Straight Line 1 (Km 92+218)

4) The traffic flow survey was undertaken for 72 consecutive hours between 29th October to 2nd November 2019. The survey counted all vehicles travelling southbound and northbound every hour interval and then the numbers of each type of transport vehicles were combined. The survey team at this station comprised of one traffic supervisor and nine enumerators. The survey team used manual counting system with field survey forms, photography, marking GPS locations and notetaking.

5) The traffic counting during the three days indicated that the majority of vehicle numbers passed through this point of the survey was motorcycles (38%), followed by pick up (24%), and car/taxi/jeep (13%). Further detailed of the traffic flow counting results were presented in Figure and Table.

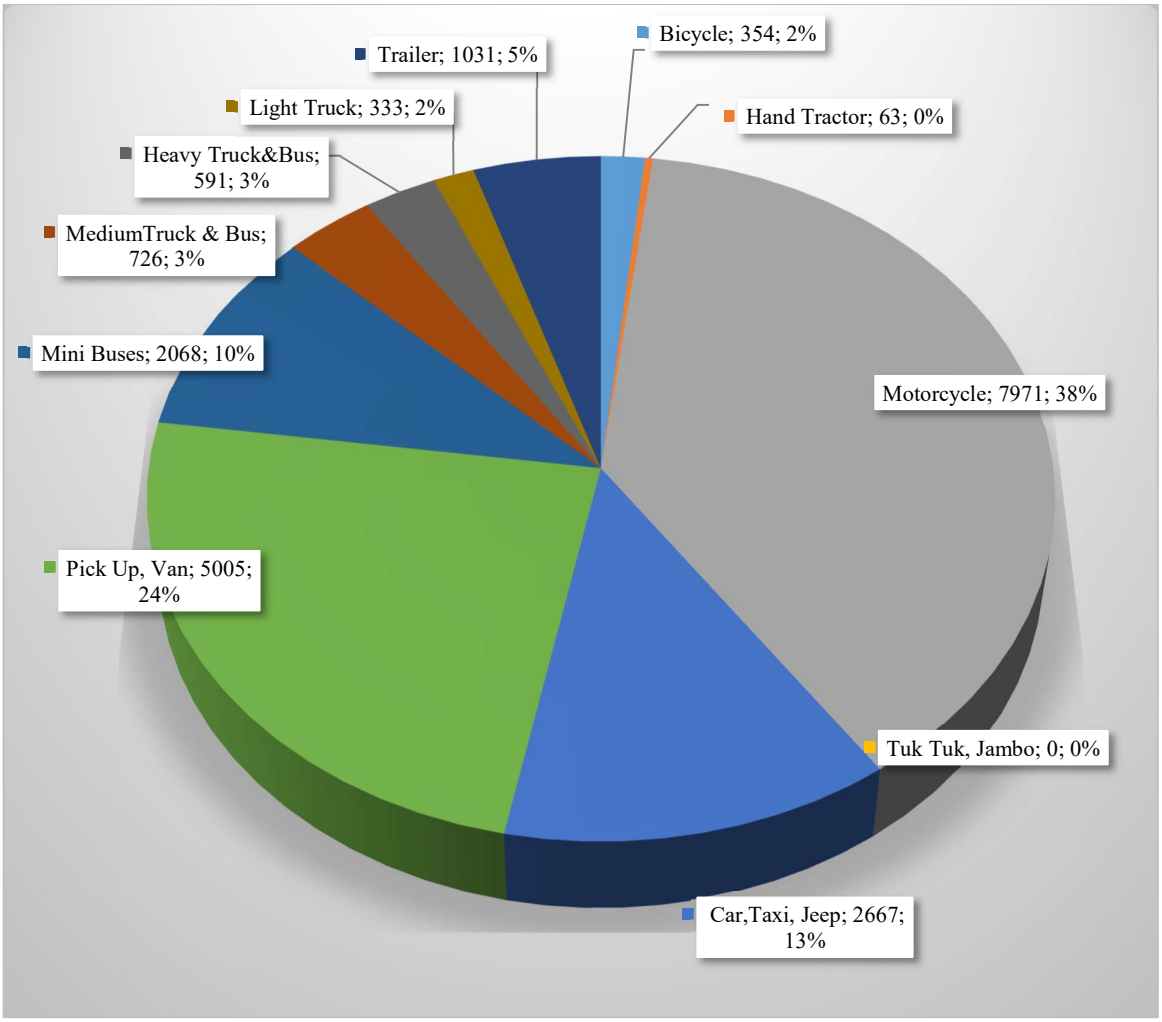


Figure 2: Traffic Survey Results at Tha Bok Bridge (Km Km 92+218)

Table 2: Results of Traffic Flow Survey at Tha Bok Bridge (Km 92+218)

Supervisor : Saisoungkhoun ; Surveyor: Viengkhone & Bolivanthchai
Location : Km 94+218 (A)+(B)
Direction from : Vientiane to Savannakhet (Km 71 - Km 346)
Date : 29/10/2019 - 2/11/2019, 3 Day Time period : 24 h
Weather: Sunshine, Event: Normal

Time Interval	Bicycle	Hand Tractor	Motorcycle	Three Wheels Tuk Tuk, Jumbo	Car,Taxi, Jeep	Pick Up, Van	Scog, Thev Mini Buses ≤ 20P	Medium Bus	Heavy Truck Heavy Bus	Light Truck T Axles ≤ 7T	Semi-Trailer Trailer ≥ 4 Axles
	Bicycle (1)	Hand Tractor (2)	Motorcycle (3)	Tuk Tuk, Jumbo (4)	Car,Taxi, Jeep (5)	Pick Up, Van (6)	Mini Buses (7)	Medium Truck & Bus (8)	Heavy Truck&Bus (9)	Light Truck (10)	Trailer (11)
6:00-7:00	30	2	523	0	98	200	126	28	8	19	59
7:00-8:00	58	16	774	0	150	246	176	21	12	16	70
8:00-9:00	12	4	579	0	201	276	144	50	12	10	40
9:00-10:00	4	2	469	0	192	313	151	39	28	20	24
10:00-11:00	3	1	403	0	183	337	148	48	24	10	37
11:00-12:00	55	2	512	0	194	317	150	58	10	13	41
12:00-13:00	20	3	365	0	138	278	121	46	21	11	24
13:00-14:00	47	1	394	0	173	309	135	64	62	13	37
14:00-15:00	11	3	287	0	160	421	111	55	36	13	44
15:00-16:00	38	4	504	0	201	359	86	55	24	18	34
16:00-17:00	53	5	851	0	281	449	155	56	34	23	45
17:00-18:00	15	12	556	0	161	376	117	35	32	19	51
18:00-19:00	3	1	385	0	114	266	86	34	18	14	45
19:00-10:00	1	1	286	0	110	136	76	20	40	18	43
20:00-21:00	0	0	178	0	92	172	49	19	30	21	52
21:00-22:00	0	0	140	0	52	152	31	19	34	12	65
22:00-23:00	0	0	132	0	42	119	35	13	33	28	91
23:00-24:00	0	0	100	0	30	86	35	14	10	10	51
00:00-01:00	0	0	65	0	25	49	24	9	12	1	53
01:00-02:00	0	0	52	0	11	22	19	5	12	5	25
02:00-03:00	0	0	18	0	6	20	13	8	18	7	20
03:00-04:00	0	0	15	0	6	12	17	10	26	9	17
04:00-05:00	0	0	12	0	15	41	18	5	27	7	25
05:00-06:00	3	1	61	0	34	89	25	14	28	6	38
Sum	**354**	**63**	**7971**	**0**	**2667**	**5005**	**2068**	**726**	**591**	**333**	**1031**

Plate 0-1: Traffic Survey at Tha Bok Bridge – daytime

Plate 0-2: Traffic Survey at Tha Bok Bridge – night-time

b. Nam Ngiep Bridge Straight Line 2 (Km 140 + 162)

6) Similar approach to the traffic flow counting at Tha Bok Bridge, another survey team of LTEC was stationed near Nam Ngiep Bridge at the same day and time. This survey location is relatively close to Paksane town centre, approximately 4km. This included a continuous counting of all vehicle moving in northbound and southbound for a collection period of 72 consecutive hours between 29th October to 2nd November 2019. The survey team at this station comprised of one traffic supervisor and nine enumerators. The survey team used manual counting system with field survey forms, photography, marking GPS locations and notetaking.

7) During a three-day traffic flow survey at Nam Ngiep Bridge, the results were consistent with data recorded at Tha Bok Bridge. The majority of traffic volume was assessed as being 6,496 motorcycles (32%) and 5,969 pick-up truck/vans (30%) and 3,121 cars/taxi/jeep (15%). The lesser number of vehicles moving through this survey location included 1,214 trailers (6%), 1,154 minibuses (6%) and other types of vehicles.

Plate 0-3: Traffic Survey at Nam Ngiep Bridge

Plate 0-4: Traffic Survey at Nam Ngiep Bridge

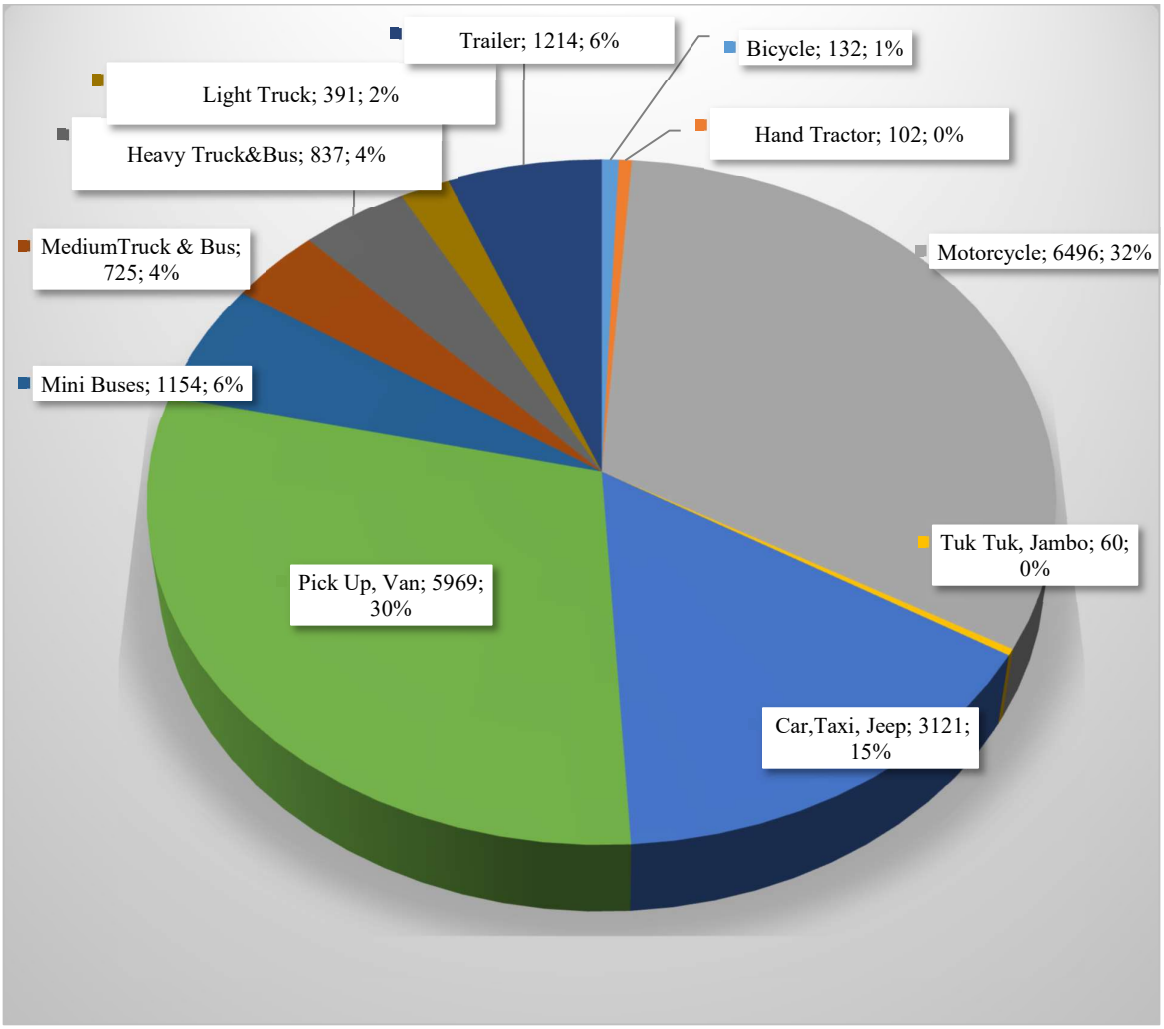


Figure 3: Traffic Survey Results at Nam Ngiep Bridge (Km 140+162)

Table 3: Results of Traffic Flow Survey at Nam Ngiep Bridge (Km 140+162)

Supervisor : A Thid ; Surveyor: Sengxay & Lorthao
Location : Km 140+145 (A)-(B)
Direction from : Vientiane to Savannakhet (Km 71 - Km 346)
Date : 29-31/10/2019 - 2/11/2019, 3 Day Time period : 24 h
Weather: Sunshine, Event: Normal

Straight line km 140+145
Vientiane Capital — B — A — Savannakhet

Time Interval	Bicycle	Hand Tractor	Motorcycle	Three Wheels Tuk Tuk, Jumbo	Car,Taxi, Jeep	Pick Up, Van	Song, Thev Mini Buses ≤ 20P	Medium Bus Mid T2 Axles≤7T	Heavy Truck Heavy Bus	Light Truck 2 Axles ≤ 7T	Semi-Trailer Trailer ≥ 4 Axles
	Bicycle (1)	Hand Tractor (2)	Motorcycle (3)	Tuk Tuk, Jumbo (4)	Car,Taxi, Jeep (5)	Pick Up, Van (6)	Mini Buses (7)	Medium Truck & Bus (8)	Heavy Truck&Bus (9)	Light Truck (10)	Trailer (11)
6:00-7:00	7	9	519	6	92	225	55	20	12	7	78
7:00-8:00	37	16	799	4	154	364	73	21	16	8	77
8:00-9:00	1	5	554	4	284	418	84	38	50	22	67
9:00-10:00	2	8	330	2	178	354	62	66	50	14	23
10:00-11:00	2	6	309	1	210	381	78	73	58	21	39
11:00-12:00	14	7	396	4	233	383	86	79	39	25	43
12:00-13:00	6	3	369	0	199	348	74	56	27	16	55
13:00-14:00	9	4	364	3	172	357	86	55	41	29	37
14:00-15:00	4	6	290	5	250	447	75	60	94	45	53
15:00-16:00	2	3	383	6	258	426	85	51	76	34	64
16:00-17:00	33	4	603	9	280	482	89	43	54	28	44
17:00-18:00	8	23	652	8	231	442	56	32	33	30	45
18:00-19:00	3	2	285	2	154	356	50	20	14	17	57
19:00-20:00	1	2	160	0	131	212	33	17	18	9	58
20:00-21:00	0	0	99	0	92	147	11	14	43	8	84
21:00-22:00	0	0	61	0	55	142	24	16	24	9	70
22:00-23:00	0	0	50	0	61	125	24	16	38	14	68
23:00 24:00	0	0	43	0	36	87	18	7	18	15	78
00:00-01:00	0	0	22	0	29	54	17	8	9	12	61
01:00-02:00	0	0	29	0	19	29	12	7	17	2	28
02:00-03:00	0	0	16	0	9	26	7	2	26	5	16
03:00-04:00	0	0	11	1	7	31	11	6	33	3	17
04:00-05:00	1	0	25	0	10	40	11	7	32	6	26
05:00-06:00	2	2	127	5	27	93	33	11	14	12	26
Sum	**132**	**102**	**6496**	**60**	**3121**	**5969**	**1154**	**725**	**837**	**391**	**1214**

c. Nam Kading Bridge Straight Line (Km 189+040)

8) The traffic flow counting at Nam Kading Bridge was conducted with the same methodology as above-mentioned two locations. This included the establishment of survey team of ten staff with one supervisor. The survey team split into three shifts – eight hours each. The traffic volume survey started at 6:00am of 6th November to 6:00am of 9th November 2019 for 72 consecutive hours. At this survey location, it was in proximity to a main community and commercial area of Pakkading. The counting system was completed manually.

9) The traffic counting indicated results similar to the three survey locations. Most of the transport vehicle numbers recorded during three days at this location were 4,155 pick up trucks/van (30%), followed by 4,093 motorcycles (29%) and 1,747 cars/jeeps (13%). However, heavy trucks, trailers and heavy buses remained high in terms of the volumes in relation to the road condition (refer to Figure and .

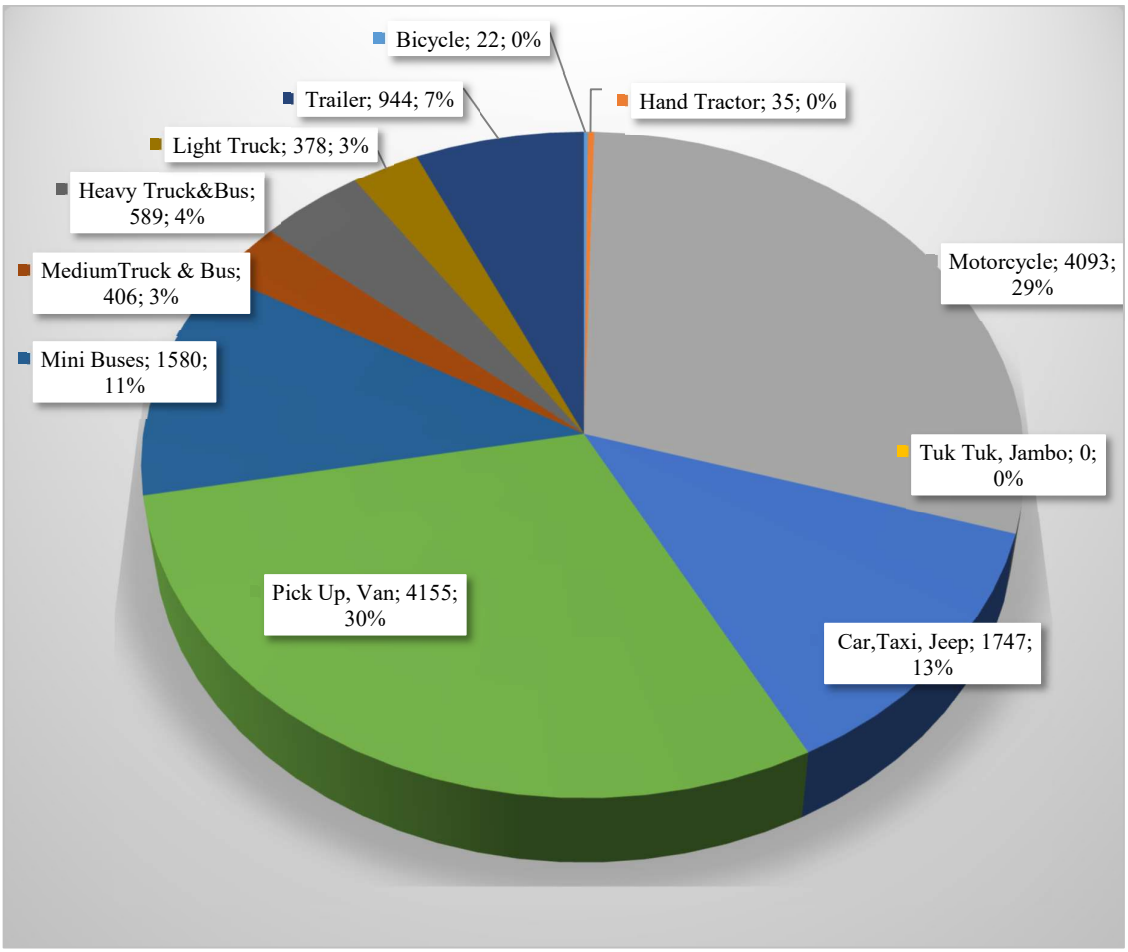
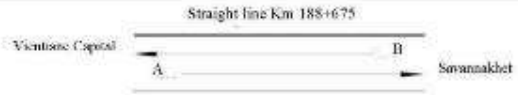


Figure 4: Traffic Flow Survey Results at Nam Kading Bridge (Km 189+040)

Table 4 Results of Traffic Flow Survey at Nam Kading Bridge (Km 189+040)

Supervisor : Saimoungkhoun ; Surveyor Viengkhone & Bolisouthchai
Location : Km 188+675 (A) : (B)
Direction from : Vientiane to Savannakhet (Km 21 - Km 346)
Date : 5/11/2019 - 9/11/2019, 5 Day Time period : 24 h
Weather: Sunshine; Event: Normal



Time Interval	Bicycle	Hand Tractor	Motorcycle	Three Wheels Tuk Tuk, Jumbo	Car,Taxi, Jeep	Pick Up, Van	Song, Thev Mini Buses ≤ 20P	Medium Bus	Heavy Bus	Light Truck	Semi-Trailer Trailer ≥ 4 Axles
	Bicycle (1)	Hand Tractor (2)	Motorcycle (3)	Tuk Tuk, Jumbo (4)	Car,Taxi, Jeep (5)	Pick Up, Van (6)	Mini Buses (7)	MediumTruck & Bus (8)	Heavy Truck&Bus (9)	Light Truck (10)	Trailer (11)
6:00-7:00	0	4	150	0	32	133	60	13	10	21	41
7:00-8:00	1	4	394	0	73	228	115	25	10	18	44
8:00-9:00	4	2	350	0	87	269	106	26	25	12	56
9:00-10:00	5	2	261	0	131	333	106	26	33	16	30
10:00-11:00	1	5	270	0	109	310	109	25	34	15	33
11:00-12:00	1	2	303	0	146	317	110	39	46	9	26
12:00-13:00	1	1	214	0	143	304	100	21	37	14	26
13:00-14:00	2	1	200	0	134	244	113	18	40	16	34
14:00-15:00	1	1	180	0	160	322	127	33	21	20	47
15:00-16:00	3	2	338	0	170	293	108	23	25	19	46
16:00-17:00	0	6	492	0	155	326	126	36	22	34	60
17:00-18:00	2	2	494	0	116	296	115	24	20	22	54
18:00-19:00	0	1	149	0	72	185	36	13	18	24	39
19:00-20:00	0	0	111	0	56	122	31	11	12	18	31
20:00-21:00	1	0	46	0	36	93	28	9	15	14	68
21:00-22:00	0	0	39	0	29	95	26	9	25	14	63
22:00-23:00	0	0	17	0	30	54	22	18	19	17	35
23:00-24:00	0	0	20	0	18	44	17	11	47	26	35
00:00-01:00	0	0	18	0	14	35	10	4	24	10	30
01:00-02:00	0	0	9	0	5	26	16	2	22	4	43
02:00-03:00	0	1	7	0	6	19	13	2	29	9	11
03:00-04:00	0	0	8	0	4	22	11	1	46	7	18
04:00-05:00	0	0	6	0	10	34	15	10	9	8	13
05:00-06:00	0	1	17	0	11	51	22	7	0	11	41
Sum	**22**	**35**	**4093**	**0**	**1747**	**4155**	**1580**	**406**	**589**	**378**	**944**

d. Nam Thone Bridge Straight Line (Km 239+700)

10) The traffic counting data recorded at this location was obtained over a three consecutive day period, between 5th November to 9th November 2019. This survey location was in close proximity to a cluster community of Ban Namthone, a well-known place for local passengers.

11) A summary of the existing traffic volume was presented in Figure Table which include the location, peak our flow and the number of different vehicles at the survey location. Vehicles were sorted by percent of total number passed through this survey location. The analysis of the traffic data presented below is consistent with the previous survey stations. The number of motorcycles remained the highest and accounted for 36% (4,637), the second largest number of vehicle passing through this point was pick up truck (3,734 fleets or 29%).

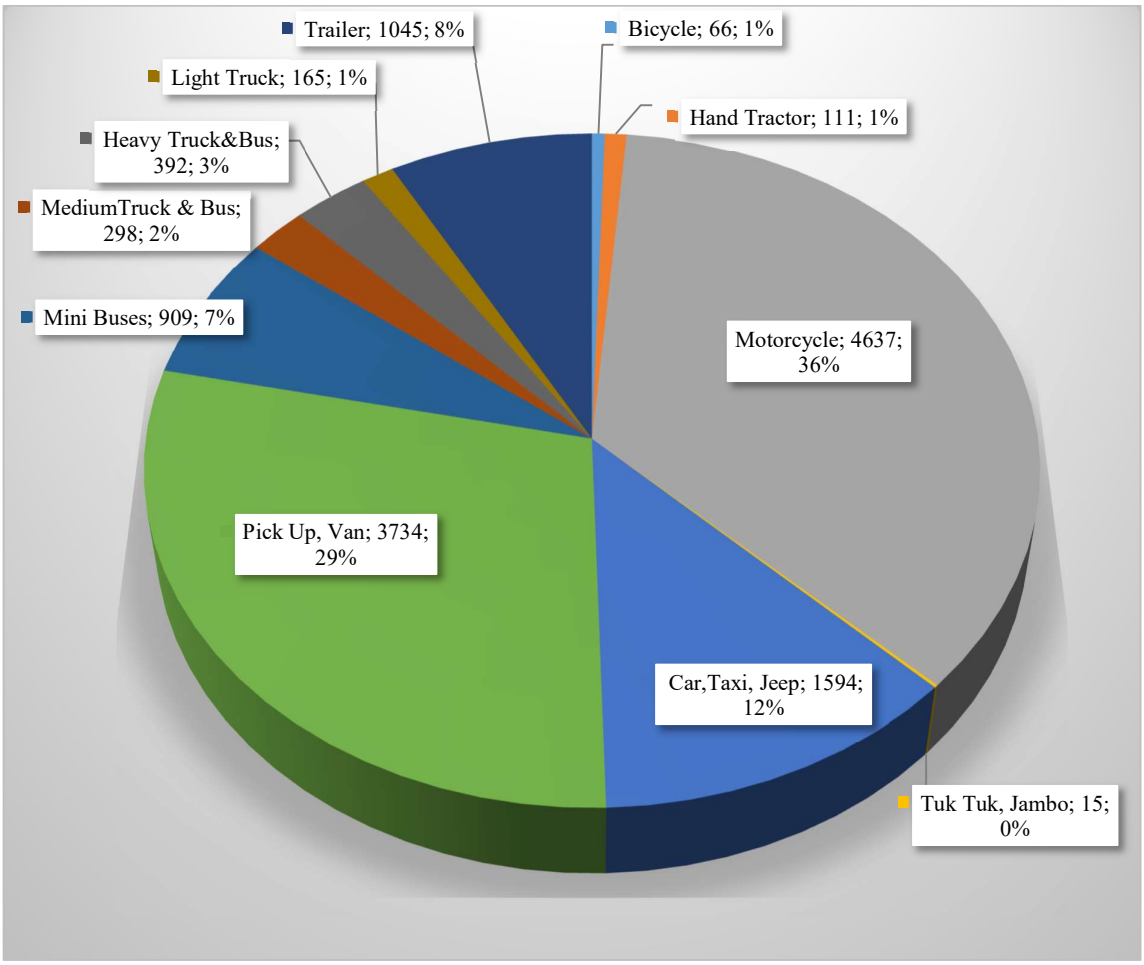
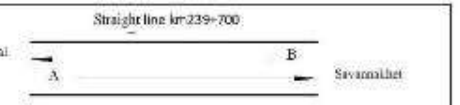


Figure 5: Results of Traffic Flow Counting at Nam Thone Bridge (Km 239+700)

Table 5: Results of Traffic Flow Survey at Nam Thone Bridge (Km 239+700)

Supervisor : A.Trid , Surveyor: Sangnay & Leuthao
Location : Km 239+700 (A)+(B)
Direction from : Vientiane to Savannakhet (Km 71 - Km 346)
Date : 5/11/2018 - 9/11/2018, 5 Day Time period : 24 h
Weather: Sunshine Event : Normal



Time Interval	Bicycle	Hand Tractor	Motorcycle	Three Wheels Tuk Tuk, Jumbo	Car, Taxi, Jeep	Pick Up, Van	Song, Thev Mini Buses < 30P	Med T2 Axles>2T Medium Bus	Heavy Truck Heavy Bus	Light Truck T Axles ≤ 7T	Semi-Trailer Trailer ≥ 4 Axles
	Bicycle (1)	Hand Tractor (2)	Motorcycle (3)	Tuk Tuk, Jumbo (4)	Car, Taxi, Jeep (5)	Pick Up, Van (6)	Mini Buses (7)	Medium Truck & Bus (8)	Heavy Truck&Bus (9)	Light Truck (10)	Trailer (11)
6:00-7:00	4	1	158	1	39	133	31	12	7	10	52
7:00-8:00	3	6	442	1	67	187	46	20	3	6	40
8:00-9:00	2	17	368	1	66	225	63	8	7	8	38
9:00-10:00	6	16	281	2	85	292	85	23	12	4	44
10:00-11:00	3	11	285	3	126	257	74	29	11	8	37
11:00-12:00	8	11	305	3	141	282	64	16	18	12	38
12:00-13:00	14	5	317	0	123	264	52	14	22	14	31
13:00-14:00	1	7	247	0	106	239	64	27	15	11	37
14:00-15:00	2	3	278	0	154	274	78	17	16	12	46
15:00-16:00	8	13	356	1	143	244	72	13	16	9	59
16:00-17:00	9	7	458	7	139	252	64	17	19	11	72
17:00-18:00	4	10	434	0	85	223	65	17	13	12	61
18:00-19:00	1	2	226	1	91	207	31	13	5	8	81
19:00-20:00	0	0	131	0	45	139	29	12	8	6	55
20:00-21:00	0	0	99	0	47	109	10	12	10	2	45
21:00-22:00	0	0	52	0	38	81	16	4	11	7	39
22:00-23:00	0	0	55	0	29	75	16	5	29	5	40
23:00-24:00	1	2	40	0	19	54	8	7	42	2	30
00:00-01:00	0	0	40	0	16	42	11	10	48	5	35
01:00-02:00	0	0	12	0	11	34	5	4	25	2	36
02:00-03:00	0	0	20	0	4	33	2	3	41	0	43
03:00-04:00	0	0	5	0	6	25	8	12	12	5	16
04:00-05:00	0	0	6	0	3	24	4	4	2	1	29
05:00-06:00	0	0	22	0	12	39	11	4	0	5	41
Sum	**66**	**111**	**4637**	**15**	**1594**	**3734**	**909**	**298**	**392**	**165**	**1045**

e. Hinboun Bridge Straight Line (Km 280+400)

12) Traffic count survey was conducted at Hinboun Bridge between 12th – 16th November 2019 for three consecutive days. The site was selected as it was in close to Songhong cluster community of Hinboun District. The survey team was comprised of one supervisor and nine enumerators which has been split into three counting shifts per day. The traffic data was presented in Figure and Table which provided number of traffic volume in every hour interval.

13) The analysis of the traffic data indicated similar patterns from the previous counts at Tha Bok Bridge, Nam Ngiep Bridge, Pakkading Bridge and Namthone Bridge stations. During the survey period, the survey team counted 6,023 motorcycles (42%), 3,590 pick up trucks (25%), and 1,353 cars (9%). The number of other modes of vehicle were also presented with relatively high where minibus was accounted for 9%, trailer was 5%, and combined light and heavy trucks were approximately 6%.

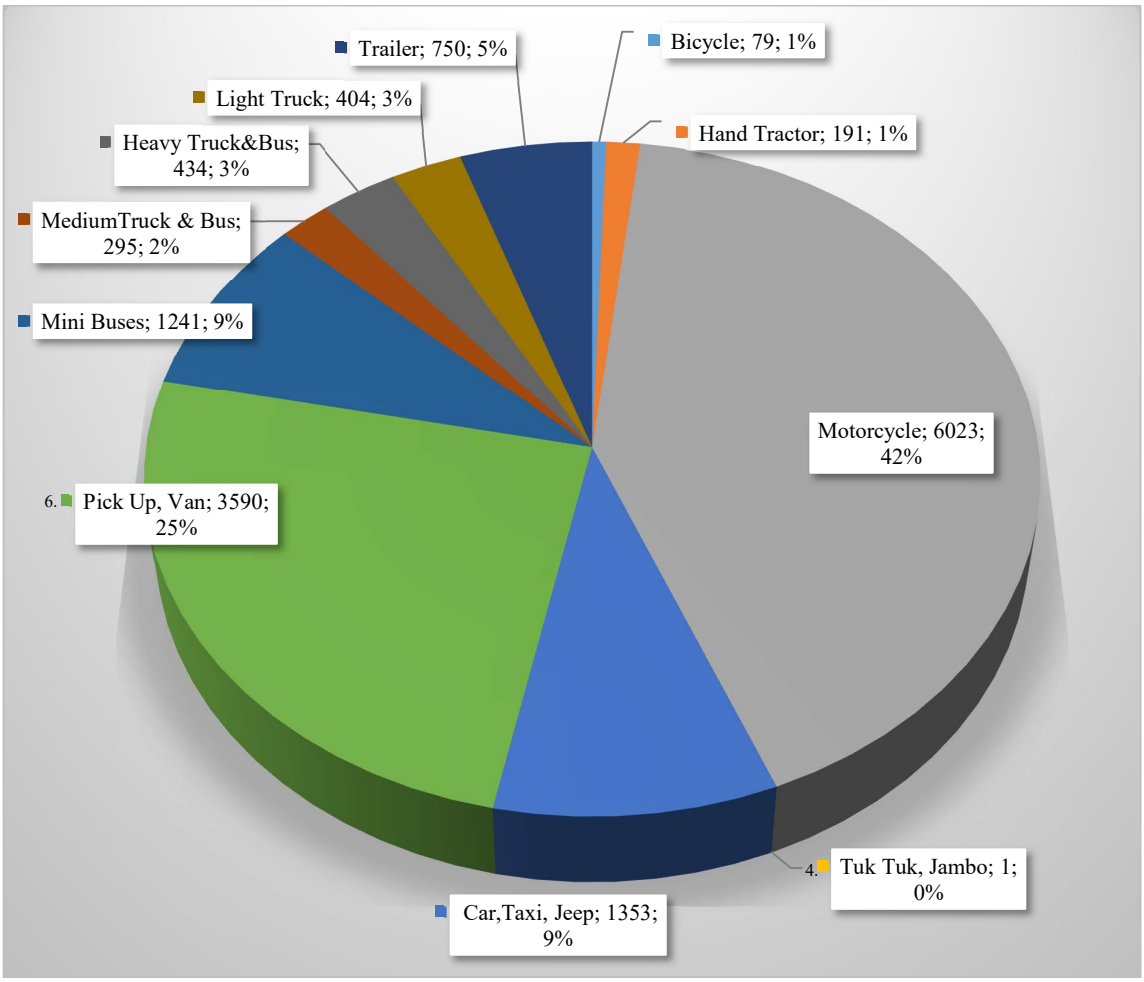


Figure 6: Results of Traffic Flow Survey at Nam Hinboun Bridge (Km 280+400)

Table 6 Results of Traffic Flow Data at Hinboun Bridge

Supervisor : Saisoungkheun ; Surveyor: Viengkhone & Bolisouthchai
Location : Km 280+400 (A)+(B)
Direction from : Vientiane to Savannakhet (Km 71 - Km 346)
Date : 5/11/2019 - 9/11/2019, 3 Day Time period : 24 h
Weather: Sunshine; Event: Normal

Straight line Km 280+400
Vientiane Capital — A — B — Savannakhet

Time Interval	Bicycle	Hand Tractor	Motorcycle	Three Wheels Tuk Tuk, Jumbo	Car,Taxi, Jeep	Pick Up, Van	Song, Thev Mini Buses ≤ 20P	Medium Bus	Heavy Bus	Light Truck 7 Axles ≤ 7t	Semi-Trailer Trailer ≥ 4 Axles
	Bicycle (1)	Hand Tractor (2)	Motorcycle (3)	Tuk Tuk, Jumbo (4)	Car,Taxi, Jeep (5)	Pick Up, Van (6)	Mini Buses (7)	Medium Truck & Bus (8)	Heavy Truck&Bus (9)	Light Truck (10)	Trailer (11)
6:00-7:00	12	31	231	0	33	122	58	12	2	23	23
7:00-8:00	3	14	684	0	61	191	48	7	7	29	34
8:00-9:00	6	35	483	0	83	236	94	10	4	8	32
9:00-10:00	2	19	415	0	78	284	86	23	9	13	37
10:00-11:00	2	24	333	0	107	250	86	24	21	17	48
11:00-12:00	13	14	587	0	101	299	71	19	26	27	35
12:00-13:00	2	10	303	0	93	225	61	19	14	21	41
13:00-14:00	11	14	471	0	120	264	71	29	18	22	31
14:00-15:00	0	5	364	0	118	293	113	19	19	17	35
15:00-16:00	1	9	420	0	106	275	115	13	19	18	46
16:00-17:00	20	20	649	0	96	257	94	24	21	33	49
17:00-18:00	5	7	458	0	93	249	84	21	20	26	50
18:00-19:00	2	5	190	0	65	185	61	13	12	23	47
19:00-20:00	0	3	102	1	28	108	31	12	10	8	27
20:00-21:00	0	1	94	0	48	73	42	7	12	14	31
21:00-22:00	0	0	49	0	34	62	27	5	16	15	30
22:00-23:00	0	0	45	0	19	49	19	4	20	16	30
23:00-24:00	0	0	36	0	13	38	21	5	32	8	13
00:00-01:00	0	0	23	0	14	29	10	7	79	13	9
01:00-02:00	0	0	14	0	6	16	8	5	47	14	12
02:00-03:00	0	0	5	0	6	22	6	7	17	16	25
03:00-04:00	0	0	7	0	5	15	4	2	4	8	22
04:00-05:00	0	0	9	0	10	13	14	1	1	8	16
05:00-06:00	0	0	51	0	16	35	17	7	4	7	27
Sum	**79**	**191**	**6023**	**1**	**1353**	**3590**	**1241**	**295**	**434**	**404**	**750**

f. Thakhek Straight Line (Km 346+000)

14) While there was a traffic flow counting team was established at Hinboun Bridge, another team also set up a traffic survey station at Km 346+000 near Thakhek town. The survey commenced between 12th to 16th November 2019 for a three-day continuous period. This traffic survey station was close to the T-junction of the National Road No 12.

15) Key summary of traffic survey results at Thakhek station were outlined in Figure and more detailed data was provided in Table . Overall number of vehicle movements were consistent whereas motorcycle was the dominant vehicle class with 8,231 fleets, then pick-up trucks were 4,788 fleets with important 25% contribution and cars were 1,708 fleets. In addition, it was observed that the volume of trailers was relatively high which ten to be primarily related to the road linking to Lao-Vietnam border via National Road No. 12.

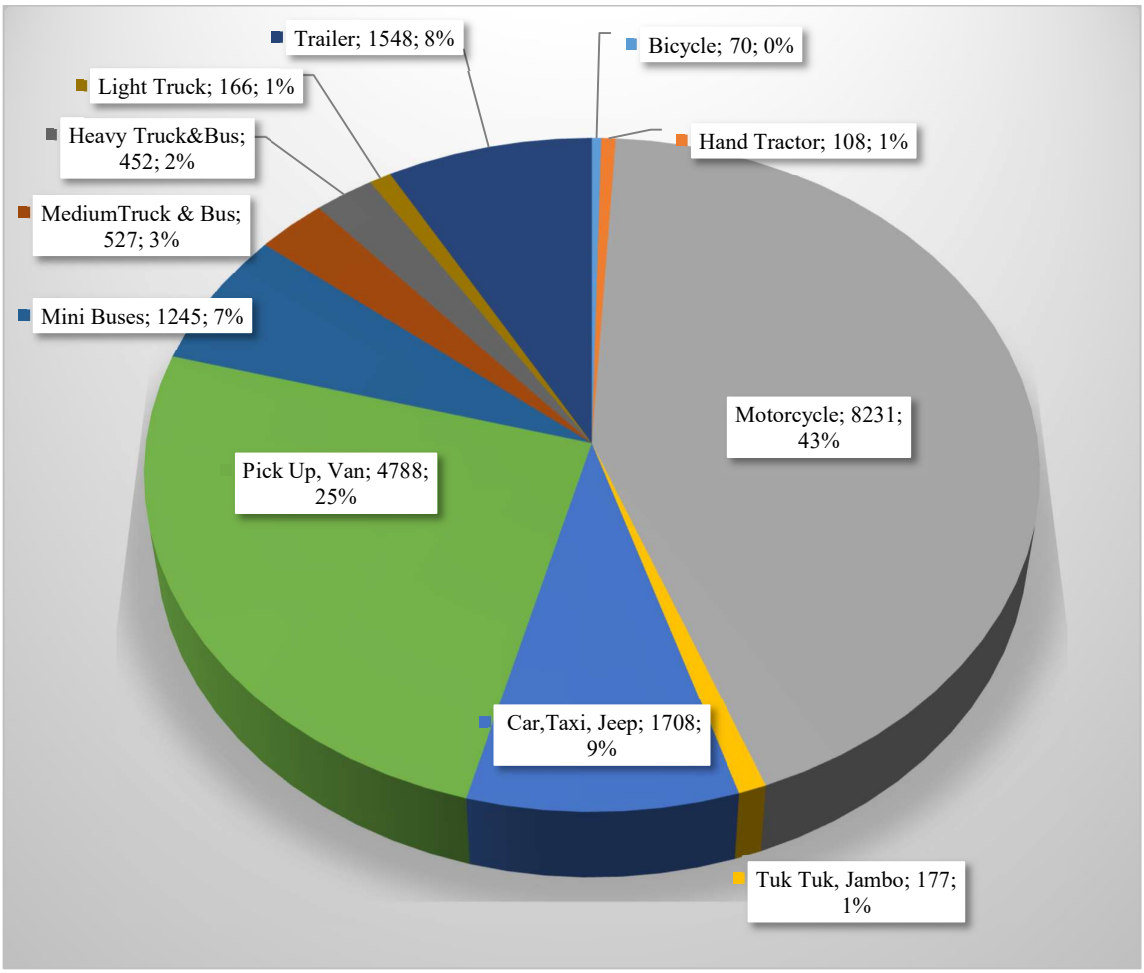
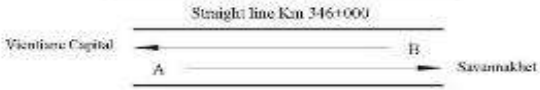


Figure 7: Results of Traffic Flow Counting at Thakhek (Km 346+000)

Table 7 Results of Traffic Flow Counting at Thakhek (Km 346+000

Supervisor : A Thid ; Surveyor: Seugsay & Loethao
Location : Km 346+000 (A)-(B)
Direction from : Vientiane to Savannakhet (Km 71 - Km 346)
Date : 12/11/2019 - 13/11/2019, 3 Day Time period : 24 h
Weather: ☐ Sunshine, Event: ☐ Normal



Time Interval	Bicycle	Hand Tractor	Motorcycle	Three Wheels Tuk Tuk, Jumbo	Car,Taxi, Jeep	Pick Up, Van	Song, Thev Mini Buses x 20P	Med 72 Axles 77 Medium Bus	Heavy Truck Heavy Bus	Light Truck 7 Axles x 77	Semi-Trailer Trailer ≥ 4 Axles
	Bicycle (1)	Hand Tractor (2)	Motorcycle (3)	Tuk Tuk, Jumbo (4)	Car,Taxi, Jeep (5)	Pick Up, Van (6)	Mini Buses (7)	Medium Truck & Bus (8)	Heavy Truck&Bus (9)	Light Truck (10)	Trailer (11)
6:00-7:00	0	7	451	13	93	153	25	15	7	5	60
7:00-8:00	21	12	916	18	71	265	67	28	8	9	70
8:00-9:00	12	16	842	21	115	369	104	38	11	11	61
9:00-10:00	2	8	690	18	133	378	82	42	12	10	79
10:00-11:00	1	8	580	18	122	349	84	29	12	10	150
11:00-12:00	0	7	487	13	119	331	97	35	12	11	96
12:00-13:00	0	8	471	11	150	327	84	41	24	14	91
13:00-14:00	3	9	482	8	135	343	84	37	24	15	93
14:00-15:00	3	5	480	8	149	385	116	42	19	13	94
15:00-16:00	1	3	458	9	116	359	98	39	27	16	125
16:00-17:00	23	7	696	6	149	335	100	31	10	8	109
17:00-18:00	1	11	554	11	114	299	88	21	28	4	81
18:00-19:00	0	4	288	5	69	250	44	20	11	5	65
19:00-20:00	0	0	151	4	52	137	33	11	17	7	67
20:00-21:00	0	0	116	1	37	129	21	16	18	4	55
21:00-22:00	0	0	91	1	31	85	11	7	17	1	51
22:00-23:00	0	0	96	1	32	53	18	15	25	4	49
23:00-24:00	0	0	63	2	13	35	12	11	33	3	37
00:00-01:00	0	0	52	1	17	38	11	9	36	1	22
01:00-02:00	0	0	16	0	8	22	9	15	67	2	21
02:00-03:00	0	0	15	1	4	28	11	5	28	1	9
03:00-04:00	0	0	28	1	11	25	12	5	8	4	12
04:00-05:00	1	0	49	2	7	26	14	8	4	6	16
05:00-06:00	2	3	159	4	11	67	20	8	4	2	26
Sum	**70**	**108**	**8231**	**177**	**1708**	**4788**	**1245**	**527**	**452**	**166**	**1548**

ATTACHMENT 2B ROAD SAFETY RISK ASSESSMENT AND RECOMMENDATIONS

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
1	Km 84+400 Samakkhyxai village	- Narrow road pass through community. - No speed limit sign.		- Widening the road pass through all community. - Install calming sign and rumble strips at all community, school and market along the road. - Install speed limit sign. - Install warning sign - Install stop sign on access road. - Install flashing light. - Install chevrons sign at curve.	
2	Km 91+600 Palai village	- Narrow road and bridge pass through community. - Curve with junction - No speed limit sign.		- Widening the road pass through all community. - Install calming sign and rumble strips road marking at all community and	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
				school along the road. - Install speed limit sign. - Install warning sign - Install stop sign on access road. - Install flashing light. - Install chevrons sign at curve.	
3	Km 93+000 Thabok village	- Narrow road and bridge pass through community. - No speed limit sign. - Lack of adequate sight distances at curve.		- Widening the road pass through all community. - Install calming sign and rumble strips road marking at all community and school along the road. - Install speed limit sign. - Install warning sign - Install stop sign on access road. - Install flashing light. - Install chevrons sign at curve.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
4	Km 101+500 Phonsavan village	- Narrow road pass through community. - No speed limit sign.		− Widening the road pass through all community. − Install calming sign and rumble strips road marking at all community and school along the road. − Install speed limit sign. − Install warning sign − Install stop sign on access road.	
5	Km 117+200 Nongkeun village	- Narrow road and bridge through community. - No speed limit sign. - Lack of adequate sight distances		- Redesign and widening the curve. - Widening the road pass through all community. - Install calming sign and rumble strips road marking at all community and school along the road. - Install speed limit sign. - Install warning sign. - Install flashing light. - Install chevrons sign at curve.	
6	Km 144+300 Houaysiat village	- Narrow road pass through community. - No speed limit sign.		- Widening the road pass through all community. - Install speed limit sign. - Install calming sign and rumble strips at all community and school along the road. - Install stop sign on access road. - Install flashing light. - Install chevrons sign at curve.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
7	Km 146+950 Sivilay village	- Location of traffic sign at roadside not suitable - No road marking. - No speed limit sign.		- Install calming sign and rumble strips at all community and school along the road. - Install stop sign on access road. - Install traffic sign with right location. - Install speed limit sign.	
8	Km 150+500 Sisaad village	- Narrow road pass through community. - No speed limit sign.		- Widening the road pass through all community. - Install speed limit sign. - Install calming sign and rumble strips at all community and school along the road. - Install stop sign on access road.	
9	Km 152+300 Phonesaad village	- Narrow road pass through community. - No speed limit sign. - Lack of adequate sight distances		- Redesign and widening the curve. - Widening the road pass through all community. - Install speed limit sign. - Install warning sign. - Install chevrons sign at curve. - Install flashing light.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
10	Km 160+400 Phonngam village	- Narrow road pass through community. - No speed limit sign.		− Widening the road pass through all community. − Install speed limit sign. − Install warning sign.	
11	Km 188+000 Pakkading village	- Narrow road and bridge pass through community. - No speed limit sign. - Lack of adequate sight distances		− Widening the road pass through all community. − Install calming sign and rumble strips at all community along the road. − Install speed limit sign. − Install warning sign. − Install chevrons sign at curve. − Install flashing light.	
12	Km 194+600 Hadxaykham village	- Narrow road and bridge pass through community. - No speed limit sign.		− Widening the road pass through all community. − Install calming sign and rumble strips at all community and school along the road. − Install speed limit sign. − Install warning sign. − Install flashing light.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
13	Km 204+000 Phonchalern village	- Narrow road and bridge pass through community. - Community and Market close at road side - Junction and access road - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install chevrons sign at curve. – Install flashing light. – Install stop sign on access road.	
14	Km 216+200 Namdua village	- Narrow road pass through community. - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install flashing light.	
15	Km 222+000 Namkhou village	- Narrow road and bridge pass through community. - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install chevrons sign at curve.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
				– Install flashing light.	
16	Km 225+000 Thongnamy village	- Narrow road pass through community. - Community and Market close at road side - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install flashing light.	
17	Km 231+000 Namsang village	- Narrow road and bridge pass through community. - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install chevrons sign at curve. – Install flashing light.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
18	Km 235+500 Viengkham village	- Some sections of the road were narrow road pass through community. - Junction and access road - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install stop sign on access road. –	
19	Km 258+700 Laokha village	- Narrow road pass through community. - Curve with junction - No speed limit sign.		– Widening the road pass through all community. – Install calming sign and rumble strips at all community and school along the road. – Install speed limit sign. – Install warning sign. – Install flashing light. – Install chevrons sign at curve. – Install stop sign on access road.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
20	Km 311+000 Phonkham village	- Narrow road pass through community. - Junction and access road. - No speed limit sign.		− Widening the road pass through all community. − Install calming sign and rumble strips at all community and school along the road. − Install speed limit sign. − Install warning sign. − Install flashing light. − Install stop sign on access road.	
21	Km 325+400 Namdon village	- Narrow road and bridge pass through community. - Access road. - No speed limit sign.		− Widening the road pass through all community. − Install speed limit sign. − Install warning sign. − Install flashing light. − Install stop sign on access road.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
22	Km 326+800 Phonsoung village	- Narrow road and bridge pass through community. - Access road. - No speed limit sign.		- Widening the road pass through all community. - Install calming sign and rumble strips at all community and school along the road. - Install speed limit sign. - Install warning sign. - Install flashing light. - Install stop sign on access road.	
23	Km 333+000 Phonsytha village	- Narrow road pass through community. - Curve with junction - No speed limit sign.		- Widening the road pass through all community. - Install calming sign and rumble strips at all community along the road. - Install speed limit sign. - Install warning sign. - Install flashing light. - Install chevrons sign at curve. - Install stop sign on access road.	
24	Km 334+600 Maisivilai village	- Narrow road pass through community. - Junction - No speed limit sign.		- Widening the road pass through all community. - Install calming sign and rumble strips at all community along the road. - Install speed limit sign. - Install warning sign. - Install stop sign on access road.	

Item	Location	Road geometry/Design characterize/Risks	Pictures	Recommendations	Remarks
25	Km 336+300 Phonsaad village	- Narrow road pass through community. - No traffic signal control at Intersection. - Y Junction at Km 335+900. - No speed limit sign.		− Widening the road pass through all community. − Redesign Y Junction to T Junction. − Install calming sign and rumble strips at school and all community along the road. − Install speed limit sign. − Install warning sign. − Install chevron sign at curve. − Install stop sign on access road.	

ATTACHMENT 3 APPLICABLE GOL REGULATIONS

Law or Decree	Art.	Relating To	Content
Constitution of the Lao PDR People's Democratic Republic (1991, amended No. 63/NA, 08 December 2015	17	Environment in general	"All organizations and citizens must protect the environment and natural resources: land, underground, forests, fauna, water sources and atmosphere."
The Law on Environmental Protection, No. 29/NA, dated 18 December 2012	5	Environmental Protection Policy(s) (new)	The State promotes protection and rehabilitation of social and natural environment through dissemination of regulations and Environmental information, building of awareness and knowledge, training and conducting campaigns for individuals and organizations; both domestic and international, to recognize importance of social and natural environment in daily livelihoods and in strictly implement the Environmental protection regulations, methods and measures.
	10	Impact on Social Environment (new)	An impact on social environment is an adverse impact on human life and health, properties and livelihoods, including shelters of people, and on cultural and historical heritages.
	11	Impact on Natural Environment (new)	An impact on natural environment is an adverse impact on natural ecological fundamentals, natural resources, biodiversity, arable land, water sources, climate change and natural heritages.
	13	Environmental Protection Practices (new)	Environmental protection consists of these key following practices: (i) Environmental prevention(ii) Pollution control(iii) Toxic chemical control and waste disposal (iv) Environmental certification and permission (v) Promotion and public participation
	14	Environmental Prevention (revised)	Environmental prevention is an action of safeguarding and preventing against any natural or manmade events, which may possibly happen, are happening or already happened, leading to damages or depletions of social and natural environment
	19	Strategic Environmental Assessment (new)	A strategic environmental assessment (SEA) is a process of anticipating an impact that may affect social and natural environment, while developing policies, strategic plans, and programs, including considerations towards impacts of climate change. This impact assessment shall determine methods and measures to avoid or mitigate impacts on social and natural environment in order to accomplish sustainable development goals. While developing the policies, strategic plans, and programs, particularly of energy and mining, agriculture and forestry, industry and commerce, public works and transportation, post-

Law or Decree	Art.	Relating To	Content
			telecommunication and communication, information-culture and tourism sector, a strategic environmental assessment shall be conducted, except a plan, which applies to uses of small-scale areas and subject to the Integrated Spatial Plans.
	21	Initial Environmental Examination (new)	Initial Environment Examination (IEE) is a data examination, exploration and analysis to anticipate possible minor environmental impacts, while identifying appropriate methods and measures to prevent, avoid or mitigate environmental impacts from investment projects or activities including considerations of climate change.
	22	Environmental Impact Assessment (revised)	Environment Impact Assessment (EIA) is a process of addressing an issue in order to anticipate impacts that may affect the environment, society and nature, derived from investment projects or activities, along with considerations related to climate change in Lao PDR, and development of reports. Apart from reporting, an Environmental Social Management and Monitoring Plans (ESMMP) will be developed. Both the report and the plan shall be approved by MONRE prior to implementation of investment projects and activities. The process of assessing impacts from the investment project and the activity on the environment, society and nature, shall comply with the specific regulations. A new ESIA decree has been approved by GOL in early 2019.
	29	Pollution control (revised)	Pollution is a chemical substance, radiation, dust, smoke, including noise, light, odour, vibration and heat mixing in the air, soil, and water with concentration exceeding the National Environmental Quality Standards or National Pollution Control Standards, as the results of manmade or nature, affecting human life and health, animals, plants, other living creatures and ecosystem.
	32	National Pollution Control Standards (new)	The National Pollution Control Standards are identification of pollutant concentrations emitted by persons, legal entities and organizations with permission, from any sources into the air, soil or water. The Government shall identify the National Pollution Control Standards based on the proposal from MONRE upon coordinating with line sectors.The national standards are updated in early 2017. PCD is drafting a pollution control regulation and guidelines.
	36	Toxic Chemical Control	The natural resources and environmental sector is directly responsible in coordinating with other line sectors for inspection and endorsement of toxic

Law or Decree	Art.	Relating To	Content
			chemical lists, which are under periodical management by the sector.PCD is drafting a toxic and hazardous substances regulation and guidelines.
	38	Waste Disposal (new)	Disposal of general wastes, particularly rubbish, shall be separation for different purposes such as recycle, reuse, reprocess as new products and elimination with methods and techniques within identified areas based on regulations.PCD is drafting a guideline on 3R and try to promote the activities in pilot areas.
	55	Responsibilities in Environmental Rehabilitation (new)	Persons, legal entities or organization implementing investment projects or activities, which create environmental and social impacts, shall correct, improve, rehabilitate and remunerate damages within the affected areas.
		Environmental Protection Fund (revised)	The State promotes establishment of the Environmental Protection Fund used in environmental researches, prevention, correction, and rehabilitation. Implementation and performance of the EPF shall be stipulated by the specific regulations.
The Water and Water Resources Law No. 23/NA dated 11 May 2017	4	Rights to use water resources	Defines rights, obligations, and procedures to gain approval for use of water resources
	18	Permission for use	Stipulates that medium and large scale uses require feasibility studies, EIAs, and mitigation plans, before permission is granted for use of the resource
	22	Principles in water resource development management	Stipulates that water resource development must be consistent with national and sector plans, must ensure preservation of the natural beauty of the resources, and must protect against harmful effects of water
The Forestry Law No. 06/NA dated 24 December 2007	5	Policy on forest and forest land	The GOL has the policy to preserve, regenerate, and develop forests and forestland to help preserve the environment, water resources, biodiversity, and people's livelihoods.
	9to13	Forest types	Classify the various types of forests according to use, including forests for village use
	26	Preservation of water resources in forest zones	Stipulates the preservation of water resources in forest zones for those areas where waterways originate and flow, including strict management and regulations to control logging, shifting cultivation, and destructive forest uses
	70	Conversion of forestland	Stipulates that forest land can be converted to other land type If it brings a high level of benefits to the nation and to livelihoods of the people, and is included in the national development plan

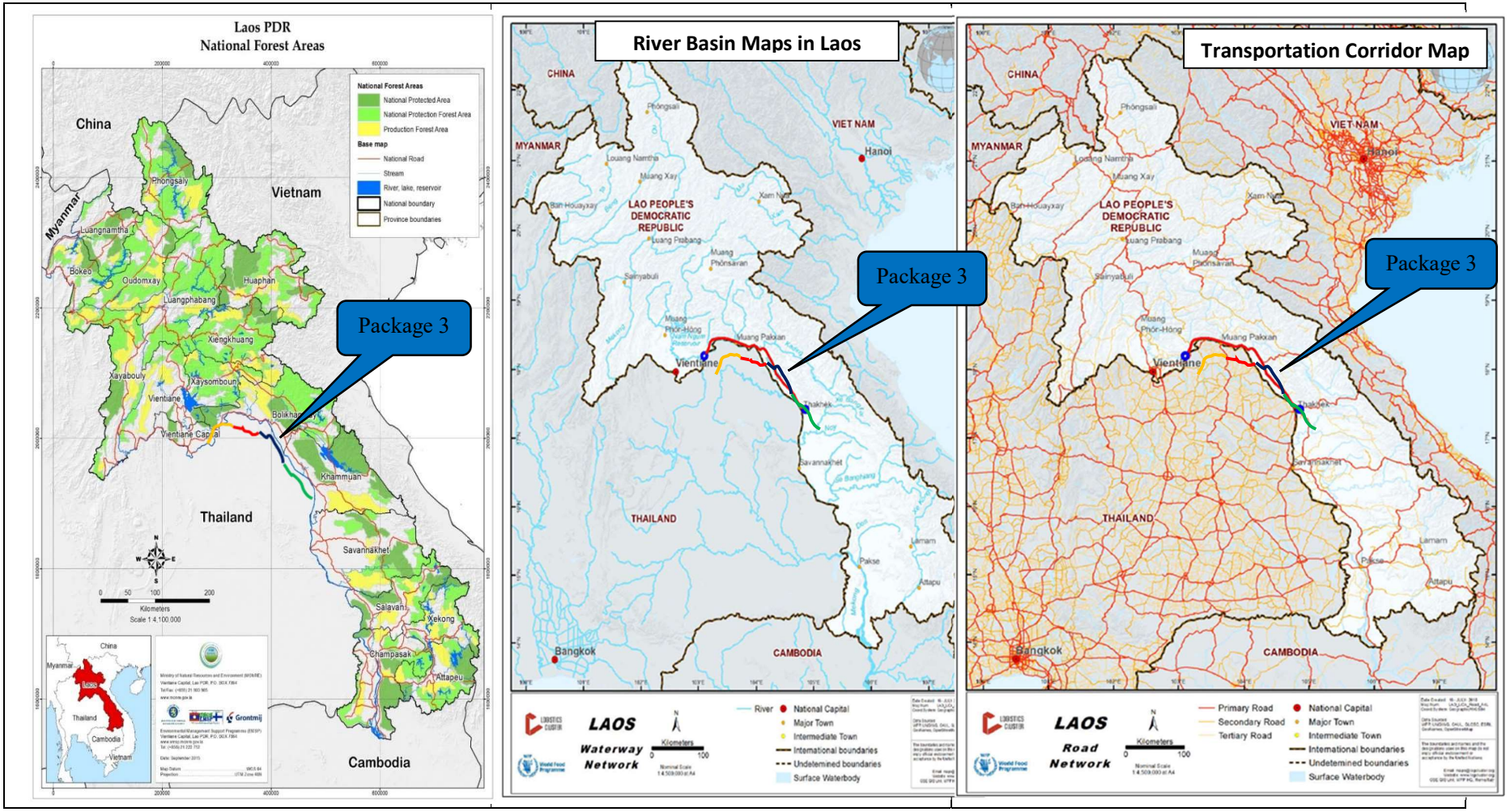
Law or Decree	Art.	Relating To	Content
	71	Types of converted forestland	Stipulates that for uses such as dam construction, the timber and forest resources to be harvested in those areas are property of the State
The Law on Aquatic and Wildlife Animals No. 07/NA dated 24 December 2007	31	Use for Household purposes	Allows use by village households of wildlife and aquatic species in the common and general category list in particular seasons or permitted areas, using tools or equipment that do not adversely affect habitats or compromise the species population.
	32	Customary Use	Allows use of wild life or aquatic species in the common and general category list by village households for "necessary cultural beliefs."
	52	Prohibitions	Prohibit staking of wildlife, including parts of the animals, from their habitats; tormenting wildlife and aquatics; illegal catching, hunting, trading and possession; catching aquatic and hunting in conservation zones, in breeding season, or when pregnant; devastation of habitats and feeding zones.
Land Law, No. 04/NA, dated 21 October 2003	6	Protection of Land and Environment	Declares that all individuals and organizations are obliged to protect the land from degradation,
	14	Changes in Land Category	Land use can be changed if it does not cause social or environmental harm and if prior approval is obtained from the authorities.
Decree on Land Lease or Concession, No. 135/PM, dated 25/5/2009	39	Obligation of Person or Legal Entity Who Leases or Obtains Concession	The person or legal entity that leases land or obtains a concession is obligated, among other things, "not to cause any damage to the quality of land and negative impact to the natural environment and the society."
Law on Public Roads 3April 1999	15	Public Road Construction	Public road construction refers to the building of various public roads as defined in Article 5 of this law. The public road contractor shall perform the work in accordance with design documents, and shall ensure quality, safety and environmental protection
	16	Maintenance and Repair of Public Roads	Maintenance of public roads means to follow up, control, and check on the conditions of public roads in order to provide regular maintenance, such as: grass-cutting, road surface cleaning, sewage draining, and cleaning of bridges and other road appurtenances. Repair of public roads means to maintain, repair and reinstate damaged roads in compliance with the design, including routine repairs, periodic repairs and urgent repairs.
	19	Compensation for Land Acquired for	If, in the construction of various kinds of public roads, it is necessary to use land that is legally owned by a private person or by an organization,

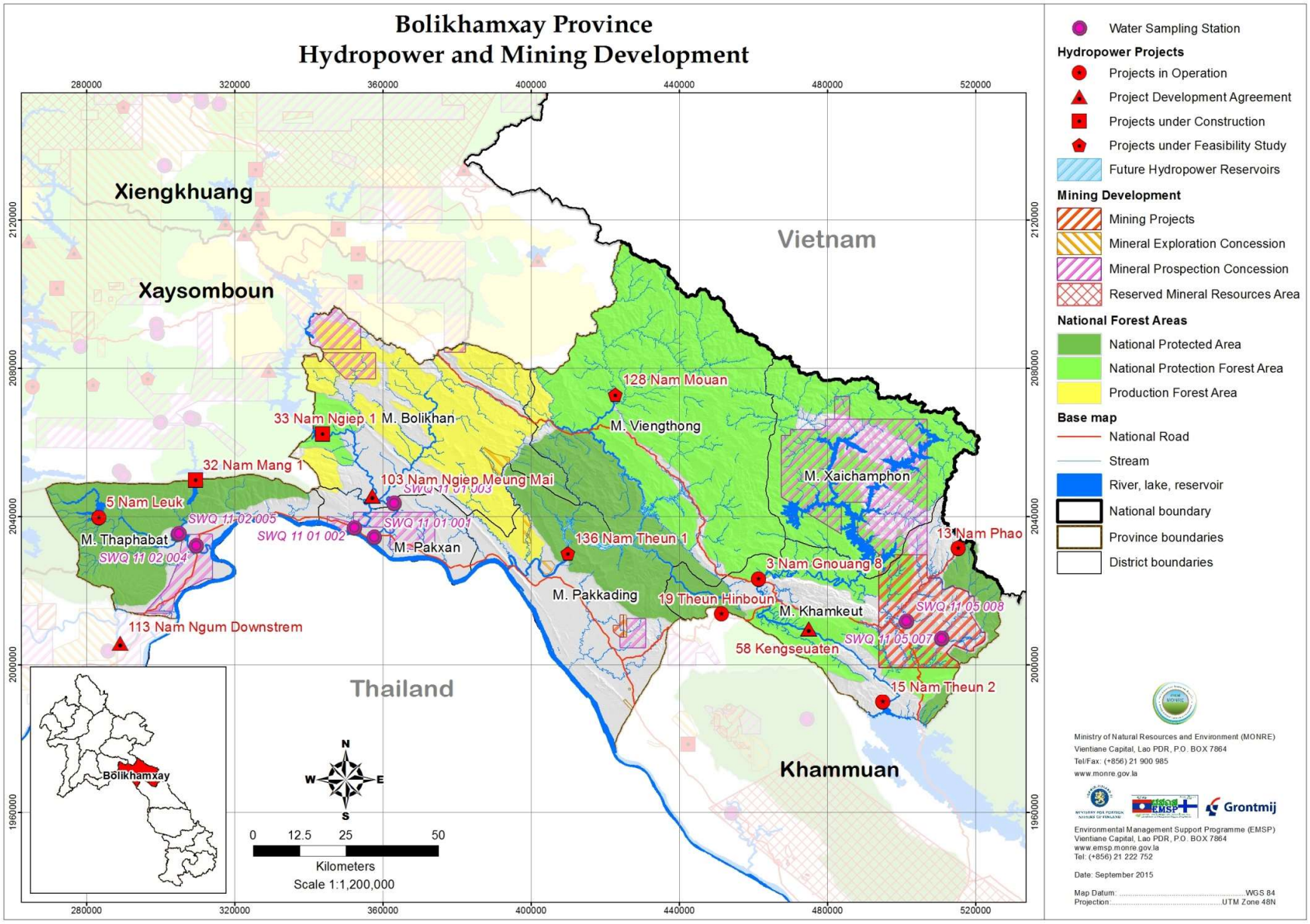
Law or Decree	Art.	Relating To	Content
		Public Road Activities	the owner of the expropriated land used for public road construction shall receive reasonable compensation.
	43	Criminal Sanctions	Any person breaching any provision of this law, such as: serious violation of principles relating to public road activities, or to the maintenance, repair, or use of public roads; destruction of road appurtenances, road structures, delimitation areas, or safety-limit areas; falsification of registration and business documents; violation of construction principles causing damage to the public, or to the life, health or property of other persons; and abuse of position for personal interest; shall be subject to criminal prosecution and shall compensate for damage caused by him.
Decree on environmental Impact Assessment for investment project No.21/GOL 31 January 2019		Stipulates the need for Environmental Impact Assessment	This Decree provides rules, regulations and measures on management and monitoring implementation of environmental impact assessment activities to make sure that such activities are proceeded correctly with transparency and in concerted form with purpose to protect[environment], mitigate [and] remedy impacts on environment, ensuring that the compensation is reasonable, relocation and occupational resumption and restoration of livelihood of the affected people is improved more than before, making management and use of the natural resources is efficient, securing the rights and interests of the nation and the people, contributing to the implementation of the National Social and Economic Development Plan in the direction of green and sustainability.
The National Heritage Law No.08/NA dated 9 November 2005	**33**	Suspend the activities and report to concerned sectors	The Project is required to immediately report to the local administration and the concerned information and culture sector if any national heritage is found during the implementation of any activities. The Company shall suspend such activities until an approval to proceed is granted from the mentioned sector.
	38	purchase or sale of national cultural and historical heritage	Stipulates that any purchase or sale of national cultural and historical heritage by the individuals or Project need to be approved by the cultural and information sector.

Law or Decree	Art.	Relating To	Content
	42	development in the national cultural and historical heritage areas	Provides that any socio-economic development activities including infrastructure development in the national cultural and historical heritage areas or places where it is suspected that there is any national cultural and historical heritage shall obtain prior approval from the Ministry of Information and Culture, as well as identifying necessary measures to protect such heritage from damages. The Project is prohibited from causing damages to national cultural and historical heritage such as destroying archaeological and anthropological sites and, changing the condition of the natural heritage area to other conditions.
The Decree on National Environmental Standards, No 81/GOL dated 02 February 2017	**10**	Surface Water Quality Standards	Determines the National Surface Water Quality Standards for 5 different classes of waterways.
	11	groundwater quality standards	Determines the groundwater quality standards
	14	effluent limit values	Determines the effluent limit values for different activities
PM Decree on the Compensation and Resettlement of Villagers by Development Projects, No. 84/GOL dated 5 April 2016	**7**	Compensation Plan	The Project is required to formulate a Compensation Plan prior to the implementation of the Project or signing a Concession Agreement by collecting the baseline data on the affected people including the list of compensation rate for the preparation of an Environmental and Social Monitoring and Management Plan (ESMMP). The approval date of the ESMMP is the registration date of the affected people's rights.
	17	an Environmental and Social Impact Assessment (ESIA) report and the ESMMP	The Project is obliged to: i) develop an Environmental and Social Impact Assessment (ESIA) report and the ESMMP in Lao language that are accurate and in accordance with relevant technical guidelines for approval by the Ministry of Natural Resources and Environment (MONRE) prior to commencing the construction or signing the Concession Agreement; ii) strictly follow its ESMMP as specified in the Concession Agreement, Environmental Certificate as well as ensuring that the affected people are involved in all processes related to compensation, resettlement and livelihood development; iii) be responsible for the expenses of activities that are related to the ESIA and, environmental and social monitoring including compensation, resettlement and livelihood development of affected villagers; iv) be accountable for its collected data and disclose this to the Government of Lao PDR and the public; v) regularly report the situation and progresses related to the compensation, resettlement and

Law or Decree	Art.	Relating To	Content
			livelihood development to the Committee on Resettlement and Compensation and MONRE.
PM Order on Enhancing the Management and Inspection of Timber Exploitation Business No. 15/PM dated 13 May 2016	**4.3**		Strictly prohibit the authorisation of any Project developer or contractor of any infrastructure development project to harvest timber. The GOL is directly responsible for the timber harvest and sales.
	5		The Project is strictly not allowed to carry out any survey and timber harvesting in the project development area without prior approval from the GOL.

ATTACHMENT 4 FORESTS AND RESOURCES IN BOLIKHAMXAY AND KHAMMOUANE PROVINCES




Bolikhamxay Province
Hydropower and Mining Development
Xiengkhuang
Xaysomboun
Vietnam
Thailand
Khammuan
128 Nam Mouan
33 Nam Ngiep 1
M. Bolikhan
M. Viengthong
32 Nam Mang 1
103 Nam Ngiep Meung Mai
M. Xaichamphon
5 Nam Leuk
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SWQ 11 01 003
SWQ 11 01 001
SWQ 11 01 002
M. Pakxan
136 Nam Theun 1
131 Nam Phao
M. Thaphabat
SWQ 11 02 004
3 Nam Gnouang 8
M. Pakkading
19 Theun Hinboun
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SWQ 11 05 008
SWQ 11 05 007
113 Nam Ngum Downstrem
58 Kengseuaten
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Water Sampling Station
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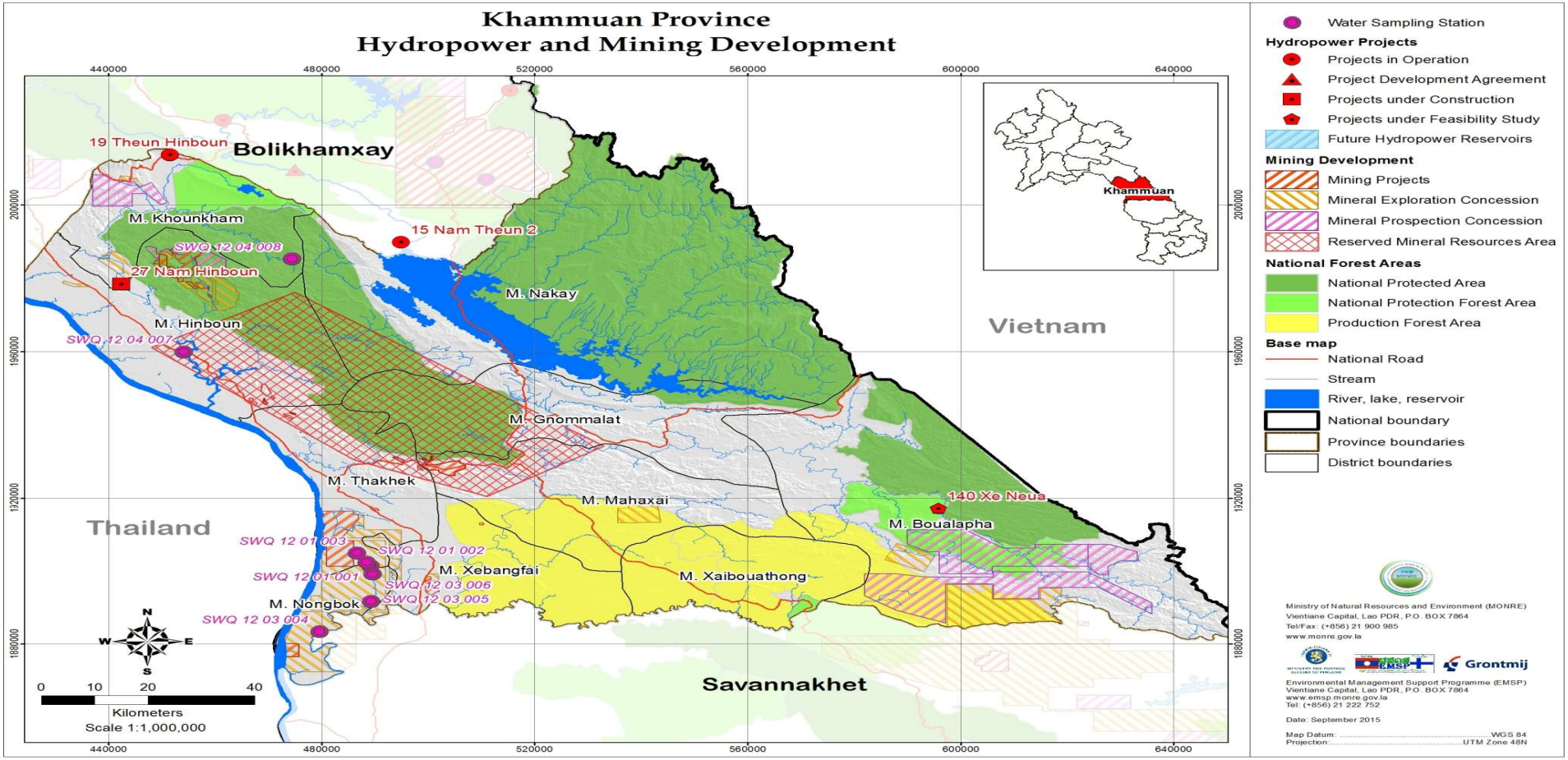
Projects in Operation
Project Development Agreement
Projects under Construction
Projects under Feasibility Study
Future Hydropower Reservoirs
Mining Development
Mining Projects
Mineral Exploration Concession
Mineral Prospection Concession
Reserved Mineral Resources Area
National Forest Areas
National Protected Area
National Protection Forest Area
Production Forest Area
Base map
National Road
Stream
River, lake, reservoir
National boundary
Province boundaries
District boundaries
Ministry of Natural Resources and Environment (MONRE)
Vientiane Capital, Lao PDR, P.O. BOX 7864
Tel/Fax: (+856) 21 900 985
www.monre.gov.la
Environmental Management Support Programme (EMSP)
Vientiane Capital, Lao PDR, P.O. BOX 7864
www.emsp.monre.gov.la
Tel: (+856) 21 222 752
Date: September 2015
Map Datum: WGS 84
Projection: UTM Zone 48N


Khammuan Province
Hydropower and Mining Development
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Bolikhamxay
M. Khounkham
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27 Nam Hinboun
15 Nam Theun 2
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M. Hinboun
SWQ 12 04 007
Vietnam
M. Gnommalat
M. Thakhek
M. Mahaxai
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Thailand
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Khammuan
Water Sampling Station
Hydropower Projects
Projects in Operation
Project Development Agreement
Projects under Construction
Projects under Feasibility Study
Future Hydropower Reservoirs
Mining Development
Mining Projects
Mineral Exploration Concession
Mineral Prospection Concession
Reserved Mineral Resources Area
National Forest Areas
National Protected Area
National Protection Forest Area
Production Forest Area
Base map
National Road
Stream
River, lake, reservoir
National boundary
Province boundaries
District boundaries
Ministry of Natural Resources and Environment (MONRE)
Vientiane Capital, Lao PDR, P.O. BOX 7864
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EMSP
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Environmental Management Support Programme (EMSP)
Vientiane Capital, Lao PDR, P.O. BOX 7864
www.emsp.monre.gov.la
Tel: (+856) 21 222 752
Date: September 2015
Map Datum: WGS 84
Projection: UTM Zone 48N

ATTACHMENT 5 KEY ISSUES AND MITIGATION MEASURES FOR C-ESMP AND SITE SPECIFIC ALIGNMENT SHEET FOR PACKAGE 3

A5.1 Introduction

1. This Attachment presents the Environmental and Social Management Plan (ESMP) of NR13S (Project-ESMP) both in the form of issues and mitigation matrix (Table A5.1)[1] and the Alignment Sheet (Table A5.2)[2] to be applied for all OPBRC packages. This Attachment provides technical guidance for the preparation, approval, implementation, and monitoring of the contractor's ESMP (C-ESMP).

2. In addition to this Attachment, the Project-ESMP also includes the environment and social code of practices (ESCOP in Attachment 6); the code of conduct on gender-based violence and violence against children (COC in Attachment 7); forms for accident reporting and grievance redress mechanism (Attachments 8 and 9); and other measures described in the ESMP report (Section 5) to be included in detailed design (DD) and bidding/contract documents (BD/CD) and those related to grievance redress mechanism (GRM) and the ESMP implementation and budget arrangement. Section A5.2 briefly highlights ESS requirements to be considered during DD while Section A5.3 highlights the requirements related to GRM. The contractor will also be required to maintain close consultation with local communities and operationalize its GRM in connection with that of DPWT and EDPD/PTRI.

3. The Project-ESMP is also closely connected to the Resettlement Action Plan (RAP) and the Ethnic Engagement Plan (EGEP) to be cleared by World Bank (WB) as well as the approval conditions of the Government of Lao PDR (GOL) for the Initial Impacts Examination (IEE) and issuance of the Environment and Compliance Certificate (ECC) and other regulatory authorities attached to any permits or approvals for the Project. These requirements will be considered during the preparation and approval of the C-ESMP and its subplans. Preparation and implementation of the C-ESMP is the contractor responsibility while those for RAP/ARAP and EGEP are the responsibility of GOL.

4. Since this is a 10-year OPBRC, the contractors will be responsible for implementation of the mitigation measure during the first 2-3-year construction phase as well as the following 7-8-year operations and maintenance (O&M) while the construction supervision consultant and/or field engineer (CSC/FE) will be responsible for approval of the C-ESMP and day-to-day monitoring of its implementation compliance. The implementation cost of the C-ESMP will be part of the OPBRC cost while that for RAP and EGEP will be responsible by GOL.

5. During bidding, the bidder will be required to prepare a Management Strategy and Implementation Plan to manage the key environmental, social, health and safety (ESHS-MSIP) risks and impacts. The ESHS-MSIP will collectively comprise an indicative C-ESMP describing the proposed mitigation measures to address environment and social (E&S) risks and impacts. The final C-ESMP which will be prepared by the contractor and approved by

[1] The issues and mitigation measures are prepared in line with the requirements outlined in the Environment and Social Management Framework (ESMF) of the second Lao Road Sector Project additional financing (LRSP2-AF)
[2] Table A5.2 is to be applied to Package 3 of the OPBRC contract to be financed by World Bank

PMU/DOR and/or CSC/FE. The C-ESMP may include a number of plans/subplans as agreed between the contractor and CSC/FE and scope of the plan/subplan is provided in Part 3 of the ESCOP (Attachment 6).

6. PMU/DOR and EDPD/PTRI will ensure that (a) the recommendations on road safety and on local flooding and GRM as provided in Sections A5.2 and A5.3 will be integrated into the detailed designs and (b) the guidelines for preparation of C-ESMP provided in Attachments 5, 6, 7, 8, 9 are included in the bidding document (BD) and contract document (CD). PMU/DOR and EDPD/PTRI will also establish a GRM process at MPWT, DPWT, and contractor levels and ensure that the contractor establish and maintain close relations with local authorities and local communities.

A5.2 Key Mitigation Measures to be Considered during Detailed Design

(a) Road safety

7. A road safety assessment was prepared in late 2019 while preparation of DD and draft BD/CD are on-going. Based on the road safety assessment and discussion during appraisal of NR13S the following measures will be considered:

- Include the "25 blackspot" recommended in the road safety assessment (Attachment 2b) in the DD, especially those related to installation of appropriate signs, taking into account the recommendations provided in the road safety audit report and also the technical discussion and final agreement between AIIB and MPWT.
- In addition, EDPD/PTRI will work with DPWT and the Department of Transport (DOT) to plan and implement a road safety campaign and pilot activities to promote knowledge and understanding of local road users on road safety regulations and good practices as well as to encourage active participation of local community especially children and women in the road safety activities in area near schools and hospitals located along the NR13S.
- EDPD/PTRI will also make an effort to provide knowledge and support to DPWT of BKX to enhance their capacity on road safety at community level and ensure proper road rehabilitation including clear vegetation within the Corridor of Impact.

(b) Local flooding during construction and operations

8. Installation of pipe culvert and/or raising grade level of road segment could help improving flood resilience, however, measures will be needed to mitigate the potential impacts on flooding during construction and/or operations. During detailed design, construction, and maintenance, the following actions will be considered:

- ***Mitigation for localised flooding:*** Drainage close to residential areas to be re-routed to appropriate existing drainage infrastructure and / or natural water course that can adequately deal with flows; Implementation of temporary flood control measures during the construction phase to safeguard from any unpredicted rainfall events; and Flood mapping to be completed to assist with the production of inundation maps for localised area and consequently used for urban planning.
- ***Mitigation for roadway flooding:*** Stormwater drainage and channels will need to be adequately designed to be able to adequately control flow on a regular basis. This is particularly relevant for urban catchments which, modelling suggests, exhibit a

'peaky' response due to the high levels of impermeable surfaces. New drainage infrastructure should be integrated with existing drainage where possible; Stormwater drainage and channels will need to be regularly cleared of rubbish and other debris; Construction of overflow drainage systems to adequately deal with irregular high rainfall events.

- ***Mitigation for flow alteration:*** Ensure adequate drainage measures are implemented to approximate natural flow including temporary construction access roads and especially for sections of the road crossing wetlands (box culverts or viaducts recommended); Ensure temporary construction access roads that are no longer required are removed in a timely manner; Phased-construction in flow sensitive areas such as wetlands to minimise flow disturbance; and Plan construction over flow sensitive areas during low flow to minimise flow disturbance.

A5.3 Community Consultation and GRM

9. To mitigate potential impacts on local community, community consultation will be made throughout the OPBRC services while grievances will be addressed at the village, district, province, and national levels. The GRM principles and process described in Section 7 of the ESMP report will be applied at all Project levels including contractors. Grievance related to safeguard issues from ethnic groups that result from Project activities will be resolved by the Grievance Redress Committee (GRC). At each level grievance details, discussions, and outcomes will be recorded in a grievance logbook, and the data provided to the GRC for recording in the *'Grievance and Complaints Logging System' (GCLS).* Status of grievances submitted, and grievance redress will be reported to DPWT management through the monthly reporting as generated by the GCLS. The complainant also retains the right to bypass this procedure and can address a grievance directly to the EDPD/PTRI Office or the National and Provincial Assembly, as provided for by law in Lao PDR as well as to the World Bank through the *World Bank's Grievance Redress Service (GRS).* Key requirements can be highlighted below.

(a) The GRM process

10. This will be operated as follows:

- The EDPD/PTRI at the MPWT in Vientiane will host the GCLS.
- In each Project Province, the Environment and Social Unit (ESU) under the DPWT—who are responsible for monitoring contractors—will assemble records of all complaints, and supply them to the EDPD/PTRI either directly, or by entering into the GCLS.
- For each province, a 'Grievance Redress Committee' (GRC) will be established. The GRC will nominate a secretary who is responsible to monitor and facilitate resolution of complaints.
- The affected peoples (AP) (or his/her representative) may submit his/her complaint in a number of ways e.g. by written letter, phone, SMS messages and email to the GRC or, alternatively, raise his/her voice in a public or individual meeting with project staff.

11. Before construction, PMU/DOR and EDPD/PTRI will establish a GRM mechanism and disseminate information to the public, local communities, and contractor. During construction, contractor will be required to regularly conduct consultation with local community and report to DPWT on GRM implementation. The status of submitted grievances and grievance redress will be reported to Project Manager through the monthly report (see Attachments 8 and 9 for forms).

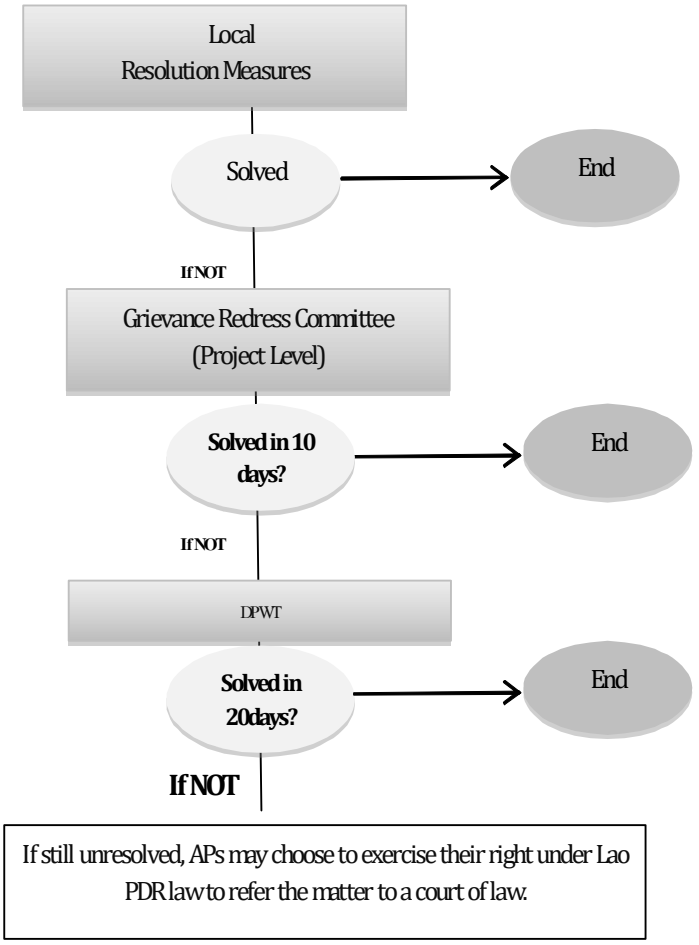
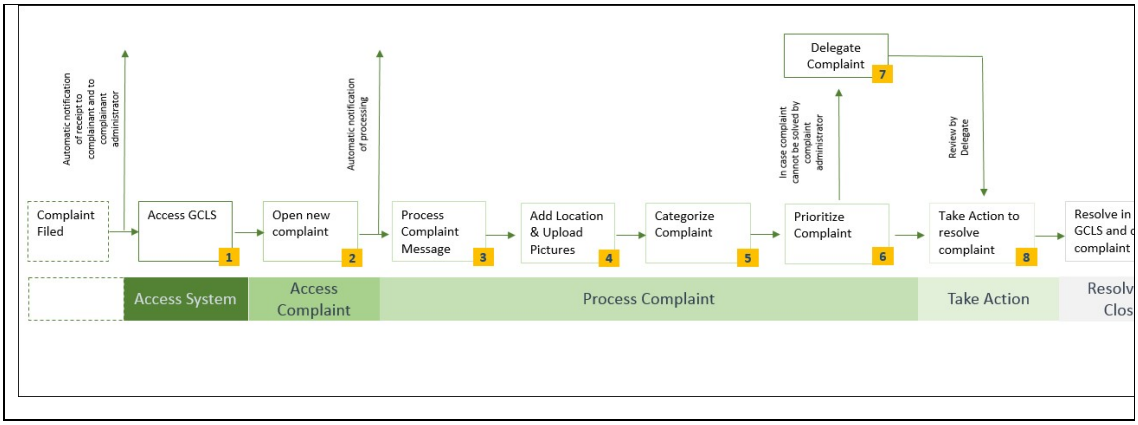
Figure 0-1: GRM Process for the NR13 South Project (see main ESMP report)	**Remarks**
	*The GRC will meet to try and resolve the matter at community level and make a recommendation within 7-10 working days from receipt of complaint. If there is no decision after 10 days, the AP can refer the complaint to the Director of DPWT in the province who will then address the complaint and respond to the complainant within 20 days. *All submitted complaints and grievances will be entered into the GCLS within two working days of being received by the PMU and ESU/DPWT. Each complaint and grievance will be ranked, analyzed and monitored according to type, accessibility and degree of priority. The status of grievances submitted, and grievance redress will be reported by ESU/DPWT in collaboration with PMU. The GCLS web site will display data on resolution rates which will enable the communities to be kept informed of progress of resolution of grievances. Individuals will be notified within 5 working days of the status of their grievance once it has been addressed by the appropriate parties.

Figure 0-2: GCLS process as part of the GRM



A5.4 Implementation Arrangement

12. The Project-ESMP implementation arrangement, capacity building and training, and budget arrangement will be implemented according to Section 8 of the ESMP report. To ensure effective implementation of these activities on the ground, priority actions will be as follows:

- DPWT will establish a Monitoring Working Groups (MWG) comprising ESU/ DPWT, PONRE, LWU, and other related local authorities to be responsible for undertaking periodic monitoring of the ESMP, ARAP, and EGEP implementation including GRM tracking and Contractor performance of the approved C-ESMP.
- EDPD/PTRI will (a) provide specific guidelines and more extensive training and capacity building on occupational and community health and safety (OCHS) to DPWT, PONRE, contractors, and the MWG, including ways for achieving effective site management and use of Personal Protection Equipment (PPE), active participation of local communities, and effective application of GRM record; (b) review/revise the current monitoring and reporting forms to enhance effectiveness of the monitoring and reporting process; and (c) ensure that adequate budget can be transferred to the ESU/DPWT and the MWG and timely submission of the ESS monitoring report.

Table A5.1 Key issues and mitigation measures during preconstruction, construction, and O&M phases for Package 3

*For NR13S, the CSC/FE will be the Implementation Support and Works Supervision Consultant (ISWS) to be mobilized by the Project Management Unit (PMU) of the Department of Road (PMU/DOR)

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
Pre-construction Phase					
P-1	Relocation of small structures and facilities and small land acquisition may cause adverse impacts on local land user and/or local people, especially the vulnerable ethnic groups (VEG)	• RP has been prepared. AIIB clearance of the RP will be required before implementation. • EGEP has been prepared. AIIB clearance of the EGEP will be required before implementation. • Establish and operationalize Project Grievance Redress Mechanism (GRM). • PMU/DOR and EDPD/PTRI will assist the local authorities and ensure effective and timely implementation of RP. • EDPD/PTRI will implement EGEP. •	• PMU/DOR • EDPD/PTRI • DPWT	• Number of related complaints. • Number of unresolved complaints. • GRM record •	
P-2	Relocation of public utilities	• Early consultation with the public utility owners/organizations and local community since it will involve relocation cost. • PMU/DOR to prepare a Public Utility Relocation Plan (PURP) and take appropriate actions to minimize impacts on local peoples. •	• PMU/DOR • CSC/FE • DPWT	Timely completed and implemented the PURP.	This can be part of the works site clearance plan
P-3	Works execution can increase dust, noise, vibration, and other impacts on local environment and local community	• Contractor will prepare C-ESMP and ESCOP and COC. • CSC/FE will approve the C-ESMP	• CSC/FE • PMU/DOR • DPWT • Contractor	See indicators under construction below	See below and ESCOP
P-4	UXO risk	• Even though the risk is low, but consultation with local community/ agency will be made. •	• CSC/FE • PMU/DOR • DPWT	No accident due to UXO	Also see borrow pits plan in ESCOP

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
			• Contractor		
P-5	Others	• Contractor includes mitigation measures in detailed designs to mitigate potential negative impacts during O&M, esp. those related to road safety risk and local flooding. • The detailed design includes 1) pollution control structures for preventing water contamination by spills from transport accidents or from contaminated run-off, detention ponds, drainage systems, and any wastes generated during maintenance and operations, and 2) sound barriers for traffic noise control at sensitive receptors. • PMU/DOR and EDPD/PTRI to ensure that proper measures are included in detailed design (DD).	• Contractor • CSC/FE • PMU/DOR • EDPD/PTRI • DPWT	Measures are considered in DD	Also see and ESCOP
	Construction phase				
C-1	Establishment and operation of worker camps could increase waste generation, water pollution, and disturbance and other direct and indirect social impacts to local community	• Ensure that the sites for campsite are approved by the Project and local authority; Selection of the camp sites should be made through tripartite consultation including community, Contractor, and the project representative. • Ensure that basic camp facilities are provided including security, septic tanks, latrines, safe water supply, mosquito net, blanket, safe paths, fire prevention equipment, etc. • Ensure that (a) washing areas, demarcated and water from washing areas and kitchen is released in sumps, (b) septic tanks of appropriate design have been used for	• Contractor • CSC/FE • PMU/DOR • EDPD/PTRI • DPWT • PONRE	• Location of the work camp should be shown in the alignment sheet and C-ESMP. • No complaints from local authorities and local residents due to location and activities of the worker camps.	Also see related plans in ESCOP Part 3

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		sewage treatment and outlets are released into sumps and must not create a pond of stagnant water, and (c) the latrines, septic tanks, and sumps are built at a safe distance from water body, stream, or dry streambed, and the sump bottom is above the groundwater level. • Details will be included in the C-ESMP under the Worker Camp Management Plan (WCMP). • Contractor prepares and implements the plan to management worker camp. • CSC/FE will review and approve the plan and monitor its implementation and report results to PMU/DOR and DPWT.		*Safe and comfortable living of staff and workers	
C-2	Establishment and operation of construction materials and equipment yards and access roads would increase dust, noise, vibration, safety, and disturbance to local people	• Ensure that the locations are far away from residential areas and watercourses, and take actions to mitigate dust, noise, vibration, water pollution, waste, etc. • Implement measures indicated in related subplans described in ESCOP. • Contractor prepares and implements the plan on environmental quality management. • CSC/FE will review and approve the plans and monitor the implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR • DPWT • PONRE	Proper management of the site and no complaints from local authorities and residents Any related complaint	Also see related plans in ESCOP Part 3
C-3	Disposal of waste generated from project sites may increase health issues to local people and unclean environment	• Recycle metallic, glass waste; burry organic waste in impervious pit covered with soil. • Ensure that waste material is properly disposed off in a manner that does not affect the natural drainage.	• Contractor • CSC/FE • PMU/DOR • DPWT • PONRE	• No health issue occurred. • Clean work sites and worker camp • Any related complaint	Also see related plans in ESCOP Part 3

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• Properly store and dispose hazardous wastes in accordance with ESCOP. • Contractor prepares and implements the plan on waste management. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.			
C-4	Access tracks/ haulage routs	• The moving machinery should remain within the project boundary. • Ensure that the access tracks, which are prone to dust emissions and disturbance to local resident are managed by water spraying daily and the areas sensitive to noise and vibration are managed through enforcement of speed limit control. • After completion of construction work all the damaged roads / tracks will be restored by the Contractor, as it is Contractor's obligations. Ensure that surface run-off controls are installed and maintained to minimize erosion. • Restriction on movement of Contractor's vehicles on designation routes; deploy traffic men at the villages to control the traffic as needed. • Place road safety warning sign visible during the day and the night, and signs marking of the road edge and construction areas. Contractor prepares and implements the plan on traffic and transport management.	• Contractor • CSC/FE • PMU/DOR • DPWT PONRE	No complaints from local residents regarding dust, noise, vibration, road safety, and the usage of the tracks/access roads	Also see related plans in ESCOP Part 3

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• CSC/FE will review and approved the plan and monitor its implementation and report to PMU/DOR and DPWT.			
C-5	Hiring skilled workers from outside of the locality can create social conflicts with local peoples	• Hiring of workers from the local communities as much as possible. • Contractor prepares and implements the plan on labor management.	• Contractor	Number of local workers at the worksite.	Also see related plans in ESCOP Part 3
C-6	Poor workers safety and hygienic conditions may cause accidents and illness of workers and/or create poor health and other social issues to local peoples	• Provide personal protective clothing and equipment for workers especially those handling hazardous materials, (helmets, adequate footwear) for concrete works (long boots, gloves), for welders (protective screen, gloves dungaree), etc. • Contractor prepares and implements the plan on occupational and community health and safety. • CSC/FE will review and approved the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE	Safe working conditions Number of accidents	Also see related plans in ESCOP Part 3
C-7	Water for staff and workers consumption and construction	• Provide adequate and safe water for consumption at sites and work camp. • Contractor prepares and implements the plan on work yard/camp. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR • DPWT	Water tanker and pump provided by the Contractor	Also see related plans in ESCOP Part 3
C-8	Interruption of water supply	• Inform residents and provide water supply as needed. • Contractor takes actions	• Contractor • PMU/DOR • DPWT	No complaint from residents	Also see related plans in ESCOP Part 3

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
C-9	Social issues	• Ensure that conflicts with local authorities and local communities are avoided. • Ensure that consultations and focus group meetings are conducted with both men and women to identify any water related and/or other issues related to the project implementation. • Contractor prepares and implements the Code of Conduct and plan on labor management. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• PMU/DOR • DPWT • Contractor • CSC/FE	No social conflicts due to the subproject activities and/or workers. Any related complaint	Also see related plans in ESCOP Part 3
C-10	Storage of hazardous material (including wastes)	• Provide hard compacted, impervious and bounded flooring to hazardous material storage areas; Label each container indicating what is stored within; Train staff in safe handling techniques. • Contractor prepares and implements the plan on construction site management. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR • DPWT	No health hazard and water contamination occurred. Record of any accidents Any related complaint	Also see related plans in ESCOP Part 3
C-11	Construction activities; handling of fuels, oil spell and lubricants	• Ensure that no contaminated effluent is released to the environment. • Ensure that fuels, oils, and other hazardous substances handled and stored according to standard safety practices such as secondary containment. • Fuel tanks should be labeled and stored in impervious lining and dykes etc • Fire fighting arrangements should be made available	• Contractor • CSC/FE • PMU/DOR • DPWT • PONRE	No oil spill observed Record of any accidents	Also see related plans in ESCOP Part 3

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• Ensure that vehicle refueling to be planned on need basis to minimize travel and chance spills. • Ensure that operating vehicles are checked regularly for any fuel, oil, or battery fluid leakage. • Contractor prepares and implements the plan on construction site management including an Emergency Response Plan. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.			
C-12	Cutting of trees in the right of way where required	• To get agreement of the local community and authority. • Contractor prepares and implements plan for site clearance, excavation, restoration, tree replantation, etc. CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR • DPWT • PONRE	No complaints from local authority and/or residents. Number of trees replanted.	Also see related plans in ESCOP Part 3
C-13	Excavation of channels	• Proper compaction and water sprinkling. • Implement erosion control measures.		Erosion and dust emission minimized	Also see related plans in ESCOP Part 3
C-14	Disposal of excavated material	• Stockpile the excavated material to non-agriculture and in a minimum area and away from storm water. Dispose in consultation with DPWT and community		Minimum loss of habitat	
C-15	Loss of fertile soil and vegetation; impacts on natural vegetation and	• Remove top layer of soil of the location, stock in a proper place and once the construction is finished, put the soil back on that place. The leftover spoil soil should be collected and kept	• Contractor • CSC/FE • PMU/DOR	River banks stabilized and re-vegetated	

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
	embankment erosion along the watercourse.	aside for rehabilitation of the site at later stage of the work; re-vegetate the embankments with indigenous plant species. • Contractor prepares and implements the plan for site clearance and restoration. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• DPWT		
C-16	Dust and smoke emissions	• Cover all truckloads of loose materials during transportation. Water spraying or any other methods are used by the Contractor to maintain the works areas, adjacent areas, and roads, in a dustless condition, as well the vehicle speed not to be exceeded from 30Km/h. Vehicles will be tuned regularly to minimize the smoke emissions. • Contractor prepares and implements the plan for environmental quality management. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR DPWT	Dust and smoke controlled Any related complaint	Also see related plans in ESCOP Part 3 (EQMP)
C-17	Noise pollution, Vibration	• Vehicles and equipment to be fitted, as applicable, with properly maintained silencers. Restrictions on using vehicle horns, loudly playing radio/tape recorders etc. • Contractor prepares and implements the plan for environmental quality management. • Noise monitoring will be carried out at sensitive receptors (eg, schools and healthcare facilities) and appropriate mitigation measures such as noise barriers will be integrated into the detailed design and be installed. CSC/FE will review and approve the plan and the design of sound barriers, and monitor its		Excessive noise generation controlled Any related complaint	Also see related plans in ESCOP Part 3 (EQMP)

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		implementation and report to PMU/DOR and DPWT.			
C-18	Excavation of borrow areas	• Excavate borrow soil up to maximum depth of 0.5m; with slope boundaries. • Implement erosion control measures. • Contractor prepares and implements the plan for quarry and borrow pit management plan. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR DPWT	Borrow area rehabilitated as per specification Any related complaint	Also see related plans in ESCOP Part 3
C-19	Rehabilitation of borrow pits	• Proper rehabilitation of borrow pits; Removal and storage of top 15 cm topsoil having organic materials and spreading it back during restoration of borrow area. • Contractor prepares and implements the plan for quarry and borrow pit management plan. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.		Borrow areas rehabilitated Any related complaint	
C-20	Encountering archaeological sites during earth works	• The subproject field supervisor (CSC or filed engineer) will halt the work at the site and inform to the regional team leader and Archaeological Department immediately. • Contractor to follow “chance finds procedure” in ESCOP. • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT. • Contractor to follow “chance finds procedure” in ESCOP	• Contractor • CSC/FE • PMU/DOR • DPWT	The report from the CSC/FE, community, and contractor	See “chance find procedures” in ESCOP

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.			
C-21	Aesthetic/ scenic quality	• Carry out complete restoration of the construction sites. • Remove all waste, debris, unused construction material, and spoil from the worksites. • Contractor to follow all ESS requirements in ESCOP • CSC/FE will review and approve the plan and monitor its implementation and report to PMU/DOR and DPWT.	• Contractor • CSC/FE • PMU/DOR DPWT	Cleanliness and tidiness of works sites and work camp Any related complaint	See all relevant plans in ESCOP
C-22	Disruption of local businesses and loss of income	• Development of a recruitment system that allows for employment opportunities across all project affected communities. • Develop contracts for casual labourers. • Ensure that legal wages are paid to construction and ancillary workers in line with Lao Labour Law and minimum wages set in the Project area. • Implement a transparent and participatory compensation and livelihood restoration process as per the RP.	• Contractor • CSC/FE • PMU/DOR • DPWT	• Number of local people employed by the Project/contractor in casual and full time jobs; • Compensation and livelihood restoration have been delivered to affected households appropriately. • No complaints from local people.	Refer to RP
C-23	Community health and safety.	• Contract prepares and implements Community health and safety plan.	• Contractor • CSC/FE • PMU/DOR	• Complaints received. Number of unresolved complaints	

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• Implement a project grievance mechanism to record and respond to community complaints. • Implement community health and safety awareness activities. • Provide access over ditches at construction sites to community facilities and install fall protection fences. • Contractor develops the plan on traffic and transport management for construction to identify and minimise risks associated with road transport. • Require driver training for all personnel that is specific to the type of vehicle that will be driven; • Identify suitable speed limits for the primary and ancillary roads and require strict driver adherence, particularly through settlements. • Develop and follow a vehicle maintenance programme.	• DPWT • PONRE	regarding community health and safety. • Number of community trainings conducted. • Number of community members involved in programme.	
	Operation Phase				
O-1	Air emissions from traffic on NR13 South	• Contractor maintains the NR13 South road surface. • CSC/FE supervises the operation and maintenance and reports to PMU/DOR and DPWT in the first 1-2 years of O&M phase. PMU/DOR and DPWT will supervise the maintenance afterwards. • Introduce/encourage use of modern, efficient vehicles. • Introduce encourage use of low emission fuels.	• Contractor • CSC/FE • PMU/DOR • DPWT • Road Users • General Public	Air quality parameters of interest are within the National Environmental Standards.	National Environmental Standards (2017) – Air Quality

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• Do not overload heavy trucks. • Implement an air quality public liaison and complaints procedures. • Regularly monitor air quality.			
O-2	Decongestion of the existing road network	• Beneficial impact, therefore no management measures are proposed.	• N/A	N/A	Positive
O-3	Improvement in regional accessibility and connectivity	• Implement appropriate signage on the NR13 South for urban areas bypassed by the project to identify these urbans as stop-overs for fuel supplies, accommodation etc and to support the demand for goods and services in these areas.	• Contractor • CSC/FE • PMU/DOR • DPWT •	Appropriate traffic and road signs have been installed and maintained.	N/A
O-4	Time travel reduction	• Beneficial impact, therefore no management measures are proposed.	• N/A	N/A	Positive
O-5	Disruption of local access routes as a result of land acquisition for the project alignment (including current vehicle access routes and pedestrian footpaths)	• Implement measures from Pre-Construction and Construction Phases, where applicable. • Severance impacts from the Construction phase will continue into the O&M phase. These will be partly mitigated through the appropriate design and development of crossing areas along the alignment. The level of impact will depend on distance from a crossing area.	• Contractor • CSC/FE • PMU/DOR • DPWT •	The sensitive sections of the NR13 South have been further improved and maintained as required.	National Road Maintenance Fund may apply.
O-6	Community safety and changed traffic conditions	• Ensure accessibility impacts are minimised through provision of pedestrian crossings and alternate routes for vehicles where required. • Conduct community education campaigns to raise awareness regarding the safety practices to help improve road safety behaviours.	• Contractor • CSC/FE • Department of Transport, DOR/MPWT • DPWT	• Road traffic incidents reduced; • Road safety design measures implemented; • Community and general road users	N/A

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
				are aware of road safety and regulations.	
O-7	Traffic related noise and vibration impacts from traffic on communities	• Conduct operational noise monitoring within a year of operations to compare the actual noise performance of the project against predicted noise performance and review model and management measures if required. This should also include a review of the grievance register for any noise complaints. • Maintain the NR13 South road surface. • Prohibit use of truck hydraulic braking in community areas • Implement a noise and vibration public liaison and complaints procedure. • Regularly monitor noise and vibration.	• Contractor • CSC/FE • Department of Transport, DOR/MPWT • DPWT	No complaint on noise pollution.	N/A
O-8	Waste management on the NR13 South	• Install 'No littering' signs along roadway and provide waste bins at rest areas. • Install drainage litter traps along the ROW. • Conduct regular litter collection activities along the roadside and embankments to prevent the accumulation of domestic waste (e.g. water bottles, packaging, vehicle waste (e.g. tyre material, wheel hub caps).	• Contractor • CSC/FE • Department of Transport, DOR/MPWT • DPWT	The NR13 South has been maintained and cleaned.	National Road Maintenance Fund may apply
O-9	Water pollution due to road maintenance on NR13 South	The following road maintenance measures should be applied to minimise water quality impacts of spills from transport accidents or from contaminated run-off, as part of a regular program: • Inspect barriers, fences, erosion and sediment control devices.	• Contractor • CSC/FE • Department of Transport, DOR/MPWT • DPWT	The NR13 South has been maintained and cleaned.	National Road Maintenance Fund may apply

	Activities causing impacts	Mitigation Measures	Responsible Entities	Monitoring Indicators	Remarks
		• Maintain retaining walls to minimise cracks and water damage. • Repair pot-holes and shoulder erosion to minimise risk of vehicle accidents. • Maintain stormwater energy dissipaters and velocity controls on open drains to lower runoff velocity and control soil erosion. • Dispose of accumulated sediment collected from detention ponds, drainage systems, and pollution control structures, and any wastes generated during maintenance operations in accordance with appropriate government requirements. • Use techniques during bridge maintenance such as suspended tarpaulins, vacuum collection or booms to prevent paint spills, solvents and scrapings from becoming waterborne pollutants. • Keep drainage ditches free from accumulated debris.			

Table A5.2 Site Specific-ESMP (Alignment Sheet) for Package 3 (KM190+000 to KM268+000)

*[*Note: The final works and the actual impacts and specific mitigations at each specific site, especially those related to relocation and compensation will be updated per the final design.* To reduce impacts on relocation and compensation, AIIB and MPWT has agreed that the work for this section in some part will be widening of existing road alignment from 9m to 12m where feasible and where resettlement impacts and land acquisition are either unanticipated or minor but some part will keep the original size of 9m without any expansion.]

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
Generic Impacts and Mitigation Measures					
Km190-km268	• Overlay existing alignment 9m and expansion to 12m at some sections • Boxes culvert • ACCESS TYPE A3 • BOX GABIONs • JUNCTION J1,2 • GROUTED RIP-RAPs • Bridges • Permanent Project Engineer camp	• Villages, schools, health centers, temples, cemeteries • Rivers and streams • Fallow forest • Residential and agriculture land	1. Increased incidences of disease, HIV/AIDS infection rate, GBV, social issues and cultural destruction resulting from the influx of construction workers into the region. 2. Potential employment issues due to labour influx from outside project areas. 3. Wastes and spills of hydrocarbons at storage, workcamp, stockyard, parking areas, etc.	1. Comply with project RP 2. Comply with the project ESMP, section 5.7 3. Comply with table A5.1 (C-1, C-2, C-5, C-6, C-7, C-9, C-18, C-19 4. Application of NR13S ESCOP (Attachment 6) 5. Application of NR13S Generic COC on GBV/VAC (Attachment 7) 6. Prepare and implement Worker Camp Management and Operation; Occupational and Community Health and Safety Plans; Traffic Management Plan; Spill Response Plan; Labor Influx Management Plan;	1. Prepare and implement ESS Pre-site Closure Plan; 2. Regular monitoring, maintenance and cutting grasses/brushes growing on both sides of roads; 3. Community training/awareness on road safety; 4. Improvement in regional accessibility and connectivity. 5. EDPD/PTRI and DPWT in consultation with DOT shall conduct road safety meetings and campaigns 6. DPWT shall keep the ROW clear of new encroachment and

[3] LL= Lao Loum, KM= Khmu, HM=Hmong

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
				and Chance Find Procedure	effectively manage existing ROW
KM 190+000 - KM 195+000	• Overlay existing alignment 9m • ACCESS TYPE A3 (9 sections) • BOX GABION (8 sections) • JUNCTION J1 (1 section) • GROUTED RIP-RAP (7 sections) • 3 BRIDGEs	**Village/ Community Areas:** • B. DONEXAY (LL) • B. HADXAYKHAM (LL) • Temple • GASOLINE STION **Rivers/streams:** • HUAY NGOUYAI • HUAY NGOUNOI • HOUAY HADXAYKHAM **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	• Erosion and sediment transport and suspended solid in downstream watercourses; • Long-term water diversion channels resulting in alteration of hydrological regime (flooding in raining season/reduced flow in dry season) poses negative impacts on community aquatic resources and water users/community; • Noise and dust pollution pose risks for impacts ranging from nuisance level to serious health impacts; • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety;	• Refer to Table A5.1 – C-3, #C-4; #C-6; #C-9; #C-11; #C-12; #C-16; #C-17; #C-20; C-21, C-22, C-23	• Refer to Table A5.1: - O-1, #O-2; #O-3; #O-5; O-6, O-7, O-8,

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
			• Potential impact on residential property and land acquisition.		
Km 195+000 – Km 200+000	• Overlay existing alignment 9m • ACCESS TYPE A3 (11 sections) • BOX GABION (3 sections) • JUNCTION J1 (1 section) • GROUTED RIP-RAP (2 sections) • 5 Bus stops	**Village/ Community Areas:** • B. PHONXAY (LL, KM) • School **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	• Noise and dust pollution pose risks for impacts at nuisance level; • Community health and safety; • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety; • Potential impact on residential property and land acquisition.	Refer to Table A5-1: #P-1; #C-2; C-3; #C-4; C-12; #C-16; #C-17; C-22; #C-23.	Refer to Table A5-1: #O-1; #O-5; #O-6; #O-7; O-8;
Km 200+000 – Km 205+000	• Overlay existing alignment 9m • Boxes culvert • ACCESS TYPE A3 (28 sections) • 2 bridges • 4 Bus stops	**Village/ Community Areas:** • B. PHONCHALEUN (LL) • CEMETERY • TEMPLE **Rivers/streams:** • HOUAY NANGMONG	• Noise and dust pollution pose risks for impacts at nuisance level; • Community health and safety; • Temporary impact on local stream hydrology and water quality	Refer to Table A5-1: #P-1; #C-2; C-3; #C-4; C-12; #C-16; #C-17; C-20; C-22; #C-23.	Refer to Table A5-1: #O-1; O-5; #O-6; #O-7, O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
		• HOUAY XAMBOUNGNAI **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	during rainy season and construction period; • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.		
Km 205+000 – Km 210+000	• Boxes culvert • Overlay existing alignment 9m • ACCESS TYPE A3 (13 sections)	**Village/ Community Areas:** • 2 HEALTH CENTRES **Rivers/streams:** • Stream **Land use:** • Fallow forest • Residential land • Agriculture land • Public facility	• Land acquisition; • Potential impact on residential property; • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors particularly the community health center. • Community health and safety; • Changed road conditions during construction impacting on efficiency of travel	Refer to Table A5-1: #P-1; #C-2; C-3; #C-4; C-12; #C-16; #C-17; C-22; #C-23.	Refer to Table A5-1: #O-1; O-5; #O-6; #O-7, O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
			modes and potential road safety. • Potential impact on residential property and land acquisition.		
Km 210+000 – Km 215+000	• Overlay existing alignment 9m and expansion to 12m at some sections • ACCESS TYPE A3 (11 sections)	**Village/ Community Areas:** • B. NAMDEUA (LL, KM) **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	• 20 roadside shops in Ban Namdeua; • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors; • Community health and safety; • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.	Refer to Table A5-1: #P-1; #C-2; C-3; #C-4; C-12; #C-16; #C-17; C-20; C-22; #C-23.	Refer to Table A5-1: #O-1; O-5; #O-6; #O-7, O-8
Km 215+000 – Km 220+000	• Overlay existing alignment 9m and expansion to 12m at some sections • Boxes culverts	**Village/ Community Areas:** • B. NAKHEUANORK (LL) • Temple • 2 Schools	• Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for	Refer to Table 5-1: #C-2; C-3; C-4; #C-11; C-12; #C-16; #C17; #C-20; C-22; #C-23	Refer to Table A5-1: #O-1; O-5; #O-6; #O-7, O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
	• ACCESS TYPE A3 (10 sections) • JUNCTION J1 (1 section) • 2 BRIDGEs • 4 Bus stops	**Rivers/streams:** • HOUAY DEUA2 • HOUAY NATHAT • STREAMs **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	impacts at nuisance to sensitive receptors; • Temporary impact on local stream hydrology and water quality during rainy season and construction period; • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.		
Km 220+000 – Km 225+000	• Overlay existing alignment 9m and expansion to 12m at some sections • ACCESS TYPE A3 (18 sections) • 2 BRIDGEs • 3 Bus stops	**Village/ Community Areas:** • B. NAMKHOU (LL) • B. THONG NA MY (LL, KM, HM) • B. NAM SANG (LL) • Temple • School **Rivers/streams:** • NAM KHOU BRIDGE • NAM SANG	Refer to RP: Section 1.6 for more details on physical impacts including: • Impacts on shops, porches of houses and shops, brick walls, fruit trees, and an electricity pole. • Temporary alteration of water quality and hydrology during construction phase of local streams;	Refer to Table 5-1: #P-1; #P-2; #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16;C-17; #C-20; #C-22; C-23.	Refer to Table A5-1: #O-1; O-5; #O-6; #O-7, O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
		Land use: • Fallow forest • Residential land • Houses/porch of house. • Shops/porch of shop.	• Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors. • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety.		
Km 225+000 – Km 230+000	• Overlay existing alignment 9m and expansion to 12m at some sections • Boxes culverts • ACCESS TYPE A3 (11 sections) • 1 Bus stop	**Village/ Community Areas:** • B. NAM SANG (LL) • 3 Schools • CEMETERY **Rivers/streams:** • 3 Streams **Land use:** • Fallow forest • Residential land • Houses/porch of house	Refer to RP: Section 1.6 for more details on physical impacts including: • 3 porches of shops; • Concrete slaps (total area of 275m^2); • Temporary alteration of water quality and hydrology during construction phase in 3 local streams; • Community health and safety particularly school students using the roads.	Refer to Table 5-1: #P-1; #P-2; #C-2; C-3;C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22; C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
		• Shops/porch of shop	• Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors. • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety.		
Km 230+000 – Km 235+000	• Overlay existing alignment 9m and expansion to 12m at some sections • ACCESS TYPE A3 (18 sections) • 4 Bus stop	**Village/ Community Areas:** • B. VIENG KHAM (LL, KM) • CEMETERY **Rivers/streams:** • NAM SANG **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	Refer to RP: Section 1.6 for more details on physical impacts including: • 1 porch of a shop; • Brick wall with a total length of 480m. • Temporary alteration of water quality and hydrology during construction phase in Nam Sang River; • Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors.	Refer to Table 5-1: #P-1; #P-2; #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22; C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
			• Changed road conditions during construction impacting on efficiency of travel modes and potential road safety.		
Km 235+000 – Km 240+000	• Overlay existing alignment 9m and expansion to 12m at some sections • ACCESS TYPE A3 (15 sections) • JUNCTION J1 (3 sections) • 2 Bus stop • 1 BRIDGE	**Village/ Community Areas:** • B. NAMTHONE (LL) • B. KHONE SONG (LL) • Temple • School **Rivers/streams:** • NAM THONE **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	Refer to RP: Section 1.6 for more details on physical impacts including: • 2 affected houses; • 2 roadside shops; • 10 porches of houses; • 8 porches of shops; • 3 electricity poles; • Four fruit trees; • Temporary alteration of water quality and hydrology during construction phase in Nam Thone River; • Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors.	Refer to Table 5-1: #P-1; #P-2; #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22, C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
			• Changed road conditions during construction impacting on efficiency of travel modes and potential road safety.		
Km 240+000 – Km 245+000	• Overlay existing alignment 9m and expansion to 12m at some sections • Boxes culverts • ACCESS TYPE A3 (10 sections) • 2 Bus stops	**Village/ Community Areas:** • B. NA IN (LL) • Temple • School • CEMETERY **Rivers/streams:** • HOUAY - IN • 2 STREAMS **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	Refer to RP: Section 1.6 for more information on physical impacts including: • 1 roadside shop; • 5 porches of shops; • Concrete slab floor with a total area of 291m^2; • 1 mango tree; • Temporary alteration of water quality and hydrology during construction phase in perennial and seasonal streams; • Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors.	Refer to Table 5-1: #P-1; #P-2; #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22; C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
			• Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.		
Km 245+000 – Km 250+000	• Overlay existing alignment 9m and expansion to 12m at some sections • Boxes culverts • ACCESS TYPE A3 (9 sections) • JUNCTION J1 (2 sections) • 2 Bus stops	**Village/ Community Areas:** • B. NA LIENG (LL, KM) • B. VIENG THONG (LL) • 3 Temples • 3 Schools **Rivers/streams:** • 2 STREAMs **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	• Temporary alteration of water quality and hydrology during construction phase in perennial and seasonal streams; • Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors. • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety.	Refer to Table 5-1: #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22; C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
			• Potential impact on residential property and land acquisition.		
Km 250+000 – Km 255+000	• Overlay existing alignment 9m and expansion to 12m at some sections • ACCESS TYPE A3 (10 sections) • JUNCTION J1 (3 sections) • 4 Bus stop • 1 Bridge	**Village/ Community Areas:** • B. PHON XAI (LL) • B. LAO KHA (LL) • 3 Temples • CEMETERY • 3 Schools **Rivers/streams:** • HOUAY MAENG **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop.	• Temporary alteration of water quality and hydrology during construction phase in Houay Maeng; • Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors. • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.	Refer to Table 5-1: #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22; C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8
Km 255+000 – Km 260+000	• Overlay existing alignment 9m and	**Village/ Community Areas:** • B. PHONSA ART (LL)	• Community health and safety particularly	Refer to Table 5-1: #C-2; C-3; C-4; #C-10; #C-11; #C-12;	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
	expansion to 12m at some sections • ACCESS TYPE A3 (8 sections)	• Temple • School **Rivers/streams:** • No any **Land use:** • Fallow forest • Residential land • Houses/porch of house • Shops/porch of shop	school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors. • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.	#C-14; #C-16; C-17; #C-20; #C-22; C-23.	
Km 260+000 – Km 265+000	• Overlay existing alignment 9m and expansion to 12m at some sections • ACCESS TYPE A3 (4 sections) • JUNCTION J1 (1) • 1 Bridge • 2 bus stops	**Village/ Community Areas:** • B. PHON SUNG (LL) • Temple • School **Rivers/streams:** • HOUAY HE **Land use:** • Fallow forest • Residential land	• Temporary alteration of water quality and hydrology during construction phase in Houay He; • Community health and safety particularly school students using the roads. • Noise and dust pollution pose risks for impacts at nuisance to sensitive receptors.	Refer to Table 5-1: #C-2; C-3; C-4; #C-10; #C-11; #C-12; #C-14; #C-16; C-17; #C-20; #C-22; C-23.	Refer to Table 5-1: #O-1; #O-3; #O-5; #O-6; #O-7; #O-8

Location (every 5Km)	Conceptual Design	Site Description[3]	Potential Impacts (PI)	MMs – Construction Phase (MM-CP)	MMs –Operation Phase (MM-OP)
		• Houses/porch of house • Shops/porch of shop	• Temporary impact on local stream hydrology and water quality during rainy season and construction period; • Changed road conditions during construction impacting on efficiency of travel modes and potential road safety. • Potential impact on residential property and land acquisition.		

ATTACHMENT 6: ESCOP

1. This attachment presents a generic Environment and Social Code of Practices (ESCOP) to be applied during the preparation of the contractor's Environmental and Social Management Plan (C-ESMP) to be prepared and implemented by contractor. This ESCOP is considered part of the Project-ESMP and it will be incorporated into the bidding document (BD) and contract document (CD) while the implementation cost will be part of the contract cost (OPBRC). The ESCOP will be implemented in connected with the code of conduct on gender-based violation and violence against children (COC on GBV/VAC) provided in Attachment 7 and the generic forms provided in Attachments 8 and 9. It has also taken into account the recommendations provided on the road safety (Attachment 2b) and other mitigation measures described in the ESMP report (Section 5) and results from the consultation meetings in late 2019 (Section 7).

2. The Project Management Unit of Department of Road (PMU/DOR) will assign the Construction Supervision Consultant (CSC)[4] and/or Field Engineer (CSC/FE) to supervise and monitor Contractor's compliance with ESCOP on a day-to-day basis while assigning at least one full time staff (the Environment and Social Unit, ESU/DWPT) to be responsible for conducting monthly monitoring and reporting. The Department of Road (DOR), the Environment Research and Disaster Prevention of the Public Works and Transport Institute (EDPD/PTRI), the local authorities (PONRE/DONRE), and local communities will conduct periodic (quarterly and semi-annual) monitoring of contractor performance, as needed. DPWT assisted by CSC/FE will be responsible for review and approval of the C-ESMP and its subplans to be prepared and submitted by contractors and ensuring its compliance during implementation of road maintenance works.

3. *Objective and scope of ESCOP:* The ESCOP aims to mitigate the potential negative impacts of road maintenance works such as increased in air, noise, vibration, waste generation, safety risks, local traffic, etc. which could be mitigated through good environmental and social management and construction practices in general. Site-specific measures and/or plan/subplan can be prepared to address site-specific issues that require specific actions as requested by local authorities, local communities, PMU/DOR, AIIB and/or other financing agencies during the preparation and clearance of the C-ESMP and other safeguard documents (RAP, EGEP). In summary, the ESCOP comprise the following 3 parts[5]:

a. ***Part (1) General Provision and Planning.*** This part describes general provision and basic principles on contract management including roles and responsibility of the project owner (PMU/DOR), contractors, CSC/FE, EDPD/PTRI, and local authorities. It has also incorporated the mitigation measures for the pre-construction phase as proposed in the ESMP report (Section 5).

b. ***Part (2) ESS Specific Requirements.*** This part describes specific environment and social safeguard (ESS) requirements and/or actions as required by AIIB, GOL, and

[4] For NR13S, the CSC will be the Implementation Support and Works Supervision Consultant (ISWS) and this responsibility will be included in the TOR of the ISWS.
[5] The ESCOP has taken into account the requirements described in generic ECOP of the ESMF of LRSP2-AF.

communities during implementation and/or supervision.

c. ***Part (3) Works Management and Monitoring.*** This describes the mitigation measures to reduce potential negative impacts on air, noise, vibration, water, etc. to be implemented during works execution through the preparation and implementation of specific management plans/subplans taking into account the activities, potential impacts, and mitigation measures proposed in the ESMP Section 5.

6. This ESCOP Part (2) has incorporated specific requirements of the AIIB regarding the "chance find procedures" and the "occupational and community health and safety (OCHS)" including other social obligations to ensure safety of workers and local communities. The concerns/suggestions expressed by local authorities and communities during consultation have also been considered.

Part (1): General Provision and Planning

Section (1.1) Contractor responsibility

7. The Contractor is responsible for making best effort to reduce and mitigate the potential negative impacts on local environment and local resident including making payment for all damages that may occur. Performance of the Contractor will be regularly supervised and monitored by the CSC/FE as well as periodic monitored by PMU/DOR (through the ESU/DPWT) and EDPD/PTRI. Results of the ESCOP compliance monitoring will be included as part of the project progress report. Compliance with ESCOP will be required throughout the construction period.

8. For clarity, the term "works" and/or "construction" in this document includes all site preparation, demolition, spoil disposal, materials and waste removal and all related engineering and construction activities.

9. Since this is a 10-year OPBRC, the contractors will be responsible for implementation of the mitigation measure during the first 2-3 year construction phase as well as the following 7-8 year operations and maintenance (O&M) while the construction supervision consultant (CSC) and/or field engineer will be responsible for approval and day-to-day monitoring of the C-ESMP implementation and ensure compliance. The implementation cost of the C-ESMP will be part of the OPBRC cost while that for RAP and EGEP will be responsible by GOL. The ESS requirements described in The Project-ESMP[6] as well as GOL requirements/ conditions during approval of the Initial Impacts Examination (IEE) and issuance of the Environment and Compliance Certificate (ECC) will be considered during the preparation and approval of the C-ESMP and its subplans.

ensure that necessary action has been undertaken and that steps to avoid adverse impacts and/or reoccurrence have been implemented, the CSC/FE, the ESU/DPWT, and/or the Contractors must advise the PMU/DOR and EDPD/PTRI within 24 hours of any serious accidents and/or incidents of non-compliance with the ESCOP that may have serious consequence. In the event of working practices being deemed dangerous either by the CSC/FE, PMU/DOR, EDPD/PTRI, the local authorities, or the other concerned agencies, immediate remedial action must be taken by the Contractors**.** The Contractors must keep records of any incidents and any corrective action taken. The records on non-compliance that could be practically addressed (not cause serious impacts) will be reported to the CSC/FE and PMU/DOR on a monthly basis.

11. The Contractor will be responsible for dealing with any reports/grievance requested by the CSC/FE, PMU/DOR, EDPD/PTRI, Police, or other agencies as soon as practicable, preferably within 24 hours of receipt. The CSC/FE will monitor and ensure that the Contractor has taken appropriate action. Where appropriate, approval of 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 (also see form in Attachment 8).

12. In case the Contractor does not comply with local regulations, PMU/DOR and/or the local authorities will have the power to suspend the construction operations. The Contractor will be responsible for mitigating and/or compensating for any damage and/or adverse environmental impacts during the construction caused by the Contractor.

Section (1.3) Liaising with local authorities and the public

13. Prior to the commencement of project and throughout the construction duration, the Contractor will work closely with the local authorities and other agencies to ensure full compliance with Government regulations and will also provide adequate information on the Project to the general public, especially those that may cause public safety, nuisance, and sensitive areas and the locations of storage and special handling areas. The Contractor will provide information and reporting telephone "Hot Line" staffed at all times during working hours. Information on this facility shall be prominently displayed on site hoardings.

Section (1.4) Community relations

14. The Contractor will assign one community-relation personnel, who will be responsible for building relations with local community and to provide appropriate information and be the first line of response to resolve issues of concern. Contractor will take reasonable steps to engage with residents of ethnic minority backgrounds and residents with disabilities (or other priority groups as appropriate), who may be differentially affected by construction impacts.

15. The Contractor will ensure that local residents nearby the construction sites will be

also be notified of the "Hotline" number, which will operate during working hours. The "Hotline" will be maintained to handle enquiries regarding construction activities from the general public as well as to act as a first point of contact and information in the case of any emergency. All calls will be logged, together with the responses given and the callers' concerns action and a response provided promptly. The helpline will be widely advertised and displayed on site signboards.

16. The Contractor will respond quickly to emergencies, complaints or other contacts made via the 'Hotline' or any other recognized means and liaise closely with the emergency services, local authority officers and other agencies (based on established contacts) who may be involved in incidents or emergency situations.

17. The Contractor will manage the work sites, work camps, and workers in a way that is acceptable to local residents and will not create any social impacts due to workers. Any construction workers, office staff, Contractor's employees, or any other person related to the Project found violating the *"prohibitions*" activities listed in Section (1.5) below may be subject to disciplinary actions that can range from a simple reprimand to termination of his/her employment depending on the seriousness of the violation.

Section (1.5) Prohibitions

18. The following activities are prohibited on or near the Project sites:

- Cutting of trees for any reason outside the approved construction area; Hunting, fishing, wildlife capture, or plant collection; Buying of wild animals for food; Having caged wild animals (especially birds) in camps; Poaching of any description; Explosive and chemical fishing; Disturbance to anything with architectural or historical value;
- Building of fires; Use of unapproved toxic materials, including lead-based paints, asbestos, etc.; Use of firearms (except authorized security guards); Use of alcohol by workers in office hours; Driving in an unsafe manner in local roads; and
- Washing cars or machinery in streams or creeks; Maintenance (change of oils and filters) of cars and equipment outside authorized areas; Creating nuisances and disturbances in or near communities; Disposing garbage in unauthorized places; Indiscriminate disposal of rubbish or construction wastes; Littering the site; Spillage of potential pollutants, such as petroleum products; Collection of firewood; Urinating or defecating outside the designated facilities; and Burning of wastes and/or cleared vegetation.

Part (2) ESS Specific Requirements

Section (2.1) Implementation of "Chance Find Procedures"

Contractor will carry out the following steps:

- Stop the construction activities in the area of the chance finds;
- 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 the responsible local authorities or the National Culture Administration take over;
- Notify the project engineer, supervisor (CSC), the project owner (PMU/DOR), and/or DPWT and EDPD/PTRI who in turn will notify the responsible local authorities and the provincial Culture Department immediately (within 24 hours or less);
- Responsible local authorities and the provincial Culture Department would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of National Culture Administration. 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 and the provincial Culture Department. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Construction work could resume only after permission is given from the responsible local authorities or the provincial Culture Department concerning safeguard of the heritage.

Section (2.2) Implementation of the Environmental, Health, and Safety (EHS) guideline

20. In line with AIIB safeguard policy, the Contractor is required to comply with the Environmental Health and Safety Guidelines (EHSG)[7] established for the project investment with financial support from the AIIB. For the Project, the Contractor will prepare a number of

[7] The EHSG provides general guidance on the pollution prevention and abatement measures and workplace and community health and safety guidelines that are normally acceptable in AIIB-supported projects, particularly in cases where the borrowing country does not have standards, or when its standards fall significantly short of international or industry-wide norms. The EHSG are divided in two parts: general guidelines on health and safety

(OCHSP) will be prepared and incorporated into the Contractor's own Standard Operating Procedures (C-SOPs). At a minimum the following rules will be strictly followed, however, more comprehensive measures may be required:

Site Environment and OCHS Rules

- Daily and weekly OCHS orientation sessions before starting work;
- Wearing of personal protective equipment (PPE) such as gloves, helmets, safety shoes, dungarees, goggles etc;
- Follow the messages and instructions displayed on the environmental management plans and OCHS notice boards installed on site;
- Promptly reporting all accidents to the concerned authority;
- Maintain appropriate barricades of dangerous areas, as required;
- Vehicles must be driven at a safe speed, observing speed limits of 30 Km/h in sensitive areas and use only the designated routes as mentioned in the Traffic and Transport Management Plan (TTMP);
- Drivers must have a valid driving license for the class of vehicle they are operating;
- Vehicles should only be parked in designated parking areas; and
- Land mines/UXO clearance of the project area as needed.

***Health and Hygiene*:** The measures should include:

- Provision of adequate medical facilities to the staff;
- Provision of hygienic food to the employees;
- Provision of cooling and heating facilities to the staff; and
- Provision of drainage, sewerage and septic tanks in camp area.

Security: Security measures should include:

- Regular attendance and a controlled time keeping of all employees;
- Restriction of un-authorized persons to the work areas and/or worker camps;
- Restriction of carrying weapons and control hunting by employees; and
- Provision of boundary walls/ fences with proper exits to the camp.

Section (2.3) ESS Requirements before Commencement of Construction

20. Before construction begins (at each Project site), all the following requirements will be completed, checked and approved by DWPT, PONRE, and EDPD/PTRI:

ESMP will be prepared in line with the Project-ESMP and it will be reviewed and approved by PMU/DOR and/or the CSC/FE. The approved C-ESMP will be sent to EDPD/PTRI, DPWT, and/or PONRE.

- Recruitment of key ESS staff of the contractor to be responsible for environmental, social and safety aspects.
- Establishment of worker camps with quality health services and sanitary equipment and all required supporting facilities and workshop/material storage area in comply with the ESS requirements related to the labour management, worker camp and storage area described in Part 3. Worker camps and storage areas will be checked and approved by DPWT and PONRE before moving or utilization of the area.
- Development of Code of Conducts (COC) and Company Project Rules regarding health and safety of workers and local communities to prevent and address potential risks and issues associated with possible labour influx including SEA, GBV and VAC (see Attachment 7). The Contractor will provide training to all Contractor's staffs and workers working for the Project. Code of Conducts and Company Project Rules will be signed and stamped by company management team and all staffs and workers.
- Provision of a list of Contractor's key staff, engineers, and worker to be working on site. The information will be included, but not limited to, personal data, criminal check and health data to ensure that all employees are free of the following diseases: liver cancer and sexually transmitted diseases (STDs) with the following information: names and surnames, ages, address (village, district, province, contact details, status (single, married), health (good), family information (number of children, name of wife, address and contact details) and among others. The list of employees will need to be attached in C-ESMP and distribute to all project affected communities/villages.
- Consultation with affected communities/villages on Project activities, risks/ impacts, prevention and mitigation measures and other community health and safety information. The consultation reports will be submitted to DWPT and EDPD/PTRI with list of participation and minutes of consultation.

21. The Contractor will (a) install signs and signals on works in progress to ensure safety both during day and night time; (b) ensure no blockage of access to households during construction and/or provide alternative access, provide footbridges and access of neighbours; and (c) endure construction of proper drainage on the site. The measures recommended in the Safety Risk Assessment (see Attachment 2b) should be considered and the key ones are highlighted as follows:

hospitals and other sensitive areas with speed limit between 20-25km/hr or any speed issued by local authorities;
- Speed limit and caution signs at both edges of each active construction area;
- Install signs indicating way to work camps, borrow pits, quarries, etc.,
- Bypass signs, reflection, etc.,
- Ensuring that local communities are active involve in the planning and installation of these signs and help preventing damages and/or loss as much as possible.

22. The Contractor will also be required to complete the environmental management subplans and the OCHS Plan and complete at least one training for all contractor staff and workers working for the Project with records of any training and induction. Periodic and follow-up trainings will be conducted at least 1 time in every 3 months.

Section (2.4) ESS Requirements during Construction and Project-Site Closure

23. The ESS requirements during Construction is provided in Part 3. The Contractor will also be required to manage all activities in compliance with laws, rules and other permits related to site construction regulations (what is allowed and not allowed on work sites) and will protect public properties. Degradation and demolition of private properties will be avoided. Paying compensation to damage to the public facilities and/or private property will be required. The Contractor will inform PMU/DOR and DPWT on issue and/or damages that may unexpectedly occur.

24. As part of the ESCOP, the Contractor is responsible for protection of local environment against dust, air, noise, vibration, exhaust fuels and oils, and other solid wastes generated from the work sites. The Contractor will manage waste properly and do not burn them on site and will also provide proper storage for construction materials, organize parking and displacements of machines in the site. Used oil and construction waste materials must be appropriately disposed-off and adequate waste disposal and sanitation services will be provided at the construction site next to the generated areas. In order to protect soil, surface and ground water the Contractor will avoid any wastewater discharge, oil spill and discharge of any type of pollutants on soils, in surface or ground waters, in sewers and drainage ditches. Compensation measures may be required.

25. *Construction site closure.* Before each Project site is considered completed, the following actions will be undertaken:

- Clean up all wastes and disruption and removal of construction equipment, construction waste and general wastes from the Project ROW and all location used by the Project during construction such as worker camps, parking bays, and storage areas, borrow pits, quarries and ancillary facilities.

- Stabilize all borrow pits or implement all agreed measures in accordance with

- Stabilize and/or rehabilitate all project sites to ensure community safety and erosion control.
- Together with DPWT and PONRE, provide training on road safety to all affected community. All training will be recorded and affected communities will sign the training received sheet.
- Submission of ESS Site Closure Report to DPWT and EDPF/PTRI one month before project completion inspection. Any potentially defects to the works will be fixed to ensure good conditions before completing the contract.

Section (2.5) GOL Regulations and Comments from Local Communities

26. It is expected that EDPD/PTRI will prepare 2 IEE including consultation for the Project (one for Bolikhamxay and one for Khamouane) as agreed with PONREs and that an Environment and Compliance Certificate (ECC) will be issued before commencement of construction. The Contractor will be required to comply with the ECC approval conditions as well as to be responsive to the concerns and/or the requests made by local authorities and/or local communities throughout the contract period.

Part (3) Works Management and Monitoring

27. This section provides technical guidance on the ESS requirements during construction phase. At a minimum, the Contractor is required to prepare and submit to CSC/FE the following, but not limited to, plans/subplans: (i) Construction Site Management Plan (CSMP) including site safety, spill prevention, and emergency response, (ii) Occupational and Community Health and Safety Plan (OCHSP), (iii) Environmental Quality Management Plan (EQMP), (iv) Site Clearance and Borrow Pit Management Plan (SCBMP), (v) Waste Management and Recycling Plan (WMRP), (vi) Works/Worker Camp Management Plan (WCMP), (vii) Traffic and Transportation Management Plan (TTMP), (viii) Labor Management Plan (LMP), and (ix) Monitoring and Reporting Plan (MRP). Scope of these plans are described below.

Section (3.1) Construction Sites Management Plan (CSMP)

28. *This plan aims to mitigate potential impacts at the construction sites in general.* Key requirements are related to working hours, site layout and appearance and good housekeeping as well as operations of equipment and vehicles including prevention of spill and emergency response**.** Monthly inspection/meeting should be conducted to ensure that these procedures are adhered to. The Contractor must follow a 'good housekeeping' policy at all times. Preparation of contractor SOP (C-SOP) may be required by CSC/FE. All Project sites should be cleared by the Contractor on completion of the construction.

(a) *General requirements on construction sites*

29. The Contractor is required to minimize, as far as reasonably practicable, any adverse

- *Working hours:* Core working hours will be from 0800 to 1800 on weekdays and 0800 to 1300 on Saturday and this should be established in close consultation with local authorities and local resident. Noisy operations will not take place outside these hours without prior approval from the CSC/FE. All construction related traffic can be adjusted according to the agreed working hours for each site. Any exemption will require an agreement with the PMU/DOR, CSC/FE, and/or local authorities.
- *Site layout*. The overall site layout must be designed and approved under regulations to suit the construction location, the site's area, natural and climate conditions in the place of construction, facilitate the construction and ensure safety for human, machines and equipment at the construction site and the surrounding areas affected by construction activities.
- *Site arrangement*. Supplies and materials are placed neatly according to the approved overall plan design. Supplies, materials and obstacles are not placed on roads, emergency exits or fire entrances. Flammable and explosive material warehouses are not arranged near the place of construction and tents. Waste materials are removed and discharged in prescribed places. Water drainage systems are regularly cleared to ensure that the construction ground is always dry.
- *Signs*. At the construction site, appropriate signs must be installed. At the main entrance, a plan of the overall ground of the construction site and working regulations is displayed. Safety measures and rules are publicized at the construction site for compliance. At dangerous places at the construction site, such as areas going through local community with limited space and/or dangerous operations, installation of temporary fences, warning signs and instructions for accident prevention (including installation of light/reflection) must be provided.
- *Good housekeeping:* The Contractor will follow a 'good housekeeping' policy at all time for the workers and the surrounding environment. This will include, but not necessarily be limited to the following: dust and noise control; waste treatment, keeping the site clean and tidy. To sites located near residential areas, wastes must be covered and collected and properly disposed-off. Construction and waste materials during transportation must be properly covered to ensure safety and environmental sanitation.
- *Training of staff and workers.* Before starting construction, an approved design of construction measures including those related to transportation of construction materials are required. The measures will include those to ensure safety of workers, construction machines and equipment for each job, and/or local people. Training of workers and/or drivers on technical and use instructions, etc. will also be required. During construction, the approved design as well as regulations, standards and technical processes are complied with. Jobs dependent on the quality of previous jobs are performed only after the previous jobs have been tested to meet quality requirements under regulations.

women and households in close proximity to the camps. Measures can be included in an appropriate management plan described in this ESCOP.

(c) Fire, spill, and emergency plan

31. The Contractor to set up specific measures for prevention of fire and spill of toxic/hazardous chemicals and provide appropriate facilities and equipment that could help fighting fire at the construction site, which has its own working regulations on its specific duties and powers. A subplan on to prevent fire and toxic/hazardous chemical spill will be prepared and approved under regulations including preparation of emergency response. This will include assignment of specific staff and/or team to be responsible for ensuring safety and organizes training on these procedures. In/near urban area, at the construction site, local fire-fighting equipment are arranged (if possible). At fire-prone places, inflammable signboards and fire-fighting and alarm equipment are installed to promptly detect fires and take remedies.

Section (3.2) Occupational and Community Health Safety Plan (OCHSP)

32. *This plan aims to ensure safety of contractor workers and staff who work on the Project and well as protection of community safety.* Experience of road rehabilitation and maintenance works in Lao PDR suggested that safety of worker and local community are high priority, especially when the activities are conducted in rural and/or mountainous areas due to limited space/area for operations of heavy equipment and vehicles.

33. The Contractor is required to take the following actions:

- Conduct a safety risk assessment of all construct sites and identify the area and type of safety risks and prepare/implement measures to mitigate them effectively. Electric equipment should be safely insulated during the construction process while the workers knowledge on safety techniques and ways to give first aid to persons who get electric shock and/or accident should also be provided.
- Ensure that key managers and workers are fully capable in the jobs they perform under regulations. Operators of construction machines and equipment and performers of jobs with strict labor safety requirements are trained in labor safety and possess labor safety cards under regulations. Workers at the construction site are provided with medical checks-up and safety training and adequate personal safety equipment under the labor law.
- Construction machines and equipment with strict labor safety requirements are inspected by and registered with competent agencies under regulations for operation at the construction site. During operation, they comply with safety processes and measures. If construction equipment is operated outside the construction site, the investor approves safety measures for construction-affected people, machines, equipment and works inside and outside the construction site. If due to construction conditions, equipment have to be placed outside the construction site and while not in operation, if they operate outside the construction site, such is permitted by authorized agencies under local regulations.
- *Unexploded Ordnance (UXO):* Although the risk is considered low, but due

34. The Contractor is also responsible for maintaining good hygiene, safety, and social welfare security of the work sites, including protection of and health and safety of staff and workers. The Contractor will prevent standing water in open construction pits, quarries or fill areas to avoid potential contamination of the water table and the development of a habitat for disease-carrying vectors and insects. Safe and sustainable construction materials and construction method should be used.

Section (3.3) Environmental Quality Management Plan (EQMP)

35. *This plan aims to reduce potential impacts on air, noise, vibration, and water quality.* During construction, the Contractor will specifically take serious actions on the following:

- To control dust by using water or through other means and the construction site will be cleaned on a daily basis;
- To work with local authority and management local traffic effectively and ensure traffic access of road safety of local residents and road users during the works. Speed limit at work sites and community area will be applied to all vehicles and cars. All vehicles and their drivers must be identified and registered, and the drivers are properly trained;

36. ***Dust, noise, and vibration.*** The Contractor must make efforts to control dust, noise, and vibration levels from the site, as far as is reasonably practicable. Excessive noise/vibration generation activities must be in accordance with GOL standards. For critical areas, the Contractor many be required to conduct noise measurement in close consultation with the local residents and establish appropriate measures to control and manage noise level. Measures for reducing dust and other air pollution, noise, and vibration are provided as follows:

- *Inform the residents:* Prior to commencement of work at any site, the Contractor will be required to inform the local authority and residents regarding the construction plan and potential noise and vibration that may occur from the construction activities, including measures to reduce noise and vibration.
- *Dust control:* The Contractor will ensue that no burning of waste materials on site; adequate water supply is available on site; dry sweeping of large areas is not allowed; Cover all trucks carrying loose or potentially dusty materials (soil, mud, etc.) to and from construction site; Water or sprinkle the construction areas periodically, especially at site located near residential area; avoid overloaded of trucks; routinely clean public roads and access routes; Ensure vehicles working on site have exhausts positioned such that the risk of re-suspension of ground dust is minimized (exhausts should preferably point upwards), where reasonably practicable; Control driving speed on un-surfaced haul routes and work areas; Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; Mix large quantities of cement, grouts and other similar materials in designated areas; Store materials with the potential to

completion.

- Care must be undertaken during the transportation of construction materials to and from the construction site; the spoil must be covered at all time. Fly-tipping will not be permitted. Loads must only be deposited at designated sites. The Contractor will be responsible for all the trucks delivering to, or exiting from, a worksite and will clean up all damage that may occur to public road and other public facilities. Care should be taken when loading or unloading vehicles or dismantling scaffolding or moving materials to reduce impact noise. Loading or unloading bays may have to be housed in suitable acoustic enclosures**.**
- Noisy plant or equipment including will be sited as far away as is practicable from noise sensitive buildings. The use of barriers, (e.g. soil mounds), site huts, acoustic sheds or partitions to deflect noise away from noise sensitive areas should be employed wherever practicable.
- The Contractor will be obliged to comply with the vibration levels according to GOL standards. Due attention will be given to minimize human exposure (1 Hz to 80 Hz) and protection of damage to nearby structures.

37. ***Water quality.*** The Contractor must take all the efforts to prevent wastes (solid and liquid) discharge into all rivers and to protect surface and groundwater from pollution and other adverse impacts including changes to water levels, flows and general water quality. Discharge of engine oil and oily waste from dredgers and construction machines to the rivers will be strictly prohibited. Engine oil, used oil, and other toxic substances and hazardous wastes must be properly collected, stored, treated, and/or disposed-off. Key measures are as follows:

- *Used oil/engine oil:* The oil container at the construction site (especially when the site is located less than 10 meters from the waterways) must be of sufficient strength to ensure to prevent leakage. The container must be situated within a secondary containment system (bunded), which will prevent the release of any leaked oil. The Contractor must make provisions to ensure that all hazardous substances including oil drums or containers on site are properly labeled and properly stored and that no oil or other contaminants are allowed to reach water courses or groundwater.
- *Wastewater from sites:* Whenever possible, the Contractor must minimize the amounts of wastewater that need to be discharged and find alternative means of disposal. The Contractor will ensure that any seepage and wastewater arising from the works and camp sites must be collected and discharged via a settlement tank. The standards for wastewater treatment prior to discharge must be agreed in advance with the ESA. Contaminated water or water of an uncertain quality must be discharged into sewers by tankers or other approved means of disposal.
- *Drainage.* Water drainage must be designed to avoid stagnant conditions that could create bad smell and unsanitary condition. The Contractor must agree with the ESA in advance, details of the methodology to be employed, prior to commencement of the construction. Particular attention must be given to regular pest control treatment

Section (3.4) Works/Worker Camp Management Plan (WCMP)

38. *This plan aims to mitigate negative impacts due to establishment and operations of work yard and worker camps including storage site management.* The Contractor will carry out, but not limited to, the following:

- The Worker Camp and workshop storage area will be located on areas far enough from water points, houses and sensitive areas in consultation with the community and the subproject owner. Worker camps shall not be located within 500 meters of any sensitive receptors, urban area and at least 200 meters from any surface water course and not within 2 kilometers of a protected area.
- Worker camps, cooking facilities, and toilets will be provided with roofs, walls and wooden floors or paved with concrete while the camp yards and storage can be compacted or paved with gravels. If possible, the worker camps should be fenced and provided with entrance gates to prevent unauthorized entry. In addition, the worker camps will be provided with storm water drainage system around the camp facilities to prevent flooding, mud, erosion and sediment transport to natural environment.
- Worker camps will be provided with basic facilities and utilities including but not limited to: office, notice boards and regulations of the company and about the Project, beds, mosquito nets, blankets, clean drinking water and safe portable water, sufficient waste bins, first aid kits and necessary medicines, fire extinguishers, etc.
- For bathing and toilets, the Contractor will ensure that (1)separate toilets for males and females and sewage and wastewater will be retained in sediment pond(s); (2) Toilet chambers will be designed appropriately to be able to treat sludge and sewage prior to discharge to closed retention ponds without exposure to vectors and/or diseases; (3) building of toilet rooms, sewage chambers and retention ponds will be away from natural water bodies, streams, and wetland areas. The floor of retention chambers will be above the aquifer layer.
- Material storage facilities and workshop will be in proximity or within work camp area with fences, compacted ground or paved with gravel and drainage system.
- Hazardous material storage area will be provided with roof, walls and concrete floor and bunds, storm water drainage and oil traps. Engine oil change requires steel trays on the floor to prevent hydrocarbon spills on soils. If spill is found, immediate cleaning is required by collecting contaminated soil and to a temporary container and maintained in hazardous storage area.

40. The Contractor will consult with local authority regarding the location of the worker

prohibitions activities is required. Detail measures as follow:

(a) During the preconstruction stage:

- Contractor will consult with local authority and subproject management unit regarding the location of the worker camps
- Once work camp location is identified, the Contractor will set up temporary accommodation for all the workers throughout the construction or maintenance period. In terms of supply and storage of domestic water at the work camp area, the Contractor will comply with the following requirements: (a) Provide adequate drinking water supply for the work camps in appropriate tanks/containers. The Contractor will identify appropriate public water source for drinking in consultation with the local authority; (b) in case no appropriate source of water is identified, the Contractor will take water from other sources which will be tested and treated before supplied to the work camps; (c) All water supply and storage areas must be away from the wastewater storage area, drainage system or other sources of contamination according to the regulations. Water from drains or contaminated water must not be used as domestic water at the site.
- At all construction sites, facilities for washing and necessary and appropriate tools must be provided by the Contractor. Bathrooms must be provided separately for male and female workers. Such facilities must ensure convenience for use and cleaning.
- Waste discharges, wastewater must be properly collected and disposed-off.
- First aid/Emergency aid kit. The first/emergency aid kit must be available at the work camp area and managed by a responsible person. This person must be trained on emergency/first aid. Injured or seriously sick people must be taken to the nearest hospital.
- *Community relations.* The Contractor will ensure that conflicts between the workers and local population are avoided.

(b) Construction stage:

- Work camps must be kept clean and tidy, unaffected by oil spill and construction wastes. Any oil spilt or leaked must be cleaned immediately to avoid soil and water contamination. Some actions to carry out are as follow: (a) avoid oil leakage into surface water or groundwater; (b) wastewater must not be disposed directly to natural water areas; (c) solid waste materials are removed and discharged in prescribed places at frequent intervals; (d) First/Emergency aid supplies and materials and cleaning tools are regularly provided.
- PMU/DOR and/or CSC/FE will monitor the housekeeping of work camp areas and ensure these areas are kept clean throughout the construction period.

(c) Construction completion.

- During this stage, all work camps and facilities will be cleared away and removed

cutting in ROW, stockpilings, quarries, and borrow pits including the needs for revegetation and/or rehabilitation of the work sites (see locations in Attachment 1c). The Project road is predominantly located on existing alignment and substantial sections of the first quarter of the alignment will be built using embankments over swamp and soft ground. Considerable amounts of borrow materials will therefore be needed to improve the swamp ground, including replacement of swamp deposits with rock fill, and in areas of embankment to attain the appropriate height of earthworks on which to form the required road grade. Capping layers may also be required to achieve a uniform roadbed support.

(a) Tree cutting, quarry and borrow pit

42. Tree cannot be cut without approval from CFC/FE. The Contractor will use a quarry of materials according to the regulations and compensate by planting of trees in case of deforestation or tree felling. When possible, the Contractor should develop maintenance and reclamation plans, protect soil surfaces during construction and re-vegetate or physically stabilize eligible surfaces, preserve existing fauna and flora and preserve natural habitats along streams, steep slopes, and ecologically sensitive areas.

43. The materials required to be sourced locally for road construction include: Natural granular material for possible application as subbase; Borrow materials for embankment fill (typically obtained from nearby NR13 South alignment but from private owned/operate borrow areas in some cases); Quarry stone for production of aggregates for asphalt, crushed stone base, concrete and masonry works; and Sand for concrete and mortar. Locations of these materials have been identified nearby the Project road (see locations in Attachment 1c). It is expected that these sites will supply source materials to the closest section of the alignment to minimise the impact of transporting materials.

44. Commercial quarries and borrow pits approved by local environmental agencies should be used as much as possible. If non-commercial quarries and/or borrow pits are newly opened or expanded and used, in consultation with the CSC/FE, the Contractor will comply with the following requirements:

- Large-scale borrow pits or stockpiles will need site-specific measures that may go beyond those required in this ESCOP.
- All locations to be used must be previously identified in the approved construction specifications. Sensitive sites such as scenic spots, areas of natural habitat, areas near sensitive receptors, or areas near water should be avoided.
- When water pollution is expected, an open ditch will be built around the stockpile site to intercept wastewater.
- Stockpile topsoil when first opening a borrow pit and use it later to restore the area to near natural conditions.
- If needed, disposal sites will include a retaining wall.
- If the need for new sites arises during construction, they must be pre-approved by

will be secured.

- For any stockpile, quarry, or borrow pit sites opened for this project should be used only for the project activities and it should not to be used afterwards, unless it has been authorized by local authorities.
- If access/rescue roads are needed, actions to mitigate all negative impacts described in this ESCOP will also be applied. The alignment for each of these roads must be clearly determined with its impacts and mitigation measures.

(b) Earth excavation and demolition materials

46. During site physical clearance, earth excavation must be carefully handled to reduce dust and possible obstruction and causing nuisance and health impacts to local residents. Excavation that affects existing traffic and public utilities (such as pipeline, water supply, and bridges) must be properly planned in consultation with local authority and informed to the residents in advance. All excavation materials and old road surface will be reused for dike/road construction and/or land filling at or nearby the work site. Demolition materials must be properly disposed-off. The Contractor must consult PMU/DOR and/or CSC/FE on the final selection of disposal sites and methods.

47. To mitigate potential impacts of material excavation include: Potential UXO risk; Exposure of soil that has the potential to lead to increased erosion and discharge of sediment into waterways; Exposed faces and slopes that may be at risk of landslide or collapse; The dewatering of some areas within source sites has potential to impact on flow activation of potential plumes; Discharge of effluents from aggregate washing and crushing has potential to impact on water quality; and Increased noise, dust and vibrations in the local area surrounding the source sites. The Contractor will consult local authorities and communities on UXO risks at all borrow materials, quarry stone and sand site, a quick assessment is undertaken for each site to ensure that UXO risk and impacts on local community and local environment are low and appropriate actions will be made by contractor to mitigate these risks/impacts. Obtaining approval letter from local authorities is required before utilization of each site. Each site should have a clear plan for mitigation of erosion and/or sedimentation measures including construction of drainage controls and sedimentation ponds, daily deployment and maintenance of sediment control devices such as silt fences and jute netting, and planning of quarrying operations to minimise long-term exposure of erosive materials. It is expected that each quarry will also have a rehabilitation plan for the closure of the site after the sourcing of materials.

(d) Protection of natural habitats.

48. The Contractor must observe the national and local regulations and policies related to protected areas/species, wildlife sanctuaries. No trees in nearby sensitive areas can be cut without obtaining prior agreement with the authorities. When possible, organize training courses to improve environmental protection awareness of the staff and local communities. When the construction activities are carried out near and/or within sensitive areas (such as conservation and protection areas), the Contractor will ensure that the workers will not be

49. *Site restoration.* The Contractor will use a quarry of materials according to the regulations and compensate by planting of trees in case of deforestation or tree felling. When possible, the Contractor should develop maintenance and reclamation plans, protect soil surfaces during construction and re-vegetate or physically stabilize eligible surfaces, preserve existing fauna and flora and preserve natural habitats along streams, steep slopes, and ecologically sensitive areas.

Section (3.6) Waste Management and Recycling Plan (WMRP)

50. *This plan aims to mitigate potential negative impacts due to generation of construction wastes and operations of works and worker camps (construction, hazardous, domestic) including recycle and reuse plan to be conducted during road construction and maintenance.*

(b) Construction and hazardous wastes.

51. Preconstruction and construction activities may generate large amount of construction wastes including those generating from resurfacing and excavation of soil, old road surface and/or concrete structure and other surplus materials (oily wastes, miscellaneous woods, steel, etc.). Although most of these wastes are not toxic or dangerous (except for some oily wastes such as oily cloths after cleansing machines and equipment, etc.), proper measures for waste collection and treatment are required to avoid contaminating local environment (water quality, soil, natural habitats, land scape, and scenery) and local residents. The Contractor will prepare and implement a plan to reduce the generation of these wastes. When possible, these wastes should be properly reused and/or recycle. Bags and other solid wastes will be collected for recycling while appropriate arrangement will be made if a temporary disposal area will be required. Appropriate final disposal sites must be identified and implemented.

(c) *Domestic solid wastes*

52. Generation of these wastes (food wastes and garbage including plastic) will be minimized and/or reused when possible. The Contractor must carry out appropriate measures for waste collection and treatment. The domestic wastes will be collected in plastic or wooden bins with lids placed in convenient places and in worker canteens. Periodically, at appropriate time, transport those bins to the disposal sites (the sites should be approved by local authorities). The Contractor must sign a contract with the Urban Environmental and Construction Company to collect and treat these wastes during construction. In case the wastes cannot be transported to the dumping site (for example, due to lack of appropriate transport route), wastes must be buried at temporary dumps in the project area in a sanitary way – a waste layer covered by a layer of soil, and when the dump is filled, it is covered by a soil layer about 50 cm thick. Temporary dump sites must be located at least 500 m away from residential areas, 200 m away from work camps and surface water sources, and not in the prevalent wind direction of the area. Upon completion of works, cover the entire temporary dumps with soil, ensure land, and landscape restoration for the subproject area.

Section (3.7) Traffic and Transportation Management Plan (TTMP)

noise, and vibration. Key requirements are as follows:

- The Contractor will be required to use designated construction traffic routes as agreed and/or directed by the local authorities and the Police. The number of truck movements, hours of operation and any truck holding areas will be agreed in advance with the local authority and the Police. Plans will be required for each site showing the site entrances/exits and the agreed access roads for use to the nearest main road, and the routes to be used by truck to and from the strategic road network.
- The Contractor will maintain an up to date log of all drivers that will include a written undertaking from them to adhere to the local authority's approved routes for construction traffic. In the case of non-compliance, the Contractor and/or their sub-contractor(s) would be in breach of contract, necessitating disciplinary action against individual drivers.
- The Contractor may be required to provide truck stickers uniquely identifying the group of construction sites included in each contract, details of which shall be submitted to the local authority for approval. For identification purposes the Contractor will fix these in a prominent position on all trucks frequently serving the construction site. The identification will need to be sufficiently large to be easily read from a distance of 20 meters. Trucks waiting to enter or leave the site must switch off their engines to avoid unnecessary engine noise and emissions. Restrictions on the size and weight of vehicles accessing each site may be imposed depending on agreed access routes.

54. For construction that interference with a carriageway or footway, the Contractor will inform the local authorities, responsible agencies, and local residents before commencing the works and proposed measures to minimize the safety risk and inconvenience to the public. All necessary consents and licenses must be obtained in advance. The safety of the public must be ensured. In the case of temporary footways, reasonable access shall be provided for people in accordance with the following requirements:

- Any temporary footways and carriageways will be constructed to the reasonable requirements of the local authorities and should have uniform surfaces as much as possible;
- Clear signing must be provided at all times for pedestrian routes with the minimum number of changes to all temporary layouts in order to reduce confusion. Advance warning should, if possible, indicate alternative existing wheelchair-accessible routes;
- After completion of the works all materials arising from the works will be cleared from the highway leaving the same in a clean and tidy condition to the reasonable requirements of the local authorities; and
- The Contractor will be responsible for any damage caused by their activities to the roads and public facilities in the vicinity of the worksite. Any defects caused by the Contractors must be rectified immediately if dangerous or otherwise within 24 hours.

55. Road safety campaign in the high risks area will be prepared and implemented as agreed with DPWT and/or CSC/FE (see also Attachment 2b).

Section (3.8) Labor Management Plan (LMP) --COC

56. *This plan aims to minimize potential direct and indirect social impacts of contractor's staff and workers including their behaviors on local communities.* The Contractor will be required to have appropriate contract arrangement with staff and workers as well as to prohibit actions that may cause negative social impacts (direct and indirect) due to labor influx and possible health impacts (STDs, AIDs, etc.) to local peoples. The Contractor is required to implement and comply with Occupational Health and Community Safety Plan (OHCSP) as one of main part of overall ESHS requirements. The Contractor is encouraged to hire local labours including community and female workers to extent possible. Where local labours are not adequately available in the Project sites, labour or camp site management plan and is required to be prepared and implemented and monitored potential external labour influx and associated risks including SEA, GBV and VAC. Code of Conducts (COC) and Company Project Rules regarding health and safety of workers and local communities will be applied by the contractors and their sub-contractors and workers to be hired under the Project to manage the risks anticipated.

57. The Contractor will also be responsible for maintaining good hygiene, safety, and social welfare security of the work sites, including protection of and health and safety of staff and workers. The Contractor will prevent standing water in open construction pits, quarries or fill areas to avoid potential contamination of the water table and the development of a habitat for disease-carrying vectors and insects. Safe and sustainable construction materials and construction method should be used.

Section (3.9) Monitoring and reporting Plan (MERP)

58. *This plan aims to ensure that the mitigation measures are conducted timely and effectively.* The Contractor will be required to submit the Contractor ESS monitoring report to DPWT and PONRE (with a copy to EDPD/PTRI) on every 25th of each month. The report can be submitted electronically as agreed. Key monitoring subplan and/or indicators (also see Attachment 5 Table A5.1).

(a) Site Management and Monitoring

59. Following approval of the C-ESMP, the Contractor will be required to attend a series of meetings with the CSC and/or Field Engineers to ensure that all compliance conditions and procedures are clearly understood and actions can be implemented on the ground. As part of the day-to-day supervision of works, the CSC/FE are also responsible for day-to-day supervision and monitoring of compliance of the C-ESMP and report the results in the progress report. The Contractor will be responsible for ensuring that all sub-contractors abide by the conditions of the Project-ESMP.

- To control dust by using water or through other means and the construction site will be cleaned on a daily basis;
- To work with local authority and management local traffic effectively and ensure traffic access of road safety of local residents and road users during the works. Speed limit at work sites and community area will be applied to all vehicles and cars. All vehicles and their drivers must be identified and registered, and the drivers are properly trained;
- To respect the cultural sites, ensure security and privacy of women and households in close proximity to the camps and the use of asbestos containing materials is not allowed;
- To conduct daily monitoring and inspection of construction activities to ensure environmental and social impacts are managed and mitigated appropriately in local communities. These potential impacts include wastes, discharge, dust, community health and safety, OCHS, construction waste contaminated on private land, social issues and social security, etc.;
- To implement and maintain a good community-relations in comply with requirements in the section on Community Relation below; and
- To comply with Non-compliance Reporting Procedures as specified in Part 1 of the ESCOP.

(c) Contractors Reporting

61. The Contractor will prepare two levels of ESS reports:

- Weekly Environmental Checklists – These will be prepared weekly by the Contractor's ESS management (ESSM) team and the checklist will be submitted to the CSC/Engineer on a weekly basis. EDPD/PTRI will provide a sample for the checklist.
- Monthly Summary Report - in respect of compliance with C-ESMP will be submitted to the PMU/DOR and DPWT through the CSC/Engineer (with a copy to EDPD/PTRI) on every 25th of each month. The report can be submitted electronically as agreed.

1. This section provides guidance on sample of requirements to be included in contract to address the issues related to Gender-Based Violence (GBV) and Violence against Children (VAC) which is a new requirement to be applied to all projects with AIIB financing. These samples are used in road projects in Cambodia (RAMP-II) and Lao PDR (LRSP2 and NR13N) starting 2018. Sections G1, G2, G3, G4, G5, and G6 presents (i) Table of contents, objectives, scope, and definitions; (ii) Samples code of conduct; (iii) Action plan; (iv) GRM; (v) Services providers; (vi) GBV and VAC Focal Point; and (vii) Annex 1 - Potential Procedures for Addressing GBV and VAC.

2. Table of Content, Objective, Scope, and Definitions are as follows:

1. Background
2. Scope
3. Definitions
4. Sample Codes of Conduct
   (a) Company Code of Conduct
   (b) Preventing Gender Based Violence and Violence Against Children
   (c) Manager's Code of Conduct
   (d) Preventing Gender Based Violence and Violence Against Children
   (e) Individual Code of Conduct
   (f) Preventing Gender Based Violence and Violence Against Children
5. Action Plan
   (a) The GBV and VAC Compliance Team
   (b) Making Complaints: GBV and VAC Allegation Procedures
   (c) Addressing Complaints about GBV or VAC
6. GRM
7. Service Provider
8. GBV and VAC Focal Point
   (a) Accountability Measures
   (b) Monitoring and Evaluation
   (c) Awareness-raising Strategy
   (d) Response Protocol

Annex 1 - Potential Procedures for Addressing GBV and VAC

G1. Background

3. The purpose of these *Codes of Conduct and Action Plan to prevent Gender Based Violence (GBV) and Violence against Children (VAC)* is to introduce a set of key definitions, minimum standard sample Codes of Conduct, and guidelines that establish mechanisms for preventing, reporting and addressing GBV and VAC within the work site and in its immediate surrounding communities. The application of the GBV and VAC Codes of Conduct will help prevent and/or mitigate the risks of GBV and VAC on the project.

4. Mutual respect and fair treatment between those working on the project and local communities is critical to a safe, respectful, and productive workplace and operating environment. GBV and VAC can be one of the most serious violations of respect and fair treatment which can harm the local community, and significantly damage trust and cooperation between parties.

5. These Codes of Conduct are to be adopted by those working on the project and are meant to: (i) create common awareness about GBV and VAC; (ii) ensure a shared understanding; and, (iii) create a clear system for identifying, responding to, and sanctioning GBV and VAC incidents.

6. Ensuring that all project staff understand the values of the project, understand expectations for all employees, and acknowledge the consequences for violations of these values, will help to create a smoother, more respectful and productive project implementation thereby helping ensure that the project's objectives will be achieved.

G2. Scope

7. [use what is in draft bidding documents]

G3. Definitions

8. The following definitions apply:

- *Gender-Based Violence (GBV):*is an umbrella term for any harmful act that is perpetrated against a person's will and that is based on socially ascribed (i.e. gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or in private.
- *Violence against Children (VAC):*is defined as physical, sexual or psychological harm of minor children (i.e. under the age of 18) including using for profit, labor, sexual gratification, or some other personal or financial advantage.

instituting a fair system of addressing cases of GBV and VAC.

- *Child:*is used interchangeably with the term 'minor' and refers to a person under the age of 18.[8] This is in accordance with Article 1 of the United Nations Convention on the Rights of the Child.
- *Child Protection (CP): is* an activity or initiative designed to protect children from any form of harm, particularly arising from VAC.
- *Consent:* is the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18[9], even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
- *Consultant:* is as any firm, company, organization or other institution that has been awarded a contract to provide consulting services in the context of the RAMP-II, to the project, and has hired managers and/or employees to conduct this work.
- *Contractor:* is any firm, company, organization or other institution that has been awarded a contract to conduct infrastructure development works in the context of the RAMP-II project and has hired managers and/or employees to conduct this work. This also includes sub-contractors hired to undertake activities on behalf of the contractor.
- *Employee:* is as any individual offering labor to the contractor or consultant within country on or off the work site, under a formal or informal employment contract or arrangement, typically but not necessarily in exchange for a salary (e.g. including unpaid interns and volunteers), with no responsibility to manage or supervise other employees.

[8] The Kingdom of Cambodia is party to this convention. http://www.pseataskforce.org/uploads/tools/1478613357.pdf

[9] See UN Resolution 62/214. United Nations Comprehensive Strategy on Assistance and Support to Victims of Sexual Exploitation and Abuse by United Nations Staff and Related Personnel; UN Secretariat (2003) ST/SGB/2003/13 Special measures for protection from sexual exploitation and sexual abuse; IOM (2016) Policy and Procedures for Preventing and Responding to Sexual Exploitation and Abuse.

when reporting incidents of GBV or VAC.

- *GBV and VAC Codes of Conduct:* The Codes of Conduct adopted for the project covering the commitment of the company, and the responsibilities of managers and individuals with regards to GBV and VAC.
- *GBV and VAC Compliance Team (GCCT):* a team established by the project to address GBV and VAC issues.
- *Grievance Redress Mechanism (GRM):*is the process established by theRAMP-II project to receive and address complaints.
- *Grooming:* are behaviors that make it easier for a perpetrator to procure a child for sexual activity. For example, an offender might build a relationship of trust with the child, and then seek to sexualize that relationship (for example by encouraging romantic feelings or exposing the child to sexual concepts through pornography).
- *Manager:* is any individual offering labor to the contractor or consultant, on or off the work site, under a formal employment contract and in exchange for a salary, with responsibility to control or direct the activities of a contractor's or consultant's team, unit, division or similar, and to supervise and manage a pre-defined number of employees.
- *Online Grooming:* is the act of sending an electronic message with indecent content to a recipient who the sender believes to be a minor, with the intention of procuring the recipient to engage in or submit to sexual activity with another person, including but not necessarily the sender[10].
- *Perpetrator:* is the person(s) who commit(s) or threaten(s) to commit an act or acts of GBV or VAC.
- *Response Protocol:* is the mechanisms set in place to respond to cases of GBV and VAC.
- *Survivor/Survivors:* is the person(s) adversely affected by GBV or VAC. Women, men and children can be survivors of GBV; children can be survivors of VAC.
- *Work Site:* is the area in which infrastructure development works are being conducted, as part of the project.

found on it.

G4. Sample Codes of Conduct

9. This section presents three sample Codes of Conduct as the minimum standard for use under civil works contracts for the Project (RAMP-II). These codes will be confirmed and agreed upon prior commencement of works and cleared by the Supervision Consultant.

- *Company Code of Conduct:* Commits the company to addressing GBV and VAC issues;
- *Manager's Code of Conduct:* Commits managers to implementing the Company Code of Conduct, as well as those signed by individuals; and,
- *Individual Code of Conduct:* Code of Conduct for everyone working on the project, including managers.

(a) Company Code of Conduct: Preventing Gender Based Violence and Violence Against Children

10. In the context of the Project, the company is committed to creating and maintaining an environment in which gender based violence (GBV) and violence against children (VAC) have no place, and where they will not be tolerated by any employee, associate, or representative of the company. Therefore, in order to ensure that all those engaged in the project are aware of this commitment, and in order to prevent, be aware of, and respond to any allegations of GBV and VAC, the company commits to the following core principles and minimum standards of behavior that will apply to all company employees, associates, and representatives including sub-contractors, without exception:

1. The company—and therefore all employees, associates, and representatives—commit to treating women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status. Acts of GBV and VAC are in violation of this commitment.
2. Demeaning, threatening, harassing, abusive, culturally inappropriate, or sexually provocative language and behavior are prohibited among all company employees, associates, and its representatives.
3. Acts of GBV or VAC constitute gross misconduct and are therefore grounds for administrative sanctions, which may include penalties and/or termination of employment. All forms of GBV and VAC, including grooming are unacceptable, regardless of whether they take place on the work site, the work site surroundings, at worker's camps or at worker's homes.
4. In addition to company sanctions, legal prosecution of those who commit acts of

Consent from the child is also not a defense or excuse.

6. Sexual favors—for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior are prohibited.
7. Unless there is full consent[11] by all parties involved in the sexual act, sexual interactions between the company's employees (at any level) and members of the communities surrounding the work place are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
8. All employees, including volunteers and sub-contractors are highly encouraged to report suspected or actual acts of GBV and/or VAC by a fellow worker, whether in the same company or not. Reports must be made in accordance with GBV and VAC Allegation Procedures.
9. Managers are required to report suspected or actual acts of GBV and/or VAC as they have a responsibility to uphold company commitments and hold their direct reports responsible.
10. Comply with all relevant local legislation, including labor laws in relation to child labor.
11. To ensure that the above principles are implemented effectively the company commits to ensuring that:
12. All managers sign the 'Manager's Code of Conduct' detailing their responsibilities for implementing the company's commitments and enforcing the responsibilities in the 'Individual Code of Conduct'.
13. All employees sign the project's 'Individual Code of Conduct' confirming their agreement not to engage in activities resulting in GBV or VAC.
14. Displaying the Company and Individual Codes of Conduct prominently and in clear view at workers' camps, offices, and in in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.

[11] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into

well as for any international staff in their native language.

16. An appropriate person is nominated as the company's 'Focal Point' for addressing GBV and VAC issues, including representing the company on the GBV and VAC Compliance Team (GCCT) which is comprised of representatives from the client, contractor(s), the supervision consultant, and local service provider(s).
17. Ensuring that an effective Action Plan is developed in consultation with the supervision consultant and which includes as a minimum:
    a. *GBV and VAC Allegation Procedure* to report GBV and VAC issues through the project Grievance Redress Mechanism (GRM);
    b. *Accountability Measures* to protect confidentiality of all involved; and,
    c. *Response Protocol* applicable to GBV and VAC survivors and perpetrators.
18. That the company effectively implements the Action Plan, providing feedback to the GCCT for improvements and updates as appropriate.
19. All employees attend an induction training course prior to commencing work on site to ensure they are familiar with the company's commitments and the project's GBV and VAC Codes of Conduct.
20. All employees attend two mandatory training courses per year for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the project's GBV and VAC Code of Conduct.

Company name: _____

Signature of Company's Representative: _____

Printed Name: _____

Title: _____

Date: _____

(b) Manager's Code of Conduct: Preventing Gender Based Violence and Violence against Children

11. Managers at all levels have particular responsibilities to uphold the company's

To that end, managers must adhere this Manager's Code of Conduct and also sign the Individual Code of Conduct. This commits them to supporting and developing systems that facilitate the implementation of the Action Plan and maintain a GBV-free and VAC-free environment at the workplace and in the local community. These responsibilities include but are not limited to:

Implementation

1. To ensure maximum effectiveness of the Company and Individual Codes of Conduct:
    a. Prominently displaying the Company and Individual Codes of Conduct in clear view at workers' camps, offices, and in in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.
    b. Ensuring all posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.
2. Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.
3. Ensure that:
    a. All staff members sign the 'Individual Code of Conduct', including acknowledgment that they have read and agree with the Code of Conduct.
    b. Staff lists and signed copies of the Individual Code of Conduct are provided to the GCCT and the client.
    c. Participate in training and ensure that staff also participate as outlined below.
    d. Staff are familiar with the Grievance Redress Mechanism (GRM) and that they can use it to anonymously report concerns of GBV or VAC incidents.
    e. Staff are encouraged to report suspected or actual GBV or VAC through the GRM by raising awareness about GBV and VAC issues, emphasizing the staff's responsibility to the Company and the country hosting their employment, and emphasizing the respect for confidentiality.
4. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed.
5. Ensure that when engaging in partnership, sub-contractor or similar agreements, these agreements:

Individual Codes of Conduct.

c. expressly state that the failure of those entities or individuals, as appropriate, to take preventive measures against GBV and VAC, to investigate allegations thereof, or to take corrective actions when GBV or VAC has occurred, shall constitute grounds for sanctions and penalties in accordance with the Individual Codes of Conduct.

6. Provide resources to the GCCT to create and disseminate internal sensitization initiatives through the awareness-raising strategy under the Action Plan.

7. Ensure that any GBV or VAC issue warranting police action is reported to the client and the World Bank immediately.

Training

8. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and VAC Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the Action Plan for addressing GBV and VAC issues.

9. Ensure that time is provided during work hours and that staff attend the mandatory project facilitated induction training on GBV and VAC required of all employees prior to commencing work on site.

10. Ensure that staff attend the mandatory refresher training course required of all employees. Ensure satisfaction surveys to evaluate training are conducted by the service provider.

Response

11. Managers will be provide input to the GBV and VAC Allegation Procedures and Response Protocol developed by the GCCT, as needed as part of the final cleared Action Plan.

12. Once adopted by the Company, managers will uphold the Accountability Measures set forth in the Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV and VAC (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).

13. If a manager develops concerns or suspicions regarding any form of GBV or VAC by an employee, or by an employee working for another contractor on the same work site, s/he is required to report the case

maximum timeframe of 14 days from the date on which the decision to sanction was made.

15. Managers failing to report or comply with such provision can in turn be subject to disciplinary measures, to be determined and enacted by the company's CEO, Managing Director or equivalent highest-ranking manager. Those measures may include:
    a. Informal warning.
    b. Formal warning.
    c. Loss of up to one week's salary.
    d. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
    e. Termination of employment.
16. Ultimately, failure to effectively respond to GBV and VAC cases on the work site by the company's managers or CEO may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the foregoing Manager's Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and VAC. I understand that any action inconsistent with this Manager's Code of Conduct or failure to take action mandated by this Manager's Code of Conduct may result in disciplinary action.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

(c) Individual Code of Conduct: Preventing Gender Based Violence and Violence against Children

I, _____, acknowledge that preventing gender-based violence (GBV) and violence against children (VAC) is important. The company considers that GBV or VAC activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. All forms of GBV or VAC are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit GBV or VAC may be pursued if appropriate.

- Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with children—including grooming, or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
- Not engage in sexual favors—for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.
- Unless there is the full consent[12] by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
- Attend and actively partake in training courses related to HIV/AIDS, GBV and VAC as requested by my employer.
- Consider reporting through the grievance redress mechanism or to my manager any suspected or actual GBV or VAC by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

With regard to children under the age of 18:

- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.
- Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible.

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[12]**Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into

medium (see also "Use of children's images for work related purposes" below).

- Refrain from physical punishment or discipline of children.
- Refrain from hiring children for domestic or other labor which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.

Use of children's images for work related purposes

12. When photographing or filming a child for work related purposes, I must:

- Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
- Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
- Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner.
- Ensure images are honest representations of the context and the facts.
- Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

13. I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

- Informal warning.
- Formal warning.
- Loss of up to one week's salary.
- Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
- Termination of employment.
- Report to the police if warranted.

I understand that it is my responsibility to avoid actions or behaviors that could be regarded as GBV or VAC or breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the

Signature: _____

Printed Name: _____

Title: _____

Date: _____

G3. Action Plan

(a) The GBV and VAC Compliance Team

14. The project shall establish a 'GBV and VAC Compliance Team' (GCCT). The GCCT will include, as appropriate to the project, at least four representatives ('Focal Points') as follows:

a. A safeguards specialist from the client;

b. The occupational health and safety manager from the contractor[13], or someone else tasked with the responsibility for addressing GBV and VAC with the time and seniority to devote to the position;

c. The supervision consultant; and,

d. A representative from a local service provider with experience in GBV and VAC (the 'Service Provider').

15. It will be the duty of the GCCT with support from the management to inform workers about the activities and responsibilities of the GCCT. To effectively serve on the GCCT, members must undergo training by the local service provider prior to the commencement of their assignment to ensure that they are sensitized on GBV and Child Protection.

16. The GCCT will be required to:

a. Approve any changes to the GBV and VAC Codes of Conduct contained in this document, with clearances from the Supervision Consultant for any such changes.

b. Prepare the Action Plan reflecting the Codes of Conduct which includes:

i. GBV and VAC Allegation Procedures (See 4.3)

iv. A Response Protocol (See 4.6)

c. Obtain approval of the Action Plan by company management;

d. Obtain client clearances for the Action Plan prior to full mobilization;

e. Receive and monitor resolutions and sanctions with regard to complaints received related to GBV and VAC associated with the project; and,

f. Ensure that GBV and VAC statistics in the GRM are up to date and included in the regular project reports.

17. The GCCT shall hold quarterly update meetings to discuss ways to strengthen resources and GBV and VAC support for employees and community members.

18. The Action Plan and Code of Conduct shall be submitted for review to the ISWS Consultant within 90 days from the contract signature date. Works will not commence unless the Engineer is satisfied with measures in place, including plan and codes. Failure to comply with such obligation should provide ground for contract suspension cancellation – this shall be determined at the sole discretion of the contracting entity, whilst intention to cancel the contract shall be notified to the World Bank team within 60 days from the proposed cancellation date.

(b) Making Complaints: GBV and VAC Allegation Procedures

19. All staff, volunteers, consultants and sub-contractors are encouraged to report suspected or actual GBV or VAC cases. Managers are required to report suspected or actual GBV and/or VAC cases as they have responsibilities to uphold company commitments and they hold their direct reports accountable for complying with the Individual Code of Conduct.

20. The project will provide information to employees and the community on how to report cases of GBV and VAC Code of Conduct breaches through the Grievance Redress Mechanism (GRM). The GCCT will follow up on cases of GBV, VAC and Code of Conduct breaches reported through the GRM.

(c) Addressing Complaints about GBV or VAC

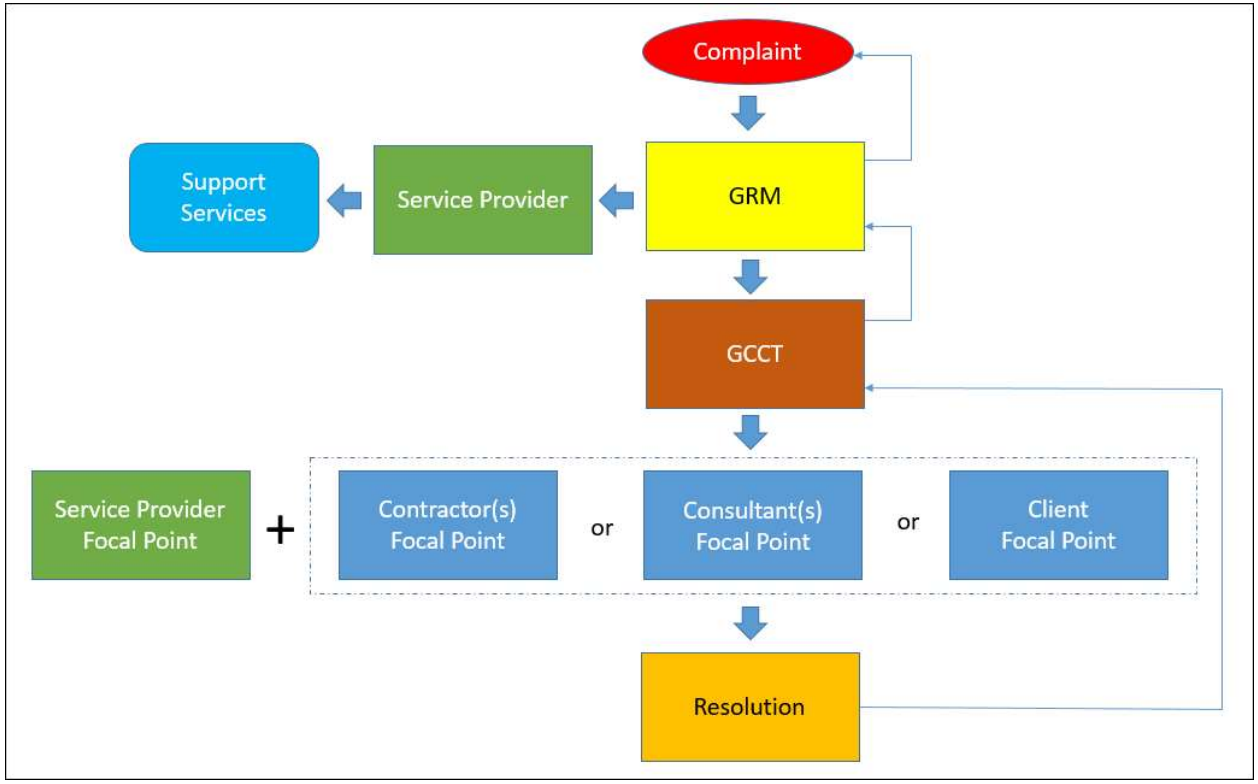
21. The figure below shows the process for addressing complaints.

G4. GRM

22. The project operates a grievance redress mechanism (GRM). Reports of GBV or VAC, other complaints, or other concerns may be submitted online, via telephone or mail, or in person.

23. The GRM operator will refer complaints related to GBV or VAC to the GCCT to resolve them. In accordance with the Action Plan, the GCCT through the Service Provider and Focal Point(s) will investigate the complaint and ultimately provide the GRM operator with a

24. If the complaint to the GRM is made by a survivor or on behalf of a survivor, the complainant will be directly referred to the service provider to receive support services while the GCCT investigates the complaint in parallel.



G5 Service Provider

25. The Service Provider is a local organization (possibly an NGO) which has the technical experience and ability to provide training to staff and to support survivors of GBV or VAC. The contractor(s) will contract the services of a Service Provider, so that GBV and VAC cases can safely be referred to them. The Service Provider will also provide support and guidance to the GBV and VAC Focal Points as necessary. The Service Provider will have a representative on the GCCT and be involved in resolving complaints related to GBV or VAC. The service provider will develop and conduct the mandatory training to employees on GBV and VAC.

G6. GBV and VAC Focal Point

26. The GCCT will refer the complaint to the appropriate Focal Points for resolution (i.e. issues with contractor's staff will be for the contractor to resolve; consultant's staff the consultant; and client staff the client) and will advise the GCCT on potential resolutions, including referral to the police if necessary. They will be assisted by the Service Provider as appropriate.

27. All the Focal Points on the GCCT must be trained and empowered to resolve GBV and VAC

warranting police action, the Focal Points must appropriately refer the complaint to: (i) the authorities; (ii) the Service Provider; and, (iii) management for further action. The Employer and the World Bank are to be immediately notified.

(a) Accountability Measures

28. All reports of GBV or VAC shall be handled in a confidential manner in order to protect the rights of all involved. To ensure that survivors feel confident to disclose their experience of GBV or VAC, the client, contractor and consultant must maintain the confidentiality of employees who notify any acts or threats of violence, and of any employees accused of engaging in any acts or threats of violence (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law). The contractor and consultant must prohibit discrimination or adverse action against an employee on the basis of survivor's disclosure, experience or perceived experience of GBV or VAC (see Annex 1 for examples of actions to maintain accountability).

(b) Monitoring and Evaluation

29. The GCCT must monitor the follow up of cases that have been reported and maintain all reported cases in a confidential and secure location. Monitoring must collect the number of cases that have been reported and the share of them that are being managed by police, NGOs etc.

30. These statistics shall be reported to the GRM and the Supervision Engineer for inclusion in their reporting.

31. In GBV and VAC cases warranting police action, the client and the World Bank are to be immediately notified.

(c) Awareness-raising Strategy

32. It is important to create an Awareness-raising Strategy with activities aimed to sensitize employees on GBV and VAC on the work site and its related risks, provisions of the GBV and VAC Codes of Conduct, GBV and VAC Allegation Procedures, Accountability Measures and Response Protocol. The strategy will be accompanied by a timeline, indicating the various sensitization activities through which the strategy will be implemented and also the related (expected) delivery dates. Awareness-raising activities may be linked with trainings provided by Service Provider.

(d) Response Protocol

33. The GCCT will be responsible for developing a written response[15] protocol to meet the project requirements, in accordance to national laws and protocols. The response protocol must include mechanisms to notify and respond to perpetrators in the workplace (See 4.8 for Perpetrator Policy and Response). The response protocol will include the GRM process to ensure competent and confidential response to disclosures of GBV and VAC. An employee who discloses a case of GBV or VAC in the workplace shall be referred to the GRM for further action.

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[14]Survivors of GBV and VACmay need access to police, justice, health, psychosocial, safe shelter and livelihood services to begin on a path of healing from their experience of violence.

[15] Develop appropriate protocol for written recording of GBV issues and VAC raised in case the notes are

minimize the potential for re-traumatization and further violence against the survivor. Refer the survivor to the Service Provider to obtain appropriate support services in the community—including medical and psychosocial support, emergency accommodation, security including police protection and livelihood support—by facilitating contact and coordination with these services. The contractor may, where feasible, provide financial and other supports to survivors of GBV or VAC for these services (see Annex 1 for examples of financial support).

35. If the survivor is an employee, in order to ensure the safety of the survivor and the workplace in general, the contractor, in consultation with the survivor, will assess the risk of ongoing abuse, to the survivor and to the workplace, and make reasonable adjustments to the work schedule and work environment as deemed necessary (see Annex 1 for examples of safety measures). The contractor will provide adequate leave to survivors seeking services after experiencing violence (see Annex 1 for details).

(f) Perpetrator Policy and Response

36. Encourage and accept notification through the GRM from employees and community members about perpetrators in the workplace. Through the GCCT and/or the Service Provider, oversee the investigation of these grievances, ensuring procedural fairness for the accused, and within the local laws. If an employee has breached the Code of Conduct, the contractor will take action which could include:

a. Undertake disciplinary action up in accordance with sanctions in the GBV and VAC Codes of Conduct;

b. Report the perpetrator to the Police as per local legal paradigms; and/or

c. If feasible, provide or facilitate counselling for the perpetrator.

(g) Administrative Sanctions

37. In accordance with the Code of Conduct, any employee identified as a potential GBV or VAC perpetrator shall be considered for disciplinary measures in line with sanctions and practices as agreed in the Individual Code of Conduct (see Annex 1 for examples of sanctions). It is important to note that, for each case, disciplinary sanctions are intended to be part of a process that is entirely internal to the employer, is placed under the full control and responsibility of its managers, and is conducted in accordance with the applicable national labor legislation.

30. Such process is expected to be fully independent from any official investigation that competent authorities (e.g. Police) may decide to conduct in relationship to the same case, and in accordance with the applicable national law. Similarly, internal disciplinary measures that the employer's managers may decide to enact are meant to be separate from any charges or sanctions that the official investigation may result into (e.g. monetary fines, detention etc.).

G7. Attachment 1 - Potential Procedures for Addressing GBV and VAC

Accountability Measures to maintain confidentiality can be achieved through the following actions:

1. Inform all employees that confidentiality of GBV/VAC survivors' personal information is

survivor's confidentiality (this is unless a breach of confidentiality is necessary to protect the survivor or another person from serious harm, or where required by law).

GBV and VAC Allegation Procedures should specify:

1. Who survivors can seek information and assistance from.
2. The process for community members and employees to lodge a complaint through the GRM should there be alleged GBV or VAC.
3. The mechanism for how community members and employees can escalate a request for support or notification of violence if the process for reporting is ineffective due to unavailability or non-responsiveness, or if the employee's concern in not resolved.

Financial and Other Supports to survivors can include:

1. No/low interest loans.
2. Salary advances.
3. Direct payment of medical costs.
4. Upfront payments for medical costs to be recouped from the employee's health insurance.
5. Providing or facilitating access to childcare.
6. Providing security upgrades to the employee's home.
7. Providing safe transportation to access support services or to and from accommodation.

Survivor Support measures to ensure the safety of the survivor can include:

1. Changing the employee's span of hours or pattern of hours and/or shift patterns.
2. Redesigning or changing the employee's duties.
3. Changing the employee's telephone number or email address to avoid harassing contact.
4. Relocating the employee to another work site/ alternative premises.
5. Providing safe transportation to and from work for a specified period.
6. Supporting the employee to apply for an Interim Protection Order or referring them to appropriate support.
7. Taking any other appropriate measures including those available under existing provisions for family friendly and flexible work arrangements.

Leave options for survivors that are employees can include:

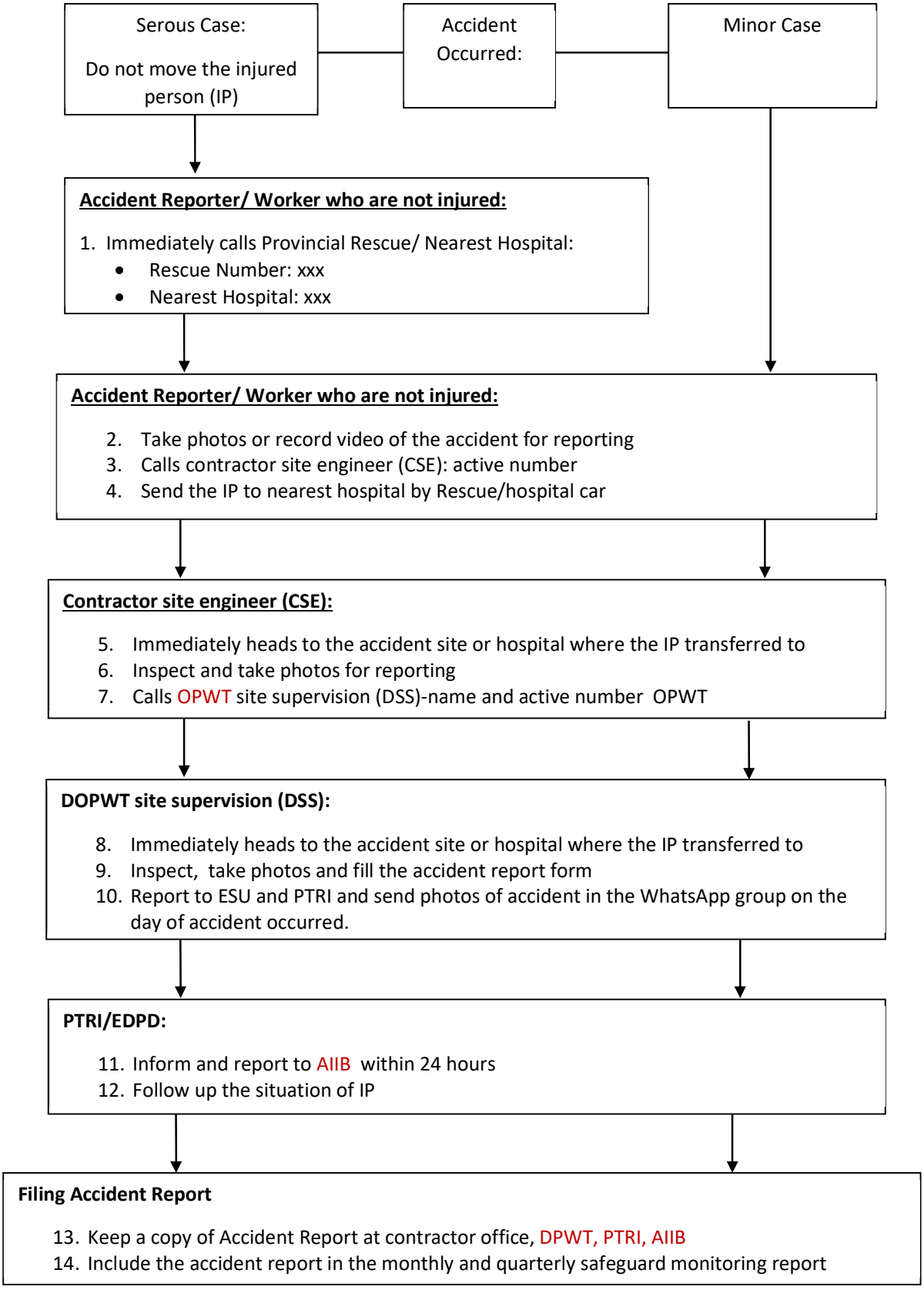
1. An employee experiencing GBV should be able to request paid special leave to attend medical or psychosocial appointments, legal proceedings, relocation to safe accommodation and other activities related to GBV.
2. An employee who supports a person experiencing GBV or VAC may take carer's leave, including but not limited to accompanying them to court or hospital, or to take care of

4. The amount of leave provided will be determine by the individual's situation through consultations with the employee, the management and the GCCT where appropriate.

Potential Sanctions to employees who are perpetrators of GBV and VAC include:

- Informal warning
- Formal warning
- Additional Training
- Loss of up to one week's salary.
- Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
- Termination of employment.
- Referral to the Police or other authorities as warranted.

ATTACHMENT 8 ACCIDENT REPORTING PROCEDURE AND FORM



ACCIDENT REPORT

Date of the Accident: _____ **Time:** _____

Location: _____

Type of Accident: _____

Detailed Description of the Accident:

_____

Responses / Corrective Actions Taken:

_____

Possible Causes(s) of the Accident:

_____

Suggested Preventive Measures:

_____

Submitted by:		**Position:**	
Signature:		**Date:**	

Reviewed by : _____ **Date :** _____

ACHMENT 9 SAMPLE FORM OF GRIEVANCE REDRESS MECHANISM MONITORING

Sample Form of Grievance Redress Mechanism Monitoring to be used by Village Grievance Committee
Village:……; District:……;
Provinces:…….

cation /Km) village	Brief Description/nature of grievance	Grievance applied by and contact detail or code (not mandatory)	Ethnic Group	Date of grievance received	Grievance received by	Status of action taken		Action taken by	Rem Expla
						Solved or what action taken	Date of action completed or taken		

Sample Form of Grievance Redress Mechanism Monitoring to be used by District Grievance Committee and PMU

District:……; Provinces:……,
Month/Year……

No	Location (PK/Km)	Village	Brief Description/nature of grievance	Grievance applied by with contact detail or code (not mandatory)	Ethnic Group	Date of grievance received	Grievance received by	Status of action taken			Action taken by	Remarks/ Explanation
								Solved or what action taken	I.1.a.1	Date of action completed or ta		

									k e n		

ATTACHMENT 10 MINUTES OF CONSULTATION MEETINGS IN BOLIKHAMXAY AND KHAMMOUANE PROVINCES

LAO PEOPLE'S DEMOCRATIC REPUBLIC

PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

Ministry of Public Works and Transport (MPWT)

The Department of Road (DoR) and

The Public Works and Transport Research Institute (PTRI)

Minutes of Consultation Meetings

in

Bolikhamxay and Khammoaune Provinces

Lao Road Sector Project 2 Additional Financing

(LRSP2-AF)

Project No. (P170951)

Vientiane, September 2019

1 INTRODUCTION

1.1 Project Background

1. The proposed Lao Road Sector Project 2 Additional Financing (LRSP2-AF or the Project) builds on the achievements of the parent Lao Road Sector Project 2 (LRSP2). The Project is being prepared to support the Government of Lao PDR (GoL) in the preservation of the Lao road network. The Project will finance civil works in the form of routine and periodic maintenanceto preserve the road network as well asspot improvements to strengthen vulnerable sections and thereby enhance climate resilience. In addition to the World Bank, the Nordic Development Fund (NDF), the European Investment Bank (EIB) and the European Union (EU), and the Asian Infrastructure Investment Bank (AIIB) have provided complementary parallel financing for works and TA of the parent project and this arrangement is expected to be applied for the Project. This Environment and Social Management Framework (ESMF) being applied under the parent project is updated to include additional work activities (subproject) for new section of National Road 13 South (NR13 S).

2. The Project Development Objective (PDO) of the LRSP2-AF is similar to that of the parent project i.e. to strengthen maintenance systems to improve reliable road connectivity in Lao PDR and, in the event of an Eligible Crisis or Emergency, to provide immediate and effective response to said Eligible Crisis or Emergency. The Project will scale up the investment of LRSP2 to: (i) carry out climate resilience improvement and maintenance of 275 kilometers of national road 13 south (NR13S) sections from Bolikhamxay (BKX) to Khammouane (KM) provinces using an Output- and Performance-Based Road Contract (OPBRC), (ii) provide additional technical and operational assistance for contract management, quality assurance, road safety, Electrical Vehicle (EV) regulations, urban mobility and environmental and social monitoring, and (iii) to provide equipment and flood relief facilities to villages located in flood-prone areas along the NR13S road sections to mitigate potential negative impacts due to flooding. Two additional subcomponents will be added to cover these activities: i.e. Sub-component 1.3: Design and Supervision of NR13S Improvement and Maintenance and Sub-component 1.5: Improvement and Maintenance of NR13S and. Annex A provides an overview of the Project components compared to those of the parent project.

3. The improvement works for NR13S will include overlaying the existing wide two-lane carriageway with asphalt concrete (AC), as well as improving the climate resilience of vulnerable road sections. Improve road safety, especially for pedestrians, motorcyclists and farm tractors, the improvement works also include widening of shoulders on both sides from 1 to 2.5 meters (making the road a maximum of 12 meters wide) in sections with high traffic volume as well as in populated areas. These works will be executed on the existing road within the right of way, and no additional land acquisition is required.

4. The Project life will be 6 years; comprising 1 year for preparation and bidding, 3 years to carry out civil works related to the improvement and enhance climate resilience of

NR13S, followed by 2 years for maintenance. As a result, an extension of the project closing date to December 13, 2025 is required.

1.2 Objective

5. The consultation was conducted in two provinces (BLKX and KM provinces), the main objectives of the consultation were for:

- To consult on the draft of ESMF, RPF and EGPF;
- To know the perception of local authority on the implementation of the LRSP 2-AF;
- To share working experience with all participants on the implementation of E&S for the road development project.

1.3 Methodology

6. The PP presentation was used to explain the draft of ESMF, RPF and EGPF to the audiences and open discussion have given to all participants to discuss and share their own experience with the EDPD team.

2 THE PARTICIPANTS

7. In Bolikhamxay province, the project pass through three districts namely Thapabad, Parksan and Parkading and 54 villages from 10-village groups were officially invited into the consultation meetings. There were 224 participants and 58 females. The detail of the village group was shown in table 1.

8. In Khammouan province, the project pass through two districts namely Thakhek and Hinboun and 37 villages from 8-village groups were officially invited into the consultation meetings. There were 118 participants and 30 females. The detail of the village group was shown in table 1.

Table 1: Name and the number of participants in each village group

No	District	Village group	Participated villages	Participants	Females
Bolikhamxay Province			54 villages	224	58
1	Thapabad	Thapabad Phonsan	5 villages: Naxai, Xaixavang, Laoka, Nakaen and Pabadphonsun	23	10
		Paktuay	6 villages: Seesomxai, Namlo, Yoyhai, Nongkern, Parktuay and Vernthat	34	12
		Thabok	4 villages: Palai, Thabok, Phonsavanh and Samakkeexay	27	6
2	Paksan	Ssenoudom	6 villages: Hangxing, Kuayoudom, Namngieb and Huaysied	21	6
		Urban 2	2 villages: Anousonxai and Phonxaineau	11	2

No	District	Village group	Participated villages	Participants	Females
		Urban 1	6 villages: Symungkhoun, Syvilay, Myxay, Nachik, Sysaath and Phonsaath	14	2
		Phonxaithai	8 villages: Phonsavang, Phonengarm, Thana, Hardxaikhoon, Parkkadun, Kengsdok and Phonxaitai	29	5
3	Parkading	Thongnamee	4 villages: Nadeua, Nakeuanok, Namkhou and Thongnamee	19	4
		Pakkading	7 villages: Seansamlane, Paksa, PakkadingNeua, Donexay, Hadsaykham, Phonxay and Phonchalern	22	5
		Viengkham	6 villages: Namsang, Viengkham, Namthon, Khonsong, Na In and Nalieng	24	6
Khammouan Province			**37 Villages**	**118**	**30**
4	Hinboun	Khamkeo	8 villages: Phonthong, Khamkeo, Sysomsuen, Phonsavang, Songhong, Khamkeo, Nonghoi, Vanghaopa	25	7
	Hinboun	NaPho and Hinboun	Napho, 3 villages: MaiNampakan, Nongbouanoy, Xaysomboun and Hinboun 1 village: Phokham	11	1
		Laukra and Paktuk	4 Paktuk villages: Phonsung, Huayhue, Danhy, Laurlung. 4 Laukra villages: Viengthong, Phonsay, Laukra, Phonsaart	31	8
5	Thakhek	Thakuang-NaNgeo	8 Jomthong villages: Phonkhoun, Nonsavang, NaNgeo, Nakok, Namdon, Phonsoung, Maiphonsy and NaYavay	21	6

No	District	Village group	Participated villages	Participants	Females
		Jomthong and Nadon	7 Jomthong villages: Phonsytha, Syvilay, Phonsaart, Viengvilay, Suksavanh, Phonphim, Donmuang 2 Nadon villages: Nabuam, Nadon.	30	8
Total Two Provinces			91 villages	342	88

3 CONSULTATION FINDINGS

9. All the participants agreed that having the road upgrading and expanding is their dream. They all support this project with many positive reasons such as the new and standard road will be a signature of modernity, which shows a good image of the community as well as the country, having larger road equals to having better transportation, possibly reduce the issues of road accident and better road safety conditions. More details of the discussion on both positive and negative impacts of the road construction is discussed in heading 2.

10. Potential project risks and impacts on the local communities, people, their environment and livelihood, access etc (both positive and negative) are presented below:

a) Positive impacts

11. Some villagers pointed that the upgrading road project will significantly contribute to social and economic development. One of frequent reasons mentioned is that both villagers or local traders will be able to deliver goods (agriculture and handicraft products) to the neighbor districts, in the province or even in the Vientiane capital. Apart from the discussion of commercial activities, opinions about visiting relatives in other places were also mentioned. A lady from Phonxaithai village group, Parksun district said "with current road conditions, I rarely visit my relatives in other places because it takes time". When we have good road, I can spend shorter time to visit other relatives/friends in other places, she added. Other villagers explained that local communities will have better and standardized road and this will contribute to not only having better and quicker transportation, which will reach destinations more quickly, but also having safety road conditions and this may help to reduce the number of road accident.

b) Potential risks and negative impacts

12. Common negative impacts discussed during the consultation meetings were: **dust, rubbish,** road accident and relocation issues as a result from road construction. In terms of the dust impact, the participants were aware that it is a common issue during road construction and many of the road construction projects did not have effective solutions to address this issue based on their experiences. The rubbish issues were also experienced by local communities. They explained that many of the road construction

projects likely to leave their unused materials in local communities during and/or after the completion of the construction and those materials become rubbish in the communities. Additionally, many female participants claimed that apart from leaving unused materials, rubbish also come from workers during the construction. Sometimes construction workers do not manage their rubbish and throw it in public.

13. Regarding the road accident, based on experiences of the local communities, accidents were frequently happened during the road construction period because of inconvenient transportation. Villagers elaborated this point by arguing that many road construction projects were likely not paying attention to the road accident and the accident issue is like to happens as usual. Sometimes, there were no signal signs that road users need to be aware and be careful if there is construction in front or there are some holes on the road, some villagers added.

14. Relocation issues were also pointed out as negative impacts. Despite the fact that all of the participants are aware that 25 m of both side of the 13th southern road has been issued by the Lao government as conservative area since 1996, some villagers argued that many villagers established their house/s before the 1996 so they should be compensated with acceptable conditions. Villagers claimed that those who expanded their restaurants or houses close to road after the 1996, they should not claim for compensation. This view was supported by many participants. An example is a man, about 70 years old, from Viengkham viallge, Parkading district saying that he has run a shop next to the road after the 1996 despite having informed by local authorities that it is conservative area. He agreed to move out without compensation. Another man added that the 13th road upgrading is a government project and all villagers are aware of road conservative area and they would not argue against the government when the project come.

15. However, in practice, the compensation issue should not take for granted and an effective solution should be clearly made.

c) Proposed mitigation measures and actions:

16. Some mitigation measures were discussed. In terms of road accident, having signal signs/banners posted on the road with wordings saying ‘there is constructing in 100 m or more, please reducing seeped to 30 km/h) during the construction is needed. Some villagers using their old experiences to explain this point the fact that sometimes the signal signs were already existed but they were removed or destroyed by road users so the project needs to pay more attention to check regularly in order to avoid or minimize the road accident issue.

17. Stick on action plans and timeframe were further recommended. The participants claimed that it is important to stick on the schedule and villagers should be regularly informed if any changing occurred during the construction.

d) Concerns, issues, expectations and suggestions raised by the PAPs/PAHs

18. Compensation, noise and dust, be practical and an effective collaboration were frequently raised and discussed during the group discussion.

19. The compensation issue was popular topic. Concerns were related to the question whether or not those villagers having house/s, restaurants or/and other business activities next to the 13th southern road will be compensated when project happens and how will be implemented? For example, land compensation, whether villagers will be compensated the same price as they bought or higher or lower? some villagers added. Some others further raised a concern of house broken during the construction because of heavy trucks and/or pressing road with heaving machines/trucks. This can be issue of compensation and how it will be compensated.

20. Regarding the noise and dust issues, the participants explained that sometimes the construction was happened during the days and nights so villagers' free time or relax time were disturbed and taken. The villagers hope that the project will have some mitigation strategies to deal with these issues.

21. In terms of being practical, many of the participants explained that based on their experiences, sometimes the project coordinators worked with local authorities and informed the affected households to move out/ relocated their business activities (can be house, restaurants and others) so the project can start working but unfortunately, some cases were eventually not affected when the project implemented despite the fact that their business activities were already removed without compensation. Villagers suggest that the project should have a good practical plan and actions should be implemented in according to the plan.

22. An effective collaboration with different stakeholders (villagers/affected households, local and government authorities, project owners and donors) was strongly suggested by the discussion groups. The participants believe that the project corridor is someone who has power to control budget plans and project working plans. Therefore, the project coordinator is considered as key contact person working along these diverse beneficiary actors, participants added.

e) Proposed mitigation measures and support required by man and women:

23. Different mitigation approaches were pointed and discussed amongst the participants and gender perceptions were also included.

24. Overall, both females and males shared similar mitigation measures. Regarding the dust and noise, regular purring water during the construction is suggested in order to minimize the dust issue. In terms of compensation matters, the participants suggested that the project committees should come and closely consult with local authorities and affected households and agreement between parties should be made at the local level, villagers claimed. Both project and local communities should be able to reach an agreement of what and how both parties can contribute to the project development, participants added. For example, how much compensation can be accepted by both affected households and government and what kinds of contributions that local communities can contribute to the project or government. Once the promise is

developed, the parties must stick on it. Some other village interviewees claimed that livelihood restoration is also essential mitigation, particularly those affected families.

25. Looking at specific gender perception, the suggested mitigation measures by males are more related creating a temporary road avoiding from the main road for road users during the construction of the main road (if it is possible). Males also proposed to have signal signs close to the construction areas, specific posters with road conditions should be posted before and on the construction area. Additionally, signal lights or posters in curve areas and drainage ways are also suggested. For females, frequent recommended mitigation is to create pedestrian in the school areas or even building a small bridge across the road.

f) Did project beneficiaries, project affected people or households (PAPs/PAHs) or other stakeholders consulted broadly support the proposed project?

26. All the participants in the consultation meeting agreed to support the project.

g) Next steps/ agreed action, persons responsible, resources/budget and timeframe (basically to confirm the point 6):

27. Overall, villagers have a trust with the project; particularly the name of AIIB is well-known and trustable. They thought the 6-year project is not really long and of course the shorter timeframe is better, villagers added. However, some of the interviewees questioned about the possibilities because global economic conditions can influence the project particularly if the donors face financial difficulties, it might affect the project implementation too.

28. Information disclosure and grievance redress mechanism required to be established: Firstly, working closely with local authorities is recommended. The information disclosure can be a poster posted in the village office so when villagers come to a meeting, they can have a look more closely. It is also important to note that the disclosure of the project information should be accessible by all village members and make sure that everyone receive the same messages, others added. Therefore, the project information disclosure should be organized in village meeting hall and all households shall be invited and their voices are discussed and considered. Secondly, consultation meetings with affected households separately is a must, most of the interviewees claimed. This may open opportunities with both project owners and local communities to seek and reach their bargain with a win-win solution. Thirdly, all related decrees and agreements form the government office should posted in the village office. Finally, the grievance mechanism (committee) is significant and it should be established at village and district level in order to response the project issues more quickly and effectively, villagers recommended.

h) Road Safety (During and after the completion of construction- short term and long-term impacts):

29. Diverse road safety techniques were suggested during the consultation meetings. For the short-term solution, reducing speeds or speed limits in the construction area should be suggested to road users. Also signal lights/signs near and in the construction areas, creating temporary road avoiding the main construction area, and regular cleaning the construction areas are recommended.

30. For the long-term solution, having cameras were highlighted. Local communities raised many examples of road accidents and parties are not responsible and the fact that there is no evidence to be confirmed. For example, in Viengkham village, there were cases of road accident and unfortunately, the local community could not find who were perpetrators. If there is a road camera, it would help, villagers claimed. Another type of road accident is because of curve road or a small bridge. For example, in Thongnamee viallge, Parkkading district, often accidents happened in the curve road next to the Namkhou bridge so having a fence alongside the curve area is required by local communities. Pedestrian and signal bans in schooling areas were frequently pointed during the group discussions.

i) The perception on the disaster caused by road project and proposed mitigation measures to be identified among villagers and stakeholders:

31. The disaster issue is related flooding and many local communities have been facing. The flooding was considered from two main causes: The first is because of raise of the Mekong rivers and the mall rivers in the local communities, particularly during the rainy season. recommended mitigation measures to address this issue to establish a center for responding the flooding. The center should be provided with facilities and necessary assistance equipment such as boats, trucks and communication tools and make sure that villagers can access to these facilities. While having a center is considerably important, many other participants in the group discussion suggested to renovate current existing facilities in local public buildings such as schools, village office or temples and these places can be used during and after flooding issues. Some villages suggested to build water gate that can be closed and opened in different seasons, which can solve the flooding issue. For example, in the Kouddaeng river, Pasoom village, Paksun district, villagers explained that the flooding occasionally happens when there is a lot of rain. If there is a gate water in the Kouddaeng river, it can solve the flooding issues. Others also asked the support of water pumping machine to drain flooding water.

32. Secondly, others claimed that the flooding is because of having small drainage pipes. By having bigger drainage pipes or having a bridge for some cases, it would help the flow of rain water, villagers argued.

j) The gender perspective on the road project through consultation, design, planning, implementing and monitoring to be promoted during the project cycles:

33. In terms of designing and implementing the road construction project, many of the participants suggested that the participation of the local communities is significant. Local residents are aware of the road conditions and they are able to share some potential solutions.

34. Regarding gender perspectives, different views on gender roles and participations were raised. Many of the female and male interviewees argued that women have more power when talking about financial control and the final decision making. We can say it is equal but in practice women have more power regarding the finance management, many men added. A lady participant said, I agreed women have power because men are not good at the management of finance. When compensation come, women will take charge to claim money, a man added.
35. However, some others feel that the final decision making comes from both husband and wife. They have equal roles and so they share equal responsibilities. Their roles and responsibilities are interchangeable in practice depending on their ability and availability, villagers added.
36. Only a Viengkham village lady pointed that man has more power than woman. She gave an example of her experience that the final decision making is mainly based on husband. She said, I respect my husband decision and I followed him. This argument is further explained by another lady in Parkading saying that some women are illiterate but most of men they are literate, also men are usually a head of the family. Therefore, men are often involved in village activities.

4 RECOMMENDATIONS

37. Villagers would like to hear more from the project regarding the budget for compensation? Where does it come from? And the compensation should be acceptable and transparency.
38. In terms of information disclosure of the project, it should be detailed and villagers' satisfaction or feedback should be studied and evaluated.
39. The main road should higher than the alleyways in villages. The issue is that the alleyways are often not developed by the project so it makes difficulty for the villagers' transportation and most of the time they handle by themselves. Thus, it would be great if the project can develop the alleyways, which is about 5-10 m from the main road.
40. Compensation should be completed before the project starts and villagers should be informed for at least 2-3 month before construction starts.
41. Based on local experiences, villagers particularly those who have house/s next to the main road were asked to contribute the drainage pipes. The hope that this project might be different.
42. If will be great if there is a bus waiting area and the project can design bus top areas.
43. Both quality and quantity of the road construction are important. Thus, the project owner or donors should pay attention to. Sometimes, new roads are broken after two years, which is sad, villagers commended.

Having consultation meetings are significant and this is the first time for villagers to participate in road construction project, their voices and concerns are discussed, we support this kind of meeting, added by the participants.