

**KINGDOM OF CAMBODIA  
NATION RELIGION KING**

**Cambodia Agricultural Sector Diversification Project  
(CADSP)  
ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR**

DBST Road Rehabilitation Subproject  
(7.31 kilometers)  
In Preah Rumkel commune, Borie Oh Svay District Stung Trang Province.

Name of AC: Preah Rumkel

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## List of Abbreviations

CASDP	Cambodia Agricultural Sector Diversification Project
DP	Development Plan
E&S	Environmental and Social
ECOPs	Environmental Code of Practices
EHS	Environmental Health and Safety
EIA	Environmental Impact Assessment
EMDP	Ethnic Minority Development Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
EU	Environmental Unit
GAP	Good Agricultural Practices
GHG	Greenhouse Gasses
GNI	Gross National Income
GRM	Grievance Redress Mechanism
IEIA	Initial Environmental Impact Assessment
IPM	Integrated Pest Management
MAFF	Ministry of Agricultural Forestry and Fishery
MoE	Ministry of Environment
MOWRAM	Ministry of Water Resources and Meteorology
MRD	Ministry of Rural Development
PCO	Project Coordination Office
PCR	Physical Cultural Resource
PIM	Project Implementation Manual
PMP	Pesticide Management Plan
RPF	Resettlement Policy Framework
SEO	Safety and Environment Officer
WB	World Bank

## **I. Introduction**

1. The Cambodia Agricultural Sector Diversification Project (CASDP) planned to reach the project development objective indicators at least: 1). Increase in the value of gross sales at benefitting farms for 5 percentages in year one, 10 percentages in year two and another 15 percentages at end target, 2). Increase in the volume of gross sale of benefitting farms for 5 percentages in year one, 10 percentages in year two and another 15 percentages at end target, 3). Increase in the value of gross sales of benefitting agribusinesses for 5 percentages in year one, 10 percentages in year two and another 15 percentages at end target, and 4). Share of non-rice production area of participating farmers increase 20 percentages in year one, 25 percentages in year two and another 20 percentages at end target.

2. In the period from January to June 2020, significant progress was made, including the formation of the Project Steering Committee (PSC). In addition, both Khmer and English versions of the POM were developed. The primary objective of this ESMP is to establish a set of mitigation and monitoring measures to minimize any negative social and environmental impacts that may occur during the subproject's implementation phase.

3. The measures emphasize particularly sensitive receptors or locations. The ESMP also details the monitoring program during the construction phase, including locations, frequency, and reporting procedures. During the pre-construction and construction phases of the Subproject, all staff, consultants, supervisors, Contractors, and subcontractors must adhere to the ESMP's guiding environmental principles and procedures for communication, reporting, training, monitoring, and plan review.

4. This document presents the Environmental Social Management Plan (ESMP), which was developed to ensure that the proposed CASDP is implemented in accordance with the operational policies (OP) and local environmental protection legislation of the World Bank. The primary objective of this ESMP is to serve as a useful tool for identifying potential significant environmental and social impacts that will result from the project and proposing mitigation measures to address the most significant impacts. The ESMP also specifies the responsibilities of all parties involved in the implementation of the project. Although major environmental concerns are not anticipated (the project has been classified as Environmental Category B in accordance with the World Bank's OP/BP 4.01 on Environmental Assessment), the ESMP identifies a number of mitigation measures aimed at environment protection and maintenance of environmental conditions during the civil works.

5. As part of their duties for the Road rehabilitation in Preah Rumkel AC in the Preah Rumkel commune, the PCO will be responsible for the supervision and monitoring of project-related environmental and social activities throughout the pre-construction, construction, and operation phases. In accordance with this, the PCO will assign a Ministry of Rural Development (MRD) with oversight of environmental management and environmental monitoring responsibilities. The environmental officer will be primarily responsible for ensuring:

- i. Mitigation measures and monitoring of these activities are carried out in accordance with the ESMP;
- ii. Environmental and social Monitoring program, comprising of taking samples and analysis are being carried out;
- iii. Reporting is performed in compliance with World Bank requirements.

6. Through a competitive bidding process, the MRD will select a contractor for road rehabilitation. The bid document also contained the ESMP for bidders to review prior to submitting a bid. Environmental Social Management Plan (ESMP) developed by the Safeguards team must also be applied by the contractors, as stipulated in the contract documents. During the construction phase, the Contractor will be responsible for implementing mitigation and monitoring measures, with the PCO-MRD supervising and monitoring their performance.

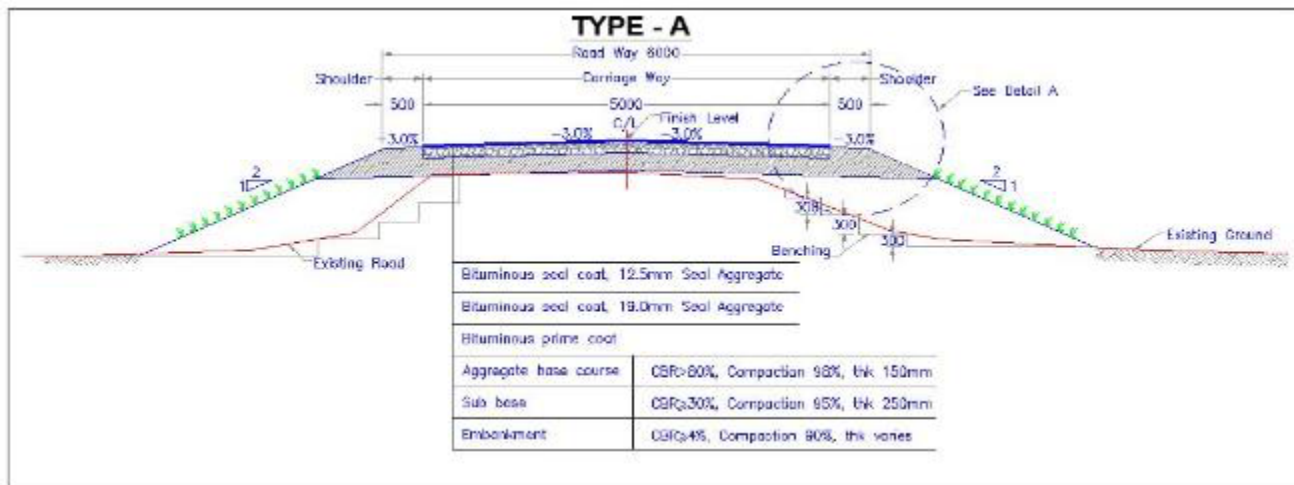
## II. Sub-Project Description

### II-1. Site Location

7. The proposed sub-project involves the rehabilitation of the existing road in Kralapeas village, Preah Rumkel Commune, Borie Our Svaysenchey District, Stung Treng Province, which is approximately 412 kilometers from the capital of Phnom Penh. The sub-project site could be reached via National Road No. 7 and road No. 64, which are roughly 80 kilometers from the city of Stung Treng.

8. A 7-kilometer unpaved existing road track will be upgraded to a DBST road as part of this subproject. Originally, the road is between 7 and 12 meters wide. The project will not widen the existing road track, but certain stretches will require road shoulders. The type of road rehabilitation and the required ROW are depicted in the diagram below.

Figure 1: Road Type



9. This road connects the five villages of Anlongsvay, Kralapeas, Kandal, Kraom, and Leu in the commune of Preah Rumkel, providing access to the district center via National Road No. 7 and/or Road No. 64. Figure below depicts the location of the road subproject between the coordinates BP: N=604637, E=1533786. The majority of the road becomes muddy and waterlogged during the rainy season, and during the dry season, it is difficult to travel on by vehicle and creates dusty conditions that negatively impact the villagers who live near the road line. This road rehabilitation was requested by these villagers to the commune authorities. Given this, it was requested that the unpaved road be converted into a DBST road. The road location and the location of the Agriculture Cooperative are shown on the map below.

Figure 2: Sub project Map for DBST Road Rehabilitation at Preah Rumkel



**II-2. Construction activities and Schedule.**

*Table 1: Summary of Miscellaneous Work*

Activity	Unit	Quantity
<b>Maintenance of Road During Construction Works</b>		
Maintain Safe Traffic Operations	km-Month	19.13
<b>Progress Photographs</b>		
Progress Photographs	Month	15
<b>Project Information Board</b>		
Project Information Board	No	3
<b>Site Clean Up</b>		
Site Clean Up	L.S	3
<b>Safeguards</b>		
Maintain the Gender Action Plan and HIV/Aids & Human Trafficking Prevention Program	Month	15
Environmental Monitoring Costs Preconstruction, Survey of sensitive receptors, water quality monitoring, Air quality monitoring, noise and vibrations monitoring to establish baselines	L.S	3
Implementation of the Environmental and Social Management Plan (ESMP) including ensuring the water quality monitoring, air quality, dust monitoring, noise and vibrations monitoring to ensure compliance and , Healthy (first aids kit) and safety (install: construction signboard, banner, etc. (provisional quantities), Safety staffs (Protective Helmet, Safety Hand Gloves, Reflective Safety Vest Safe Strap, Construction Boots, Safe Belts and other Personal protective equipment (PPE) has been supplied to the worker during construction, Worker’s Camp will be construction, Safe drinking water and toilets for Workers and Measurement of Pandemic Covid-19 material: Masks, Alcohol for hand sanitizer (Note: Contractor may claim base on Invoice).	Month	15

10. Table 2 provides a summary of the progress made by contractors beginning in August 2023 for each contract package.

*Table 2: Project Construction Scheduled*

Activity	Q4-2022			Q1-2023			Q2-2023			Q3-2023			Q4-2023		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Document Submission to World Bank, Comments, Revision, NOL															
Bidding															
NOL, Negotiation and Contract Sign															
Advance Payment (10%)															
Contract Implementation/ Construction Supervision															

**III. Baseline data**

**III-1. Project Area**

11. This subproject involves the rehabilitation of a 7.31-kilometer road beginning in Kralapeas village, Preah Rumkel Commune, Borie. Our Svaysenchey District in Stung Treng province connects the five villages of Anlongsvay, Kralapeas, Kandal, Kraom, and Leu in the commune of Preah Rumkel, facilitating access

between farms and provincial markets. This unpaved road is utilized not only by residents of the Preah Rumkel Commune, but also by residents of adjacent communes.

12. In addition, this road allows farmers to transport their crops, livestock, supplies, and equipment between their farms, homes, and nearby markets. This unpaved path with seasonal access to a year-round, all-weather paved road is necessary because a stable, long-lasting access road is a significant improvement for agricultural operations in this community. Stable access road provides a safe, stable route for transporting equipment, supplies, crops, and animals, reduces expensive long-term agricultural input and output transport costs, and shortens travel time for farmers, allowing them to devote more time to farm activities and the production of more crops. In addition, it is anticipated that the road will provide residents and children of the commune with access to schools, health centers, and other nearby villages. The farmers' language implies that road rehabilitation is beneficial and increases agricultural output. The image below depicts the current condition of the road (Photo 2)

*Figure 3: Original condition of road in Preah Rumkel commune*



13. The proposed project expands upon existing environmental practices under the World Bank-funded CASDP. On the basis of the assessment (Environmental and Social Management Framework) conducted by the PCO team on the proposed road sections on July 25, 2018, no major adverse impacts on local environment and local people have been identified.

14. During construction, initial emissions from heavy equipment, noise, air pollution, water quality, construction debris (likely the installation of construction materials and machines along roads or in front of local community houses and small shops, school), and short-term disruption of daily business operations may occur (likely the accessibility to small shops,). These issues can be mitigated, however, by employing good construction practices and closely supervising and monitoring the work.

Observing daily business activities, students traveling along this road segment in the communities, and resuming discussions with the local authority comprised the initial evaluation (such as local small shops and school).

The construction of side drainages may pose a minimal threat to the safety and health of nearby residents. Additionally, the provision of warning signs and barriers (e.g., a temporary fence) for the convenience of children riding bicycles is required, as are additional measures such as signposts and security on road segments where a school is located.

15. Therefore, there will be no land impacts as the side drainages are primarily rehabilitation of the existing ones. Equally, the drainage work may cause disruptions to goods transportation and resident travel, including school travel for students, and may limit these activities. In addition, some mobile tables, cooks, and/or vendors may need to be removed from the pedestrian areas utilized by local small business owners. Based on feedback from local store owners and discussions with CASDP's road engineers, this evaluation recommended the site-specific ESMPs described in Table 4 of the Mitigation measure matrix.

### III-2. Topography

1. The terrain of the road subproject area in Preah Rumkel commune (Stung Treng is a very flat alluvial plain of clays and sands bordered by floodplain silts along a small canal. The biodiversity of paddy rice fields, crops, small trees, and fisheries is considered to be of particular importance along this stretch of road.

Figure 4: Satellite Map of the Preah Rumkel subproject area



2. **Surface water:** No comprehensive water quality data for the subproject areas water bodies currently exist. For the road subproject, dry season water quality was sampled by the consultation with local authority.

3. **Water Uses:** Mekong River is the primary water source for the community, and they have access to it. The villagers obtain water from the current Mekong River. Other source of water in the command area is precipitation. When the people require additional water for their fields, they use pumps for irrigation.



4. **Land Use:** Land use in the subproject areas is agricultural, comprising actively farmed paddy fields or abandoned paddies, in both actively farmed paddy fields and abandoned paddies, a mixture of natural and plantation-escaped trees and shrubs have established along the bundled boundaries of fields, along roadsides. In abandoned paddies there is adventitious growth of shrubs, weeds and grasses. In the village road subproject, the water quality in the main intermittent creek line over which the road passes were observed by Safeguards team. Land in these villages is divided into four main categories: (i) residential land or land for household compound including animal raising and home gardening activities; (ii) common or public land for public purpose; (iii) land for crop farming (short- and long-term farming); and (iv) community land or AC's land area. And the subproject will cause some minimal impact on land and some minimal assets (mainly fruit trees). Following some fully informed consultation with the affected households, all of them (7 households) have voluntarily donated their loss of land/assets. Documentation of these voluntary land donations has been carried out properly and is attached to this ESMP as Annex 5: List of Voluntary Contribution of Land and Other Assets.

5. **Soil and Water Pollution:** The road subproject area in Preah Rumkel commune (Stung Treng) is a very flat alluvial plain of clays, gravel, silts, and sands bordered by the Mekong River, and there is a risk of soil contamination during construction due to accidental spills of fuel and oil from construction equipment. In the construction industry, construction waste is produced, which, if improperly disposed of, may have minor effects. The construction work performed within the river bed causes a temporary blurring of the watercourse and the release of dust into the river, which negatively impacts the health of those living along the road. In the construction industry, construction waste is produced, which, if improperly disposed of, may have minor effects.

6. During the wet season, the road is muddy, slick, and flooded with water. Along the roadway, there are currently six bridges and fourteen pipe culverts. The construction risk impact during implementation activities may cause damage to a small sub-canal and erosion on embankment slopes, and an excavator will impact the existing bridge slope. Since these are natural effects of construction, they will not harm the native tree or aquatic life. It has been determined that the road rehabilitation will have no effect on natural waterways or habitats because six existing bridges and six existing pipe culverts are in usable condition.

#### IV. Socioeconomic Status

7. The socioeconomic status of people in five villages can be divided into four categories according to the national wealth classification (Ministry of Planning, Kingdom of Cambodia). They are: 1) very poor which is considered as poor I, 2) poor which is considered as poor II, 3) medium and 4) better-off. All poor I and poor II got the identification card from the government, especially these categories have been set up by Ministry of Planning (MOP) and officially approved by the Cambodian Government.

8. The highest percentage (3%) of very poor and 39% of poor live in Anlongsvay village, followed closely by 29% in Kralas Peas village. When the very poor and poor categories are added together, everyone in five villages lives in extreme poverty. The number of medium and well-off households is highest in Kandal village (70%). (Table 3)

9. It was noted that the proposed road provides access to the provincial road network, which will boost economic growth by decreasing the cost of transporting individuals. The survey reveals that pedestrians, bicycles, motorcycles, moto trailers, and dump trucks are the most common road users, which is advantageous for the entire community, including village pig farmers.

Table 3: Wealth Classification in the Subproject Villages

Villages	Wealth Classification			
	Very poor %	Poor %	Medium %	Well-off %
Anlongsvay	3%	39%	47%	11%

Kralapeas	3%	29%	60%	8%
Kandal	3%	20%	70%	7%
Kraom	2%	28%	60%	10%
Leu	2%	25%	63%	10%

## V. Potential impacts and mitigation measures

10. Since the existing infrastructure, facilities and equipment will be rehabilitated, reconstructed, repaired and replaced during the realization of the project, impacts on environment will be a consequence of human presence and construction machines, and the nature of construction works at a location, which are limited to the location of works or its surrounding vicinity. Social impacts include occupational health and safety of workers, impacts on nearby community (caused by construction activities and presence of workers, such as communicative diseases, including Covid, and impacts caused by labor influx. There will be around 30-40 workers who will work for this subproject. However, these workers will be hired from within community. Therefore, the impacts related to Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) will be minimal. These workers will need to be trained in OHS as well as in gender sensitivity including SEA/SH. They will be required to sign/read workers' code of conduct.

11. **Mitigation Measures:** The environmental impacts identified at this stage are preliminary in nature and will need to be further elaborated specifically (subproject wise) and potential for occurrence has to be ascertained during further stages of subproject design and implementation. This section details out the potential environmental impacts of the sub-projects funded by WB under CASDP.

12. **Proposes mitigation measures for social impact:** (i) occupational health and safety: Contractors also are required to comply with Communicable Disease Control Department of Ministry of Health on COVID 19 regulations and policies to protect themselves from COVID 19, (ii) community disturbance: Site manager or staff who is responsible for environment, health and safety should regularly orient/train workers or staff to avoid any conflict may happen in advance (iii) gender based violence: minimize labor influx as much as possible promoting local recruitment, toilet facilities for women should be accessible from place of work, strict Code of Conduct for workers with no tolerance for physical or verbal abuse of women or children , training to workers on proper conduct around women and children, GBV, Contractor's Code of Conduct and minimum working age.

16. **Impact:** The road will be rehabilitated on the existing track, and the carriageway design does not require any road widening; consequently, there will be minimal impacts to private assets or lands; however, there were impacts during the acquisition of land for the road shoulders. According to the screening, nine households will be affected in part by land, fences, roofs, or trees.

No of Affected Households (AH)	Affected Land and Property/Assets	No Affected Land and Property/Assets
7	Trees and Land	(8 numbers trees and 3 AH affected land
1	Land	1 AH affected land
1	Extension Roof	1 AH affected extension roof
<b>Total:</b>	<b>AH</b>	<b>9</b>

13. **Mitigation Measures:** The road is intended to have minimal impact on private property, but some minor impacts, such as extension roofs and wooden fences, have occurred. Nonetheless, all affected households have agreed to donate land and property that affects assets located within the ROW without compensation. Therefore, no payment is associated with the project (See annex 5: List of Voluntary Contribution of Land and Other Assets).

17. **Impact:** During the rehabilitation of the roadway, the installation of the drainage structure, and the excavation of the borrow soil, the possibility of encountering unexploded ordnance (UXO) is anticipated.

18. **Mitigation Measures:** Prior to road construction, the MRD will request an independent mine clearance agency to identify and mark the anticipated UXO area. Therefore, there is no UXO risk associated with road rehabilitation phases.

#### **V-1. Erosion of embankment slopes**

14. **Impact:** The earthworks for the sub-project activities may have negative impacts in the form of erosion on embankment slopes, dust, noise, and vibration that will disturb local residents.

15. **Mitigation Measures:** The excavation and/or filling will occur within the right-of-way and will not cause drainage problems. During earthmoving operations, the contractor is responsible for controlling the dust by applying water. In addition to replanting and tarping disturbed areas, the Contractor must implement erosion control measures. As soon as practicable after completion of activities, the Contractor shall stabilize the cleared areas not used for rehabilitation activities with vegetation or the appropriate surface treatments. In addition, there will be the installation of five new pie culverts and three replacement pipe culverts.

#### **V-2. Traffic Accidents:**

16. **Impact:** Along the roadway, with particular focus on areas near sensitive receptors and school zones.

17. **Mitigation Measures:** Road design should make safety a priority, such as by widening and sealing shoulders, where land is available, through better marking and signage, introducing traffic calming measures at critical location, and measures to safeguard pedestrians' safety, including for women and children, students from local community who use roads to travel to schools, market and hospitals.

#### **V-3. Potential air pollution – Dust**

18. **Impact:** Possible sources of air pollution will be dust due to maintenance activities, machinery movement and other sources. Rehabilitation works involve breaking up, digging, crushing, transporting, and dumping small quantities of dry materials. Locally, the air quality may experience some moderate and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NOx) and Sulphur oxide (SOx) from construction equipment exhausts. Primarily as a result of dust, heavy construction and earthwork may temporarily have a significant effect on the local air quality.

19. **Mitigation Measures:** Water spraying is the primary method for controlling dust. Regardless, water must be added to the fill material during rehabilitation works. During material transportation and earthwork, sensitive areas, such as residential/commercial/school areas, must be sprayed with water during rehabilitation work. According to the ESMP, the contractor will implement these measures.

#### **V-4. Potential water contamination and safe natural waterway**

20. **Impact:** Water contamination may occur during the execution of the project from site run off, spills from the equipment maintenance areas and sanitary wastewater effluent from the work camps. As for the potential pollution during operation, these are mostly limited to accidents. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

21. **Mitigation Measures:** Fuel and lubricant spills can occur at the Contractor's work camp while maintaining and washing equipment and work vehicles. During the normal operations, these areas should be equipped with the adequately sized, gravity oil separator. Should spills occur, to mitigate the problem the Contractor should use absorbing materials, such as absorbent mats/fabrics, or sand and scrape off the contaminated soils and dispose them in approved facility, in accordance with the Water Law.

22. **Impact;** New drainage structures are installed to prevent road flooding caused by inadequate drainage,

resulting in the temporary closure of natural waterways.

23. **Mitigation Measures:** Temporary drainages must be installed to allow for as much natural water flow as possible. Before installing drainage structures, a protective barrier should be erected in order to minimize the impact on natural waters and their habitats.

#### **V-5. Potential contamination of soils due to pesticide usage and improvement proper waste disposal**

24. **Impact:** Potential contamination of soils and watercourses as a result of improper disposal of liquid and solid wastes from rehabilitation activities.

25. **Mitigation Measures:** The mitigation measure to avoid contamination of soils and watercourses is to ensure that waste materials are properly disposed to the suitable locations. Partly, inert waste materials can be used as filling material. Contractor should produce a Waste Management Plan for the Project. Mitigation measures should, among other requirement, contain contractor obligations to:

26. locate the garbage pit/waste disposal site min 500 m away from the residence so that peoples are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children to enter and play with. All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.

27. In case oil and grease are trapped for reuse in a minimum 60cm thick lined pit, care shall be taken to ensure that the pit should be located at the lowest end of the site and away from the residential areas. In case of filling of low-lying areas with wastes, it needs to be ensured that the level matches with the surrounding areas. In this case care should be taken that these low-lying areas are not used for rainwater storage

#### **V-6. Equipment maintenance and fueling**

28. **Impact:** equipment maintenance and fueling may cause contamination of soils and watercourses, including groundwater, if handling of lubricants, fuels and solvents is improper or careless.

29. **Mitigation Measures:** To avoid damage to natural environment there is a need to ensure proper handling of lubricants, fuels and solvents while maintaining the equipment.

#### **V-7. Occupational Health and Safety**

30. **Impacts:** Construction workers may be affected adversely due to hazardous working environments where high noise, dust, unsafe movement of machinery etc. may be present.

31. **Mitigation Measures:** The Contractor shall instruct his workers in health and safety matters and require from the workers to use the provided personal safety equipment. Contractor must ensure that all operators of heavy or dangerous machinery are properly trained/certified, and also insured. He will have to provide first aid facilities, rapid availability of trained paramedical personnel, and emergency transport to nearest hospital with accident and emergency facilities.

#### **V-8. Noise**

32. **Impact:** Noise caused by the rehabilitation works will have only a temporary impact. Although temporary and mostly moderate, noise impacts in the vicinity of residential areas may cause negative health impact, if not mitigated.

33. **Mitigation Measures:** In sensitive areas (schools, nature parks, shops, pagoda, hospitals) special care regarding noise emission will be taken by the Contractor, strictly respecting the ESMP requirements. In case of noise disturbance with noise emissions which are above permitted level, temporary noise barriers should be

considered as appropriate mitigation measure. Awareness building and administrative measures should be taken to ensure proper maintenance of vehicles. In case of exceeded noise limits for sensitive areas the Contractor should erect temporary shields to prevent a free noise spreading to the sensitive receptors.

#### **V-9. Damage to existing structures**

34. **Impacts:** Public or private water distribution pipelines may be damaged during road construction.

35. **Mitigation Measures:** After completion of the rehabilitation work, the contractor will replace any damaged drainage pipes that may have occurred during construction.

36. Tube water distribution system installed in the ground on the road are located within the vicinity of the project. The design should be designed to avoid impact on existing pipes to prevent damage and to lessen the project impacts, the Tube water distribution line was guaranteed and protected, the contractor shall be responsible for mitigating any adverse impacts to the existing environment as results of their construction works, for instance, damage to access roads due to moving construction vehicles.

37. The mitigation measures will be incorporated into the tender documents, construction contracts, and operational management procedures. Contractors, Key Implementation Agencies, MRD/PCO and CC will implement these measures, depending upon sub-project phases. The effectiveness of these measures will be carefully monitored to confirm if improvements needed, and the environmental and social impacts and mitigation measures outlined in Table 4 as below:

Table 4: Example of a Mitigation measure matrix

Phase	Environmental and Social Impacts and Issues	Mitigation Measures	Locations for mitigation measures	Applicable Standard (e.g. country, WB, Cambodia)	Cost of Mitigation	Responsible party	Verification Required to determine effectiveness of measures
<b>1. Pre-construction</b>							
1.1. Design stage	Final Site Designs	Final designs of embankments, siting of control structures and road alignments will be completed after taking into account all the provisions of the ESMP (below). Final alignment of road, embankments and drainage structures will be completed after taking into account all the provisions of the CEMP (below). At all sites, trees to be retained will be clearly marked.	Road construction in Kralas Peas village, Preah Rumkel commune, Borei Ou Svay Senchey district, Stung Treng province area requirement for topsoil conservation and Extent of loss of topsoil due to widening	Cambodia, WB	Include in construction Budget	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	The existing structures, tube water distribution pipelines or system damages during the road exaction work	Replaces the damaged public or private water distribution system or structures.	All along the project road line	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	MRD
1.2 Construction Preparation Stage	Environmental management budget	Confirm budgets for the implementation of environmental management measures and environmental supervisory responsibilities.	All along the road, with special attention to areas closes to sensitive receptors, especially residential land and other areas deemed risky	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	Incorporate environmental management into contract documents	Contract documents: Preparation of the environment section in the Terms of Reference for bidders for construction contracts, and environmental contract clauses for contractors, namely the special conditions for the protection of the water, soil and air environments (referencing the CEMP and monitoring plan).	All along the project road section	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
1.3 Construction support preparation.	Environmental Education awareness	Environmental Protection Training: PCO Environment Specialist and/or Environment Safeguard focal points will be invited to provide on-the-job training on implementation and supervision of environmental mitigation measures to IA, CC, AC and	All along the project road section	Cambodia, WB	Included in Design Costs	ES consultants and Focal Points	MRD

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
		contractors.					
	Complaints procedures established	The Project Grievance Redress Mechanism will be established and contact persons for the sub-project provided to affected persons and included on sign boards at construction sites, camps and each village.	All along the project road section	Cambodia, WB	Included in Design Costs	ES Focal Points	PCO-MRD
1.4 UXO	Safety Risks due to presence of UXO	In the event unexpected ordinance (UXO) clearance is needed, the services of a reputable and experienced mine security organization, acceptable to the CC or MRD, will be engaged to carry out and then certify that the project area is clear of UXO.  Prior to road construction, the MRD will request an independent mine clearance agency to identify and mark the anticipated UXO area. Therefore, there is no UXO risk associated with road rehabilitation phases.	All along the project road section	Cambodia, WB	Included in Design Costs	MRD-Consultant	PCO
1.5 Borrow Pit	High level of dust due to excavation works, loading of trucks which could be caused to air quality. In addition, increased noise level in the area due to operation equipment of movement of trucks. It is possibility of ground water contamination from water ponding in the borrow pits.	<ul style="list-style-type: none"> <li>- All sources of rock, aggregate and fill for construction will be identified and contracted with licensed quarry and borrow operators. Sites to be approved by CC.</li> <li>- Due to very depth of excavation of borrow pit, it is hazard to community, animal, and people, particularly cow boy during rainy season. Therefore, the contractor shall ensure that the preventive and protective measures will be established that will include: <ul style="list-style-type: none"> <li>o Define/agree with site engineer on the depth of soil excavation</li> <li>o Berm protection will be applied then animal and/or people can clam up when falling down into.</li> <li>o Warning sign with reflection will be applied surrounding borrow pit.</li> </ul> </li> </ul>	All along the project road section	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
1.6 Development of Environment, Health and Safety Guideline	Labor will be required during construction; therefore, it will include	The contractor is required:	All along the road, with special attention to areas closes to	Cambodia, WB	Included in Design Costs	Site Manager of the contractor	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
in cooperate in CEMP	skill or non-skill workers, operators, surveyors, and construction supervisors. Due to the limited number of workers from time to time during the construction, so there is relatively small scale and the construction activities is expected to be completed within one year.	<ul style="list-style-type: none"> <li>- Contractor to designate an Environmental Health and Safety officer to implement and monitor CEMP and health and safety guidelines.</li> <li>- To orient/train workers regularly to ensure they know CEMP and health and safety requirements. Training will be conducted by responsible person who are working on Environment, Health and Safety.</li> </ul>	sensitive receptors, especially, Residential areas, local smell shop, health center, school, Pagoda and other areas deemed risky			and Resident Engineer	
<b>2. Construction Phase</b>							
2.1 Water pollution from human waste, oil contamination, and other hazardous material.	Human wastes from construction. An adverse environmental impact could occur during the construction phase from workers feces and domestic wastes. This will generate flies and transmitted diseases which will possibly result to sanitation issue in the areas.	Provision of sanitary facilities (toilets, burying, etc.) with proper waste treatment and disposal will be provided by contractors.	Sections of repairing road bed and pavement. - Residential areas, smell shop, health center, school, Pagoda school, Pagoda near construction locations	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	Hazardous materials such as fuels, oil, cement and chemicals	To prevent pollution of soil and surface water/groundwater: (i) Storage facilities for fuels, oil, cement, and chemicals will be within secured areas on impermeable surfaces, provided with bunds and clean up installations; (ii) Vehicle, machinery, and equipment maintenance and re-fueling will be carried out in such a way that spilled materials do not seep into the soil. All truck and vehicle need to be maintained regularly.	At the sections of repairing road bed and pavement - At the locations of repairing and adding drainage pipes, culverts, ditches - At the locations of reinforcing slope - At the locations near the source of surface water	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs



<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
		(iii) Oil traps will be provided for service areas and parking areas; (iv) Fuel storage and refilling areas will be located at least 50m from canals and channels and will be protected by temporary drainage bunds to contain spills.					
2.2 Air	Air quality	Equipment will be maintained to a high standard to ensure efficient running and fuel-burning. All vehicle emission will be in compliance with relevant Cambodian emission standards.	Residential areas, small shop, health center, school, Pagoda near construction locations	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	Dust	Material stocking and concrete mixing equipment will be equipped with dust shrouds. Vehicles carrying soil, sand, or other fine materials to and from the construction sites will be covered.	Along the transportation roads - Residential areas, small shop, health center, school, pagoda near construction locations	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
		For both construction sites and construction roads, water spraying for suppression of dust and maintenance of driving surface will be standard site management practices.	Route passes through residential areas and paddy rice	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.3 Noise and Vibration	Noise impacts on sensitive receivers	- Construction at lunch and night within 280m of residences shall be strictly prohibited. - During daytime construction, the contractor will ensure that: (i) sites for concrete mixing plants and similar activities will be located at least 1 km away from residences and schools, and (ii) temporary anti-noise barriers will be installed to shield any schools or residences within 100m of the construction site.	Residential areas, health center, school, Pagoda, local small shops near construction locations	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.4 Solid wastes	Demolition or construction waste	- Any waste from the demolition of un-repairable sluice and gate structures will be either sold to building materials recyclers or collected and transported to official landfill sites. Metal parts,	- At the locations of repairing and adding drainage pipes, culverts, ditches	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
		<p>including pump and pipe will be broken up and sold to scrap metal merchants.</p> <ul style="list-style-type: none"> <li>- Any excess spoil will be made available to nearby communities for use as building pads and bunds.</li> <li>- There will be no dumping of spoil on adjacent land unless agreement reached with land owner in advance and compensation agreed for any damage. Written agreements should be attached to semi-annual safeguards monitoring report.</li> </ul>	<ul style="list-style-type: none"> <li>- At the locations of reinforcing slope</li> <li>- At the locations near the source of surface water</li> </ul>			Engineer	
	Domestic waste from worker camps	Contractors will provide disposal facilities and sufficient garbage bins at strategic locations and ensure that they are (i) protected from birds and vermin; (ii) emptied regularly (using the nearest township solid waste system and landfill); and (iii) Do not overflow.	Existing workers campsite and the worker from the villages. At construction locations	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.5 Soil erosion and ecology	Erosion from construction sites.	<ul style="list-style-type: none"> <li>- Erosion control will include (i) limiting construction and material handling during periods of rains and high winds; and (ii) stabilizing all cut slopes, embankments, and other erosion-prone working areas while works are going on.</li> <li>- All earthwork disturbance areas shall be stabilized within 30 days after earthworks have ceased at the sites.</li> <li>- All tree along the road to be protected from construction activities if they are not required to be removed.</li> </ul>	<p>At the sections of repairing road bed and pavement</p> <ul style="list-style-type: none"> <li>- At the locations of repairing and adding drainage pipes, culverts, ditches</li> <li>- At the locations of reinforcing slope</li> <li>- At the locations near the source of surface water</li> </ul>	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	Flora	<ul style="list-style-type: none"> <li>- All trees over 2m in construction sites to be protected from construction activities if they are not required to be removed.</li> <li>- Borrow sites will not be selected within forested areas and will be vegetated with native species following re-contouring.</li> </ul>	At the locations	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.7 Environment, Health, and Safety	Community health and safety. The construction activities will be done through the relevant	<p>Community health and safety will be safeguarded by:</p> <ul style="list-style-type: none"> <li>- Contractor will provide sufficient signage giving community health and safety warnings</li> </ul>	All construction location	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
	communes.	<p>and information disclosure within all construction sites to community.</p> <ul style="list-style-type: none"> <li>- Planning construction activities so as to minimize disturbances to residents, utilities and services. Temporary land occupation will be planned well ahead of construction to minimize its impact. Land will be re-instated to its original condition after construction.</li> <li>- Implementing safety measures around the construction sites to protect the public, including warning signs to alert the public to potential safety hazards, and barriers to prevent public access to construction sites.</li> <li>- The provision of adequate safety and barriers (e.g., a temporary fence) for the convenience of children riding bicycles is required, as are additional measures such as signposts and security on road segments where schools are located.</li> </ul>				Engineer	
	Occupational Health and Safety. Some workers will be recruited for construction activities and workers' camp will be constructed. These will include non-skilled workers, operators and drivers as well as surveyors and construction supervisors. Since the works will be relatively small scale and expected to be completed within one and a half year, large numbers of workers are not expected. However, safety and health impacts will be also expected.	<p>Measures to ensure occupational health and safety will include:</p> <ul style="list-style-type: none"> <li>- Contractor shall be required by the PCO to ensure that their workers and other staff engaged in the proposed constructions are in a safe environment.</li> <li>- Contractors shall ensure that (i) all reasonable steps are taken to protect any person on the site from health and safety risks; (ii) the construction site is a safe and healthy workplace; (iii) machineries and equipment are safe; (iv) adequate training or instruction for occupational health and safety is provided; (v) adequate supervision of safe work systems is implemented; and (vi) means of access to and egress from the site are without risk to health and safety.</li> </ul>	All construction location	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
		<ul style="list-style-type: none"> <li>- Contractor shall ensure that all workers are equipped with, and use Personal Protective Equipment (PPE)</li> <li>- Contractor will provide sufficient signage giving occupational health and safety warnings and information disclosure within all construction sites.</li> <li>- Contractor shall provide first aid kit for urgent and small case accident.</li> </ul>					
2.8 Road safety /accident (by transportation of heavy trucks...)	Some heavy equipment (heavy trucks, bulldozers, backhoes, etc.) will be brought to the construction areas for construction works. They will only be transported in and out during the construction period and in relatively small numbers. Even though the project area is not populated (rural area), no serious disturbance is envisaged; but it will possibly cause accidents to local communities and dusty.	<p>The contractor is required to implement some mitigation measures as follow:</p> <ul style="list-style-type: none"> <li>- Construction vehicles will comply with national speed limitation.</li> <li>- Construction vehicles will drive at low speeds, especially at market, school, hospital, urban areas.</li> <li>- Keep road spaces or bypass for travelers to avoid traffic jams.</li> <li>- Vehicles for construction should park at designated safe places.</li> <li>- Water spraying should be applied as needed to ensure there is no dust/air pollution in local community (See 2.2. Air).</li> </ul>	<p>At construction locations</p> <ul style="list-style-type: none"> <li>- Along transport route and local route</li> </ul> <p>Local road used for transport material and waste</p>	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.9 Transmitted Disease (e.g. HIV ...)	Workers will be recruited for construction activities and workers' camp will be constructed. These will include non-skilled workers, operators and drivers as well as surveyors and construction supervisors with different gender. Thus, transmitted diseases, especially HIV, will be also expected.	<p>The contractor will be required</p> <ul style="list-style-type: none"> <li>- To develop a guideline on health and safety management during construction.</li> <li>- To orient/train the workers on health and HIV program.</li> </ul>	All construction location	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
2.10 Communicable diseases including COVID-19	Outbreak of Covid-19 at working area as well as to local community	<ul style="list-style-type: none"> <li>- Clean your hands often, use soap and water or an alcohol-based hand rub;</li> <li>- Maintain and safe distance from anyone who is coughing or sneezing;</li> <li>- Follow the directions of the local health authority;</li> <li>- Measurement of Pandemic Covid-19 material: Masks, Alcohol for hand sanitizer;</li> <li>- Measurement of Pandemic Covid-19 material: LCD digital temperature Measurement</li> </ul>	All construction location	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.10 Conflict between the workers and community	Workers will be recruited for construction activities and workers camp will be constructed. These will include non-skilled workers, operators and drivers as well as surveyors and construction supervisor. Since the works will be relatively small scale and expected to be completed within one year large numbers of workers are not expected.	<p>Contractor is required to implement the mitigation measures as follow:</p> <ul style="list-style-type: none"> <li>- The guideline on staff management, internal policy and internal rule should be prepared in advance or at the same time of preparing the site planning or called construction environmental management plan (CEMP).</li> <li>- Site manager or staff who is responsible for environment, health and safety should regularly orient/train workers or staff to avoid any conflict may happen in advance.</li> </ul>	Local road used for transport material and waste cycling	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.11 Worker's camp issue	Some workers will be recruited for construction activities; including non-skilled workers, operators and drivers as well as surveyors and construction supervisors. Since the work will be relatively small scale and expected to be completed within 1-year, large numbers of workers are not expected. This will	<p>The contractor shall:</p> <ul style="list-style-type: none"> <li>- Train workers on environmental management and sanitation and working safety,</li> <li>- Provide sufficient waste bin for temporary storage before transporting to dispose at safe dump site where approved by local authority.</li> <li>- Clean labor's camp after movement to another place</li> <li>- Provide a sanitary toilet for workers</li> </ul>	Location of maintenance and repair	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
	have minor impact as long as their living quarters will be situated away from the nearby communities and careful attention has to be paid to the sanitary conditions around the camp site.						
2.12 Gender-Based Violence (GBV)	physical or verbal abuse of women or children	<ul style="list-style-type: none"> <li>- Strict Code of Conduct for workers with no tolerance for physical or verbal abuse of women or children</li> <li>- Training to workers on maintaining good community relations, with emphasis on proper conduct around women and children, GBV and VAC.</li> <li>- Ensuring workers sites are situated (at least 500m) from schools and/or other areas where children congregate.</li> <li>- Support (in the form of training, awareness raising, etc.) to local law enforcement to act on community complaints regarding GBV and VAC.</li> <li>- Provision of information to local communities about the contractor's policies and responsibilities, including the Contractor's Code of Conduct and minimum working age.</li> </ul>	All along the project road section with special attention around schools and residential areas	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
2.13 Occupation Health & Safety	Community health and safety. The construction activities will be done through the relevant communes.	<ul style="list-style-type: none"> <li>- Conduct orientation for construction workers regarding emergency response procedures and equipment in case of accidents; health and safety measures; prevention of HIV/AIDS; GBV, VAC as well as Code of Conduct.</li> <li>- Provide fire extinguish equipment and appropriate emergency response equipment.</li> <li>- Provide first aid kits at each camp and working sites as applicable.</li> <li>- Provide workers with appropriate safety equipment/devices and strictly require them to use these as necessary.</li> <li>- Provide training to workers on traffic safety.</li> </ul>	All along the project road section	Cambodia, WB	Included in Design Costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
		- Ensure work areas have proper signs to alert traffic and that flagmen and speed limits are used, as necessary, to ensure the safety of workers.					
<b>3. Operation Phase</b>							
3.1 Inadequate O&M	Poor and inadequate operation and maintenance (O&M) of the improved village road could cause unintended adverse environmental impacts. Establishment and operation of community is part of the project design and support. The MRD has been providing a technical support to set up community. Community is charged with undertaking or ensuring the key activities - operation and maintenance.	<ul style="list-style-type: none"> <li>- Acceptable and appropriate O&amp;M should be developed for sustainable operation and maintenance.</li> <li>- Sufficient training to community must be also provided thus they will be able to manage, operate and maintain the irrigation in sustainability.</li> </ul>	Sections of the road that may pose risks, especially the turnaround sections and residential area	Cambodia, WB	Included in O&M Training costs	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	The restoration of sites	The restoration of sites (of camps, wells, surface production facilities, pipeline rights of way, terminals and loading facilities, offices) to their original condition or to a condition for future use.	All road sections but especially the construction site, trees and other Sections considered important	Cambodia, WB	Included in project operation cost	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
	Impact of Trees, Land minimizes on going impact after construction is completed	Contractor to remove and decontaminate areas around all temporary facilities in line with decommissioning and restoration plan included in ESMP as updated. Eliminate unacceptable health hazard and ensure public safety. Restore sites to a condition that is visually acceptable to the community	All road sections and other sections considered important	Cambodia, WB	Included in project operation cost	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs

<i>Phase</i>	<b>Environmental and Social Impacts and Issues</b>	<b>Mitigation Measures</b>	<i>Locations for mitigation measures</i>	<i>Applicable Standard (e.g. country, WB, Cambodia)</i>	<i>Cost of Mitigation</i>	<i>Responsible party</i>	<i>Verification Required to determine effectiveness of measures</i>
3.2 Road accident	As the project output, number of trips will be increased. The road accident will be increased too.	<ul style="list-style-type: none"> <li>- Implement community road safety awareness training and traffic-calming resources.</li> <li>- Public awareness on traffic policy and traffic sign</li> <li>- Provide sufficient traffic sign after project completion.</li> </ul>	All road sections but especially those close to residential areas, small shop, health center, school, Pagoda and other sections considered important	Cambodia, WB	Included in project operation cost	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
3.3 Routing and ongoing maintenance	To avoid health safety, Gender and traffic problem including COVID-19 and reduced visibility	<ul style="list-style-type: none"> <li>- Timely maintenance action helps in reducing ongoing</li> <li>- To avoid social impacts like avoid health safety, Gender and traffic problem including COVID-19, maintenance problems, aggravation road accidents and traffic noise. This project of erosion, and aims at rehabilitating roads to maintainable reduced visibility: standards, which is environmentally beneficial during operation provided routine maintenance is successful.</li> <li>- Follow the directions of the local health authority; and MoH</li> <li>- Training to workers on maintaining good community relations, with emphasis on proper conduct around women and children, GBV and VAC.</li> </ul>	All road sections and other Sections considered important	Cambodia, WB	Included in project operation cost	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs
3.4 Unexpected environmental impacts		<ul style="list-style-type: none"> <li>- If unexpected environmental impacts occur during project construction phase, the IA will update the ESMP, and environmental protection measures will be designed and discussed immediately.</li> </ul>	All road sections and other Sections considered important	Cambodia, WB	Included in project operation cost	Site Manager of the contractor and Resident Engineer	PCO-MRD-PDRD, AC and CCs

## VI. Monitoring of ESMP

38. PCO and MRD will monitor overall environmental performance during project implementation. Each sub-project will have a site specific ESMP document in which a monitoring plan(s) and check-lists are presented.



39. For each of the environmental components, the monitoring plan specifies the parameters to be monitored, location of the monitoring sites and duration of monitoring. The monitoring plan also specifies the applicable standards, implementation and supervising responsibilities. In addition to the critical locations selected during design stage, the environmental monitoring will also be done at the construction camp site and any other plant site as determined relevant during rehabilitation works stage.

40. World Bank guidance on the environmental aspects of project monitoring, including its health and socio-economic aspects,

41. The project’s monitoring program included surface and groundwater quality impacts, disturbance to important ecological habitats including riverside ecosystems, unscheduled environmental compliance inspections during construction, final inspection upon completion to ensure site condition is satisfactory, and assessment of sites prior to and after construction to ensure no loss of natural values. The following table presents the monitoring activities and responsibilities over the implementation of proposed mitigation measures, during execution of sub-project showing in table below.

*Table 5: An example of monitoring plan*

<b>Phase</b>	<b>What parameter is to be monitored? (Note if it is against a set standard)</b>	<b>Where is the parameter to be monitored?</b>	<b>How is parameter to be monitored/ type of monitoring equipment?</b>	<b>When is parameter to be monitored/frequency of measurement</b>	<b>Responsible party</b>
<b>Pre-construction</b>					
Construction Preparation Stage	Environmental Budget	Bidding document & contract	The results of observations and complaints are made in the tabulation to compare with the previous month One time only before the construction start (Review the bidding document and contract	Every month	PCO-MRD-PDRD
	Construction Environmental Management Plan	1 <sup>st</sup> quarterly report from the contractor	One time only before the construction start (Through review document which is submitted by contractors).	Every month	PCO-MRD-PDRD
	Site Planning	Project Site	Once before the contractor move equipment and workers to the construction site (through site planning document submitting to IA and D&S Consultant office).	Every month	PCO-MRD-PDRD
	Replacement of damaged structures and water distribution tubes following construction of the road.	During and after the road rehabilitation work.	Monitor and inspect the execution of the work.	Every month	PCO-MRD-PDRD
<b>Construction</b>					

During Construction activity	UXO and borrow pit remove The MRD hired UXO expert to identify UXO along the subproject area.	Implementation site and borrow pit site	Once when the UXO removing agency complete their task (through the report for submitting to IA and ES Consultant office)	Every 6 months	PCO-MRD-PDRD
	Noise Level	Commercial, rice field, and residential	Monthly checking against mitigation measures specified in this ESMP (through interview with villagers, AC or villager chief and observation)	Every 6 months	PCO-MRD-PDRD
	Water Quality	Implementation Site of Spoil and Borrow Site management	Monthly checking against mitigation measures specified in this ESMP (through observation on borrow pit and spoil sites management)	Every 6 months	PCO-MRD-PDRD
	Air quality	Civil Work sites	Monthly checking against mitigation measures specified in this ESMP (through interview with villagers, AC or villager chief and observation)	Every 6 months	PCO-MRD-PDRD
	Solid Wastes	Implementation of construction workers management	Monthly checking against mitigation measures specified in this ESMP	Every 6 months	PCO-MRD-PDRD
	Flora	Civil work sites	Monthly checking against mitigation measures specified in this ESMP	Every 6 months	PCO-MRD-PDRD
	Occurrence of traffic constraints (access) caused by project activities	The route of mobilization equipment & around project activities	Monitor the community complaints regarding the disturbance of access	Every month	PCO-MRD-PDRD
	Soil erosion and resources	Implementation site of spoil and borrow site management	Monthly checking against mitigation measures specified in this ESMP (through observation on borrow pit and spoil sites management)	Every month	PCO-MRD-PDRD
	Social and Culture	Local cultural sites	Monthly checking against mitigation measures specified in this EMP (Through observation, and interview with villagers and local authority)	Every month	PCO-MRD-PDRD
	Human Health and safety	Implementation of community and occupational Health and Safety and Emergency Response	Monthly checking against mitigation measures specified in this ESMP (Through observation, and interview with villagers, AC and local authority)	Every month	PCO-MRD-PDRD
<b>Operational</b>					
During operational activity	Complaints by community and villagers about road use and	At road section	Direct observation of road users or villages and reviewing public complaints that generate from road construction activities. The results of observations and complaints are made in the tabulation to compare with the previous month	Every 3 months	PCO-MRD-PDRD

	Road quantity		Calculating water discharge and comparing it with previous data	Every 6 months	PCO-MRD-PDRD
	Road safety/accident (by transportation of heavy trucks ...)	All along the access road to construction site	Monthly checking against mitigation measures specified in this ESMP (Through observation, and interview with villagers, AC and local authority)	Every month	PCO-MRD-PDRD
	Conflict between the workers and community	At construction and villages where is nearby or within subproject command area.	Monthly checking against mitigation measures specified in this ESMP (Through observation, and interview with villagers, AC and local authority)	Every month	PCO-MRD-PDRD
	Inadequate O&M	At road section could cause unintended adverse environmental impacts.	Monthly checking against mitigation measures specified in this ESMP (Through observation, and interview with villagers, AC and local authority)	Every month	PCO-MRD-PDRD

## VII. Institutional Strengthening Plan

42. To ensure that works associated with the project are undertaken in a manner that minimizes potential impacts it is necessary to have resources dedicated to managing the environmental and social issues. Approvals associated with all stages of preparation and works will be undertaken by CASDP in coordination with Project Coordinator Office PCO.

*Table 6 Institutional responsibilities for the Project and Subproject safeguard implementation.*

<b>Community/ agencies</b>	<b>Responsibilities</b>
Project Implementing Agency (IA) and PTs	<ul style="list-style-type: none"> <li>- The IA will be responsible for overseeing the project implementation including ESMF implementation and environmental performance of the project.</li> <li>- MAFF and the concerned ministries, representative of the IA (PTs), will be responsible for monitoring the overall project implementation, including environmental compliance of the project. MAFF and the concerned ministries (PTs) will have the final responsibility for ESMF implementation and environmental performance of the project during both the construction and operational phases.</li> <li>- MAFF and the concerned ministries (PTs) will: i) closely coordinate with local authorities in the participation of the community during project preparation and implementation; ii) monitor and supervise EMP implementation including incorporation of EMP into the detailed technical designs and bidding and contractual documents; iii) ensure that an environmental management system is set up and functions properly; iv) be in charge of reporting on EMP implementation to the IA and the World Bank.</li> <li>- In order to be effective in the implementation process, MAFF and the concerned ministries (PTs) will establish an Environmental Unit with at least two environmental staff to help with the environmental aspects of the project.</li> </ul>
Environmental Unit (EU) or Environmental safeguards focal points under PTs	<ul style="list-style-type: none"> <li>- The EU is responsible for monitoring the implementation of WB's environmental safeguard policies in all stages and process of the project. Specifically, this unit will be responsible for: i) screening subprojects against eligibility criteria, for environment and social impacts, policies triggered and instrument/s to be prepared; ii) reviewing the subproject EIAs/EPCs and EMPs prepared by consultants to ensure quality of the documents; iii) helping MAFF and the concerned ministries (PTs) incorporate EMPs into the detailed technical designs and civil works bidding and contractual documents; iv) helping MAFF and the concerned ministries (PTs) incorporate responsibilities for EMP monitoring and supervision into the TORs, bidding and contractual documents for CSC and IEMC; v) providing relevant inputs to the consultant selection process; vi) reviewing reports submitted by the CSC and IEMC; vii) conducting periodic site checks; viii) advising MAFF and the concerned ministries (PTs) on solutions to environmental issues of the project; and ix) preparing environmental performance section on the progress and review reports to be submitted to the Implementing Agency and the Bank.</li> </ul>
subproject owner/IAs	<ul style="list-style-type: none"> <li>- As the subproject owner, MAFF and the concerned ministries (PTs) is responsible for implementation of the all the EMP activities to be carried out under the Project, including fostering effective coordination and cooperation between contractor, local authorities, and local communities during construction phase. MAFF and the concerned ministries (PTs) will be assisted by the Environmental Consultant or Construction Supervising Consultant (CSC) or field engineer.</li> </ul>

<p>Environmental Consultant or Construction Supervising Consultant (CSC) or field engineer</p>	<p>The CSC, collaborating with the assigned environmental safeguards focal points, will be responsible for routine supervising and monitoring all construction activities and for ensuring that Contractors comply with the requirements of the contracts and the EMP. The CSC shall engage sufficient number of qualified staff (e.g. Environmental Engineers) with adequate knowledge on environmental protection and construction project management to perform the required duties and to supervise the Contractor’s performance.</p> <p>The CSC also assists MAFF and the concerned ministries (PTs) in reporting and maintaining close coordination with the local community.</p>
<p>Contractor</p>	<p>Based on the approved EMP and environmental specifications/requirements in the bidding and contractual documents, the Contractor is responsible for establishing a site- specific EMP for each construction site area, submit the plan to the subproject owner/implementing agency and CSC for review and approval before commencement of construction. In addition, it is required that the Contractor get all permissions for construction (traffic control and diversion, excavation, labor safety, etc. before civil works) following current regulations.</p> <p>The contractor is required to appoint a competent individual as the contractor ‘s on-site Safety and Environment Officer (SEO) who will be responsible for monitoring the contractor’s compliance with the EMP requirements and the environmental specifications.</p> <p>Take actions to mitigate all potential negative impacts in line with the objective described in the EMP.</p> <p>Actively communicate with local residents and take actions to prevent disturbance during construction.</p> <p>Ensure that all staff and workers understand the procedure and their tasks in the environmental management program.</p> <p>Report to the MAFF and the concerned ministries (PTs) on any difficulties and their solutions.</p> <p>Report to local authority and MAFF and the concerned ministries (PTs) if environmental accidents occur and coordinate with agencies and keys stakeholders to resolve these issues.</p>
<p>Local community</p>	<p>- Community has the right and responsibility to routinely monitor environmental performance during construction to ensure that their rights and safety are adequately protected and that the mitigation measures are effectively implemented by contractors and the MAFF and the concerned ministries (PTs)/SUBPROJECT OWNER. In case of unexpected problems, they will report to CSC/ MAFF and the concerned ministries (PTs)/SUBPROJECT OWNER.</p>
<p>Sub-national level: Province, District and Commune</p>	<p>- Liaise with contractor and national implementing agency to disseminate mitigation measures and coordinate for complaints from local community people regarding EMP implementation.</p>

### VIII. Estimated Budget for ESMP Implementation

43. The costs of implementing the environmental management and impact mitigation measures listed in the ESMP matrix are included in the design costs, construction contracts and operational budgets. Final budget allocations for the other the items in the ESMP will be developed by D&S Consultant of MRD. The total environmental management cost is \$ 15.000 for This cost add is added to contractor’s BOQ to implement and establish the works such as Environmental monitoring costs during construction water quality monitoring, Air quality monitoring, noise and vibrations monitoring to ensure compliance , Healthy (first aids kit) and safety (install: construction signboard, banner, etc. (provisional quantities), Safety staffs (Protective Helmet, Safety Hand Gloves, Reflective Safety Vest Safe Strap, Construction Boots, Safe Belts and other Personal protective

equipment (PPE) has been supplied to the worker during construction, Worker’s Camp will be construction, Safe drinking water and toilets for Workers and Measurement of Pandemic Covid-19 material: Masks, Alcohol for hand sanitizer (Note: Contractor may claim base on Invoice), It is show in Table below:

*Table 7: Summary of Environmental Budget for Implementing Mitigation Measure and Monitoring*

No.	Bid No.	Description	Location	Environmental Budget
1	CW-TS1	Rehabilitation of 7.31 km of Preah Rumkel road subproject	Preah Rumkel Commune, Borie Ousvay district, Stung Treng Province	15.000
2	CW-TS2	Rehabilitation of 5.55 km of Srekrosang road subproject	Srekrosang Commune, Siem Bok district, Stung Treng Province	
<b>Total Budget</b>				<b>15.000</b>

## IX. Consultation

44. Results of the study show that only minor environmental impacts are anticipated. Such impacts will be experienced during site works mainly due to dust and noise emissions as well as potential occupational and community health and safety risks, but can be mitigated.

45. As required by the WB's environmental and social safeguard requirements and Public Communications Policy, public consultations need to be undertaken for projects of this nature. The primary purpose of the consultations is to present the proposed development, illicit issues and concerns that the people, stakeholders, and concerned parties in the impact area may have relevant to the proposed development.

46. After the presentation, issues and concerns of the stakeholders and participants were elicited, discussed and noted, for further inclusion in design of the subproject. The stakeholders were largely comprised of the concerned and affected people, District and Local Government Officials, Village Leaders, Youth and Women.

47. To ensure that Project is carried out consistent with the specific ESMP requirements, PCO-MRD shall specify in the tender documents and civil works contracts the implementation of ESMP. shall be assisted by the consultant in monitoring the environmental performance of contractors. The consultant shall also undertake environmental management capacity building to the Social and Environmental Office in PCO during Project implementation.

48. In some markets and urban area, it is recommended that shallow drain (made of concrete) should be considered as an option to the engineering study to suite current situation in local area.

49. To ensure that Project is carried out consistent with the specific ESMP requirements, MRD shall specify in the tender documents and civil works contracts the implementation of ESMP. MRD shall be assisted by the consultant in monitoring the environmental performance of contractors. The consultant shall also undertake environmental management capacity building to the Social and Environmental Office in during Project implementation.

50. The purpose of road in this project is to improve transport facilities which are essential for economic development and social activities of the nation because drainage system can reduce rate of road deterioration (or prolong the life of the facilities) and lower vehicle operating cost. Hence it is recommended that local authority shall take necessary measures in their area in order to prevent household waste to discharge into the road.

51. During construction, the complaints unit will be informed by contractors and construction supervisors, commune council's staff, if people complain about the project. During operation, the complaints unit will be advised of complaints by the commune council.

## **X. Disclosure of the ESMP**

52. As required by the WB's environmental and social safeguards requirements and public consultation need to be undertaken for project of this nature. The primary purpose of consultation is to prevent the proposed development from causing issues and concerns that the peoples, stakeholders, and concerned parties in the impact area may have relevant to the proposed the elopement.

53. Community consultations were held during the site visit and data collection on February 6th, 2023, at CW-ST1.L= 7.31 Km, the purpose of the consultation was to inform the public about implementations such as the establishments of the requirement of the required material sources and manufacturing facilities and get the option, concern and issues of the stakeholders for consideration in the implementation of the subproject.

54. The project team presented and defined to the participants the scope as well as the need for the rehabilitation of the existing road and its attendant subcomponents. The project team also explained the environmental and social impact and the requisition mitigating measures that to be established during the implementation of the sub project.

55. If the Contractor, during construction, discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

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

## **XI. ANNEXES**

### **Annex 1: Policy, legal and administration framework**

#### **Annex-1.1 Law and Regulation**

2. This section describes the applicable national laws, decrees, circulars, decisions, and national technical regulations and standards. It is equally important that sector specific regulations (e.g., energy, rural, health sectors) on environment and social related to the project are described in this section.
3. Overall management of the environment is under the responsible of the Ministry of Environment (MoE), which was created in 1993. The MoE is responsible for implementation of the Law on Environmental Protection and Natural Resources Management. At the provincial and city levels, there are corresponding provincial/city environment departments. These local departments have the responsibility of enforcing the environmental legislation coming under the competence of the MoE. However, the daily operation functions of these departments would normally be under the direct control of the provincial authorities.
4. The framework law calls for an initial environmental impact assessment (IEIA) or full environmental impact assessment (EIA), depending on type and activity and the site of the project (Sub- Decree on IEIA/EIA process (article 1 and 2 of Sub-Decree of IEIA/EIA process), to be conducted for every private or public project, to be reviewed by the MoE before submission to the Government for a final decision. All proposed and existing activities are to be covered under this requirement. Recently, the Declaration on General Guidance, N 376 BRK.BST, for conducting initial and full environmental impact assessment has been signed and enacted on September 02, 2008 by the Minister of Environment. The goal of the guidance is to implement initial environmental impact assessment (IEIA), full environmental impact assessment (EIA), and to provide general guidelines and checklists. IEIA or EIA is required for every project, depending on type and activity and the site of the project (Sub-Decree on IEIA/EIA process (article 1 and 2 of Sub-Decree of IEIA/EIA process). The Ministry of Environment is responsible for reviewing the reports, the required follow-up, and monitoring.
5. The Environmental Protection and Natural Resources Management Law was enacted by the National Assembly and launched by the Preah Reach Kram/NS-RKM-1296/36. It was enacted on November 18, 1996. This law has the following objectives:
  - a. To protect and promote environment quality and public health through prevention, reduction and control of pollution,
  - b. To assess the environmental impacts of all proposed projects prior to the issuance of a decision by the Royal Government,
  - c. To ensure the rational and sustainable conservation, development, management and use of the natural resources of the Kingdom of Cambodia,
  - d. To encourage and provide possibilities for the public to participate in the protection of environment and the management of the natural resources, and
  - e. To suppress any acts that cause harm to the environment.
6. Under this law the developers or project owners need to prepare an IEIA or EIA report for their posed or existing development projects.

#### **Annex-1.1 World Bank Safeguards Policies Triggered**

7. This section should describe the applicable/relevant World Bank safeguard policies. The project/sub project screening report would identify the World Bank's environmental and social safeguard policies applicable to the project, also identifies when and how the Bank's Safeguard Policies are triggered or not triggered. The World Bank environmental assessment (EA) category assigned to the Project, and the key environmental and social issues identified under the safeguard policies are also discussed in this section. For each World Bank safeguards policy triggered by the project, a brief description is provided to explain



why the policy is triggered, what the requirements of the policy are, and how the project will comply with these requirements. All safeguards policies triggered under the project need to be addressed.

8. The project triggers five environmental safeguard policies. Environmental Assessment (OP/BP 4.01), Pest Management (OP/BP 4.09), Physical Cultural Resources (OP/BP 4.11), Safety of Dams (OP/BP 4.37), and one legal policy, Projects on International Waterways (OP/BP 7.50). These safeguard policies are triggered due to the anticipated small-scale and potentially irreversible impacts from (i) technical assistance and civil works such as irrigation investments, farm to market roads, farm mechanization, infrastructure services and (ii) potential application of pesticides or chemicals for increase production under Components 1 and 2.
9. Environmental Assessment (OP/BP 4.01). This policy is triggered. due to technical assistance and potential adverse impacts under infrastructure investments (including diversifying agricultural systems, increasing productivity and developing processed and high value food product markets; providing supporting infrastructure, including tertiary road and irrigation structure rehabilitation and upgrade laboratories). Since locations are unknown, the project will prepare site-specific instrument (e.g. ESMP or ESIA) based on the project-ESMF once sub-projects are identified. Interim Guidelines on the Application of safeguard Policies to Technical Assistance (TA) Activities under the Bank-Financed Projects will be applied for in the terms of references for interventions in technical assistance and financial services designed under the project.
10. Performance Standards for Private Sector Activities (OP/BP 4.03) is not triggered; however, all subprojects under the matching grant and credit line financing on-farm investments, agribusiness and enterprises will be required to follow the ESMF and other relevant safeguard instruments. All subprojects will be early screened on due diligence of exiting agribusiness and enterprises-- as required in Annex 10- - to become project beneficiaries.
11. Natural Habitats (OP/BP 4.04). This policy is not triggered since civil works such as irrigation and road rehabilitation will be within agricultural areas or new areas that are anticipated to affect or encroach into any known natural habitats.
12. Forests (OP/BP 4.36). This policy is not triggered since civil works such as irrigation and road rehabilitation will be within agricultural areas or new areas that are anticipated to affect or encroach into any know natural habitats.
13. Pest Management (OP/BP 4.09). This policy is triggered because the project involves the usage or promotion of the purchase of pesticides, fertilizers, or chemical substances for the agricultural production. Although, MAFF policies have promoted organic farming and non-pesticide based agriculture, the borrower has included pesticide management plan (PMP) in the project-ESMF to address any potential risks from pesticide-related activities. See the Pest Management Plan (PMP) in Annex 8. The PMP is prepared based on Integrated Pest Management (IPM) principles, describing the national regulatory framework, status of pest and disease control, monitoring and supervision mechanism. The PMP is comprised of three parts: (i) application of government regulation on pesticide control; (ii) training of the integrated pesticides concept and/or other approaches for the safe use of pesticides; and (iii) monitoring. The PMP specifies a range of actions to strengthen integrated pest management practices and awareness and includes capacity building and monitoring program to facilitate implementation. It is anticipated that there will be no procurement of pesticides under the project and that pesticide use, overall, will decline as a result with the introduction of Good Agricultural Practices (GAP). That said, pesticides are being used by farmers in the project area, so this plan will be applied to the project activities involving any changes in agricultural practices and/or rehabilitation of or development of existing irrigation schemes that may prompt farmers to increase their use of pesticides if no training or monitoring is provided. The plan is comprised of three parts: (i) application of government regulation on pesticide control; (ii) training of the integrated pesticides concept and/or other approaches for the safe use of pesticides; and (iii) monitoring.
14. Physical Cultural Resources (OP/BP 4.11). This policy is triggered as the project funds rural infrastructure such as road and irrigation rehabilitation, which can impact on unknown, physical cultural resources as

defined by OP/BP 4.11. A chance find procedure of physical cultural resources has been integrated in Annex 4 on environmental code of practice (ECOP) and will be included in the construction contracts as preventive measures.

15. Safety of Dams (OP/BP 4.37). This policy is triggered as the project finances irrigation rehabilitation are classified as "small dams" defined under OP 4.37. The rehabilitation of small irrigation schemes not more than 15 meters in height and will not expect to include medium to large scale dams. The project owner (e.g. MOWRAM) will adopt generic dam safety in the design and implementation
16. Pest Management (OP/BP 4.09). This policy is triggered because the project involves the usage or promotion of the purchase of pesticides, fertilizers, or chemical substances for the agricultural production. Although, MAFF policies have promoted organic farming and non-pesticide-based agriculture, the borrower has included pesticide management plan (PMP) in the project-ESMF to address any potential risks from pesticide-related activities. See the Pest Management Plan (PMP) in Annex 8. The PMP is prepared based on Integrated Pest Management (IPM) principles, describing the national regulatory framework, status of pest and disease control, monitoring and supervision mechanism. The PMP is comprised of three parts: (i) application of government regulation on pesticide control; (ii) training of the integrated pesticides concept and/or other approaches for the safe use of pesticides; and (iii) monitoring. The PMP specifies a range of actions to strengthen integrated pest management practices and awareness and includes capacity building and monitoring program to facilitate implementation. It is anticipated that there will be no procurement of pesticides under the project and that pesticide use, overall, will decline as a result with the introduction of Good Agricultural Practices (GAP). That said, pesticides are being used by farmers in the project area, so this plan will be applied to the project activities involving any changes in agricultural practices and/or rehabilitation of or development of existing irrigation schemes that may prompt farmers to increase their use of pesticides if no training or monitoring is provided. The plan is comprised of three parts: (i) application of government regulation on pesticide control; (ii) training of the integrated pesticides concept and/or other approaches for the safe use of pesticides; and (iii) monitoring.
17. Physical Cultural Resources (OP/BP 4.11). This policy is triggered as the project funds rural infrastructure such as road and irrigation rehabilitation, which can impact on unknown, physical cultural resources as defined by OP/BP 4.11. A chance find procedure of physical cultural resources has been integrated in Annex 4 on environmental code of practice (ECOP) and will be included in the construction contracts as preventive measures.
18. Safety of Dams (OP/BP 4.37). This policy is triggered as the project finances irrigation rehabilitation are classified as "small dams" defined under OP 4.37. The rehabilitation of small irrigation schemes not more than 15 meters in height and will not expect to include medium to large scale dams. project owner (e.g. MOWRAM) will adopt generic dam safety in the design and implementation of rehabilitation/improvement of irrigation structures in accordance with OP/BP4.37. Senior irrigation engineer (or qualified irrigation specialist) of the World Bank will provide Support and supervision of the dam safety measures.
19. Projects on International Waterways (OP/BP 7.50). This policy is triggered since the project funds rehabilitation of the existing irrigation water delivery structures such as tertiary and quaternary canals, which will likely abstract water from tributaries of international waters or link or flow into international waterways (e.g. Tonle Sap River and Mekong River) that forms boundary between the water body or surface water that flows through two or more riparian countries. However, the abstraction of water from international rivers will not increase because the project exclusively funds existing irrigation schemes and introduces more efficient irrigation system. In this case, an exemption letter from the RVP has been approved.
20. Project in Disputed Areas OP 7.60. The project is not triggered. The project does not involve activities any disputed area.
21. The project should also consider the World Bank Group Environmental, Health, and Safety Guidelines1 (known as the "EHS Guidelines"). The EHS Guidelines are technical reference documents with general

and industry-specific examples of Good International Industry Practice. The EHS Guidelines contain the performance levels and measures that are normally acceptable to the World Bank Group and are generally considered to be achievable in new facilities at reasonable costs by existing technology. The environmental assessment process may recommend alternative (higher or lower) levels or measures, which, if acceptable to the World Bank, become project- or site-specific requirements.

22. When the Bank's safeguards policies on Involuntary Resettlement (OP/BP 4.12) and Indigenous People (OP/BP 4.10) triggered, it is very important that this section link to the RPF, EMPF, or Process Framework, if any are identified for the project. Although these frameworks and other related social

## Annex 2: ES Screening Checklist for DBST Road Rehabilitation at Preah Rumkel AC

Table 3. Potential Environmental and Social Impacts to be Addressed							
No	Does the subproject entail these environmental impacts?	No	Low	Medium	High	Not known	Remarks
1	Encroachment on historical/cultural areas	√					Works are confined to rehabilitation/modernization within existing sites for agriculture production site and will not encroach on new sites.
2	Encroachment on an ecosystem (e.g. natural habitat sensitive or protected area, national park, nature reserve etc....)	√					The project will not cause potential ecosystem problems
3	Disfiguration of landscape and increased waste generation	√					No impact
4	Removal of vegetation cover or cutting down of trees during clearance for construction		√				Some trees will be removal during clearance for construction
5	Change of surface water quality or water flows (e.g. Increase water turbidity due to run-off, waste water from camp sites and erosion, and construction waste) or long-term.		√				Minor impact
6	Increased dust level or add pollutants to the air during construction			√			The project will cause Increased dust level or add pollutants to the air during construction
7	Increased noise and/or vibration			√			Will be impact
8	Resettlement of households? If yes, how many households?	√					No impact
9	Use of resettlement site that is environmentally and/or culturally sensitive	√					No impact
10	Risk of disease dissemination from construction workers to the local peoples (and vice versa)?		√				Will be impact
11	Potential for conflict between construction workers and local peoples (and vice versa)?		√				Will be impact
12	Use of explosive and hazardous chemicals	√					No impact
13	Use of sites where, in the past, there were accidents incurred due to landmines or explosive materials remaining from the war	√					No impact
14	Construction that could cause disturbance to the transportation, traffic routes, or waterway transport?			√			Will be impact
15	Construction that could cause any damage to the existing local roads, bridges or other rural infrastructures?		√				6 existing bridges will be repaired which will not cause any impact.
16	Soil excavation during subproject's construction so as to cause soil erosion		√				Will be impact

17	Need to open new, temporary or permanent, access roads?		√				Will be impact
18	Separation or fragmentation of habitats of flora and fauna?		√				Will be impact
19	Long-term impacts on air quality	√					No impact
20	Accident risks for workers and community during construction phase		√				Will be impact
21	Use of hazardous or toxic materials and generation of hazardous wastes		√				Will be impact
22	Risks to safety and human health		√				Will be impact
<b>Does the subproject entail land acquisition or restriction of access to resources?</b>							
23	Acquisition (temporarily or permanently) of land (public or private) for its development	√					The trees and land belonging to seven households will be affected. One HH affected the land, while another HH affected the roof of the extension. In addition, all HH have a moderate standard of living, are not vulnerable, and are therefore willing to donate their affected states to the project as volunteers. (The VLDR has been prepared)
24	Use land that is currently occupied or regularly used for productive purposes (e.g., gardening, farming, pasture, fishing locations, forests)	√					Minor impact
25	Displacement of individuals, families or Businesses	√					No impact
26	Temporary or permanent loss of crops, fruit trees or household infrastructure	√					The impacts were very minimal and voluntary donation is required from Ahs
27	Involuntary restriction of access by people to legally designated parks and protected areas	√					There will no loss of access to land and resources owned by the commune.
If the answer to any of the questions 23-27 is “Yes”, please consult the ESMF; preparation of a Resettlement Plan (RP) is likely required.							
28	Ethnic minority groups are living within the boundaries of, or nearby, the subproject.	√					
29	Members of these ethnic minority groups in the area potentially could benefit or be harmed from the project.	√					
If the answer to questions 28 or 29 is “Yes”, please consult the ESMF; and preparation of an Ethnic Minority Development Plan (EMDP) is likely required.							
<b>Does the subproject entail construction of or depend upon a dam?</b>							
30	Involve the construction of a large dam?	√					
31	Depend on water supplied from an existing dam or weir or a dam under construction?	√					
If the answer to question 30 or 31 is “Yes”, please consult the ESMF; a Dam Safety Report (DSR) will likely be required.							
<b>Does the subproject entail procurement or use of pesticides?</b>							
32	What is the World Health Organization’s classification of the formulation of the specific pesticides to be used?	No					

If the answer to question 32 is yes, please consult the ESMF; a Pest Management Plan (PMP) will likely be required.

### Annex 3: Environmental Due Diligence Form

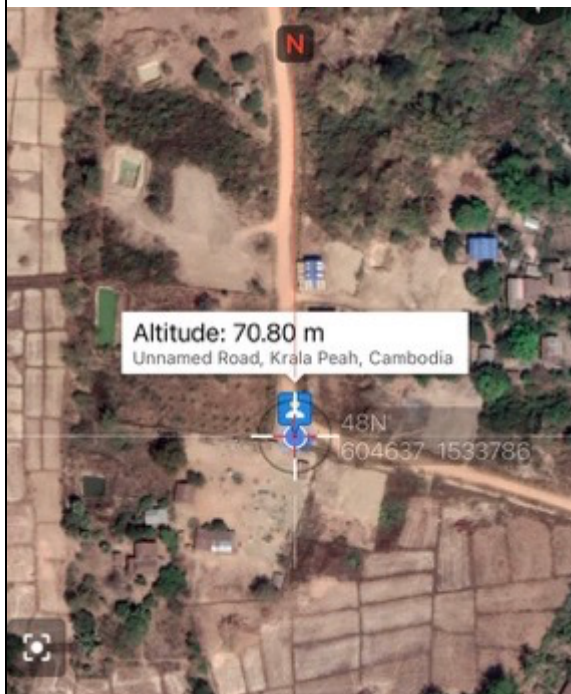
This site-specific safeguard due diligence shall be conducted to evaluate environmental impacts of all activity activities which will be implemented at one location under each activity.

#### Section 1- Subproject Details

Component No.	Component 2	
Title of Subproject	DBST Road Rehabilitation of the Length with 7.31 Km in Agricultural Commodity's Preah Rumkel, located in Preah Rumkel Commune, Borei Ousvay District, Stung Treng Province	
Name of Implementation Agency	Agricultural Cooperative Preah Rumkel in Preah Rumkel Commune, Borei Ousvay district, Stung Treng Province.	
Contact information of the subproject proponent	Name: Mr. Hieng Pov	Position: Chief of Agricultural Cooperative
	Phone: +855 88 5582156	Email: N/A Telgram: +855 88 5582156
Project Location	Preah Rumkel Commune City: Brie Ousvay District	Province/Region: Stung Treng Province, Cambodia.
	Coordinates: N=604637, E=1533786  Please provide the KML/KMZ file in google map as well.	

Photos to be provided

1. Google map photos of the project location



2. The proposed project location and the surroundings areas especially on those of **sensitive receptors** (eg. Hospitals, monastery, schools, house for aged people etc.,).

The road rehabilitation will be minor affected by sensitive receptors surrounding place, such as residential, school, local shops, health center, Pagoda and rice fields, Trees and local etc.

Subproject Activities in the above-mentioned location	<b>Road:</b> <input type="checkbox"/> New <input checked="" type="checkbox"/> Rehabilitation of existing road Existing road width (km): 5.50m Proposed road length and width (km): the length is 10.00km and width is 8.00m Proposed road type: DBST Rehabilitation type: Widening and DBST paving (Widening or just paving etc.,)	<b>Construction:</b> <input type="checkbox"/> Building/any small infrastructures (ponds, farm drains, tube wells, dry storage, cold storage, warehouse etc.,) <input type="checkbox"/> Farming/Livestock raising associated Facility (fish farm, pig raising farm, bio gas etc.,) <input type="checkbox"/> Irrigation schemes/ channels <input type="checkbox"/> Other (please mention) (Renovation of Regional Animal Health Laboratory Building)
Elaborate more in detail about the above-mentioned activity	<b>There is detail activity as below:</b> Mobilization of Contractor's staffs and labors to site, Site Camp, toilet preparation with electrician water supply, Site cleaning after completed works, Bush and shrub clearing at sub project output location by removing of top soil, Soil cost and excavation for road embankment after compacted, Soil backfill and fill for road embankment with watering and compaction	
Expected construction commencement (starting) Date	The expectation of road rehabilitation date would be started on July 2023.	

## Section 2- Environmental Issues

Will the proposed subproject:		Yes	No	Explanation (pls write explanation if the answer is Yes)
1	<b><u>Fall under category A as defined in the project ESMF? (pls refer to table 1, Annex 2.2 of the ESMF)</u></b>		No	
2	<b><u>Resource Use</u></b> Require a large amount of energy, water or other natural resources (eg. Wood fire, charcoal, etc.,) during project construction or operation?		No	<p>Certain stones/gravel/sand/soils are obligatory and can be obtained with a valid license from the relevant authority. The stone is accessible from a quarry located 67 kilometers from proposed road, at 608614.00 East and 1494025.00 North.</p> <p>The soils (gravel) are available 25 kilometers from the road at the borrow-pit. The Borrow-pit is located at 611266.3 east and 1479372.20 north.</p>
3	<b><u>Water Use</u></b> Extract or use ground or surface water resources, leading to reduction in the volume and the quality of water available for the public water supply?		No	
4	<b><u>Water Quality</u></b> Cause pollution to ground or surface water, via direct or indirect discharges or seepages, or through interception of an aquifer by drilling, trenching or excavation?		No	

Will the proposed subproject:		Yes	No	Explanation (pls write explanation if the answer is Yes)
5	<b><u>Soil Quality</u></b> Create a risk of increased soil degradation, soil erosion or increase in soil salinity?	Yes		The earthworks for the sub-project activities might cause minor negative impacts in form of erosion on road shoulder
6	<b><u>Sensitive Receptors</u></b> Be located adjacent to a sensitive receptors and area (e.g. school, hospital or medical facility, river crossings, forests, monastery, meditation center etc.)? If there is any, provide detail locations and photos. (Note: If any of the sensitive receptors are located adjacent/near to the proposed subproject's activity, this subproject may need to develop a site specific ESMP rather than using the ECOP.		No	
7	<b><u>Air Quality</u></b> Lead to increased levels of harmful air emissions including dust?	Yes		During road rehabilitation, dust could be impacted to villagers, so workers have to water the road once or twice a day.
8	<b><u>Noise</u></b> increase the noise levels leading to non-compliance with national and WHO/WBG guideline for noise?	Yes		Some part of the road rehabilitation nearby village it could be impacted to villagers by dust, so workers have to use the regulation of noise pollution and respect to the relaxing time of villager.
9	<b><u>Waste Generation</u></b> Generate solid or liquid waste that could adversely impact soils, vegetation, rivers, streams or groundwater?	Yes		During road rehabilitation activities it could be Impact on the ground by oil spills from constructed machinery, the worker should collect dirty soil with oil from the construction site and store in the safe place, and take it to the landfill.
10	<b><u>Hazardous Waste Management</u></b> Will hazardous waste such chemicals container and packaging etc., be generated during construction or operation?	Yes		All hazardous waste shall be disposed of at an approved hazardous landfill site.
11	<b><u>Wastewater Management</u></b> Is there any potential release of contaminated wastewater from the project funded facilities and associated facilities during the operation period?	Yes		
	<b><u>Tree cutting and vegetation clearance</u></b> Will the project involve tree cuttings? If yes, how many in approximate?	Yes		There are approximate 8 trees from the 7 household will affected.

### Section 3 – Health and Safety issues

Will the activity or any of its associated activities?		Yes	No	Explanation
1	<b><u>Natural Disasters</u></b> Be susceptible to or lead to increased vulnerability to earthquakes, flood/river cutting, flooding to low lying area?		No	
2	<b><u>Climate Change</u></b> Lead to climate change impacts or conversely be		No	



Will the activity or any of its associated activities?		Yes	No	Explanation
	susceptible to impacts resulting from climate change?			
3	<b><u>GHG Emission</u></b> Result in significant increases in local or regional Green House Gas (GHG) Emissions?		No	
4	<b><u>Occupational Health and Safety</u></b> Have an adverse impact upon the health and safety of the workers/ employees?		No	
5	<b><u>Community Health and Safety</u></b> Increase exposure of the community to communicable disease (such as COVID-19, HIV/AIDS, Malaria), or increase the risk of traffic related accidents?	Yes		So far, Kovid-19 continues to be replicated. There will be minor impact on workers so required that to comply with the Department of Infectious Diseases of the Ministry of Health on Covid-19 regulations and self-defense policies.
6	<b><u>Child Labor</u></b> Involve the use of child labor or lead to increased child delinquency (school drop-outs) or child abuse.		No	
7	<b><u>Gender Equality</u></b> Likely to directly or indirectly increase gender inequalities or gender-based violence?	Yes		Sometimes there is discrimination against women in the workplace, but the need to build teamwork is related to gender equality, considering the inclusion of women's ideas and the absence of Sexual Harassment (SH).
8	<b><u>Disadvantaged or Vulnerable Individuals or Groups</u></b> Lead to any risks and impacts on, individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable, as defined below.		No	
9	<b><u>Grievance Redress Mechanism (GRM)</u></b>	Yes		Sometimes there is discrimination against women in the workplace, but it is necessary for sub-projects to provide GRM knowledge to villagers who file complaints about activities affected by road rehabilitation to the committee.
10	<b><u>Associated Facility</u></b> Does the project have any associated facilities		No	
11	<b><u>Unexploded Ordinance (UXO)</u></b> Is there potential history or occurrence of unexploded ordinance or land mines? (If the proposed area has potential land mine risk, please coordinate with UXO specialist consultant for the chance find procedures).		No	
12	<b><u>Labor Influx</u></b> Is there a potential for the activity to result in workers moving into the project area in search of employment?		No	
13	<b><u>Conflict</u></b> Is the proposed activity in a conflict zone?		No	

#### Section 4 – Summary of the due diligence findings

Type of ES instruments required for the proposed subproject:

- ESCoP
- Site specific ESMP

Finding Summary:

In summary, the location of the renovation of the Regional Animal Health Laboratory Building is the existing lab location in the PDAFF compound. The majority of identified environmental impact screening as not significant impacts for environment and social due to the existing building is location instead of land of PDAFF and no sensitive receptors surrounding that place.

**Section 5 - Certification**

We certify that we have thoroughly examined all the potential adverse effect of this activity. To the best of our knowledge, the activity will follow the ESMP and will prepare the additional plans (such as site specific ESMP) as per ESMF guidance, to avoid or minimize all adverse environmental, social and health impacts.

***Prepared by:***

Signature: \_\_\_\_\_



Name: Te Rithy

Position: National Social Safeguard Supervision Consultant

Contact: Phone/Telegram: +855 12 758 003; Email: (tritty.2010@gmail.com)

Date: February 6, 2023.

-----  
***Evaluated by:***

Signature: \_\_\_\_\_



Name: Hong Sophea

Position: National Environmental Safeguard Supervision Consultant

Contact: +855 12 518 109; Email: (hongsophea@yahoo.com)

Date: February 7, 2023.

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***Approved by:***



Signature: \_\_\_\_\_

Name: Ith Chumnan

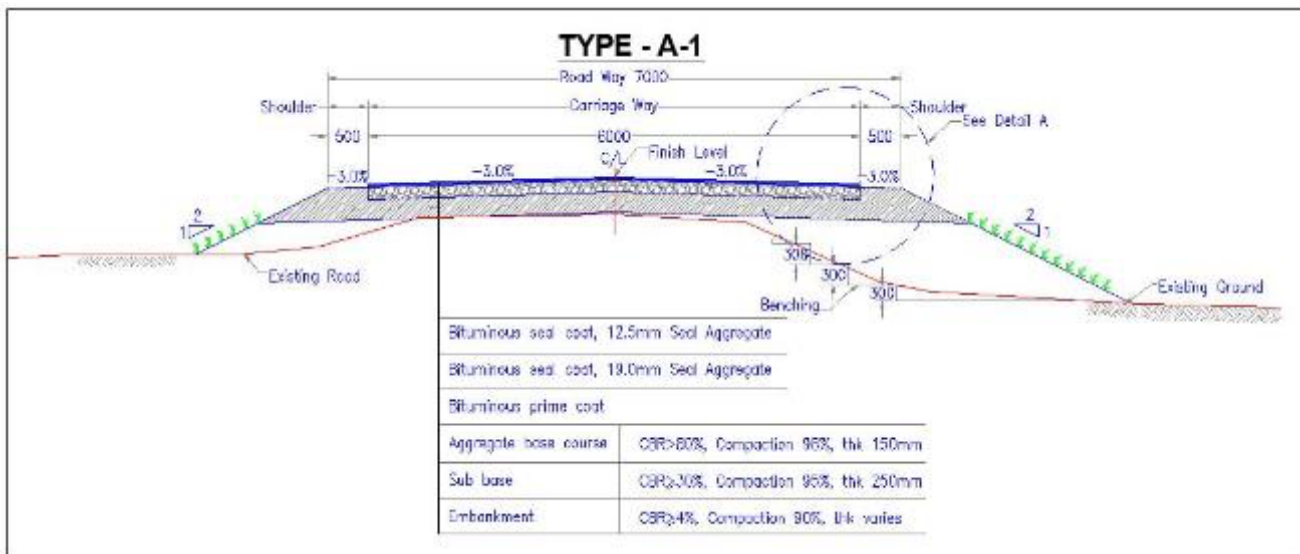
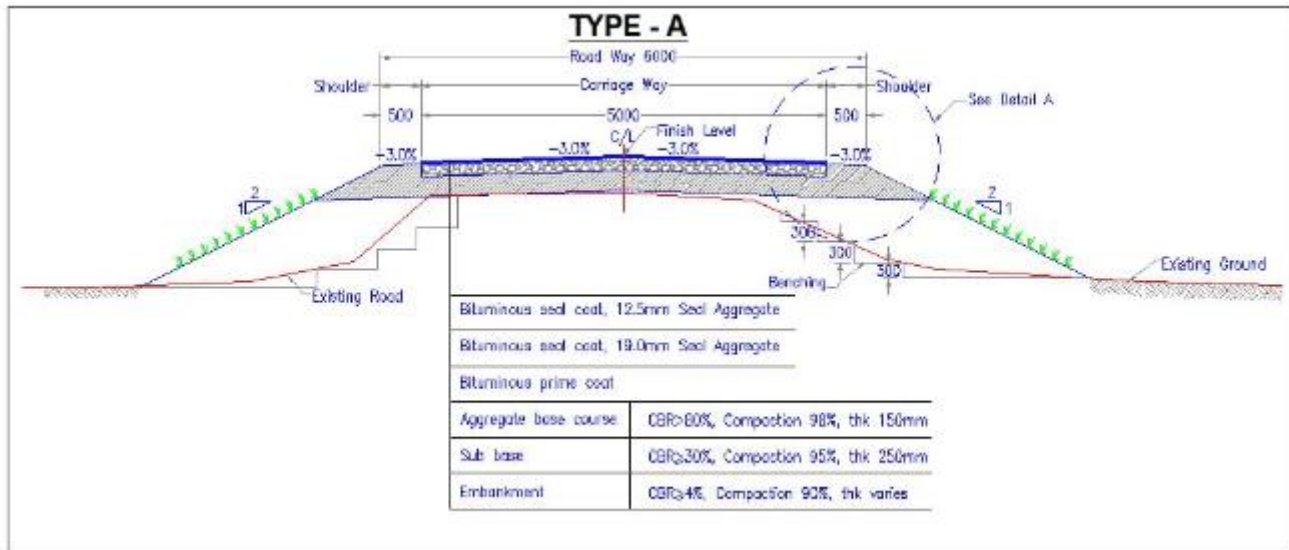
Position: Chief of Safeguard

Contact: 012 44 54 58, Email : ith.chumnan@gmail.com

Date: February 8, 2023.

## Annex 4: Detail Technical Design

### Typical Road Cross Section



**Annex 5: List of Voluntary Contribution of Land and Other Assets**

ឧប្រៀងទី២១.៥



**គម្រោងពិពិធកម្មកសិកម្មកម្ពុជា**

(CASDP-P163264)

**បញ្ជីឈ្មោះអ្នកបរិច្ចាគដីធ្លី និងទ្រព្យសម្បត្តិដោយស្ម័គ្រចិត្តឱ្យគម្រោង**

រាជធានី ខេត្ត ÷ ស៊ីវិល	រដ្ឋបាលឃុំ សង្កាត់ ÷ ក្រុង/ខេត្ត
ក្រុង ស្រុក ខេត្ត ÷ ម៉ឺនស្ទាយសែនជ័យ	លេខកូដឃុំ សង្កាត់ ÷ 190603
ឈ្មោះគម្រោង ÷ <i>ស្ថាប័នស្រាវជ្រាវ និងសេវាសេដ្ឋកិច្ចស្រូវ វិស័យកសិកម្ម</i>	

កម្មសិទ្ធិករ ឬកោតិ ឬអ្នកប្រើប្រាស់ដីធ្លីបានយល់ព្រមបរិច្ចាគដីធ្លី និងទ្រព្យសម្បត្តិរបស់ខ្លួនឱ្យគម្រោង ដោយ  
 ចុះហត្ថលេខា ឬផ្ដិតមេដៃនៅលើទម្រង់នេះ។ ការបរិច្ចាគនេះគឺជាការបរិច្ចាគដោយស្ម័គ្រចិត្ត។  
 ប្រសិនបើកម្មសិទ្ធិករ ឬកោតិ ឬអ្នកប្រើប្រាស់ដីធ្លីមិនព្រមបរិច្ចាគដីធ្លី និងទ្រព្យសម្បត្តិរបស់ខ្លួនឱ្យគម្រោងទេ មិន  
 ត្រូវចុះហត្ថលេខា ឬផ្ដិតមេដៃនៅលើទម្រង់នេះឡើយ។

ល.រ	ឈ្មោះ	ភូមិ	មុខរបរ	លេខកូដឃុំ ផែនទីអន្តរជាតិ	ផ្ទៃដីដែល ចាត់បង់	តម្លៃទ្រព្យសម្បត្តិ ផ្សេងៗ ដែលចាត់បង់	ហត្ថលេខា ឬ ស្នាមមេដៃ
1	<i>ឃីនសំរឹត</i>	<i>ឃ្លាប</i>	<i>កសិករ</i>	5	0	2,000 ៛	
2	<i>ទាំ សៀម</i>	<i>សង្កែ</i>	<i>កសិករ</i>	1	0	100,000 ៛	
3	<i>ញូ ឌីវី</i>	<i>សង្កែ</i>	<i>កសិករ</i>	2	0	100,000 ៛	
4	<i>ឡាន់ ប៊ុនរ៉ា</i>	<i>សង្កែ</i>	<i>កសិករ</i>	3	0	100,000 ៛	
5	<i>គង់ សៀម</i>	<i>សង្កែ</i>	<i>កសិករ</i>	4	0	100,000 ៛	
6	<i>ស្រី តៅ</i>	<i>ក្រឡាញាត</i>	<i>កសិករ</i>	6	952m <sup>2</sup>	100,000 ៛	
7	<i>ខាង សៀម</i>	<i>ក្រឡាញាត</i>	<i>កសិករ</i>	7	36m <sup>2</sup>	100,000 ៛	
8	<i>សេង សេង</i>	<i>ក្រឡាញាត</i>	<i>កសិករ</i>	8	10m <sup>2</sup>	100,000 ៛	
9	<i>ឯក សៀម</i>	<i>ក្រឡាញាត</i>	<i>កសិករ</i>	9	416m <sup>2</sup>	100,000 ៛	

ថ្ងៃទី ០១ ខែ កុម្ភៈ ឆ្នាំ ២០២៦  
  
 អ្នកប្រើប្រាស់ដី  
  
**ភីវ ម៉ៅយុន**

ថ្ងៃទី ០១ ខែ កុម្ភៈ ឆ្នាំ ២០២៦  
 មន្ត្រីទទួលបន្ទុក  
  
 ៧.០៧.២០២៦



ឧប្បទម្ម ២១.២

គម្រោងពិពិធកម្មកសិកម្មកម្ពុជា (CASDP-P163264)

**តារាងលទ្ធផល**

រាល់ឆ្នាំ ខេត្ត: ស្ទឹងត្រែង ក្រុង/ស្រុក ខណ្ឌ: ឃុំស្រែចម្ការស្ទឹងត្រែង រដ្ឋបាលឃុំ សង្កាត់: ២:ស្ទឹងត្រែង លេខកូដឃុំ សង្កាត់: 190603  
 ឈ្មោះគម្រោង: សហគមន៍កសិកម្មស្រែចម្ការស្ទឹងត្រែង ឃុំស្រែចម្ការស្ទឹងត្រែង

លេខកូដ លើ ជំនឿ	ឈ្មោះកម្មសិទ្ធិករ ឬ ភោគី	ផ្ទៃដី ដែល បាត់បង់	ផ្ទៃដីសរុប	%ដីដែល ត្រូវ បាត់បង់	ដំណាំប្រចាំឆ្នាំ ដែលមាន	កាលបរិច្ឆេទ ប្រមូលផល	ចំនួនដើមឈើដែលត្រូវ បំផ្លាញ		ទ្រព្យធនផ្សេងៗ ដែលត្រូវ បាត់បង់	តម្លៃទ្រព្យសម្បត្តិ ផ្សេងៗដែលត្រូវ បាត់បង់	ស្ថានភាពគ្រួសារ (មាន, មធ្យម, ក្រីក្រ)
							ឈើហូប ផ្លែ	ព្រៃឈើ			
1	ព័ន្ធកែវ	0	0	0	0	សីហា 2023	0	0	0	100,000 ៛	ល្អ/មធ្យម
2	ព័ន្ធកែវ	0	0	0	0	សីហា 2023	0	0	0	100,000 ៛	ល្អ/មធ្យម
3	ព័ន្ធកែវ	0	0	0	0	0	0	0	សំណង់ផ្សេងៗ	100,000 ៛	ល្អ/មធ្យម
4	ព័ន្ធកែវ	0	0	0	0	សីហា 2023	0	0	0	200,000 ៛	ល្អ/មធ្យម
5	ព័ន្ធកែវ	0	0	0	0	សីហា 2023	0	0	0	200,000 ៛	ល្អ/មធ្យម

ថ្ងៃទី ០៣ ខែ កុម្ភៈ ឆ្នាំ ២០២៣  
 មេឃឹម លោកសង្កាត់  

 ភីម ម៉េឃឹមយុន

ថ្ងៃទី ០៣ ខែ កុម្ភៈ ឆ្នាំ ២០២៣  
 មន្ត្រីទទួលបន្ទុក  

 លេខ ២៧ ២០២៣



ឧបទ្វីប ២១.២

គម្រោងពិពិធកម្មកសិកម្មកម្ពុជា (CASDP-P163264)

**តារាងលទ្ធកម្មដីធ្លី**

រាជធានី ខេត្ត ÷ ភ្នំពេញ/កែប	ក្រុង ស្រុក ខណ្ឌ ÷ ក្រុងស្រែស្វាយ/ស្រែស្រីសោយ	រដ្ឋបាលឃុំ សង្កាត់ ÷ ២១: ទឹកសាប	លេខកូដឃុំ សង្កាត់ ÷ ១០៦០៣
ឈ្មោះគម្រោង ÷ សេសស្រែស្វាយដង្កូវទឹកស្រីសាប ឆ្នាំ ២០២៣ ព្រះទីក្រុង/ក្រុងស្រែស្វាយ			

លេខកូដ លើ ផែនទី	ឈ្មោះកម្មសិទ្ធិករ ឬ ភោគី	ផ្ទៃដី ដែល បាត់បង់	ផ្ទៃដីសរុប	%ដីដែល ត្រូវ បាត់បង់	ដំណាំប្រចាំឆ្នាំ ដែលមាន	កាលបរិច្ឆេទ ប្រមូលផល	ចំនួនដីមរណីដែលត្រូវ បំប្លែង		ទ្រព្យធនផ្សេងៗ ដែលត្រូវ បាត់បង់	តម្លៃទ្រព្យសម្បត្តិ ផ្សេងៗដែលត្រូវ បាត់បង់	ស្ថានភាពគ្រួសារ (មាន, មធ្យម, ក្រីក្រ)	
							លើប្រមូល ផ្លែ	ព្រៃឈើ				
6	ស្រែស្រាវ គោក	18m <sup>2</sup>	252m <sup>2</sup>	1,8	0	ស្រែស្រាវ ២០២៣	0	0	0	100,000 ដុល្លារ	មធ្យម	
7	ស្រែស្រាវ គោក	36m <sup>2</sup>	220m <sup>2</sup>	3,6	0	ស្រែស្រាវ ២០២៣	0	0	ស្រែស្រាវ ២០២៣	100,000 ដុល្លារ	មធ្យម	
8	ស្រែស្រាវ គោក	19m <sup>2</sup>	329m <sup>2</sup>	1,9	0	ស្រែស្រាវ ២០២៣	0	0	ស្រែស្រាវ ២០២៣	100,000 ដុល្លារ	មធ្យម	
9	ស្រែស្រាវ គោក	16m <sup>2</sup>	416m <sup>2</sup>	1,6	0	0	ស្រែស្រាវ ២០២៣	0	0	ស្រែស្រាវ ២០២៣	100,000 ដុល្លារ	មធ្យម

ថ្ងៃទី ០៣ ខែ កុម្ភៈ ឆ្នាំ ២០២៣

ថ្ងៃទី ០៣ ខែ កុម្ភៈ ឆ្នាំ ២០២៣

រដ្ឋមន្ត្រី ខេត្តសង្កាត់

**គឹម ម៉ៅឃុន**

មន្ត្រីទទួលបន្ទុក  
  
 N. មន្ត្រី

TheDBST road rehabilitation Sob-project of Agricultural Cooperative in Preah Rumkel Commune, Borie Ohsvay District, Stung Treng Province.

ព្រះរាជាណាចក្រកម្ពុជា  
ជាតិ សាសនា ព្រះមហាក្សត្រ

កំណត់ហេតុ  
ស្តីពី

ការពិនិត្យអំពីតម្រូវការនៃការសិក្សារៀបចំផែនការគ្រប់គ្រងបរិស្ថាន និងសង្គម (ESCoP) និងរៀបចំសិក្សាផលប៉ះពាល់ដីធ្លីរបស់អនុគម្រោងកែលម្អផ្លូវចាក់កៅស៊ូ១ខ្សែ នៅក្នុងសំណើពិពិធកម្មកសិកម្មរបស់គម្រោងCASDPឆ្នាំ ២០២២

ពុទ្ធសករាជពីរពាន់ប្រាំបួនសិបប្រាំមួយ ឆ្នាំខាលចតុស័ក ខែមាឃ ថ្ងៃចន្ទ មួយរោច ត្រូវនឹងឆ្នាំពិរពាន់ ខែកុម្ភៈ ថ្ងៃទីប្រាំមួយ វេលាម៉ោងប្រាំបួនព្រឹក នៅស្នាក់ការសហគមន៍ព្រះវិហារ ភូមិក្រឡាពាស ឃុំព្រះវិហារ ស្រុក បុរីអូរស្វាយសែនជ័យ ខេត្តស្ទឹងត្រែង មានបើកកិច្ចប្រជុំផ្សព្វផ្សាយមួយស្តីពីការអនុវត្តអនុគម្រោងកែលម្អផ្លូវកៅស៊ូ១ខ្សែ ប្រវែង៧,៣១០ក្រោមអធិបតីភាពលោក **គឹម ឃឿនយុន** ជាមេឃុំព្រះវិហារ និងជាប្រធានអង្គប្រជុំ រួមជាមួយលោក **ហ៊ុន កៅ** ប្រធានសហគមន៍កសិកម្មព្រះវិហារ។

- I - សមាសភាពចូលរួម (ដូចមានភ្ជាប់ក្នុងបញ្ជីវត្តមាន)
- II - របៀបវារៈនៃកិច្ចប្រជុំ
  - ១- ការពិនិត្យមើលអំពីតម្រូវការសិក្សាផលប៉ះពាល់ដីធ្លីរៀបចំផែនការគ្រប់គ្រងបរិស្ថាន និងសង្គម (ESCoP)
  - ២- ការពិនិត្យអំពីតម្រូវការនៃការសិក្សាផលប៉ះពាល់ដីធ្លី និងទ្រព្យសម្បត្តិផ្សេងៗលើអនុគម្រោងកែលម្អផ្លូវកៅស៊ូ១ខ្សែ
  - ៣- បញ្ហាផ្សេង

ជាកិច្ចចាប់ផ្តើម លោក **គឹម ឃឿនយុន** បានមានមតិស្វាគមន៍ ចំពោះក្រុមការងារចុះបេសកកម្មថ្នាក់ជាតិ និងសហគមន៍សមាជិកនៃអង្គប្រជុំដែលបានអញ្ជើញចូលរួម និងបានមានប្រសាសន៍លើកឡើងថា៖ ថ្ងៃនេះយើងបានរៀបចំកិច្ចប្រជុំមួយដើម្បីពិភាក្សាអំពីតម្រូវការនៃការសិក្សាផលប៉ះពាល់បរិស្ថាន និងសង្គមរបស់អនុគម្រោងកែលម្អផ្លូវកៅស៊ូមួយខ្សែ ក្នុងសហគមន៍កសិកម្មព្រះវិហារសម្រាប់ឆ្នាំ២០២៣ តាមសំណើលើកឡើងរបស់សហគមន៍។ លទ្ធផលនៃការចុះពិនិត្យទីតាំងគម្រោងផ្ទាល់សង្កេតឃើញថា អនុគម្រោងកែលម្អផ្លូវមួយខ្សែនៅក្នុងគម្រោងពិពិធកម្មកសិកម្មកម្ពុជា (CASDP) មានទីតាំងនៅក្នុងភូមិក្រឡាពាស ឃុំព្រះវិហារ ស្រុកបុរីអូរស្វាយសែនជ័យ ខេត្តស្ទឹងត្រែង អាចនឹងមានផលប៉ះពាល់លើដីធ្លី របងឈើ និងដើមឈើខ្លះ ដោយសារទីតាំងអនុគម្រោងត្រូវពង្រីកទទឹងផ្លូវឱ្យបានសមស្របសម្រាប់សហគមន៍ដឹកសត្វចិញ្ចឹម និងកសិផលផ្សេងៗឆ្ពោះទៅកាន់ទីផ្សារ។ ដូច្នេះ អាចមានផលប៉ះពាល់តិចតួចលើក្បាលដីប្រជាជនជាកម្មសិទ្ធិករ ឬភោគី ឬអ្នកប្រើប្រាស់ដីធ្លី និងដើមឈើហូបផ្លែមួយចំនួន។

លោក **ហ៊ុន កៅ** ជាប្រធានសហគមន៍កសិកម្មព្រះវិហារ បានលើកយកខ្លឹមសារសំខាន់មួយចំនួនមកបន្ថែមជូនអង្គប្រជុំមានដូចជា សិទ្ធិរបស់កម្មសិទ្ធិករ ឬភោគី ឬអ្នកប្រើប្រាស់ដីធ្លីក្នុងការទទួលបានព័ត៌មានគម្រោង ការបិទផ្លូវដីធ្លី របងដើមឈើហូបផ្លែដោយស្ម័គ្រចិត្ត សិទ្ធិក្នុងការទទួលយកសំណងទូទាត់ និងនីតិវិធីក្នុងការតវ៉ាជាដើម។

លោក **ហុន សុគា** ទីប្រឹក្សាផ្នែកគាំពារបរិស្ថាន បានធ្វើការពន្យល់ដល់អ្នកចូលរួមក្នុងអង្គប្រជុំអំពីមូលហេតុដែលនាំឱ្យមានផលប៉ះពាល់បរិស្ថានកើតមានឡើងដូចជា គុណវិបាកពេលសាងសង់ សំខ្សែរំខាន ស្ទះចរាចរ គ្រោះថ្នាក់កម្មករ សុវត្ថិភាពសុខភាពសាធារណៈ ប្រភពទឹក ការទន្ទ្រានលើតំបន់ប្រវត្តិសាស្ត្រ ការទន្ទ្រានលើតំបន់ប្រព័ន្ធអេកូឡូស៊ី

ការបំផ្លាញតម្រូវឲ្យជាតិផ្លាស់ប្តូរគុណភាពទឹកលើដីឬលំហូរទឹក ការប្រើប្រាស់ជាតិផ្ទះ សារធាតុគីមីពុលក្នុងខ្យល់ ការបាត់បង់ព្រៃឈើ ឬសំណង់គ្រួសារជាបណ្តោះអាសន្ន ឬអចិន្ត្រៃយ៍ ។ល។

អ្នកចូលរួមទាំងអស់បានលើកឡើងថា សំណើខ្សែផ្លូវដែលបានលើកឡើងមិនមានផលប៉ះពាល់បរិស្ថានដូចបានលើកឡើងទេ ដោយសារទំហំផ្លូវចាស់ដែលមានស្រាប់ស្ថិតនៅតំបន់ទីប្រជុំជនដែលពលរដ្ឋប្រើប្រាស់ប្រចាំថ្ងៃដែលអាជ្ញាធរមូលដ្ឋានបានទុកចំណីផ្លូវមានទទឹងរហូតទៅដល់៥ម៉ែត្រ។ ទោះជាយ៉ាងណាក៏ដោយ នឹងមានផលប៉ះពាល់ខ្លះក្នុងអំឡុងពេលសាងសង់ ដូចជាដីហុយ សំឡេងរំខានពីគ្រឿងចក្រ គុណភាពខ្យល់ គុណភាពទឹក ការហូរច្រោះដី និងសុខភាពកម្មករ ដែលផលប៉ះពាល់ទាំងនេះអាចទប់ស្កាត់ និងកាត់បន្ថយបាន។

លោក គេ ធីត្និ ទីប្រឹក្សាផ្នែកសុវត្ថិភាពសង្គម បានលើកឡើងពន្យល់អំពីទំហំ និងផលប៉ះពាល់លើដីធ្លី និងទ្រព្យសម្បត្តិផ្សេងៗនៅក្នុងអនុគម្រោងកែលម្អផ្លូវកៅស៊ូ១ខ្សែនេះ ដោយបង្ហាញគំនូសប្លង់បច្ចេកទេសខ្សែផ្លូវដែលបានលើកឡើងទើងទទឹងខ្ពង់លើប្រវែង៦ម៉ែត្រដីដែលត្រូវការសម្រាប់សាងសង់ប្រវែងពី១០ទៅ១២ម៉ែត្រ។ ដូច្នេះ ទីតាំងក្បាលដីស្រែ ដីចំការ ដីលំនៅដ្ឋាន ដើមឈើ រូបង និងទ្រព្យសម្បត្តិផ្សេងៗទៀត ដែលស្ថិតនៅបណ្តោយផ្លូវក្នុងទំហំទទឹង១០ទៅ១២ម៉ែត្រ គឺជាទីតាំងរងនូវផលប៉ះពាល់ ដែលនឹងត្រូវធ្វើការវាស់វែងលម្អិតដើម្បីប្រមូលទិន្នន័យផលប៉ះពាល់ជាក់លាក់សម្រាប់រៀបចំរបាយការណ៍ជាក់ជូនថ្នាក់ដឹកនាំគម្រោង និងធនាគារពិភពលោកត្រួតពិនិត្យផ្តល់យោបល់ណែនាំ។ លោកបានបន្ថែមថា ក្នុងករណីផលប៉ះពាល់ដីធ្លីក្រោម១០%នៃផ្ទៃដីសរុបទាំងអស់ដែលគ្រួសារដែលមានផលប៉ះពាល់នីមួយៗ នោះតម្រូវឱ្យបរិច្ចាគដោយស្ម័គ្រចិត្តដោយមិនមានការបង្ខិតបង្ខំ។ ចំពោះកិច្ចការពារសុវត្ថិភាពជនជាតិដើមភាគតិចមិនតម្រូវឱ្យមានសិក្សានោះទេ ដោយសារទីតាំងអនុគម្រោងមិនមានជនជាតិដើមភាគតិចរស់ឡើយ។

ក្នុងអំឡុងពេលពិគ្រោះយោបល់ ក្រុមការងារគម្រោងបានលើកយន្តការដោះស្រាយវិវាទ ឬបណ្តឹងតវ៉ា (GRM) មកពន្យល់ដល់អ្នកចូលរួមក្នុងការប្រើប្រាស់យន្តការនេះឱ្យមានប្រសិទ្ធភាព ដែលយន្តការនេះបានបញ្ជាក់យ៉ាងច្បាស់អំពីសិទ្ធិទាមទារសំណងរបស់ប្រជាពលរដ្ឋ យោងតាមគោលនយោបាយការពាររបស់ធនាគារពិភពលោក និងមិនមាននរណាម្នាក់ត្រូវបានបង្ខិតបង្ខំឱ្យបរិច្ចាគដីធ្លីទៅអនុគម្រោងផ្លូវនេះទេ។

ក្រុមការងារគម្រោង និងអាជ្ញាធរមូលដ្ឋានភូមិ ឃុំ បានចុះទៅពិនិត្យទីតាំងខ្សែផ្លូវដែលបានលើកឡើង ដើម្បីធ្វើការវាស់វែង អង្កេតប្រមូលព័ត៌មានពីផលប៉ះពាល់បរិស្ថាន និងសង្គម និងបន្តទៅរៀបចំវិធានការទប់ស្កាត់ផលប៉ះពាល់ដោយប្រើឧបករណ៍ផែនការគ្រប់គ្រងបរិស្ថាន និងសង្គម (ESMP) និងរបាយការណ៍បរិច្ចាគដីធ្លីដោយស្ម័គ្រចិត្តឱ្យគម្រោង (VLD)។

លោក គីន ឃឿន ជាមេឃុំព្រះវិហារ និងជាប្រធានអង្គប្រជុំ មានប្រសាសន៍លើកឡើងជម្រាបជូនអង្គប្រជុំអំពីផលប្រយោជន៍នៃអនុគម្រោងផ្លូវមួយខ្សែដែលសហគមន៍បានឡើងនេះ នៅពេលដែលបានកែលម្អចរាចរណ៍ផ្លូវនេះនឹងបានសម្រួលដល់សមាជិកសហគមន៍ និងប្រជាជននៅក្នុងឃុំព្រះវិហារទាំងមូលដោយស្រួលក្នុងការដឹកសត្វចិញ្ចឹម និងកសិផលផ្សេងៗពីចំការមកស្តុកទុកលក់ក្នុងស្នាក់ការសហគមន៍កសិកម្ម។ យោងតាមការពិនិត្យរបស់ក្រុមជំនាញឃើញថា អនុគម្រោងនឹងមានផលប៉ះពាល់ខ្លះលើក្បាលដីប្រជាជនមួយចំនួនដែលនៅអមសងខាងផ្លូវដែលមានស្រាប់ ដូចជាដើមដូង ដើមស្វាយចន្ទី និងទុរយោទិកស្អាតតាមផ្ទះ។ លោកបានបញ្ជាក់បន្ថែមថា អនុគម្រោងផ្លូវដែលអាចឈានទៅដល់ដំណាក់កាលអនុវត្តបាន លុះត្រាតែក្រុមការងារចុះវាស់វែងបានកំណត់លើផលប៉ះពាល់ជាមុនសិន និងមានការទទួលស្គាល់ពីម្ចាស់ក្បាលដីនីមួយៗលើផលប៉ះពាល់ទាំងនោះ។ ថ្ងៃនេះ បងប្អូនបានចូលរួមទាំងអស់គ្នាបានស្តាប់នូវការផ្សព្វផ្សាយអំពីអនុគម្រោងផ្លូវមួយខ្សែនេះ និងបានស្តាប់ពីនីតិវិធីនៃការចុះសិក្សាផលប៉ះពាល់ដែលក្រុមជំនាញបានបង្ហាញជូន នឹងសហការជាមួយអាជ្ញាធរមូលដ្ឋានដើម្បីកំណត់ឱ្យបានច្បាស់លាស់ និងមានតម្លាភាព។ លោកបានបន្ថែមទៀតថា ក្រោយពីបញ្ចប់អង្គប្រជុំនេះទៅ ក្រុមជំនាញនឹងមានការវាស់វែងស្រង់ទិន្នន័យផលប៉ះពាល់នៃអនុគម្រោងផ្លូវមួយខ្សែនេះ បន្ទាប់ពីបានទិន្នន័យរៀបចំរួចរាល់ នឹងមានរៀបចំការប្រជុំលើកទីពីរស្តីពីកិច្ចព្រមព្រៀងបរិច្ចាគដោយស្ម័គ្រចិត្តរវាងក្រុមការងារជំនាញ ជាមួយអាជ្ញាធរដែនដី និងប្រជាជនដែលមានផលប៉ះពាល់ដើម្បីសម្រេចទាំងអស់គ្នា។



បន្ទាប់ពីបានពិភាក្សាគ្នាយ៉ាងប្រឹកប្រឹក្សានូវរូបមន្ត លោកមេឃុំបានពិនិត្យ និងសម្រេចឱ្យមានការសិក្សាដីធ្លី ស្របតាមគោលការណ៍ណែនាំដែលបានកំណត់។

អង្គប្រជុំបានបញ្ចប់នៅម៉ោងដប់មួយនិងសាមសិបនាទីព្រឹក នាថ្ងៃខែឆ្នាំដែលក្រោមបរិយាកាសវិករាយ និងស្និទ្ធស្នាលក្រែលែង។

បានឃើញ និងឯកភាព  
ប្រធានអង្គប្រជុំ  
  
ភីវ ម៉េរីងយុន

អ្នកធ្វើកំណត់ហេតុ  
  
៧ ៦ ២០២០

**Annex 7: Attendants of consultation Meeting**

The DBST road rehabilitation Sob-project of Agricultural Cooperative in Preah Rumkel Commune, Borien Ohsvay District, Stung Treng Province.

**ព្រះរាជាណាចក្រកម្ពុជា**  
**ជាតិ សាសនា ព្រះមហាក្សត្រ**  
**មន្ទីរមហាសេដ្ឋកិច្ច និងហិរញ្ញវត្ថុ**  
**ស្ថិតិ**  
**ការប្រជុំផ្សព្វផ្សាយគ្រោងការអនុគម្រោងកែលម្អផ្លូវ ការពិនិត្យអំពីតម្រូវការ**  
**នៃការរៀបចំផែនការគ្រប់គ្រងបរិស្ថាន និងសង្គម (ESMP) និងរៀបចំសិក្សាផលប៉ះពាល់ដីធ្លី**

**ទីកន្លែងប្រជុំ : ភូមិក្រឡាពាស ឃុំព្រះវិហារ ស្រុកបុរីអូរស្វាយសែនជ័យ ខេត្តស្ទឹងត្រែង**  
**ថ្ងៃទី : 06 ខែសីហា ឆ្នាំ ២០២៣**

ល.រ	ឈ្មោះ-ភេទ	ភេទ	មុខងារ	អង្គការ/ភូមិ	លេខទូរស័ព្ទ	ហត្ថលេខា/ស្នាមមេដៃ
1	ស៊ី ធួន ឃី	ប	សមាជិក	ភូមិក្រវាត	0977883040	[Signature]
2	យ៉ាង ធួន ឃី	ប	សមាជិក	ភូមិក្រវាត	0889483074	[Signature]
3	ធួន ឃី	ប	សមាជិក	កណ្តាល	0977778971	[Signature]
4	ឃី ឃី	ប	សមាជិក	ភូមិក្រវាត	0989148.990	[Signature]
5	ឃី ឃី	ប	សមាជិក	កណ្តាល	0886687982	[Signature]
6	ឃី ឃី	ប	សមាជិក	កណ្តាល	0719993382	[Signature]
7	ឃី ឃី	ប	សមាជិក	កណ្តាល	060880531	[Signature]
8	ឃី ឃី	ប	សមាជិក	កណ្តាល	0882079523	[Signature]
9	ឃី ឃី	ប	សមាជិក	កណ្តាល	0923869511	[Signature]
10	ឃី ឃី	ប	សមាជិក	កណ្តាល	0918600758	[Signature]
11	ឃី ឃី	ប	សមាជិក	កណ្តាល	0885825966	[Signature]
12	ឃី ឃី	ប	សមាជិក	កណ្តាល		[Signature]
13	ឃី ឃី	ប	សមាជិក	កណ្តាល	0883263661	[Signature]
14	ឃី ឃី	ប	សមាជិក	កណ្តាល	0962586972	[Signature]
15	ឃី ឃី	ប	សមាជិក	កណ្តាល	0973216201	[Signature]
16	ឃី ឃី	ប	សមាជិក	កណ្តាល	0888952779	[Signature]
17	ឃី ឃី	ប	សមាជិក	កណ្តាល		[Signature]
18	ឃី ឃី	ប	សមាជិក	កណ្តាល		[Signature]
19	ឃី ឃី	ប	សមាជិក	កណ្តាល		[Signature]
20	ឃី ឃី	ប	សមាជិក	កណ្តាល		[Signature]
21	ឃី ឃី	ប	សមាជិក	កណ្តាល	0978800758	[Signature]
22	ឃី ឃី	ប	សមាជិក	PCO	012518109	[Signature]
23	ឃី ឃី	ប	សមាជិក	PCO	012758003	[Signature]