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SOUTH EAST ASIA DISASTER RISK MANAGEMENT (SEA DRM) PROJECT FOR CAMBODIA

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

Prepared by:

PROJECT MANAGEMENT UNIT

MINISTRY OF RURAL DEVELOPMENT

CORNER STREET 169 AND RUSSIA BLVD, 7 MAKARA

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ADB	Asian Development Bank
AFD	Agence Française de Développement
AIDS	Acquired Immune Deficiency Syndrome
ARAP	Abbreviated Resettlement Action Plan
CBO	Community Based Organizations
CERD	International Convention on the Elimination of All Forms of Racial Discrimination
CMDG	Cambodia Millennium Development Goals
CNCW	Cambodia National Council for Women
CRS	Community Resettlement Subcommittees
C/S	Commune/ Sangkat
CSO	Civil Society Organizations
DBST	Double Bituminous Surface Treatment
DFAT	Department of Foreign Affairs and Trade (formerly, AusAID)
DIA	Designated Implementing Agency
DRFI	Disaster Risk Financing and Insurance
DRM	Disaster Risk Management
EA	Environmental Assessment
ECoP	Environment Code of Practice
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESOM	Environmental and Social Operation Manual
GAP	Gender Action Plan
GDCC	Government Donor Consultative Committee
GDR	General Department of Resettlement
HIV	Human Immunodeficiency Virus
ICCPR	International Convention on Civil and Political Rights
ICESCR	International Convention on Economic, Social and Cultural Rights
IDA	International Development Association
IP	Indigenous Peoples
IPDP	Indigenous Peoples Development Plan
IPM	Integrated Pest Management
IPPF	Indigenous Peoples Planning Framework
IRC	Inter-Ministerial Resettlement Committee
KOICA	Korea International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau Development Bank
M&E	Monitoring and Evaluation
MEF	Ministry of Economy and Finance
MOE	Ministry of Environment
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MOWA	Ministry of Women's Affairs

MOWRAM	Ministry of Water Resources and Meteorology
MRD	Ministry of Rural Development
NERUDP	North Eastern Region Urban Development Project
NGO	Non-Government Organizations
NDF	Nordic Development Fund
NPA	National Protected Area
NP-SNDD	National Program for Sub-National Democratic Development
NTFP	Non-Timber Forest Products
O&M	Operation and Maintenance
OM	Operation Manual
OP/BP	Operation Policy / Bank Policy
PA	Protected Area
PAH	Project Affected Households
PAP	Project Affected Persons
PDRD	Provincial Department of Rural Development
PFA	Protected Forest Area
PMO	Project Management Office
PPP	Public Private Partnership
RGC	Royal Government of Cambodia
ROI	Region of Influence
ROW	Right of Way
RPF	Resettlement Policy Framework
RSS	Regional Safeguards Secretariat
SEA DRM	South East Asia Disaster Risk Management
SEO	Social and Environmental Safeguard Office
SIA	Social Impact Assessment
SMMP	Social Management and Monitoring Plan
STI	Sexually Transmitted Infection
TA	Technical Assistance
TOR	Terms of Reference
TWG-G	Technical Working Group on Gender
USAID	United States Agency for International Development
USD	United States Dollar
WBG	World Bank Group
WCCC	Women's and Children's Consultative Committee

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1.0 PROJECT DESCRIPTION

The project development objective of the proposed South East Asia Disaster Risk Management (SEA DRM) Project to be funded by the World Bank Group (the Bank) through an International Development Association (IDA) loan of USD 60 million in Cambodia is to reduce the risk of flooding and enhance disaster risk financing capacity within the Mekong catchment of Cambodia. The Project will help Cambodia achieve and expand outcomes in three key areas: (i) flood risk management investments; (ii) disaster risk assessment and financing; and, (iii) a contingent emergency response component.

The overall project objective is "to promote and harmonize disaster risk management at the regional level." The Cambodian government has developed a number of sub-projects which will be subject to further assessment and consideration for funding purposes.

The SEA DRM has the following four components:

Component 1: Strengthening Rural Road and Community Resilience

This component will focus on resilience of rural road corridors through the upgrading rural roads and strengthening the preparedness of surrounding communities. It will be implemented by MRD in Steung Treng, Kratié, Kampong Cham, Tbong Khmum, Siem Reap, and Kandal, six highly flood-prone provinces along the Mekong and Tonlé Sap basins, which were most affected by recent major flood events.

Sub-component 1.1. Resilient Rural Road Rehabilitation and Upgrading: This component will finance the climate resilient rehabilitation and maintenance of about 250 km of rural roads that are regularly damaged from recurrent flood events. Sound engineering designs, sufficient drainage, and greening approaches will be applied to enhance the resilience of the road structures. Where appropriate, labor-intensive methods will be supported. These works will be complemented with traffic safety measures near communities and schools, building on a safe villages program that combines road safety with community disaster risk management and planning. Opportunities will be integrated to use the rural road network to strengthen water control measures, for example, by raising the road levels so as to function as embankments or introducing water gates in certain elevated road links to control water flows in dry and wet seasons. Criteria used to prioritize rural roads for upgrading under this project focus on roads which have been regularly flooded and require resilient rehabilitation and upgrading investments.

Engineering design measures to improve rural road resilience include the use of lime or cement to improve the sustainability of the road, increase its strength, protect subsurface conditions and prevent soil saturation. Construction materials will be tested according to the specifications and good engineering practice applying International (AASHTO or BS) Engineering Codes under different environmental conditions. The strength of materials for sub-base, base course, bitumen or emulsion and cement will be built to withstand increased or decreased moisture contents. Additionally, the slope of pavement will be increased in areas where larger volumes of water from the road are expected. Similarly, standards pertaining to road elevations or the vertical clearance of bridges over waterways may have to be revised to withstand more extreme flood conditions where applicable and use engineering methods to allow the excess water flow over the road.

Non-engineering measures include the planting of trees and vegetation along the rehabilitated roads. The works will also draw on green construction materials and explore the possible increased use of more sustainable road construction materials and technologies in the sub-projects. Rigourous quality

control measures will be part of the implementation phase to ensure good quality of the infrastructure built.

Sub-component 1.2. Institutional Strengthening: This sub-component will finance institutional strengthening within the rural road sector. In particular, this component will (i) develop and adopt resilient roads planning, design, and construction standards, (ii) support quality control through field laboratories, and (iii) upgrade the rural road inventory.

Component 2: Disaster Risk Financing and Insurance

The objective of this component is to increase the financial resilience of Cambodia against natural disasters and the Government's capacity to meet post-disaster funding needs. This component will be implemented by MEF.

Sub-component 2.1. Support for strengthening national financial resilience (US$0.5 million TF Grant): This sub-component will build capacity on disaster risk finance within MEF, support the preparation and implementation of a national disaster risk finance strategy, and facilitate the country engagement in the preparation and establishment of the Southeast Asia Disaster Resilience Insurance Fund (SEADRIF) as a regional disaster risk pooling mechanism, designed to provide participating countries with effective and affordable post-disaster rapid response financing. This sub-component will be financed through trust fund grants.

Sub-component 2.2. Payment of disaster risk insurance premium (US$10 million IDA Credit): This sub-component will assist the Government in securing access to sovereign disaster risk insurance by financing its premium for three years to an international risk carrier such as the newly established SEADRIF or through the World Bank Treasury. It is proposed to structure this component in a way that should the SEADRIF not be operational at mid-term review of the project, the funds of this sub-component will be reallocated to Component 1.

Sub-component 2.3. Support for strengthening disaster resilience (US$0.5 million TF Grant): This sub-component will build capacity MEF to systematically mainstream disaster rand climate resilience into investment planning and development processes, in coordination with other relevant line Ministries and NCDM.

Component 3 Project Management

The objective of this component is to support the day-to-day implementation of the project. It will finance institutional support and capacity development for project management, coordination, procurement, financial management, technical and safeguards aspects, monitoring and evaluation (M&E), and reporting

Component 4: Contingent Emergency Response Component

This component will allow for a reallocation of credit proceeds from other components to provide emergency recovery and reconstruction support following an eligible crisis or emergency. An Emergency Response Operations Manual will be developed during project implementation for the specific eligible disaster, detailing financial management (FM), procurement, safeguard, and any other necessary implementation arrangements.

The Ministry of Economy and Finance (MEF) advised that infrastructure investments should focus on Component 1.1 rural road rehabilitation – including road strengthening in six provinces along the

Mekong and Tonlé Sap basins, including Steung Treng, Kratié, Kampong Cham, Tboung Khmum, Siem Reap and Kandal. High-impact investments will be selected using a set of criteria, including (i) flood risk (road exposure and vulnerability); (ii) disaster preparedness (evacuation route and connection with safe areas on higher ground); (iii) population served (2 km either side of road, disaggregated by income group and gender); (iv) connectivity with schools and health centers; (v) economic connectivity (markets along road); and (vi) viability (cost of road strengthening)[1]. This will also help MRD to develop its rural road asset inventory, which will be used to inform investment decisions for upgrading and operation and maintenance (O&M) in the future. For purposes of the present environmental and social management framework (ESMF), the main emphasis is on the discussion of safeguards for high impact investments in rural road rehabilitation.

This resilient rural infrastructure component and rural road rehabilitation is implemented by the RGC through the MRD and will entail capacity development for the ministry. The Resilient Rural Infrastructure component will focus on strengthening the resilience of rural road corridors mainly through the strengthening of rural roads and surrounding communities. By enhancing the resilience of key rural access roads that link local communities to regional markets, the project intends to deepen regional economic corridors and strengthen the competitiveness of rural communities.

The purpose of this ESMF is to identify and direct the safeguard issues affecting the Cambodia DRM Project, and to inform the development of more detailed, specific environment safeguard document such as Environmental and Social Management Plans (ESMP) or limited scope Environmental and Social Impact Assessment (ESIA)[2] if the scale of potential impacts is complex. However, a scenario of complex Category B is unexpected as the rural road improvement will be limited to within the existing right of way. The RPF and IPPF have been developed to inform the development of more detailed, specific social safeguard documents such as the Abbreviated Resettlement Action Plan (ARAP) and Indigenous Peoples Development Plan (IPDP), as applicable, along with other safeguard measures and procedures where necessary for proposed sub-project initiatives and/or activities. These project-level safeguard documents are expected to be consistent with this ESMF and to provide the necessary level of detail to address the safeguard issues appropriate for the proposed sub-project investments.

This ESMF has been prepared through consultations and updated as required to reflect any changes to program investments irrespective of donor, national legislation, the World Bank or other donor policies. The ESMF will be publically disclosed to local communities and the general public.

2.0 ENVIRONMENTAL VULNERABILITIES AND RISKS

Approximately 80 percent of Cambodia's territory lies within the Mekong River and Tonlé Sap basins, known to have large fluctuations of water levels between the dry and wet seasons. Around 30 tropical storms affected Cambodia between 1999 and 2013 with severity increasing in recent years. Floods cause widespread disruption and dislocation on a temporary basis (i.e., until waters recede) on a medium- to long-term basis. The 2013 floods affected more than 1.8 million people in 20 provinces.

[1] Criteria revised as per Cambodia DRM Project Preparation Mission, 8 to 12 August 2016 Draft Aide Memoire for discussion.

[2] A limited scope ESIA applies to a Category B project in that the scope is narrower than for a Category A project. This limited scope ESIA could be equivalent to an Initial Environmental Assessment (IEE) or similar process in the national legal framework.

Flooding causes major disruption to affected people who have to adjust to the associated shocks and stresses which impact their livelihoods, assets and well-being. Loss of connectivity for short- or longer periods can have a devastating effect on public infrastructure and commerce. Extreme weather events caused by climate change are expected to increase in intensity, severity, and frequency with a consequent effect on livelihoods and well-being.

Floods can severely damage infrastructure including roads. However, roads and associated infrastructure (i.e., bridges, culverts, etc.) also impact flood events. They fragment the floodplains and interrupt natural flow of water, sediments, nutrients and aquatic life. Road development in floodplains usually alters floodplain hydraulics and impacts related aquatic ecosystems. Roads in floodplains are often built on dikes, which can have both intended and unintended impacts. Beneficial impacts including acting as a 'reservoir dam' or tank to store water for irrigation in the dry season. Roads can act as a dam to protect spring crops from the early stages of the flood. Floods can also damage roads with negative effects on transportation. This can hamper economic development, and also slow emergency relief actions.

Mekong floods perform an important ecological function which is essential for much of the population. However, flooding also results in economic and financial costs, including; damage to infrastructure and houses; lost lives and damage to property and assets (i.e., crops and trees).

During the community consultations, community members expressed concerns to the Consultant regarding insufficient water for livestock, homestead gardens and potable water for household consumption. These kinds of water shortages are perennial in nature during the dry season. However, drought concerns could be mitigated somewhat as an indirect result of the proposed sub-project road rehabilitation work. For instance, conversion of soil borrow pits into environmentally-friendly community water retention ponds or, possibly, a channel for water flow to drain water during the wet season could be considered.

There are both direct and indirect effects of roads on the environment. Direct effects are easily seen and are easier to comprehend. In contrast, many indirect environmental effects of roads are cumulative and involve changes in community structures and ecological processes that may not be well understood. Roads act as dams, altering water flow from one side to the other. This can result in flooding on one side of the road and drying out on the other, altering vegetation and associated ecosystems. Roads also can cause changes to hydrologic flows (i.e., drainage patterns).

The challenge is to take the above considerations into account during road planning and design. The MRD is one of the ministries responsible for secondary road networks and which considers an integrated approach to planning road networks.

2.1 DAMAGE DUE TO FLOODS

Cambodian government policy is to protect its population from floods as much as possible by; implementing flood warning systems, protecting cities with dikes, building small levees to protect agricultural fields, and constructing canals to direct flood waters. Local populations have learnt over time to adapt to the constraints that floods impose and to take advantage of their benefits, including living in houses built on stilts, transporting people and goods in boats, adjusting their agricultural pattern to the annual flood pulse, and developing seasonal fishing practices (e.g., MARD, 2003).

As a result of this cultural adaptation, floods do not cause much damage to traditional settlements, and actually bring many benefits. However, extra-ordinary floods cause loss of human lives and

substantial damage to crops, assets and infrastructure. The flood in 2000 was an exceptional flood causing more than 300 casualties and a total damage of over USD 150 million, including damage to infrastructure of around USD 100 million.

2.2 STANDARDS FOR CIVIL ENGINEERING ROADWORKS

Road planning and design in Cambodia are based on international guidelines for roads located outside the floodplain, with the exception of guidelines for rural access roads which are largely the purview of the MRD. The country has limited national standards and guidelines. Cambodia has insufficient funds to internally finance necessary road rehabilitation and construction programs. Many of the rehabilitation and construction works are financed by donor organizations including; Asian Development Bank (ADB), World Bank, or countries like Japan and China. Donors generally do not finance all rehabilitation and construction activities and the work is often done "piecemeal" depending on available funding. Donors often have preferred companies and their own rules for contractors involved in civil engineering and roadworks. Contractors tend to use different guidelines and standards due to the lack of national guidelines. Consequently rehabilitation activities often result in a patchwork of different road sections constructed under different guidelines to different design standards. The sub-projects could help harmonize different standards and guidelines related to road construction and rehabilitation (Section 3.0).

In Cambodia, current road planning and design practices consider hydraulics from the perspective of road-bed stability and minimizing damage during floods. The impact roads have on floodplain dynamics or the ecology of floodplains (i.e., beyond the immediate vicinity of the road) is usually not considered. The MRD Rural Roads Policy (2007) is an exception as they include to some extent floodplain dynamics.

3.0 REGULATORY AND INSTITUTIONAL FRAMEWORK

3.1 CAMBODIA REGULATORY FRAMEWORKS

3.1.1 RGC Constitution

The RGC Constitution (1993) has provisions for land acquisition for public purposes. Article 44 states that "right to confiscate properties from any person shall be exercised only in the public interest as provided by law and shall require fair and just compensation in advance." Article 44, it states that "*the right to confiscate land from any person shall be exercised only in the public interest as provided for under the law and shall require fair and just compensation.*" Some protection for vulnerable groups is also specified in the Constitution in Articles 73 and 74.

The Constitution (1993) guarantees all Khmer citizens the same rights regardless of race, color, language and religious belief. The RGC has acknowledged the importance of having an inclusive multi-cultural Cambodian society in its political platform for the third legislature of the national assembly. Article 31 states that every Khmer citizen shall be equal before the law, enjoying the same rights, freedom and fulfilling the same obligations regardless of race, color, sex, language, religious belief, political tendency, birth origin, social status, wealth or other status. Article 31 implies minority rights provisions.

Article 9 (second paragraph) of the Law on the Commune/Sangkat Administrative Management states that "*the Commune/Sangkat (C/S) is a body representing citizens in its Commune/Sangkat and has missions to serve the general interests of its Commune/Sangkat.*"

The Inter-Ministerial Prakas No 2423 BRK, dated 03 July 2007 on C/S Development Plan, Article 9 states: "*Civil society organizations may participate in the Development Plan and shall be responsible for:*

- *Representing the interests of local communities; and*
- *Specific stakeholder's groups like women, youth, the poor, ethnic minorities*[3]*.*

C/S Council (local people) must ensure that Indigenous People or representatives of them are able to take part in the decision making process on the projects that affect to them".

3.1.2 Land Law

The Land Law (2001) Article 5 states that "*No person may be deprived of his ownership, unless it is in the public interest. An ownership deprivation shall be carried out in accordance with the forms and procedures provided by law and regulations and after the payment of fair and just compensation in advance.*" However, there are currently no such laws and regulations on the statutes and there continues to be an absence of the definition of "*just compensation*." Additionally, a person holding illegally possessed property cannot claim compensation, even if there is a title (Article 18). Further, any "*illegal and intentional or deceitful acquisition of the public domain of the State or public legal entity shall be punished*" with a fine and/or imprisonment. This penalty can be doubled if the landholder is held to damage or delay work in favor of the common interest, especially if the possession of land is necessarily reserved for maintaining roads. Under the new Land Law, those who have occupied a ROW or public properties may not be entitled to any compensation or social support, regardless of their being an affected person or a member of a vulnerable group.

The Land Law grants collective land ownership rights to indigenous communities. Article 26 states that ownership of immovable properties is granted by the state to indigenous minorities as collective ownership. This collective ownership includes all of the rights and protections as enjoyed by private owners. The exercise of collective ownership rights is subject to the responsibility of traditional authorities and decision-making mechanisms of the indigenous community, according to their customs and subject to the laws of general enforcement related to immovable property such as the law on environmental protection (Article 26).

The Ministry of Land Management, Urban Planning and Construction (MLMUPC) is responsible for receiving the land registration application. Mechanisms for dealing with land conflict issues are discussed at an inter-ministerial level and issues related to land application and/or conflict are submitted to an inter-ministerial working group comprised the Ministry of Interior, Councils of Ministers, MEF, Ministry of Environment (MOE), Ministry of Agriculture, Forestry and Fisheries, MRD, and other relevant ministries.

In Article 23, an indigenous community is defined as "*a group of people that resides in Cambodia whose members have manifested ethnic, social, cultural and economic unity and who practice a traditional lifestyle, and who cultivate the lands in their possession according to the customary rules of*

[3] These stakeholders are referred to in this ESMF as "different populations," including ethnic minorities and vulnerable groups – women and female/male youth and children, men, the elderly and disabled, etc.

collective use." In Cambodia, the IP policy was formalized by the MRD in 2009. The policy clearly states that all relevant ministries shall recognize that IP has its own culture and tradition, and have full rights and privileges related to their culture and traditions. The culture and tradition consists of the community land occupation, actual land that they currently use, land for their funeral purposes, land for agriculture farming, land for their belief systems, and land for their benefit. Therefore, IP have full right and privilege to protect their privately- and community-held lands. Any project with the potential to involve involuntary resettlement impacts among IP will need to collect detailed information on their land-use, economic activities, and social organizations, in order that a culturally appropriate IPDP is formulated with full consultation of affected indigenous peoples. All development projects must refer to this policy.

Sub-Decree No. 19 on Social Land Concession (March 2003) discusses the law in relation to a social land concession. This sub-decree has 8 provisions and 33 articles. The purpose of this sub-decree is to define the criteria, procedures and mechanism for granting of social land concessions for residential use and or family farming. In this sub-decree, it is clearly defined that a social land concession is a legal mechanism to transfer private state land for social purposes to the poor who lack land for residential and or family framing purposes.

Circular No 02 which addresses illegal encroachment of state lands was issued 26 February 2007: This Circular identifies the procedure for confiscation and taking back all kinds of forest lands following the order No. 01 dated 10 May 2006 on preventing all types of forest land clearance for properties.

MEF Circular No. 006 (2 April 2014) addresses the Resettlement Implementation Procedure for development projects. This circular provides clear instructions for the administrative management, roles and responsibilities of all relevant implementing agencies and provinces when implementing resettlement for development projects.

3.1.3 Law on Expropriation

The Law on Expropriation (2010) provides principles, mechanisms and procedures of expropriation and defines fair and just compensation for construction, rehabilitation, and physical infrastructure expansion projects to be implemented in the public and/or national interest and development of Cambodia. The Expropriation Law is largely consistent with the main principles of the Bank's *Involuntary Resettlement Policy* (OP/BP 4.12).

Traditional private land ownership was abolished during the Khmer Rouge period (1975-1979) and was not re-introduced until the late 1980s. Determining ownership and obtaining documentation to prove ownership is a cumbersome and time-consuming process which many landholders have not pursued. The boundaries of public land remain unclearly defined and it can be difficult to distinguish between public and private land. This blurring between public and private land is particularly acute with regard to ROW for roads and irrigation channels. In 1999, the RGC decreed that ROW for national roads would vary between 50 meter (m) and 60 m widths. The width of other ROW varies depending upon the type of road carriageway and alignment.

The RGC General Department of Resettlement (secretariat of Inter-Ministerial Resettlement Committee [IRC]) is charged with determining entitlements, valuation of affected assets and in fixing compensation rates. It is important to note that there are gaps between Cambodian expropriation law and the Bank's policy on Involuntary Resettlement, including:

- Expropriation Law defines fair and just compensation for any construction, rehabilitation, and expansion of physical infrastructure projects in the public or national interest and development.
- Expropriation Law does not detail the process and procedures of resettlement induced by physical infrastructure projects, land acquisition, voluntary land and asset donation, and post relocation support.
- Even though the Expropriation Law outlines a complaint and dispute resolution mechanism for project affected households (PAH) in articles under Chapter 3: Expropriation Mechanism and Chapter 4: Expropriation Procedures, there are no specific measures or actions articulated to support vulnerable groups of PAH.
- There are no provisions regarding monitoring and public disclosure requirements described in the Expropriation Law.

Measures to address these gaps shall be mutually agreed and adopted by RGC and the World Bank in the event significant gaps exist between Cambodian Laws and the Bank's Policies.

3.1.4 Law on Environmental Protection and Natural Resources Management

The Law on Environmental Protection and Natural Resources Management (LEPNRM) (1996) states that the MOE is the lead agency in environmental planning, Environmental Assessments (EAs), natural resource management, environmental protection and development project monitoring and inspection. The MOE is mandated to coordinate with other agencies that have development and resources management responsibilities.

The Royal Decree on the Creation and Designation of Protected Areas (1993) designates 23 areas as national parks, wildlife sanctuaries, protected landscapes, or multiple use areas under the administration of the MOE. In 1994, the MOE issued Prakas No. 103 to implement the Royal Decree by prohibiting a number of activities within the protected areas including use of machinery and heavy vehicles that could cause smoke pollution.

3.1.5 Cultural Heritage Protection

Cambodian cultural heritage issues are governed by several laws and decrees, including:

- The Royal Decree on the Establishment of Protected Cultural Zones in the Siem Reap/Angkor Region and Guidelines for their Management (1993);
- The Royal Decree Establishing the Supreme Council on National Culture (SCNC, 1995);
- The Royal Decree on the Establishment of a National Authority for the Protection, Management of Angkor and the Region of Siem Reap (APSARA, 1995); and
- The Law on the Protection of Cultural Heritage (1996).

The Law on the Protection of Cultural Heritage, Chapter 1, Article 4 defines cultural property. Chapter Two, Section 7: Chance Discoveries, Articles 37 and 39 of the same law govern actions to be taken in the event that road works unearth cultural property.

Article 37 states that when construction work or any other activity unearths cultural property, those who discover the object(s) are obliged to stop the construction work and immediately make a declaration to the local police. The Police are to transmit the declaration to the Governor of the province without delay. The Governor in turn informs the competent authority (either SCNC, or in Siem Reap, APSARA) and takes measures to ensure the protection of the object(s) and the site. Such measures are decided by the competent authority.

Article 38 states that the competent authority shall, within 30-days of the declaration, announce the temporary suspension of the construction and the safeguarding measures to be taken. When no such announcements are made within 30-days, the work suspension no longer applies. The Ketsana Emergency Reconstruction and Rehabilitation Project rural road reconstruction activities do not cross any known heritage sites. Nevertheless, road works may unearth archaeological artifacts ("chance finds"), or cultural property, particularly given that Siem Reap province has a number known heritage sites.

3.2 APPLICABLE BANK SAFEGUARD POLICIES TRIGGERED BY THE PROJECT

With a focus on sustainability of projects, the Bank's environmental and social safeguard policies provide assurance to the borrower country that instruments are in place for ensuring environmental and social soundness of projects. As noted, the SEA DRM Project will support smaller sub-projects which have not been clearly defined nor the precise nature of the sub-projects known. In addition, since the location and design are yet to be determined at the time of project appraisal, an ESMF is the safeguards mechanism to provide assurance to the borrower country and impacted individuals that due consideration has been given to potential sub-project impacts and risks.

The World Bank classifies sub-projects into four safeguard policy categories, depending on the type, location, sensitivity, scope and scale of the project as well as the nature and magnitude of potential environmental and social impacts.

Category A: applied to proposed sub-projects where development is likely to have significant adverse environmental and social impacts that are sensitive, diverse or unprecedented. These sub-projects are ineligible for funding.

Category B: applied to proposed sub-projects which have the potential for adverse environmental impacts on human populations or environment (i.e., forests, and other natural habitats) but are less adverse than those of "Category A" projects. These impacts are site-specific; few if any of them are irreversible; and, in most cases, mitigation measures can be designed. Category "B" sub-projects are guided by applicable Bank safeguard instruments similar to Category "A" but with narrower scope.

Category C: applied to proposed sub-projects which have minimal or no adverse environmental and social impacts. In this case, Bank safeguard instruments do not apply and only periodic site environmental screening would be conducted.

The physical works of the project, under Component 1, will take place in Stung Treng, Kratié, Kampong Cham, Tbong Khmum, Siem Reap, and Kandal, six highly flood-prone provinces along the Mekong and Tonlé Sap basins, which were most affected by the most recent major flood events. Given that specific sub-projects and locations are not know at the time of appraisal, the Government prepared an ESMF that provides guidelines to ensure that the project is implemented in an

environmentally and socially sustainable manner in line with World Bank and Government safeguards regulations. Component 2 on disaster risk financing and insurance will support the government to gain access to sovereign disaster risk insurance. The component does not finance any physical investments but it finances the premium for the government to purchase catastrophe risk insurance for 3 years, therefore no safeguards are triggered by this Component.

The proposed road rehabilitation will be implemented on the existing right of way and does not involve road widening. Based on the experience in similar projects elsewhere and the understanding of the nature and potential impact of the types of sub-projects envisaged under this project, significant negative environmental impacts are not anticipated and impacts will be limited to dust, noise, household business disturbance (in populated communities), sourcing of materials, and construction waste during construction. These issues are temporary, minor and site specific. The highest envisaged category is B. The project's safeguards approach is thus designed to ensure compliance and sustainability of category B (and C) sub-projects. In the unlikely case that a subproject of EA category A would be proposed, it would be considered ineligible for project's support as this will take time to prepare, including the ESIA, the delay or hamper the urgent response objective of the project.

As all details on the Cambodian sub-projects are unknown, the borrower has prepared an ESMF to provide an overarching safeguards policy guideline document governing the approach, processes and specific instruments , including ESMP (environmental code of practice [ECoP]) or limited ESIA, ARAP or RAP, IPDP, These plans and procedures are discussed at greater length in Section 5.0. Table 1 provides more detail on these operational policies as well as their implication for the proposed sub-projects.

The sub-projects will likely trigger the following two WB social safeguards policies: Indigenous Peoples (OP/Bank Policy (BP) 4.10) and Involuntary Resettlement (OP/BP 4.12) as well as the following WB environmental safeguard policy*: Environmental Assessment (OP/BP4.01), Natural Habitats (OP/BP 4.04), and Physical Cultural Resources* (OP/BP 4.11). Other safeguard plans and procedures may be applicable as well depending upon the exact nature and scope of the proposed sub-projects are determined.

3.3 GAP ANALYSIS BETWEEN RGC AND WORLD BANK POLICIES

The World Bank's Policy requires the RGC to analyze and summarize national laws pertaining to land acquisition, compensation payment, and relocation of affected settlement plan. The RGC will compare and contrast such laws and regulations with principles and requirements. If a gap between the two exists such that national laws than World Bank OPs, the RGC will propose a suitable gap-filling strategy in the consultation with Bank's officer in charge. The Bank OP 4.01 was compared with laws and regulations and gaps were identified such that OP 4.01 is triggered (Table 2). To address the gaps, Bank policies and requirements will be followed. With respect to IP, while the RGC Constitution implies minority rights provisions, the Bank OP 4.10 will be applied on the sub-projects where gaps exist and IP communities are present. Similarly, the Law on Environmental Protection and Natural Resources Management (1996) and Law on Protected Area Management (2008) will guide safeguards with respect to natural habit should they occur in the sub-projects, though national legislations will be addressed by applying the Bank OP 4.04 (

Table 3). Cambodia has regulations for the protection of cultural resources including the Law on the Protection of Cultural Heritage (1996) which provides guidance for finds during construction however the Bank OP 4.11 will complement national regulations where gaps exist (

Table 4). A gap analysis between RGC existing laws and regulation to the Bank OP 4.12 is provided in the RPF.

Table 1 Summary of operational policies/bank policies triggered and their implication for sub-projects.

OP/BP No.	Summary of Safeguard and Other Operational Policies	Triggered (Y/N) and How	Implication
4.01	**Environmental Assessment:** the Environmental Assessment (EA) covers impacts on the natural environment (air, water and land); human health and safety; physical cultural resources; and transboundary and global environmental concerns. Social aspects (involuntary resettlement, indigenous peoples) as well as natural habitats, pest management, forestry, and safety of dams are covered by separate policies with their own requirements and procedures.	**Y** The proposed road rehabilitation will be implemented on the existing right of way. Significant negative environmental impacts are not anticipated and impacts will be limited to dust, noise, household business disturbance (in populated communities), sourcing if materials, and waste during construction. These issues are minor and site specific. They can be managed by applying good construction practices. The use of materials for the construction will be monitored.	(i) An ESMP or a limited scope ESIA will be prepared for each proposed sub-project as part of the feasibility studies which will include required management plans (Indigenous Peoples Development Plan [IPDP] and Abbreviated Resettlement Action Plan [ARAP]
4.04	**Natural Habitat:** the Bank supports the protection, maintenance, and rehabilitation of natural habitats and their functions. The conservation of natural habitats is essential for long term sustainable development. Natural habitats comprise land and water areas where (i) the ecosystems' biological communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions.	**Y** The proposed road strengthening under component 1 could have some impacts on nearby habitats, wildlife corridors, wetlands, or river basins, therefore this OP is triggered as a precautionary measure.	Sub-projects will be designed in a way to maximize flood resilience, while minimizing natural habitat disruption and site-specific ESMPs will be developed to help mitigate this risk.
4.10	**Indigenous Peoples:** These are defined to be a distinct, vulnerable, social and cultural group possessing a number of characteristics including collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories.	**Y** The consultations conducted during the project preparation suggest that ethnic minorities are present (Stung Treng) and may be directly or indirectly impacted by the proposed project investments in target provinces. In view of this, OP/BP4.10 is triggered by the sub-projects.	An Indigenous Peoples Planning Framework (IPPF) will be developed as a component of this ESMF. The Ethnic Groups Development Framework (EGDF) is prepared to address potential adverse social impacts to the ethnic minorities that may occur due to the implementation of the project. This policy framework requires that special measures be established to ensure that the interest of ethnic minorities are protected and that they are meaningfully consulted in a free, prior and informed consent manner.

(Cont'd.)

OP/BP No.	Summary of Safeguard and Other Operational Policies	Triggered (Y/N) and How	Implication
4.11	**Physical Cultural Properties:** This policy addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance.	**Y** No physical cultural sites are located adjacent to the road alignments and ROW. However, there is a possibility that physical cultural resources could be found during eventual construction of infrastructure that is to be studied and designed through this project, especially in the IP areas. This OP will be triggered.	A chance find process is discussed in this ESMF document
4.12	**Involuntary Resettlement:** this policy aims to address and mitigate risks of physical relocation, loss of land and other assets, sources of incomes and means of livelihood by local people due to proposed sub-projects. The policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.	**Y** Land acquisition and structure relocation are expected to be minor and temporary since a minimization of resettlement is a criteria used in road selection and since the project roads will be upgraded on the existing alignment and the right of way.	(i) The Resettlement Policy Framework (RPF) will be applied by all subprojects to address potential adverse social impacts due to involuntary acquisition of assets and changes in land use. RPF includes provision for compensation and rehabilitation assistance, and if land donation is involved, procedures for land contributions. (ii) Each sub-project will prepare an ARAP to address all issues related to [potential] relocation and compensation of communities affected by the proposed sub-project (iii) Grievance Redress Mechanism will be defined as part of the ARAP for each site, taking into consideration the local context. The ARAP document for each project will be disclosed locally, at the national level as well as on the MRD website and the World Bank InfoShop.

Table 2 Gap analysis between the RGC legal/regulatory framework and the World Bank OP4.01.

Subjects	OP 4.01	RGC	Gap/Project Measures
1.EA Process			
1.1 An EA considers natural and social aspects in an integrated manner that considers national and international obligations, treaties and agreements	*Assess the adequacy of the applicable legal and institutional framework, including applicable international environmental agreements, and confirm that they provide that the cooperating government does not finance project activities that would contravene such international obligations.*	Law on Environmental Protection and Natural Resource Management: ▪ Article 6 – An environmental impact assessment shall be done on every project and activity, private or public, and shall be reviewed and evaluated by the Ministry of Environment before being submitted to the Royal Government for decision. Sub-decree #72 ANRK.BK on Environmental Impact Assessment Process (1999): ▪ Article 1 – An environmental impact assessment (EIA) shall be done on every project and activity, private or public, and shall be reviewed by the Ministry of Environment before being submitted to the Royal Government for decision. ▪ Article 6 – The Project Sponsor shall conduct Initial Environmental Impact Assessment (IEIA) for the project required EIA as listed in an Annex of this Sub-Decree.	OP 4.01 Policy Procedures will be applied to ensure the sub-projects do not contravene any obligations, treaties or agreements whether or not an EA is a requirement under national regulations.
1.2. Assessment of project alternatives.	*Provide for assessment of feasible investment, technical, and siting alternatives, including the "no action" alternative, potential impacts, feasibility of mitigating these impacts, their capital and recurrent costs, their suitability under local conditions, and their institutional, training and monitoring requirements associated with them.*	Not included.	OP 4.01 Policy Procedures will be implemented to ensure that the assessment of the Project potential impacts review possible alternatives including the option of “no action”.
1.3 Retention of	*The borrower should normally*	Not included.	OP 4.01 Policy Procedures will be

Subjects	OP 4.01	RGC	Gap/Project Measures
project advisors.	*engage an advisory panel of independent, internationally recognized environmental specialists to advise on all aspects of the project relevant to the EA.*		implemented to provide guidance should the borrower be advised that independent, internationally recognized environmental specialists be engaged to provide advice on the Project review.
2. Public Consultation and Disclosure			
2.1. The EA process must include public consultation and disclosure.	*The Bank may, if appropriate, require public consultation and disclosure.* *The borrower consults project affected groups and local nongovernmental organizations (NGOs).*	Law on Environmental Protection and Natural Resource Management: ▪ Article 1 – The purposes of this law are: ○ to encourage and enable the public to participate in environmental protection and natural resource management. ▪ Article 16 – The Ministry of Environment, following a request from the public, shall provide information on its activities, and shall engage public participation in environmental protection and natural resource management. Sub-decree #72 ANRK.BK on Environmental Impact Assessment Process (1999): ▪ Article 1 – Foster public participation in the environmental impact assessment process in recognition that their concerns should be considered in the project decision-making process.	OP 4.01 Policy Procedures will be implemented to provide guidance on public consultation and disclosure such that project affected groups and local NGOs are informed.
3. Monitoring & Evaluation			
3.1 Internal and external independent monitoring are required	*During project implementation, the borrower reports on (a) compliance with measures agreed with the Bank on the basis of the findings and results of the EA, including implementation of any EMP.*	Sub-decree #72 ANRK.BK on Environmental Impact Assessment Process (1999): ▪ Article 3 – The Ministry of Environment shall: b/ take appropriate administrative, conduct surveillance and monitor to ensure that the Environmental Management Plan during project construction, operation, and closure, which	OP 4.01 Policy Procedures will be implemented. The PMU in close coordination with GDR-IRC will conduct internal monitoring on resettlement implementation and reporting requirements for the ESMMP implementation. The monitoring will

Subjects	OP 4.01	RGC	Gap/Project Measures
		contained in an approved EIA report be implemented by the Project Sponsor.	include progress reports, status of the RP implementation, information on location and numbers of people affected, compensation amounts paid by item, and assistance provided to PAHs. The report of monitoring results will be prepared by MRD and submitted to IRC and WB on a quarterly basis.

Table 3 Gap analysis between the RGC legal/regulatory framework and the World Bank OP4.04.

Subjects	OP 4.04	RGC	Gap/Project Measures
1.Promote Environmentally Sustainable Development			
1.1 Use a precautionary approach to ensure environmentally sustainable development.	*The Bank supports, and expects borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.*	Law on Environmental Protection and Natural Resource Management: ▪ Article 1 – The purposes of this law are: ○ to ensure the rational and sustainable conservation, development, management, and use of the natural resources of the Kingdom of Cambodia. ○ to suppress any acts that cause harm to the environment. ▪ Article 3 – The National Environmental plan is a plan of environmental protection and sustainable natural resource management for implementation throughout the Kingdom of Cambodia.	OP 4.04 Policy Procedures will be implemented to apply a precautionary approach that complements the national regulation that ensures the rational and sustainable conservation, development, management, and use of the natural resources.
1.2 Avoid significant conversion or degradation of critical natural habitats.	*The Bank does not support projects that, in the Bank's opinion, involve the significant conversion or degradation of natural habitats.*	Law on Environmental Protection and Natural Resource Management: ▪ Article 8 – Natural resource protected areas, which include national parks, wildlife sanctuaries, protected landscape areas, (and) multiple use areas, shall be determined by Royal Decree.	Though critical habitats are not proposed to be within the sub-project footprints, OP 4.04 Policy Procedures will be implemented to provide guidance on avoiding the conversion or degradation of critical natural habitats which could be directly or indirectly affected by the sub-projects.
1.3 Using lands already converted from natural habitats to minimize impacts.	*Wherever feasible, Bank-financed projects are sited on lands already converted.*	Not included.	OP 4.04 Policy Procedures will be implemented to ensure that the sub-projects are designed to be sited on converted lands.
1.4 Provide for the use of appropriate expertise for the design and	*If there are potential institutional capacity problems, the project includes components that develop the capacity of national*	Not included.	OP 4.04 Policy Procedures will be implemented to provide guidance should the borrower be advised that independent, internationally recognized

Subjects	OP 4.04	RGC	Gap/Project Measures
implementation of mitigation and monitoring plans.	*and local institutions for effective environmental planning and management. The mitigation measures specified for the project may be used to enhance the practical field capacity of national and local institutions.*		environmental specialists be engaged to provide advice on the Project review.
2. Public Consultation and Disclosure			
2.1 Consult key stakeholders and NGOs as well as disclose draft mitigation plan in a timely manner, before appraisal formally begins, in an accessible place and in a form and language understandable to key stakeholders.	*The Bank expects the borrower to take into account the views, roles, and rights of groups, including local nongovernmental organizations and local communities, affected by Bank-financed projects involving natural habitats, and to involve such people in planning, designing, implementing, monitoring, and evaluating such projects.*	Law on Environmental Protection and Natural Resource Management: ▪ Article 1 – The purposes of this law are: ○ to encourage and enable the public to participate in environmental protection and natural resource management. ▪ Article 16 – The Ministry of Environment, following a request from the public, shall provide information on its activities, and shall engage public participation in environmental protection and natural resource management. Sub-decree #72 ANRK.BK on Environmental Impact Assessment Process (1999): ▪ Article 1 – Foster public participation in the environmental impact assessment process in recognition that their concerns should be considered in the project decision-making process.	OP 4.01 Policy Procedures will be implemented to provide guidance on public consultation and disclosure such that project affected groups and local NGOs are informed.

Table 4 Gap analysis between the RGC legal/regulatory framework and the World Bank OP4.11.

Subjects	OP 4.11	RGC	Gap/Project Measures
1.Preservation of Physical Cultural Resources			
1.2 As part of the EA, as appropriate, conduct field based surveys, using qualified specialists to consult concerned government authorities, relevant non-governmental organizations, relevant experts and local people in documenting the presence and significance of PCR.	*To develop the TORs for the EA, the borrower, in consultation with the Bank, relevant experts, and relevant project-affected groups, identifies the likely physical cultural resources issues, if any, to be taken into account by the EA.*	The Constitution of the Kingdom of Cambodia: ▪ Article 69 – The State shall preserve ancient monuments and artifacts and restore historic sites. Law on the Protection of Cultural Heritage: ▪ Article 7 – Listing in the inventory consists of keeping a record of public and private cultural property which, while not necessarily requiring immediate classification, is nonetheless of some importance from a scientific, historical, artistic or religious point of view.	OP 4.11 Policy Procedures will be implemented to ensure that qualified specialists are engaged in the site assessments to identify likely PCR issues.
1.2 For materials that may be discovered during project implementation, provide for the use of "chance find" procedures in the context of the PCR management plan or PCR component of the environmental management plan.	*The borrower develops a physical cultural resources management plan that includes measures for avoiding or mitigating any adverse impacts on physical cultural resources, provisions for managing chance find, any necessary measures for strengthening institutional capacity, and a monitoring system to track the progress of these activities.*	Law on the Protection of Cultural Heritage: ▪ Article 37 – When construction work or any other activity brings to light cultural property such as monuments, ruins, ancient objects, remains of inhabited sites, ancient burial sites, engravings or any property likely to be of interest in the study of prehistory, history, archaeology, ethnology, paleontology or other branches of science dealing with the past or of human sciences in general, the person finding the property and the owner of the site where it was discovered are obliged to stop the construction work and immediately make a declaration to the local police, who shall transmit it to the Governor of the province without delay. The Governor shall in turn inform the competent authority and shall take the measures necessary	OP 4.11 Policy Procedures will be implemented to guide the preparation of a PCR management plan should cultural resources be discovered during sub-project construction activities.

Subjects	OP 4.11	RGC	Gap/Project Measures
		to ensure the protection of the objects and the site.	
2. Public Consultation and Disclosure			
2.1 Disclose draft mitigation plans as part of the EA or equivalent process, in a timely manner, before appraisal formally begins, in an accessible place and in a form and language that are understandable to key stakeholders.	*As part of the public consultations required in the EA process, the consultative process for the physical cultural resources component normally includes relevant project-affected groups, concerned government authorities, and relevant nongovernmental organizations in documenting the presence and significance of physical cultural resources, assessing potential impacts, and exploring avoidance and mitigation options.* *The findings of the physical cultural resources component of the EA are disclosed as part of, and in the same manner as, the EA report.*	Law on Environmental Protection and Natural Resource Management: ▪ Article 1 – The purposes of this law are: ○ to encourage and enable the public to participate in environmental protection and natural resource management. ▪ Article 16 – The Ministry of Environment, following a request from the public, shall provide information on its activities, and shall engage public participation in environmental protection and natural resource management. Sub-decree #72 ANRK.BK on Environmental Impact Assessment Process (1999): ▪ Article 1 – Foster public participation in the environmental impact assessment process in recognition that their concerns should be considered in the project decision-making process.	OP 4.01 Policy Procedures will be implemented to provide guidance on public consultation and disclosure such that project affected groups and local NGOs are informed.

4.0 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

Potential environmental and social impacts arising from the sub-projects were identified by comparing sub-project initiatives and/or activities with the surrounding environmental and social context. Topographic and demographic information was sourced from secondary sources as well as consultations with relevant stakeholders.

The MRD has identified over seventy road sections representing more than 500 kilometers in six provinces that need to be rehabilitated. However, at time of writing, a definitive short list of proposed sub-projects had not been identified. Once road section(s) and locations have been identified and impacts are likely known then, site-specific safeguards tools (e.g., ESMP, ARAP, and IPDP), among other safeguards measures, can be prepared in accordance with the World Bank Operational Policies triggered (Table 1).

Although no major environmental and social impacts are expected, the most serious direct impacts associated with the proposed sub-projects would be related to: (i) sensitive environmental and social sites along the ROW such as natural habitats, protected areas, wetlands, cultural resources; (ii) potential minor resettlement of families in the ROW and the potential economic impact on small and medium business and/or informal economic activities; (iii) the interaction of construction workers with local communities, especially indigenous peoples (i.e., ethnic groups), potential damage to private property and community infrastructure, and nuisances to communities caused by construction activities; (iv) localized environmental impacts due to construction activities with significant slope instability and erosion, impact on drainage patterns; (v) exacerbation of road safety hot spots along the ROW; and (vi) management of non-motorized transport, two-wheel tractors and motorcycles. Road safety issues during construction as well as operation were highlighted by local people during public and community consultations.

Another aspect to improving the development impact of the sub-projects will be to ensure that gender mainstreaming considerations are included in the project design and feasibility studies. Developing an understanding of gender issues as they relate to the sub-projects is necessary condition to ensuring a gender-responsive project design.

4.1 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS, MITIGATIONS, RISKS AND ISSUES

The World Bank Aide Memoire (2 June 2016) indicates that "*cost effective road design will be used, accepting that all weather access will only be considered for the most critical stretches of roads. Less critical links will be sealed with concrete, accepting that they may be inundated for a few weeks each year, but will not be washed away. Opportunities will also be explored, to use the rural road network to strengthen flood control measures, by enhancing drainage canals, culverts and possibly raising the road levels to use as embankments. Careful hydrological analysis is being undertaken to ensure that the target roads are designed in a way that do not impede flooding and drainage in areas that depend on flooding for irrigation and fertilization of [croplands]*."

Environmental and social effects and impacts will differ markedly depending upon the type and scope of the particular sub-project roadworks and its location. For rehabilitation and repair of largely rural district access roads, it is likely that the potential negative (adverse) impacts will be minor, localized and temporary because proposed roadworks will be within the existing road right-of-way (ROW) and

at times within the existing road footprint. Table 2 provides a typology of potential site-specific environmental and social impacts.

Known safeguards risks are listed below:

- *Safeguards Screening and Risks:* environmental risks will be mitigated by identifying and ensuring Cambodia environmental and social legal frameworks, as well as the World Bank safeguards policies, are applied at the earliest stages of project preparation and planning and adhered to throughout all phases of project implementation.
- *Impacts of Civil Works Activities*: it is expected for a road rehabilitation and improvement project that the environmental and social impacts will be minor and can be avoided or mitigated through the ESMF safeguards plans and procedures. Some examples of effects from civil works include:
    - Noise and air quality (e.g., dust) impacts will occur as a result of construction activities. These impacts can be mitigated using well established mitigation measures when construction is undertaken in close proximity to residential areas and other socially sensitive areas. Some examples of mitigation measures include: (i) watering of active construction work areas to minimize dust emissions during construction. Regular and effective maintenance of equipment will mitigate emissions. Re-vegetation of disturbed areas immediately following construction also assists in reducing dust emissions; and (ii) during construction, the use of noise barriers in sensitive areas and controlling hours of work are effective noise mitigation measures.

      It is important to note that noise and air quality emissions are temporary and short-term concerns.
    - Runoff from construction areas during rain events can contain high concentrations of sediment and possibly other pollutants (e.g., hydrocarbons, heavy metals, etc.). Standard operating practices defined in the Environmental Code of Practice (ECoP) should be implemented to contain and treat runoff from the construction site. The use of silt control measures (e.g., silt fences, catch basins, temporary or permanent settling ponds, vegetated swales, etc.), when properly operated, can be very effective in protecting water quality in nearby streams during construction and during the operational phase of the improved roadworks.
    - Construction wastes, garbage and refuse generated during construction including waste oil and chemicals should be contained on site and ultimate disposed of off-site in an environmentally acceptable manner. Procedures for on-site management and off-site disposal need to be addressed in the ECoP. A source of fill (borrow) materials will need to be established in the area of the road rehabilitation. If available, an established borrow pit should be employed. If a new borrow pit is needed, safeguards procedures will need to be established in the ECoP.
- *Land Acquisition and Resettlement*: no major land acquisition or major adverse social impacts are expected in support of roadway improvement activities or for hydrometeorological

stations[4]. However, minor relocation of temporary buildings including roof structures and concrete floors extending from small shops and houses and removal of crops and trees found along the road alignment and right of way (ROW) are possible especially in areas where local people have utilized the ROW for personal gain. Potential minor land acquisition may be required to facilitate the construction of roadway ditches and drainage improvements. These minor land acquisition requirements will be identified during the detailed design phase of project implementation.

- *Ethnic Minority*: indigenous peoples may be directly or indirectly affected by the proposed sub-project roadworks and, therefore, an IPPF has been included as part of the current ESMF.

- *Physical Cultural Properties and Sensitive Areas*: for the most part, local hospitals, schools, temples and markets are to be found outside the road alignment and ROW so, the civil works would not cause impacts to these sensitive land uses. It is unlikely that archaeological and heritage resources will be impacted by the sub-projects. However, the detailed and site-specific ESMP would include chance find provisions for archaeological resources to mitigate potential adverse impacts of the proposed sub-projects.

Table 5 Potential environmental and social impacts of proposed sub-project.

No.	Sub-projects Associated Activities	Potential Environmental and Social Impact Issues	Expected Significance
1	Land acquisition and resettlement issues	Land acquisition or moving back of ROW	Low
		Loss of agriculture land, including roadside crops	Low
		Relocation of structures (temporary)	Moderate
2	Access roads	Construction phase dust and noise pollution	Moderate
		Water pollution (contaminated site runoff)	Moderate
		Construction waste disposal	Moderate
		Waste oil/fuel and chemical disposal	Moderate
		Public health and safety	Moderate
		Land take	Moderate
3	Establishment and operation of borrow pits	Air and noise pollution for nearby settlements	Moderate
		Vibration impacts on nearby settlements	Moderate
		Noise and dust impacts on wildlife and natural habitats.	Moderate
		Dust impact on crops	Moderate
		Loss of aesthetic /visual values	Moderate
		Loss of natural habitat	Moderate
		Loss of archaeological or historical values	Moderate

[4] It should be noted that the footprint for hydrometeorological stations (e.g., rain gauges, river/streamflow gauges, satellite, etc.) is expected to be minimal. If existing hydrometeorological stations are upgraded and modernized then it is likely that a World Bank safeguards policy instrument Category "C" can be applied. However, if new hydrometeorological stations are being considered then, depending upon location (i.e., public or private land), a Category "B" safeguards policy may apply.

No.	Sub-projects Associated Activities	Potential Environmental and Social Impact Issues	Expected Significance
		Disruption of groundwater supplies	Moderate
		Run-off of sediment laden water or polluted water into waterbodies	Moderate
		Hazard when quarry or pit is abandoned due to deep water or disease (mosquitoes, etc.)	Moderate
4	Workforce	Unrest and dissatisfaction among local communities(distribution of labour, opportunities and other benefits)	Moderate
		Unrest and dissatisfaction among local communities resulting from cultural differences with labour crew	Moderate
5	Equipment	Traffic impacts	Moderate
		Introduction of plant and animal pests	Moderate
6	Worker Camps	Water pollution from sewage and rubbish disposal	Moderate
		Disease risk to workers	Moderate
		Impact on health and social well-being of local communities (introduction of diseases and disruption of existing social relationships)	Moderate
		Impact on services and regional economy through worker camp development into a permanent settlement	Low
		Impact on local resources, including wildlife through demand for food, fuel and building materials	Low
		Impact on local wildlife through recreational hunting and fishing by workforce	Low
7	Workshops/Fuel Depots/Warehouses/ Asphalt Plant and Preparation	Oil pollution from improper disposal of oil and grease	Moderate
		Oil pollution from leaks in fuel and lubricants tanks, or during filling of these.	Moderate
		Oil spills from leaks in machinery	Moderate
		Noise pollution in nearby settlements	Moderate
		Air pollution (including dust) in nearby settlements.	Moderate
		Ground water pollution from bitumen or solvents	Moderate
		Cutting of trees for use as fuel wood for heating bitumen	Moderate
8	Construction waste	From removal of small trees/branches, etc.	Moderate
		Used gravels, stones, mixed concreted, etc.	Moderate
		Unused soils/hips	Moderate
9	Specific social issues	Livelihood loss	Moderate
		Community disruption	Moderate
		Cultural heritage site destruction	Moderate
		Increased marginalization of landless people	Moderate

No.	Sub-projects Associated Activities	Potential Environmental and Social Impact Issues	Expected Significance
		Loss of access to biodiversity resources (for food, economic activities or medicine)	Moderate
		Increased spreading of waterborne diseases	Major
		Increased HIV/AIDS infection rate due to increased itinerant working population	Major
10	Specific gender issues	Increased work burdens of women and children	Moderate

4.2 MITIGATION MEASURES OF ENVIRONMENTAL IMPACTS

As noted in Section 4.1, civil engineering and roadworks repair and rehabilitation could temporarily affect the environment in several ways. For instance, poor road design and planning, delayed mobilization of labor for construction, lack of construction camp maintenance, storage and handling of construction wastes and hazardous materials, location of borrow pits and quarry sites, associated earthworks, and drainage design may all, or in combination with one and another, contribute to temporary adverse environmental impacts. Poorly executed maintenance activities may create localized soil erosion problems affecting streams or other water bodies; lack of clear practical operational plans for environmental management could contribute to inappropriate solid waste material disposal and lead to lack of controls for noise, emissions and dust which could be a nuisance for different populations and communities. Good roads may increase the likelihood and accessibility to remote areas which may hasten uncontrolled resource extraction and land conversion along the road alignment and ROW. Such concerns are heightened in areas where roads pass through protected areas or other sites of a sensitive ecological nature such as wetlands, streams or forests.

Even a “do nothing” approach may have its own adverse environmental implications. For instance, a “do nothing” (i.e., no maintenance nor rehabilitation) approach could see further deterioration in the existing carriageway thereby, lead to unstable road bed conditions and localized erosion and drainage problems. In areas of high precipitation and geological instability, risks could be substantial. Additionally, the obvious poor quality and deteriorating carriageway could contribute to more accidents and potentially injury or loss of life.

A careful and considered engineering approach must be integrated into the road networks’ planning process, particularly during sub-project roadworks’ design and feasibility study. Thought must be given to how and where the earthwork and gravel materials for road rehabilitation will be sourced since the borrow pit practices used for construction material extraction (either from the river or land) may result in negative environmental impacts. One approach for use of borrow pits post-roadworks rehabilitation is to convert borrow pits into water retention ponds to store water during dry periods for livestock, fish and aquatic vegetation, homestead gardens and/or household use. If borrow pits are utilized for water retention ponds, some safeguards protection should be considered, including installation of a borrow pit boundary fence and water quality treatment depending upon its eventual use.

Social and environmental measures to mitigate the impacts of the proposed sub-project initiatives and/or activities related to rural access roads rehabilitation include: (i) scoping land and environmental issues; (ii) screening of potential positive and negative (adverse) impacts; (iii) clear integration of measures into project design and feasibility study; (iv) precise and detailed impacts’ report;

(v) formulation of social and environmental management and monitoring plan; and (vi) capacity refresher workshop.

4.3 SOCIAL IMPACTS

Besides obvious issues associated with noise, emissions and dust related to construction activities, there are likely to be some adverse social impacts and risks associated with the proposed sub-projects' rural roads rehabilitation. These include (i) minor relocation of household assets in ROW, the potential economic impact on small and medium business and/or family businesses and activities; (iii) the interaction of construction workers with local communities, especially indigenous peoples (i.e., ethnic groups), potential damage to private property and community infrastructure, and nuisances and disturbed access to households and communities caused by construction activities; (iv) exacerbation of road safety hot spots along the ROW; and (vi) management of non-motorized transport, two-wheel tractors and motorcycles. Road safety issues during construction as well as operation were highlighted by local people during public and community consultations.

4.3.1 Core Labor Standards

Where different populations are inducted into the workforce by civil works contractors, subcontractors and other providers of goods and services, consideration must be given to compliance with local and national labor laws and relevant core labor standards. With respect to labor and working conditions of women, there must be compliance with core labor standards which includes prohibition of any form of discrimination against women during hiring and providing equal work for equal pay for women and men. Other workforce considerations as a result of the proposed sub-projects development which may have impact on human resources policies (i.e., working relationship, working conditions and terms of employment, workers' organizations, non-discrimination and equal opportunity, retrenchment and grievance mechanism), protecting the workforce (i.e., child labor and forced labor), occupational health and safety, workers engaged by third parties, and supply chain are applicable in varying degrees due to differences in local context.

4.3.2 Land Acquisition and Resettlement

Experience from other civil engineering and roadworks repair and rehabilitation sub-projects in Cambodia suggests that no major relocation or resettlement would be required as the infrastructure works would be implemented in the existing road alignment and ROW. However, there are likely to be minor infrastructure impacts or the use of some areas as borrow pits, side ditches and drainage areas, and disposal sites resulting in unexpected low-level impacts to parcels of land or buildings.

As proposed road maintenance sections will be carried out on the existing road alignments and ROW, major dislocation is not expected. No physical resettlement is anticipated, nor would different populations (i.e., ethnic minorities and vulnerable groups – women and female/male youth and children, men, the elderly and disabled, etc.) be significantly impacted. Road maintenance activities may require the relocation of temporary structures, temporary occupation of plots or temporary and/or seasonal damage to crops and trees along the alignment and ROW to be disturbed briefly.

Although no involuntary resettlement is expected during sub-project implementation, it is possible that local communities and households elect to make a voluntary contribution of small land area affected without compensation. This should only be acceptable for marginal impacts and only when benefits to project affected people (PAP) and PAH can be assured. Such voluntary land donation is allowed if the land affected does not exceed 10% of the total PAS or PAP's land. PAP and PAH must be able to

decline a request to donate land for the purpose of infrastructure and receive compensation instead. The process of consultation with potential land or asset contributors should be conducted in an open and transparent manner by the Resettlement Working Group at Commune Level with decisions regarding voluntary contributions based on free, prior and informed consultation with PAP and PAH. Local authorities must document the consultation process and agreement as part of the roadworks package. Procedures for voluntary land donation are provided in the accompanying RPF.

Early insights into the potential positive and adverse impacts are of benefit to decision makers. PAP and PAH perceptions about proposed sub-projects on people's livelihoods for those who live within close proximity of the roadworks is useful. Particularly, for PAP and PAH whose livelihoods are linked to the use of land as well as other livelihoods that may be affected by the proposed sub-project initiatives and/or activities.

4.3.3 Indigenous People

Indigenous People (IP) account for most ancient inhabitants in the highland areas. Their religion in Cambodia and whole way of existence for centuries has been founded on their relationship with natural resources and the environment.

IP traditions and practices include:

- Customary lands and forests form the basis of upland minorities' livelihoods, including their spiritual lives;
- Belief systems have traditionally been animist in nature – that is the respect for spirits dwelling in mountains, lakes, trees and other natural objects;
- Traditional upland society is based on a powerful relationship with the land. Each village has its own customary lands and forests, with certain areas, whereas:
    - Some areas used for collecting and hunting;
    - Some areas used for cultivation; and
    - Some areas venerated as the dwelling places of spirits.
- The customary method of cultivation is rotational swidden agriculture. In this system, a small plot (chamkar) is cultivated for a few years before being left to fallow so that the forest can regrow, while the family moves on to another plot within the customary village lands;
- Once the original plot has regained its fertility, the farmer can return to it and the cycle repeats. Using this method, the upland forests have remained largely in balance for centuries. Despite the rather negative view sometimes held about swidden agriculture, the consensus in the literature is that it is actually a highly evolved, very efficient style of farming, which in areas of low population density is sustainable; and
- After cultivating the land, the old-growth forest ecosystem is the next most important resource in the highlanders' subsistence system, providing a wide range of forest products and foodstuffs.

The Khmer majority generally considers a set of indigenous people as “Khmer Loeu” who are distinctive in their cultural and economic practices. These groups generally exhibit most or all of the characteristics of potential vulnerability:

- close attachment to ancestral territories and resources;
- reliance on subsistence modes of production;
- self-identification or identification by others as distinctive groups;
- use of a language different than prominent or official languages within the country; and
- reliance on customary cultural and socio-economic institutions.

There is potential that IP may not receive equitable benefits from the MRD proposed sub-project initiatives and/or activities. They may be excluded from local decision-making processes that discuss strategies and approaches for the proposed civil engineering sub-projects, and roadwork repair and rehabilitation. In addition, companies working in indigenous communities may not be aware of or respectful of local culture and traditions.

The World Bank will undertake a screening early (see Appendix A3 Site-Specific Environmental and Social Screening Form C) in the sub-project preparation phase, to determine whether IP are present in, or have collective attachment to, the project area. If, based on the screening, the World Bank concludes that IP are present in, or have collective attachment to, the sub-project area, OP/BP 4.10 is triggered and the procedures described in the IPPF will be followed. This includes the requirement that the borrower undertakes a social assessment to evaluate the sub-project’s potential positive or adverse effects on the IP, and to examine alternatives where adverse effects may be significant and therefore ineligible for project funding. The breadth, depth, and type of analysis in the social assessment are proportional to the nature and scale of the proposed sub-project’s potential effects on the IP, whether such effects are positive or adverse.

The World Bank’s policy on IP requires a process of free, prior and informed consultation leading to broad community support from indigenous peoples benefiting from, or affected by, World Bank-financed sub-projects. The principle of free, prior and informed consultation recognizes IP’s inherent and prior rights to their lands, territories and resources and respects their legitimate authority and requires processes that allow and support meaningful choices by IP about their development path. The borrower needs to use consultative methods appropriate to the social and cultural values of affected IPs’ communities and their local conditions and, in designing these methods, gives special attention to the concerns of indigenous women, youth, and children and their access to development opportunities and benefits.

As discussed in the IPPF, the screening process can also be used to identify other vulnerable groups and individuals that could be affected by the sub-projects including by potential exclusion from involvement in sub-project activities. Such vulnerable groups could include religious minorities, refugees and displaced communities. Vulnerable individuals could include landless, widow headed households, disabled person headed households who earn the main family income, or elderly headed households without other means of support, and the poor (i.e. those falling under the national poverty line). The vulnerability of each household will depend on their impacts and socio-economic profile that will be assessed during the socio-economic survey and the detail measurement survey.

Special attention will be paid to IP's to ensure that Cambodian and World Bank legal protections are applied during implementation of World Bank-funded sub-projects and projects, and project activities will not negatively impact the livelihood and traditions of IPs.

4.3.4 Minor Temporary Impacts

There may be minor temporary impacts associated with the proposed sub-projects civil engineering and roadworks' activities including dust, noise and increased vehicle traffic, and lighting during nighttime hours.

For export of waste, there could be positive economic benefits and/or adverse impacts on small business and individuals working in the waste sector. Some action may be required to avoid adverse impacts, or to restore livelihoods under the applicable resettlement instrument. There are health, safety and wellbeing benefits to reducing waste disposal (i.e., reduced exposure to waste and leachate, reduced demand on land for waste disposal, reduced pests and disease vectors). In addition, there may be social impacts and economic benefit with the reuse, recycling and disposal of wastes such as noise, odour, leachate and visual impacts.

4.4 GENDER CONSIDERATIONS

The sub-project preparation provides a critical entry point for mainstreaming gender and related aspects. Once proposed sub-project locations are known, it will be important to have good baseline information on gender and social relations to be able to identify gender issues and to assess the local enabling environment. A gender-responsive social assessment will provide essential information for identifying potential impacts on different populations (i.e., ethnic minorities and vulnerable groups – women and female/male youth and children, men, the elderly and disabled, etc.) in relation to their health and safety and well-being concerns. The following sub-sections provide insight into the scope and details that should be considered for establishing baseline information and the subsequent gender analysis.

4.4.1 National Laws and Legal Framework

Gender relations in Cambodia are complex. As of 2011, Khmer women can own assets, manage financial transactions, and contribute to household decision making. Both men and women can inherit property, and the gender division of labor can be complementary and flexible, with men and women performing a range of productive and household tasks. In practice, however, traditional norms and low levels of education and literacy still limit girls' and women's choices and options. In general, attitudes toward gender roles still emphasize the woman as household manager and the man as provider. Women are also severely underrepresented in decision-making processes outside the household (Asian Development Bank [ADB] 2012).

Despite these major challenges, there has been some progress in gender equality in Cambodia, and the RGC passed a number of important laws and policies. Equality between women and men is enshrined in the Cambodian constitution of 1993. In 1992, the government ratified the Convention on the Elimination of All Forms of Discrimination against Women with no reservations. A strong commitment to gender equality was reflected in the 2002 National Poverty Reduction Strategy, the 2003 Cambodia Millennium Development Goals (CMDG), the 2004 Rectangular Strategy, and the 2008 Rectangular Strategy, Phase II.

The government passed the Law on the Prevention of Domestic Violence and Protection of the Victims in 2005, and the Law on the Suppression of Human Trafficking and Sexual Exploitation in 2008. In May 2008, the RGC adopted The Organic Law, which stipulates the principles of gender equality and women's rights and empowerment, and promotion of women's roles, participation and representation in politics and decision-making at the Province and Municipal, District and Khan, and Commune/Sangkat levels. The 10-year, 2010-2019, National Program for Sub-National Democratic Development (NP-SNDD) clearly outlines the gender issues (ibid).

The Ministry of Women's Affairs (MOWA) plays a critical role in advocating for gender equality and in building capacity of sector ministries and institutions to integrate gender into their respective sectors. It acts as a catalyst and advocates to mainstream gender priorities in planning and operational processes and encourages public institutions, development partners, civil society and the private sector to integrate gender equality into their policies and programs. The MOWA-Neary Rattanak III Five Year Strategic Plan 2009-2013 focuses on five strategic areas: (i) Economic Empowerment of Women; (ii) Education of Women and Girls, Attitudes and Behavior Change; (iii) Legal Protection of Women and Girls; (iv) Health and Nutrition of Women and Girls, and HIV/AIDS; and (v) Women in Public Decision-making and Politics, along with a gender mainstreaming program for national policies, reform, programs and sectors and a set of cross-cutting interventions.

The Cambodia National Council for Women (CNCW) is the national inter-ministerial council to support the royal government by facilitating, following-up, and evaluating the implementation of national policies, laws, and other regulations in relation to the promotion of women's status, roles and welfare. The Technical Working Group on Gender (TWG-G) works within the framework of the Government-Donor Consultative Committee (GDCC) on cross-cutting issues including gender equality, partnership and harmonization, planning and poverty reduction, and de-centralization. At the sub-national level, Women and Children Consultative Committees (WCCCs) have been established by a decree of the Ministry of Interior in December 2009, and were designed as a sub-national mechanism to promote gender equality and empowering women and children under the jurisdiction of the Provincial and District Councils. The Phnom Penh provincial, municipal, district, and khan councils are each called upon to establish a WCCC, which should provide advice and recommendations to the councils, boards of governors, governors, and other committees on issues related to gender equality, women, youth, and children (Government of Cambodia 2009).

4.4.2 Entry Points for Gender Mainstreaming in the Project Cycle

Ensuring that the project impact assessment includes a gender-responsive social analysis is an important element of each stage or level of World Bank operations: upstream/macro-social analysis (the national, regional or sector level), sociological appraisal conducted as an integral part of project selection and appraisal, and social assessment for a particular project conducted at different times during the project cycle (World Bank 2005).

Infrastructure and services related to transportation are an important means to connect people to other communities, open up new markets, and facilitate access to other services such as schools and healthcare. Since new or improved roads can increase peoples' economic and social welfare, they should be designed to best meet the needs of men and women in ways that are equitable, affordable, safe and responsive to all groups. Transport infrastructure and services are often incorrectly considered to be "gender neutral", and will benefit men and women in the same way. In fact, mobility is experienced differently by women and men, as they use different modes of transport for different

purposes and in different ways depending on their socially determined reproductive, productive, and community-related gender roles. Women's and men's relative economic and social status and livelihoods also influence their different transport needs and utilization of transport services. Based on the extent to which gender differences are taken into account in project design and operation, transport can play a significant role in ameliorating or exacerbating the living conditions of women, especially for the poor.

It is important to understand these differences in order to inform the design of gender-inclusive transport projects, and to ensure gender considerations are mainstreamed into each phase of the project cycle. Gender dimensions of transport become more evident when transport investments are viewed in terms of enabling the mobility of people for different purposes and needs, and by different modes - which are experienced differently by women and men, girls and boys - rather than in terms of mere investment in hard infrastructure that equally benefit all social groups (ADB 2013).

The starting point for effective gender mainstreaming in infrastructure projects is to undertake the required gender analysis. A gender analysis typically involves examining the differential impact of the project intervention on women and men, and may include the collection of sex-disaggregated or gender-sensitive data. A gender analysis examines the different roles, rights, and opportunities of men and women and relations between them (i.e., the economic and social relationships between females and males which are constructed and reinforced by social institutions). It also identifies disparities, examines why such disparities exist, determines whether they are a potential impediment to achieving results, and looks at how they can be addressed (USAID 2011).

The transport sector is especially vulnerable to issues such as HIV/AIDS, sexual harassment, abuse and violence, child labor, and human trafficking. Transport hubs and construction sites are often considered hot spots for HIV transmission due to the influx and interaction that take place among the mobile workers. The improved transport network that connects people to markets may also be used by human trafficking networks for their illegal operation. The gender analysis should identify and address these issues, and include measures, recommendations, and action plans to address these issues, along with measurable indicators to monitor the intended social benefits and development outcomes and risks of the project.

Conducting a gender analysis when designing a new project or activity will help to:

- Analyze gender roles in project design;
- Identify root causes of existing gender inequalities in that context so that they can be addressed in the project design;
- Identify different needs and priorities of men and women in both the near and long term;
- Collect sex-disaggregated baseline data;
- Avoid perpetuating traditional power imbalances; and
- Enhance the likelihood of strong and sustainable project results.

It is important that sex-disaggregated baseline data are collected as part of the social assessment, and then the findings used to inform development of a project-specific gender action plan (GAP) as well as provide critical inputs to the Operational Manual (OM) of the sub-project. The social scientist that implements the social assessment must participate in the preparation of the operational manual

to ensure that the findings of the social analysis are incorporated in the OM. Gender and transport related issues listed in Table 6 should be included in the detailed social assessment.

Table 6 Gender and transport issues to be considered as part of the social assessment (ADB 2013).

Category	Gender Issue
Country Social and Institutional Context *If responses are mostly positive, the proposed project can design gender-responsive actions to support national mandates, assist reducing disparity, and promote equitable benefits.*	▪ Does the country have policies or laws related to gender equality or equity (labor laws, property and business ownership, opening a bank account, obtaining passport, holding public office)? ▪ Does the transport sector have strategies or policies that address gender issues? ▪ What are the key social, cultural or legal constraints of female mobility compared with male mobility and access to transport planning, services, and jobs? Do these vary by other social characteristics (ethnic, minority, rural/urban, age)?
Transport Needs *If there are gender-based differences in needs, better understanding and targeting of transport can improve project benefits*	▪ What are the different needs and priorities of women and men transport users?
	▪ What are the gender transport patterns of different groups, i.e., what types of journeys do different groups of women and men make? For what purpose and how? Does this vary by social characteristics (ethnic, minority, rural/urban, age)?
	▪ What type of goods do women and men move?
	▪ What gender-related barriers exist in accessing transport infrastructure or services?
	▪ What are the relative costs of travel (in time, effort, cash, and lost opportunities) for women and men?
Economic Opportunities *Actions can be introduced in the proposed project can provide equal economic opportunities for both women and men*	▪ Is the project expected to facilitate employment creation or income generation?
	▪ Will the project use local labor for road rehabilitation and maintenance?
	▪ Are there barriers to women's labor force participation?
	▪ Does the project include transport sector restructuring and reduction in the labor force?
Access to Health and Education *If responses are positive, the proposed project can improve health and education*	▪ Are there high rates of maternal mortality? Can transport help address the access aspect of this problem?
	▪ Are there low rates of school enrollment and completion, particularly for girls? Can transport help to address the access aspect of this problem?
Personal Security and Road Safely *If responses are positive, the proposed project can take actions for reducing risks*	▪ Is gender-based violence a widespread problem during travel (by foot, public transport etc.)?
	▪ Is there a high rate of pedestrian and non-motorized vehicle accidents?
Gender-Related Risks *(If responses are positive, the proposed project can take actions for reducing risks)*	▪ Is there a high rate of HIV/AIDS infection in the general population? Among the transport sector workers?
	▪ Is there a significant rate of human trafficking using transport routes?

Table 6 (Cont'd.)

Category	Gender Issue
Gender Aspects of Social Safeguards *If there are gender-based differences, the proposed project can take actions for reducing risks*	▪ What are the gender differences in effects of involuntary resettlement in transport projects? ▪ What are the gender differences in project impacts on indigenous people?

Potential Gender Constraints and Opportunities in Transport Projects

Projects designed and implemented to improve transport infrastructure and services often benefit women and men differently, and not always positively. Insufficient consideration of gendered needs in transport can inadvertently exclude or further constrain access for some groups if projects are not designed to be gender and socially inclusive. New or improved transport infrastructure and services do have the potential to benefit women to access employment, markets, education and health services, child care, training, and information, if existing gender inequalities are addressed and their capacity to utilize such opportunities are supported. Reducing women's transport time burden, particularly in rural areas, can increase their time for productive and income-generating activities, as well as allow more time for rest, leisure, and social interaction. Effective consideration of gender dimensions in project design can maximize benefits and opportunities and reduce potential risks to women (ADB 2013).

Gender Action Plan

A project-specific GAP is a tool used to ensure that "gender mainstreaming" is tangible and explicitly visible in project design and implementation. The project GAP is not a separate component but instead should mirror the project outputs and be included as an integral part of the project design. The GAP should include clear targets, quotas, gender design features and quantifiable performance indicators to ensure women's participation and benefits. Once proposed sub-project locations are identified then, key aspects of the GAP are incorporated into the OM and other project plans and regulations to promote buy-in from executing agencies and other project partners (NERUDP 2012).

The GAP should include details on:

- Preparatory work undertaken to address gender issues in the project;
- Quotas, targets, design features included in the project to address gender inclusion and facilitate women's involvement and/or ensure tangible benefits to women;
- Mechanisms to ensure implementation of the gender design elements; and
- Gender monitoring and evaluation indicators.

Key gender provisions of the GAP should be included in the OM and the monitoring and evaluation (M&E) framework, to describe the gender deliverables and results that are expected from the project. Gender performance targets and indicators should be incorporated in different phases of the project cycle as appropriate (Table 7). Sex-disaggregated baseline information is essential to demonstrate changes over the life of a project and provide a reference point for assessing gender equality results.

Capacity building on the importance of gender mainstreaming may also need to be included in the GAP.

Gender-responsive Indicators

Gender-responsive monitoring and evaluation is essential to ensure that gender and transport and related social issues addressed in the project design are implemented, progress monitored, and the impacts assessed. Indicators are linked to development objectives; and measure the outcome of the projects. Gender indicators track progress toward reducing gender disparities in transport access, mobility, employment, and business opportunities (World Bank 2010).

Table 7 Key gender issues, constraints and opportunities in transport projects.

Key Gender Issues	Constraints	Opportunities and Recommendations
Economic opportunities in the road sector	▪ Women compared with men generally lack capacity to fully capture economic opportunities from improved transport, due to their limited skills, access to credit, property rights, and time flexibility. ▪ Road construction jobs can be considered “not appropriate” for women. ▪ Securing construction employment for women in local communities is often difficult in civil works due to the difficulty in setting gender targets in bidding documents, skills required, travel distances to sites, lack of child-care facilities, and harassment. ▪ The increased use of equipment-based methods and related skills requirements further affect women’s ability to compete for labor.	▪ Include gender employment targets with equal pay and gender-responsive physical design in standard contract bidding documents). ▪ Train contractors on gender-sensitive employment practices and hiring of women. ▪ Improve employment policies and practices of sector agencies, including for the recruitment, promotion, training, and working conditions of women. ▪ Improve information outreach to women on transport investments and transport sector employment opportunities. ▪ Encouraging women into higher-level transport sector jobs, including through the use of sector-wide vocational training targets. ▪ Women owned road maintenance enterprises, labor contracting societies can be established. ▪ Training for women to benefit from transport-related ancillary work (e.g., vehicle repairs). ▪ Based on community consultations in sub-project areas, build a common facility targeted at women such as a small market along rehabilitated roads. ▪ Assemble information on market opportunities along key roads for women as well as men.
Road traffic safety issues	▪ Women and children are considered more vulnerable road users, as they are more likely to be on foot or non-motorized transport (NMT), and sharing the road space with larger vehicles. ▪ Pedestrians, bicyclists and motorized two-wheelers constitute 60-80% of all traffic fatalities. ▪ Road crashes of family members put women under disproportionate pressure for care of the injured.	▪ Physical design of roads for enhanced safety should take into consideration the wider needs of vulnerable road users, by encouraging the use of local area traffic management (e.g., use of traffic-calming devices such as road humps, creating lower-speed environments, and roundabouts) and safer road crossings (e.g., marked pedestrian crossing, controlled pedestrian crossing, and pedestrian overpasses or underpasses). ▪ Road safety awareness programs should be targeted to change driver behaviors and increase driver responsibility for crashes, rather than blaming victims. ▪ Road safety awareness needs should be integrated into school curricula. ▪ Separate paths should be developed for pedestrians to remove the need for them to walk on the edge of roads with vehicles passing at high speeds. Improving the condition and safety of rural paths and trails can have significant positive impact on the daily transport of rural women. ▪ Provide signage and other measures such as speed bumps and roundabouts to slow traffic passing through villages and settlements, as well as adequately controlled pedestrian crossings where villages are divided on two sides of the road.

Table 7 (Cont'd.)

Key Gender Issues	Constraints	Opportunities and Recommendations
HIV/AIDS, sexually transmitted infections (STIs), and other communicable diseases	▪ Large transport infrastructure construction draws an influx of workers from other localities that are predominantly male, migrant, have a regular supply of money from their work, and are more likely and able to access commercial sex. ▪ Improved connectivity and mobility can trigger higher levels of HIV transmission and/or STIs for young women from surrounding areas in search of income opportunities as sex workers. ▪ Women and girls from vulnerable groups (the poor, ethnic minorities) living in remote cross-border locations are at a significantly higher risk of HIV infection. ▪ Women can also be at risk of infection by their husbands who may work as mobile drivers or construction workers and return home infected, and may take on the additional care burden for their sick husbands.	▪ Provide tailored training and awareness for contractors. ▪ Integrate HIV/AIDS and STI prevention in contractor occupational health and safety programs. ▪ Distribute free condoms to ensure sufficient availability on-site. ▪ Conduct social marketing of condom use to high-risk groups. ▪ Implement public awareness and education campaigns, targeted at and tailored for construction workplaces, entertainment establishments, transport corridors, and at-risk local communities (e.g., women cooks in construction sites and ethnic minority women). ▪ Provide counseling and treatment services for transport workers, sex workers, wives, and other female partners of transport workers. ▪ Collaborate with local AIDS authorities (where they exist) to maximize coordination. ▪ Build partnerships with local health providers for community awareness and referrals. ▪ Build capacity of the executing and implementing agencies and transport sector institutions on mainstreaming HIV prevention in transport projects, including development of guidelines.
Human trafficking	▪ Improved connectivity and mobility can increase the risks of female trafficking and unsafe migration practices. ▪ The risk is greatest where poverty is widespread, where women have low social status, and there is a general lack of awareness about the risks of human trafficking and unsafe migration.	▪ Carry out social, gender, and poverty analysis to assess the likely vulnerability of local communities, particularly women and children, to human trafficking risk. ▪ Build capacity of border control officials and transport project executing and implementing agencies to identify cases, including on adequate preparedness and equipment for inspections. ▪ Conduct public awareness campaigns on human trafficking and unsafe migration using a range of appropriate media. ▪ Build partnerships and coordination with human trafficking programs of NGOs and local authorities, focusing on cross-border areas. ▪ Provide helpline information targeted at young girls and working-age men, both in source and transit/destinations. ▪ Provide alternative employment opportunities for high-risk groups.

Table 7 (Cont'd.)

Key Gender Issues	Constraints	Opportunities and Recommendations
Public transportation	▪ Women are less likely to be able to afford the cost of transport services. ▪ Women may not feel safe taking public transport due to incidence of gender-based violence. ▪ Transport service providers have little incentive to respond to women's needs due to their limited capacity to pay.	▪ Promote the role of the public sector in regulating mandatory gender-responsive physical designs (e.g., reserved seats, height-of-steps requirements, and panic buttons). ▪ Implement public awareness campaigns to address sexual harassment in transport services and hubs, and training of police on women's security needs when using transport.
Impacts on existing businesses	▪ New transport infrastructure can alter the logistical advantages of existing businesses. ▪ Opportunity for elite capture of land value improvements next to transport corridors at the expense of current businesses.	▪ Ensure that transport improvements are inclusive for all, which may require some measures for existing businesses, such as improved signage, parking, and traffic management in their vicinity. ▪ For any businesses that are adversely impacted, they can be given priority and assistance to relocate next to the new roadway or planned market areas. This consideration is particularly helpful for small roadside businesses that are often owned and run by local women entrepreneurs.

The following list provides examples of gender-responsive indicators for a number of common transport project outcomes.

Improved access:

- Increased number of women and men within two kilometers of an all-weather road;
- Travel time for men and women to essential services;
- Reduced time required for girls and boys to travel to school; and
- Changes in women's travel patterns and transport mode use as result of the project.

Increased income, employment and entrepreneurship:

- Number of women and men employed in transport construction, transport services, and government transport agencies;
- Number of women and men operating transport-related services;
- Increased women's and men's income from produce marketed using transport services;
- Increased women's and men's income from transport employment and enterprises;
- Percent increase of new commercial enterprises run by women; and
- Reduced time and costs in taking goods to the market; to access agricultural extension services.

Mitigating social risks:

- Number of HIV/AIDS, sexually transmitted infections (STIs), and communicable diseases, human trafficking and safety prevention, outreach and training activities, or public awareness campaigns conducted for high-risk men and women (e.g., sex workers, transport workers, migrant workers, contractors, laborers, and vulnerable youth);
- Number and percentage of women and men participating in HIV, STI, and human trafficking prevention and outreach activities;
- Number of male and female government local officials and police who have participated in information and awareness about HIV, STI, and human trafficking risks; and
- Incidence of reported HIV, STI, and human trafficking cases in project area.

Gender Capacity Development

To enhance gender mainstreaming of transport sector projects, it is important to build the gender capacity of the executing and implementing agencies to recognize the importance of conducting a gender analysis, and to use the findings to design gender-responsive approaches to transport sector development. Capacity-building support is also needed to enable effective implementation of the GAP. The executing agency may need to contract gender specialist consultants to provide technical support for GAP implementation, monitoring, and reporting (ADB 2013).

Recommended Gender Design Features for Capacity Development Support:

- Appointment of a gender specialist within the project management office (PMO) or TA consultant team with clear terms of reference;
- Sex-disaggregated database for monitoring and evaluation;
- Building of understanding and ownership of responsibility for gender issues and gender analysis by PMO and TA consultants, including in all project monitoring and reporting, particularly where a project GAP is in place;
- Provision of gender awareness and GAP implementation training for all project staff;
- Requirement for project baseline and reporting data to be sex-disaggregated;
- Targets for women established for newly hired executing or implementing agency staff;
- Targets for greater representation of women at professional, technical, and decision-making levels in the executing or DIA;
- Development of gender awareness and GAP implementation training materials;
- Sex-disaggregated tracking of participation in all capacity development activities of the executing agency; and
- Target setting for female staff participation in training, as appropriate.

Additionally, these best practices were identified during the public consultations (13 to 17 June 2016) held in Tboung Khmum and Kratié provinces and should be written into subsequent sub-project roadworks rehabilitation tender documents and contracts once proposed sub-project locations have been identified. These include:

- Contractors will not employ child labor on civil works contracts;
- Road shoulders will be sealed surfaces enabling wheeled-carts better mobility;
- Capacity building of local contractors on gender and labor-based appropriate technology;
- Sex disaggregated database to track the use of local labor;
- Community contracts to women for sustainable road maintenance works;
- At least 50% women to be employed as roadside maintenance workers;
- All project roads with speed bumps in villages and road safety signage;
- A community-based road safety campaign with 50% women facilitators;
- Inclusion of HIV/AIDS and human trafficking prevention programs during and after construction; and
- Climate change adaptation will include community-based work programs involving women in planting and caring for road-side trees and other vegetation.

5.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

The World Bank-funded SEA DRM Project "*will finance key flood risk management investments that contribute to natural disaster risk and poverty reduction and strengthen the capacity for longer-term disaster risk management in Cambodia …*" (World Bank SEA DRM Project ESMF Terms of Reference [TOR]). Discussions with the World Bank and MRD DIA counterpart staff confirmed proposed sub-project initiatives and/or activities in six provinces (i.e., Kandal, Kampang Chan, Tboung Khmum, Kratié, Siem Reap, and Stung Treng) of Cambodia. All proposed sub-projects will undergo further review and consideration, particularly in relation to potential environmental and social impacts and mitigation measures. As such, the ESMF is guided by the WBG *Environmental Assessment* safeguard instruments (OP/BP 4.01) and, specifically, operational policies (OP/BP 4.10, 4.11 and 4.12). Additionally, there may be other regional and trans-boundary, and national safeguard policies and legislation relevant to the Cambodia DRM Project or the Greater Mekong Sub-region (GMS) which also need to be considered and documented.

The purpose of the ESMF is to manage potential adverse impacts by establishing a guidance document which will inform the RGC MRD DIA and related ministries/departments to administer mutually agreed sets of environmental and social safeguards procedures and measures. The ESMF will facilitate necessary environmental and social management (including risk management of environmental and social impacts) procedures and measures of proposed sub-project(s) which may be financed by the SEA DRM Project, and whose infrastructure design and location is unknown and may change during project implementation. The ESMF comprises the guidance document required for the ESMP or a limited scope ESIA and other planning instruments (i.e., IPDP or ARAP) to be applied at project appraisal and formulation when detailed feasibility studies and technical design details become available. The ESMF is a guidance and decision-support tool for the MRD DIA, stakeholders and different populations.

As an overarching guideline document, the ESMF should provide assurances that:

- Sub-projects and TA consider potential environmental and social issues, especially for different populations who would be directly impacted (positively or adversely) by the sub-project;
- Sub-projects and TA consider socio-cultural and gender sensitivities and environmental values prevailing in areas where the proposed sub-project(s) would be implemented;
- During project formulation and design, adverse environmental and social impacts may arise during construction and operational phases and appropriate mitigation/enhancement measures need to be designed with a monitoring plan developed to track implementation of site-specific safeguards instruments;
- Environmental and social management safeguard instruments such as ESMP or ECoP, IPDP, and ARAP are suitably prepared and followed; and
- ESMF provides assurance that safeguard instruments are compliant with the Bank safeguard policies and procedures as well as national legislation.

5.1 DESCRIPTION OF PROPOSED SUB-PROJECTS

The proposed sub-projects will rehabilitate approximately 500 kilometers (km) of rural roads in six provinces (Stung Treng, Kratié, Kampong Cham, Tboung Khmum, Kandal, and Takeo) to paved condition (DBST) or concrete pavement to make them resilient to climate change impacts. The rehabilitated roads will provide the six provinces with a safer, more cost-effective rural access road network with all-year access to markets and other social services. The proposed sub-projects will also support a sustainable road maintenance regime in the MRD, a community-based road safety program with climate change adaptation measures. The feasibility study of the proposed sub-projects will be completed through a TA team during project preparatory phase with MRD. Final sub-project rural access road selection will follow these criteria:

- Vulnerability of road to flooding;
- Cost of works;
- Poverty reduction impact and number of beneficiaries;
- Importance of road for trade and market access; and
- Importance of road for access to safe areas on higher ground, emergency evacuation and flood relief efforts.

Cost effective road design will be used, accepting that all weather access will only be considered for the most critical stretches of roads. MRD will complete the proposed sub-projects sustainably and productively with social and environmental safeguards monitoring protocols in place.

Guidelines for land acquisition will focus on procedures for voluntary and involuntary contribution of land for the sub-project and the determination of compensation, if applicable. The ESMF will include an initial scoping and screening of environmental and social impacts, and provisions for integrating required actions into the contractor's contract.

These guidelines will comply with the WBG global policies that are attached to the project agreement between the World Bank and the MRD. Safeguards that ensure the interests of minority peoples are incorporated in the planning process for the Investment Plan.

Monitoring of the implementation of the safeguard guidelines will be largely limited to the six provinces proposed in the sub-projects and supported by World Bank financing. The guidelines will clearly discuss the screening and approval of the project designs.

5.2 SCREENING AND APPROVAL

Environmental and social screening is designed to identify and document potential impacts arising from proposed sub-projects. The environmental and social screening informs decision-makers about the need to implement measures or actions [if any] which avoid, minimize, mitigate or compensate for adverse impacts. Sub-projects are categorized according to the screening procedure depending on the type, location, sensitivity and scale of the project and the nature and magnitude of its potential environmental and social impact. A sample of environmental and social safeguard screening form is in Annex A2.

As described in Section 3.2, any sub-project in Category A will be ineligible for funding provided that road improvement is confined within the existing right of way. Category A sub-projects would result in ESIAs which require time and additional consultations to prepare and are beyond this Project objective as an urgent disaster risk management response

Once the location and type of investment is identified then, a site-specific ESMP and ARAP/RAP, IPDP can be prepared; only rehabilitation and repair of existing roads classified as a Category B will be financed (see Section 3.2). The PDRD completes the initial screening with the PMO who are responsible for proposed sub-projects identification and screening (see Appendix A2) and ensuring that adequate environmental and social safeguards performance instruments are implemented. Once proposed sub-project locations are identified, the PMO will prepare proposed sub-project(s) descriptions, conduct environmental and social screening of proposed sub-project(s), and assess requirements for necessary environmental and social management measures and plans (i.e., ESMP/ECoP, IPDP, ARAP and)[5]. At the implementation phase, two national consultants will be contracted to support PRD and PMO staff who are responsible for completing the screening safeguards forms in Appendix A2.

5.3 SCOPING ENVIRONMENTAL AND SOCIAL ISSUES

The proposed sub-projects in the six provinces would include rehabilitation and repair of rural access roads and, possibly, dual-purpose embankments and water retention basins. However, at time of writing the dual-purpose embankments and water retention basin locations had not been specified.

The rural roadworks would entail support for proposed sub-projects' rehabilitation, repair and maintenance of numerous road sections/packages in six provinces (i.e., Kandal, Kampang Chan, Tboung Khmum, Kratié, Siem Reap and Steung Treng) of Cambodia. Consequently, for each province, the Provincial Department of Rural Development (PDRD) PMO will be responsible for analyzing the level and extent of environmental and social issues relevant to the proposed sub-project roadworks. The analysis will determine whether:

- The proposed sub-project has the potential to cause any social or environmental impact, whether directly or indirectly;
- Any WBG safeguards policies would be triggered by the nature of the proposed sub-project(s) initiatives and/or activities; and
- Could there be any activities under a proposed sub-project that could cause significant impacts, beyond what is acceptable under the WB Category "B" Environmental Assessment classification.

As mentioned, the screening process will identify the nature of potential impacts, both positive and negative (adverse), that the potential sub-project(s) could generate within its region of influence (ROI). This will inform the selection of safeguards instruments that would be required to assess the potential impacts in further detail. The choice of safeguards instrument or measure primarily depends on the degree of significance of anticipated environmental and social impacts as well as the associated environmental and social risks.

[5] The Bank TOR state that "an independent consultant is to be retained to assist in the preparation of safeguards measures and procedures (ESMP/ECoP, IPDP, ARAP, etc.) targeted at specific sub-projects during project implementation.

Scoping confirms the key environmental and social issues, risks and potential impacts identified during the screening process. The scoping stage can highlight potential issues at an early phase of sub-project development so as to allow planners to design changes which will mitigate potential environmental and social impacts as well as, possibly, project location to be modified.

5.4 APPLICATION OF SAFEGUARDS PLANS AND MEASURES

All sub-projects activities will require safeguards instruments such as limited scope ESIAs, ESMPs, IPDPs, and ARAPs within clearly delineated sub-project footprints. The details are described in the below sub-sections.

5.4.1 Environmental and Social Management Plan or ECoP

All Cambodia sub-project civil engineering and roadworks will require an ESMP. The ESMP would become part of the civil engineering and roadworks contract (see Appendix A4: Generic Environmental Management Plan [EMP]), establish the environmental and social standard and compliance mechanisms, and serve as the contractual basis for supervision and enforcement of good environmental and social practice during subsequent sub-project civil engineering and roadworks. For Cambodia, as the sub-project roadworks are being repaired and rehabilitated within an existing alignment and ROW, a checklist type of ESMP would provide the appropriate due diligence instrument as illustrated in Table 9.

Once sub-project road sections have been identified, the site-specific ESMP will be prepared to identify potential impacts during pre-construction, construction, and operations. The environmental analysis, design and preparation of an ESMP for each road sub-section must be conducted in close connection with the feasibility and engineering design of the sub-project and/or each individual road segment. As the proposed sub-projects will involve rural access road rehabilitation of existing roads, the analysis should concentrate on environmental and social issues associated with direct impacts along the road alignment and the management of road construction impacts.

Each road segment will be subject to a detailed environmental and social screening. The environmental and social screening will include, but not be limited to, the analysis of available information concerning the general population distribution, concentrations of indigenous peoples, concentrations of low-income communities, areas of significant ROW encroachment, sensitive and/or critical natural habitats, major rivers and waterways, recorded cultural heritage sites, and any other potentially sensitive areas, based on recent census, official data and information garnered from civil society organizations as well as detailed site visits. The environmental and social alignment sheets can be prepared once a detailed survey of the final road alignment has been completed. The Alignment Sheets will include: (i) identification of all physical, environmental and social issues along the road; (ii) identification of mitigation measures identified by kilometers along the alignment; (iii) the safeguards instrument in which the mitigation measures will be included (i.e., design, resettlement plan, construction specifications, bidding documents, community relations plans, etc.); (iv) agency responsible for implementation; (v) timing for implementation of the mitigation measure (before construction, during construction, during planning, etc.); and (vi) sources of funding for implementing the mitigation measure. The Alignment Sheet will include maps at appropriate scales and schematic summary tables with specific issues to be addressed (e.g., slope stability, natural hazards, erosion, drainage or stream crossings, hot spots, road safety and borrow pits). Finally, for each environmental and social concern identified and evaluated in the Alignment Sheet, mitigation measures must be

identified and safeguards procedures discussed in the ECoP discussed below and community relations plan.

Road construction works may disrupt communities in the vicinity of the ROW as there will be an influx of workers, increased traffic of heavy machinery, potential damages to private property, and conflicts with the local population. The ESMP should identify community participation mechanisms (i.e., a committee with representatives from different commune leaders) to address social issues raised during the construction period.

The objectives of the ESMP or ECoP are to: (i) establish specific environmental and social criteria for roadworks in Cambodia; (ii) provide technical assistance; (iii) ensure general understanding of environmental and social impacts and define environmental and social criteria to minimize such impacts; (iv) ensure that road engineers and technicians can find solutions for any problems arising during road construction or maintenance activities; and, (v) facilitate the preparation of environmental and social assessment for road development sub-projects. The below table is a sample of a generic EMP or ECoP for customizing to fit each sub-project investment during implementation

Table 8 A Sample of Generic Environmental Management Plan (EMP) or ECoP.

Activity	Potential Impacts	Mitigation Measures
Transport of Materials.	▪ Air and noise pollution for any nearby settlements and damage to existing roads. ▪ Dust generated from civil work and transport of construction materials.	▪ Control contractor's vehicle speeds, noise and weight of loads and control dust and flying debris by covering loads or wetting material if necessary. ▪ Use locally available construction material wherever possible to minimize transport distances. ▪ Contractor to regularly water the roads to prevent from dust, especially in community or urban area.
Materials stock piling on shoulders	▪ Possible pollution of water ways by solids. ▪ Possible impacts on road users safety because construction waste was disposed on the carriage way.	▪ Choose appropriate location for materials stockpiling well away from any waterways, irrigation or washing/drinking water supplies. ▪ Avoid encroachment on carriageway. ▪ Preserve trees during material stockpiling.
Borrow areas	▪ Quarries and borrow pits can have impacts on soils, water and the natural environment.	▪ Locate borrow areas away from any residential or other environmentally sensitive areas such as hospitals, intensive livestock production areas or wildlife breeding areas. ▪ Also avoid farmlands or forests as much as possible. Restrict work to daylight hours and limit the size and frequency of any blasting. ▪ Borrow areas will be restored and re-vegetated.

Table 8 (Cont'd.)

Activity	Potential Impacts	Mitigation Measures
Work site installation (if needed)	▪ Degradation of plant cover ▪ Soil and water pollution (trash dumping, oil spills)	▪ Choose location of work site installations in order to reduce impacts on the environment of these sites and the people living in the immediate vicinity. ▪ Fuel and oil, and bitumen storage areas will be located well away from any watercourses. ▪ These storage areas will be provided with interceptor traps so that accidental spills do not contaminate the environment. ▪ All waste oil will be stored and disposed of acceptable oil industry standards. ▪ Wherever possible, refueling will be carried out at a fuel storage area and not permitted within or adjacent to watercourses. ▪ On completion of the work, contractor shall restore the sites to their original state.
Road safety and traffic management	▪ Road accidents due to in adequate control of vehicle speeds and signs/signals	▪ Prepare/finalize an action plan for each sub project in close consultation with local agencies. ▪ As experienced from RAMP, contractor should install road traffic signs during construction (for example, diversion), construct proper and safe diversions, and employ sufficient flagmen to direct the traffic. ▪ Where there are open manholes or excavation for side drains in front of shops/houses, contractor shall then: 1) cover them quickly or provide proper and clear sign to avoid danger to cyclists or pedestrians, especially at night time, and provide temporary access road to the shops/houses to maintain normal business and living activities in the communities. The implementation results should be reported periodically.

Implementation of the ECoP must ensure that no activities cause harm to people or the environment. An example of a practice in the ECoP could include dust:

1. Bulk storage of potentially dusty materials should be located away from the site boundary.
2. Operations should be undertaken using appropriate dust suppression techniques.
3. Potentially dusty spoil and other waste materials should be damped down regularly when handled and transported in sheeted vehicles.

Chance Find Procedures

The proposed sub-projects civil engineering and roadworks repair and rehabilitation is not expected to yield archaeological, paleontological or cultural findings of any significance because infrastructure works will occur in the existing road alignment and ROW. However, there remains a possibility for (as yet undiscovered) sites of local cultural significance (i.e., sacred sites, cemeteries) and archaeological sites to exist with sub-project areas.

The implementing agency (MRD) will ensure that the bidding and contract documentation will include a clause on chance find procedures and includes the following measures: "(i) stop construction

activities in the area of the chance find; (ii) delineate the discovered site or area; (iii) secure the site to prevent any damage or loss of removable objects; (iv) notify the supervisory Engineer who, in turn, will notify the responsible local authorities; (v) responsible local authorities would conduct a preliminary evaluation of the findings to be performed by archaeologists who will assess the significance and importance of the findings according to various criteria, including aesthetic, historic, scientific or research, social and economic values; (vi) decisions on how to handle the finding shall be taken by the responsible authorities which could result in changes in layout, conservation, preservation, restoration and salvage; (vii) implementation for the management of the finding communicated in writing; and (viii) construction work could resume only after permission is given from the responsible local authority concerning safeguard of the heritage. MRD safeguards team and the Bank task team will monitor the process of design, implementation, and post project implementation.

5.4.2 Indigenous Peoples Development Plan

If ethnic groups are potentially impacted by the proposed sub-project, an indigenous peoples safeguards planning instrument should be developed. The WBG safeguards policy directive guiding indigenous peoples is OP/BP 4.10. The policy requires that special measures be established to protect the interests of ethnic minorities[6] and indigenous peoples who can be distinguished by:

- Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- Customary cultural, economic, social or political institutions that are separate from those of the dominant society and culture; and
- Indigenous language, often different from the official language of the country or region.

As mentioned, it is not expected that proposed sub-projects will have significant adverse impacts on ethnic minorities. However, indigenous peoples' livelihoods and well-being are under pressure in some areas because of in-migration by others, forestry concession programs, and discouragement of shifting cultivation practices. Proposed sub-project civil engineering and roadworks could induce further in-migration putting pressure on access to resources.

Table 9 Site-specific screening process for MRD roadworks sub-projects.

Screening Check List	Yes/ No	Actions to be Undertaken
Involves land acquisition, relocation, indirect loss of access and assets, and has adverse impacts on different populations	Yes	Planning/Project engineers (MRD) through PMO will consult the General Department of Resettlement (GDR) and apply the technical guidelines and policy frameworks. Extensive consultations with affected peoples are expected during the planning and implementation development of the ARAP. Activities with significant impacts are not eligible for project funding.

[6] Social groups with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process.

Table 9 (Cont'd.)

Screening Check List	Yes/ No	Actions to be Undertaken
Scale of civil works is larger than those identified for maintenance or involves new construction	Yes	Planning/Project engineers (MRD) through PMO will consult GDR to apply appropriate guidelines. If new road construction is required, an EA study will be required and IDA clearance will be necessary. Activities with significant impacts are not eligible for project funding.
The sub-project site is located near villages, residential, markets or other sensitive areas (i.e., schools and hospitals) and dust and road safety issues will affect human health and wellbeing	Yes	Planning/Project engineers (MRD) through PMO will consult GDR and include appropriate mitigation measures during planning and design stages. MRD will establish criteria and technology appropriate for dust suppression in the sensitive areas. An action plan to address road safety during construction, including cost and consultation with local agencies and communities, will be prepared. Periodic monitoring of air quality, dust, noise level, and obtaining the opinions of local authority/communities may be necessary. The issues and actions will be included in the ESMP and recorded in the progress report and/or semi-annual report(s).
The project site is located in or less than 50 meters away from protected areas, areas of cultural heritage, or involves the use of large amounts of toxic chemicals or herbicides.	Yes	Planning/Project engineers (MRD) through PMO will consult GDR to ensure that the mitigation measures or actions are adequate to address the issues. Use of borrow pits and quarry sites and operation of asphalt plants in the sensitive areas must be prohibited. Specific requirements provided in the ESMP may be applied to minimize the potential impacts.
Large amount of material will be needed and stored properly	Yes	Planning/Project engineers (MRD) through PMO will ensure locations and practices of material excavation are consistent with ECoP.
Fully comply with the assumptions specified above and a contractor will be hired to carry out the civil engineering and roadworks.	Yes	Planning/Project engineers (MRD) through PMO will apply the proposed ESMP of the project and prepare a specification plan for the sub-project, including those measures and actions required to mitigate the impacts on road safety during construction, community consultation, and the public disclosure plan. A technical guideline on the environmental measures is provided and training will be provided to PMO and project staff will be necessary.
Indigenous peoples are present or have collective attachment to the affected areas.	Yes	Planning/Project engineers (MRD) through PMO will consult IPPF and develop appropriate measures in the Indigenous Peoples Development Plan. Mechanism and institutional arrangement for implementing the IPDP, in such a case (including budget), needs to be prepared.

If ethnic groups are identified in any of the proposed sub-project areas, WB OP/BP 4.10 general principles will apply, to ensure that:

- Ethnic minority groups are afforded meaningful opportunities to participate in planning that affects them;
- Opportunities to provide such groups with culturally appropriate benefits are considered; and
- Any sub-project impacts that adversely affect them are avoided or otherwise minimized and mitigated.

The purpose of the IPDP is to ensure culturally appropriate consultation with indigenous peoples (i.e., ethnic groups) and participation in sub-project development. If based on free, prior and informed consultations where affected indigenous peoples conclude that the proposed sub-project will be beneficial to them then, measures and assistance will be developed in consultation with tribal elders, community based organizations (CBO) and independent CSOs/NGOs. The free, prior and informed consultation and planned activities will be documented in the IPDP. Assistance should include institutional strengthening and capacity building of tribal elders and CBOs working on specific activities (e.g., resettlement, if any) within the sub-project.

If indigenous people are adversely affected by a sub-project, either by land acquisition or by other induced negative impacts, the IPDP would have to address the impacts with various measures, activities and actions to mitigate adverse impacts. Acquisition of land and other assets would be governed by the RPF.

Implementation of the IPDP would be carried out by the community, assisted by appropriate staff from PDRD and Commune Council, facilitated by a CSO/NGO, where available and appropriate.

5.4.3 Abbreviated Resettlement Action Plan

If less than 200 people are affected by the sub-project, the appropriate safeguards measure is an Abbreviated Resettlement Action Plan (ARAP) described more fully in the RPF. The ARAP would include: (i) brief description of the sub-project, location and its impacts; (ii) principles and objectives governing resettlement preparation and implementation; (iii) legal framework; (iv) baseline information of PAP and PAH; (v) category of PAP and PAH by degree and type of impacts; (vi) entitlement to compensation, allowances and rehabilitation assistance by category of impacts in a compensation matrix; (vii) information on relocation site together with socio-economic conditions on the PAP and PAH and host communities; (viii) institutional arrangement for planning and implementation; (ix) participatory procedures during planning and implementation; (x) grievance redress procedures; (xi) estimated cost of resettlement and yearly budget; (xii) time-bound action plan for implementation; and, (xiii) internal and external monitoring and reporting procedures, including TOR for external monitoring and evaluation.

6.0 CONSULTATION AND INFORMATION DISCLOSURE

The sub-projects support a participatory and consultative approach involving meaningful engagement with different populations (i.e., ethnic minorities, vulnerable groups, women and female/male youth and children, men, the elderly and disabled, etc.), CSOs, CBOs and other relevant stakeholders. The approach was intended to enhance ownership and general understanding of different populations through public access to information for the ESMF and safeguard management instruments

(i.e., ESMP, IPDP, ARAP as necessary), roles and responsibilities, and perceptions as a basis for improving coordination and achievement of the sub-project objectives. The participatory and consultative approach should ensure effective communication and coordination with all stakeholders and different populations at national and subnational levels.

The Cambodia sub-projects were first discussed with key government decision-makers, the World Bank and the consultant on 6 May 2016 during the kick-off meeting in Phenom Penh. Subsequently, during the 1st Public Consultation Meeting held on 10 June 2016, government decision-makers, CSO representatives, the World Bank and the consultant discussed the objectives of the ESMF, TOR for the ESMF, field visit schedule and expected outcomes from the community consultations, timeline and deliverables and a table of contents for the ESMF document.

Consultations to inform the draft ESMF, IPPF and RPF were held in Tboung Khmum and Kratié Provinces during the week of 13 to 17 June 2016 and described more fully in Appendices A8, A9 and A10). Stakeholders and different populations were provided information on project objectives, sub-project descriptions and component initiatives, potential impacts (both positive and adverse effects). A second public consultation meeting is planned for early August 2016 to discuss the proposed sub-projects, issues and concerns, the draft final ESMF, IPPF and RPF documents, and related measures. These draft documents will be translated into Khmer language and distributed to national and subnational and local governments, key stakeholders and civil society organizations, and different populations prior to the second public consultation meeting. Initial results suggest that most of the stakeholders and different populations support the proposed sub-project initiatives and/or activities. As sub-projects are formulated, additional consultations will be held with local authorities and different populations who are likely to be directly or indirectly affected from the proposed sub-project(s). Written records of the consultations are appended in Appendices A9 and A10.

7.0 GRIEVANCE REDRESS MECHANISM

The Provincial Authority is expected to establish grievance redress committee(s) at the local (provincial, district, and commune) levels to be headed respectively by the Provincial Governor or Provincial Vice-Governor, Chief of District, and Chief of Commune. At the GRM commune level, the membership of the GRM a representative from affected households (AHs) who shall be chosen from among the PAPs. In the case of indigenous communities, village level committees will be established and subject to a process of free, prior and informed consultation and will build on the unique decision making structures of individual indigenous communities, as well as requirements for gender and intergenerational balance. These committees will receive, evaluate and facilitate the resolution of PAP and PAH concerns, complaints and grievances. The grievance redress committees will function, for the benefit of PAP and PAH, during the entire life of the sub-project(s), including the defects liability periods.

Grievances from PAP and PAHs in connection with the implementation of the RP will be handled through negotiation with the aim of achieving consensus. Complaints have the option of passing through four stages (described below) before potentially being elevated to a court of law as a last resort.

First Stage, Village Level

An aggrieved PAH may an aggrieved PAH may bring his/her complaint to village complaints committee established under the IPDP. The committee should attempt to resolve the complaint

within 15 days following the lodging of the complaint by the aggrieved PAH. The composition of the group will vary depending on the village, and be subject to a process of free, prior and informed consultation, will build on the unique decision making structures of individual indigenous communities, as well as requirements for gender and intergenerational balance. If after 15 days the aggrieved PAH does not hear from Village or if the PAH is not satisfied with the decision taken during the first stage, the complaint may be brought to the District Office either in writing or verbally.

Second Stage, Commune Level

An aggrieved PAH may bring his/her complaint to the commune leader. The commune leader will call for a meeting of the group to decide on a course of action to resolve the complaint within 15 days, following the lodging of complaint by the aggrieved PAH. The group meeting should consist of the commune leader, representative(s) from PRSC-WG district offices, and the aggrieved PAH. The commune leader is responsible for documenting and maintaining files of all complaints that are processed. If after 15 days the aggrieved PAH does not hear from Village or Commune authorities, or if the PAH is not satisfied with the decision taken during the first stage, the complaint may be brought to the District Office either in writing or verbally. In the case of PAH from indigenous making a complaint, they will be accompanied by a facilitator paid for by the project, who is conversant in the relevant language, and who will serve as an advocate for the aggrieved PAH during the process.

Third Stage, District Office

The District office has 15 days within which to resolve the complaint to the satisfaction of all concerned. If the complaints cannot be solved in this stage, the district office will bring the case to the Provincial Grievance Redress Committee. In the case of PAH from indigenous community making a complaint, they will be accompanied by a facilitator paid for by the project, who is conversant in the relevant language, and who will serve as an advocate for the aggrieved PAH during the process.

Fourth Stage, Provincial Grievance Redress Committee

The Provincial Grievance Redress Committee, which consists of the Provincial Governor or Deputy Governor as the committee chairman and Directors of relevant Provincial Departments as members (which will be established in each province prior to DMS), meets with the aggrieved party and tries to resolve the complaint. The Committee may ask the PRSC-WG for a review of the DMS by the External Monitoring Agency (EMA). Within 30 days of the submission of the grievance to the Provincial Grievance Redress Committee a written decision must be made and a copy of the decision sent to IRC, MRD and the PAH. In the case of PAH from indigenous community making a complaint, they will be accompanied by a facilitator paid for by the project, who is conversant in the relevant language, and who will serve as an advocate for the aggrieved PAH during the process.

Final Stage, the Court Procedures

If the aggrieved PAH is not satisfied with proposed remedies developed by the Provincial Grievance Redress Committee based on agreed policies in the RF-RP, the committee shall file administrative procedures against the PAH with the participation of provincial prosecutors. The case will be brought to the Provincial Court and the same will be litigated under the rules of the court. At the

same time, the PAH can bring the case to the Provincial court. During litigation of the case, RGC will ask the court that the project proceed without disruption while the case is being heard. If any party is not satisfied with the ruling of the provincial court, that party can bring the case to a higher court. The RGC shall implement the decision of the court.

In addition to the above mechanisms, and at the prerogative of the PAP and PAH, grievances may be taken to other mediating bodies, such as a council of elders, monks at a local pagoda, or any other dispute resolution body recognized by the PAP and PAH.

8.0 MONITORING AND REPORTING

Monitoring is a key component of the ESMF environmental and social safeguards performance during sub-project implementation to ensure mitigation measures are being implemented and are effective. Monthly, quarterly- and semi-annual monitoring reports will be undertaken as per specific activities in order to:

- Improve environmental and social management practices;
- Ensure the efficiency and quality of the environmental and social assessment processes;
- Establish evidence- and results-based environmental and social assessment for the sub-projects; and
- Provide an opportunity to report the results of safeguards, impacts and proposed mitigation measures' implementation.

During sub-project implementation, the PMO will conduct internal monitoring activities of the design and feasibility studies and ESMPs to determine the extent to which mitigation measures are successfully implemented. The SEO will also conduct internal quarterly monitoring activities and the report will be submitted to the IRC and WB for review. Monitoring will focus on three key areas, including:

(i) *Compliance Monitoring*: to verify that the required mitigation measures are considered and implemented. During the sub-project preparation phase, compliance monitoring activities will focus on ensuring effective ESMF implementation and respect of procedures. The MRD PMO Environmental and Social Specialist staff will ensure that sub-project studies are properly and expeditiously conducted in compliance with RGC law and the WBG regulations.

The feasibility studies will also include an assessment of the conditions for implementation of the ARAP and IPDP related activities;

- Grievances, especially those that have not yet been resolved at the local level and which may require resolution at the higher levels as initially determined in the ESMF;
- Document completion of project resettlement and compensation if these are applicable, including for all permanent and temporary losses;
- Evaluation of the quality of compensation or other relevant mitigation measures that would be applied in accordance with the requirements of the potential future investment projects that have been initially identified, including impacts on livelihoods; and
- Mitigation measures when there are major changes in the indicators that may require strategic interventions, for example, if different populations (ethnic peoples and vulnerable

groups – women and female/male youth and children, men, the elderly and disabled, landless, and poor, etc.) are not receiving sufficient support from the potential sub-projects.

During the implementation phase, compliance monitoring would include inspections during construction of the sub-project initiatives and/or activities to verify the extent with which conditions and licenses are issued and adhered. The effective project construction, operational and decommissioning phase will be the full responsibility of MRD and compliance monitoring ensured by MOE.

(ii) *Impacts Monitoring*: during implementation, monitoring of sub-project initiatives and/or activities' impact mitigation measures should be the duty of the DIA and SEO. It is expected that the environmental and social safeguards documents will be given to the contractor and the DIA will monitor to ensure that works are preceding in accordance with the agreed (between RGC and WBG) mitigation measures.

Monitoring and evaluation of the social impacts will measure the following:

- Impacts on affected individuals, different populations, households and communities to be maintained at their pre-project standard of living, or better;
- Gender differentiated impacts to be avoided, minimized or addressed;
- Post project socio-economic status of communities affected by the sub-project(s); and
- Management of disputes or conflicts.

In order to measure these impacts, the pre-feasibility studies will identify:

- Specific indicators to be monitored with gender disaggregated data;
- Define how indicators will be measured on a regular basis; and
- Identify key monitoring milestones (e.g., at mid-point of the ARAP implementation process, if applicable).

An independent monitor may be recruited by the IRC to assess potential sub-project related impacts depending on the nature and extent of impacts. Their report will be submitted to the IRC and WB.

(iii) *Cumulative Impacts Monitoring*: impacts of the sub-project initiatives and/or activities on the environmental and social resources for the six respective provinces will also be monitored in consideration of other developments which might be established.

9.0 ESMF IMPLEMENTATION

9.1 INSTITUTIONAL ARRANGEMENTS FOR SUB-PROJECT IMPLEMENTATION

In Cambodia, several ministries have responsibility for the development and management of roads. The MRD has responsibility for many rural secondary access roads. The World Bank assistance would enable key road segments located in provinces along the Mekong and Tonlé Sap rivers to withstand regular flood events, and reduce recurring reconstruction costs. The sub-projects are an essential component in implementing the MRD's plan for flood recovery, its Climate Change Strategic Plan for Rural Infrastructure, and the Climate Change Action Plan for Rural Development Sector 2014-2018. Should hydrometeorological stations be included in the sub-project, institutional linkages

with MOWRAM will need to be considered in order to integrate hydromet forecasting and early warning systems into MRD climate vulnerability mapping.

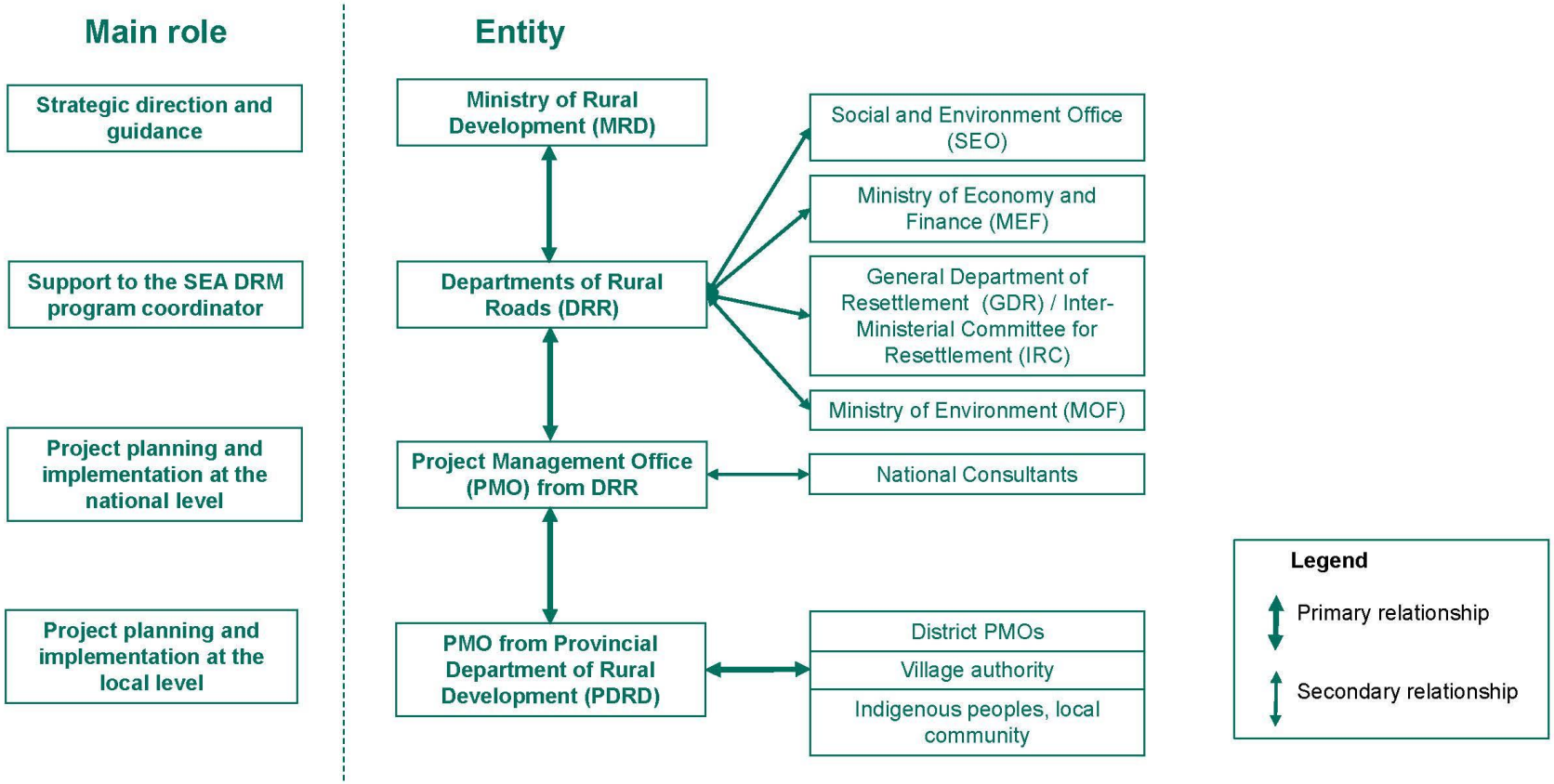
The MRD supports seventeen different technical areas, including border development, rural infrastructure, rural water supply, rural sanitation, ethnic group development, community development, rural economic development, training and research, administration and personnel, internal audit, planning and public relations, supply and finance, general inspection, international cooperation, NGO management, gender issues, and the Provincial Department of Rural Development (PDRD). Several technical areas including rural road improvement and rural water supply, sanitation and hygiene have been integrating social and environmental safeguards into their practices for several years. However, the capacity of staff in applying these social and environmental safeguards is low and does not meet acceptable safeguards standards, and the ministry lacks mechanisms to ensure safeguards guidelines are enforced and implemented.

The MRD Project Management Office (PMO) will be located in the MRD offices and responsible for the technical activities carried out by the Departments of Rural Roads under the sub-projects. The Provincial Hall management will be responsible for sub-project planning and implementation at the provincial level through the PDRD, while local level project planning and implementation will be led by the District PMOs. Districts and communes are under the authority of Provincial Hall management. The Provincial Hall provides notice to the district and commune to appoint a focal person to work with the MRD environmental and social safeguards team for each sub-project.[7] Figure 1provides a flow chart diagram illustrating these institutional arrangements.

The MRD is the DIA for the SEA DRM Project in Cambodia. The MRD Social and Environment Office (SEO) is an active office with responsibility for environmental safeguards. It currently has ten (10) staff implementing various environmental and social safeguards procedures. The sub-project environmental and social performance will be implemented under the SEO office with the support of MOE. The SEO will assist the GDR in the implementation of Land Acquisition and Resettlement. The central PMO should be staffed for this purpose with environmental and social safeguards officers. Depending upon training and professional experience in environmental and social safeguards implementation and monitoring, it is likely that these staff will require additional training and support. They should be supported by a TA consultant team that will assist in the implementation of the ESMF requirements while building staff capacity to address safeguard issues.

[7] This mechanism is very similar to the process followed by The National Committee for Sub-National Democratic Development (NCDD) of the Ministry of Interior (MOI).

Figure 1 Institutional arrangements for ESMF implementation of Component 1.



As sub-projects are identified, the PMO (under MRD) will clarify tasks and responsibilities regarding implementation of specific sub-projects. Central PMOs will review screening reports prepared by local subnational PMOs and prepare draft terms of reference for an ESMP and requirements to prepare an ARAP and IPDP, as necessary. The ESMP and planning documents (i.e., ARAP and IPDP) will be shared with stakeholders and different populations during consultations. Issues and observations noted in the consultations will be incorporated. Documentation will be released for public disclosure and submitted to the World Bank for review.

The ESMP and accompanying ARAP and IPDP are normally prepared by the local subnational PMOs with support from consultants as necessary.

As stated elsewhere in this ESMF document, the MRD PMO is responsible for tracking results of environmental and social safeguards implementation during project appraisal. These internal monitoring reports are submitted to IRC and the World Bank for review and documentation on a quarterly basis. Details are provided in Section 8.0 of the current ESMF document. Additionally, MOE will be informed and engaged throughout the implementation process of the ESMF as part of the general reporting function of the sub-project implementation.

The sub-project financing will support a project management component for the MRD. The objective of this component will be to support management and implementation of the sub-projects. It will finance institutional support and capacity development for project management, coordination, technical and safeguards aspects, monitoring and evaluation, and reporting.

9.2 CAPACITY BUILDING AND TRAINING PLAN

Environmental and social sustainability of the proposed sub-projects to be formulated is largely dependent upon the capacity of the implementing agencies to coordinate the planning and supervision of service providers. MRD has wide experience implementing projects funded by various donors (i.e. ADB, Nordic Development Fund [NDF], WBG, Korea International Cooperation Agency [KOICA], Kreditanstalt für Wiederaufbau Development Bank [KfW], Agence Française de Développement [AFD], and Government of Australia Department of Foreign Affairs and Trade [DFAT, formerly AusAID]). Each donor and financer has its own guidelines and regulations. The MRD has strong familiarity with WBG guidelines on procurement, project implementation, environmental and social safeguards, and other related procedure and instruction manuals. MRD also has formulated a code of conduct for the project implementation staff.

The Consultant determined that MRD staff seconded to work on WBG financed projects were familiar with the KETSANA project and have strong familiarity with its guidelines and manuals. MRD understands the importance of environmental protection and avoiding, minimizing, mitigating or compensating for adverse social impacts particularly as a precondition for obtaining WBG financing. In order to ensure effective implementation of safeguards at planning, pre-construction, construction and operations phases, it is imperative to have capable and properly trained staff in place. Accordingly, an institutional strengthening and capacity building training program will include on-the-job training, workshops, field visits and external training opportunities.

MRD has three general departments: Administration and Finance, Technical Affairs and the General Inspectorate illustrated in Figure 2. The General Department of Administration and Finance has control of the Department of Administration and Personal Affairs, the Department of Procurement and Finance, and the Department of Planning and Public Relations. The General Department of Technical Affairs plays an important technical role for the Ministry. It controls the Department of Rural Roads,

the Department of Rural Water Supply, the Department of Rural Health Care, the Department of Community Development and the Department of Rural Economic Development. The particular stand, the department of internal audit is under direct control of the ministerial office.

The MRD General Department for Technical Affairs, including rural road improvement, has been integrating social and environmental safeguards practices in their work for a number of years. However, the capacity of social and environmental safeguards monitoring has not yet been adequate and the ministry still lacks safeguards guidelines and specific procedures to follow.

In addition to the policy addressing environmental and social safeguards application for social and physical infrastructure development, a series of policies have emerged as current mandates of the MRD. These mandates include a policy on indigenous people, a policy for rural road improvement, a policy for rural development, and a policy for rural water supply. These policies are being developed through several projects and programs, including:

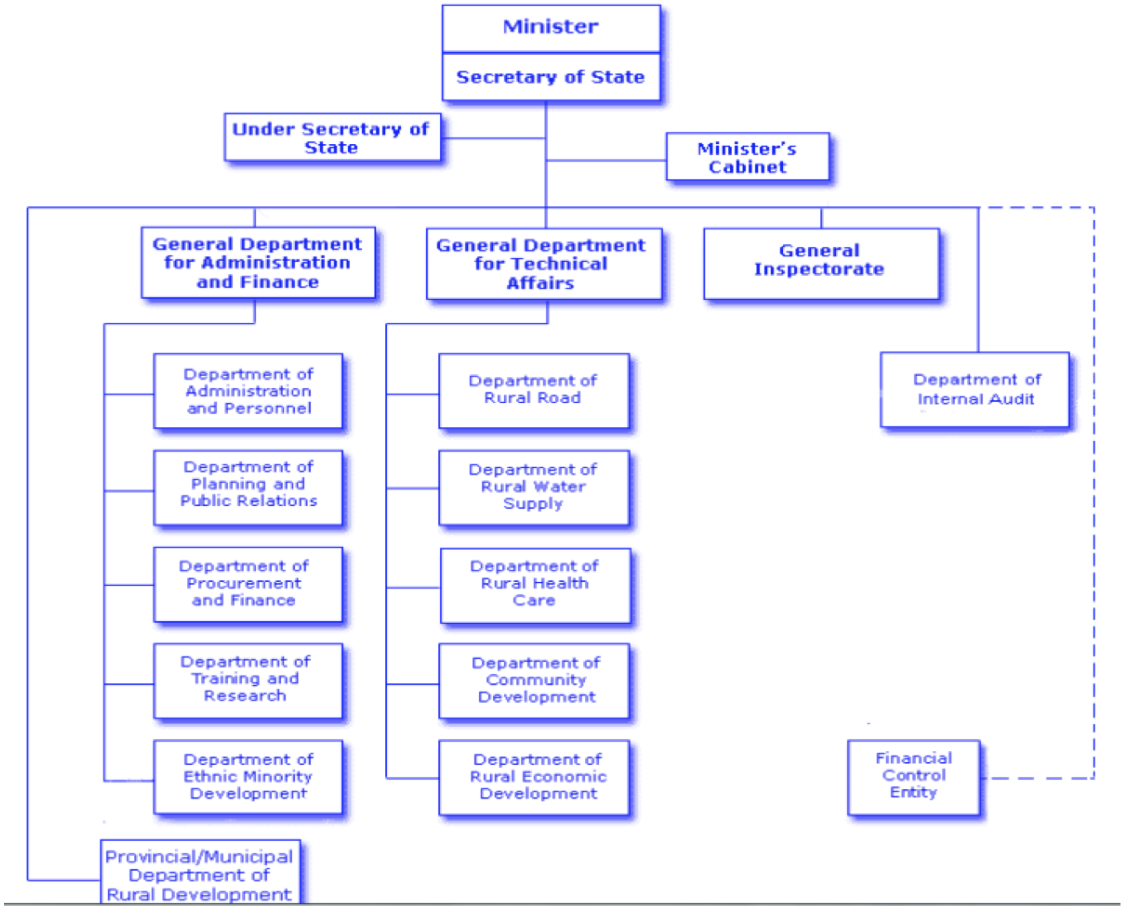
- Provincial and rural infrastructure project;
- Food for Work project;
- Rural water supply and sanitation project;
- Tertiary road improvement project;
- Tonlé Sap rural water supply and sanitation sector;
- Second rural water supply and sanitation sector project;
- Financial management for rural development program;
- Border development program;
- School and community water sanitation and hygiene;
- Ketsana emergency reconstruction and rehabilitation project; and
- Rural road improvement project.

Beyond mandated policy development of the MRD as described above, the MRD has responsibility for the sub-projects which will be implemented in line with WBG and RGC procedures and processes. The sub-project will provide an entry point for further development of its environmental and social safeguards instruments, specifically to the rehabilitation of existing rural access roads.

MRD SEO staff were assessed by the Consultant in relation to education levels, knowledge and practical application of environmental and social safeguards implementation monitoring. Information to support the capacity assessment was obtained through document review, semi-structured interviews with key informants as well as from various workshops and professional judgment.

Although the safeguard guidelines for rural road improvements exist, the level of understanding of environmental and social safeguard issues is limited and requires more capacity through provision of more detailed safeguard guidelines and procedure documents. The MOE is also responsible for providing safeguard training, ensuring effective mainstreaming of safeguard requirements into the road development project cycle, and undertaking research activities. In addition, MEF, General Department of Resettlement (GDR, formerly, Inter-Ministerial Resettlement Committee [IRC]) will be involved as land acquisition will likely be required on a temporary or permanent basis.

Figure 2 Organizational chart of MRD.



The MRD SEO has a staff complement of ten (10) who implement safeguards instruments, plans and measures for rural road improvement. SEO staff require better environmental and social safeguards manuals and guidelines in order to provide monitoring and auditing services for rural road improvement projects. Environmental and social safeguards knowledge and guidelines documents are required at project preparation and planning, implementation period and post-project construction period. The SEO has traditionally provided safeguards monitoring for domestically-funded roadworks while MOE monitored externally-funded road construction. However, as all Cambodia SEA DRM proposed sub-project roadworks' rehabilitation and repair will be on sections less than 100 km in length, the SEO will provide safeguards monitoring and evaluation at critical stages of the Cambodia DRM Project as illustrated in Table 10. MOE will monitor the Cambodia DRM Project safeguards implementation on a periodic basis.

The MRD PMO will be responsible for the environmental and social performance of the sub-projects implemented with the support of MOE and GDR. The central PMO should be staffed for this purpose with environmental and social safeguards officers. Depending upon training and professional experience in environmental and social safeguards implementation and monitoring, it is likely that these staff will require additional training and support. They should be supported by a technical assistance (TA) consultant team that will assist in the implementation of the ESMF requirements while building staff capacity to address safeguard issues.

Table 10 Key responsibilities for ESMF implementation.

Sub-project Cycle	MRD Responsibility	Provincial Department of Rural Roads (as sub-project owner)
Screening	▪ Advise applicants and other stakeholders of environmental and social safeguard procedures. ▪ Review the concept note/idea and screen for potential safeguard issues, and advise applicants regarding the nature and content of safeguard documents, measures and actions to be prepared.	▪ Assess any potential safeguard issues early in the preparation process, including screening for the presence of indigenous peoples. ▪ Describe potential safeguard issues in the safeguard screening form to be attached to the sub-project proposal.
Preparation	▪ Advise applicants on safeguard issues, as needed.	▪ Undertake safeguard preparation actions as required, such as consultations with local communities and/or collection of data. ▪ Design safeguard measures and prepare documents, such as an ESMP, IPDP, ARAP, etc. as agreed with MRD. If applicable, disclose draft safeguard documents with the sub-project proposal to affected communities prior to final review of proposal by the MRD.
Review and approval	▪ Review sub-project proposal for safeguard impacts and social risks. ▪ Assess the adequacy and feasibility of the safeguard assessment and consultation process. If needed, request further steps. ▪ Assess the adequacy and feasibility of the safeguard measures and documents. If needed, request appropriate changes to these and reassess prior to final approval. ▪ If Indigenous Peoples (OP/BP4.10) are affected, ascertain that they have provided free, prior and informed consent to sub-project activities affecting them. ▪ If applicable, publicly disclose safeguard related information on the website after sub-project approval	▪ Submit sub-project proposal with safeguard measures and documents as agreed. If requested by MRD take additional steps to meet ESMF and safeguard policy provisions. Re-submit proposal with revised safeguard measures and documents, as needed. All national and local legislation and regulations will be complied with. ▪ Prepare an action plan, as needed, if the sub-project is likely to have some impacts on National Protected Areas (NPA) and/or National Protected Forest Area.
Implementation	▪ Supervise and review safeguard documents and issues during sub-project implementation. If needed, request changes to safeguard measures. ▪ Review and approve Plan of Actions that are required to be prepared during implementation of sub-projects.	▪ Disclose final safeguard documents, if any, to affected communities. ▪ Monitor and document the implementation of safeguard measures. ▪ When Indigenous Peoples (OP/BP4.10) are affected, include them in participatory monitoring and evaluation exercises.
Evaluation	▪ Ensure inclusion and review of environmental and social safeguard issues and outcomes in mid-term and final sub-project evaluation and reporting, including concerning any lessons learned on the sustainability of each sub-project.	▪ Evaluate the implementation and outcomes of safeguard measures. ▪ When Indigenous Peoples (OP/BP4.11) are affected, include them in participatory evaluation exercises.

As sub-projects are identified, the PMO (under MRD) will clarify tasks and responsibilities regarding implementation of specific sub-projects. Central PMOs will review screening reports prepared by local PMOs and prepare draft terms of reference for an environmental and social management plan (ESMP) as well as requirements to prepare an ARAP depending on the number of affected persons, and an IPDP, as necessary. The ESMP and planning documents (i.e., ARAP and IPDP) will be shared with stakeholders during consultations. Issues and observations noted in the consultations will be incorporated. Documentation will also be released for public disclosure and submitted to the World Bank for review.

9.3 INSTITUTIONAL STRENGTHENING ASSESSMENT

The RGC MRD has its own social and environmental safeguards office called the SEO comprised of ten staff. The main responsibility of the SEO is to implement and monitor safeguards instruments for rural road improvement, particularly for roadworks funded from the recurring RGC budget. MRD has a number of existing safeguards guidelines for rural road improvement, however staff are constrained by their understanding of specific issues related to social and environmental safeguards which invariably affects monitoring of these same safeguards instruments and measures during subsequent implementation.

More than fifty percent of MRD staff hold higher university education. A third have no university degree but, have many years of practical experience in rural infrastructure construction and improvement. The MRD SEO staff are all degree-qualified with at least a bachelor degree or higher academic qualification. It was felt that lack of application of environmental and social safeguards instruments was not due to education level rather, MRD staff felt constrained in application of environmental and social instruments for rural development infrastructure projects due to a lack of a sector coordination strategy between state agencies to share and update environmental and social impact assessment laws.

The current rural development strategic plan on climate change highlighted inherent weaknesses of indigenous peoples' safeguards instruments being applied and monitored during sub-project implementation; from the central level right through the devolution of responsibility to the local community level. It is imperative that institutional and capacity development are provided in terms of explicit environmental and social safeguards guidelines, safeguards frameworks, capacity building trainings, coordination between different government departments and organizations, awareness-raising campaign(s), and other measures for ensuring the knowledge gaps are addressed as expeditiously as possible for development of the sub-project and, subsequently, at feasibility and design stages and beyond.

As indicated, strengthening coordination between line ministries (i.e., MOE, MEF, and MRD) would help close the knowledge gap and lead to more effective implementation and monitoring of environmental and social safeguards instruments. Within the MRD, two departments including the Department of Rural Road and the Department of Rural Water Supply, will play an important role in the implementation and monitoring of environmental and social safeguards instruments for the sub-project implementation as well as during the planning process.

Sector capacity building is important to ensure that legal frameworks are in place to guide environmental and social safeguards development in MRD. Technical training to improve sector capacity on climate resilience planning for rural roads and rural water supply development and maintenance is required. An initiative to develop the legal and institutional framework to address loss and damage to rural

infrastructure as a result of climate shock and extreme weather events is required. Such a process requires a review of existing legislation and policies in order to explore the scope, gaps and constraints for developing a mechanism to address loss and damage. Suggestions for integrating loss and damage mechanisms need to be tailored for both national and subnational rural development levels.

Partnerships and participation in externally-funded projects and programs such as the Cambodia sub-projects can provide a critical entry point for institutional strengthening and capacity development within the MRD. The sub-projects will build on MRD strengths to enhance knowledge, technical skills in the application of environmental and social safeguards, strengthen the operations it supports, leverage additional funding and contribute to the global policy agenda on social and natural resources protection for rural development planning. The sub-projects can facilitate cooperation between MOE and the MRD SEO to ensure environmental and social safeguards instruments and measures are properly monitored during Project implementation.

9.4 BUDGET TO IMPLEMENT ESMF

ESMF implementation cost will include the development of the specific site-specific safeguards instruments, including staff costs, travel, consultation workshops, translation and trainings. The total indicative cost reviewed by the World Bank and MRD is estimated at 205,000 USD (Table 11), which will be supported by a combination of IDA and counterpart financing, from the project management component.

Table 11 ESMF implementation costs.

No.	Description	Indicative Cost (USD)
1	MRD National Environment Safeguards Specialist	52,000
2	MRD National Social Safeguards Specialist	52,000
3	International Institutional and Capacity Building of the Safeguard Officers	20,000
4	National Travel for M&E for the implementation of the safeguard tools to 6 provinces	25,000
5	National Travel for public consultation on Safeguard to 6 Provinces	10,000
6	Translation of Safeguard Documents	10,000
7	National Training Workshop in Phnom Penh	8,000
8	National Training workshop in Kampong Soam	9,000
9	Contingency (10%)	19,000
TOTAL		**205,000**

APPENDICES

Appendix A1

Activities Not Eligible for Project Financing

Appendix A1 Activities not Eligible for Sub-project Financing

To avoid adverse impacts on the environment and people, the following activities are explicitly excluded from sub-project financing:

- Physical relocation and/or demolition of residential structures of households that affect more than 200 PAP or 50 households;
- Creation of adverse impacts on local people including ethnic groups that are not acceptable to Them, even with the mitigation measures developed with their participation;
- Damage or loss to cultural property, including sites having archaeological (prehistoric), paleontological, historical, religious, cultural and unique natural values;
- Use of Cambodia SEA DRM sub-project as an incentive and/or tool to support and/or implement involuntary resettlement of local people and village consolidation;
- Purchase of guns, chain saws, asbestos, dynamite, destructive hunting and fishing gear, and other investments detrimental to the environment;
- Purchase of pesticides, insecticides, herbicides and other dangerous chemicals exceeding the amount required to efficiently treat the infected area. If use of pesticide is necessary, the PMO will refer to the Pesticide Management Plan in the ESMF, if applicable;
- Forestry operations, including logging, harvesting or processing of timber and non-timber forest products (NTFP). However, support to sustainable harvesting and processing of NTFPs is allowed if accompanied with a management plan for the sustainable use of the resources;
- Unsustainable exploitation of natural resources;
- Conversion or degradation of natural habitat;
- Production or trade in any product or activity deemed illegal under Cambodian laws or regulations or international conventions and agreements, or subject to international bans;
- Labor and working conditions involving harmful, exploitative, involuntary or compulsory forms of labor, forced labor, child labor or significant occupational health and safety issues;
- Trade in any products with businesses engaged in exploitative environmental and social behavior; and
- Sub-projects that require a full environmental and social impact assessment (ESIA) will not be funded.

Appendix A2

General Environmental Assessment Policy Instrument: Screening Form

Appendix A2 General Environmental Assessment Policy Instrument: Screening Form

This form is to be used by the Implementing Agency to screen potential environmental and social safeguards issues of a sub-project, determine the Category classification, which World Bank policies are triggered and the instrument to be prepared for the sub-project.

Sub-project Name	
Sub-project Location	
Sub-project Proponent	
Sub-project Type/Sector	
Estimated Investment	
Start/Completion Date	

Questions	Answer			If Yes WB Policy triggered	If Yes Document requirement
	N/A	Yes	No		
Are the sub-project impacts likely to have significant adverse environmental impacts that are sensitive[1], diverse or unprecedented and extend beyond the road alignment and ROW?[2] Please provide brief description:				*OP 4.01 Environmental Assessment* Category A	Ineligible for funding in the Cambodia DRM Project

[1] Sensitive (i.e., a potential impact is considered sensitive if it may be irreversible - e.g., lead to loss of a major natural habitat, or raise issues covered by OP 4.04, Natural Habitats; OP 4.36, Forests; OP 4.10, Indigenous Peoples; OP 4.11, Physical Cultural Resources; or OP 4.12, Involuntary Resettlement; or in the case of OP 4.09, when a project includes the manufacture, use, or disposal of environmentally significant quantities of pest control products);

[2] Examples of projects where the impacts are likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented are large scale infrastructure such as construction of new roads, railways, power plants, major urban development, water treatment, waste water treatment plants and solid waste collection and disposal etc.

Are the sub-project impacts likely to have significant adverse social impacts that are sensitive, diverse or unprecedented[3]? Please provide brief description:				*OP 4.01 Environmental Assessment* Category A	Ineligible for funding in the Cambodia DRM Project
Do the impacts affect an area broader than the sites - beyond the existing ROW - or facilities subject to physical works and are the significant adverse environmental impacts irreversible? Please provide brief description:				*OP 4.01 Environmental Assessment* Category A	Ineligible for funding in the Cambodia DRM Project
Is the proposed sub-project likely to have minimal or no adverse environmental or social impacts?[4] Please provide brief justification:				*OP 4.01 Environmental Assessment* Category C	No action needed beyond screening
Is the sub-project neither a Category A nor Category C as defined above?[5] Please provide brief justification:				*OP 4.01 Environmental Assessment* Category B	Limited Scope ESIA or IEE or ESMP
Will the sub-project likely have adverse impacts to the human or natural environment that are modest, confined to a small region and are temporary or short-lived which are easy and inexpensive to control?				*OP 4.01 Environmental Assessment* Category B	Limited Scope ESIA or IEE or ESMP

[3] Generally, sub-projects with significant resettlement-related impacts should be categorized as A. Application of judgment is necessary in assessing the potential significance of resettlement-related impacts, which vary in scope and scale from sub-project to sub-project. Sub-projects that would require physical relocation of residents or businesses, as well as sub-projects that would cause any individuals to lose more than 10 percent of their productive land area, often are categorized as A. Scale may also be a factor, even when the significance of impacts is relatively minor. Sub-projects affecting whole communities or relatively large numbers of persons (for example, more than 1,000 in total) may warrant categorization as A, especially for projects in which implementation capacity is likely to be weak. Sub-projects that would require relocation of Indigenous Peoples, that would restrict their access to traditional lands or resources, or that would seek to impose changes to Indigenous Peoples' traditional institutions, are always likely to be categorized as A.

[4] Examples of projects likely to have minimal or no adverse environmental impacts are supply of goods and services, technical assistance, simple repair of damaged structures etc.,

[5] Projects that do not fall either within OP 4.01 as a Category A or Category C can be considered as Category B. Examples of category B sub-projects include small scale *in-situ* reconstruction of infrastructure projects such as road rehabilitation and rural water supply and sanitation, small schools, rural health clinics, etc.

Do sub-project documents clearly state that no new roadways will be constructed?				*OP 4.01 Environmental Assessment* Category B	Limited Scope ESIA or IEE or ESMP
Does the sub-project document specify that there will be no use of any hazardous materials?				*OP 4.01 Environmental Assessment* Category B	Limited Scope ESIA or IEE or ESMP
Will the sub-project include the export of waste to another territory or country?				*OP 4.01 Environmental Assessment* Category B	ESMP with details on potential impacts at the waste receiving location
Will the sub-project include the export of waste to another territory/country which will not comply with international conventions on trans-boundary movement of hazardous materials and waste?				*OP 4.01 Environmental Assessment* Category A	Ineligible for funding in the Cambodia DRM Project
Will the sub-project involve the conversion or degradation of non-critical natural habitats? Please provide brief justification:				*OP 4.04 Natural Habitats*	Limited Scope ESIA or IEE or ESMP
Will the sub-project involve the significant conversion or degradation of critical natural habitats[6]?				*OP 4.04 Natural Habitats* Category A	Ineligible for funding in the Cambodia DRM Project
Are there any IP communities present in the sub-project area and are likely to be affected by the proposed sub-project negatively or positively? Please provide brief justification:				*OP 4.10 Indigenous People* Category B	Indigenous Peoples Development Plan
Will the sub-project adversely impact physical cultural resources?[7] Please provide brief justification:				*OP 4.11 Physical Cultural Resources* Category A	Ineligible for funding in the Cambodia DRM Project

[6] Sub-projects that significantly convert or degrade critical natural habitats such as legally protected, officially proposed for protection, identified by authoritative sources for their high conservation value, or recognized as protected by traditional local communities, are ineligible for Bank financing.

[7] Examples of physical cultural resources are archaeological, paleontological or historical sites, including historic urban areas, religious monuments, structures and/or cemeteries particularly sites recognized by the government.

Does the sub-project involve involuntary land acquisition, loss of assets or access to assets, or loss of income sources or means of livelihood? Please provide brief justification:				*OP 4.12 Involuntary Resettlement*	Abbreviated Resettlement Action Plan
Will the sub-project have the potential to have impacts on the health and quality of forests or the rights and welfare of people and their level of dependence upon or interaction with forests; or aims to bring about changes in the management, protection or utilization of natural forests or plantations? Please provide brief justification:				*OP4.36 Forestry* Category A	Ineligible for funding in the Cambodia DRM Project
Will the project have the potential to have significant impacts or significant conversion or degradation of critical natural forests or other natural habitats?				*OP4.36 Forestry* Category A	Ineligible for funding in the Cambodia DRM Project

Appendix A3

Site-Specific Environmental and Social Screening Forms

Appendix A3 Environmental and Social Safeguard Screening Forms

These forms will be filled by ESU/DPWT during the identification of the sub-project as part of the annual work plan. The signed will be properly signed and attached to the sub-project proposal which to be reviewed by MRD and/or ESD/PTI.

FORM A: Project Concept Safeguards Checklist

Province:	District:	Location – sketch map attached (Mark ✓)	
		☐ YES	☐ NO
Road Name:	Road No:	Link No. (details)	
TYPE of works/activities (Mark ✓)	☐ Provincial road maintenance	☐ District road maintenance	
☐ Located within NPA	☐ Located near NPA	☐ Located near important cultural sites	
Brief description of works/activities: [i.e., length of road, need/purpose of works, proposed works (list/explain activities), number of villages (approx. population) to benefit]			

Checklist	Yes	No	Explanation/Comments
1. Will the works require any households to move structures (include, houses, small shops, rice bins etc.) back from the road?			
2. Are there indigenous people living in the area? If yes, how many different groups (list)?			
3. Are the works, located in or near a cultural/heritage area?			
4. Are the works, located near or in a protected area (or a buffer zone of a protected area)?			
5. Are the works likely to generate dust or create a dust problem? If yes, for how many months (during which season)?			
6. Will the works require NEW borrow pits or quarries to be opened up?			
7. Will the works be located near a river, stream or waterway?			
8. Will the works result in increases in, or changes to the type of, traffic using the road?			
9. Will any of the works require the use of toxic chemicals, herbicides, and/or explosives?			

10. Other information: map, additional issues or impacts etc. should be specified on the attached sheet: List attachments			
Distribution of ESMF Initial Screening Form:			
Distributed to	Yes	No	Date
MRD			
MPWT/PDRD			
General Department of Resettlement (formerly IRC)			
MOE			
Others (list below)			
ESMF Initial Screening Form compiled by:			
Name:		Position:	
Signature:		Date:	
ESMF Initial Screening Form verified by:			
Name:		Position:	
Signature:		Date:	
Attachments (For map, sketches, other information, issues, potential impacts, etc. as mentioned in item 13 above)			
As required			

FORM B: Indigenous Peoples (IP) Screening Form for Road Maintenance

Province:	District:	Location – sketch map attached (Mark ✓)	
		☐ YES	☐ NO
Road Name:	Road No:	Link No. (details)	
TYPE of works/activities (Mark ✓)	☐ Provincial road maintenance	☐ District road maintenance	

Brief description of works/activities and project area: [i.e. length of road, need/purpose of works, proposed works (list/explain activities), number of villages (approx. population) affected, describe communities to be affected]

ETHNIC MINORITY ISSUES SCREENING

Screening Questions	Yes	No	Explanation/Comments
1. Are there IP and/or ethnic minority groups present in the subproject area (i.e. road alignment and its right of ways)? 2. If yes, how many different groups?			
3. Do they live in mixed communities with non-ethnic minority people?			
4. Do they maintain distinctive customs or economic activities?			
5. If yes, do any of these customs or economic activities may make them vulnerable to hardship?			
6. Will the project restrict their economic or social activity?			
7. Will the project affect or change their socio-economic and cultural integrity?			
8. Will the project disrupt their community life?			
9. Will the project positively affect their health, education, social activity, livelihoods or security?			
10. Will the project negatively affect their health, education, social activity, livelihoods or security?			
11. Will the project alter or undermine the recognition of their knowledge?			
12. Will the project preclude customary behaviour or undermine customary institutions?			
13. If impacts on ethnic minority groups are expected:			
14. Are there sufficient skilled staff in the Designated Implementing Agency for preparing an assessment and identifying suitable mitigation measures (preparing an Indigenous Peoples Development plan [IPDP]?			
15. Are training and capacity-building interventions required prior to IPDP preparation and implementation?			

16. In case of no disruption to ethnic minority community life as a whole, will there be loss of housing, land, crops, trees or access to resources owned, controlled or used by ethnic minority households?			

Anticipated Impacts on Indigenous People

Project activity	Anticipated positive effect	Anticipated negative effect

PROJECT CATEGORIZATION FOR IP (including ETHNIC GROUP) IMPACTS

Based on the definition of impacts in ESOM what is the category?

[ ] **CATEGORY B** – Impacts related to land acquisition only, specific action to be included in the ARAP is required

[ ] **CATEGORY C** – No impact, no IPDP or Specific Action is required, generic social impact mitigation specifications will apply

Distributed to	Yes	No	Date
MRD			
MPWT/PDRD			
MOE			
GDR			
Others (list below)			

IP Screening Form compiled by:

Name:	Duty:
Signature:	Date:

IP Screening Form verified by:

Name:	Duty:
Signature:	Date:

FORM C: Land Acquisition & Resettlement (LAR) Screening Form for Road Maintenance

Province:	District:	Location – sketch map attached (Mark ✓)	
		☐ YES	☐ NO
Road Name:	Road No:	Link No. (details)	
TYPE of works/activities (Mark ✓)	☐ Provincial road maintenance	☐ District road maintenance	

Brief description of works/activities and project area: [i.e. length of road, need/purpose of works, proposed works (list/explain activities), number of villages (approx. population) affected, describe communities to be affected]

LAND ACQUISITION AND RESETTLEMENT (LAR) SCREENING

Screening Questions	Yes	No	Explanation/ Comments
▪ Is land acquisition likely to be necessary?			
▪ Is the site for land acquisition known?			
▪ Is the ownership status and current usage of the land known?			
▪ Will easements be utilized within an existing right-of-way?			
▪ Are there any non-titled people who live or earn their livelihood at the site or within the right-of-way?			
▪ Will there be loss of housing?			
▪ Will there be loss of agricultural plots?			
▪ Will there be losses of crops, trees, and fixed assets?			
▪ Will there be loss of businesses or enterprises?			
▪ Will there be loss of incomes and livelihoods?			
▪ Will people lose access to facilities, services, or natural resources?			
▪ Will any social or economic activities be affected by land use-related changes?			
▪ If involuntary resettlement impacts are expected:			
▪ Will coordination between government agencies be required to deal with land acquisition?			
▪ Are there sufficient skilled staff in the Executing Agency for resettlement planning and implementation?			
▪ Are training and capacity-building interventions required prior to resettlement planning and implementation?			

INFORMATION ON AFFECTED PEOPLE
Any estimate of the likely number of households that will be affected by the project? **[ ] Yes [ ] No**
If yes, approximately how many households?
Are any of the households vulnerable i.e. households that (i) are headed by divorced or widowed females with dependents and low income; (ii) include disabled or invalid persons; (iii) include persons falling under the generally accepted indicator for poverty as defined by the Ministry of Labour and Social Welfare, or the landless; and/or, (iv) are elderly with no means of support? **[ ] Yes [ ] No**
If yes, approximately how many households?
If yes, briefly describe their situation:
Are any of the households from ethnic minority groups? **[ ] Yes [ ] No**
If yes, briefly describe their situation:
PROJECT CATEGORIZATION FOR RESETTLEMENT IMPACTS
Based on the definition of impacts in the Environmental and Social Operations Manual, what is the category?
[ ] **CATEGORY B** – marginal or non-significant resettlement impact, an ARAP is required
[ ] **CATEGORY C** – minimal or no resettlement impact, no resettlement is required, generic social impact mitigation specifications will apply

Distributed to	Yes	No	Date
MRD			
MPWT/PDRD			
GDR			
MOE			
Others (list below)			

LAR Screening Form compiled by:	
Name:	Duty:
Signature:	Date:
LAR Screening Form verified by:	
Name:	Duty:
Signature:	Date:

Appendix A4

Generic Environmental Management Plan

Table A4.1 Generic Environmental Management Plan (EMP).

Activity	Potential Impacts	Mitigation Measures
Resurfacing of pavements and associated pavement works and repair and surfacing of shoulders	▪ Possible pollution of water ways or ground water by bituminous products or solvents.	▪ Inform and/or remind PAHs and communities well in advance of the project, potential impacts, mitigation measures and time frame with a leaflet on the project provided. ▪ Strict control to avoid spills and contract or to have adequate clean up procedures.
	▪ Works can have temporary effects on irrigation or washing/drinking water supplies.	▪ Contractor to take into account local water uses.
	▪ Dust noise and vibrations.	▪ Specification to include for watering in the contract. ▪ Control of contractor's equipment noise and vibrations, especially close to settlements. ▪ Construction activities will be avoided at night, close to residential areas.
	▪ Effect on traffic and pedestrian safety.	▪ Contractor to employ safe traffic control measures and limit possible disruption to non-construction traffic.
Transport of Materials.	▪ Air and noise pollution for any nearby settlements and damage to existing roads. ▪ Dust generated from civil work and transport of construction materials.	▪ Control contractor's vehicle speeds, noise and weight of loads and control dust and flying debris by covering loads or wetting material if necessary. ▪ Use locally available construction material wherever possible to minimize transport distances. ▪ Contractor to regularly water the roads to prevent from dust, especially in community or urban area.
Materials stock piling on shoulders	▪ Possible pollution of water ways by solids. ▪ Possible impacts on road users safety because construction waste was disposed on the carriage way.	▪ Choose appropriate location for materials stockpiling well away from any waterways, irrigation or washing/drinking water supplies. ▪ Avoid encroachment on carriageway. ▪ Preserve trees during material stockpiling.
Borrow areas	▪ Quarries and borrow pits can have impacts on soils, water and the natural environment.	▪ Locate borrow areas away from any residential or other environmentally sensitive areas such as hospitals, intensive livestock production areas or wildlife breeding areas. ▪ Also avoid farmlands or forests as much as possible. Restrict work to daylight hours and limit the size and frequency of any blasting. ▪ Borrow areas will be restored and re-vegetated.

Table A4.1 (Cont'd.)

Activity	Potential Impacts	Mitigation Measures
Work site installation (if needed)	▪ Degradation of plant cover ▪ Soil and water pollution (trash dumping, oil spills)	▪ Choose location of work site installations in order to reduce impacts on the environment of these sites and the people living in the immediate vicinity. ▪ Fuel and oil, and bitumen storage areas will be located well away from any watercourses. ▪ These storage areas will be provided with interceptor traps so that accidental spills do not contaminate the environment. ▪ All waste oil will be stored and disposed of acceptable oil industry standards. ▪ Wherever possible, refueling will be carried out at a fuel storage area and not permitted within or adjacent to watercourses. ▪ On completion of the work, contractor shall restore the sites to their original state.
Road safety and traffic management	▪ Road accidents due to in adequate control of vehicle speeds and signs/signals	▪ Prepare/finalize an action plan for each sub project in close consultation with local agencies. ▪ As experienced from RAMP, contractor should install road traffic signs during construction (for example, diversion), construct proper and safe diversions, and employ sufficient flagmen to direct the traffic. ▪ Where there are open manholes or excavation for side drains in front of shops/houses, contractor shall then: 1) cover them quickly or provide proper and clear sign to avoid danger to cyclists or pedestrians, especially at night time, and provide temporary access road to the shops/houses to maintain normal business and living activities in the communities. The implementation results should be reported periodically.

Appendix A5

Environmental and Social Baseline Conditions

Appendix A5 Environmental and Social Baseline Conditions

The Cambodian road network covers about 35,500 km, including approximately 4,000 km of national roads, 3,500 km of provincial roads, and 28,000 km of rural and strategic roads (ADB, 2002). The roads have a significant number of bridges, about 4,000 on the primary roads alone. Years of war have left the Cambodian road network in a very poor state, and large floods in 1996, 2000 and 2013 caused extensive damage. A road condition survey in 2002 revealed that 28% of the network was in good or fair condition, 35% in poor condition, 28% in bad condition, and 6% under reconstruction or rehabilitation (ADB, 2002).

Most of the road construction activities in Cambodia are geared towards rehabilitation of the existing road network, including repair or replacement of existing bridges. Spatial planning and improved alignment has not been a priority and little attention was paid to improved management of hydrology and hydraulics of the floodplain. In 2006 a masterplan for road development was prepared (JICA, 2006). The masterplan does not focus on the interaction between roads and floods or possible impacts of roads on the floodplain system.

Rehabilitating and strengthening the resilience of rural infrastructure is considered a priority investment. The Ministry of Economy and Finance (MEF) have advised that infrastructure investments under the SEA DRM and, in particular, the Cambodia DRM Project should focus on the rehabilitation of rural roads. Consequently, the RGC has requested assistance from the World Bank to fund the repair and rehabilitation of vital road segments in provinces along the Mekong and Tonlé Sap to withstand regular flood events. Such rehabilitation of roadworks could help reduce recurring repair and reconstruction costs.

While the type of proposed sub-project investments is known (i.e., rehabilitation of secondary provincial rural roads), the specific locations and engineering designs are not known, therefore a framework approach will be used. The SEA DRM Program was given a safeguards Category “A” (OP/BP 4.01), largely because the specific scope and scale of the investments were unknown, and because Myanmar is one of the three countries. Although site-specific locations for the proposed Cambodia SEA DRM sub-projects are unknown, the nature of the investments is now known and they are unlikely to have any significant environmental and social impacts, and would be better suited to a Category “B” classification.[15]

The following province-by-province sections provide a glimpse of the environmental and socio-cultural conditions in each of the six provinces where the MRD have proposed to rehabilitate rural roads. Each province has its own rich and diverse ethno-cultural characteristics which have guided its development. In terms of the presence of indigenous people (IP), the diversity of its ethnic groups is no different. It is difficult to provide reliable demographic and ethnographic information on province-by-province IP due to its recent history of genocide, war, massive migration, and forced resettlement. However, the 1998 Cambodian Population Census identified 17 different indigenous groups, Table A5.1 provides a summary list of ethnic groups in the six proposed sub-project provinces. Based on spoken language, the census estimated the indigenous population at about 101,000 people or 0.9%

[15] Category “B” classification is applied to sub-projects which have the potential for adverse environmental impacts on human populations or environmentally important areas (i.e., wetlands, forests, grasslands, and other natural habitats) but are less adverse than those of Category “A” projects. These impacts are site-specific, few if any of them are irreversible and, in most cases, mitigation measures can be designed. Category “B” sub-projects are guided by applicable World Bank safeguard instruments similar to Category “A” but with narrower scope.

of the then total population of 11.4 million. Empirical research, however, suggests that the figure is most likely underestimated and could be as high as 190,000 people or 1.4% of Cambodia's population.

Table A5.1 Ethnic groups in the sub-project area by province.

Ethnic Groups	Provinces					
	Steung Treng	Kratié	Kampong Cham	Siem Reap	Kandal	Tboung Khmum
Khmer	✓	✓	✓	✓	✓	✓
Laotian	✓	-	-	✓	-	-
Kavet	✓	-	-	-	-	-
Kuoy	✓	✓	-	-	-	-
Vietnamese	✓	✓	✓	✓	✓	-
Chinese	✓	-	✓	✓	-	-
Phnong	✓	✓	-	-	-	✓
Lun	✓	-	-	-	-	-
Bunong	-	✓	-	-	-	-
Mil	-	✓	-	-	-	-
Khonh	-	✓	-	-	-	-
Kraol	-	✓	-	-	-	-
Steang	-	✓	-	-	-	-
Stieng	-	-	✓	-	-	-
Thamoun	-	✓	-	-	-	-
Brao	✓	-	-	-	-	-
Kreung	✓	-	-	-	-	-
Cham	✓	-	✓	✓	✓	-
Samre	-	-	-	✓	-	-
Tum Puon	✓	-	-	-	-	-
Kachock	✓	-	-	-	-	-
Jarai	✓	-	-	-	-	-
Thai	✓	-	-	-	-	-

The section below provides province-by-province background information related to the environmental and social context for the proposed sub-projects located in six provinces of Cambodia. At time of writing, the MRD provided a long list of over seventy proposed sub-projects in six provinces. However, the Cambodia DRM Project will only be able to rehabilitate a few of the proposed sub-projects in each province and without specific locations identified for roadworks rehabilitation, it is only possible to provide generalized contextual information on a province-by-province basis.

Steung Treng Province

Environment – Steung Treng is a north-eastern province of Cambodia. It shares borders with Ratanakiri to the east, Preah Vihear to the west, and Kratié and Kampong Thom to the south and Lao PDR to the north. It encompasses an area of 12,061 square kilometers (km^2) with coordinates

13°31' N and 105°57' E. The province is subdivided into five districts, including one municipality, comprising 4 quarters, 30 communes and 128 villages. The five districts are Sesan, Siem Bouk, Siem Pang, Thala Barivat, and Stung Treng. The provincial capital is Steung Treng, which is located to the west and close to the joining of the Mekong and Se Kong rivers. Steung Treng province is characterized by its extensive forests, scattered islands, plateaus and mountainous areas. Most significantly, the province is positioned at the intersection of four rivers: the Mekong, Se Kong, Se San, and Srea Pok. The rivers, characterized by deep pools, rocky beds and sandy islands create a rich aquatic habitat that serves as spawning and breeding grounds for a diversity of fish species and other animals. Steung Treng's land can be divided into five categories, some of which may overlap: forest lands (928,000 hectares [ha]), agricultural lands (126,836 ha), residential lands (103,217 ha), roads (2,400 ha), river, streams, and canals (41,094 ha), and fallow lands (13,200 ha)[16]. There are several protected areas found in Steung Treng, including a 37 kilometer stretch of the Mekong River (5 km north of Steung Treng city and 3 km south of Lao PDR) and an area of 14,600 ha as part of a Ramsar Site 17. Approximately 13,000 people are living at the Ramsar site. Another important protected area in the province is Virachey Natural Park (332,500 ha) which crosses into Ratanakiri province.

Climate and Extreme Weather – Steung Treng's climate is governed by monsoons. The annual temperatures range from 17° to 39° Celsius (C). The province's climate can be divided into three seasons: cool season (November – March), hot season (March – May), and rainy season (May – October). Rainfall can range from 1,800 millimeters (mm) to 2,042 mm per year. Both flooding, especially flash flooding, and drought are chronic events in Steung Treng. Although flooding is relatively minor compared to other provinces, these events adversely impact the livelihoods of the people, especially in relation to their crop production, loss of livestock, health and infrastructure. Damage and reparation costs due to floods in 2000 to 2002 ranged from 817,400 USD to 337,240 USD[18].

Social – The total population of Steung Treng province is 111,734 people, constituting 0.7% of Cambodia's population. The population has a low population density of 10 people per square kilometer (ppl/km^2) and is divided between 50.5% female and 49.5% male. As the population density is low and the province is endowed with natural resources, the immigration rate is very high. Almost twenty percent (19.4%) of the province's current population has migrated from outside the province. Fourteen (14) ethnic groups are currently living in the province. These ethnic groups include: Khmer (64,271 people), Laotian (4,928 people), Kavet (2,064 people), Kuoy (1,588 people), Vietnamese (674 people), Chinese (458 people), Phnong (284 people), Lun (359 people), Brao (345 people), Kreung (210 people), Chams (85 people), Tum Puon (18 people), Kachock (14 people), and Jarai (5 people). Despite the appreciable ethnic diversity, livelihood strategies are comparatively similar. Livelihood strategies include rice farming, fishing, animal husbandry, and gathering non-timber forest products (NTFPs). A majority (85%) of the population live in rural areas of the province and depend on agricultural farming for their livelihoods. Steung Treng is one of the poorer provinces in Cambodia with flooding, drought and over-extraction of natural resources. The province's economy is largely based on the agricultural sector. Plantations such as rubber, timber and cashew nuts are located across the province. Other key industries in the province include livestock rearing, fishing and sericulture.

[16] http://www.mrcmekong.org/assets/Publications/Consultations/SEA-Hydropower/10.Cambodia-Baseline-Assessment-Perspective28Jan.pdf

[17] http://www.ramsar.org/sites-countries/the-ramsar-sites

[18] https://portals.iucn.org/library/efiles/documents/2006-016.pdf

Developing the tourism sector, efficient infrastructure, road accessibility, and trade will give rise to opportunities for economic growth and poverty reduction.

As discussed in Appendix A10, a number of issues and concerns were relayed during community consultation in relation to the environment, natural resources conservation and degradation of land which may occur as a result of sub-project implementation.

Kratié Province

Environment – Kratié is a province located in the northeast of Cambodia. The province encompasses an area of 11,094 km^2 with coordinates of 12°29' N and 106°1' E. Kratié borders the provinces of Stung Treng to the north, Mondulkiri to the east, Kampong Thom and Kampong Cham to the west, and Tboung Khmum and Viet Nam to the south. The province is subdivided into five districts and one city, Chhloung, Preaek Prasab, Sambour, Snuol, Chitr Borie, and Krong Kratié. The provincial capital is Kratié, located in Kratié District. The Mekong River bisects the province from north to south resulting in narrow floodplains. Most of the province is covered in dense forests, though some are more open and generally consist of deciduous trees that lose their leaves during the dry season. The province also consists of undulating uplands and lowlands. Land use patterns in the upland area of Kratié province consists of forest, grazing, shrub and farming land. Due to economic development pressures, the use and control of the forests have significantly altered. Forest lands have been converted into plantations and rice paddies by farmers. Agriculture in Kratié, while not as abundant as in other provinces, continues to grow and produces maize, cassava, sesame, sweet potato, sugarcane, soya beans, and more[19]. There are two protected areas in Kratié province: Keo Seima Wildlife Sanctuary and Snoul Wildlife Sanctuary. The Keo Seima Wildlife Sanctuary encompasses over 298,160 ha, although more than half is within Mondulkiri province. Adjacent to the Keo Seima Wildlife Sanctuary is the Snoul Wildlife Sanctuary. The Snoul Wildlife Sanctuary in Kratié encompasses 61,943 ha. In 2008, a 55 kilometer stretch of the Mekong River in Kratié and Stung Treng provinces, was proposed as a "special management site" due to its high biodiversity value. Most recently, in April 2016, the Cambodian government proposed to register five new protected forests, amounting to a total of about 950,000 ha. One of the protected areas would include the Prey Long forest residing in Kratié, Kompong Thom, and Stung Treng provinces.

Climate and Extreme Weather – Kratié province follows a monsoonal climate, with a cool season from November to March, a hot season from March to May, and a rainy season from May to October. Temperatures may range from 22° Celsius (C) to 36° C annually. The province's climate has three seasons: a cool season from November to March (22° – 28°C), a hot season from March to May (28° – 36°C), and a rainy season from May to October (24° – 32°C, with humidity up to 90%). The annual flow of the Mekong River in Kratié province from 1985 to 2009 has been determined to be 401 cubic kilometers (km^3)[20]. The Mekong River may overflow its riverbanks by as much as 4 meters (m) during the rainy season, resulting in frequent and prolonged flooding. The peak of the flood is during September where the monthly discharge averages in excess of 36,000 cumecs (cubic metres per second)[21]. High flood years in Kratié include 1961, 1978, and 2000. However, the Mekong floods at Kratié have been declining for the past two decades, and in 2012, flood volumes were almost 40%

[19] http://pdf.usaid.gov/pdf_docs/Pnadn800.pdf

[20] http://www.mrcmekong.org/assets/Publications/basin-reports/Annual-Mekong-Flood-Report-2012.pdf

[21] http://www.mrcmekong.org/assets/Publications/report-management-develop/MRC-IM-No2-the-flow-of-the-mekong.pdf

below the normal rate. Kratié is increasingly experiencing severe drought, which has affected rice production and other agricultural crops. Notable drought years have included 1977, 2004, and 2008.

Social – The population of Kratié province is 318,523 people; accounting for 2.4% of the total population of Cambodia. The province's population is split between 50.3% female and 49.7% male[22]. Approximately 70% of residents live along the Mekong River and the remaining 30% live in mountainous areas. The majority of the population are Khmer, the largest ethnic group in Cambodia. There is a significant Vietnamese minority living in Kratié. An estimated 8% of the province's population is comprised of indigenous people (IP). The indigenous ethnic minorities constitute seven groups: Bunong, Kouy, Mil, Khonh, Kraol, Steang, and Thamoun. The largest indigenous ethnic group is the Steang accounting for a population of 6,541 people, while the Khonh minority ethnic group has a population of 743 people. The Kraol ethnic group represents 4,202 people, the Mil ethnic group 1,697 people, and Thamoun ethnic group 865 people, respectively[23]. The majority of Kratié's residents are subsistent farmers or fishers. Around three-quarters (78%) of the population are engaged in agriculture, both for livestock (i.e., poultry, swine and cattle) and crop production. Crops include cassava, maize, sesame, sweet potato, sugarcane, soya beans, and more[24]. Tobacco is one of the major products of Kratié, representing almost twenty percent (18%) of Cambodia's crop. Around 20,000 ha are dedicated to rubber plantations where the latex is exported to countries such as Viet Nam, Japan, and Korea. Kratié's proximity to both Phnom Penh and Viet Nam provides efficient access and opportunities for trade between both growth poles. Other key industries include a growing tourism sector and natural attractions, contributing over USD 3 million per year. There is potential for hydro-electric power and mineral resources.

As discussed in Appendix A10, Kratié province has indigenous people (IP) located within proximity of the proposed sub-projects. Special attention must be given to IP in relation to their traditional land and forest which may be affected due to project development. IP expressed concerns about forest land encroachment after the project implementation as well as impact on their belief systems and traditional practice, and decision making.

Kampong Cham Province

Environment – Kampong Cham is located in the central lowlands of Cambodia and is bordered by Kratié to the north-east, Prey Veng to the south, Kampong Chhnang to the west and Kampong Thom to the northwest as well as Viet Nam to the east. The province covers an area of 4,549 km^2 with coordinates 11°59' N and 105°27' E. Kampong Cham is subdivided into 10 districts: Batheay, Chamkar Leu, Cheung Prey, Kampong Siem, Kang Meas, Kaoh Soutin, Prey Chhor, Srei Santhor, Stueng Trang, and Krong Kampong Cham, with Kampong Cham serving as the provincial capital. The majority of the province consists of lowlands with the Mekong River flowing through the province. Agriculture and industrial crops consist of 413,035 ha of land, while forest area represents 300,000 ha, flooded land 312,860 ha, plain land 270,000 ha, and red soil 97,000 ha [25]. There are currently no protected areas in Kampong Cham province.

[22] https://www.statsmonkey.com/sunburst/37217-total-population-statistics-of-Kratié-by-gender-cambodia-stats.php

[23] http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Phnom_Penh/pdf/ethnolinguistic_groups_of_cambodia_poster.pdf

[24] http://pdf.usaid.gov/pdf_docs/Pnadn800.pdf

[25] http://www.cambodiainvestment.gov.kh/kampong-cham-province.html

Climate and Extreme Weather – Kampong Cham's climate is governed by monsoons. The average temperature is around 27° C with a minimum temperature of about 16° C. December and January are the coolest months during the year. The province's three seasons are: the cool season from November to March (17°-27°C), hot season from March to May (28° – 36°C), rainy season from May to October (25° – 35°C, with humidity up to 90%). Kampong Cham is regularly hit by flash flooding and has endured severe flooding and drought incidents in the recent past. Overall, the province suffers more from droughts than floods. However, in 2014, Kampong Cham suffered the second highest death rate in Cambodia because of flooding that began in July and lasted until the end of August. In June 2016, the province experienced increasing water shortages that had not been seen since 1983[26]. Landslides are also a common occurrence in Kampong Cham and have contributed to infrastructure damage, especially roads.

Social – Kampong Cham's total population is currently 928,694 people although, before it was split into two provinces (Kampong Cham and Tboung Khmum) it's population was 1,679,922 people, comprised of 818,662 males and 861,330 females. Much like the majority of Cambodia, Kampong Cham's major ethnic group are Khmer as well as ethnic minorities such as Vietnamese, Chinese, and Cham groups. Kampong Cham's strategic location, open policies and trading activities has transformed the province into the transportation hub for Cambodia, Thailand and Viet Nam. Transportation access to the province includes a comprehensive road network, railway, and river boats. Kampong Cham's poverty headcount index is 37.2%[27], placing it above Cambodia's poverty rate. Generally, people make their living from rubber and cashew nut plantations, fishing, and farming. Potential investment opportunities include more value adding agro-industry, such as rice plantation, cassava (tapioca), sugar cane, durian, and palm fruit. There is also potential for tourism because of the province's accessibility and historical, cultural attractions, as well as natural scenery.

Tboung Khmum Province

Situation – Tboung Khmum is located on the central lowlands of the Mekong River. The province covers an area of 4,928 km^2 with coordinates of 11°59' N and 105°27' E. Tboung Khmum borders Kampong Cham province to the west, Kratié province to the north, Prey Veng province to the south, and Viet Nam to the east. The province is divided into six districts and one city, Dambae, Krouch Chhmar, Memot, Ou Reang Ov, Ponhea Kraek, Tboung Khmum, Krong Suong and its capital and largest city, Suong. Tboung Khmum used to be part of Kampong Cham province, until December 31st, 2013 when a Royal Decree was signed by King Norodom Sihamoni to split the province in two. Due to the province's recent establishment, very little provincially aggregated data is available.

As discussed in Appendix A10 during the community consultations, the main social issues concerned were that of acquisition of land occupation and its impact on different populations. Land acquisition could be on a temporary or permanent basis as a result of the road rehabilitation. However, it can be resolved through a clear mechanism of land donation or other land acquisition guidelines.

Environmental impacts refer to the engineering environmental design such as borrow pit of soil excavation for the project (see Appendix A10).

[26] http://www.phnompenhpost.com/national/drought-highlights-intl-water-day

[27] Poverty Profile 2004 EN.pdf

Siem Reap Province

Environment – Siem Reap is located in the northwest of Lao PDR and borders the provinces of Oddar Meanchey to the north, Preah Vihear and Kampong Thom to the east, Battambang to the south, and Banteay Meanchey to the west. Siem Reap is 10,299 km^2 in area, making it the 10th largest province in Cambodia, with coordinates of 13°21' N and 103°51' E. The province is divided into 12 districts, 100 communes, and 907 villages. The districts are Angkor Chum, Angkor Thum, Banteay Srei, Chi Kraeng, Krahlanh, Puok, Prasat Bakong, Soutr Nikom, Srei Snam, Svay Leu, Varin and Siem Reap, with Siem Reap being the provincial capital. The province, in general, consists of typical plain wetland areas, rice fields and other agricultural plantations, especially in the south. The north is comprised of undulating area covered with forests. Rising from Phnom Kulen, the Siem Reap river meanders through the northern part of Siem Reap Province and eventually flows into the Tonlé Sap Lake. The total agricultural land is 216,178 ha, and forestry area consists of 476,824 ha, accounting for 45.2% of the total area of Siem Reap. Wildlife sanctuaries and protected areas include the following: Angkor Scenery Protected area (10,800 ha), Beung Pe Wildlife Sanctuary (245,500 ha), Kulen Prom Tep Wildlife Sanctuary (402,500 ha), and Kulen National Park (37,500 ha).

Climate and Extreme Weather – Siem Reap's climate is controlled by the monsoons. In general, the hottest month is April, the coolest month is December, the wettest month is September, and the driest month is January. The rainy season ranges from May to October, whereas dry periods include the months of January, February and December. The annual average temperature is 27.1°C, with the coldest temperature being 26°C and the warmest temperature being 31°C. Approximately 1,310 mm of precipitation falls annually. Siem Reap is also exposed to flooding and increasingly frequent and prolonged droughts. Specifically, from 2009 to 2012, during October and November, heavy rain (up to 140 mm per day) caused flash flooding, resulting in significant damage to agriculture and infrastructure in Siem Reap[28].

Social – Siem Reap has a total population of 896,309 people, accounting for 6.7% of the total Cambodian population. The province is roughly split between 51.1% female and 48.9% male[29]. The majority of the province's population (95%), are Khmer interspersed with Vietnamese, Chinese, Cham minorities and several other ethno-linguistic minority groups found in the hill tribes in the northeast. Tourism is the principle income of Siem Reap. An estimated 50% of jobs in Siem Reap are related to the growing tourism industry, significantly affecting the livelihoods of the population. Despite tourism providing jobs and opportunities, incomes are consistently low and Siem Reap is one of the three poorest provinces in Cambodia, with 47% of the population living below the provincial poverty line[30]. There are high costs to enter the tourism industry due to insufficient financial resources or education levels. Contributing factors to the poverty are poor soil fertility, small agricultural landholdings, and lack of technological or methodological knowledge for animal raising and vegetable cultivation. However, opportunities are open in the province's other key industries, which include handicrafts, food processing, and more recently, construction.

[28] http://www.mrcmekong.org/assets/Publications/basin-reports/Annual-Mekong-Flood-Report-2012.pdf

[29] https://knoema.com/CBDGS2008/demographics-statistics-of-cambodia-2008?region=1000170-siemreap

[30] http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/08/12/000356161_20100812014703/Rendered/PDF/E25190v10P09701ronmental0Assessment.pdf

Kandal Province

Environment – Kandal is one of the smaller provinces of Cambodia. This province completely surrounds the Cambodian capital Phnom Penh, but does not include it. Kandal's capital is Ta Khmau and is around 20 km south of Phnom Penh. The province encompasses an area 3,568 km^2 with coordinates of 11°22' N and 105°12' E. Kandal is located in the middle-south of the country and is bordered by Kampong Chhnang and Kampong Cham to the north, Prey Veng to the east, Kampong Speu and Takeo to the west as well as Viet Nam to the south. The province is divided into 11 districts, 146 communes, and 1,087 villages. The districts are Kandal Stueng, Kien Svay, Khsach Kandal, Kaoh Thum, Leuk Daek, Lvea Aem, Mukh Kamphul, Angk Snuol, Phpnhea Lueu, S'ang, and Ta Khmau. The province consists of the typical plain wet area of Cambodia, covered in rice fields and other agricultural plantations. The average altitude of the province is less than 10 m above sea level. The province also features two of the biggest rivers in the country: The Tonlé Bassac and the Mekong, allowing for rich and accessible water resources. Freshwater fish yields 79,473 tons per year. Agricultural land, mostly consisting of rice, covers 175,737 ha. There are currently no protected areas in Kandal province.

Climate and Extreme Weather – Kandal has a monsoon climate which is divided into three seasons: the cool season from November to March (22° – 28°C), the hot season from March to May (28° – 36°C), and the rainy season from May to October (24° – 32°C, with humidity up to 90%). Rainfall averages 1,686 mm per year. The highest recorded depth of flood inundation in this province was 3.1 m in agricultural fields. Kandal is subject to annual flash flooding, which has caused significant damage to infrastructure and agriculture in 2011 and 2012. In September 2002, Kandal experienced simultaneous floods and drought and was one of the worst hit provinces. Floods and drought levels vary within Kandal. For example, Lvea Em, a district of Kandal, is flooded for six months every year so the population has resorted to building their houses on stilts[31].

Social – The current population in this province is 1,280,781 people, comprising of 9% of the country's total population. The province is divided between 621,948 males and 658,833 females. The population density of Kandal is 359 people per km^2. The ethnic majority group found in the province are Khmer interspersed with ethnic minorities. Kandal's location, bordering Viet Nam as well as easy access to Phnom Penh, permits for many business and commerce opportunities, resulting in a higher per capita consumption than the national average. Almost two-thirds (60%) of workers live in the province capital, Ta Khmau, and commute to Phnom Penh for work. The garment and footwear industries, which employ more than 500,000 workers, are major industries in Kandal. However, due to fertile soils and abundant water resources, farming and fishing also contribute to the province's income.

[31] file:///Users/sabinebailey/Downloads/a_survey_of_rural_cambodian_households%20vulnerability%20and%20adaptation%20march%2005.pdf

Appendix A6

Key Stakeholders

Appendix A6 Key Stakeholders

The RGC supports the Cambodia DRM Project and supports actions to improve participation, public consultation and information disclosure. Implementation relies on strategies, legislation and procedures that are in place in Cambodia and will be supplemented - as necessary - with World Bank safeguards policies for participation, consultation and disclosure concerning the safeguards aspects of the sub-project as described in the ESMF, including procedures narrated in the IPPF and RPF.

The sub-project will pursue a process of meaningful consultation and engagement that includes national and local government, and relevant stakeholders. The sub-project supports consultative decision making by ensuring public access to information on environmental and social aspects. In addition to free, prior and informed consultation related to potential environmental and social impacts (i.e., positive or adverse effects), the consultation process should inform and explain the proposed sub-project(s) to affected communities, gather information from impacted populations, and conduct gender sensitive awareness raising.

Table A6.1 lists national and local government bodies, key stakeholders, various public entities and different populations who may be involved directly or indirectly in the sub-project.

Table A6.1 Stakeholders and various publics.

Sl. No.	Entity	Key Stakeholder
1	Government and regulatory agencies	MRD, MEF/GDR, MOE, MOWRAM, PDRD, and Districts
2	Private sector companies	Private sector companies with the technical expertise and capacity, engineering capability to implement the sub-projects. These may include both national and international companies.
3	Civil society organizations	International, national and regional non-governmental organizations (e.g., WWF, Flora, Caritas, NGO Forum, Oxfam Cambodia, Plan International, SNV), including environmental and indigenous people's organizations (Khemara).
4	Local stakeholders	Local civil society organizations including community-based organizations (CBOs), municipal and district-level committees, village communes and unions, and other local groups.
5	Academic and research institutions	Environmental research groups, universities and technical institutes.
6	Beneficiaries and affected communities and households	Sub-project beneficiaries will be consulted at community level during the preparation phase. In addition, potential sub-project affected households will be consulted on the potential impacts and mitigation measures. Particular attention will be given to different populations (i.e., ethnic minorities and vulnerable groups – women and female/male youth and children, men, the elderly and disabled, etc.) to enhance their benefits and avoid or mitigated adverse impacts.
7	Indigenous peoples	If proposed sub-projects are planned in areas where ethnic minority communities are located then, a process of free, prior and informed consultation will be undertaken with communities in the region of influence (see IPPF).

Appendix A7

Participatory Social Assessment Guidelines

Appendix A7 Participatory Social Assessment Guidelines

Community consultations will be based on free, prior and informed consultation to gauge support for the proposed sub-project(s). Objectives of community consultations are to: (i) provide background information to various stakeholders and different populations; (ii) receive feedback from civil society organizations (CSOs) including non-government organizations (NGOs), community based organizations (CBOs), local leadership and other publics on issues and perceived concerns; and, (iii) discuss methods and resources to maximize the proposed sub-project initiatives and activities' environmental and social performance. These participatory and consultative meetings will provide MRD with an opportunity to discuss grievance redress mechanisms and monitoring for those different populations and communities which may be impacted adversely from implementation of the proposed sub-projects.

Ensuring that the sub-projects' impact assessment includes a participatory and gender-responsive social analysis is an important element of each stage or level of the project lifecycle. The starting point for effective gender mainstreaming in infrastructure sub-projects is to undertake the required gender analysis once specific proposed sub-project initiatives and/or activities' locations have been identified. A gender analysis typically involves examining potential impacts of the project intervention on women and men, and may include the collection of sex-disaggregated or gender-sensitive data. A gender analysis examines the different roles, rights, and opportunities of men and women and relations between them (i.e., the economic and social relationships between females and males which are constructed and reinforced by social institutions). It also identifies disparities, examines why such disparities exist, determines whether they are a potential impediment to achieving results, and looks at how they can be addressed (USAID 2011). Measures must be proposed to address these issues, along with SMART (specific, measurable, achievable, relevant and time-bound) indicators to monitor the intended social benefits and development outcomes and risks of the sub-projects.

Conducting a gender analysis when designing a new project or activity will help to:

- Analyze gender roles in project design;
- Identify root causes of existing gender inequalities in that context so that they can be addressed in the project design;
- Identify different needs and priorities of men and women in both the near and long term;
- Collect sex-disaggregated baseline data;
- Avoid perpetuating traditional power imbalances; and
- Enhance the likelihood of strong and sustainable project results.

As indicated, MRD have proposed over seventy road sections for rehabilitation in six provinces. The Consultant visited two provinces, including Tboung Khmum and Kratié between 13-17 June 2016. One IP (i.e., Phnong ethnic group) village was identified in Kratié province and visited on 15th June 2016. In order to comply with the free, prior and informed consultation requirement and reduce the influence of local authorities, the Consultant arranged to meet with the IP village shortly after meeting with local authorities. The IP village is located in Koh Khnhaer Commune, Sambo District, Kratié Province and is situated at the end of one of the proposed sub-project road lines. The Kampong Phnong village chief accompanied the Consultant team but, was requested not to be present during the interviews. The selection of households was made randomly and walk-in guided interviews were

conducted with respondents. The Consultant team split into two groups with the female team leading interviews with female respondents and, the male team member interviewing male respondents.

Results of the IP village consultation are covered more thoroughly in the IPPF document which is appended to this ESMF. However, a few of the main findings are presented herewith to give the reader more contextual understanding as to how a rehabilitated and improved rural access road could affect different populations (i.e., ethnic minorities and vulnerable groups – women and female/male youth and children, men, the elderly and disabled, etc.) both positively and negatively (adversely).

All of the female respondents welcomed any road and bridge construction initiative because it would provide access to social infrastructure such as school, market and health facilities. Most of the female respondents had heard of or, possibly, joined community planning meetings to discuss the commune development plan, road construction and/or rehabilitation, health and sanitation awareness raising. When asked about issues pertaining to voluntary land or asset contribution, the respondents indicated that they had no reservation about contributing if the proposed road rehabilitation improved their prospects, livelihoods and well-being. An elderly female respondent indicated that their traditional culture supports cooperation and promotion of community well-being. The Consultant team noticed a high rate of alcoholism in the IP village and one elderly female respondent suggested that an improved road system enabled alcoholic people access to commercial alcohol (i.e., higher volumes) as opposed to consuming their traditional home-brewed alcohol. She indicated that alcohol poisoning and deaths had increased in the community in recent years.

Appendix A8

Stakeholder Consultation Objectives

Appendix A8 Stakeholder Consultations

Importance of Stakeholder Consultations

Public consultations occur at all stages of sub-project preparation and planning of feasibility studies and detailed design. Public participation and consultations take place through individual, group or community meetings. Additionally, different media may be used (e.g., public notice boards, official invitation letter, electronic communication including internet websites, email or cell phone) to disseminate information. To ensure that World Bank consultation and disclosure policies are followed, project affected people (PAP) and communities in the region of influence are engaged through free, prior and informed consultation to gauge support for the proposed sub-project(s). In this manner, stakeholders, various publics and different populations are consulted during several stages of sub-project preparation, including:

- **Project Identification**: preliminary consultations were conducted during sub-project identification whereby national and local government authorities were consulted to ensure that the Cambodia DRM Project aligned with national policies and legal frameworks, sectoral and local plans and strategies. Relevant stakeholders were consulted during development of the ESMF. Documented records of engagement and consultations for Tboung Khmum and Kratié provinces are located in Appendix A8 : Stakeholder Consultations;
- **Project Preparation**: consultations will be conducted during preparation of the feasibility and design studies to: (i) obtain detailed background information; (ii) conduct environmental and social surveys; and, (iii) informing as well as collecting opinions of key stakeholders, various publics and different populations on potential environmental and social impacts;
- **Project Implementation**: for sub-projects under World Bank Category "A" that might be nationally controversial, a Communication Plan including a grievance redress mechanism will be developed for the proposed sub-project(s) and implemented prior to implementation. Participation of local leaders in disseminating information and resolving any disputes will be important; and
- **Monitoring and Reporting**: national and local level government, stakeholders, various publics and different populations should participate throughout the proposed sub-project development, implementation and operational period. Participation mechanisms should be assessed during the feasibility and design phase.

Site-Specific Contextual Gender Information

Field visits were conducted from 13-17 June 2016 to Tboung Khmum and Kratié provinces and community consultations took place with a variety of local government and commune officials, civil society and different populations (see Appendices A9 and A10 for list of stakeholders consulted and stakeholder comments, respectively).

Depending on the location of the rural access road, people's livelihood activities vary from farming (i.e., rice cultivation, livestock rearing, seasonal mixed vegetative crops, and fishing) to non-farming related activities such as market sellers, migrant workers (mostly on cassava farms, factories, construction work). It is not surprising to find out that people living closer to district roads or markets are better off than those communities at the end of the road line. In Tboung Khmum province, the interviewed households living nearby the inspected road line (which is near the district area) own at least one motorbike for each household compared to the IP villagers in Kratié who share their means

of transportation with relatives. The other interesting observation is the billeting arrangement for their children's education. One respondent in Tboung Khmum said he rented a room and bought a motorbike for his child to study at the provincial school, while a respondent from the Kampong Phnouv IP village could only afford to send their child to stay in pagoda (usually at a small cost or rent free) and provide a bicycle to travel to school.

The Cambodian Gender Strategic Plan-Neary Rattanak IV (2014-2018), a national strategic document, informs the current decision-making process and notes challenges that women are facing. The plan stated opportunities for women to participate in decision-making processes in sectors such as economics, industry and energy; mines, urban management and transport. At sub-national level, women face a number of challenges to participate effectively in public and political spheres, especially workplace discrimination. Social perceptions of women as weak and less educated, general lack of family support in carrying out political work, and low salaries, exacerbate discriminatory attitudes of men towards women.

The public consultation meetings both at the national and community level were designed and conducted by the Consultant with a strong focus on gender and women considerations. This is reflected in the design of guided questionnaires, separate consultation meetings with gender working group in the MRD, sub-national agencies such as the District Women and Children Committee (DWCC) and Commune Women and Children Committee (CWCC), and separate female and male focus group discussions, in depth interviews with female participants and female-headed households by the Consultant's female team member.

Gender mainstreaming and awareness is gaining ground and gender considerations are being integrated into activities and plans ranging from national (Neary Rattanak IV to sector or ministerial gender working group) to subnational planning level. For instance, in the annual commune investment program, a gender section is included despite limitations on gender-disaggregated data related to domestic and gender-based violence, human trafficking data, or road fatalities/accidents.

Gender mainstreaming activities from national to commune levels are likely to require awareness-raising events and trainings. The commune investment plan reports on the number of women being trained and the number of trainings organized. Besides gender awareness-raising, there is an understanding that women need to attend meetings particularly commune planning meetings. This is largely due to the requirement of commune and district planning guidelines from National Committee for Sub-National Democratic Development (NCDD).

In the 14th June 2016 meeting with the Tboung Khmum Deputy District Governor and DWCC (i.e., the committee assigned to work on maternal and child health, community pre-school, hygiene/sanitation, gender equality and child protection), the Consultant team was informed that men and women are segregated into two focus groups so they can discuss and voice their concerns and priorities separately before they bring their development concerns from both parties to the main meeting. The current commune planning practice does reflect the initial stage of ensuring gender equality and women participation.

Nevertheless, it may be noted that women's participation in meetings does not necessarily represent an increase in women's decision-making power. The DWCC member respondent mentioned her participation in a dispute and settlement negotiation with a family potentially affected PAP by a road construction project. The PAP wife agreed to voluntarily donate bamboo trees in front of her house for the road rehabilitation project while her husband refused citing the economic value of the bamboo and

concern about the foregone earnings if they were donated voluntarily. The project team had to bypass the area and consider an alternative design.

During the public and community consultations (13-17 June 2016), the consultant held meetings with CBOs and female community members. The key concerns voiced included issues related to: (i) morbidity and mortality issues (i.e., maternal health and death); (ii) domestic and gender-based violence (GBV); (iii) sexual violence; (iv) temporary or seasonal migration (including rape cases on girls when their mother was working away from home or early travel to school were mentioned); and (v) and alcoholism. The concerns were brought mostly based on personal experience as a result of their day to day experience, encounters during their work and occurrences in their community.

The abovementioned gender-related findings can be further interpreted and put into actionable recommendations for the sub-projects, including:

- Inclusion of gender considerations in early stages of the project is highly recommended. This can be done by engaging gender expertise at project design and as an integral part of the implementation team. The involvement with MRD's Gender Working Group should be looked at for both technical expertise and the possibility for building synergies across projects within MRD. The link and information exchange between PDRD and gender focal points from both national and subnational government entities and CBOs should be strengthened. Once the proposed sub-project locations have been identified then, sufficient time and budget should be set aside to conduct a thorough gender-related analysis;

- Regarding the criteria of selection for road lines, in addition to the six criteria proposed by the World Bank, the analysis should consider ethno- and socio-cultural, demographic and socio-economic information pertaining to livelihoods and gender considerations to inform the roadworks section or package selection criteria. Representatives from the District Council and DWCC brought gender issues to light in proposed road lines. One of 11 proposed road lines is believed to be beneficial to women and vulnerable groups in terms of enabling them to access social infrastructure (such as health center and schools), which currently get cut off by poor road conditions;

- Ensuring equal participation amongst men and women in the planning process remains the key to informed sub-project development. The current participation mechanism guarantees women's involvement and this practice should be sustained. It should be noted that many consulted household members (mostly female respondents) complained about the lengthy process or gap between prior consultation and the actual implementation of the project. One villager said she was asked to join many meetings but the road construction has not been started. Therefore, any consultation with communities should be handled properly to avoid raising expectation. The community should be well informed about how the sub-project(s) will be implemented, what the outputs will be and what the expected benefits are (i.e., the reason for doing the sub-projects);

- The shift in decision making and balance of power between men and women is a gradual process which demands effort to be invested in further capacity building, knowledge and awareness-raising amongst women and, which should done by involving men so as to gain their support for more inclusive decision-making. The sub-projects could contribute to this gender mainstreaming process and women's empowerment in an incremental manner; and

- During consultation meetings, ideas and best practices from other projects involving and empowering women were explored. For instance, the practice of assigning a quota of female laborers during construction is very much agreed upon. In one of the Commune Council meetings, a Council Representative recognized the role of community involvement and, particularly, women's role in monitoring the quality of work by the road construction company. Therefore, it is suggested the role of community monitoring and reporting (particularly, women's potential involvement) should be well reflected in the construction contractor(s) terms of reference and tender documents.

Some best practices were identified during the public and community consultations and should be considered and/or written into subsequent sub-project contracts. These include:

- Contractors will not employ child labor on civil works contracts;
- Road shoulders will be sealed surface enabling carts with wheels;
- Capacity building of local contractors on gender and labor-based appropriate technology;
- Sex disaggregated database to track the use of local labor;
- Community contracts to women for sustainable road maintenance works;
- At least 50% women road side maintenance workers;
- All project roads with speed bumps in villages and road safety signage;
- A community-based road safety campaign with 50% women facilitators;
- Inclusion of HIV/AIDS and human trafficking prevention programs during and after construction; and

Climate change adaptation will include community-based work programs involving women in planting and caring for road-side trees and other plants.

Appendix A9

List of Stakeholders Consulted

Table A9.1 List of consulted stakeholders.

Date	Stakeholders	Methodology	Location
13 June 2016	MRD Provincial Department officers, Commune Councils, clerk, village chief	Arranged meeting with Q and A	Mean Commune, Tbuong Khmum Province
	People living along the proposed road line	Random household interviews; selection based on the location of households: the beginning, the middle, and the end of road line; 5 households were interviewed, comprising of a small business owner couple, an elderly housewife, a cake seller, a pregnant woman, a young farmer and fisherman, and a middle-aged farmer.	
	Handicap International Supported Local Health Clinic	Walk in meeting (non-arranged meeting)	
	Commune councils, clerk, village chief	Arranged meeting with Q and A	Roka Por Pram Commune, Tbuong Khmum Province
14 June 2016	Deputy district governor District Women and Children Committee	Arranged meeting with Q and A	District governor office, Tbuong Khmum Province
15 June 2016	MRD Provincial Department and commune representatives	Arranged meeting with Q and A	Kratié Provincial Department of MRD
	Commune councils, clerk, village chiefs, Commune Women and Children Committee, Representative from Agriculture Community, communities members from Sambo Commune and Koh Khnhaer Commune	Gender segregated focus group meeting: the men group led by PDRD official and Dr. Dok Doma and the women group coordinated by Ms. Seng Bopha. Resource mapping and focus group discussion.	
	Indigenous communities at Kampong Phnouv Village	Random household interviews, comprising of one woman-headed household, a housewife and seasonal migrant worker, an elderly housewife, a female farmer, a school teacher.	Kampong Phnouv Village, Koh Khnhaer Commune, Sambo district, Kratié Province

Table A9.1 (Cont'd.)

Date	Stakeholders	Methodology	Location
16 June 2016	CBO representatives from Chada (funded by Plan International), Flo working on IPs, Childfund, Samarita, and WWF	Arranged meeting with Q and A (the meeting was organized by the PDRD; however, the representatives from the department were not involved in the discussion to ensure lesser degree of influence and bias).	Kratié Provincial Department of MRD
	District governor District Women and Children Committee	Arranged meeting with Q and A	
17 June 2016	CBO representatives from Clean Water 1001 (Technical support from a French organization) and Khemara	Arranged meeting with Q and A (the meeting was organized by commune councils; however, the representatives from the councils were not involved in the discussion to ensure lesser degree of influence and bias).	Roka Por Pram Commune, Tbuong Khmum Province

Appendix A10

Stakeholder Consultations Responses

Appendix A10 Stakeholder Consultations Conducted

Provincial Public Consultation in Kratié Province

Kratié Province	
Sambo and Koh Knher Commune, PDRD Office.	▪ 75 participants from different groups participated in the public consultation meeting in three different places (15 PDRD, 40 Sambo and Koh Knher Commune, and Kampong Pnov 20 Village of Indigenous People) ▪ At provincial level, the meeting was attended by director of PDRD and other 9 staff. In separate place, the meeting was attended by 5 NGOs/CBOs representatives. ▪ At community, the meeting was attended by 30 head and ordinary villagers, including all commune councils and head of commune. ▪ At indigenous people village, household interview was randomly conducted with about 20 families where the location of their houses located in different places. ▪ Both consultation meeting and household interview were interactive with precise questions and issues raised as below. The interview took about 4 hours across the whole village of indigenous people (IP). ▪ There were several issues raised during each consultation, the below are only key issues that described in relation to environmental and social, as well as safeguards protection.

Issues Raised/Questions	Responses
What is the geographical condition of the Kratié Province?	▪ Head of PDRD: The province is large territory and has a boundary with various environmental protected areas, which fell inside and vicinity of the province center. With quite high population growth and with the growth of IP the province has challenged with environmental and social protection and made the balance of development and conservation level. ▪ Head of rural development planning office: the province exposes to floods and droughts yearly, particularly this year the droughts has damaged farming system seriously. Remote areas are so poor who fell below poverty rate, which requires infrastructure development interventions from various corners of agencies. ▪ Flora Organization: Because of the province attached with various natural resources, human and climate change have damaged them drastically, and need to have real intervention to project environment of the province.
How the road networks proposed for this project were selected	▪ Head of PDRD and key staff: We have proposed various road networks in the remote area to the ministry of rural development. Of cause, this proposal does not select by random method, but we selected in according to the following adverse factors: o The level of poverty is high in comparison to various areas in the province. o Farm lands are productive, but those locations are facing more dry and inundation than the others which damage their agricultural farm. o The road networks are importantly to connect suppliers and demands at the regional markets. o Conditions of the roads are already existed strong base, but they need to strengthen surface covers. ▪ WWF: we do not know where the proposed roads are, but we would recommend that if the roads are inside or adjacent to the protected areas, the government should pay attentions to environmental wildlife animal, fauna and flora safeguards protection during either project implementation and after post-project. ▪ Flora Organization: selected road for construction must be in the priority of low income areas, real insufficient of rural infrastructure in the communes, provide agricultural value chain to increase local livelihoods, but must be not to hurt poor people, environment, or IP.

Issues Raised/Questions	Responses
How the rural road construction affected to rural society?	SOCIAL: ▪ Child Fund: Road construction provides more positive than negative because rural children easily attend school and health care center, but the must indicate during road construction that dust and noise must be control to avoid any impacts on children either during their travelling or during their learning at school. Much accidence has been happening during the road construction because they have not made the children path safety going and returning from school. School traffic road safety education must be integrated into their program either officially or unofficially. Subjects related to roads impacts such as road safety, road asset (sign board, and line making, or others) must be disseminated to beneficiary's households which include women and children as well. ▪ Deputy director of PDRD: ▪ Commune councils of Sambo: Although people need rural road construction in their villages, but it is experienced that during the road construction there are a lot of problems happed such as land and tree affected, therefore, it is needed to clearly conduct short time assessment to ask people if they have willingness to contribute land either voluntary contribution or they need affected land acquisition. ▪ Villager of Knhe Commune: They need to have disclosure meeting on the rights of land users, land owners. ▪ Added by Chief of Knher Commune: We need land survey to identify the affected land, fence, and tree of the villagers. ▪ Chada Organization: they need to prepare survey map and schedule of land acquisition prior to decide road construction. ▪ Most of people at commune public consultation: Agreed that the authorities must conduct a meeting with villagers for discussion and agreement prior to make decision. ▪ Chief of PDRD and all staff: Detail of land loss are very important before conducting a meeting with villagers and communities and ask them whether they agree for land contribution or not. ▪ All NGOs and CBOs: agreed that approval on land study report is very important that government should have explicit mechanism to judge whether land study is right or wrong. ▪ 90% of participants at commune public consultation: Urged that to avoid women migration and children's class drops, job opportunities either during road construction or after road construction must be created, during road construction should be involved a significant number of women working as a labors and should educate children over road safety and road assets management. ▪ Both PDRD and all NGOs: Raised that the procedure of land studies, checking, verifying, and approval must be clear and involve local people to participate in the process.
Any issue on environmental impacts is emerged due to road construction?	ENVIRONMENT: ▪ Chief of communes, chief of villagers confirmed minor environmental impacts such as dust, noise, more people encroachment after road construction, and soil excavation (borrow pits) can be a risk for animals and human if their place is depth and no fence surrounding. ▪ All agreed, that the borrow pits must be converted into adequate water retention ponds used for human and animal in dry season. ▪ NGOs and CBOs: Raised their concerns over the degradation of natural resources in the protected places due to people encroachment after the road construction. They have experiences over the land encroachment, constructing houses close to protected areas or along the roads, cutting trees and transport through constructed roads.

Issues Raised/Questions	Responses
Any issue on environmental impacts is emerged due to road construction? Cont'd.	▪ Sambo District Governor: Check list of environmental impacts must be done although minor impacts. The environmental impacts analysis list is to confirm how the impacts look like, such as a long term environmental impacts and short term environmental impacts. It must be distinguished clearly.
Any people should join with environmental protection for road construction?	▪ PDRD and CBOs: The Environmental Analysis should be carried out by a provincial official who should be trained to do this work and with the participation of the people (villagers and councils) who can be affected by the project. Ordinary people should be encouraged to take part, not just the C/S chief or other people who are involved in promoting the project. It is best if many different types of people participate – young people and old people, women and men, farmers, monks, etc. ▪ District Official: The Environmental Analysis (EA) must be done although this is minor impacts to the rural people. It should be done near the sub-project site, at a public location where it is convenient for people to participate. For some projects it will be necessary for the official responsible for the analysis to walk over the sub-project site together with local people.
Who should participate and know about the project for environmental protection?	▪ Chief of commune, Sambo and one of commune councils: The PDRD technical engineer should begin by making sure that the people, commune level, who participate in the analysis, know about the project. Rural people should know clearly how the project will be implemented, what the outputs will be and what the expected benefits, (the reason for doing the sub-project), are. ▪ Commune of Knhel: Then the engineer should explain the reason why it is necessary to carry out an environmental analysis for this project. The official should make sure that the people understand that the result of the analysis will be recommendations only – sometimes it may happen that recommendations are made during the analysis, but it is not possible to follow the recommendations fully.
How will the long term impacts be done? Provide more examples please?	▪ WWF, Flora suggest that: the below impacts must be identified during project screening: ○ Increased threats to endangered wild animals known to live in the area. ○ Damage to the forests (especially in bio-diversity area). ○ Impact on sustainability of wetlands or water sources (especially in protected or bio-diversity areas). ○ Long term damage to agricultural land. ○ Erosion caused by changes to alignment or size of streams. ○ Erosion caused by removing vegetation. ○ Flooding. ○ Damage to water quality due to chemical pollution. ○ Long term impact causing by dust, noise and safety problems. ▪ IP of Knouv suggested that: ○ Damage to the livelihood, living environment or customs of IP. ▪ Community suggested that: ○ Damage to the fisheries resources and fisheries stocks.

Issues Raised/Questions	Responses
Any other impacts during road construction?	▪ Most of public consultation participants confirmed that: ○ Short-term environmental impacts mostly occur during the project implementation. Short-term environmental impacts can be ameliorated by implementing the environmental management activities described in contractor's or service provider's work plan and environment management plan. ▪ Save the Children: short term consists of contamination of water resources during construction, damage to home gardens and fruit trees, Damage to domestic water supplies, noise and dust problem during construction, and damage will be caused by vehicles transporting materials to the site.
What should we do to address longer term and short term impacts? On ESMP and Monitoring Plan	▪ All at provincial and community meeting, but not household level, confirmed that project must have environmental management plan. ▪ WWF and Save the Children: ○ The environmental management plan must show what changes to the project are recommended to reduce the bad impacts on the environment. ▪ Commune councils claimed to have monitoring plan. Environmental monitoring plan must indicate what the impacts are, where the impact is may occur, when it is actually happened, how to challenge it, who supposed to have privilege to do this. ▪ Commune chief of Khnel said: It must have mitigation measures clearly and participated by local community.
Suggestion from All	▪ Cost of damage of environment must be set or calculated to make sure that project should provide compensation if the event that there is a serious environmental impact or short term impacts.

Provincial Public Consultation in Tboung Khmum Province

Tboung Khmum Province	
Mean and Roka Por Pram Commune, PDRD Office,	▪ 37 participants from different groups participated in the public consultation meeting in three different places (3 PDRD, 20 Mean and Roka Por Pram Commune, 3 from District Governor and District Women and Children Committee [DWCC] and 8 community members from proposed road line and 3 representatives CBOs.) ▪ At provincial level, deputy director of PDRD and 3 staff members attended the meeting from Deputy District Governor and District Women and Children Committee. ▪ At commune level, 20 representatives including all commune councils, clerk, and village chiefs from both Mean and Roka Por Pram Commune attended 2 separated meetings. ▪ At community level, random household interviews were conducted with 8 families. The selection was based on the location of households from the beginning, middle and end of the proposed road line. The household interviews were guided by a set questionnaire. The interviews took about 3 hours in total. ▪ Two separate meetings were conducted with CBOs with 3 representatives from Handicap International, Safe Water 1001, and Khmera.

Issues Raised/Questions	Responses
What is the geographical condition of the Tboung Khmum Province?	▪ The proposed road line connects three communes namely Mean, Apel Tapork, and Mohaleap. Some section of the road affected by flood yearly, while drought happened almost year. Maximum flood is 1.2 m occurred at the end of road. ▪ There are local brick factories operating around the road line. Heavy truck carrying brick and factory materials such as laterites and gravels are believed to be the main cause in deteriorating the condition of the road.

Issues Raised/Questions	Responses
How the road networks proposed for this project were selected	▪ There was a discussion on criteria in selecting road lines with PDRD during a meeting among the Deputy District Governor and District Women and Children Committee, and PDRD representatives. The mission team randomly picked one among 11 proposed roads from PDRD. ▪ The selected and inspected road is Charn Nimith-Prapath road line with 7.5 km length and 5 m width. ▪ This road network is claimed to be of great significance in term of market, school, and health center access. ▪ Conditions of the roads are already existed strong base; however, due to the heavy loads of transportation, some areas of the road line got damaged, particularly at the end of the road line. ▪ There was also discussion on other proposed lines raised by a representative from DWCC in term of access for rural women to health center. Due to the condition of the road and time constraint, the mission team was unable to inspect the whole road line. ▪ The mission team also inspected one of the top ranked road lines. Nevertheless, the road does not reflect well on the six main criteria proposed by the World Bank for road selections.
How the rural road construction affected rural society?	▪ Community response: from all the household interviews, there is no one who disputes the benefits of having better road access. All of the participants are willing to contribute their tree, fence, or temporary shop house of their own volition (i.e., land donation) if their properties encroach on the road line while being rehabilitated. One of the consulted correspondents said that he has no hesitation to donate his properties if there is a requirement by the authority and if his neighbors were required to do so also. This reflects the importance of peer influence in the community. ▪ When asked to identify any adverse social impacts resulting from the proposed road construction or improvement, most of the respondents could not provide any answer. They mostly agreed to the noise and dust during the construction; nevertheless, the villagers already complained about the heavy dust during the dry season and mud during raining season with the current road condition. One villager said that she is always having a dust bath every day. One villager said he rented a place for his daughter to stay closer to school to avoid bad traffic. ▪ When being asked if improved road condition can result in higher migration rate, many villagers said that that is a normal migration practice for farmers who use dry season to seek job opportunities outside their villages. A young seasonal migrant labor said most of his peer group are working in garment factories, construction sites, and farms in other communes and provinces. ▪ Khemara: No one denies the great importance of access to roads in development and improved livelihood. Khemara representative said that it is safer for children to travel to school if there is better road. If the condition of the road is bad, the children need to commute at dawn time to make it to early class, which can result in violence or rape. Access to rural communities through better road condition is undeniably beneficial to their awareness raising and training work, particularly when all the trainings and workshops are done in direct face-to-face meetings. ▪ Safe Water 1001: This local organization representative welcomed the idea of improved road condition, which can facilitate their water supply to remote communities. ▪ Deputy Director of PDRD: Ensure gender equity and balance in participation: there is gender consideration in community participation in term of ensuring the participation among men and women. In one commune case, there is 60% of women (20% of which is youth below 35 years old) participated in the commune planning meeting.

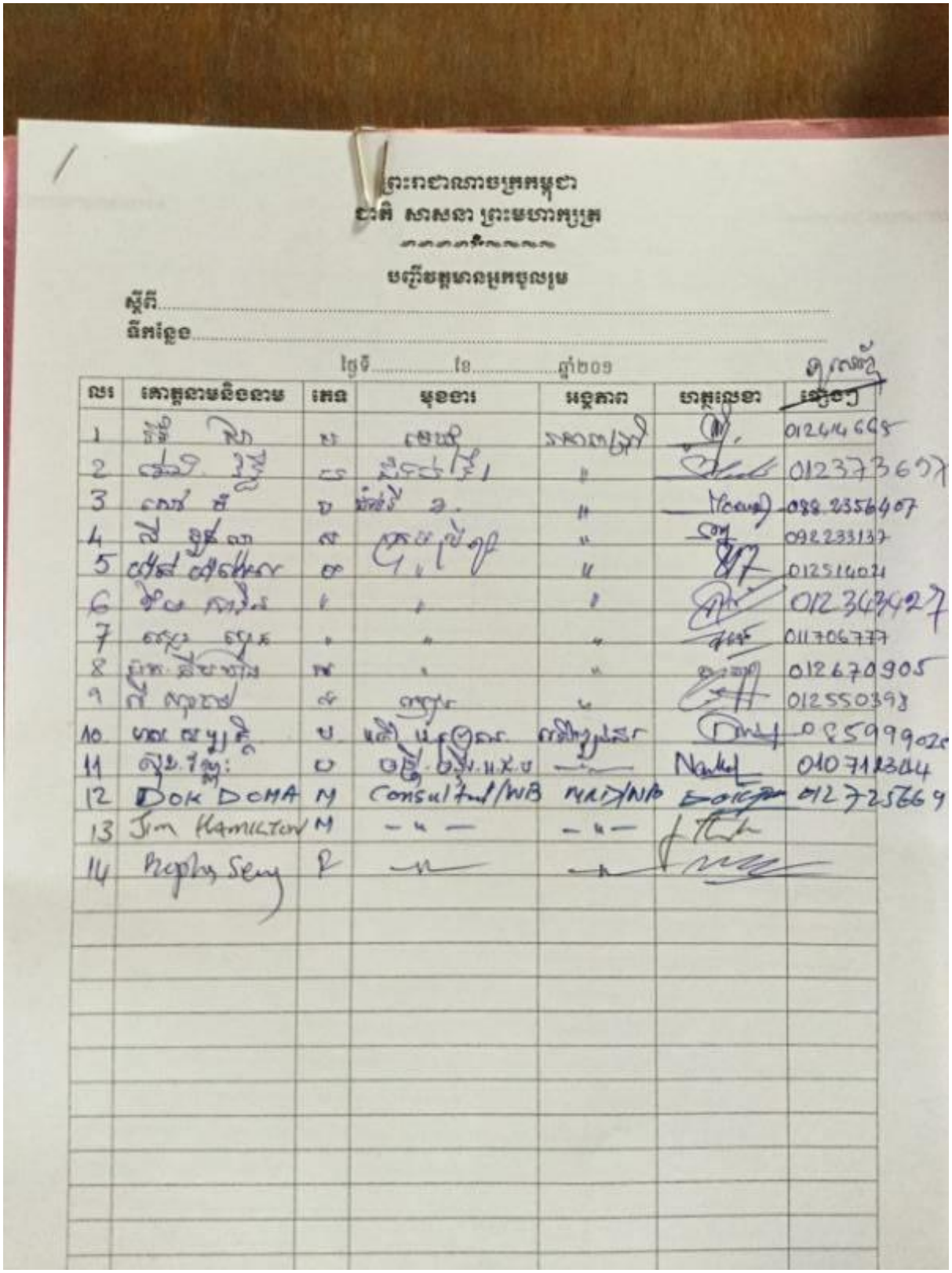
Issues Raised/Questions	Responses
How the rural road construction affected rural society? Cont'd.	▪ The current practice during commune planning, men and women are segregated into two focus groups so they can discuss and voice their concerns and priorities separately before they bring the development concerns from both parties for the main meeting. This is where the power struggle comes in to play. ▪ When it comes to decision-making power, it is interesting to note that women still need to listen to their husbands for final decision. A real-life case from DWCC member who participated in dispute and settlement negotiation with a family affected by a road construction project. The wife agreed to donate bamboo trees in front of her house for the road rehabilitation project while her husband refused. The project team had to bypass the area and found other alternatives. ▪ For women headed household, women are occupied with earning income so the participation is lacking. She will rely on getting information from village chief and her neighbor. ▪ From DWCC, women played strong role in dissemination of information.
Any issue on environmental impacts is emerged due to road construction?	▪ Consulted people living by the road line strongly recognize the disruption during construction phase; however, the current dusty and fragmented road condition they are facing is more unbearable and disturbing than the short-term construction phase. ▪ Commune council members recognized environmental impacts such as dust, noise, and people encroachment after road construction, and soil excavation (borrow pits) can be a risk for animals and human if there is place is depth and no fence surrounding.
Any people should join with environmental protection for road construction?	▪ In one of the Commune Council meeting, a Council representative recognized the role of community particularly women in monitoring quality of work of construction company. Therefore, it is suggested the role of community monitoring and reporting should be well reflected in contractual arrangement with construction firm(s).
Who should participate and know about the sub-project for environmental protection?	▪ Public and community participation is strongly reflected in many commune development-planning guidelines by NCDD. The Deputy District Governor mentioned the current dissemination mechanism is believed to be successful. There are three dissemination meetings conducted prior the road construction begins. The first meeting is the introduction about the objectives and importance of the sub-projects to the community. For the second meeting, the affected households are informed if there is any loss of properties happening during road construction. Two weeks prior notice is given to all affected families for decision making within their family if they agree to contribute land voluntarily.
How is about the long term impact should be done? Provide more examples please?	▪ Possible illegal logging transportation, mentioned one of consulted community members during nighttime. ▪ Possible damage if there is no maintenance and control plan on heavy loaded transportation. ▪ Long term damage to agricultural land. ▪ Erosion caused by changes to alignment or size of streams. ▪ Erosion caused by removing vegetation. ▪ Climate change-extreme weather of longer drought and flood.
Any other impacts during road construction?	▪ Discussion on road safety particularly around school areas was made. A great emphasis on safety for children should be included. Khemera representative said that there is an initiative to teach pre-school children with visual aids on road safety in their community kindergarten project. ▪ Through various commune meetings and village chief's door-to door announcement, almost all interviewed villagers were informed about possible loss of home gardens, trees, fences and shop houses.

Issues Raised/Questions	Responses
What should we do to address longer term and short term impacts? On ESMPand Monitoring Plan	▪ Safety guidance for travelers specifically school children should be included and implemented. ▪ Monitoring plan during construction and maintaining plan after the construction should involve more community. Awareness on road as common and public goods should be encouraged. Throughout the consultation process, no one disputes the importance of road as his/her access to better livelihood. Everyone wants good quality roads, yet there is no strong mechanism for maintaining the road quality. Some of the road lines have been repaired many times.
Suggestion from All	▪ While the dissemination process of understanding and accepting the environmental and social protection from developing road construction were normally conducted by DWCC and CWCC, there is a need for continued strengthening of capacities at local and provincial, district commune and populace levels on specific social and environmental impacts and measures. This should be complemented by strengthening awareness and understanding within the MRD that is responsible for road safeguard implementation. Key capacity issues are: natural resources protection, peoples' rights of land possession, long and short term impacts during sub-project and post-sub-project construction. ▪ It is reported that awareness of environmental impacts is mostly confined to impacts upon forest and wetland areas along project sides with little consideration of the broader environmental impacts there may be. For example, the implications that construction of a road that increases access to a forested area may have for forest clearance or tree collection is not generally considered widely among the stakeholders such as local people, authority, CBOs, and even local public servants. ▪ It should be noted that many consulted household members complained about the lengthy process or gap between prior consultation and the actual implementation of the sub-projects. One villager said she was asked to join many meetings but the road construction has not been started so far. Therefore, any consultation with communities should be handled properly to avoid raising expectation. The community should be well informed how the sub-project(s) will be implemented, what the outputs will be and what the expected benefits, (the reason for doing the project), are. ▪ Involving women and elderly in the process of monitoring and road construction with contracted firm can generate more incomes.

Appendix A11

Community and 1st Consultation Meeting Sign Up Sheets

Figure A11.1 Sambo Commune sign up sheet.



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បញ្ជីឈ្មោះអ្នកចូលរួម

ស្តីពី.....

ទីកន្លែង.....

ថ្ងៃទី.....ខែ.....ឆ្នាំ២០១

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1		ប				012464695
2		ប				012373697
3		ប				088 2356407
4		ប				092233137
5		ប				012514021
6		ប				012 363427
7		ប				011706777
8		ប				012670905
9		ប				012550393
10		ប				0
11		ប				010 712384
12	DOK DOMA	M	Consultant/WB	NAI/NA		012 725669
13	Jim Hamilton	M	— " —	— " —		
14	Rapha Seng	M	— " —	— " —		

Figure A11.2 Koh Knhel Commune sign up sheet.

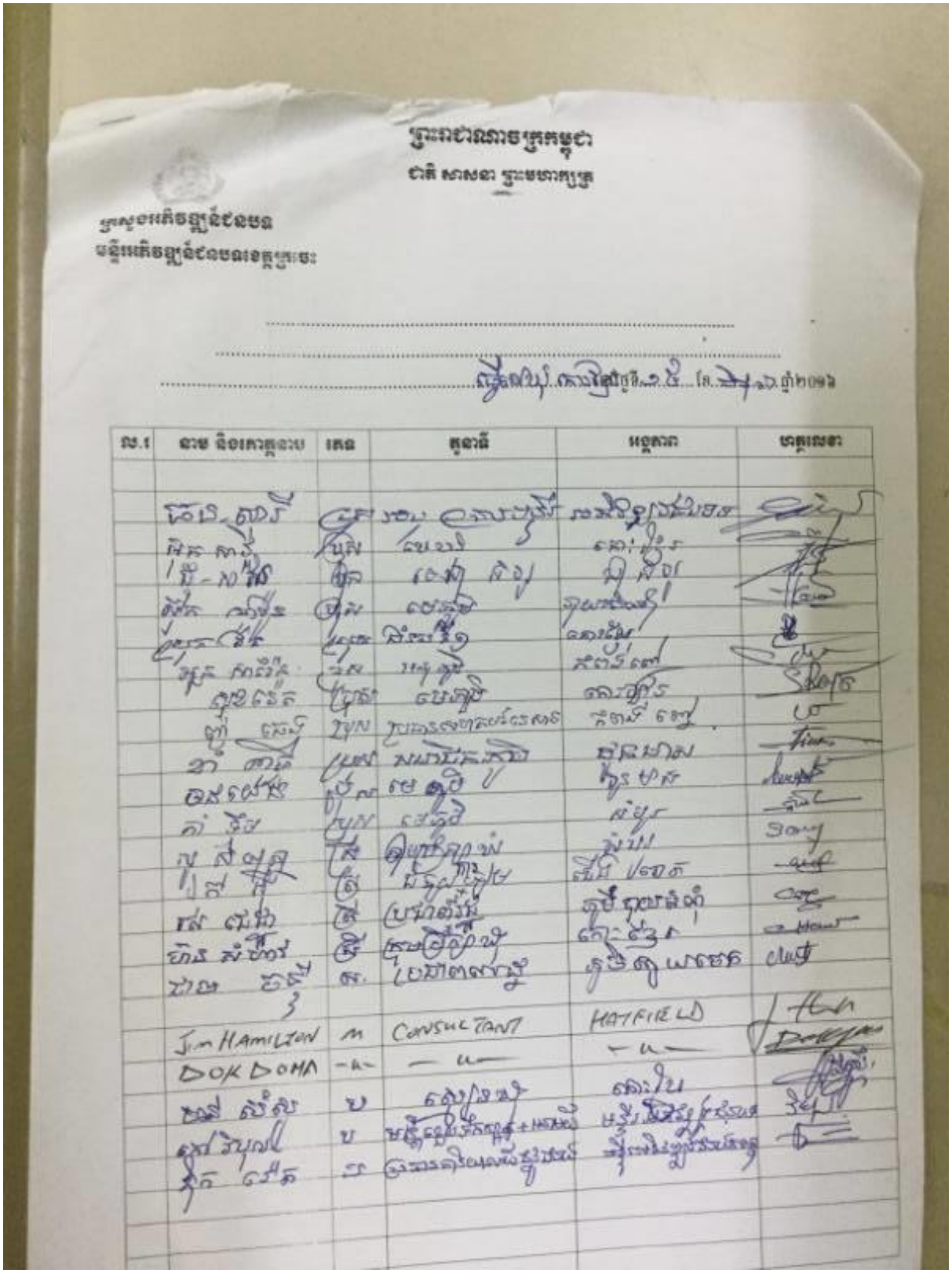
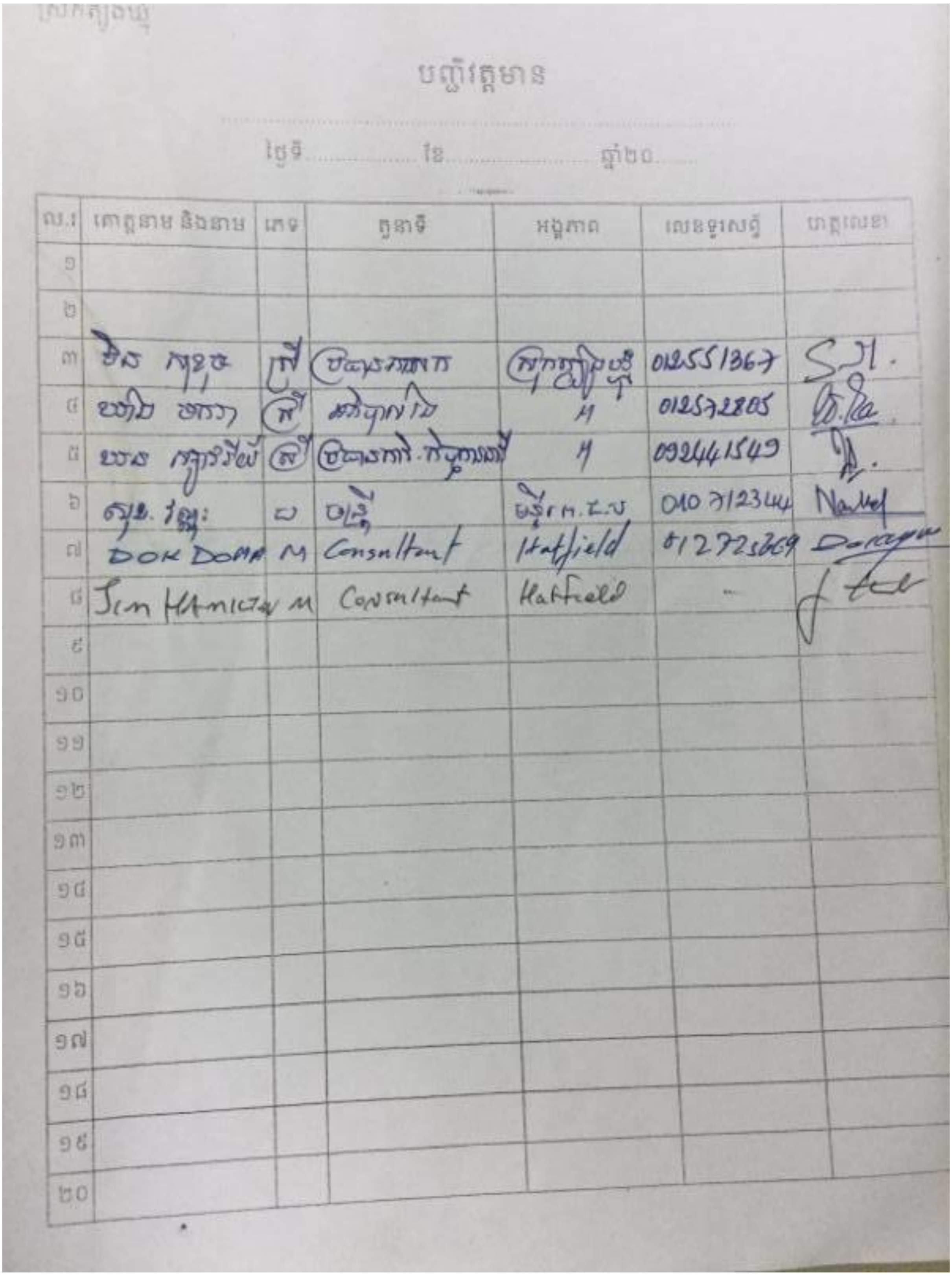


Figure A11.3 Tboung Khmum District sign up sheet.



ស្រុកត្បូងឃ្មុំ

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ថ្ងៃទី............ ខែ.................. ឆ្នាំ២០......

ល.រ	គោត្តនាម និងនាម	ភេទ	តួនាទី	អង្គភាព	លេខទូរស័ព្ទ	ហត្ថលេខា
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២						
៣	[illegible]	[illegible]	[illegible]	[illegible]	012551367	[illegible]
៤	[illegible]	[illegible]	[illegible]	"	012572805	[illegible]
៥	[illegible]	[illegible]	[illegible]	"	092441549	[illegible]
៦	[illegible]	[illegible]	[illegible]	[illegible]	010 712344	[illegible]
៧	DOK DOMA	M	Consultant	Hatfield	012725869	[illegible]
៨	Jim Hamilton	M	Consultant	Hatfield	-	[illegible]
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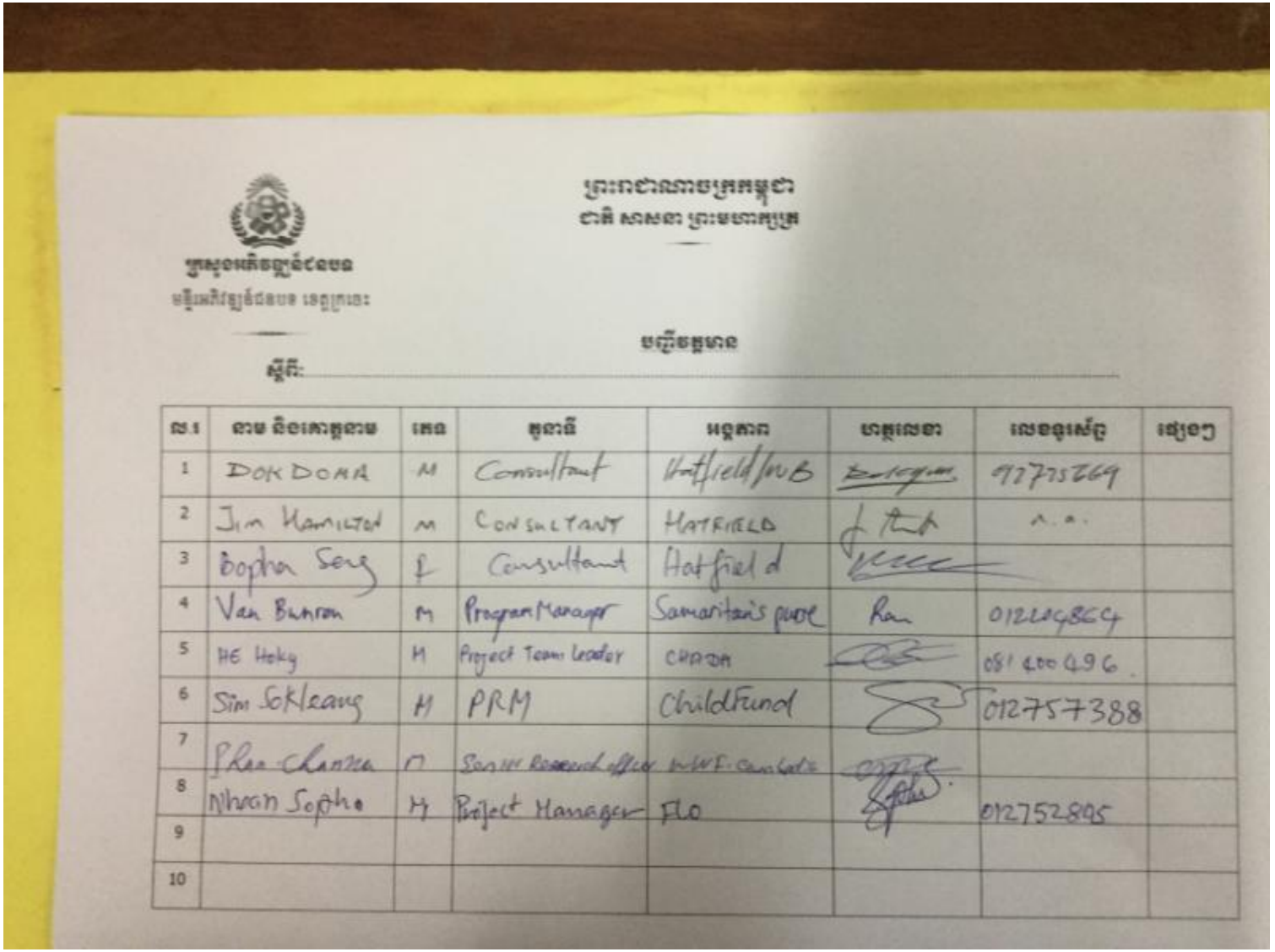
Figure A11.4 PDRD office sign up sheet.



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ជាតិ សាសនា ព្រះមហាក្សត្រ

ស្តីពី:

បញ្ជីចូលរួម

ល.រ	នាម និងគោត្តនាម	ភេទ	មុខងារ	អង្គភាព	ហត្ថលេខា	លេខទូរស័ព្ទ	ផ្សេងៗ
1	DOK DOMA	M	Consultant	Hatfield/WB		977757269	
2	Jim Hamilton	M	CONSULTANT	HATFIELD		n.a.	
3	Sopha Seng	F	Consultant	Hatfield			
4	Van Bunron	M	Program Manager	Samaritan's purse		012404864	
5	HE Hoky	M	Project Team Leader	CHRDA		081 400 496	
6	Sim Sokleang	M	PRM	ChildFund		012757388	
7	Phea Channa	M	Senior Research officer	WWF Cambodia			
8	Nhean Sopha	M	Project Manager	FLO		012752895	
9							
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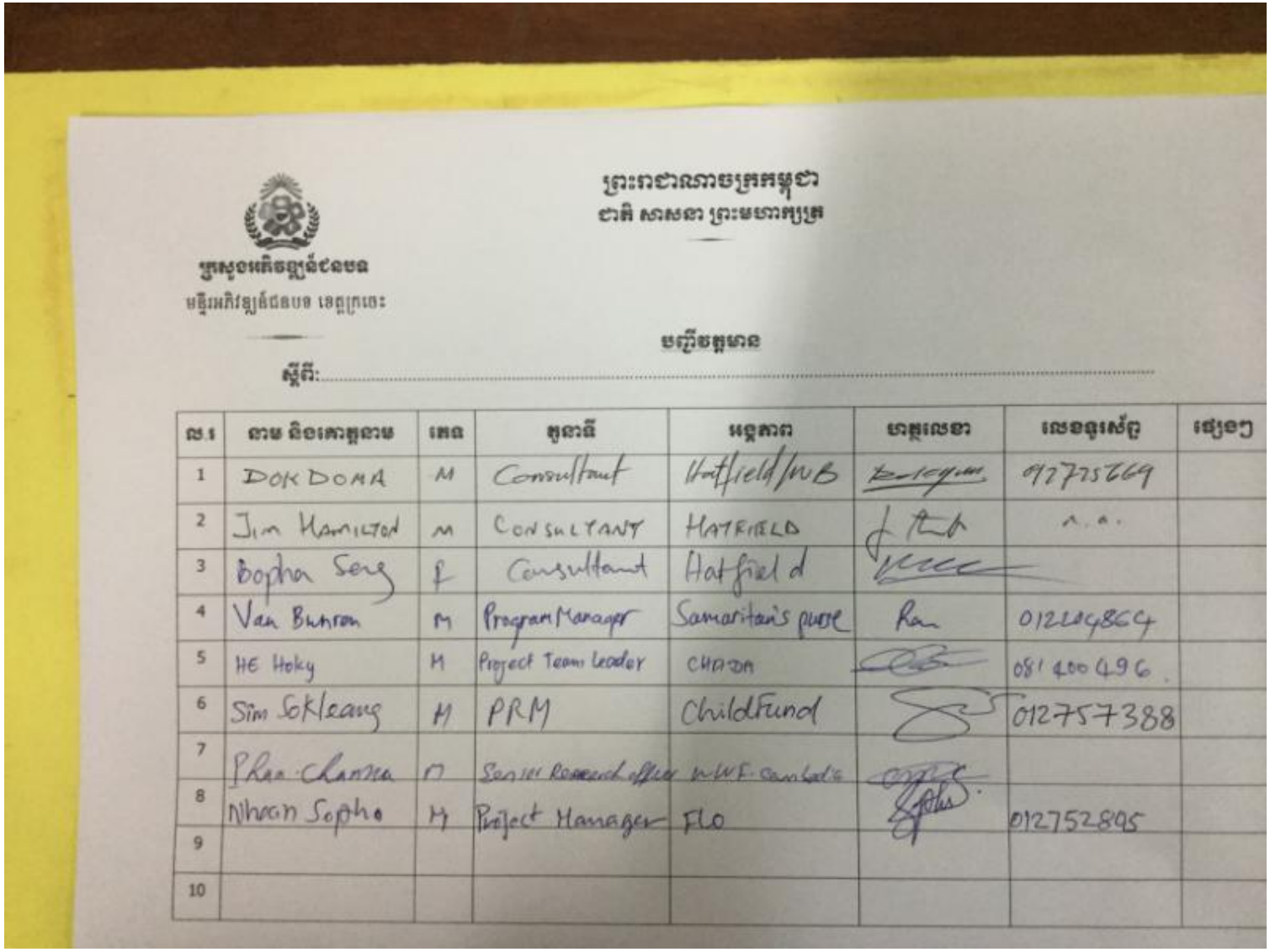
Figure A11.5 NGOs consultation sign up sheet.



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ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងអភិវឌ្ឍន៍ជនបទ
មន្ទីរអភិវឌ្ឍន៍ជនបទ ខេត្តព្រៃវែង

បញ្ជីចូលរួម

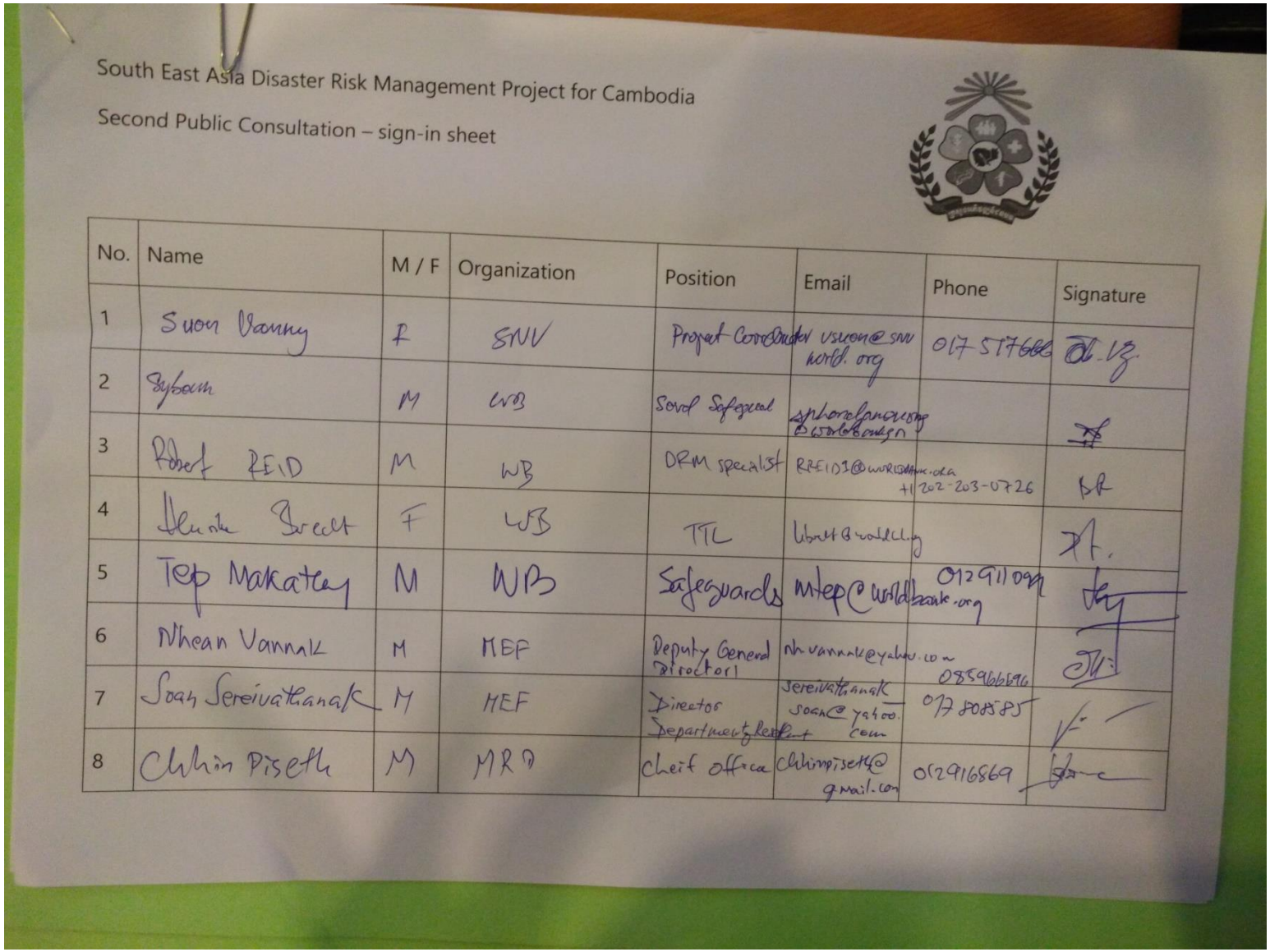
ស្តីពី:.....

ល.រ	នាម និងគោត្តនាម	ភេទ	តួនាទី	អង្គភាព	ហត្ថលេខា	លេខទូរស័ព្ទ	ផ្សេងៗ
1	DOK DOMA	M	Consultant	Hatfield/WB		012775769	
2	Jim Hamilton	M	CONSULTANT	HATFIELD		^.^.	
3	Bopha Seng	F	Consultant	Hatfield			
4	Van Butron	M	Program Manager	Samaritan's purse		012404864	
5	HE Hoky	M	Project Team Leader	CHAMP		081 400 496	
6	Sim Sokleang	M	PRM	ChildFund		012757388	
7	Phea Channa	M	Senior Research officer	WWF-Cambodia			
8	Nhean Sopho	M	Project Manager	FLO		012752895	
9							
10							

Appendix A12

2nd Public Consultation Meeting Sign Up Sheets

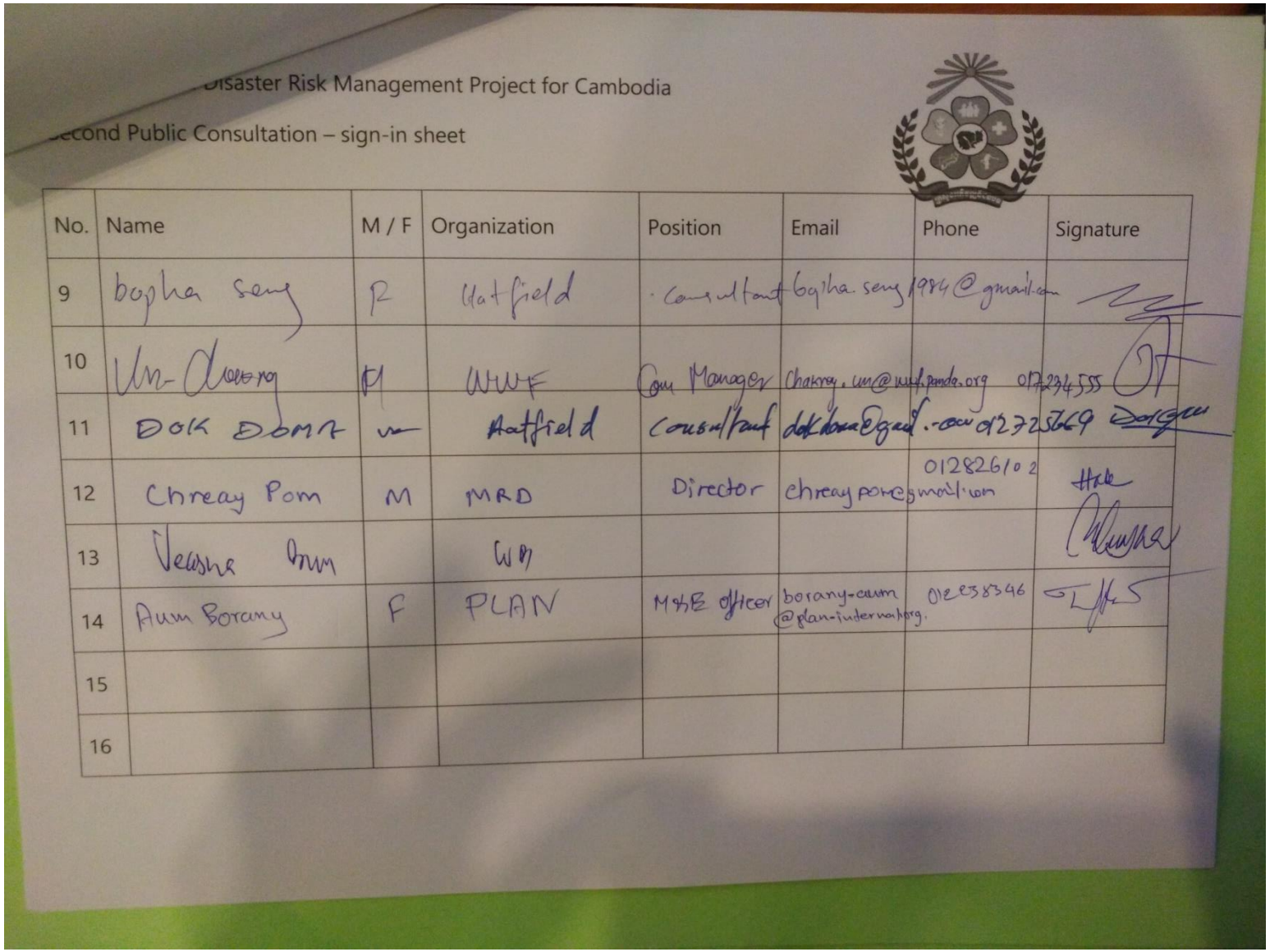
Figure A12.1 2nd public consultation meeting sign up sheets.



South East Asia Disaster Risk Management Project for Cambodia

Second Public Consultation – sign-in sheet

No.	Name	M / F	Organization	Position	Email	Phone	Signature
1	Suon Vanny	F	SNV	Project Coordinator	vsuon@snvworld.org	017 577 666	
2	Sybaan	M	WB	Social Safeguard			
3	Robert REID	M	WB	DRM specialist	RREID1@worldbank.org +1 202-203-0726		
4	[illegible]	F	WB	TTL	[illegible]		
5	Tep Makatey	M	WB	Safeguards	mtep@worldbank.org	012 911 094	
6	Nhean Vannak	M	MEF	Deputy General Director	nh.vannak@yahoo.com	085 966 696	
7	Soan Sereivathanak	M	MEF	Director Department [illegible]	Sereivathanak soan@yahoo.com	077 808 585	
8	Chhin Piseth	M	MRD	Cheif office	Chhinpiseth@gmail.com	012 916 869	



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...econd Public Consultation – sign-in sheet

No.	Name	M / F	Organization	Position	Email	Phone	Signature
9	bopha seng	F	Hatfield	Consultant	bopha.seng1984@gmail.com		
10	Un-Chakrya	M	WWF	Com Manager	Chakrya.un@wwfpanda.org	012234555	
11	DOK DOMY	M	Hatfield	Consultant	dokdomy@gmail.com	012725869	
12	Chreay Pom	M	MRD	Director	chreaypom@gmail.com	012826102	
13	Veasna Oum		WB				
14	Aum Borany	F	PLAN	M&E officer	borany-aum@plan-international.org	012838346	
15							
16							