# KINGDOM OF CAMBODIA MINISTRY OF PUBLIC WORKS AND TRANSPORT

# THE PROJECT FOR CAPACITY ENHANCEMENT ON ENVIRONMENTAL AND SOCIAL CONSIDERATIONS IN IMPLEMENTING AGENCY IN ROAD SECTOR

# PROJECT COMPLETION REPORT (VOLUME 1)

December 2019

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

CTI ENGINEERING INTERNATIONAL CO., LTD. ENVIRONMENTAL AND SOCIAL INFRASTRUCTURE CONSULTANT CO., LTD. HANSHIN EXPRESSWAY COMPANY LIMITED

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# Location Map



# **Executive Summary**

In the Kingdom of Cambodia (hereinafter referred to as "Cambodia"), demand for logistics has been increasing in conjunction with a rapid economic growth, and further development of transportation infrastructure is important for further social development. On the other hand, in order to develop a sustainable infrastructure, the negative impacts on the natural and social environment should be minimized at the time of road development and expansion projects, and that the design and construction should meet the environmental and social needs.

This project aims to improve the capacity of the Ministry of Public Works and Transport (hereinafter MPWT) in Cambodia to properly conducts the approval process of Environmental Impact Assessment (EIA) and Right of Way (ROW) management for better environmental and social considerations in the road sector. The Department of Planning (DoP), Road Infrastructure Department (RID), and International Cooperation Department (ICD) are the main project members. As outputs of the Project, Road Environment Guidelines (REG) and ROW Management Guidelines (RMG) as well as the ROW Management System (RMS) were developed. The goal is to make these outputs of the Project to be utilized and improve the management capacity for environmental and social consideration in the road sector.

The project purpose is highly relevant as it is consistent with Cambodia's development policy, development needs in general and in the road sector, as well as Japan's ODA policy. In terms of approaches and timing, it is adequate for its implementation. For the future, effectiveness and impacts are expected to be high, when the ROW management is budgeted based on the results of Current Status Identification (CSI) activities and Illegal Encroachment Prevention (IEP) activities as well as utilization of RMS, for which extensive training and activities were conducted in the Project. Therefore, effectiveness and impact for the capacity building of MPWT are high.

Regarding efficiency, the Japanese expert's input (person-month) exceeded by 7.5% from the original plan. The reasons attributed to this increase were to develop a design of future standard road cross sections for ROW management, to implement a pilot project (IEP hardware measures), and to organize additional seminars. Considering that these inputs further promoted the understanding among stakeholders, efficiency is evaluated as moderate despite its excess. As for sustainability, the need for smooth EIA approval procedures continues to be high in the road sector. And the Project has increased awareness of the policy importance of ROW management within MPWT and therefore in the future, therefore, MPWT will be able to continue to expand its implementation.

From the above reasons, the Project can be evaluated as "very satisfactory."

# **Abbreviations**

Organizations, Programs and Projects

ADB	:	Asian Development Bank
DAC	:	Development Assistance Committee
DoP	:	Department of Planning
DPs	:	Development Partners
DPWT	:	Department of Public Works and Transport
ESO	:	Environmental Social Office
IAIA	:	International Association for Impact Assessment
ICD	:	International Cooperation Department
JCC	:	Joint Coordinating Committee
JICA	:	Japan International Cooperation Agency
MEF	:	Ministry of Economy and Finance
MLMUPC	:	Ministry of Land Management, Urban Planning and Construction
MOE	:	Ministry of Environment
MOI	:	Ministry of Interior
MPWT	:	Ministry of Public Works and Transport
NSDP	:	National Strategic Development Plan
OECD	:	Organization for Economic Co-operation and Development
PMU	:	Project Management Unit
RID	:	Road Infrastructure Department
WB	:	World Bank
Technical Terms		
CA	:	Capacity Assessment
CSI	:	Current Status Identification
DB	;	Data Base
DF	:	Data Finalization
EC	:	Environmental Consideration
EIA	:	Environmental Impact Assessment
EMOP	:	Environmental Monitoring Plan
EMOR	:	Environmental Monitoring Report
EMP	:	Environmental Management Plan
ESC	:	Environmental and Social Consideration
FS	:	Field Survey
GIS	:	Geographical Information System
IEE	:	Initial Environmental Examination
	:	Initial Environmental Impact Assessment
IEP	:	Illegal Encroachment Prevention
PCM	:	Public Consultation Meeting
PCM	:	Project Cycle Management
PDM	:	Project Design Matrix
RAP	:	Resettlement Action Plan
REG	:	Road Environment Guideline (Guidebook)
RMD	:	ROW Management Database
RMG	:	ROW Management Guidelines
RMM	:	ROW Management Map
RMS	:	ROW Management System
RMS-TP	:	RMS Training Plan

ROW SC TOT UAV <u>Others</u>	::	Right of Way Social Consideration Training of Trainers Unmanned Aerial Vehicle (it means Drone in the project)
C/P	:	Counterpart
DMS	:	Detailed Measurement Survey
GL	:	Guideline
LGU	:	Local Government Units
NR	:	National Road
ODA	:	Official Development Assistance
OJT	:	On the Job Training
PTF	:	Pilot Project Task Force
RCS	:	Replacement Cost Survey
R/D		Record of Discussion
SEZ	:	Special Economic Zone
TCP-COR	:	Technical Cooperation Project on Capacity Enhancement of ESC for Resettlement
TF	:	Task Force
TOC	:	Table of Contents

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A5-2. Monitoring Sheet Ver. 2.0

A5-3. Monitoring Sheet Ver. 3.0

A5-4. Monitoring Sheet Ver. 4.0

A5-5. Monitoring Sheet Ver. 5.0

A5-6. Monitoring Sheet Ver. 6.0

#### [JICA Expert Reports]

#### J1: General

J1-1: Institutional Analysis: Institution Framework and Responsibilities on the EIA/EMP

J1-2: Institutional Analysis: Institution Framework and Responsibilities on the ROW Management in MPWT

J1-3: Capacity Enhancement Plan (Work Breakdown Structure: WBS)

J1-4: Procurement Plan

J1-5: Training Records

J1-6: Capacity Assessment Check List

Appendix 1: Record and Relevant Material on Seminar

Appendix 2: Record and Relevant Material on Training Courses in Japan

Appendix 3: Record and Relevant Material on Third Country Technical Exchanges

#### J2: EIA/EMP

J2-1: Environmental Considerations Analysis:

a Needs Analysis b ESC Analysis

J2-2: REG Development Plan

- J2-3: List of EIA/EMP Taskforce Meeting Records (REG Authorization Process)
- J2-4: REG Monitoring Report

#### J3: ROW Management

J3-1: Social Considerations Analysis:

Lessons Learned on ROW Management Based on the Land Management Framework in Cambodia and Other Countries

- J3-2: Development Plan of Draft RMS
- J3-3: List of ROW Management Taskforce Meeting Records RMG Authorization Process/ Draft RMS Development/ Draft RMG Preparation/ Draft RMS- TP Preparation/ Tentative RMM Preparation/ Tentative RMD Preparation
- J3-4: RMM and RMD
- J3-5: Budget Plan for RMS Implementation

#### J4: ROW Management - Pilot Project

- J4-1: Pilot Project Implementation Plan
- J4-2: PTF Activity Record
- J4-3: Training Records on Pilot Project

#### [Separate Volume: Copy of Products Produced by the Project]

S1: Road Environmental Guidebook (REG)

- S2: ROW Management Guidelines (RMG)
  - Appendix 1: Aerial Photography Manual
  - Appendix 2: Ground Control Point Survey Manual
  - Appendix 3: Work Management Manual for CSI
  - Appendix 4: Image Processing Manual
  - Appendix 5: Data Production Manual
  - Appendix 6: TabletApp User Manual
  - Appendix 7: Web GIS Manual
  - Appendix 8: Database Operation Manual
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# I. Basic Information of the Project

# 1.1 Country

Kingdom of Cambodia

## **1.2** Title of the Project

The Project for Capacity Enhancement of Environment and Social Considerations in Implementing Agency in Road Sector

## **1.3** Duration of the Project (Planned and Actual)

17<sup>th</sup> January 2017 – 16<sup>th</sup> January 2020 (3 years)

## 1.4 Background

Environmental and Social Considerations (ESC) has become crucial condition for smooth and appropriate implementation of infrastructure project, such as national road, railway, irrigation schemes, transmission line, Special Economic Zone (SEZ) development etc. ESC covers the issues in the field of natural environment including Environment Impact Assessment (EIA), social environment including involuntary resettlement and other environmental elements such as Environmental Management Plan (EMP), environmental measuring, and so on.

Concerning involuntary resettlement, JICA's TCP-COR (Technical cooperation Project on Capacity Enhancement of ESC for Resettlement) was implemented with Ministry of Economy and Finance (MEF) and Ministry of Public Works and Transport (MPWT) from 2010 to 2012. TCP-COR focused on BRP (Basic Resettlement Procedures) including RAP updating based on Detailed Measurement Survey (DMS) and Replacement Cost Survey (RCS).

As the result of TCP-COR, procedures and implementation of resettlement are strengthened under the determinate framework. However insufficient management of state land causes problems, e.g. illegal occupation of state land etc. Such problems make implementation of resettlement procedures much more complicated. And MPWT doesn't have an integrated unit to manage the quality of ESC on public works and this situation makes smooth implementation of public works difficult, especially in road sector.

For appropriate management of state land and qualified implementation of ESC procedures for road projects, capacity enhancement of MPWT on ESC is required.

In response to the request from the Kingdom of Cambodia, the Detail Planning Survey Team organized by JICA visited Cambodia from June 7 to June 20, 2015 for the purpose of working out the details of the technical cooperation concerning "The Project for Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector". During its stay in Cambodia, the Team exchanged views and had a series of discussions with the Cambodia authorities concerned with respect to necessary measures to be taken by JICA and the Government of Cambodia represented by Department of Road Infrastructure for the successful implementation of the above-mentioned project. As a result of the Detail Planning Survey, both sides signed the Record of Discussion on February 29, 2016.

## **1.5 Overall Goal and Project Purpose**

Overall Goal, Project Purpose and Outputs of the project are described in Table I. 1.

0	verall Goal	Environmental and Social Considerations (ESC) in road sector is implemented properly by MPWT.
Pro	ject Purpose	Capacity of MPWT officials on ESC is enhanced through applying REG and RMS
	Output 1	Implementation framework for the project is strengthened based on past experiences and present situation on ESC and ROW management.
Output	Output 2	Implementation framework of Environmental Considerations (EC) related to Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) is strengthened.
ε. S	Output 3	Implementation framework of Social Considerations (SC) related to ROW management is strengthened.
	Output 4	Capacity of SC required for ROW management is strengthened.

Table I-1	<b>Overall Goal.</b>	Project	Purpose	and Outputs
I WOIC I I	Overan Gour,	I I OJECE	- up pose	and Outputs

Note: REG: Road Environment Guideline, EIA: Environmental Impact Assessment, EMP: Environmental Management Plan, RMS: ROW Management System, CSI: Current Status Identification, IEP: Illegal Encroachment Prevention, RMS-TP: RMS Training Plan, RMM: ROW Management Map, RMD: ROW Management Database



## Figure I.1 Schematic Design of the Project Outputs

#### **1.6 Implementing Agency**

Implementing Agency:Ministry of Public Works and Transport (MPWT)Target Group:International Cooperation Department (ICD), Road Infrastructure

Department (RID), Department (ICD), Road Infrastructure Department (RID), Department of Planning (DoP) and Department of Public Works and Transport (DPWT)

# **II.** Results of the Project

# 2.1 Results of the Project

#### 2.1.1 Input by the Japanese side (Planned and Actual)

Input by Japanese side is shown in Table II-1. Experts and Local Contracts were changed according to suitable situation of the Project.

Inputs	Planned (based on PDM version 0.0)	Actual
Inputs       1. Experts	Planned (based on PDM version 0.0)         1.1       Leader / ROW Management         1.2       Sub Leader / ESC         1.3       EIA/EMP         1.4       Land Management Framework         1.5       Land and House Investigation         1.6       Training Plan and Implementation         1.7       Institutional Analysis / PCM         1.8       Project Coordinator / Database Management	Actual         1.1       Team Leader / Right of Way Management-1         1.2       Deputy Team Leader / Right of Way Management-2         1.3       ESC/EIA/EMP         1.4       Road Plan / Transportation Plan / Road Structure Plan         1.5       Land Management Framework-1         1.6       Land Management Framework-2 / Database Development         1.7       Land and House Investigation-1 / Road and Structural Design         1.8       Land and House Investigation-2         1.9       Training Plan and Implementation-1         1.10       Training Plan and Implementation-3         1.12       Institutional Analysis / PCM
		<ul><li>1.13 Project Coordinator / Database Management</li><li>1.14 Monitoring/Evaluation</li></ul>
	Assignment: 111.00 M/M	Assignment: 119.30 M/M
2. Training	<ul><li>2.1 Training in Japan</li><li>2.2 Technical exchange in third countries</li><li>2.3 Training in Cambodia</li></ul>	<ul> <li>2.1 Training in Japan (total 28 participants)</li> <li>2.2 Technical exchange in third countries (total 27 participants)</li> <li>2.3 Training and seminar in Cambodia</li> </ul>
3. Machinery and Equipment	PC, Printer, Copy Machine, Video Camera, Projector and Screen, Total Station and other related equipment	Laptop PC, Desktop PC, Printer, Copy Machine, Projector, Drone and Total Station
4. Local Contract	<ul> <li>4.1 Local lecturer from private sector</li> <li>4.2 Database (RMM and RMD)</li> <li>4.3 Local Consultant (Land Survey, Mapping)</li> <li>4.4 Local Consultant (Public Awareness Activities)</li> <li>4.5 Secretary</li> <li>4.6 Interpreter / Translator</li> <li>4.7 Driver with car (rent-a-car)</li> </ul>	<ul> <li>4.1 Technical Assistant (ROW Management, ESC, Land Survey, Mapping, Pilot Project)</li> <li>4.2 Administrative Assistant (Secretary, Interpreter, Translator)</li> <li>4.3 Driver with car (rent-a-car)</li> </ul>

Table II-1Input by Japanese side

# Training and seminar ware held as shown in Table II-2.

Table II-2 Training and Seminar	Table II-2	Training and Seminar
---------------------------------	------------	----------------------

No.	Date	Summary
Training in .	Japan	
1 <sup>st</sup>	13-22 Jun. 2017	<10 participants (MPWT, MOE)> <ul> <li>Lecture and Site Visit related to Environmental Considerations</li> <li>Lecture and Site Visit related to ROW Management</li> </ul>
2 <sup>nd</sup>	27 Feb9 Mar. 2018	<10 participants (MPWT, MLMUPC, MEF)> Lecture and Site Visit related to ROW management and Information management
3 <sup>rd</sup>	12-22 Feb. 2019	<8 participants (MPWT, DPWT)> <ul> <li>Lecture and Site Visit related to ROW management, road occupation system, road information management and real estate registration</li> </ul>
Technical ex	change in third countrie	28
1 <sup>st</sup> Myanmar	24-28 Oct. 2017	<8 participants (MPWT, MOE)> <ul> <li>Technical capacity development for the officials of the project owner (Project proponent), who is in charge of the EIA/EMP through the On the Job Training (OJT), is recommended with the budget.</li> <li>Capacity development and technical training on EIA or EMP associated to public works and transport for the designated office or division.</li> <li>It is proposed that the Environmental Social Office (ESO), Department of Planning should be included in each PMU to carry out the EIA or EMP related official works associated to public works and transport project.</li> </ul>
2 <sup>nd</sup> Laos, Thailand	26-28 Sep. 2018 Seminar in Phnom Penh, Cambodia	<ul> <li>&lt;8 participants (MPWT)&gt;</li> <li>ROW Management Seminar in Cambodia (participants from Laos and Thailand)</li> <li>Knowledge and lesson learned from Laos and Thailand were shared and discussed among the participants.</li> <li>Participants visited each other in respective countries to have a look at the management methods.</li> </ul>
	22-26 Oct. 2018 In Laos and Thailand	<ul> <li>&lt;6 participants (MPWT)&gt;</li> <li>Visit and Technical Exchange Meeting in Laos and Thailand</li> <li>Knowledge and lesson learned from Laos and Thailand were shared and discussed among the participants.</li> <li>Participants visited each other in respective countries to have a look at the management methods.</li> </ul>
3 <sup>rd</sup> Australia	27 Apr3 May 2019	<ul> <li>&lt;4 participants (MPWT)&gt;</li> <li>To attend 39th Annual Conference of the International Association for Impact Assessment in Brisbane, Australia.</li> <li>To Present a paper and poster which introducing the Project.</li> <li>Knowledge and lesson learned from related experts were shared and discussed among the participants.</li> <li>Participants visited to the other paper/poster session to have a look at the latest impact assessment methods.</li> </ul>

No.	Date	Summary
Seminar		
1 <sup>st</sup>	4 May 2017	<ul> <li>Environmental Considerations         <ul> <li>Procedures for Environmental and Social Impact Assessment in Cambodia</li> <li>Tasks and Implementation Issues of MPWT for the EIA Road Sector</li> </ul> </li> <li>ROW Management         <ul> <li>ROW Management Activities in Cambodia</li> <li>ROW Management for the Japanese Projects in Cambodia</li> <li>Management of Reserved Land for Road Construction in Japan</li> </ul> </li> </ul>
2 <sup>nd</sup>	6 Jul. 2017	<ul> <li>Report of Training in Japan</li> <li>Progress and Schedule of TF</li> <li>Discussion on Land Management and ROW management based on the Presentation</li> <li>Presentation on ROW Management Map (RMM) and ROW Management Database (RMD)</li> <li>Following Schedules</li> </ul>
3 <sup>rd</sup>	6 Feb. 2018	<ul> <li>Details of Draft Road Environmental Guidelines (REG)</li> <li>Report of Third Country Technical Exchange</li> <li>Case Study for Illegal Encroachment Prevention (IEP)</li> </ul>
4 <sup>th</sup>	27 Sep. 2018	<ul> <li>Acquire basic knowledge about each country's experiences on ROW Management by sharing presentations;</li> <li>Visit Site of Pilot Project.</li> </ul>
5 <sup>th</sup>	13 Nov. 2018	<ul> <li>Share the lesson-learns on ROW Management in Third Country;</li> <li>Report the progress of Pilot Project; and</li> <li>Share the activities of Illegal Encroachment Prevention (IEP).</li> </ul>
6 <sup>th</sup>	15 Mar. 2019	<ul> <li>Consult the typical roadway cross section (Stage Construction and ROW Management);</li> <li>Report the training in Japan; and</li> <li>Discuss the IEP approaches.</li> </ul>
7 <sup>th</sup> Final Seiner	6 Dec. 2019	<ul> <li>Report on the accomplishment of the Project</li> <li>Report on the IEA/EMP and ROW management activities</li> <li>Technical disseminate seminar on EIA/EMP and ROW management</li> </ul>
Pilot Project	Seminar	
1 <sup>st</sup> Phnom Penh	2 Oct. 2019	<ul> <li>Technical Seminar on Standard Drawings and Pilot Project Hard Approaches</li> <li>To Present the standard drawings on specification on Road Design and cross-section for future development; and</li> <li>To report the Pilot Project Hard Approaches.</li> </ul>
2 <sup>nd</sup> Pilot Project Site	16 Oct. 2019	<ul> <li>Technical Seminar on Standard Drawings and Pilot Project Hard Approaches</li> <li>To Present the standard drawings on specification on Road Design and cross-section for future development; and</li> <li>To report the Pilot Project Hard Approaches.</li> </ul>

No.	Date	Summary
TOT Works	hop	
1 <sup>st</sup>	31 Jul. 2019	ToT Workshop for Practice of ROW Management System
		• To train the DPWTs' officials on ROW Management System through the presentations from ROW TF members (MPWTs' Officials); and
		• To conduct the field practice for field survey and patrol.
		• Target DPWTs were invited from 5 provinces: Kandal, Kampong Chhnang, Pursat, Battambang, and Banteay Meanchey
2 <sup>nd</sup>	29 Aug. 2019	ToT Workshop for Practice of ROW Management System
		• To train the DPWTs' officials on ROW Management System through the presentations from ROW TF members (MPWTs' Officials); and
		• To conduct the field practice for field survey and patrol.
		• Target DPWTs were invited from 4 provinces: Kampong Cham, Kampong Thom, Siem Reap and Oddor Meanchey.
3 <sup>rd</sup>	30 Aug. 2019	ToT Workshop for Practice of ROW Management System
		• To train the DPWTs' officials on ROW Management System through the presentations from ROW TF members (MPWTs' Officials); and
		• To conduct the field practice for field survey and patrol.
		• Target DPWTs were invited from 6 provinces: Kampong Speu, Takeo, Kep, Koh Kong, Kampot and Preah Vihear

# 2.1.2 Input by the Cambodian (Planned and Actual)

Input by Cambodian side is shown in Table II-3.

Inputs	Planned (based on PDM version 0.0)	Actual	
1. Personnel (MPWT)	<ul> <li>1.1 Project Director</li> <li>1.2 Project Manager</li> <li>1.3 Deputy Manager</li> <li>1.4 Fulltime Staffs</li> </ul>	<ol> <li>Project Director</li> <li>Project Manager</li> <li>Deputy Manager</li> <li>Taskforce Members</li> <li>Pilot Project Taskforce Members</li> <li>Advisors for Taskforce Activity         <ul> <li>Ministry of Environment (MOE)</li> <li>Ministry of Land Management, Urban Planning, Construction (MLMUPC)</li> </ul> </li> </ol>	
2. JCC Member	<ul> <li>2.1 Ministry of Environment (MOE)</li> <li>2.2 Ministry of Land Management, Urban Planning, Construction (MLMUPC)</li> </ul>	<ul> <li>2.1 Ministry of Public Works and Transport (MPWT)</li> <li>2.2 Ministry of Economy and Finance (MEF)</li> <li>2.3 MLMUPC and MOE joined as an observer.</li> </ul>	

Inputs		Planned (based on PDM version 0.0)	Actual	
3.	Land, buildings	3.1 Office space for JICA Experts	3.1 Office space for JICA Experts	
	and facilities	3.2 Office space for equipment	3.2 Office space for equipment	
		3.3 Office Infrastructures	3.3 Office Infrastructures	
		a. Electricity	a. Electricity	
		b. Internet	b. Internet	
		c. Desks, Shelf and others	c. Desks, Shelf and others	
		d. Other necessary items	d. Other necessary items	
4.	Pilot Project	Preparation and implementation of the pilot project	Preparation and implementation of the pilot project	

JCC members and summary of JCC are shown in Table II-4 and Table II-5.

(MEF)

Member

Member

Member

Assignment	Position
Chair Parson	H.E. Tauch Chankosal, Secretary of State, Ministry of Public Works and Transport (MPWT)
Member	H.E. Nou Vaddhanak, Under Secretary of State, MPWT (former, Director General, General Directorate of Techniques)
Member	Ms. Pin Vuthea, Director, International Cooperation Department (ICD), MPWT
Member	Mr. Prok Novida, Director, Department of Planning (DoP), MPWT
Member	Mr. Chhim Phalla, Director, Road Infrastructure Department (RID), MPWT

Table II-4	Members	of Joint	Coordinating	Committee
1abic 11-4	WICHIDCI S	or Joint	Coorumating	commute

# Experts, JICA Project Team

Representative(s), JICA Cambodia Office

Mr. Yong Sy, Chief of Domestic Public Investment III Office, Investment

Department, General Department of Budget, Ministry of Economy and Finance

#### Table II-5JCC Summary

No.	Date	Agenda
1 <sup>st</sup>	4 May 2017	Explanation of proposed Project Framework
		Concept of ROW Management for the Project
		Following Activities
2 <sup>nd</sup>	6 Feb. 2018	Project Progress
		Technical Item for EIA Task
		• Technical Item for Right of Way (ROW) Management Task
		• Confirmation Items at JCC (Reformed JCC and TF Members, Draft REG, Authorization Process of REG, Draft Table of Contents of RMS, Selection of Pilot Project Site)
		Following Activities in 2018

No.	Date	Agenda	
3 <sup>rd</sup>	7 Feb. 2019	Project Progress	
		Technical Item for EIA Task	
		Technical Item for Right of Way (ROW) Management Task	
		• Confirmation items at JCC (Draft of RMG, Pilot Project Site for Illegal Encroachment Prevention (IEP), Participation in IAIA)	
		Following Activities in 2019	
4 <sup>th</sup>	5 Nov. 2019	Explanation of accomplishment of the Project	
		• Confirmation items at JCC (RMS and RMG)	

# 2.1.3 Activities (Planned and Actual)

Outputs have been prepared through the project activities from January 2017 to November 2019 as below,

- Road Environmental Guidebook
- ROW Management System (including ROW Management Guidelines (RMG), RMS Training Plan (RMS-TP), ROW Management Map (RMM) and ROW Management Database (RMD))

Activities are shown in Table II-6.

Planned (based on PDM version 0.0)	Planned (based on PDM version 1.0)	PDM Actual	
Activities for Output 1			
1.1 Analyze past projects, current tackling issues in terms of ESC-GL and ROW management	1.1 Analyze past projects, current tackling issues on EIA/EMP and ROW management in terms of ESC-GL	The ROW definition and EIA related legal framework and past experiences in Cambodia were analyzed based on past lessons learned.	Completed
1.2 Implement information collection and analysis on land management framework of land management system in Cambodia	1.2 Collect and analyze information on land management framework of land management system in Cambodia and other countries	The information on land management framework in Cambodia and other countries have been collected and analyzed.	Completed
1.3 Conduct institutional framework analysis for MPWT	1.3 Conduct institutional framework analysis for MPWT	Legal documents on institutional framework were collected and institutional framework and responsibilities related to EIA/EMP in MPWT were analyzed.	Completed
1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan	1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan	Capacity Enhancement Plan, training summary in Japan and 3 <sup>rd</sup> country and procurement plans were prepared.	Completed

## Table II-6Activities

Planned (based on PDM version 0.0)	Planned (based on PDM version 1.0)	Actual	Remarks
1.5 Discuss the TF framework	1.5 Discuss the TF       Ideal TF structure was proposed and TF         framework       members were officially selected as below.         - EIA/EMP Team: DoP and ICD       - ROW Management Team: RID and ICD		Completed
Activities for Output 2	L		
2.1 Conduct training on ESC of development partners (DPs)	2.1 Conduct training on ESC of development partners (DPs)	The EIA/EMP process and the implementation issues for road sector in Cambodia and understandings of the concepts of EC by DPs have been confirmed through trainings and meetings.	Completed
2.2 Discuss authorizing process and documentation level of REG (EIA and EMP)	2.2 Discuss documentation level of REG (EIA and EMP) and confirm process of authorization	Document level, the period of REG for authorization and documentation procedures were confirmed.	Completed
2.3 Discuss REG Development Plan	2.3 Plan and conduct training in Japan and third countries	Training in Japan and Third Country Technical Exchange were planned and conducted.	Completed
2.4 Plan and conduct training in Japan and third countries	2.4 Develop REG	REG was prepared in English and Khmer according to REG Development Plan and authorized as "Decision".	Completed
	2.5 Monitor EIA/EMP related activities based on REG	Site check at South part of NR5 for EC were conducted for the monitoring.	Completed
Activities for Output 3			
3.1 Discuss draft RMS (consists of draft RMG, draft RMS- TP, tentative RMM, tentative RMD) Development Plan	3.1 Discuss Development Plan of draft RMS (consists of draft RMG, draft RMS- TP, tentative RMM, tentative RMD)	Problems and concern of ROW management were revealed and development of RMS was discussed, and Development Plan of draft RMS was prepared.	Completed
3.2 Discuss authorizing process and documentation level of RMG	3.2 Discuss documentation level of RMG and process of authorization	Documentation level and procedure of RMG has been confirmed for authorization.	Completed
3.3 Develop draft RMG; Part 1: Current Status Identification (CSI) and Part 2: Illegal Encroachment Prevention (IEP)	3.3 Prepare draft RMG; Part 1: Current Status Identification (CSI) and Part 2: Illegal Encroachment Prevention (IEP)	Contents and work flow for CSI and IEP were discussed and draft RMG was prepared, and Public Consultation Meetings (PCM) related for CSI and IEP were held.	Completed
3.4 Prepare draft RMS- TP	3.4 Prepare draft RMS- TP	Contents of RMS-TP was discussed and draft RMS-TP was prepared.	Completed

Planned (based on PDM version 0.0)	Planned (based on PDM version 1.0)	Actual	Remarks
3.5 Develop tentative RMM and tentative RMD	3.5 Prepare tentative RMM and tentative RMD	The Training for Total Station and trial Flight of Drone were conducted, and Tentative RMM and Tentative RMD were prepared based on the result of the Pilot Project.	Completed
3.6 Plan and conduct training in Japan and third countries	3.6 Plan and conduct training in Japan and third countries	Training in Japan and Third Country Technical Exchange were planned and conducted.	Completed
	3.7 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as finalized RMS	Draft RMG and RMS-TP were reviewed according to the result of TOT through the pilot project and RMM is integrated in RMD was revised.	Completed
Activities for Output 4			
4.1 Discuss the implementation plan of the pilot project by using draft RMS	4.1 Discuss the implementation plan of the pilot project by using draft RMS	National Road No. 5 in: Kampong Chhnang province, Pursat province, Battambang province and Banteay Meanchey province was planned as a pilot project site and Pilot Project Implementation Plan was prepared.	Completed
4.2 Discuss the framework of the Pilot Project Task Force (PTF) with coordination between DPWT in charge of selected areas for the pilot project	4.2 Discuss the framework of the Pilot Project Task Force (PTF)	PTF was established including 2-3 members from each DPWT in 4 provinces and Kickoff Meetings were held for each province.	Completed
4.3 Implement the Pilot Project of CSI	4.3 Implement the Pilot Project of CSI	Condition of ROW management and IEP on NR5 was surveyed and Pilot Project of CSI was implemented as following activities - UAV Survey (UAV) - GIS Processing (GIS) - Field Survey (FS) - Data Finalization (DF) In addition, UAV survey on NR4 was conducted.	Completed
4.4 Implement the Pilot Project of IEP	4.4 Implement the Pilot Project of IEP	Standardization for the future road development was conducted as part of IEP activities and road design standard drawing was prepared. IEP activities including IEP herd approach was conducted by contractor.	Completed
4.5 Conduct TOT based on draft RMS-TP	4.5 Conduct TOT based on draft RMS-TP	TF members were trained at TOT workshop and Dissemination seminar (Final Seminar) to the other officials were conducted.	Completed
4.6 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as finalized RMS		This activity moved to 3.7.	-

## 2.2 Achievements of the Project

#### 2.2.1 Outputs and indicators (Target values and actual values achieved at completion)

#### (1) **Output 1**

Major Achievements of Output 1 are shown in Table II-7.

Table II-7	Achievements of t	he Output 1
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Output 1: Implementation Framework for the project is strengthened based on the past experiences and present situation on ESC and ROW management Indicators (Based on PDM ver. 1) Major Achievement 1.1 Based on the JICA Guidelines 1) EIA related to legal framework and past implementation issues of for Environmental and Social MPWT were analyzed based on discussion and hearings with MPWT Considerations (ESC-GL), relevant officials and analyzed through the case related to ADB, WB lessons learned from past and another donor in terms of ESC experiences are organized and 2) Main implementation issues of MPWT for EIA process in Road Sector current issues on ESC and ROW were shared between JICA experts and TF members through the management are analyzed discussions of the EIA/EMP TF meeting 3) EIA process and past implementation issues by another donor's projects in Cambodia were analyzed. 4) ROW definition in Cambodia was analyzed based on Law and Guideline related to MOE and MPWT learned in terms of ESC. 5) Past experiences on ROW management were analyzed and reported. 1.2 Based on the land management 1) Information and case examples on land management framework were framework in Cambodia and collected and analyzed based on Law in Cambodia. other countries, lessons learned 2) Information and case examples on land management framework in from past experiences on ROW Japan and other countries were collected and analyzed. management are organized and 3) Suggestion on the ROW management and consideration between road current issues are analyzed width and resident environment were reported. 4) Above contents were reported and shared in TF meetings. 1) Legal documents on institutional framework were collected. 1.3 Institutional framework and responsibilities in MPWT are 2) Institutional framework and responsibilities related to EIA/EMP in examined MPWT were analyzed. 1.4 Capacity enhancement plan and 1) Training needs of ICD, RID and DoP were assessed through hearing procurement plan are developed and Kickoff meeting held on 17th March 2017. through training needs 2) Capacity Enhancement Plan was prepared. assessment (analysis) of target 3) Training summary in Japan (the First - the Third) was prepared. group 4) Training summary in Third Country Technical Exchange (the First the Third) was prepared. 5) Procurement plans were prepared. 1.5 As an implementation structure 1) Ideal TF structure was proposed as below, of the project, TF is established - EIA/EMP Team: DoP and ICD - ROW Management Team: RID and ICD 2) TF members were officially selected at the first JCC held on 4th May 2017.

Summary of each achievement are as followings. Detail result is shown in JICA Expert Report.

# 1) Environmental and Social Considerations (ESC) Analysis

In terms of past projects, current tackling issues on EIA/EMP, the following issues are needed to be addressed:

- 1. The Environmental Monitoring Reports had not been sent to the Ministry of Environment (MOE) in Cambodia for ADB or World Bank projects,
- 2. The EIA/IEE Reports are prepared in both language Khmer and English and submitted to the MOE. However, the English version is the reference for the donors only,
- 3. The most of civil works contractors did not implement the mitigation measures, which were proposed on the EIA Report,
- 4. Un-realistic comments for the sampling numbers or methods had been provided to the local environmental consulting firms in Cambodia, and
- 5. The approval of the EIA/IEIA Report will take a long time.

#### 2) ROW Management Analysis

In terms of past projects, current tackling issues on Right of Way (ROW) Management, the following issues are needed to be addressed:

- 1. ROW issues in Cambodia has been discussed as a part of resettlement issues,
- 2. MPWT commenced ROW management apart from resettlement as the implementation agency in road sector. The activities included sign board for education of the people, staking ROW poles along the major national road, and public consultation meeting,
- 3. MPWT/Government of Cambodia also issued legal documents to establish clear ROW management. However, some important preconditions for ROW management such as border between urban and non-urban area have not been clearly defined,
- 4. Social environment around the ROW issues become complicated by land registration in private land side, re-encroachment of ROW after the road widening project, etc., and
- 5. It is required to review definition of ROW in Cambodia, and both political and practical way of management. Also, inter-ministerial coordination with Ministry of Land Management, Urban Planning and Construction (MLMUPC) and Local authorities are necessary in terms of land registration, construction restriction, and administrative measures at local level.

#### 3) Institutional Analysis

This institutional analysis was conducted by each department on the current practices and needs for project intervention.

In terms of project management, RID is responsible for national/domestic project, while other departments are responsible for various donors-funded projects. Specifically, ICD is responsible for projects funded by the Government of Japan such as Project management Unit (PMU) of the National Road No.5 improvement project.

The management of ROW is a complicated issue and the office of ROW Management set up in RID is a new office so that its capacity needs to be improved to administrate the ROW. Two main work components for management are: a systematic data collection on the current status of ROW, and prevention of illegal encroachment are necessary measures.

DoP is in charge of EIA monitoring for all public infrastructure projects. EIA reports for the public construction projects are sent from PMUs to DoP for review before PMUs send them to the Ministry of Environment (MOE). The review of the EIA reports focuses on the overall formalities and the technical aspects are left to MOE. Due to budgetary constraints, site visits are often not possible to conduct for the reviews of EIA reports from PMUs that DoP is mandated. It is helpful to have technical EIA checkpoints for practical work.

In terms of both EIA and ROW Management processes, PMU such as ICD encounters different requirements and contexts thus there is no uniform procedures to comply. PMU functions for a whole project cycle of loan project implementation (including procurements, bidding, EIA, ROW, resettlement and so on).

Based on the result of this analysis, the institutional framework to implement the project and the taskforce formulation by three departments were agreed in the first JCC. The composition of the framework was proposed by the JICA expert team based on the numerous interviews and discussions at the outset of the Project to decide how to establish a working relation with the MPWT and JICA Expert team.

#### 4) Needs Analysis and Taskforce structure

This needs analysis was conducted by each department on the challenges and needs for the improvement on EIA and ROW Management.

In terms of EIA issues, most of the Taskforce members are necessary to learn from basic knowledge/skill such as; 1) understandings of Environmental and Social Considerations Guidelines (JICA/WB), 2) understandings of EIA technical contents, 3) understandings of EMP technical contents, and 4) understandings of EIA Procedures in Cambodia.

For ROW management, public awareness is a key issue. In order to raise awareness, collaboration is indispensable among MPWT and local authorities to raise awareness about ROW. A notable finding for discussion is that the legal definitions of ROW and the actual reality are far complicated. It needs guidelines to clarify a standard procedure to implement of the concept of ROW to clarify 1) where it is, 2) how to manage to prevent illegal encroachment as the followings.

- 1) Where it is (Current Status Identification): Database improvement, Guidelines for piling, Mapping, Supervision guidelines of the works by DPWT.
- 2) How to manage (Illegal Encroachment Prevention): Public awareness program such as workshops, Public Awareness campaigns through media, event, sign board, video for TV, radio program (similar to road safety campaign), School program to educate about ROW (similar to road safety campaign).

Two Taskforces which are related to EIA/EMP and ROW Management were formed at the first JCC and updated at second JCC. These members will be involved in the Project in the following ways.

- 1. Attend and learn through the capacity enhancement programs such as seminars, training courses that the Project implements,
- 2. Attend training courses in Japan and other neighboring countries,
- 3. Create practical guidelines, plans, maps, database etc. for EIA, EMP on the road sector and ROW management,
- 4. Coordinate seminars, training courses within governmental bodies (MPWT, MOE, MEF, local authorities and others), and
- 5. Coordinate and implement a pilot project through which officers learn and improve the ROW management.

Each Taskforce members are assigned to the Project as follows,

Table II-8Taskforce Members

	EIA/EMP Team
1.	Mr. Prok Novida, Director, DoP
2.	Mr. Uy Sambath, Deputy Chief, Social and Environmental Office, DoP
3.	Mr. Srey Vireak, Officer, Social and Environmental Office, DoP
4.	Mr. Bour Chhay Ya, Officer, Social and Environmental Office, DoP

- 5. Mr. Manh Vutha, Officer, RID (Former ICD Officer until 18th January, 2018)
- 6. Mr. Song Kimheng, Officer, RID (Former ICD Officer until 18th January, 2018)
- 7. Mr. Ngel Sovanarith, Officer, RID (Former ICD Officer until 18th January, 2018)
- 8. (Advisor) Mr. Chea Leng, Deputy Director, Environmental Impact Assessment Department, Ministry of Environment
- 9. (Observer) Mr. Kong Youreth, Chief, Environment and Public Service Office, Public Infrastructure Department

#### **ROW Management Team**

- 10. Mr. Chhim Phalla, Deputy Director, RID
- 11. Mr. You Dara, Deputy Director, RID
- 12. Mr. Khoun Kompheak, Deputy Director, RID
- 13. Mr. Chea Samnang, Chief, ROW Management Office, RID
- 14. Mr. Khai Saray, Deputy Chief, ROW Management Office, RID
- 15. Mr. Hay Chandara, Deputy Chief, ROW Management Office, RID
- 16. Mr. Kain Theara, Officer, RID
- 17. Mr. Long Davuth, Officer, RID
- 18. Mr. Sok Chandy, Officer, RID
- 19. Mr. Sokun Piseth, Officer, RID
- 20. Mr. Sao Premarak, Technical Officer, RID
- 21. Mr. Keat Sarun, Officer, RID
- 22. Mr. Sor Yilin, Deputy Director, Logistic Department (Former Deputy Chief, Regional Cooperation Office, ICD until 1st August, 2017)
- 23. Mr. Sok Ly, Deputy Director, ICD
- 24. Mr. Von Sarom, Deputy Director ICD
- 25. Mr. Peang Samoeun, Deputy Chief, Administrative Office, ICD
- 26. Mrs. Sreng Sophea, Officer, Administrative Office, ICD
- 27. Mrs. Eam Runthearin, Deputy Chief, Regional Cooperation Office, ICD
- 28. Mr. Ang Menghor, Officer, Regional Cooperation Office, ICD
- 29. Mr. Chea Sophanith, Deputy Chief, Bilateral Cooperation Office, ICD
- 30. Mrs. Oum Sokvasey, Deputy Chief, Multilateral Cooperation Office, ICD
- 31. Mr. Lor Vicheth, Deputy Chief, Multilateral Cooperation Office, ICD
- 32. Ms. Laing Sengkim, Officer, Multilateral Cooperation Office, ICD
- 33. (Advisor) Mr. Sek Sothirith, Director, Urban Planning Department, Ministry of Land Management, Urban Planning and Constructions
- 34. (Advisor) Mr. Sao Vary, Director, Department of Conservation, Ministry of Land Management, Urban Planning and Constructions
- 35. (Observer) Ms. Em Sokchea, Deputy Chief, Environment and Public Service Office, Public Infrastructure Department

# (2) Output 2

Major Achievement of Output 2 are shown in Table II-9.

Table II-9	Achievements of the Output 2
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Output 2: Implementation Framework of EC related to Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) is strengthened		
Indicators (Based on PDM ver. 1)	Major Achievement	
2.1 Concept of EC and its implementation process are understood	1) Capacity Assessment (CA) Check List was prepared and the CA was conducted for total 8 members including 6 members who were official EIA/EMP TF members and its average correct answer rate was 43%.	
	2) Implementation issues of EIA/EMP were addressed by EIA/EMP TF members.	
	<ol> <li>Concepts and implementation process of EC were shared and understood between JICA experts and TF members through the TF meetings.</li> </ol>	
	<ol> <li>The following contents were shared and understood on the 1st Seminar held on 4th May 2017.</li> </ol>	
	a) EIA General Process and the implementation issues in Cambodia	
	b) Tasks and the implementation issues of MPWT for EIA process in road sector	
2.2 Authorizing level of REG as an official	1) Documentation Level of the REG was discussed and necessary of duration and procedures for authorization of the REG was confirmed.	
document is confirmed	2) Documentation level of REG was approved at first JCC held on May, 2017.	
	3) Documentation procedures were confirmed.	
2.3 Lessons learned on EC	1) Training summary in Japan (the First - the Third) was prepared.	
in other countries are reflected to REG	2) The 1st training in Japan related to EC was held on 13th - 22nd June 2017 and the result of the training was shared in 2nd Seminar.	
development	<ol> <li>Training summary in Third Country Technical Exchange (the First - the Third) was prepared.</li> </ol>	
	<ul> <li>4) 1st training in third country (Myanmar) related to EC was held on October 24<sup>th</sup></li> <li>- 28<sup>th</sup>, 2017 and the result of the training was shared in 10th EIA/EMP TF meeting.</li> </ul>	
	5) Training in Japan and third country related to EC was done.	
2.4 REG is developed and authorized	1) REG Development plan was prepared and provided to EIA/EMP TF members for mutual understandings.	
	<ol> <li>Technical Official of EIA Department, MOE provided the suggestions for developing REG.</li> </ol>	
	<ol> <li>Draft REG was finalized trough the modification reflected some comments of EIA/EMP TF members and Project Manager.</li> </ol>	
	4) REG title was changed as "Road Environmental Guidebook for MPWT" as a result of meeting with MOE.	
	5) Final Draft REG was shared and approved in 2nd JCC held on February 2018.	
	6) Draft REG translated in Khmer was prepared.	
	7) Document level was decided as "Decision" and REG was authorized by MPWT.	
2.5 REG is monitored based on EIA/EMP related activities.	<ol> <li>Candidate project for REG monitoring was being considered in the EIA/EMP TF and Improvement Project of National Road No.5 by Japanese Yen Loan was selected as a candidate.</li> </ol>	
	<ol> <li>Review for Environmental management Plan (EMP) based on above EIA report with EMP check list of REG was conducted by EIA/EMP TF members.</li> </ol>	
	3) Site check at South part of NR5 for Environmental Consideration such as air quality, water quality and noise / vibration were conducted for the monitoring,	

and site check for Social Consideration was conducted on December 2018.
4) Result of the monitoring of REG will be shared in the Seminar planned to be held in December 2019.

Summary of each achievement are as followings. Detail result is shown in JICA Expert Report.

## 1) Taskforce activities related to EIA/EMP

Activities of EIA/EMP Team Taskforce are shown in Table II-10,

# Table II-10 EIA/EMP Team Taskforce Activities

No.	Date	Contents	
1	31 Mar. 2017	• Conducting a capacity assessment check to understanding their technical knowledge related to EIA and EMP	
2	6 Apr. 2017	• Presenting JICA environmental and social consideration guideline and Questions and Answer	
3	20 Apr. 2017	• Presenting and discussing on draft tasks and implementation issues of MPWT for EIA road sector in Cambodia	
4	26 Apr. 2017	• Presenting and discussing on draft table contents of Road Environmental Guideline	
5	14 Jul. 2017	<ul> <li>Discuss on future schedule for EIA/EMP team of TF member's activities</li> <li>Confirm on the draft table of contents of REG</li> <li>Inform and confirm technical meeting schedule for July and August 2017</li> </ul>	
6	20 Jul. 2017	<ul> <li>Demonstrate how to use noise Measurement tool</li> <li>Present on noise measurement methods</li> <li>Inform about revised REG development schedule</li> </ul>	
7	27 Jul. 2017	<ul> <li>Discussing on how to reflect involvement phases by MPWT for the REG</li> <li>Overviewing on the third country technical exchange with Myanmar</li> </ul>	
8	3 Aug. 2017	<ul> <li>Finalize the table of contents and schedule of draft REG</li> <li>Confirm draft contents of third country technical exchange</li> </ul>	
9	14 Sep. 2017	<ul> <li>To confirm Outline of Third Country Technical Exchange Program</li> <li>To summarize preparations and activities for the program</li> <li>To follow up the EIA-TF members' contribution to the REG</li> <li>To set up the "10th taskforce meeting</li> </ul>	
10	22 Nov. 2017	<ul> <li>Sharing knowledge and lesson learnt on EIA implementation in road sector in Myanmar</li> <li>Sharing the progress of REG development</li> </ul>	
11	30 Nov. 2017	<ul> <li>To discuss and finalize Chapter 1 and 2 of draft REG</li> <li>To get some opinion on important items in Chapter 3 of REG</li> </ul>	
12	11 Dec. 2017	<ul><li>To discuss and finalize Chapter 3 and 4 of draft REG</li><li>To set up the next taskforce meeting</li></ul>	
13	14 Dec. 2017	<ul><li>To discuss and finalize Appendices of draft REG</li><li>To set up the next taskforce meeting</li></ul>	
14	20 Dec. 2017	<ul><li>To discuss and get general comments on draft REG</li><li>To set up the next taskforce meeting</li></ul>	
15	19 Jan. 2018	<ul> <li>To discuss and get general comments on draft REG</li> <li>To get confirmation on presentation in the 2nd JCC meeting and Technical</li> <li>To confirm on railway and port sector</li> </ul>	

No.	Date	Contents	
16	26 Jan. 2018	• To discuss and get general comments on draft REG	
		• To get confirmation on presentation in the 2nd JCC meeting and 3rd Seminar	
		• To confirm proposing contents of the additional requests from DoP	
17	1 Feb. 2018	• To discuss and confirm on comments made by MOE for REG	
		• To get confirmation on presentation in the 2nd JCC meeting and 3rd Seminar	
18	6 Apr. 2018	• To follow up and discuss on draft Prakas for REG	
		• To consider the candidate of road/bridge projects for applying REG	
19	20 May 2018	• To follow up and finalize draft Prakas for REG	
		• To identify existing project for applying REG	
20	22 May 2018	• Acceptances from MPWT management staff for present MPWT's Projects for exercising or applying the REG	
		• Candidate actual projects for exercising or applying the REG	
21	6 Jun. 2018	• An Exercise of the EMP of the REG for South Section (Prek Kdam-Thlea Ma'am Section) of National Road No. 5	
		• One-day Site Check in some parts of National Road No. 5	
22	13 Jun. 2018	• Review of an exercise of the EMP of the REG based on the EIA report of the South section of National Road No. 5	
		<ul> <li>Main points of EIA/EMP Guidebook for Ports Development</li> </ul>	
		• Project	
		• Plan and important check points of the oneday site check in the southern parts of the South section of NR5	
23	21 Jun. 2018	• Review of One-day Site Check in some parts of South Section of National Road No. 5	
		• Climate Change Adaptation Basic Approaches for Transportation Project	
24	13 Sep. 2018	• Discussion of site check in Northern Parts Section of National Road No. 5	
25	17 Sep. 2018	• Preparation of Site Check in Northern Parts Section of National Road No. 5	
26	28 Sep. 2018	• Review of the Site Check in Northern Parts (Batttambang-Serei Saophoan) Section of National Road No. 5	
27	4 Dec. 2018	<ul> <li>Pre-Work for Join field visit to "Actual" Environmental and Social Considerations Monitoring of South Section (Prek Kdam-Thlea Ma'am Section) of National Road No. 5</li> </ul>	
		• REG Authorization	
28	7 Dec. 2018	• To present main Points of EIA Guidebook for Railway	
		• Project for MPWT with Q&A	
		• Final preparation/confirmation for the Joint Field Visit on 13th Dec	
29	14 Dec. 2018	• Review of the REG by the Site Check in South Section of NR5 on 13th Dec. 2018	
		• Further Recommendations for REG Monitoring	
		• Ideas of the Next JICA Assistance Candidate Components for EIA/EMP TF members	
30	11 Dec. 2019	• Final Review of the REG by Additional Site Check	
		• Closing TF meeting	

# 2) Capacity Assessment Check

First capacity assessment was conducted to the TF members for EIA&EMP at the beginning of the Project and second one was conducted at the end of the Project. As the results of the capacity assessment, average understanding level for all the 4 related categories such as i) understandings of the EC (JICA

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Environmental Guidelines, WB Safeguard Policy) concepts of the EIA/EMP, ii) understandings of the EIA technical contents, iii) understandings of the EMP technical contents, iv) EIA detail process in Cambodia) were improved. For example, the total average correct answer rate for the questions was improved from 43 % in the first assessment to 59% in the second assessment. As a result of individuals, average correct answer rate of all staff were improved.

# 3) REG Preparation

REG attached in Annexes was prepared according to REG development plan. The objective of the REG is to assist the MPWT's officials in charge of the EIA to be more effective in reviewing and giving comments on the IEIA/EIA reports and implementing the EMP for road projects, and to ensure effective environmental management and sustainable development in the road sector.

Documentation level of REG was approved as "Decision" and REG was authorized as a Decision in MPWT. Documentation level was discussed as Prakas at first but an effect of REG as a guideline was secured as a result of confirmation of "Decision" according to TF meetings. Moreover, time for confirmation and approval of Decision is faster than Prakas so that Decision is suitable for documentation level of REG.

Contents of REG are as follows.

#### **Table of Contents of REG**

- 1. Introduction
  - 1.1 Background
  - 1.2 Objectives, Users and Scope of the REG
  - 1.3 General Steps in conducting the EIA
  - 1.4 Project Cycle and EIA
- 2. Essential Laws/Prakas and Guidelines related to the REG
- 3. EIA Process Steps Involving the MPWT in Cambodia
  - 3.1 EIA Process Steps Across the Nation of Cambodia
  - 3.2 EIA Process Phases Involving the MPWT in Cambodia
- 4. Practical EIA Process Methods Involving the MPWT in Cambodia
  - 4.1 EIA Report Preparation Phase
  - 4.2 EIA Report Review Phase
  - 4.3 Environmental Monitoring Phase

## 4) Training and Seminar

Training in Japan and third country related to EC were conducted as shown in Table II-11.

Training	Date	Participants	Summary
Japan (1 <sup>st</sup> )	13-22 Jun. 2017	<ul> <li>DoP: Director, Officers</li> <li>RID: Chief of Office, Deputy Chief of Office</li> <li>ICD: Officers</li> <li>MOE: Deputy Director</li> </ul>	<ul> <li>Lecture and Site Visit on environmental countermeasure and consideration at high way</li> <li>Lecture and Site Visit on ROW management and legal framework of public land</li> </ul>
Third country (1 <sup>st</sup> ) Myanmar	24-28 Oct. 2017	<ul> <li>DoP: Director, Officers</li> <li>ICD: Chief of Office, Deputy Chief of Office</li> <li>MOE: Officers</li> </ul>	<ul><li>Technical Exchange Seminar</li><li>Meeting with relevant authorities</li><li>Site visit at construction site</li></ul>

## Table II-11 Training in Japan and third country related to EC

Training	Date	Participants	Summary
Seminar (1 <sup>st</sup> )	4 May 2017	<ul> <li>Deputy Director General of Technique</li> <li>Director and officials of ICD</li> <li>Director representative and officials of DoP</li> <li>Officials of RID</li> </ul>	<ul> <li>Environmental Considerations         <ul> <li>Procedures for Environmental and Social Impact Assessment in Cambodia             <li>Tasks and Implementation Issues of MPWT for the EIA Road Sector</li> </li></ul> </li> </ul>
Seminar (3 <sup>rd</sup> )	6 Feb. 2018	<ul> <li>Deputy Director General</li> <li>Officials of ICD, DoP, and RID</li> </ul>	<ul> <li>Details of Draft Road Environmental Guidelines (REG)</li> <li>To share lesson learnt from 3rd country technical exchange</li> </ul>
Seminar (7 <sup>th</sup> : Final)	6 Dec. 2019	<ul> <li>Deputy Director General</li> <li>Officials of ICD, DoP, and RID</li> </ul>	<ul> <li>Report on the accomplishment of the Project</li> <li>Technical disseminate seminar on EIA/EMP and ROW management</li> </ul>

## 5) REG Monitoring

REG monitoring was conducted through a series of the EIA/EMP TF Technical Meetings and the 4 times of the Site Checks on some points of the project site of the National Road No.5 to contribute to improve the necessary related technical knowledge and skills for the relevant MPWT's officials in terms of reviewing the EIA/EMP for the road development projects. Also, the Checklists of the REG were prepared as flexible checklists for more applicable uses at the each phase of 1) EIA report check, 2) EMP check, 3) Environmental Monitoring Plan (EMoP) check, 4) Environmental Monitoring Report (EMoR) check on the road development projects. Therefore, these Checklists in particular, should be monitored through the document review of the EIA/EMP Reports and rapid site checks related to the Environmental and Social Monitoring of the actual road development projects.

The followings could be proposed through the above REG Monitoring activities as the further recommendation.

- Further Uses of the REG by MPWT officials related to EIA/EMP of the other road development project: Some items of the checklists could be added or be updated through further actual uses of the REG for the other road development projects, although it could not be found any updates parts of the REG
- Actual Monitoring or Uses of the checklists for Reviewing EMoR for any Actual Road Project: It could not be monitored the REG for reviewing the EMoR, When the MPWT get the real EMoR of the actual road development project, it is recommended that additional REG Monitoring should be done for the EMoR using the Checklist for Reviewing an EMoR of the REG.

# (3) Output 3

Major Achievement of Output 3 are shown in Table II-12.

Output 3: Implementation framework of Social Considerations (SC) related to ROW management is strengthened		
Indicators (Based on PDM ver. 1)	Major Achievement	
3.1 Current situation of ROW management is confirmed and Development Plan of draft RMS is prepared	<ol> <li>Problems and concern of ROW management were revealed from MPWT at TF meeting held on 9th May, 2017.</li> <li>The role of the relative organization related to ROW management such as Ministry of Interior (MOI), provincial Authority and Department of Public Works and Transport (DPWT) was analyzed.</li> <li>The development of RMS was discussed in 5th ROW TF meeting and Road Infrastructure Department (RID) will assign Officers to collaborate with JICA experts to develop the RMS.</li> <li>Development Plan of draft RMS was prepared.</li> </ol>	
3.2 Authorizing level of	1) Documentation level of RMG was approved as a Decision	
ROW Management	2) Documentation procedures were confirmed	
Guidelines (RMG) of RMS as an official document is confirmed	2) Documentation procedures were committed.	
3.3 Draft RMG is prepared	<ol> <li>Table of contents was prepared and shared in 2nd JCC held on February 2018.</li> <li>Contents of Current Status Identification (CSI) and Illegal Encroachment Prevention (IEP) were discussed in ROW TF meeting and these contents was reflected in the draft RMM and RMD.</li> <li>CSI was prepared with the result of the Pilot Project.</li> <li>Public Consultation Meeting (PCM) related for IEP for National Road No.1 was held by MPWT on the following schedule, and through the PCM, institutional analysis between MPWT and Local Authorities could be conducted in addition and IEP procedure for the cooperation got clear.         <ul> <li>27<sup>th</sup> March 2018: Kickoff Meeting for PCM</li> <li>27<sup>th</sup> April 2018: PCM at Niroth Pagoda</li> <li>28<sup>th</sup> April 2018: PCM at Khan Chbar Ampov.</li> </ul> </li> <li>Contents and work flow for CSI and IEP were discussed and draft RMG was prepared.</li> </ol>	
3.4 Draft RMS Training	1) Contents of RMS-TP was discussed.	
Plan (RMS-TP) is	2) Draft RMS-TP was prepared.	
prepared	3) Draft TP was shared in TF Meeting.	
3.5 Tentative ROW	1) The Training for Total Station and Drone were conducted on 19th October 2017 to	
Management Map (RMM) and tentative ROW Management Database (RMD) are prepared	<ul> <li>provide the basic knowledge on how to use Total Station, Drones and data processing.</li> <li>2) Trial Flight of Drone was conducted on November 2017 with the officials from RID, ICD (International Cooperation Department), DPWT and Local Government.</li> <li>3) As a result of trial flight, Verification of applicability concerning CSI method was drafted and reported.</li> <li>4) Tentative RMM was prepared for the Pilot Project.</li> <li>5) Tentative RMD was prepared by the Pilot Project.</li> </ul>	
3.6 Lessons learned on SC	1) Training summary in Japan and 3rd Country Technical Exchange were prepared	
through training in	2) The 1st training in Japan was held on 13th - 22nd June 2017 and the result of the	
other countries and	training is shared in 2nd Seminar.	

#### Table II-12Achievements of the Output 3

Output 3: Implementation framework of Social Considerations (SC) related to ROW management is strengthened		
Indicators (Based on PDM ver. 1)	Major Achievement	
Cambodia are reflected	3) The 2nd training in Japan was held on from 27th February to 9th March 2018 to learn	
to RMS discussion	the SC framework on ROW management by the lecture and site visit on ROW management, legal framework, institution and Information management of road space.	
	4) The 3rd training in Japan was held on 12th - 22nd February 2019 to learn the ROW management, road occupation system, road information management and real estate registration.	
	<ul> <li>5) 2<sup>nd</sup> Technical Exchange was held as the Seminar inviting relevant authorities in Thailand and Laos on 27th September 2018 and Visit and meeting in Thailand and Laos were held from 22th to 26<sup>th</sup> October 2018 to share and exchange the opinions for ROW management in each country.</li> <li>6) 3<sup>rd</sup> Technical Exchange at the International Association for Impact Assessment</li> </ul>	
	(IAIA) conference in Australia was held on 27 <sup>th</sup> April – 3rd May 2019 and some issue on ROW management was presented at the conference.	
3.7 RMS is authorized	1) Draft RMG is being reviewed by MPWT and a topic of "Proper Procedure of ROW Usage" was added.	
	2) RMS-TP is being reviewed according to the result of TOT by pilot project.	
	3) RMM is integrated in RMD which is being revised by the database contractor and usage of database was explained to the pilot team.	

Summary of each achievement are as followings. Detail result is shown in JICA Expert Report.

## 1) Taskforce activities related to ROW Management

Activities of ROW Management Team Taskforce are as follows,

Table II-13	<b>ROW Management Team Taskforce Activities</b>
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No.	Date	Contents		
1	9 May. 2017	• To discuss and clarify on the concepts, implementation and challenges of ROW management		
		• To set up date and agenda for the second Taskforce meeting		
2	7 Jun. 2017	• Presentation on Construction Permit by MLMUPC		
		• Set-up the next (3rd) Taskforce Meeting		
		• Capacity Assessment for Taskforce Members		
3	26 Jul. 2017	<ul> <li>Discussion on Land Management and ROW Management</li> <li>Discussion on Realizing ROW Management Map (RMM) and ROW Management Database (RMD)</li> </ul>		
		• Set up the next taskforce meeting		
		<ul> <li>Additional self-evaluation on ROW management related matters</li> </ul>		
4	5 Sep. 2017	<ul> <li>To clarify the ROW management and Table of Contents of ROW guideline</li> <li>To have better understanding the coordination between DPWT and local authorities</li> <li>To have better understanding about boundary between urban and non-urban</li> </ul>		
5	9 Oct. 2017	<ul> <li>Discussion on the Development Plan of RMG</li> <li>Discussion on Trial Flight of Drone</li> <li>Discussion on the Concept of 2nd Training in Japan</li> <li>Setup of the next ROW TF meeting</li> </ul>		

No.	Date	Contents
6	19 Oct. 2017	• Basic knowledge on using drone in ROW Management.
		• Training on using Total Station (Topcon) and Drone.
7	15 Nov. 2017	• Drone field work practice (Flight plan, How to start the flight and capture the image, image preparation and image processing)
8	23 Nov. 2017	• Explain the CSI (Current Situation Identification) Methods
		• Discuss the result of the test flight
		• Discuss the selection of pilot project
9	19 Dec. 2017	<ul> <li>Verification of Table of Content (TOC) of ROW Management Guidelines (RMG)</li> <li>Discuss the Public Consultation Meeting at 4th Section of NR1 for Illegal Encroachment Prevention (IEP)</li> </ul>
		• Explain the pre-discussion results of the third country technical exchange on the ROW management in Thailand and Laos.
10	12 Jan. 2018	• Update the Table of Content of ROW Management Guidelines
		• Update the ROW TF members
11	9 Feb. 2018	• Discussion for Public Consultation Meeting (Case Study in Japan)
		• ROW Management on NR1 Section 4
12	12 Feb. 2018	• Discuss and confirm the purpose of ROW Management System (RMS)
		• Discuss the items to be collected and recorded for RMS
		• Discuss the ROW Management Map (RMM) and Database (RMD)
13	26 Feb. 2018	• Confirmation of Item to be Collected and Recorded for ROW Management System (RMS)
		• ROW Management Database (RMD) Requirement Definition
		• Confirmation of Kick-Off Meeting Date for Public Consultation Meeting (PCM) and Materials to be Prepared
14	19 Mar. 2018	• Discuss the progress for Kick-off Meeting for PCM;
		• Clarify the arrangement of PCM; and
		• Finalize the material printing for PCM.
15	5 Apr. 2018	• Inform TF members the summarized results of Kick-off meeting with Phnom Penh Capital Hall (PPCH);
		• Clarify arrangement schedule and responsibilities for PCM; and
		• Finalized the material printing for PCM.
16	30 Apr. 2018	• Review the Public Consultation Meeting on 27th and 28th April;
		• Discuss the Pilot Project Framework; and
		• Clarify the requirement of ROW Management System (RMS).
17	28 May. 2018	• Explain the Pilot Project Plan; and
		• Explain the Pilot Project Task Force (PTF) activities and training.
18	19 Jun. 2018	• Clarify the Pilot Project Implementation;
		• Discuss the Illegal Encroachment Prevention (IEP); and
		• Set up the date for next TF meeting.
19	29 Jun. 2018	• Clarify the Pilot Project Implementation;
		• Discuss the IEP Approaches; and
		• Set up the date for next TF Meeting.
No.	Date	Contents
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20	9 Jul. 2018	• Discuss the IEP approaches;
		<ul> <li>Confirm some requests for National Budget;</li> <li>Discuss the rayised Table of Contents of POW Management Guidelines (PMG);</li> </ul>
		<ul> <li>Discuss the revised Table of Contents of ROW Management Guidennes (RMG);</li> <li>Confirm the courtesy meeting to Pursat DPWT:</li> </ul>
		<ul> <li>Explain the Draft Outline of 2nd Third Country Technical Exchange</li> </ul>
21	16 Jul. 2018	• Explain the progress of the arrangement of Third Country Technical Exchange Program;
		• Discuss the IEP Approaches; and
		• Notify the Pilot Project of Current Status Identification (CSI).
22	17 Aug. 2018	• Discuss on the presentation for Technical Exchange Seminar on 27th September; and
		• Discuss on some matters related to Pilot Project Activities.
23	31 Aug. 2018	• Discuss on IEP approaches for Pilot Project; and
		• Discuss on Third Country Technical Seminar in details.
24	20 Sep. 2018	• Review the presentation from Thailand and Laos for Third Country Technical Exchange; and
		• Discuss the CSI/IEP approaches for Pilot Project.
25	25 Sep. 2018	• Confirm the presentation and logistic arrangement for the upcoming Seminar on ROW
		Management.
26	1 Nov. 2018	<ul> <li>Report the Third Country Technical Exchange in Laos and Thailand; and</li> <li>Discuss the CSLUED segmentation for Dilut Design (</li> </ul>
	10.12	Discuss the CSI/IEP approaches for Pilot Project.
27	12 Nov. 2018	<ul> <li>Inform the 5th Technical Seminar on 13th November, 2018 at Phnom Penh Hotel; and</li> <li>Discuss each presentation for the seminar</li> </ul>
29	12 Nov. 2019	Discuss each presentation for the seminal.
28	15 Nov. 2018	<ul> <li>Present Hanshin Expressway ROW Management in Japan; and</li> <li>Discuss the CSI/IEP Approaches for Pilot Project.</li> </ul>
29	7 Dec. 2018	• Discuss on new CSI approaches for Pilot Project; and
		• Discuss on Plan for IEP Approaches for Pilot Project.
30	14 Jan. 2019	• Discuss on new CSI approaches for Pilot Project; and
		• Discuss on RMD Development.
31	30 Jan. 2019	• Discuss the procedure to establish the Inter-Ministerial Committee on ROW Management
		through sharing the presentation on the Pilot Project Progress for ROW Management; and
22	9 F.1. 2010	Commin the arrangement of sid JCC meeting.
32	8 Feb. 2019	Discuss on new CSI approaches for Pilot Project with DPW I.
33	27 Feb. 2019	<ul> <li>Discuss ROW Management Database (RMD); and</li> <li>Discuss on now CSI approaches for Pilot Project</li> </ul>
24	( Mar 2010	Discuss on new CSI approaches for Pilot Project.
54	6 Mar. 2019	<ul> <li>Discuss on IEP approaches for Pilot Project; and</li> <li>Confirm the schedule of some events.</li> </ul>
35	13 Mar. 2019	• Confirm Seminar and TF meeting with DPWT on 15th March, 2019;
		• Discuss the IEP Hard Approaches; and
		• Consult about IAIA material review.
36	15 Mar. 2019	• Discuss the IEP Soft and Hard Approaches, especially the IEP Consultation Meeting.
37	23 Apr. 2019	• Confirm the contents of Standard drawings; and
		• Discuss the IEP Hard Approach.
38	28 May. 2019	<ul> <li>Discuss ROW Management Guidelines for Proper ROW Usage.</li> </ul>

No.	Date	Contents		
39	7 Jun. 2019	• Discuss the ROW Management Database.		
40	14 Jun. 2019	Discuss the ROW Management Guidelines (ROW Usage and permission).		
41	21 Jun. 2019	Inform about the construction works on IEP Hard Approaches.		
42	28 Jun. 2019	• Discuss the Budget Plan for ROW Management Next Year.		
43	5 Jul. 2019	• Continue the discussion on the Budget Plan for ROW Management Next Year.		
44	12 Jul. 2019	• Explain the draft agenda for Workshop on Training of Trainers (ToT) for Future Practice of ROW Management Methods.		
45	19 Jul. 2019	<ul> <li>Continue the discussion on the Budget Plan for ROW Management for next year; and</li> <li>Discuss on IEP Soft Approach (Patrol).</li> </ul>		
46	24 Jul. 2019	• Discuss on legal document related to ROW and Pilot Project Patrol; and		
		• Report and confirm the updated Budget Plan and Next schedule.		
47	30 Jul. 2019	• Confirm the workshop (on July 31) in details (date, time, place, agenda, presenter, presentation, and demo); and		
		• Update the progress report of RMS App Development.		
48	8 Aug. 2019	<ul> <li>Report the summary of workshop for Practice of RMS on 31st July and discuss the next schedule; and</li> <li>Discuss the Pilot Project for Patrol at Chrey Bak Commune, Kampong Chhnang Province</li> </ul>		
49	20 Aug 2019	Discuss on the Pilot Project IEP Survey (Patrol)		
50	6 Sep 2019	Beport the evaluation results of two ToT workshops: and		
50	0 Sep. 2017	<ul> <li>Inform the number of events till the end of the project.</li> </ul>		
51	17 Sep. 2019	<ul> <li>To inform and get confirmation on 3D image for ROW signboard</li> <li>To discuss about functions of ROW management database (RMD)</li> </ul>		
52	26 Sep. 2019	<ul> <li>Confirm the preparation for the seminar on 2nd October, 2019</li> <li>Explain the draft ROW Management Guidelines (RMG)</li> </ul>		
53	3 Oct 2019	Clarify comments and requests from Technical Seminar on 2nd October 2019		
00	0.000 2013	• Confirm the information collection at IEP Patrol;		
		• Confirm schedules of reviewing the RMG and Visiting the SHV		
54	24 Oct. 2019	<ul> <li>Confirm the basic policy for IEP Patrol</li> <li>Inform uncoming 4th ICC Macting</li> </ul>		
55	28 Oct. 2019	Indate and discuss the arrangement of the 4th ICC Meeting		
55	4 Nov. 2019	Inform the key points to be reported at the 4th ICC Meeting		
50	4 NOV. 2019	<ul> <li>Confirm the comments on the construction of pilot project at Chrey Bak Primary School.</li> </ul>		
57	14 Nov. 2019	<ul> <li>Update the Appendix Manuals of RMG</li> <li>Inform the database.</li> </ul>		
58	25 Nov. 2019	<ul> <li>Confirm the final draft of ROW Management Guidelines (RMG)</li> <li>Confirm training schedule for ROW Management Database (RMD); and</li> <li>Discuss the presentations for Final Seminar</li> </ul>		
59	2 Dec. 2019	• Training on RMD by database contractor		
60	9 Dec. 2019	<ul><li> Revie of final seminar</li><li> Closing the ROW TF</li></ul>		

## 2) ROW Management System (RMS) Preparation

The ROW Management System (RMS) is structured as shown in Figure II.1. RMS is composed with ROW Management Guidelines (RMG), ROW Management Map (RMM), ROW Management Database (RMD) and RMS Training Plan (RMS-TP) as outputs of ROW management. These objectives and outputs in this project are shown after this section.



Figure II.1 RMS Structure

ROW management includes two main activities, Current Status Identification (CSI) and Illegal Encroachment Prevention (IEP). These activities were verified in Pilot Project and detail of method and effectiveness are shown in Figure II.2.



Figure II.2 CSI and IEP activities

## 3) RMG Preparation

In order to ensure the smooth implementation of road development and improvement projects, effective ROW management is needed, and RMG describing the method, procedure and role sharing was prepared.

The objectives of RMG are as follows:

• To identify current status of ROW management by developing ROW management map and ROW management database,

- To guide on implementation of CSI / IEP for better/effective ROW Management, and
- To provide design options for future road development.

Documentation level of RMG was approved as a "Decision". Documentation level was discussed as Prakas at first but an effect of RMG as a guideline was secured as a result of confirmation of "Decision" according to TF meetings. Moreover, time for confirmation and approval of Decision is faster than Prakas so that Decision is suitable for documentation level of RMG.

Table of Contents of RMG attached in Annex is as follows.



## 4) ROW Management System Training Plan (RMS-TP) Preparation

ROW Management System Training Plan (RMS-TP) is a training manual targeting to trainer for ROW management system. It provides information on what should be prepared for each training.

RMS-TP aims to guide trainers to have ideas on how each training can be prepared and be done, and aims that trainer will implement the training in MPWT and DPWT using RMS-TP in the future.

Training curriculum of RMS-TP is shown in Table II-14.

	TYPE	HOURS	TARGET	
11EM			MPWT	DPWT
CSI				
ROW Management	Lecture	3	$\checkmark$	$\checkmark$
UAV survey 1 (UAV Preparation)	Lecture	6	$\checkmark$	$\checkmark$
UAV survey 2 (UAV Operation)	On-site	3	$\checkmark$	$\checkmark$
Image processing	Hands on	3	$\checkmark$	

ITEM	TYPE	UOUDS	TARGET	
IIEM		HOURS	MPWT	DPWT
GIS outline	Lecture	3	$\checkmark$	$\checkmark$
GIS mapping	Hands on	3	$\checkmark$	$\checkmark$
Field survey 1 (Field survey preparation)	Lecture	3	$\checkmark$	$\checkmark$
Field survey 2 (Implementing field survey)	On-site	3	$\checkmark$	$\checkmark$
Data Finalization	Hands on	4	$\checkmark$	
Database	Lecture	4	$\checkmark$	
CSI Outsource & management	Lecture	4	$\checkmark$	
IEP				
IEP selection	Hands on	3	$\checkmark$	
IEP soft approach 1	Lecture	2	$\checkmark$	$\checkmark$
IEP soft approach 2	Lecture	2	$\checkmark$	$\checkmark$
IEP soft approach 3	Lecture	2	$\checkmark$	$\checkmark$
IEP hard approach	Lecture	3	$\checkmark$	$\checkmark$
IEP outsource & management	lecture	4	$\checkmark$	

#### RMM and RMD Preparation

Activities concerned in the RMM and RMD is shown in Figure II.3. Both CSI IEP activities are embedded in the system to develop RMM and RMD. The development of RMM and collection of baseline information into RMD are implemented by CSI activities. The baseline data is utilized for analysis of IEP approaches such as to classify potential, populated and non-dense areas by the density. Also, the latest situation of the encroachment will be updated to RMD by IEP approaches such as patrol by DPWT.

The objectives of the RMM and RMD are:

- To visualize the location and current situation of the ROW on an updated map to record and monitor the situation by aerial photo, field survey and patrol, and
- To use the collected information for a smooth implementation of ROW management such as considering countermeasures for illegal encroachment and development in case of road improvement project such as widening of existing road.



Figure II.3 Activities concerned in the RMM and RMD

## 5) Budget Plan for ROW Management

Budget plan for the ROW management was prepared for the following purpose.

• To classify the cost of appropriate ROW management

- To contribute the budget requirement for ROW management
- To secure the future budget for ROW management

Budget Plan includes the all budget for the overall goal for the future ROW management, which is set as CSI and IEP are implemented on the all 1-digit and 2-digit national road which total length is 7,260 km. These total prices were estimated that approx. 900,000 USD for CSI activities and 100,000,000 USD for IEP activities so that budget period was separated as a phase for 3 years.

First phase target was set as Half of all 1-digit & 2-digit CSI, PCM for 50 places, Patrol on all 1-digit & 2-digit national road and New ROW Pole installation for 150 km and approx. 1,000,000 USD was estimated in 3 years. Estimated price is a rough standard, and MPWT should adjust for their activities related to CSI and IEP and evaluate their effectiveness for the future budget requirement.

In the budget plan, increasing the resettlement price and land price were shown and based on that price and budget for ROW management, it is shown that RID, MPWT should have role for budget requirement.

## 6) Training and Seminar (To be updated)

Training in Japan and third country related to ROW Management were conducted as shown in Table II-15.

Training	Date	Participants	Summary
Japan (1 <sup>st</sup> )	13-22 Jun. 2017	<ul> <li>DoP: Director, Officers</li> <li>RID: Chief, Deputy Chief</li> <li>ICD: Officers</li> <li>MOE: Deputy Director</li> </ul>	<ul> <li>Lecture and Site Visit on environmental countermeasure and consideration at high way</li> <li>Lecture and Site Visit on ROW management and legal framework of public land</li> </ul>
Japan (2 <sup>nd</sup> )	27 Feb9 Mar. 2018	<ul> <li>RID: Chief, Deputy Chief, Officers</li> <li>ICD: Director, Deputy Chief Officers</li> <li>MEF: Chief</li> <li>MLMUPC: Director, Acting Director</li> </ul>	<ul> <li>Lecture and Site Visit on ROW management, legal framework and institution.</li> <li>Information management of road space</li> <li>Discussion against challenges</li> </ul>
Japan (3 <sup>rd</sup> )	12-22 Feb. 2019	<ul> <li>RID: Chief officer, Officer</li> <li>ICD: Officer</li> <li>DPWT in Kampong Chhnang, Pursat, Battambang, Banteay Meanchey</li> </ul>	<ul> <li>Lecture and site visit for road space management, ROW management, traffic patrol and geographic information</li> <li>Presentation and discussion against challenges</li> </ul>
Third Country (2 <sup>nd</sup> ) (Seminar in Cambodia)	26-28 Sep. 2018	<ul> <li>ICD: Director</li> <li>RID: Chief, Deputy chief, officer</li> <li>PID: Deputy chief</li> </ul>	• ROW Management Seminar in Cambodia (participants from Laos and Thailand)
(Visit to Laos and Thailand)	22-26 Oct. 2018	• RID: Chief, Deputy chief, Officer	• Visit and Technical Exchange Meeting in Laos and Thailand
Third Country (3 <sup>rd</sup> ) (Seminar in Australia)	27 Apr3 May 2019	<ul><li>Director General</li><li>ICD: Chief</li></ul>	• Participation in International Association for Impact Assessment (IAIA) conference in Brisbane, Australia

 Table II-15
 Training in Japan and third country related to ROW Management

Training	Date	Participants	Summary
1 <sup>st</sup> Seminar	4 May 2017	<ul> <li>Deputy Director General of Technique</li> <li>Director and officials of ICD</li> <li>Director representative and officials of DoP</li> <li>Officials of RID</li> </ul>	<ul> <li>Environmental Considerations <ul> <li>Procedures for Environmental and Social Impact Assessment in Cambodia</li> <li>Tasks and Implementation Issues of MPWT for the EIA Road Sector</li> </ul> </li> <li>ROW Management <ul> <li>ROW Management Activities in Cambodia</li> <li>ROW Management for the Japanese Projects in Cambodia</li> </ul> </li> <li>Management of Reserved Land for Road Construction in Japan</li> </ul>
2 <sup>nd</sup> Seminar	6 Jul. 2017	<ul> <li>Director General of Technique</li> <li>EIA and ROW Taskforce members</li> <li>Ministry of Land Management, Urban Planning and Construction</li> <li>Ministry of Environment</li> </ul>	<ul> <li>Report of Training in Japan</li> <li>Progress and Schedule of TF</li> <li>Discussion on Land Management and ROW management based on the Presentation</li> <li>Presentation on ROW Management Map (RMM) and ROW Management Database (RMD)</li> <li>Following Schedules</li> </ul>
3 <sup>rd</sup> Seminar	6 Feb. 2018	<ul> <li>Deputy Director General</li> <li>ICD, DoP, RID</li> </ul>	<ul> <li>Details of Draft Road Environmental Guidelines (REG)</li> <li>Report of Third Country Technical Exchange</li> <li>Case Study for Illegal Encroachment Prevention (IEP)</li> </ul>
4 <sup>th</sup> Seminar	27th Sep. 2018	<ul> <li>Deputy Director General of Techniques</li> <li>ICD, RID</li> </ul>	<ul> <li>To acquire basic knowledge about each country's experiences on ROW Management by sharing presentation</li> <li>Visit Site of Pilot Project</li> </ul>
5 <sup>th</sup> Seminar	13th Nov. 2018	<ul> <li>Director General of Techniques</li> <li>ICD, RID, PID</li> <li>Railway Department</li> </ul>	<ul> <li>To share the lesson-learns on ROW Management in Third Country;</li> <li>To report the progress of Pilot Project</li> <li>To share the activities of Illegal Encroachment Prevention (IEP).</li> </ul>
6 <sup>th</sup> Seminar	15th Mar. 2019	<ul> <li>Deputy Director General</li> <li>ICD, RID, PID</li> </ul>	<ul> <li>To consult the typical roadway cross section (Stage Construction and ROW Management);</li> <li>To report the training in Japan; and</li> <li>To discuss the IEP approaches</li> </ul>
7 <sup>th</sup> Seminar (Final)	6 Dec. 2019	<ul> <li>Deputy Director General</li> <li>Officials of ICD, DoP, and RID</li> </ul>	<ul> <li>Report on the accomplishment of the Project</li> <li>Technical disseminate seminar on EIA/EMP and ROW management</li> </ul>

Training	Date	Participants	Summary
1 <sup>st</sup> TOT Workshop	31st Jul. 2019	<ul> <li>Director General of Techniques</li> <li>ICD, RID, PID</li> </ul>	<ul> <li>To train the DPWTs' Officials on ROW management System through the presentations from ROW TF members (MPWT's Officials);</li> <li>To conduct the field practice for field survey and patrol</li> </ul>
2 <sup>nd</sup> TOT Workshop	29th Aug. 2019	<ul> <li>Under Secretary of State</li> <li>ICD, RID, PID</li> </ul>	<ul> <li>To train the DPWTs' Officials on ROW management System through the presentations from ROW TF members (MPWT's Officials);</li> <li>To conduct the field practice for field survey and patrol.</li> </ul>
3 <sup>rd</sup> TOT Workshop	30th Aug. 2019	• ICD, RID, PID	<ul> <li>To train the DPWTs' Officials on ROW management System through the presentations from ROW TF members (MPWT's Officials);</li> <li>To conduct the field practice for field survey and patrol</li> </ul>

## (4) **Output 4**

Major Achievement of Output 4 are shown in Table II-16.

Output 4: Capacity of SC required for ROW management is strengthened			
Indicators (Based on PDM ver. 1)	Major Achievement		
4.1 Pilot Project Implementation Plan is established	<ol> <li>National Road No. 5 in: Kampong Chhnang province, Pursat province, Battambang province and Banteay Meanchey province was planned as a pilot project site.</li> <li>Pilot Project Implementation Plan was prepared trough ROW TF</li> </ol>		
4.2 PTF is established	<ol> <li>PTF was established including 2-3 members from each DPWT in 4 provinces.</li> </ol>		
	<ol> <li>Kickoff Meetings were held in 2018 for each province and explanation and discussion with relevant authorities were conducted.</li> </ol>		
4.3 Pilot project of Current Status Identification (CSI) is completed	<ol> <li>Condition of ROW management and IEP in NR5 from the border of Kampong Chhnang and Kampong Speu was surveyed for Pilot Project.</li> <li>Pilot Project of CSI started from end of May 2018.</li> <li>Each CSI activities such as UAV Survey, GIS Processing, Field Survey, Data Finalization were completed.</li> <li>In addition RMM in NR4 Sibanoukville was conducted</li> </ol>		
4.4 Pilot project of Illegal Encroachment Prevention (IEP) is completed	<ol> <li>Contents and budget for IEP activities were decided by ROW TF.</li> <li>Standardization for the future road development was conducted as part of IEP activities and road design standard drawing was prepared.</li> <li>IEP activities at the site has been started from June 2019 and the construction of IEP activities for hard approaches will be completed by October 2019.</li> <li>Target area of IEP activities is NR5 at Chrey Bak Commune, Krong Kampong Chhnang and consultation meeting for residents and IEP hard approach at target area was conducted.</li> </ol>		

Output 4: Capacity of SC required for ROW management is strengthened			
Indicators (Based on PDM ver. 1)	Major Achievement		
4.5 At least 10 qualified trainers are trained	1) Train of Trainer between JICA Project Team and MPWT started from March 2019 and was held 8 times until April 2019.		
	2) Total 13 MPWT's staffs were trained at above train and they implemented ToT for DPWT.		
	3) TOT between MPWT and DPWT were conducted from July 2019		
	4) Dissemination seminar to the other officials was held on December 2019.		

#### 1) Pilot Project Implementation Plan

National Road No. 5 (Priority wise: Battambang, Banteay Meanchey and Pursat Provinces) from 1-digit National Roads was approved as a candidate of the pilot project. Pilot Project Implementation Plan is established to implement the Pilot Project of CSI and IEP smoothly. In addition, additional pilot project for CSI was implemented at some section of NR No. 4 in Preah Sihanouk Province based on the MPWT road maintenance plan in order to ensure the knowledge from the pilot project on NR No. 5.

CSI and IEP (PCM) work flow is shown in Figure II.4.



Figure II.4 CSI and IEP (PCM) Work Flow

#### 2) Pilot Project Taskforce

Pilot Project Taskforce was established on and that members and activities are as shown in Table II-17 and Table II-18.

	Fable II-17	Pilot Project Taskforce Members
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	Task Force member (MPWT)					
1.	Mr. You Dara, Deputy Director, RID					
3.	Mr. Khoun Kompheak, Deputy Director, RID					
2.	Mr. Chea Samnang, Chief, ROW Management Office, RID					
4.	Mr. Khai Saray, Deputy Chief, ROW Management Office, RID					

5.	Mr. Hay Chandara, Deputy Chief, ROW Management Office, RID
6.	Mr. Kain Theara, Officer, RID
7.	Mr. Long Davuth, Officer, RID
8.	Mr. Sok Chandy, Officer, RID
9.	Mr. Sokun Piseth, Officer, RID
10.	Mr. Sao Premarak, Technical Officer, RID
11.	Mr. Keat Sarun, Officer, RID
12.	Mr. Sor Yilin, Deputy Director, Logistic Department
13.	Mr. Sok Ly, Deputy Director, ICD
14.	Mr. Von Sarom, Deputy Director ICD
15.	Mr. Peang Samoeun, Deputy Chief, Administrative Office, ICD
16.	Mrs Sreng Sophea, Officer, Administrative Office, ICD
17.	Mrs. Eam Runthearin, Deputy Chief, Regional Cooperation Office, ICD
18.	Mr. Ang Menghor, Officer, Regional Cooperation Office, ICD
19.	Mr. Chea Sophanith, Deputy Chief, Bilateral Cooperation Office, ICD
20.	Mrs. Oum Sokvasey, Deputy Chief, Multilateral Cooperation Office, ICD
21.	Mr. Lor Vicheth, Deputy Chief, Multilateral Cooperation Office, ICD
22.	Ms. Laing Sengkim, Officer, Multilateral Cooperation Office, ICD
	Task Force member (DPWT)
1.	Lao Prostit, Officer, DPWT Kampong Chhnang
2.	Khut Khemra, Officer, DPWT Kampong Chhnang
3.	Phang Dollar, Deputy Director, Public Order Office, DPWT Banteay Meanchey
4.	Lang Sopheak, Senior Technical Officer, DPWT Banteay Meanchey
5.	Pheng Chanchhaya, Director, Machinery Unit, DPWT Battambong
6.	San Sereisith, Deputy Director, Public Works Office, DPWT Battambong
7.	Thouch Raksa, Officer, Public Works Office, DPWT Battambong
8.	Kang Kimchhun, Deputy Director, Public Works Office, DPWT Pursat
9.	Tang Sovanna, Director, Public Works and Transport Office of Bakan District, DPWT Pursat
10.	Bun Soupheng, Officer, Roads and Bridges Unit, DPWT Pursat

Table II-18	Pilot Project Taskforce Activities
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No.	Date	Activities	Contents	
1	31st May 2018	UAV operation training in Kampong Chhnang	<ul><li>Explanation of the objective of UAV operation</li><li>Operating training</li></ul>	
2	7th June 2018	GIS training	<ul> <li>Explanation of the objective of the feature and basic knowledge of GIS</li> <li>Basic operation of GIS and data processing operation</li> </ul>	
3	8th June 2018	UAV operation training in Kampong Chhnang	<ul><li>Explanation of the objective of UAV operation</li><li>Operating training</li></ul>	

No.	Date	Activities	Contents
4	12th June 2018	Field Survey training in Kampong Chhnang	• Explanation of the objective of Field Survey
5	15th June 2018	UAV operation training in Kampong Chhnang	<ul><li>Explanation of the objective of UAV operation</li><li>Operating training</li></ul>
6	27th -28th March 2019	IEP Consultation Meeting in Kampong Chhnang	<ul><li>To discuss on IEP approaches for pilot project</li><li>To confirm schedule of some events</li></ul>
7	20th April, 2019	PCM in Kampong Chhnang	<ul> <li>To disseminate the Laws and legal documents on ROW</li> <li>To explain the ROW Management Activities by DPWT</li> <li>To explain the IEP approaches in Pilot Project Area</li> </ul>
8	24th April 2019	PCM in Kampong Chhnang	• To disseminate the Laws and legal documents on ROW

## 3) <u>Result of Pilot Project for CSI</u>

CSI focuses on data collection related to situation of ROW along national roads and provincial roads across the country in order to create ROW maps and database as baseline for effective ROW management. Main contents of CSI are UAV survey, field survey and office work. Detail information of each task is shown in Table II-19.

Main Implementation Items		plementation Items	Contents	
	1)	Arrange for UAV Flight Permission	Arrange for the UAV Flight by getting Permission from DPWT as well as other local government and acquiring a UAV Usage permit.	
UAV Survey	2)	Prepare for UAV Flight	Create UAV Flight Plan based on UAV Survey Manual and prepare necessary equipment related to UAV Flight as well as a Notice Board to raise public awareness about ROW.	
	3)	Implement UAV Survey	Take aerial images by using UAV. In addition, during the UAV Survey install the notice board so that passers can see the picture of activity related to ROW.	
	4)	Supervision	Audit time schedule and quality and take care safety control.	
	1)	Take Photos of Facilities	Take photos of facilities from the ground and count existing facilities which is difficult to identify the exact number of them.	
Field Survey	2)	Update data on the tablets	Update data on the tablets.	
	3)	Survey other things	Survey other things based on Items to be collected / recorded for RMS and discussions by TF.	
Office Work	1)	Data Processing (Ortho, GIS and DB)	Create the orthomosaic (Orhto) from aerial images and make raster data and attribute information on GIS. Also build up and update Data base (DB).	
	2)	Finalization	Finalize RMM after field survey are implemented.	

Table II-19Main Contents of CSI

Area of CSI and Image of the CSI output are shown in Figure II.5 and Figure II.6. Pilot Project for CSI implemented from May 2018 to July 2019 on the NR5, that total length is 366km. Each CSI activities were implemented as follows.

- UAV survey: 750 flights
- Image processing: 36,600,000m<sup>2</sup>
- Data Production: 33,625 points
- Field survey: 25,248 photos
- · Data finalization: All errors were corrected





Figure II.5 Area of CSI

Figure II.6 Image of the CSI output

In addition, UAV survey and Data Processing for RMM along NR4 from Sihanoukville Autonomous Port for Phnom Penh in Sihanoukville province for approx. 15 km were also conducted. The field survey would be conducted sequentially by MPWT and DPWT based on road maintenance plan and schedule of the province in 2020.

- UAV survey: 30 flights
- Image processing: 1,500,000m2
- Data Production: 805 points (to be updated by Field survey)

## 4) Result of Pilot Project for IEP

Following the results from CSI, IEP approaches shall be implemented in order not to allow any illegal/inappropriate use lands in ROW.

The approaches have been classified into hard approaches and soft approaches for both existing project and project in future. Illegal encroachment prevention approaches are summarized in Table II-20.

Classification		ication	Approaches for IEP
ect	Soft approaches	t approaches ng Raising ol/ awareness on (Education)	Raising local people's awareness on ROW
ng proj			Integrating ROW concept into school curriculum (high-school student or university student)
txisti			Raising relevant governmental officials' awareness on ROW management
for E			Promoting regular patrol activities to prevent ROW encroachment (Monitoring)
tivities		onitorii d Contr erventi	Promoting collaborative works among local police, local authorities and DPWT (control or intervention)
Ac		M anc Int	Appealing to the court

Table II-20 Main Contents of IEP

Classification		ication	Approaches for IEP
		tration / ssion of ation for / Usage	Regarding application for construction permit should be done by public works office of DPWT and cadastral office of DLMUPC, not cadastral office alone.
			Building construction permit
		Regis Permi Applic ROW	Land filling permit
			ROW registration
	approaches	stalling facilities	Installing ROW poles (be long enough)
			Installing ROW signboards in each commune office
			Installing fence for COI/ROW in urban area
			Growing tree as ROW boundary in rural area
		Ins	Install Tile in different color on boundary belong Side walk (line boundary)
for	Hard	w design/ nstruction	Digging channel as ROW boundary
ivities future			Road construction starts from the edge of ROW boundary and keeping empty space around central line
Ac		Ne CO	Constructing sub-roads as ROW boundary

Pilot Project for IEP was implemented from April 2019 to September 2019 for 3 km on the part of NR5 at the Chrey Bak district, Kampong Chhnang province as shown in Figure II.7.

In the pilot project, some hard structures such as sidewalk, pedestrian fence, ROW marking plate and ROW pole were constructed.



Figure II.7 Area of IEP

## 5) Train of Trainer (TOT)

TOT from JICA Expert Team to MPWT was conducted for 8 times on March and April 2019 and TOT from MPWT to DPWT was conducted for 3 times on July and August 2019 as workshop. Participants of TOT to MPWT were total 13 members from RID and ICD and project contents such as concept of ROW management and activities and method of CSI & IEP were lectured. TOT to DPWT was held as workshop and MPWT lectured ROW management contents and method of ROW management activities as the following table.

The TOT from JICA experts to MPWT staffs made positive effect for better understanding in technical, process and operation know-hows. In the workshop for DPWT's staff, discussion related to technical activities and geo-information for the future worked efficiency through the MPWT's trainer promoted the seminar. The hands-on exercise was formulated to practice the actual field work which cleared out doubts from the lecture.

No.	Date	Contents	
1 <sup>st</sup> TOT	31 Jul. 2019	ToT Workshop for Practice of ROW Management System	
Workshop		• To train the DPWTs' officials on ROW Management System through the presentations from ROW TF members (MPWTs' Officials); and	
		• To conduct the field practice for field survey and patrol.	
		• (Target DPWTs were invited from 5 provinces: Kandal, Kampong Chhnang, Pursat, Battambang, and Banteay Meanchey	
2 <sup>nd</sup> TOT	29 Aug. 2019	ToT Workshop for Practice of ROW Management System	
Workshop		• To train the DPWTs' officials on ROW Management System through the presentations from ROW TF members (MPWTs' Officials); and	
		• To conduct the field practice for field survey and patrol.	
		• Target DPWTs were invited from 4 provinces: Kampong Cham, Kampong Thom, Siem Reap and Oddor Meanchey.	
3 <sup>rd</sup> TOT	30 Aug. 2019	ToT Workshop for Practice of ROW Management System	
Workshop		• To train the DPWTs' officials on ROW Management System through the presentations from ROW TF members (MPWTs' Officials); and	
		• To conduct the field practice for field survey and patrol.	
		• Target DPWTs were invited from 6 provinces: Kampong Speu, Takeo, Kep, Koh Kong, Kampot and Preah Vihear	

## Table II-21TOT to DPWT

## 6) Standard Drawing (Typical Road Cross Section)

Road design standard drawings were prepared for the standardization of the future road development as a part of IEP activities as shown in Figure II.8. Standard Drawings of Typical Cross Sections for planning Expressways and Highways (ROW: 60m, 50m and 40m) have been prepared under this project and can be referred for road development by MPWT in future. If approved, the drawings will be provided in the appendix of the Design Standard.

Different type of drawings was prepared because cross section requirements for roadways vary according to the capacity, level of service to be provided and the alongside land use pattern, as well as step construction.



Figure II.8 Sample of the standard drawings

Drawing list prepared in the Project is shown in

Table II-22. In this table items, "Stage of Improvement" classifies the construction stage of increasing road line and sidewalk etc. to secure the ROW boundary, "Alternative" classifies the road width etc. and "Option" classifies the location of utilities such as telephone lines and sewage lines.

ROW	Stage of	Alternative	Option	No.
	Improvement			
Expressway	Initial Stage	Alt 1	Opt1	1
60m			Opt2	2
		Alt 2	Opt1	3
			Opt2	4
	1st Stage	Alt 1	Opt1	5
			Opt2	6
		Alt 2	Opt1	7
			Opt2	8
	2nd Stage	Alt 1	Opt1	9
	_		Opt2	10
Highway	Initial Stage	Alt 1	Opt1	11
60m			Opt2	12
			Opt3	13
		Alt 2	Opt1	14
			Opt2	15
	1st Stage	Alt 1	Opt1	16
			Opt2	17
			Opt3	18
		Alt 2	Opt1	19
			Opt2	20
	2nd Stage	Alt 1	Opt1	21
			Opt2	22
			Opt3	23
		Alt 2	Opt1	24
			Opt2	25
	3rd Stage	Alt 1	Opt1	26
			Opt2	27
		Alt 2	Opt3	28

ROW	Stage of	Alternative	Option	No.
	Improvement			
Highway	Initial Stage	Alt 1	Opt1	29
50m			Opt2	30
		Alt 2	Opt1	31
			Opt2	32
	1st Stage	Alt 1	Opt1	33
			Opt2	34
		Alt 2	Opt1	35
			Opt2	36
	2nd Stage	Alt 1	Opt1	37
			Opt2	38
Highway	Initial Stage	Alt 1	Opt1	39
40m			Opt2	40
	1st Stage	Alt 1	Opt1	41
			Opt2	42
	2nd Stage	Alt 1	Opt1	43
			Opt2	44

## 2.2.2 Project Purpose and indicators (Target values and actual values achieved at completion)

Major Result for the Project Purpose is shown in Table below.

Table II-23	<b>Result for the Project Purpose</b>	
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Project Purpose: Capacity of MPWT officials on ESC is enhanced through applying REG and RMS		
Indicators	Major Results	
<ol> <li>Implementation framework of the project is established by Task Force (TF) consisting of ICD, RID and DoP officials</li> </ol>	<ul> <li>TF members were officially selected at the 1st JCC held on 4th May 2017.</li> <li>Each TF members conduct the appropriate activities through the TF meeting and present the output at the seminar etc.</li> </ul>	
<ul> <li>More than 5 members of TF are observed their capacity enhancement on Environmental Considerations (EC) through continuous participation to the REG preparation process</li> </ul>	<ul> <li>TF meetings were held once or twice per month (total 30 times) and total 7 TF members (main was 5 members each meeting) had participated in the meeting and discussed some challenges</li> <li>Total 6 TF members had participated training in Japan and third country and learnt the good practices for EC</li> <li>Total 7 TF members had participated at the seminars and presented their activities.</li> <li>TF members had monitored the environmental countermeasure at NR5 with using draft REG.</li> <li>Output of activities will be presented by TF members at final seminar.</li> </ul>	

Project Purpose: Capacity of MPWT officials on ESC is enhanced through applying REG and RMS			
Indicators	Major Results		
(3) More than 5 members of TF are observed their capacity enhancement on Social Considerations (SC) through	- TF meetings were held once or twice per month (total 60 times) and total 19 TF members (main was 5 members each meeting) had participated in the meeting and discussed some challenges.		
continuous participation to the RMS preparation process	- Total 8 TF members had participated training in Japan and third country and learnt the good practices for SC.		
	- Total 18 TF members had participated at the seminars and presented their activities.		
	- Output of activities will be presented by TF members at final seminar.		
(4) More than 10 members of TF and Pilot	- PTF members were selected at the ROW TF meeting.		
Project Task Force (PTF) are trained to guide RMS operation to the other	- Total 22 from MPWT and 10 from DPWT TF members had participated their meeting and seminars.		
omciais	- Training to MPWT and to DPWT were conducted through the dissemination seminar by TF members.		

#### (1) Capacity enhancement on EC

TF meeting for EIA & EMP had been held for 30 times and mainly 7 TF members had participated the meetings. TF prepared the REG through the discussion and training. That members also had participated the several seminars and training in Japan and third country and learnt good practices and their understandings for EC were risen through their presentation etc.

Therefore, it is said that capacity of more than 5 TF members was risen.

#### (2) Capacity enhancement on SC

TF meeting for ROW Management had been held for 60 times and mainly 19 TF members had participated the meetings. TF prepared the RMS such as RMG and RMM/RMD through the discussion, training and pilot project. That members also had participated the several seminars and training in Japan and third country and learnt good practices and their understandings for SC such as ROW management and road maintenance were risen through their presentation and experiences.

Therefore, it is said that capacity of more than 5 TF members for EC was risen.

#### (3) Pilot Project TF (PTF) Training

32 PTF members including MPWT and DPWT had prepared and implemented the pilot project activities such as 366km CSI, PCM 3km IEP hard approaches. TOT to MPWT was conducted to the 12 PTF members first and TOT workshop to DPWT was also conducted by MPWT to the 12 DPWT's members. They learnt RMS operation and trained for it through the workshop and site trainings, therefore, it is said that more than 10 members of TF and PTF were trained to guide RMS operation to the other officials.

## 2.3 History of PDM Modification

## History of PDM Modification is shown in Table II-24.

Date	Version	Revised Contents
October 2015	Ver. 0.0	
February 2018	Ver. 1.0	Project Purpose, Objectively Verifiable Indicators         [Revision]         (2) 80% of TF member record their capacity enhancement on Environmental Considerations (EC)         ⇒(2) More than 5 members of TF are observed their capacity enhancement on Environmental Considerations (EC) through continuous participation to the REG preparation process         [Reason]         Considering the size of Taskforce members, 5 members is a better indication.         Output 1. Activities
		<ul> <li>[Revision]</li> <li>1.2 Implement information collection and analysis on land management framework of land management system in Cambodia</li> <li>⇒1.2 Collect and analyze information on land management framework of land management system in Cambodia and other countries</li> <li>[Reason]</li> <li>Analysis of information on land framework management in other countries is necessary.</li> <li>Output 2, Objectively Verifiable Indicators &amp; Activities</li> </ul>
		[Revision] As a 2.5, Indicator and activities for REG monitoring was added [Reason] REG monitoring is needed for capacity development and optimization of the documents. Output 3, Objectively Verifiable Indicators [Revision] 3.6 Lessons learned on SC in other countries are reflected to RMS discussion ⇒3.6 Lessons learned on SC through training in other countries and
		Cambodia are reflected to RMS discussion [Reason] Reflection of the lesson learned in Cambodia is necessary. <u>Output 4, Objectively Verifiable Indicators</u> [Revision] 4.3 Pilot projects of Current Status Identification (CSI) is implemented 4.4 Pilot project of Illegal Encroachment Prevention (IEP) is implemented ⇒4.3 Pilot projects of Current Status Identification (CSI) is completed 4.4 Pilot project of Illegal Encroachment Prevention (IEP) is completed 4.4 Pilot project of Illegal Encroachment Prevention (IEP) is completed 4.4 Pilot project of Illegal Encroachment Prevention (IEP) is completed [Reason]
		As an indicator, the pilot project has to be completed Inputs (Japanese side) [Revision • Reason] Necessary experts were added. Seminar in Cambodia was added for the dissemination and development of the knowledge and skills Inputs (Cambodian side) [Revision • Reason] MOE is not directly related to the project so it was omitted. MEF is a relevant ministry as the budget requests will be made to MEF so it was added.

## 2.4 Others

## 2.4.1 Public Relations

Public relations on the Project were conducted to disseminate of the project activities and project outputs to the relevant agencies and residents in Cambodia and Japan.

## (1) Public Relations during the Pilot Project

During the pilot project activities such as PCM and site survey, hand fans, Eco bags and polo shirts were prepared and public relations were conducted by them.



Photo II.1 Hand fans, Eco bags and Polo shirts

## (2) Monthly Report

Project web site operated by JICA was prepared to disseminate the project activities for the people in Japan. Monthly Report to report the project achievement to the relevant parties were also prepared.



Photo II.2 Project Web site and Monthly Report

## (3) International Association for Impact Assessment (IAIA)

Project TF members from MPWT and JICA experts participated in the 39th Annual Conference of the International Association for Impact Assessment (IAIA) held at Brisbane, Australia as the 3rd Third Country Technical Exchange and the project activities and outputs were presented through the poster session and paper session. Participants could exchange their opinions with international development partners and governmental officers and project activities and outputs were shared with them.

## 2.4.2 3D Drawing

The stage construction for road improvements in the future are studied by applying 3D drawing. The number of carriage lanes are assumed as 2 lanes, 4 lanes and 6 lanes and the utilization of ROW including utility layout were studied accordingly. The typical cross section with 4 stages are shown in Figure II.9.



Photo II.3 Poster of the Project



Stage 1: Existing Condition (2-lane without ROW management)



Stage 2: Development Plan of ROW (2-lane with ROW management)



Stage 3: Future Development Plan (4-lane)



Stage 4: Future Development Plan (6-lane)Figure II.9Usage of ROW in Step Construction

## **III. Results of Joint Review**

## 3.1 Results of Review based on DAC Evaluation Criteria

The results of the Project are reviewed according to DAC (Development Assistance Committee, Organization for Economic Co-operation and Development: OECD) evaluation criteria together with the TF members of MPWT. Five DAC criteria are 1) relevance, 2) effectiveness, 3) efficiency, 4) impact and 5) sustainability. A Joint review was conducted by questionnaire and discussion. Each criterion is assessed by a five evaluative scale: **Extremely satisfactory, Very satisfactory, Moderately satisfactory, Slightly satisfactory, Not at all satisfactory**.

Sustainably was evaluated through looking into the relevant aspects in order to keep up with the further development of the activities.

#### 3.1.1 Relevance

#### **Rating: Very satisfactory**

## (1) Relevance with the policy of Cambodia

The Project is aligned with "National Strategic Development Plan: NSDP (2014-2018)". NSDP states environmental sustainability, development of transport and capacity building as key policy priorities.

The NSDP also states that MPWT is responsible for implementing the policy with regards to the public works and management of statistical database and planning as follows;

- Strengthen and improve planning, statistics, data management, and information dissemination in the transport sector
- Strengthen human and institutional capacity in the transport sector

Cambodia government laid out the policy to maintain roads and strengthen data management and human capacity. Thus, the Project is recognized as one of the Cambodian policies.

#### (2) Relevance with the assistance policy of Japan

The Project is in line with the country assistance policy for Cambodia published in July 2017. The policy shows the support for industrial promotion and sustainable society through the strengthening governance as the pillars of priority. Assistance of capacity enhancement in road sector contributes to the industrial promotion as non-structural (environmental) side and the strengthening governance for sustainable society. Thus, the Project is recognized as one of the strategies to attain the priority of Japanese assistance policy.

#### (3) Relevance with the needs of the target group in the Project

MPWT including ICD, RID and DoP and DPWT, which are the target group in the Project have an obligation to manage the ROW boundary of the national road. They have the own budget for ROW management such as installation of ROW poles and patrol for monitoring the illegal encroachment but that budget is limited.

The ROW management system that is tested and delivered by the Project helps to manage and store the data and information with more accuracy. This will save the time and budget for the government for the future road planning and implementation works, as the issue of resettlement will be better regulated. It is recognized that the Project met the needs of the Cambodia's demand of systematical ROW management was very appropriate.

## 3.1.2 Effectiveness

## **Rating: Extremely satisfactory**

## (1) Achievement of the Project Purpose

The Project purpose predetermined in the PDM is "Capacity of MPWT officials on ESC is enhanced through applying REG and RMS". As seen in the Chapter II Result of the Project, the achievements of project purpose are observed as below.

## 1) Implementation framework for EC is strengthened

DoP has responsibilities to implement the road EC for the public works such as road and bridge, however, actual works were not related to EC. For the improvement of this status, REG was prepared by EIA/EMP TF mainly including DoP. REG includes the general information related to EIA process in Cambodia and MPWT's role, responsibility and practical method for EIA process. The REG is to be used by the MPWT's officials for their internal use within the MPWT in carrying out their daily duties/tasks in terms of the EIA's related activities. TF members for EIA/EMP developed their understandings of the EIA process and their roles thorough the REG preparing at the several TF meetings.

REG monitoring was conducted for 4 times as the site checks on some points of the project site of the NR5. Through the monitoring, MPWT learnt the necessary for additional checklist items for EMP and importance of EMOP/EMOR reviewing.

TF members also visited to Japan and third country as the training and learnt the best practice and lesson learnt for EIA and environmental measure for road management. In addition, TF members presented their outputs at the seminars with their understandings of environmental issue.

Knowledge and experience for EIA/EMP of road projects were accumulated through above process and implementation framework for EC was strengthened.

## 2) Implementation framework of Social Consideration (ROW Management)

RID has responsibilities to implement the ROW management on the national and provincial road, however, ROW management focus only ROW pole installation and regular patrol with a little budget. For the improvement of this status, RMS was prepared by ROW management TF mainly.

RMS includes RMG, RMM and RMD. RMG describes the two types of ROW management flow and method, which are CSI and IEP using RMM and RMD. This shows the process of ROW management and leads to efficient works.

ROW management TF members also learned the best practice and case study for SC through the seminars, training in Japan and third country exchange and obtained the knowledge for SC.

Knowledge, skills and experience for ROW management were accumulated through above process and implementation framework for SC was strengthened.

#### 3) Capacity of Social Consideration through the Pilot Project

Pilot Project was implemented on the NR5 and NR4, and all mapping data was collected. Based on this collected data, database including plot of objective on the road was prepared and IEP was implemented.

Training through the pilot project also was implemented and its TF composed MPWT and DPWT members learned the method of ROW management contents and disseminated the general knowledge for ROW management through the ToT workshop and dissemination seminar.

#### (2) Contributing factors to achieve the Project Purpose

Main factors contributing to achieve the Project Purpose and Outputs are REG and RMS. In the process of REG preparation, TF members discussed and learned the process of EIA and EMP for the construction phase and monitored actually along EMP at the construction site on NR5. It is said that capacity of TF members for EIA and EMP was strengthened through the REG preparation.

In the process of RMS preparation, TF members had a lot of meetings and discussed ROW. management issue and countermeasures. It is said that capacity of ROW management TF members was strengthened through the RMS preparation.

I addition, the pilot project was a good factor to achieve the project purpose. The actual implementation of the activities for CSI and IEP made the purpose of the project clear and explanatory. Through discussions and engagement of the activities, the officers enhanced the knowledge and skills concerning the process of concrete activities and use of devices as well as actual works to be undertaken.

## (3) Hindering factors to achieve the Project Purpose

Hindering factors was not found in this project.

The scale of the pilot project was small to give opportunities to more people to learn. This was a good example for residence and the local authorities at all levels to show how to manage the ROW and road environment. It would enhance the capacity of all provinces, if such a pilot project would be implemented at all provinces.

## 3.1.3 Efficiency

## **Rating: Very satisfactory**

Project period was 3 years as same as an initial plan. The JICA expert's input (person-month) exceeded by 7.5% from the original plan. The reasons attributed to this increase were as follows and these activities were to be output

- · To develop a design of future standard road cross sections for ROW management,
- To implement a pilot project of IEP hardware measures such as additional fence installation and simple pavement
- To organize additional seminars (Pilot Project Seminar), and
- To implement a pilot project of CSI at NR No.4

In this resource, pilot project for CSI could also be implemented on all NR5 length with support of MPWT and DPWT. Considering that these inputs further promoted the understanding among stakeholders in initial period, efficiency is evaluated as moderate despite its excess. Input of equipment was also adequate for the Project.

Training in Japan, technical exchange in third country and each seminar contributed to stock of knowledge and skills and awareness rising for the MPWT and DPWT staff. So this number was also adequate.

Although some C/P personnel (each director and TF members) had to leave the Project for the personnel transfer, the new C/Ps were assigned without delay. Those transfers did not create serious obstacles to implement the Project. Good communication between JICA experts and C/P personnel in all C/P organizations promoted smooth implementation of the Project.

## 3.1.4 Impact

## Rating: Very satisfactory

## (1) Policy Aspects

REG was authorized as a Ministry's Decision. The guidebook will be officially used to guide the EIA authorization process for the road development project within the MPWT so that the process is clear to all officers and can proceed faster. Also in the future, new officials who will be assigned to the post can learn the processes faster.

The RMG will help to understand the concepts of the ROW management, policies, regulations and necessary activities on the ground.

## (2) Technical Aspects

The UAV survey, data proceeding and field survey for CSI made a good impact to learn about the effective management on the current illegal ROW encroachment. Through the actual implementation of activities, the learning became deepened especially about the database and the methods for CSI activities. The daily patrol is important to prevent new encroachment. Although the continuity after the project is necessary, it became clear that patrolling is very effective to regulate the use of ROW by local businesses that affects future road expansion plans.

## (3) Social Aspects

At the pilot project sites, Public Consultation Meetings (PCM) helped to disseminate the information on the ROW regulations from MPWT. Such public relations make a positive impact to inform the residents about the governmental initiatives and activities to regulate the ROW use and management. Such activities need to continue in the future in all districts and provinces in Cambodia.

## (4) Institutional Aspects

The Project attracted the concern and attention from the management levels of MPWT, MEF and Ministry of Land Management, Urban Planning and Construction (MLMUPC) through seminars and reporting of activities. The institutional arrangement for the pilot project implementation helped the information flow and communication with DPWT and MPWT at pilot project districts.

## 3.1.5 Sustainability

## **Rating: Moderately satisfactory**

Sustainability for the future will depend on the aspects to keep up with the ROW and road environment management. Therefore, planning and budgeting within MPWT to continue with the activities are a key for the sustainability of the policy implementation.

## (1) Policy Aspects

Developing both policy related documents: REG and RMG gave a good amount of knowledge for the topics. MPWT can use and apply them for the work in the whole country to achieve the cohesiveness of the policy implementation for the integrated road network. Gaining understanding and collaboration with relevant parties, especially with the private sector and community.

## (2) Institutional and Finance Aspects

Cooperation among local authorities and relevant institutes such as MLMUPC, MOI, MEF, MPWT is important to enforce the laws and regulations, disseminate the information and conduct effective patrol by local officers.

Budget Plan prepared and shared within the Project shows draft amount of budget for ROW management activities in all 1-digit and 2 digit national road and MPWT can consider their budget arrangement and negotiate with MEF for the future project based on the plan. An official notice requiring securing budget for ROW management was submitted from MEF to MPWT so that priority of budget for ROW management will be increasing in MPWT. On the other hand, budget for ROW management is included in the budget for road maintenance now so a gap between planed budget and current budget may be occurred. In case some disaster such as flood happen, budget for that countermeasure will have priority and a risk should be considered that budget for ROW management may be cut in that case.

## (3) Technical Aspects

Understanding of the implementing officers will affect the sustainability of the activities. Therefore, good understanding on the issues and processes by the officers is important. In this project, several training to officers were conducted as the seminars, trainings in other countries and dissemination workshops so that their understanding was risen. While, skills and knowledge for ROW management such as CSI and IEP activities were operated in the only pilot project and some trainings in the Project

so that accumulation, operation and upgrade of these skills on other road project would be challenges in the future.

## (4) Environmental Aspects

REG contributes to future environmental measures on the road project and MPWT can manage the road environment under their responsibility. This means road environment may be managed adequately by MPWT.

## **3.2** Key Factors Affecting Implementation and Outcomes

## (1) **DPWT's cooperation**

Each DPWT manages the road condition at their control area and their role and activities are important for the ROW management. In this project, trainings for the ROW management to the DPWT were conducted by MPWT and that helped to make clear the DPWT's role and activities for the ROW management.

## (2) Local Government Units' cooperation

Local Government Units' such as municipalities and communes manage the IEP activities at their control area and their role and activities are also important for the ROW management. In this project, LGUs were invited seminars and that helped to make clear the LGU's role and activities for the ROW management.

## 3.3 Evaluation on the results of the Project Risk Management

During the Project, reform of the MPWT was taken in place and some of the TF members were transferred to different organization including the director. This may have had a risk to give negative impact to the project activities. However, other key members remained in the same department and grew as master trainers which enables to have minimum affects.

## 3.4 Lessons Learnt

## (1) Implementation of the Additional Pilot Project

Continues pilot projects with construction activities shall be commenced as early as possible to keep enough time for reviewing and confirming its effectiveness. Documentation such as preparation of RMG should be discussed in parallel with pilot projects so that both activities can improve each other.

ROW management in urban areas and other areas is very different in terms of background, relevant conditions, and effective measures. In order to find and apply optimized measures to such different situations, it is necessary to continue try and error activities with feedbacks from the actual field. Limited experiences of pilot projects under the Project may not be enough for budget management and technical aspect of ROW management. Therefore, MPWT shall continue activities of IEP with necessary budget in the future. In addition, MPWT showed their needs for following phases of the Project.

## (2) Future road improvement Plan

Different type of typical road cross section considering step construction were prepared to help understanding of ROW usage. In order to find and apply optimized ROW management and usage of ROW, it is necessary to apply the sufficient step construction with showing the 6 lanes road, service toad, sidewalk and location of utilities in the future road developments. For example, step construction of road is that sidewalk is constructed first beside ROW boundary and its land between constructed sidewalk and existing road will be used for road widening in the future. As a result of this step, ROW boundary can be clear and encroachment of illegal possession to ROW boundary can be prevented, and ROW management activities such as patrol can be omitted.

## IV. For the Achievement of Overall Goals after the Project Completion

## 4.1 Prospects to achieve Overall Goal

Overall goals are predetermined in PDM as below.

## Environmental and Social Considerations (ESC) in road sector is implemented properly by <u>MPWT</u>

(1) Environmental procedures are implemented in line with Road Environmental Guidelines (REG)

(2) Right of Way (ROW) management is operated by using ROW Management System (RMS)

REG and RMS are the key tool to achieve the overall goal. REG and RMS were already prepared in this project while operation using REG and RMS is not enough. For the adequate ESC operation by MPWT, monitoring and upgrading of REG and RMS are necessary through the operating them.

Achievement and challenges for overall goal are as shown in Table IV-1.

## Table IV-1 Achievement and challenges for overall goal

Overall Goal: Environmental and Social Considerations (ESC) in road sector is implemented properly by MPWT			
Indicators	Achievement on completion of the Project (December 2019)	Challenges for overall goal achievement (in 3 years)	
<ul> <li>(1) Environmental procedures are implemented in line with Road Environmental Guidelines (REG)</li> </ul>	<ul> <li>REG was prepared and REG monitoring was implemented by TF members.</li> <li>TF members found that some contents of EMP should need to be changed.</li> <li>TF members from MPWT learnt and discussed the adequate Environmental procedure in Cambodia through the trainings and seminars.</li> </ul>	<ul> <li>MPWT keep using the REG frequently on other road project and upgrades it's check list items for their convenience.</li> <li>All EIA report for the road project is reviewed by MPWT.</li> <li>All EMP for the road project is reviewed by MPWT.</li> <li>All EMOR for the road project is reviewed by MPWT.</li> </ul>	
<ul><li>(2) Right of Way (ROW) management is operated by using ROW Management System (RMS)</li></ul>	<ul> <li>RMS was prepared through the pilot project.</li> <li>CSI activities were conducted on the NR5 (366 km) and NR4 (15 km).</li> <li>IEP activities was conducted for 3 km at the part of NR5.</li> <li>Above data was input into the database.</li> <li>Some PCM were held at some province along the NR1 and NR5.</li> <li>TF members from MPWT and DPWT learnt and discussed the adequate ROW management in Cambodia through the trainings and seminars.</li> </ul>	<ul> <li>CSI activities is needed at the other area of the 1-digit and 2-digit national road.</li> <li>IEP activities is needed at the other area of the 1-digit and 2-digit national road.</li> <li>Database for the above area is needed to be managed and updated.</li> <li>Enough budget for ROW management such and CSI and IEP is secured.</li> </ul>	

## 4.2 Plan of Operation and Implementation Structure of the Cambodian Side to Achieve Overall Goal

Action plan for the achievement of overall goal is as shown in Table IV-2.

Overall Goal: Environmental and Social Considerations (ESC) in road sector is implemented properly by MPWT			
Indicators	Target in 3 years	Action Plan	
<ul> <li>(1) Environmental procedures are implemented in line with Road Environmental Guidelines (REG)</li> </ul>	<ul> <li>REG is used frequently and modifies by MPWT</li> </ul>	- To make clear the role and charge of the implementation of the environmental procedure in MPWT. (any official documents did not issue such as division of duties which technical officials should be in charge of the EIA reviews and the related tasks in DOP at present)	
	<ul> <li>All EIA report for the road project is reviewed by MPWT</li> </ul>	<ul> <li>To communicate with each department in MPWT and identify the road project detail</li> <li>To make clear the role and charge for the EIA reviewing in MPWT</li> </ul>	
	<ul> <li>All EMP for the road project is reviewed by MPWT</li> </ul>	<ul> <li>To make clear the role and charge for the EMP reviewing in MPWT</li> <li>To study and discuss the adequate environmental measures for the road project</li> </ul>	
	<ul> <li>All EMoR for the road project is reviewed by MPWT</li> </ul>	<ul> <li>To make clear the role and charge for the EMoR reviewing in MPWT</li> <li>To implement the site check for the monitoring of environmental measures of the road project</li> </ul>	
(2) ROW management are implemented in line with ROW management system (RMS)	<ul> <li>CSI is implemented on the half of all 1 digit &amp; 2 digit national road (approx. 3,430 km except NR5)</li> </ul>	<ul> <li>To select the priority area on the 1 digit and 2 digit national road where CSI should be implemented first</li> <li>To make clear the charge for the CSI implementation in MPWT and DPWT</li> <li>To contract the sub-contractor for CSI activities as needed</li> </ul>	
	<ul> <li>PCM for the IEP activities is implemented at 50 places per year</li> <li>Patrol is implemented on all 1 digit &amp; 2 digit national road (approx. 7,260 km)</li> <li>ROW Poles are installed on the part of 1 digit national road</li> </ul>	<ul> <li>To select the priority area on the 1 digit and 2 digit national road where each IEP activity should be implemented first</li> <li>To make clear the charge for the IEP implementation in MPWT and DPWT</li> <li>To contract the sub-contractor for CSI activities as needed</li> </ul>	
	- Database for the implementation area of CSI & IEP is established and managed	<ul> <li>To make clear the charge for the database management in MPWT</li> <li>To contract the sub-contractor for database management as needed</li> <li>To procure the new database for the adequate usage as needed</li> </ul>	
	- Enough budget for ROW management such and CSI and IEP is prepared	<ul> <li>Cost for ROW management activities is managed and estimated by MPWT</li> <li>Budget plan is prepared in each year</li> </ul>	

## Table IV-2 Action Plan for overall goal

## 4.3 Recommendations for the Cambodian Side

## (1) Implementation of Hard Approaches for IEP

ROW management such as installation of poles, patrol and PCM are implemented by MPWT now, however, hard approaches such as ROW fence for encroachment prevention are not implemented as ROW management activities. While, budget for such activities are shortage so that ROW management concept should be included in the road designs when new road project or road rehabilitation starts. In addition, to secure the budget for it and to adjust the relation with inside/outside of the Ministry are needed and standard drawings should be used and contributed for these challenges.

## (2) Advertisement Income System

To secure the budget for ROW management, advertisement income should be introduced with the cooperation between MPWT, MEF and some provincial government. Advertisement income such as advertisement board are now managed by MEF and provincial government and that management is not clear in some area. To integrate these management, discussion and exchanging the official documents for it between MPWT, MEF and provincial government should be implemented, and advertisement inside of the ROW boundary should be managed by MPWT and their income should be included in MPWT's budget directly for using the ROW management activities and road maintenance etc.

## (3) Communication with other countries

Project members visited Myanmar to exchange technical knowledge and experiences on EIA. Terms of the related EIA legal framework and the implementation issues in Myanmar were similar kinds and same development level, as well as the implementation issues with those of Cambodia. It is expected that Cambodia and Myanmar could share similar experiences and the issues in the near future. However, the technical officials of the Ministry of Construction (MOC) in Myanmar as the implementing agency for the EIA of public infrastructure project, had very limited technical knowledge by lack of human resources for the EIA reviews. On the other hand, it is understood that these issues in Cambodia have been improved through this project. Furthermore, it is expected that continuous technical capacity development for the EIA review and the related tasks through technical exchanges programs between Cambodia and Myanmar such as the technical exchange program on March 2018 for the JICA Project for Capacity Development of Road and Bridge Technology.

Project members visited Lao P.D.R. and Thailand to exchange technical knowledge and experiences on ROW management. ROW management in Lao P.D.R. has some same points such as declaration year and encroachment status, therefore there were observed several useful opinion exchanges among participants. It is expected that Lao P.D.R.'s advanced activities such as ROW registration can share experiences with MPWT of Cambodia in the future. ROW management in Thailand is different from Cambodia's in terms of process and concept of ROW, therefore limited cases were applicable to Cambodia. However, future management of ROW in Cambodia requires new system as same as Thailand, for example, ROW management by border line between public and private. Therefore, it is expected that Thailand and Cambodia will continue their cooperation for future innovative scheme of ROW management.

MPWT should expand these exchange and share and solve the challenges fast and very efficient. In addition, MPWT should use the network of training and technical exchange and keep the actions with it.

#### (4) Public Relation for public understanding

Adequate ROW management cannot be implemented without understanding and cooperation of residents. Method and future necessity of ROW management cleared by the Project should be disseminated to public at the PCM that MPWT already implements regularly. In addition, based on the budget plan prepared by the Project showing more PCM's budget than present, MPWT should secure the budget for public relation and implement PCMs at the wider area and disseminate their activities to public through web sites etc.

## (5) Approval of the necessary documents

RMG prepared by the Project should be approved quickly in MPWT to be an evidence for strengthening action of ROW management. In order that MPWT gets the income from road occupancies such as sign board within ROW, exchange of the documents between MPWT, MEF and provincial government are needed. Preparation and approval of these necessary documents for strengthening ROW management should be promoted quickly in MPWT.

## 4.4 Monitoring Plan from the End of the Project to Ex-post Evaluation

After the end of the project, monitoring to ex-post evaluation will be planned and implemented by JICA Cambodia office in consultation with JICA headquarter. The monitoring plan is proposed in Table IV-3. Considering to budget cycle, the most appropriate timing of the monitoring is in January (beginning of the fiscal year) to see the progress of the previous year and plan of the year.

Monitoring schedule: January (1 time / year)

Overall Goal: Environmental and Social Considerations (ESC) in road sector is implemented properly by MPWT				
Monitoring Schedule	1st	January 2021 (in 1 year (13 months f	from project completion))	
	2nd	January 2022 (in 2 years)		
	3rd	January 2023 (in 3 years)		
Indicators		Target in 3 years	Monitoring Method	
(1) Environmental procedures are	- All El review	A report for the road project is ed by MPWT	- Number of reports reviewing and suggestion for the project	
implemented in line with Road Environmental Guidelines (REG)	<ul> <li>All EMP for the road project is reviewed by MPWT</li> </ul>		- Number of reports reviewing and suggestion for the project	
	<ul> <li>All EMoR for the road project is reviewed by MPWT</li> </ul>		- Number of reports reviewing and suggestion for the project	
(2) ROW management are implemented in line with ROW management	<ul> <li>CSI is implemented on the half of all 1 digit &amp; 2 digit national road (approx. 3,430 km except NR5)</li> </ul>		- CSI database	
system (RMS)	<ul> <li>PCM f at 50 p</li> <li>Patrol 2 digit</li> <li>ROW 1 digit</li> </ul>	for the IEP activities is implemented laces per year. is implemented on all 1 digit & national road (approx. 7,260km) Poles are installed on the part of national road	<ul> <li>Record of the PCM</li> <li>IEP database</li> <li>Site check for hard approaches such as installation of poles</li> </ul>	
	<ul> <li>Enough budget for ROW management such and CSI and IEP is prepared</li> </ul>		<ul> <li>Budget plan and document for the budget request to MEF</li> </ul>	

	Table IV-3	Proposed	<b>Monitoring P</b>	lan
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## <u>Annexes</u> Contents

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- A1-3. List of Taskforce Members
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### Annex 2: List of Products (Report, Manuals, Handbooks, etc.) Produced by the Project

## Annex 3: PDM (All versions of PDM)

- A3-1. Project Design Matrix (PDM) Ver. 0.0
- A3-2. Project Design Matrix (PDM) Ver. 1.0

#### Annex 4: R/D, M/M, Minutes of JCC (copy)

- A4-1. Record of Discussion (R/D)
- A4-2. Amended Record of Discussion (R/D)
- A4-3. Summary of JCC Meetings
- A4-4. Minutes of the first JCC Meeting
- A4-5. Materials for the first JCC Meeting
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- A4-10. Minutes of the fourth JCC Meeting
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## **Annex 5: Monitoring Sheet (copy) (Remarks: internal reference only)**

- A5-1. Monitoring Sheet Ver. 1.0
- A5-2. Monitoring Sheet Ver. 2.0
- A5-3. Monitoring Sheet Ver. 3.0
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# Annex 1: Results of the Project

A1-1. List of JICA Project Expert Team

A1-2. List of JCC Members

A1-3. List of Taskforce Members

A1-4. List of Pilot Project Taskforce Members

Name		Position	Organisation
JICA	A Experts		
1.	Dr. TSUCHIDA Takayuki	Team Leader/ ROW Management 1	CTII
2.	Mr. YAMASHITA Akira	Deputy Team Leader/ ROW Management 2	ESIC
3.	Mr. ITO Tsuyoshi	Environmental Social Consideration/ EIA/ EMP	CTII
4.	Mr. SHRESTHA Robinson	Road Planning/ Transport Planning/ Road Structure Design	CTII
5.	Mr. NARA Hiroshi Mr. ISHIGE Hiroshi	Land Management Framework 1	CTII
6.	Mr. KIYOTA Daisaku	Land Management Framework 2/ Database Development	CTII
7.	Mr. OCHI Masaki	Land and House Investigation 1/ Road and Structural Design	CTII
8.	Mr. James Kazumori WATSON	Land and House Investigation 2	CTII
9.	Ms. NAKAYAMA Makiko	Training Plan and Implementation 1	CTII
10.	Mr. NISHIO Kyoichiro	Training Plan and Implementation 2	HEX
11.	Mr. NAKAMURA Yukihiko	Training Plan and Implementation 3	CTII
12.	Ms. MIZUYORI Tomoko	Institutional Analysis/ PCM	CTII
13.	Mr. KUMAGAI Takahiro	Project Coordinator/ Database Management	CTII
14.	Mr. ICHIKAWA Shumpei	Monitoring/ Evaluation	CTII
Technical Assistants			
15.	Mr. Penh Socheat	Project Assistant	CTII
16.	Dr. Ches Sophy	Project Assistant	CTII
17.	Mr. Bun Sereyvuth	Project Assistant	CTII

## JICA Project Expert Team

Note: CTII: CTI Engineering International Co., Ltd., ESIC: Environment and Social Infrastructure Consultant Co., Ltd., HEX: Hanshin Expressway Company Limited

Assignment	Name	Position
Chair Parson, Project Director	H.E. Tauch Chankosal	Secretary of State, Ministry of Public Works and Transport (MPWT)
Member, Project Manager	H.E. Nou Vaddhanak	Under Secretary of State, MPWT (former, Director General, General Directorate of Techniques)
Member, Deputy Project Manager	Ms. Pin Vuthea	Director, International Cooperation Department (ICD), MPWT
Member, Deputy Project Manager	Mr. Prok Novida	Director, Department of Planning (DoP), MPWT
Member, Deputy Project Manager	Mr. Chhim Phalla	Director, Road Infrastructure Department (RID)
Member	Mr. Yong Sy	Chief of Domestic Public Investment III Office, Investment Department, General Department of Budget, Ministry of Economy and Fin/ance (MEF)
Member	Representative(s)	JICA Cambodia Office
Member	Experts	JICA Project Team

## **JCC Members**

Ass	signment	Name	Position	
Projec	et Director	H.E. Tauch Chankosal	Secretary of State	
Projec	et Manager	H.E. Nou Vaddhanak	Under Secretary of State (former, Director General, General Directorate of Techniques)	
	Deputy Manager	Ms. Pin Vuthea	Director, International Cooperation Department (ICD)	
	EIA/EMP '	Team		
	Deputy Manager	Mr. Prok Novida	Director, Department of Planning (DoP)	
	Taskforce Member	1. Mr. Uy Sambath	Deputy Chief, Social and Environmental Office, Department of Planning (DoP)	
		2. Mr. Srey Vireak	Officer, Social and Environmental Office, Department of Planning (DoP)	
Tasl		3. Mr. Bour Chhay Ya	Officer, Social and Environmental Office, Department of Planning (DoP)	
		4. Mr. Manh Vutha	Officer, Road Infrastructure Department (RID) (Former ICD Officer until 18th January, 2018)	
		5. Mr. Song Kimheng	Officer, Road Infrastructure Department (RID) (Former ICD Officer until 18th January, 2018)	
		6. Mr. Ngel Sovanarith	Officer, Road Infrastructure Department (RID) (Former ICD Officer until 18th January, 2018)	
cforce	Advisor	Mr. Chea Leng	Deputy Director, Environmental Impact Assessment Department, Ministry of Environment (MoE)	
	Observer	Mr. Kong Youreth	Chief, Environment and Public Service Office, Publ Infrastructure Department (PID)	
	ROW Management Team			
	Deputy Manager	Mr. Chhim Phalla	Director, Road Infrastructure Department (RID)	
	Taskforce	1. Mr. You Dara	Deputy Director, Road Infrastructure Department (TID)	
	Member	2. Mr. Chea Samnang	Chief, ROW Management Office, Road Infrastructure Department (RID)	
		3. Mr. Khoun Kompheak	Deputy Director, Traffic Safety Office, Road Infrastructure Department (RID)	
		4. Mr. Khai Saray	Deputy Chief, ROW Management Office, Road Infrastructure Department (RID)	
		5. Mr. Hay Chandara	Deputy Chief, ROW Management Office, Road Infrastructure Department (RID)	
		6. Kaing Theara	Officer, Road Infrastructure Department (RID)	

## **Taskforce Members**

Ass	ignment	Name	Position
		7. Mr. Long Davuth	Officer, Road Infrastructure Department (RID)
		8. Mr. Sok Chandy	Officer, Road Infrastructure Department (RID)
		9. Mr. Sokun Piseth	Officer, Road Infrastructure Department (RID)
		10. Mr. Sao Premarak	Technical Officer, Road Infrastructure Department (RID)
		11. Mr. Keat Sarun	Officer, Road Infrastructure Department (RID)
		12. Mr. Sor Yilin	Deputy Director of Department of Logistics Monitoring and Evaluation (Former Deputy Chief, Regional Cooperation Office, International Cooperation Department (ICD) until 1st August, 2017)
		13. Mr. Sok Ly	Deputy Director, International Cooperation Department (ICD)
		14. Mr. Von Sarom	Deputy Director, International Cooperation Department (ICD)
		15. Mr. Peang Samoeun	Deputy Chief, Administrative Office, International Cooperation Department (ICD)
		16. Mrs. Sreng Sorphea	Officer, Administrative Office, International Cooperation Department ICD)
		17. Mrs. Eam Runthearin	Deputy Chief, Reginal Cooperation Office, International Cooperation Department (ICD)
		18. Mr. An Menghour	Officer, Regional Cooperation Office, International Cooperation Department (ICD)
		19. Mr. Chea Sophanith	Deputy Chief, Bilateral Cooperation Office, International Cooperation Department (ICD)
		20. Mrs. Oum Sokvasey	Deputy Chief, Multilateral Cooperation Office, International Cooperation Department (ICD)
		21. Mr. Lor Vicheth	Deputy Chief, Multilateral Cooperation Office, International Cooperation Department (ICD)
		22. Ms. Laing Sengkim	Officer, Multilateral Cooperation Office, International Cooperation Department (ICD)
	Advisor	Mr. Sek Sothirith	Director, Urban Planning Department, Ministry of Land Management, Urban Planning and Constructions (MLMUPC)
		Mr. Sao Vary	Director, Department of Conservation, Ministry of Land Management, Urban Planning and Constructions (MLMUPC)
	Observer	Ms. Em Sokchea	Deputy Chief, Environment and Public Service Office, Public Infrastructure Department (PID)
Group	Assignment	Name	Position
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1- MPWT Pi	lot Project Taskf	orce Members	
Group A	Team Leader	Mr. Hay Chandara	Deputy Chief, ROW Management Office, Road Infrastructure Department (RID), MPWT
	Members	Mr. Sok Chandy	Officer, RID, MPWT
		Mr. Kaing Theara	Officer, RID, MPWT
		Mr. Peang Samoeun	Deputy Chief of General Administrative Office, International Cooperation Department (ICD), MPWT
Group B	Team Leader	Mr. Chea Samnang	Chief of ROW Management Office, RID, MPWT
	Members	Mr. Sao Pramarak	Technical Officer, RID, MPWT
		Mr. Chhouk Sochea	Officer, RID, MPWT
		Mr. Ob Socharidth	Officer, RID, MPWT
		Mr. An Menghour	Officer, ICD, MPWT
Group C	Team Leader	Mr. Khuon Kompheak	Deputy Director, Traffic Safety Office, RID
	Members	Mr. Penh Oddum	Officer, RID, MPWT
		Mr. Keat Sarun	Officer, RID, MPWT
		Mr. Long Davuth	Officer, RID, MPWT
		Mr. Oum Sokvasey	Deputy Chief of Multilateral Cooperation Office, ICD, MPWT
2- DPWT Pil	ot Project Taskfo	orce Members	
Kampong	Members	Mr. Lao Prosit	Officer, DPWT
Chhnang (KPC)		Mr. Khut Khemra	Officer, DPWT
Pursat (PST)	Members	Mr. Kang Kimchhun	Deputy Chief Officer, DPWT
		Mr. Tang Sovanna	District Chief Officer, DPWT
		Mr. Bun Soupheng	Officer, DPWT
Battam Bang	Members	Mr. Pheng Chanchhaya	Head of Unit, DPWT
(BTB)		Mr. San Sereisith	Deputy Chief Officer, DPWT
		Mr. Thouch Raksa	Officer, DPWT
Banteay	Members	Mr. Phang Dollar	Deputy Chief Officer, DPWT
Meanchey (BMC)		Mr. Lang Sophaek	Officer, DPWT

#### **Pilot Project Taskforce Members**

# <u>Annex 2: List of Products</u> (Report, Manuals, Handbooks, etc.) <u>Produced by the Project</u>

#### List of Guidelines and Manuals

#### I- Environmental Impact Assessment

- 1. Road Environmental Guidebook (Khmer)
- 2. Road Environmental Guidebook (English)

#### II- Right of Way (ROW) System

- 1. ROW Management Guidelines (Khmer)
- 2. ROW Management Guidelines (English)

#### Manuals (Appendix of ROW Management Guidelines)

- 1: Aerial Photography Manual
- 2: Ground Control Point Survey Manual
- 3: Work Management Manual for CSI
- 4: Image Processing Manual
- 5: Data Production Manual
- 6: TabletApp User Manual
- 7: Web GIS Manual
- 8: Database Operation Manual
- 9: Database Development Manual
- 10: Documents and PR Goods for IEP
- 11: Construction Management Manual for IEP
- 12: Typical Cross Section for Future Development Plan
- 13: RMS-Training Plan (RMS-TP)

#### **List of Reports and Database**

1. Final Complete Report

#### List of other Deliverables

- 1. ROW Management Database
- 2. ROW Management Map

#### List of Distribution Materials

- 1. CESCoR Leaflet
- 2. Bags on ROW
- 3. Handy Fans on ROW
- 4. T-Shirts on ROW

#### List of Equipment

Nr.	Procured Items	Specifications	Date	Quantity	Location	Final Status
1	Laptop PC	Acer Aspire F5-573G	2017/03/03	2	MPWT	Donated
2	Desktop PC	Customized PC	2017/03/28	1	MPWT	Donated
3	Laptop PC	ASUS ROG Strix GL503	2017/07/10	1	MPWT	Donated
4	A3 Multifuncition Machine	DocuCentre VIC3371 CPS	2017/08/07	1	MPWT	Donated
5	Unmanned Aerial Vehicle (UAV, Drone)	Phantom 4 Pro	2017/08/07	2	MPWT	Donated
6	Desktop PC	Customized PC	2017/08/08	1	MPWT	Donated
7	CAD Application	Auto CAD LT (3years License)	2018/02/01	1	MPWT	Donated
8	Total Station	TOPCON OS-101	2018/06/06	1	MPWT	Donated
9	Server PC	Dell Power Edge T130 Server, UPS, Fortinet Hardware Firewall FG60E-BDL	2018/06/06	1	MPWT	Donated
11	Image Processing Application	Pix4D Mapper (Perpetual License)	2018/06/22	1	MPWT	Donated
12	Laptop PC	Dell Inspiron 15 7000		1		
13	Color Printer	Canon G3000		1	MPWT	
14	Cross-cut Shredder	Giraffe GR-1214		1	MPWT	
15	Phone	Nokia 105		4	MPWT	
16	Smart Phone	Sony Xperia XA		3	MPWT	
17	Tablet	Samsung Tab A(2016)		3	MPWT	
18	Tablet	Huawei MediaPad M3	2018/06/06	3	MPWT	
19	Tablet	Huawei MediaPad M5		1	MPWT	
20	Tablet	Huawei MediaPad M5 Lite		25	MPWT	
21	External Hard Drive	Transcend 1TB StoreJet 25H3		3	MPWT	
22	External Hard Drive	Transcend 1TB StoreJet 25H3	2018/11/27	3	MPWT	
23	LCD Projector	Acer X115		1	MPWT	
24	Tripod Projection Screen			2	MPWT	
25	Laser Meter	Tajima F05		3	MPWT	
26	Wind Speed Meter	Anemometer		2	MPWT	
27	Handheld GPS	Garmin GPSMAP 64s		1	MPWT	

### Annex 3: PDM (All version of PDM)

A3-1. Project Design Matrix (PDM) Ver. 0.0 A3-2. Project Design Matrix (PDM) Ver. 1.0

#### **Project Design Matrix**

#### Project Title: Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

Implementing Agency: Ministry of Public Works and Transport (MPWT), Cambodia

Dated 30 October, 2015

Version 0.0

Target Group: International Cooperation Department (ICD), Road Infrastructure Department (RID), and Department of Planning (DOP) in Ministry of Public Works and Transport (MPWT) and Department of Public Works and Transport (DPWT) in charge of selected areas for pilot project

#### Period of Project: XXX, 2015 - XXX, 2018 (3 years)

Project Site: Phnom Penh Model Site: To be Decided

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal	(1) Environmental procedures are implemented	(1) REG applying record			
Environmental and Social Considerations (ESC) in	in line with Road Environmental Guidelines	(2) RMS operational record			
Toad sector is implemented property by MP W1	(2) Right of Way (ROW) management is				
	operated by using ROW Management System				
	(RMS)				
Project Purpose	(1) Implementation framework of the project is	(1) Relevant documents of	MPWT takes initiative on		
Capacity of MPWT officials on ESC is enhanced	established by Task Force (TF) consists of	institutional arrangement	the process that project		
through applying REG and RMS	(2) 80% of TE member record their capacity	(2) Result of the comprehension check test	(PMUs) including ICD		
	enhancement on Environmental	(3) Observation and interview by	apply REG and RMS		
	Considerations (EC)	JICA Experts	under cooperation with		
	(3) More than 5 IF members are observed	(4) Records of dissemination seminar	DOP and RID		
	participation to the draft RMS preparation				
	process				
	(4) More than 10 members (MPW1:5, DPWT:5) among TE and Project Task Force				
	(PTF) consists of DPWT officials are trained to				
	guide RMS operation to the other officials.				
1 Implementation framework for the project is	1 1 Based on the JICA Guidelines for	1 1 1 IICA Expert Report	Policy on ESC and legislation on ROW		
strengthened based on past experiences and	Environmental and Social Considerations	(Environmental Social consideration	management system in		
present situation on ESC and ROW management	(ESC-GL), lessons learned from past	analysis)	Cambodia government		
	experiences are organized and current issues on ESC and ROW management are analyzed	1.1.2 Activity report of TF members	are not drastically changed		
	1.2 Based on the land management framework	1.2.1 JICA Expert Report (ROW	onangoa.		
	in Cambodia, lessons learned from past	management analysis)	There is no big		
	experiences on ROW management are	1.2.2 Activity report of TF members	project related		
	1.2 Institutional framework and an alyzed		organizations and JCC		
	in MPWT are examined	(Institutional analysis)	members		
		1.3.2 Activity report of TF members			
		in charge			
	1.4 Capacity enhancement plan is developed	1.4.1 JICA Expert Report (Needs analysis Implementation capacity			
		plan)			
		1.4.2 Training plan (Cambodia,			
		Japan, third countries)			
	1.5 As an implementation structure of the	1.5.1 TF organizing meeting record			
	project, TF is established	1.5.2 Documents related to TF			
		establishment			
2. Implementation framework of Environmental	2.1 Concept of EC and its implementation	2.1.1 Training records			
Impact Assessment (EIA) and Environmental	2.2 Authorizing level of REG as an official	2.2.1 Minutes of ICC			
Management Plan (EMP) is strengthened	document is confirmed				
	2.3 REG is authorized	2.3.1 REG Development Plan			
		development			
		2.3.3 Authorized REG			
	2.4 Lessons learned on EC in other countries	2.4.1 Participation Report to training			
	are reliected to RIVIS development	2.4.2 Participation Report to third			
		country technical exchanges			
3. Implementation framework of Social Considerations (SC) related to ROW management	3.1 Current situation of existing ROW	3.1.1 RMS Development Plan 3.1.2 Meeting record of RMS			
is strengthened	Development Plan is prepared	development			
	3.2 Authorizing level of ROW Management	3.2.1 Minutes of JCC			
	Guidelines (RMG) of RMS as an official				
	3.3 Draft RMG is prepared	3.3.1 Meeting Record of RMG			
		development			
		3.3.2 Draft RMG			
	3.4 Draπ κMS Training Plan (RMS-TP) is prepared	3.4.1 Meeting Record of RMS-TP			
	3.5 Tentative ROW Management Map (RMM)	3.5.1 Meeting Record of RMM			
	and tentative ROW Management Database	development			
	עוארא <i>ו</i> ) are prepared	o.o.∠ ivieeting Record of RMD development			
	3.6 Lessons learned on SC in other countries	3.6.1 Reports on Training in Japan			
	are reflected to RMS discussion	3.6.2 Reports on Technical			
		Exchange in third countries			
4. Compatibule 20 minutes 14 DOM	4.4 Dilet Drois et handers de l'Archer	4 4 4 Mooffer			
4. Capacity of SC required for ROW management is strengthened	4.1 Pliot Project Implementation Plan is established	4.1.1 Meeting record of pilot project			
		4.1.2 Pilot project implementation			
	4.2 DTE which involves DDWT is a statistic	plan			
	4.2 PTF which involves DPWT is established	4.2.1 Establishment of PTF			
	Identification (CSI) is implemented	4.3.1 Procurement documents 4.3.2 PTF activity record			
		4.3.3 Progress on RMM and RMD			
		preparation			
	4.4 Dilet project of the set of				
	Prevention (IEP) is implemented	4.4.1 Procurement documents 4.4.2 PTF activity record			
		4.4.3 Progress on RMM and RMD			
		updating			
	4.5 At least 10 qualified trainers are trained	4.5.1 IOI implementation record			
		seminar			
		4.5.3 Observation and interview by			
	4.6 RMS is authorized	JICA Experts 4.6.1 Established and approved			
		RMG			
		4.6.2 Established RMS-TP			
		4.0.3 Established RMM 4.6.4 Established RMD			
		4.6.5 Record of RMS final seminar			
		4.6.6 Budget plan for RMS			
		Implementation			

Activities	Inputs		Pre-Conditions
Activities for Output 1	The Japanese Side	The Cambodian Side	Target group members
1.1 Analyze past projects and current tackling	1. Experts	1. Personnel (MPWT)	assigned for the project
1.2 Implement information collection and analysis	1.1 Leader / ROW Management	1.1 Project Director	are able to participate
on land management framework of land	1.2 Sub Leader / ESC	1.2 Project Manager	activities with enough
management system in Cambodia	1.3 EIA / EMP	1.3 Deputy Manager	time
1.3 Conduct institutional framework analysis for	1.4 Land Management Framework	1.4 Fulltime Staffs	
MPWT	1.5 Land and House Investigation		Critical bars due to
1.4 Conduct a needs assessment for training and	1.6 Training Plan and Implementation	2. JCC Members	failure of coordination
develop capacity enhancement plan and	1.7 Institutional Analysis / PCM	2.1 Ministry of Environment (MOE)	between other
procurement plan	1.8 Project Coordinator / Database	2.2 Ministry of Land Management,	authorities related to the
1.5 Discuss the TF framework	Management	Urban Planning, Construction	project do not emerge
Activities for Output 2		(MLMUPC)	
2.1 Conduct training on ESC of development	2. Training		
partners (DPs)	2.1 Training in Japan	3. Land, buildings and facilities	
2.2 Discuss authorizing process and documentation	2.2 Technical exchange in third countries	3.1 Office space for JICA Experts	<lssues and<="" td=""></lssues>
level of REG (EIA and EMP)	2.3 Training in Cambodia	3.2 Office space for equipment	countermeasures>
2.3 Discuss REG Development Plan		3.3 Office Infrastructures	
2.4 Plan and conduct training in Japan and third	3. Machinery and Equipment	a. Electricity	
countries	PC, Printer, Copy Machine, Video Camera,	b. Internet	
Activities for Output 3	Projector and Screen, Total Station and other	c. Desks, Shelf and others	
3.1 Discuss draft RMS (consists of draft RMG draft	related equipment	d. Other necessary items	
BMS-TP tentative RMM tentative RMD)			
Development Plan	4. Local Contract	4. Pilot Project	
3.2 Discuss authorizing process and documentation	4.1 Local lecturer from private sector	Preparation and implementation of	
S.2 Discuss addition2ing process and documentation	4.2 Database (RMM and RMD)	the pliot project	
3.3 Develop draft RMG Part 1: Current Status	4.3 Local Consultant (Land Survey, Mapping)		
Identification (CSI) and Part 2: Illegal Encroachment	4.4 Local Consultant (Public Awareness		
Prevention (IFP)			
3 4 Develop draft RMS-TP	4.5 Secretary		
3.5 Develop tentative RMM and tentative RMD	4.0 Interpreter / Translator 4.7 Driver with car (rent-a-car)		
3.6 Plan and conduct training in Japan and third			
countries			
Activities for Output 4			
4.1 Discuss the implementation plan of the pilot			
project by using draft RMS			
4.2 Discuss the framework of the Pilot Project Task			
Force (PTF) with coordination between DPWT in			
charge of selected areas for the pilot project			
4.3 Implement the Pilot Project of CSI			
4.4 Implement the Pilot Project of IEP			
4.5 Conduct TOT based on draft RMS-TP			
4.6 Modify draft RMG, RMS-TP, tentative RMM, and			
tentative RMD as finalized RMS			

Annex 3 - 2

#### Project Design Matrix

Project Title: Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

Implementing Agency: Ministry of Public Works and Transport (MPWT), Cambodia

Version 1.0

Dated 4th, May, 2017

PDMrev

Target Group: International Cooperation Depart and Department of Public Works and Transport	ment (ICD), Road Infrastructure Department ( (DPWT) in charge of selected areas for pilot	RID), and Department of Planning project	(DOP) in Ministry of Publ	ic Works and Transpo	rt (MPWT)
Period of Project: Jan, 2017 - Dec, 2019 (3 years) Project Site: Phnom Penh	Pilot Project Site: To be Decided				
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<b>Overall Goal</b> Environmental and Social Considerations (ESC) in road sector is implemented properly by MPWT	<ul> <li>(1) Environmental procedures are</li> <li>implemented in line with Road Environmental</li> <li>Guidelines (REG)</li> <li>(2) Right of Way (ROW) management is</li> </ul>	<ul><li>(1) REG implementation record</li><li>(2) RMS implementation record</li></ul>			
Design to Duran and	operated by using ROW Management System (RMS)	(1) Delayant desymptotic of			
Capacity of MPWT officials on ESC is enhanced through applying REG and RMS	established by Task Force (TF) consisting of ICD, RID and DOP officials	institutional arrangement	enforce REG and RMS in road sector		
	(2) More than 5 members of TF are observed their capacity enhancement on Environmental Considerations(EC) through continuous participation to the REG preparation process	(2) Result of the Capacity Assessment check list (comprehension check test)			
	(3) More than 5 members of TF are observed their capacity enhancement on Social Considerations (SC) through continuous participation to the RMS preparation process	(3) Observation and interview by JICA Experts			
	(4) More than 10 members of TF and Pilot Project Task Force (PTF) are trained to guide RMS operation to the other officials.	(4) Records of dissemination seminars and final seminar			
Outputs 1. Implementation framework for the project is strengthened based on past experiences and present situation on ESC and ROW management	1.1 Based on the JICA Guidelines for Environmental and Social Considerations (ESC-GL), lessons learned from past experiences are organized and current issues on ESC and ROW management are analyzed	1.1.1 JICA Expert Report (Environmental Social considerations analysis) 1.1.2 Relevant materials of TF members in charge	Policy on ESC and legislation on ROW management system in Cambodia government are not drastically changed.		
	1.2 Based on the land management framework in Cambodia and other countries, lessons learned from past experiences on ROW management are organized and current issues are analyzed	1.2.1 JICA Expert Report (ROW management analysis) 1.2.2 Relevant materials of TF members in charge	Institutional organizations and JCC members related with the project are not drastically changed.		
	1.3 Institutional framework and responsibilities in MPWT are examined	1.3.1 JICA Expert Report (Institutional analysis) 1.3.2 Relevant materials of TF members in charge			
	1.4 Capacity enhancement plan and procurement plan are developed through training needs assessment (analysis) of target group	1.4.1 JICA Expert Report (Needs analysis) 1.4.2 Capacity enhancement plan 1.4.3 Procurement plan			
	1.5 As an implementation structure of the project, TF is established	1.5.1 TF organizing meeting record 1.5.2 Documents related to TF establishment			
2. Implementation framework of EC related to Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) is	2.1 Concept of EC and its implementation process are understood	2.1.1 Training records 2.1.2 Capacity Assessment check list			
strengthened	2.2 Authorizing level of REG as an official document is confirmed	2.2.1 Minutes of JCC 2.2.2 Meeting record of REG authorization process			
	2.3 Lessons learned on EC in other countries are reflected to REG development	2.3.1 Relevant materials of training courses in Japan 2.3.2 Relevant materials of third country technical exchanges 2.3.3 Records of Training and seminar in Cambodia			
	2.4 REG is developed and authorized	2.4.1 REG Development Plan 2.4.2 Meeting record of REG development 2.4.3 Drafted REG 2.4.4 Authorized REG			
	2.5 REG is monitored based on EIA/EMP related activities.	2.5.1 JICA Expert Report (REG Monitoring Report)			
3. Implementation framework of Social Considerations (SC) related to ROW management is strengthened	3.1 Current situation of ROW management is confirmed and Development Plan of draft RMS is prepared	3.1.1 Development Plan of draft RMS 3.1.2 Meeting record of draft RMS development			
	3.2 Authorizing level of ROW Management Guidelines (RMG) of RMS as an official	3.2.1 Minutes of JCC 3.2.2 Meeting record of RMG			

3.3 Draft RMG is prepared	3.3.1 Meeting Record of draft RMG preparation 3.3.2 Draft RMG
3.4 Draft RMS Training Plan (RMS-TP) is prepared	3.4.1 Meeting Record of draft RMS- TP preparation 3.4.2 Draft RMS-TP
3.5 Tentative ROW Management Map (RMM) and tentative ROW Management Database (RMD) are prepared	3.5.1 Meeting Record of tentative RMM preparation 3.5.2 Meeting Record of tentative RMD preparation 3.5.3 Tentative RMM and RMD
3.6 Lessons learned on SC through training in other countries and Cambodia are reflected to RMS discussion	3.6.1 Relevant materials of training courses in Japan 3.6.2 Relevant materials of third country technical exchanges 3.6.3 Records of Training and seminar in Cambodia
3.7 RMS is authorized	3.7.1 Finalized RMG, RMS-TP, RMM and RMD 3.7.2 Minutes of JCC 3.7.3 Record of RMS final seminar 3.7.4 Budget plan for RMS implementation

authorization process

document is confirmed

4. Capacity of SC required for ROW management is strengthened	<ul><li>4.1 Pilot Project Implementation Plan is established</li><li>4.2 PTF is established</li></ul>	<ul> <li>4.1.1 Meeting record of establishment of pilot project implementation plan</li> <li>4.1.2 Pilot project implementation plan</li> <li>4.2.1 PTF organizing meeting record</li> <li>4.2.2 Documents related to PTF</li> </ul>		
	4.3 Pilot project of Current Status Identification (CSI) is completed	establishment 4.3.1 PTF activity record 4.3.2 Progress on RMM and RMD preparation 4.3.3 Training records		
	4.4 Pilot project of Illegal Encroachment Prevention (IEP) is completed	4.4.1 PTF activity record 4.4.2 Progress on RMM and RMD updating 4.4.3 Training records		
	4.5 At least 10 qualified trainers are trained	4.5.1 TOT implementation record 4.5.2 Record of the dissemination seminar 4.5.3 Observation and interview by JICA Experts		
Activitica	Innuto		Dro Conditiono	
Activities Activities for Output 1	The Japanese Side	The Cambodian Side	Target group members	
1.1 Analyze past projects, current tackling issues on EIA/EMP and ROW management in terms of ESC-GL	1. Experts 1.1 Team Leader / Right of Way Management- 1	1. Personnel (MPWT) 1.1 Project Director 1.2 Project Manager	assigned for the project are able to spend sufficient time to	
1.2 Collect and analyze information on land management framework of land management system in Cambodia and other countries	1.2 Deputy Team Leader / Right of Way Management-2 1.3 ESC/EIA/EMP	1.3 Deputy Manager 1.4 Taskforce Members 1.5 Pilot Project Taskforce	participate in activities Critical obstructions due	
1.3 Conduct institutional framework analysis for MPWT	1.4 Land Management Framework -1 1.5 Land Management Framework -2 / Database Development	Members 1.6 Advisors for Taskforce Activity	to failure of coordination between other authorities relevant to	
1.4 Conduct a needs assessment for training and	1.6 Land and House Investigation -1	2. JCC Organization 2.1 JCC Members	the project do not occur	
procurement plan	1.8 Training Plan and Implementation -1	a. Ministry of Public Works and		
1.5 Discuss the TF framework	1.9 Training Plan and Implementation -2	Transport (MPWT)		
Activities for Output 2	1.11 Project Coordinator / Database	Finance (MEF)		
2.1 Conduct training on ESC of development	Management		<li>sues and</li>	
partners (DPs)	1.12 Monitoring/Evaluation	3 Land buildings and facilities	countermeasures>	
EMP) and confirm process of authorization	2. Training	3.1 Office space for JICA Experts		
2.3 Plan and conduct training in Japan and third	2.1 Training in Japan	3.2 Office space for equipment		
countries	2.2 Technical exchange in third countries 2.3 Training and seminar in Cambodia	a. Electricity		
2.4 Develop REG		b. Internet		
REG	3. Machinery and Equipment	c. Desks, Shelf and others		
Activities for Output 3	(Drone: unmanned aircraft), Projector and			
3.1 Discuss Development Plan of draft RMS (consists of draft RMG, draft RMS-TP, tentative RMM, tentative RMD)	Screen, Total Station and other related equipment	4. Pilot Project site Preparation and implementation of the pilot project		
3.2 Discuss documentation level of RMG and process of authorization	4. Local Contract 4.1 Technical Assistant (ROW Management,			
3.3 Prepare draft RMG; Part 1: Current Status Identification (CSI) and Part 2: Illegal Encroachment Prevention (IEP)	ESC, Land Survey, Mapping) 4.2 Administrative Assistant (Secretary, Interpreter, Translator)			
3.4 Prepare draft RMS-TP 3.5 Prepare tentative RMM and tentative RMD 3.6 Plan and conduct training in Japan and third	4.3 Driver with car (rent-a-car)			
3.7 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as finalized RMS				
Activities for Output 4 4.1 Discuss the implementation plan of the pilot project by using draft RMS				
4.2 Discuss the framework of the Pilot Project Task Force (PTF)				
4.3 Implement the Pilot Project of CSI				
4.5 Conduct TOT based on draft RMS-TP				

Annex 3 - 4

- Tido: Concept: Enhancement of E	Tenta Tenta	tive Plan of Operation	Version 1.0 Dated 4th,May, 2017 Monitoring
<u>rruject frite: Vapacity Eimancement ur Ei</u> lhnuts	iivii oliillelital allu social colisiuelatiolis III IIIp	Year 1st Year 2nd Year 3rd Year 4th Year Remarks	Issue Solution
Expert			
Team Leader / Right of Way Management-1			
Deputy Team Leader / Right of Way Management-2			
Environmental and Social Considerations / Environmental			
Initipact rosessment. Livinginiaria maraganan nai Land Management Framework -1			
Land Management Framework -2 / Database Development			
Land and House Investigation -1			
Land and House Investigation -2			
Training Plan and Implementation -1			
Training Plan and Implementation -2			
Institutional Analysis / PCM		Augusta         Augusta <t< td=""><td></td></t<>	
Project Coordinator / Database Management		A         A	
Monitoring/Evaluation			
Equipment			
Office Facilities			
Total Station		Vectoral and a second and a se	
Training in Japan			
Training Course in Japan		Lian	
In-country/Third country Training			
Third Country Technical Exchange			
Activities		Year 1st Year 2nd Year 3rd Year 4th Year Responsible Organizati	ion Achimicato Issue &
Sub-Activities		I         I	Achievements Countermeasures
Output 1: Implementation framework for the project is s	strengthened based on past experiences and present situation	on ESC and ROW management	
1.1 Analyze past projects, current tackling			
issues on Enveryer and KOW management in terms of ESC-GL		Actual Contraction	
1.2 Collect and analyze information on land	0		
system in Cambodia and other countries		Actual	
1.3 Conduct institutional framework analysis for	0		
MPWT		Actual	
1.4 Conduct a needs assessment for training and develop capacity enhancement plan and	0		
procurement plan			
<ul> <li>1.5 Discuss the TF framework</li> </ul>	0		
Output 2: Implementation framework of Environmental C		ent (ElA) and Environmental management Plan (EMP) is strengtnened	_
2.1 Conduct training on ESC of development	0		
parmers (UPS)		Actual	
2.2 Discuss documentation level of REG (EIA	0		
and EMP) and confirm process of authorization		Actual	
2.3 Plan and conduct training in Japan and third $^{\odot}$	0		
countries		Actual	
	0	Pan	
		Actual Commented Comm	
2.5 Monitor EIA/EMP related activities based	0	Par	
on REG			

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Output 3: Implementation framework of Social Considerations (SC) related to ROW management is strengthened					
3.1 Discuss Development Plan of draft RMS	Plan				
(consists of diatr KMG, drait KMG-1 F, tentative RMM, tentative RMD)	Actual				
3.2 Discuss documentation level of RMG and ③	Plan				
process of authorization	Actual				
3.3 Prepare draft RMG; Part 1: Current Status  O O O O O O O O O O O O O O O O O O O	Plan				
	Actual				
3.4 Prepare draft RMS-TP	Plan				
	Actual				
3.5 Prenare tentrative BMM and tentative BMD	Plan				
	Actual				
3.6 Plan and conduct training in Japan and third	Plan				
countries	Actual				
3.7 Modify draft RMG, RMS-TP, tentative RMM, ③ O O O O and tentative RMD as finalized RMS	Plan Actual				
Output 4: Capacity of SC required for ROW management is strengthened				-	
4.1 Discuss the implementation plan of the pilot © 0	Plan				
project by using draft RMS	Actual				
4.2 Discuss the framework of the Pilot Project ③	Plan				
Task Force (PTF)	Actual				
O     O     O     O     O	Plan				
	Actual				
4.4 Implement the Pilot Project of IEP	Plan				
	Actual				
4.5 Conduct TOT based on draft RMS-TP	Plan				
	Plan				
Duration / Phasing	Actual				
Monitoring Plan	Year	1st Year 2nd Year 3	3rd Year 4th Year Rems	rks Issue S	Solution
Monitoring	1				
Joint Coordinating Committee	Actual				
Set-up the Detailed Plan of Operation	Plan Actual				
Submission of Monitoring Sheet	Plan Actual				
Monitoring Mission from Japan	Plan Actual				
Joint Monitoring	Plan Actual				
Post Monitoring	Plan Actual				
Reports/Documents					
Inception Report	Actual				
Report of Past Experiences on ESC and ROW	Plan Actual				
Progress Report	Plan Actual				
Project Completion Report	Plan Actual				
Public Relations					
Establishment and Operation of web Site	Actual				
Seminar, Academic Conference	Plan Actual				

# Annex 4: R/D, M/M, Minutes of JCC

# (copy)

- 4-1. Record of Discussion (R/D)
- 4-2. Amended Record of Discussion (R/D)
- 4-3. Summary of JCC Meetings
- 4-4. Minutes of the first JCC Meeting
- 4-5: Materials for the first JCC Meeting
- 4-6. Minutes of the second JCC Meeting
- 4-7. Materials for the second JCC Meeting
- 4-8. Minutes of the third JCC Meeting
- 4-9. Materials for the third JCC Meeting
- 4-10. Minutes of the fourth JCC Meeting
- 4-11. Materials for the fourth JCC Meeting

4-1. Record of Discussion (R/D)4-2. Amended Record of Discussion (R/D)

A4-1. Record of Discussion (R/D)

#### RECORD OF DISCUSSIONS

ON

The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector

IN

the Kingdom of Cambodia

#### AGREED UPON BETWEEN

**Ministry of Public Works and Transport** 

#### AND

#### JAPAN INTERNATIONAL COOPERATION AGENCY

Phnom Penh, February 29, 2016

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Itsu Adachi Chief Representative Cambodia Office Japan International Cooperation Agency

Tram Iv Tek Minister Ministry of Public Works and Transport Kingdom of Cambodia Based on the minutes of meetings on the Detailed Planning Survey on the Project for Capacity Enhancement on Environmental and social Considerations in Implementing Agency for Road Sector (hereinafter referred to as "the Project") signed on 30 October, 2015 between Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with MPWT and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that MPWT, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Kingdom of Cambodia.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on June 17, 2003 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on June 3, 2015 between the Government of Japan (hereinafter referred to as "GOJ") and the Royal Government of Cambodia (hereinafter referred to as "RGoC").

Appendix 1: Project Description

Appendix 2: Minutes of Meetings on Detailed Design Survey on the Project for Capacity Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

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#### PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description in the minutes of meetings for Detailed Design Survey on the Project signed on [date] (Appendix 3).

#### I. BACKGROUND

Environmental and Social Considerations (ESC) has become crucial condition for smooth and appropriate implementation of infrastructure project, such as national road, railway, irrigation schemes, transmission line, SEZ development, and etc. ESC covers the issues in the field of natural environment including EIA, social environment including involuntary resettlement, and other environmental elements such as Environmental Management Plan (EMP), environmental measuring, and so on.

Concerning involuntary resettlement, JICA's TCP-COR (Technical cooperation Project on Capacity Enhancement of ESC for Resettlement) was implemented with MEF and MPWT from 2010 to 2012. TCP-COR focused on BRP (Basic Resettlement Procedures) including RAP updating based on Detailed Measurement Survey (DMS) and Replacement Cost Survey (RCS).

As the result of TCP-COR, procedures and implementation of resettlement are strengthened under the determinate framework. However insufficient management of state land causes problems, e.g. illegal occupation of state land, etc. Such problems make implementation of resettlement procedures much more complicated. Furthermore, MPWT doesn't have an integrated unit to manage the quality of ESC on public works, which makes smooth implementation of public works difficult, especially in road sectors.

For appropriate management of state land and qualified implementation of ESC procedures for road projects, capacity enhancement of MPWT on ESC is required.

#### II. OUTLINE OF THE PROJECT

Details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (Annex 1) and the Tentative Plan of Operation (Annex 2).

1. Title of the Project

The Project for Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

2. Overall Goal

ESC in road sector is implemented properly by MPWT.

3. Project Purpose

Capacity of MPWT officials on ESC is enhanced through applying Road

Environmental Guidelines (REG) and RoW Management System (RMS).

4. Outputs

- Implementation framework for the project is strengthened based on past experiences and present situation on ESC and ROW management
- (2) Implementation framework of Environmental Considerations (EC) related to Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) is strengthened.
- (3) Implementation framework of Social Considerations (SC) related to ROW management is strengthened.
- (4) Capacity of SC required for ROW management is strengthened.
- 5. Activities
- 1.1 Analyze past projects and current tackling issues in terms of ESC Guidelines (ESC-GL) and ROW management.
- 1.2 Implement information collection and analysis on land management framework of land management system in Cambodia
- 1.3 Conduct institutional framework analysis for MPWT
- 1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan
- 1.5 Discuss the TF framework
- 2.1 Conduct training on ESC of development partners (DPs)
- 2.2 Discuss authorizing process and documentation level of REG (EIA and EMP)
- 2.3 Discuss REG Development Plan
- 2.4 Plan and conduct training in Japan and third countries
- 3.1 Discuss draft RMS (consists of draft RMG, draft RMS Training Plan (RMS-TP), tentative RMM, tentative RMD) Development Plan
- 3.2 Discuss authorizing process and documentation level of RMG
- 3.3 Develop draft RMG Part 1: Current Status Identification (CSI) and Part 2: Illegal Encroachment Prevention (IEP)
- 3.4 Develop draft RMS-TP
- 3.5 Develop tentative RMM and tentative RMD
- 3.6 Plan and conduct training in Japan and third countries
- 4.1 Discuss the implementation plan of the pilot project by using draft RMS
- 4.2 Discuss the framework of the Pilot Project Task Force (PTF) with coordination between Department of Public Works and Transport (DPWT) in charge of selected areas for the pilot project
- 4.3 Implement the Pilot Project of CSI
- 4.4 implement the Pilot Project of IEP
- 4.5 Conduct TOT based on draft RMS-TP
- 4.6 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as finalized RMS
- 6. Input
  - (1) Input by JICA
    - (a) Dispatch of Experts (Long/Short Term)
    - 1) Leader / ROW Management
    - 2) Sub Leader / ESC
    - 3) EIA / EMP

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- 4) Land Management Framework
- 5) Land and House Investigation
- 6) Training Plan and Implementation
- 7) Institutional Analysis / PCM
- 8) Project Coordinator / Database Management
- (b) Training

Provision of training in Cambodia, in Japan and/or in other countries.

(c) Machinery and Equipment

Provision of machinery and equipment

In case of importation, the machinery, equipment and other materials under II-6 (1) (c) above will become the property of the RGoC upon being delivered C.I.F. (cost, insurance and freight) to the Cambodia authorities concerned at the ports and/or airports of disembarkation.

Input other than indicated above will be determined through mutual consultations between JICA and MPWT during the implementation of the Project, as necessary.

#### (2) Input by MPWT

MPWT will take necessary measures to provide at its own expense:

- (a) Services of MPWT's counterpart personnel and administrative personnel as referred to in II-7;
- (b) Suitable office space with necessary equipment;
- (c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- (d) Information as well as support in obtaining medical service;
- (e) Credentials or identification cards;
- (f) Available data (including maps and photographs) and information related to the Project;
- (g) Running expenses necessary for the implementation of the Project;
- (h) Expenses necessary for transportation within Cambodia of the equipment referred to in II-6 (1) as well as for the installation, operation and maintenance thereof; and
- (i) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Cambodia from Japan in connection with the implementation of the Project

7. Implementation Structure

The project organization chart is given in the Annex 3. The roles and assignments of relevant organizations are as follows:

#### (1) MPWT

(a) Project Director

Chairman will be responsible for overall administration and implementation of the Project.

(b) Project Manager

(3) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to MPWT on any matters pertaining to the implementation of the Project.

(4) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will review the progress, revise the overall plan when necessary, approve an annual work plan, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the Annex 4.

8. Project Site(s) and Beneficiaries Citizens in Cambodia

9. Duration

3 years from the Project commencement (Assignment of first Japanese expert in Cambodia).

10. Reports to JCC

MPWT and JICA experts will jointly prepare the following reports in English.

- (1) Inception Report
- (2) Progress Report on annual basis until the project completion.
- (3) Project Completion Report at the time of project completion.

11. Environmental and Social Considerations

MPWT will abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

#### III. UNDERTAKINGS OF MPWT

1.MPWT will take necessary measures to:

- (1) ensure that the technologies and knowledge acquired by the Cambodia nationals as a result of Japanese technical cooperation contributes to the economic and social development of Cambodia, and that the knowledge and experience acquired by the personnel of Cambodia from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
- (2) grant privileges, exemptions and benefits to the JICA experts referred to in II-6 (1) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Cambodia.

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- 2.MPWT will take necessary measures to:
  - (1) Provide security-related information as well as measures to ensure the safety of the JICA experts;
  - (2) Permit the JICA experts to enter, leave and sojourn in Cambodia for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.
  - (3) Exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;
  - (4) Exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project; and
  - (5) Meet taxes and any other charges on the equipment, machinery and other material, referred to in II-7 above, necessary for the implementation of the Project.
- 3.MPWT will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

#### IV. MONITORING AND EVALUATION

JICA and the MPWT will jointly and regularly monitor the progress of the Project through the Monitoring Sheets based on the Project Design Matrix (PDM) and Plan of Operation (PO). The Monitoring Sheets will be reviewed every six (6) months.

Also, Project Completion Report will be drawn up one (1) month before the termination of the Project.

JICA will conduct the following evaluations and surveys to verify sustainability and impact of the Project and draw lessons. The MPWT is required to provide necessary support for them.

- 1. Ex-post evaluation three (3) years after the project completion, in principle
- 2. Follow-up surveys on necessity basis

#### V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, MPWT will take appropriate measures to make the Project widely known to the people of Cambodia.

#### VI. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MPWT and relevant organizations will provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of the Cambodia.

MPWT and relevant organizations will not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

#### VII. MUTUAL CONSULTATION

JICA and MPWT will consult each other whenever any major issues arise in the course of Project implementation.

#### VIII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and MPWT. However, PO may be amended in the Monitoring Sheets. The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

#### IX. OTHER RELEVANT ISSUES

- The resettlement issues, e.g. compensation, detailed measurement survey, resettlement cost survey, etc., under the mandate of Ministry of Economy and Finance and Inter-Ministerial Resettlement Committee are not included in the contents of the Project.
- 2. MPWT will request appropriate necessary budget for RoW Management to Ministry of Economy and Finance utilizing a draft budget plan which is prepared in the Project.
- 3. Site of the Pilot Project will be selected at the first JCC (Kick-Off Meeting)
- Annex 1 Logical Framework (Project Design Matrix:PDM)
- Annex 2 Tentative Plan of Operation
- Annex 3 Project Organization Chart
- Annex 4 A List of Proposed Members of Joint Coordinating Committee/ Steering Committee

# **Project Design Matrix**

Project Title: Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

implementing Agency: Ministry of Public Works and Transport (MPWT). Cambodia

Version 0.0 Dated 30 October, 2015

Target Group: International Cooperation Department (ICD), Road Infrastructure Department (RID), and Department of Planning (DOP) in Ministry of Public Works and Transport (MPWT) and Department of Public Works and Transport (DPWT) in charge of selected areas for pilot project

# Period of Project: XXX, 2015 - XXX, 2018 (3 years)

<u>Project Site: Phnom Penh</u>	<u>Model Site: To be Decided</u>				
Narrative Summary	<b>Objectively Verifiable Indicators</b>	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal Environmental and Social Considerations (ESC) in road sector is implemented properly by MPWT	<ul> <li>(1) Environmental procedures are implemented in line with Road Environmental Guidelines (REG)</li> <li>(2) Right of Way (ROW) management is operated by using ROW Management System (RMS)</li> </ul>	<ul> <li>(1) REG applying record</li> <li>(2) RMS operational record</li> </ul>			
Project Purpose Capacity of MPWT officials on ESC is enhanced through applying REG and RMS	<ol> <li>Implementation framework of the project is established by Task Force (TF) consists of ICD, RID, and DOP officials</li> <li>80% of TF member record their capacity enhancement on Environmental</li> <li>More than 5 TF members are observed their capacity enhancement through continuous participation to the draft RMS preparation process</li> <li>More than 10 members (MPWT:5, DPWT:5) among TF and Project Task Force (PTF) consists of DPWT officials are trained to guide RMS operation to the other officials.</li> </ol>	<ul> <li>(1) Relevant documents of institutional arrangement</li> <li>(2) Result of the comprehension check test</li> <li>(3) Observation and interview by JICA Experts</li> <li>(4) Records of dissemination seminars and final seminar</li> </ul>	MPWT takes initiative on the process that project management units (PMUs) including KCD apply REG and RMS under cooperation with DOP and RID with DOP and RID		
Outputs 1. Implementation framework for the project is strengthened based on past experiences and present situation on ESC and ROW management	<ol> <li>1.1 Based on the JICA Guidelines for Environmental and Social Considerations (ESC-GL), lessons learned from past experiences are organized and current issues on ESC and ROW management are analyzed 1.2 Based on the land management framework in Cambodia, lessons learned from past experiences on ROW management are organized and current issues are</li> </ol>	<ol> <li>1.1.1 JICA Expert Report (Environmental Social consideration analysis)</li> <li>1.1.2 Activity report of TF members in charge</li> <li>1.2.1 JICA Expert Report (ROW management analysis)</li> <li>1.2.2 Activity report of TF members in charge</li> </ol>	Policy on ESC and legislation on ROW management system in Cambodia government are not drastically changed. There is no big institutional change in project related		

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Activities	Inputs		Pre-Conditions
Activities for Output 1	The Japanese Side	The Cambodian Side	
1.1 Analyze past projects and current tackling	1. Experts	1. Personnel (MPWT)	assigned for the project I
1.2 Implement information collection and analysis	1.1 Leader / ROW Management	1.1 Project Director	are able to particinate
on land management framework of land	1.2 Sub Leader / ESC	1.2 Project Manager	activities with enough
management system in Cambodia	1.3 EIA / EMP	1.3 Deputy Manager	time
1.3 Conduct institutional framework analysis for	1.4 Land Management Framework	1.4 Fulltime Staffs	
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develop connects assessment for naming and	1.6 Training Plan and Implementation	2. JCC Members	failure of coordination
brocurpomont aloa	1.7 Institutional Analysis / PCM	2.1 Ministry of Environment (MOE)	between other
1.5 Discuss the TF framework	1.8 Project Coordinator / Database	2.2 Ministry of Land Management,	authorities related to the
Activities for Output 2	Management	Urban Planning,	project do not emerge
2.1 Conduct training on ESC of development		Construction (MLMUPC)	
bartners (DPs)	2. Training		
2.7 Discuss authorizing process and	2.1 Training in Japan	3. Land, buildings and facilities	
documentation level of REG (FIA and EMP)	2.2 Technical exchange in third countries	3.1 Office space for JICA Experts	sissues and
2.3 Discuss REG Development Plan	2.3 Training in Cambodia	3.2 Office space for equipment	Couling The Association
2.4 Plan and conduct training in Japan and third		3.3 Office Infrastructures	
countries	3. Machinery and Equipment	a Electricity	
Activities for Output 3	PC, Printer, Copy Machine, Video Camera,	b. Internet	
3.1 Discuss draft RMS (consists of draft RMG.	Projector and Screen, Total Station and other	c. Desks, Shelf and others	
draft RMS-TP, tentative RMM, tentative RMD)	related equipment	d. Other necessary items	
Development Plan			
3.2 Discuss authorizing process and	4. Local Contract	4. Fliot Project	
documentation level of RMG	4.1 LOCAL RECURENTION PRIVATE SECTOR	Freparation and implementation of	
3.3 Develop draft RMG Part 1: Current Status	4.2 Database (Kivityi and KMU)	ne pilot project	
identification (CSI) and Part 2: Illegal	4.5 Local Consultant (Land Survey, Mapping)		
Encroachment Prevention (IEP) 13 A Develop droft DMC TD	4.4 Local Consultant (Public Awareness Activities)		
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3.5 Develop tentative RMM and tentative RMD	4.0 Secretary		
3.6 Plan and conduct training in Japan and third	4.0 Interpreter / Hanstator		
Countries			
4.1 Discuss the implementation plan of the pilot			
project by using draft RMS			
4.2 Discuss the framework of the Pilot Project			
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DPWT in charge of selected areas for the pilot			
Project			
4.4 Implement the Pilot Project of IEP			
4.5 Conduct TOT based on draft RMS-TP			
4.6 Modify draft RMG, RMS-TP, tentative RMM,			
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Joint Motioning       Name	Monitoring Mission from Japan														
Post Networks         Name         Nam         Name         Name	Joint Monitoring														
Reports/Decuments       Explore to be used to be	Post Manitoring														
Newpolion Report         Name         Nam         Name         Name	Reports/Documents														
Report of Part Experiments on ESC and ROW         Number of Art Experiments on ESC and ROW         Number of Art	Inception Report														
Programs Report         Ammunication         Ammunicati	Report of Past Experiences on ESC and ROW														2
Projection Report     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Public Relations     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum       Pum     Pum     Pum     Pum     Pum     Pum     Pum     Pum	Prograss Report			Man Moture					•						
	Project Completion Report										 ┋╋┇┨╞╧╄╎╋				
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	Seminar, Academic Conference			Plan		•								i	
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Organization chart of the Project

Annex 3



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#### LIST OF PROPOSED MEMBERS OF JOINT COORDINATING COMMITTEE (JCC)

Chairperson:

Secretary of State, MPWT

#### Members:

(1) Cambodian Side

<ol> <li>Project Director:</li> </ol>	Secretary of State, MPWT
2) Project Manager:	Director, International Cooperation Department (ICD), MPWT
<ol><li>Project Co-Manager:</li></ol>	Director, Road Infrastructure Department (RID), MPWT
	Director, Department of Planning (DoP), MPWT

- 4) Project Members:
  - MPWT

\*\*\*\*\* from ICD, MPWT \*\*\*\*\* from RID, MPWT \*\*\*\*\* from DoP, MPWT

5) Relevant personnel accepted by the Chairperson, if necessary.

#### (2) Japanese Side

- 1) JICA Cambodia Office
  - Representative(s)
- 2) JICA Experts
  - Leader / ROW Management
  - Sub Leader / ESC
  - EIA / EMP
  - Land Management Framework
  - Land and House Investigation
  - Training Plan and Implementation
  - Institutional Analysis / PCM
  - Project Coordinator / Database Management
- 3) Other personnel, if necessary

JCC will be scheduled based on the maximum availability of the members listed above.
## MINUTES OF MEETINGS BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY AND MINISTRY OF PUBLIC WORKS AND TRANSPORT, THE KINGDOM OF CAMBODIA FOR AMENDMENT OF THE RECORD OF DISCUSSIONS ON

## THE PROJECT FOR CAPACITY ENHANCEMENT ON ENVIRONMENTAL AND SOCIAL CONSIDERATIONS IN IMPLEMENTING AGENCY IN ROAD SECTOR

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and Ministry of Public Works and Transport (hereinafter referred to as "MPWT") hereby agree that the Record of Discussions on The project for Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector signed on February 29<sup>th</sup> 2016 will be amended as follows;

## 1. Project Design Matrix (PDM)

(1)Overall Goal

Before	Amended Version		
Means of Verification			
(1) REG applying record	(1) REG implementation record		
(2) RMS operational record	(2) RMS implementation record		
Reason:			
(1) English wording correction	of the second		
(2) English wording correction	the second state in the second state of the second state of the second state of the second state of the second		

## (2) Project Purpose

Before	Amended Version
<b>Objectively Verifiable Indicators</b>	
<ul><li>(2) 80% of TF member record their capacity enhancement on Environmental Considerations (EC)</li></ul>	(2) More than 5 members of TF are observed their capacity enhancement on Environmental Considerations (EC) through continuous participation to the REG preparation process
(3) More than 5 TF members are observed their capacity enhancement through continuous participation to the draft RMS preparation process	(3) More than 5 members of TF are observed their capacity enhancement on Social Considerations (SC) through continuous participation to the draft RMS preparation

(4) More than 10 members (MPWT:5, DPWT:5) among TF and Project Task Force (PTF) consists of DPWT officials are trained to guide RMS operation to the other officials.	process (4) More than 10 members of TF and Pilot Project Task Force (PTF) are trained to guide RMS operation to the other officials
Reason:	
(2) Considering the size of Taskforce members	5 members is a better indication.
(3) The words 'Social Considerations (SC)' are	added for better clarification.
(4) (MPWT:5, DPWT:5) were omitted, as it is d	ifficult to decide the details of Project Task Force
members at this stage.	in the second
Means of Verification	
Multiples No. Markey Processing	
(2) Result of the comprehension check test	(2) Result of the Capacity Assessment check
(2) Result of the comprehension check test	(2) Result of the Capacity Assessment check list (comprehension check list)
(2) Result of the comprehension check test Reason:	(2) Result of the Capacity Assessment check list (comprehension check list)
<ul> <li>(2) Result of the comprehension check test</li> <li>Reason:</li> <li>(2) English wording improvement: Capacity</li> </ul>	<ul> <li>(2) Result of the Capacity Assessment check list (comprehension check list)</li> <li>assessment is a broader concept than a</li> </ul>

## (3)Outputs

1) Output1

Before	Amended Version		
<b>Objectively Verifiable Indicators</b>			
<ul> <li>1.2 Based on the land management framework in Cambodia, lessons learned from past experiences on ROW management are organized and current issues are analyzed</li> <li>1.4 Capacity enhancement plan is developed through training needs analysis of target group</li> </ul>	<ul> <li>1.2 Based on the land management framework in Cambodia and other countries, lessons learned from past experiences on ROW management are organized and current issues are analyzed</li> <li>1.4 Capacity enhancement plan and procurement plan are developed through training needs assessment (analysis) of target group</li> </ul>		
Reason:			
1.2 The words 'Other countries' are added	and the second		
1.4 The words 'procurement plan' are added			
Means of Verification			
1.1.2 Activity report of TF members in charge	1.1.2 Relevant materials of TF members in charge		
1.2.2 Activity report of TF members in charge	1.2.2 Relevant materials of TF members in charge		
1.3.2 Activity report of TF members in charge	1.3.2 Relevant materials of TF members in		
1.4.1 JICA Expert Report (Needs analysis, Implementation capacity plan) 1.4.2 Training plan (Cambodia Japan third	1.4.1 JICA Expert Report (Needs analysis)		
countries)	T.T.2 Oapacity enhancement plan		

1.4.3 Equipment procurement plan	1.4.3 Procurement plan			
Reason:	I			
1.1.2 English wording correction: 'Relevant materials' are used to include other materials than				
Expert reports				
1.2.2 English wording correction: 'Relevant materials' are used to include other materials than				
Expert reports				
1.3.2 English wording correction: 'Relevant ma	terials' are used to include other materials than			
1.4.1 The words 'Implementation capacity plan' v	vere omitted as they don't make sense.			
1.4.2 English wording correction: The expression	is put in concordance with the project title.			
1.4.3 English wording correction: 'Equipment' v	was omitted. The words 'procurement plan' are			
added				
Activities				
1.1 Analyze past projects and current tackling	1.1 Analyze past projects, current tackling			
issues in terms of ESC-GL and ROW	issues on EIA/EMP and ROW management in			
management	terms of ESC-GL			
1.2 Implement information collection and	1.2 Collect and analyze information on land			
analysis on land management framework of	management framework of land management			
land management system in Cambodia	system in Cambodia and other countries			
Reason:				
1.1 Changed the word ESC-GL into EIA/EMP to clarify the topics				

1.2 It was added because analysis of information on land framework management in other countries is necessary.

2) Output 2

Before	Amended Version		
Objectively Verifiable Indicators			
2.3 REG is authorized	2.3 Lessons learned on EC in other countries		
	are reflected to REG development		
2.4 Lessons learned on EC in other countries	2.4 REG is developed and authorized		
are reflected to RMS development			
	<add:> 2.5 REG is monitored based on</add:>		
	EIA/EMP related activities		
Reason:			
The order of 2.3 and 2.4 is interchanged			
2.5 Monitoring activity is added			
Means of Verification			
2.1.2 Comprehension check test	2.1.2 Capacity assessment check test		
	<add:> 2.2.2 Meeting record of REG</add:>		
	authorization process		
	< Replace 2.3 and 2.4>		
2.3.1 REG Development Plan	2.3.1 Relevant material of training courses in		
	Japan		
2.3.2 Meeting record of REG development	2.3.2 Relevant material of third country		

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	technical exchanges		
2.3.3 Authorized REG	2.3.3 Records of training and seminar in		
	Cambodia		
2.4.1 Participation Report to training courses in	2.4.1 REG Development Plan		
Japan			
2.4.2 Participation Report to third country	2.4.2 Meeting record of REG development		
technical exchanges			
	2.4.3 Drafted REG		
	2.4.4 Authorized REG		
	<add:> 2.5.1 JICA Expert Report (REG</add:>		
	Monitoring Report)		
Reason:			
2.1.2 The words 'Capacity assessment' is used t	o include other assessment tools.		
2.2.2 Meeting record is added.			
The order of 2.3 and 2.4 are interchanged to follo	ow the order of the activities.		
2.5.1 is added for monitoring of REG related activities			
Activities			
2.2 Discuss authorizing process and	2.2 Discuss documentation level of REG (EIA		
documentation level of REG (EIA and EMP)	I EMP) and EMP) and confirm process of authorizatio		
2.3 Discuss REG Development Plan	2.3 Plan and conduct training in Japan and		
	third countries		
2.4 Plan and conduct training in Japan and	2.4 Develop REG		
third countries			
	<add:> 2.5 Monitor EIA/EMP related activities</add:>		
	based on REG		
Reason:			
2.2 English wording improvement to make the ac	tivities clear		
Interchange the order of 2.3 and 2.4 and English wording improvement to clarify the work order			
2.5 monitoring activity is added.			

3)	Output3
-,	outputo

Before	Amended Version	
Objectively Verifiable Indicators		
3.1 Current situation of existing ROW	3.1 Current situation of ROW management is	
management is confirmed and RMS	confirmed and Development Plan of draft RMS	
Development Plan is prepared	is prepared	
3.6 Lessons learned on SC in other countries	3.6 Lessons learned on SC through training in	
are reflected to RMS discussion	other countries and Cambodia are reflected to	
	RMS discussion	
	<replace 4.6:="" from=""> 3.7 RMS is authorized</replace>	
Reason:		

3.1 English wording improvement to make it clear

3.6 The word 'Cambodia' is added as there are also training sessions in Cambodia

3.7 4.6 is added for the logical order of activities

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Means of Verification			
3.1.1 RMS Development Plan 3.1.1 Development Plan of draft RMS			
3.1.2 Meeting record of RMS development	3.1.2 Meeting record of draft RMS development		
	<add:>3.2.2 Meeting Record of RMG</add:>		
	authorization process		
3.3.1 Meeting Record of RMG development	3.3.1 Meeting Record of draft RMG preparation		
3.4.1 Meeting Record of RMS-TP development	3.4.1 Meeting Record of draft RMS-TP		
	preparation		
	<add:>3.4.2 Draft RMS-TP</add:>		
3.5.1 Meeting Record of RMM development	3.5.1 Meeting Record of tentative RMM		
	preparation		
3.5.2 Meeting Record of RMD development	3.5.2 Meeting Record of draft RMD preparation		
	<add:>3.5.3 Tentative RMM and RMD</add:>		
3.6.1 Reports on Training in Japan	3.6.1 Relevant materials of Training course in		
	Japan		
3.6.2 Reports on Technical Exchange in third	3.6.2 Relevant materials of third country		
countries	technical exchanges		
	<add:>3.6.3 Records of training and seminar</add:>		
	Replace from 4.6.1:> 3.7.1 Finalized RMG,		
	3.7.2 Minutes of ICC		
	3.7.3 Record of RMS final sominar		
	3.7.4 Budget plan for RMS implementation		
Reason:			
3.1.1 The word 'draft' is added as the document	at this stage is a draft before the authorization by		
the Cambodia government and the project cannot	ot control the authorization process		
3.1.2, 3.3.1, 3.4.1, 3.5.1, 3.5.2 From the same re	ason as above, the word 'draft' is added		
3.6.1 The words 'relevant materials' are used as	there are other materials than reports.		
3.6.2 Same as 3.6.1			
Activities			
3.1 Discuss draft RMS (consists of draft RMG,	3.1 Discuss Development plan of draft RMS		
draft RMS-TP, tentative RMM, tentative RMD)	(consists of draft RMG, draft RMS-TP, tentative		
Development Plan	RMM, tentative RMD)		
3.2 Discuss authorizing process and	3.2 Discuss documentation level of RMG and		
documentation level of RMG	process of authorization		
3.3 Develop draft RMG Part 1: Current Status	3.3 Prepare draft RMG; Part 1: Current Status		
Identification (CSI) and Part 2: Illegal	Identification (CSI) and Part 2: Illegal		
Encroachment Prevention (IEP)	Encroachment Prevention (IEP)		
3.4 Develop draft RMS-TP	3.4 Prepare draft RMS-TP		
3.5 Develop tentative RMM and tentative RMD	3.5 Prepare tentative RMM and tentative RMD		
	<replace 4.6="" :="" from=""> 3.7 Modify draft RMG,</replace>		
	RMS-TP, tentative RMM and tentative RMD as		
	finalized RMS		

X

Reason:

3.1 English wording improvement

3.2 English wording correction in the order of activities

3.3 English wording improvement

3.4 English wording improvement

3.5 English wording improvement

3.7 This item is moved from 4.6 as the theme is matched with Activity for Output 3

## 4) Output4

Before	Amended Version		
Objectively Verifiable Indicators			
4.2 PTF which involves DPWT is established	4.2 PTF is established		
4.3 Pilot projects of Current Status	4.3 Pilot projects of Current Status		
Identification (CSI) is implemented	Identification (CSI) is completed		
4.4 Pilot project of Illegal Encroachment	4.4 Pilot project of Illegal Encroachment		
Prevention (IEP) is implemented	Prevention (IEP) is completed		
4.6 RMS is authorized	<replace 3.7="" to=""></replace>		
Reason:			
4.2 It is not yet decided whether or not DPWT wi	Il be involved in PTF		
4.3 As an indicator, the pilot project has to be co	mpleted		
4.4 Same as 4.3			
4.6 This item is moved to 3.7 as the theme is diff	erent		
Means of Verification			
4.1.1 Meeting record of pilot project	4.1.1 Meeting record of establishment of pilot		
implementation plan	project implementation plan		
4.2.1 Establishment of PTF	4.2.1 PTF organizing meeting record		
	<add:>4.2.2 Documents related to PTF</add:>		
	establishment		
4.3.1 Procurement documents	4.3.1 PTF activity record		
4.3.2 PTF activity record	4.3.2 Progress on RMM and RMD updating		
4.3.3 Progress on RMM and RMD preparation	4.3.3 Training records		
4.3.4 Training records			
4.4.1 Procurement documents	4.4.1 PTF activity record		
4.4.2 PTF activity record	4.4.2 Progress on RMM and RMD updating		
4.4.3 Progress on RMM and RMD updating	4.4.3 Training records		
4.6.1 Established and approved RMG	<replace 3.7.1:="" to=""> 4.6.1 to 4.6.6</replace>		
4.6.2 Established RMS-TP			
4.6.3 Established RMM			
4.6.4 Established RMD			
4.6.5 Record of RMS final seminar			
4.6.6 Budget plan for RMS implementation			
Reason:			
4.1.1 Produces a pilot project implementation plan			
4.2.1 Meeting record will be used as a means of	verification		

4.2.2 Related documents will be used as a means of verification

4.3.1 Procurement documents are not relevant indication, so is omitted

4.3.2-4.3.4 Changed numbering as 4.3.1 is omitted

4.4.1 Procurement documents are not relevant indication, so is omitted

4.4.2-4.4.3 Changed numbering as 4.4.1 is omitted and 4.4.3 Training records is added as an effective indication tool

4.6.1 to 4.6.6 The themes are related to RMS. So all the activities are replaced to 3.7.1

A	C	tiv	iti	es	
			_		

4.2 Discuss the framework of the Pilot Project	4.2 Discuss the framework of the Pilot Project
Task Force (PTF) with coordination between	Task Force (PTF)
DPWT in charge of selected areas for the	
pilot project	
4.6 Modify draft RMG, RMS-TP, tentative	<replace 3.7:="" to=""> 4.6</replace>
RMM, and tentative RMD as finalized RMS	

Reason:

4.2 At the moment, it is not yet decided whether or not DPWT will be a member of Project Task Force

4.6 The themes are related to RMS so they were moved to 3.7

## (4) Important Assumption

Before	Amended Version
Project Purpose	
MPWT takes initiative on the process that project management units (PMUs) including ICD apply REG and RMS under cooperation with DOP and RID	MPWT takes initiative to enforce REG and RMS in road sector
Reason:	
It will be decided later by MPWT as to which d	epartments or institutional mechanism will be in
charge. In a broader sense, MPWT will be in cha	rge.
Outputs	
Policy on ESC and legislation on ROW management system in Cambodia government are not drastically changed. There is no big institutional change in project related organizations and JCC members	Policy on ESC and legislation on ROW management system in Cambodia government are not drastically changed. Institutional organizations and JCC members related with the project are not drastically changed
Reason:	
English wording improvement	

## (5)Inputs

## 1) Inputs (Japanese side)

Before	Amended Version
1. Experts	
1.1 Leader / ROW Management	1.1 Team Leader / Right of Way Management-

7

1.2 Sub Leader / ESC	1.2 Deputy Team Leader / Right of Way
	Management-2
1.4 Land Management Eremowerk	
1.4 Land management Framework	1.4 Land Management Framework-1
1.5 Land and House investigation	1.5 Land Management Framework-2 /
4.C.Training Discond loss loss 1.	Database Development
1.6 Training Plan and Implementation	1.6 Land and House Investigation-1
1.7 Institutional Analysis / PCM	1.7 Land and House Investigation-2
1.8 Project Coordinator / Database	1.8 Training Plan and Implementation-1
Management	
	1.9 Training Plan and Implementation-2
	1.10 Institutional Analysis / PCM
	1.11 Project Coordinator / Database
	Management
	1.12 Monitoring/Evaluation
Reason: Changed to the actual Japanese project membe	rs
2. Training	
2.3 Training in Cambodia	2.3 Training and seminar in Cambodia
Reason:	
2.3 Not only training but also seminar will be con	ducted in Cambodia
3. Machinery and Equipment	
PC, Printer, Copy Machine, Video Camera.	PC, Printer, Copy Machine, Video, Camera
Projector and Screen, Total Station and other	(Drone: unmanned aircraft). Projector and
related equipment	Screen. Total Station and other related
	equipment
Reason:	
Drone is added for mapping.	the second second second second second
4. Local Contract	
4.1 Local lecturer from private sector	4.1 Technical Assistant (ROW/ Management
	ESC Land Survey, Manning)
4.2 Database (RMM and RMD)	4.2 Administration Assistant (Secretary
	4.2 Administration Assistant (Secretary,
4.3 Local Consultant (Land Survey, Monning)	A 2 Driver with east (rank a car)
4.4 Local Consultant (Public Aucrosoft	4.5 Driver with car (rent-a-car)
Activities)	
4.5 Secretary	
4.6 Interpreter / Translator	×
4.7 Driver with car (rent a car)	
Passan:	
Freeh leaselly existence of the second secon	
Each locally contracted numan resources will ha	ave multi-functional duties. It is not necessary to

2) Inputs (Cambodian side)

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Before	Amended Version
1. Personnel (MPWT)	
1.4 Fulltime Staffs	1.4 Taskforce Members 1.5 Pilot project taskforce members
Reason:	
1.4-1.6 specified more about the relevant stakeh 2. JCC organization	olders. 'Fulltime Staffs' is a vague expression.
<ul><li>2.1 Ministry of Environment (MOE)</li><li>2.2 Ministry of Land Management, Urban Planning, Construction (MLMUPC)</li></ul>	2.1 JCC Members a. Ministry of Public Works and Transport (MPWT) b. Ministry of Economy and Eingnes (MEE)
Reason:	
MOE is not directly related to this project. MEF be made to MEF.	is a relevant ministry as the budget requests will

## (6) Pre-conditions

Before	Amended Version
Target group members assigned for the project are able to participate activities with enough time Critical bars due to failure of coordination between other authorities related to the project do not emerge	Target group members assigned for the project are able to spend sufficient time to participate in activities Critical obstructions due to failure of coordination between other authorities relevant to the project do not occur
Reason:	
English wording improvement	and the provide the second

# 2. Plan of Operation is amended as Annex 4.

# 3. Organization Chart and JCC Member list is amended as Annex 5 and Annex 6.

This amendment will become effective as of February , 2018.

Annex 1 : Record of Discussions (signed on February 29th, 2016)

Annex 2 : Minutes of 1st JCC Meeting

Annex 3 : Project Design Matrix (Amended)

Annex 4 : Plan of Operation (Amended)

Annex 5 : Organization Chart (Amended)

Annex 6 : JCC Member List (Amended)



Mr. SUGANO Yuichi Chief Representative Japan International Cooperation Agency Cambodia Office



H.E. Tauch Chankosal Secretary of State, Ministry of Public Works and Transport, The Kingdom of Cambodia

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## The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCoR)

#### Minutes of the First Joint Coordination Committee Meeting of The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia

The First Joint Coordination Committee (JCC) meeting among the Ministry of Public Works and Transport (MPWT) of Cambodia, Japan International Cooperation Agency (JICA), and the other agencies concerned of the Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCOR) was held at the Conference Room of HIMAWARI Hotel, Phnom Penh on the 04th of May, 2017. Discussions and exchanges of opinion were made, which resulted in the mutual agreement on several items as briefly described below.

#### 1. JCC Members and Proposal on Taskforce Structures

Members of the JCC have been approved and fixed. The Taskforce Structures were proposed and accepted in this meeting. It was agreed that the taskforce members directly manage the implementation of the Project and report on all progress and achievements to the JCC. The lists of members of JCC and Taskforce are given in the Inception Report herewith attached as Attachment 3.

Taskforce is lead by three (3) Deputy Managers and divided into EIA/EMP (Environmental Impact Assessment/Environmental Management Plan) Team consisting of seven (7) members and ROW Management Team consisting of eight (8) members. The selected number of Taskforce members was limited to eighteen (18). Taskforce members will be supported by JICA Experts and advisors appointed by MPWT, Ministry of Environment (MOE), and Ministry of Land Management, Urban Planning and Construction (MLMUPC). Members of Taskforce are expected to sustainably utilize their knowledge and continue the technical transfer to their subordinates or concerned institutions after the completion of the Project.

#### 2. Approval of Project Design Matrix (PDM) Ver. 1.0

The Project Design Matrix (hereinafter referred to as "PDM") Ver. 1.0 was reviewed and approved by the JCC members. The PDM Ver. 0.0, which was previously agreed, was revised into PDM Ver. 1.0. The PDM Ver. 0.0 and Ver. 1.0 are given in the Inception Report herewith attached as Attachment 3.

#### 3. Approval of Plan of Operation (PO) Ver. 1.0

The Plan of Operation (hereinafter referred to as "PO") Ver. 1.0 was reviewed and approved by the JCC members as well. The PO Ver. 0.0 and Ver. 1.0 are given in the Inception Report attached as Attachment 3.

#### 4. Monitoring of the Project

The monitoring methods of the Project were approved with the JCC members as follows:

- (1) To monitor the project progress every six (6) months.
- (2) To amend the target indicators or objectively verifiable indicators and/or required activities in consideration of the sustainability of the Project, if required.
- (3) In order to describe the progress of objectively verifiable indicators in the PDM, the progress of activities is to be described in the PO, and the amendments are to be shown in the Monitoring Sheet.

#### 5. Documentation Level

It was agreed that Taskforce Members will keep working with JICA Expert Team on the preparation of Road Environmental Guidelines (REG) and Right of Way Management Guidelines (RMG). Both REG and RMG are approved to be issued as Prokas (Proclamation) by the end of the Project.

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The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCOR)

### 6. Work Plan

A Work Plan was submitted and its major points were explained. It was agreed that JICA Expert Team provides the Work Breakdown Structure (WBS) for the Taskforce Activities on EIA/EMP Team and ROW Management Team. It was proposed and agreed that EIA/EMP Team will complete the Activity 2-1 to 2-4 by the next JCC meeting early next year and Activity 2-5 by the end of the project. ROW Management Team agreed to complete the Activity 3-1 to 3-3 by the next JCC meeting early next year and start the Activity 3-4 to 3-7 and Activity 4-1 to 4-5 after the next JCC meeting. The detailed activities can be checked in PDM Ver.1.0 in the Inception Report herewith attached as Attachment 3.

#### 7. Other Issues

It was re-confirmed that MPWT and MOE have appointed officials to attend the Training in Japan from 13th to 22nd of June, 2017 to improve capacity in Environmental and Social Considerations. The meeting also informed and explained the expected participants (eight persons) and objectives of the Technical Exchange in Third Countries which will be conducted in Myanmar and Thailand from 23rd to 28th of October, 2017.

JCC members discussed procurement of the equipment for Pilot Project. One (1) Unit of Total Station and one (1) Unit of Drone will be procured in Cambodia, so that the maintenance work can be smoothly conducted. The selection of pilot project site was agreed to be discussed in the 2nd JCC meeting.

It was agreed with the JCC members that the 2nd JCC meeting will be held in January, 2018 and Road Environmental Guidelines (REG) and the draft of Right of Way Management Guidelines (Draft RMG) will be explained and approved in the 2nd JCC meeting, based on the progress of the Project. It was also agreed that the 2nd Seminar will be jointly held with the 2nd JCC meeting. Additionally, JCC members suggested that JICA Experts should consider the involvement of local/provincial government and Ministry of Interior (MOI) in the preparation of REG and RMG.

Attachment: 1. Agenda, 2. Participants List, 3. Theeption Report

CONFIRMED BY:

H.E. TAUCH Chankesal Secretary of State Ministry of Public Works and Transport

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TKNAKA Kotaro Senior-Representative JICA Cambodia Office

uchida

TSUCHIDA Takayuki Team Leader JICA Project Team

#### Project Design Matrix

Project Title: Capacity Enhancement of Environmental and Social Considerations in Implementing Agency In Read Sector
Implementing Agency: Ministry of Public Works and Transport (MPWT), Cambedia
Target Group: Intermitional Cooperation Department (ICD), Read Infrastructure Department (RID), and Department of Planning (DOP) in Ministry of Public Works and Transport.
(MPWT) and Department of Public Works and Transport (DPWT) in charge of selected areas for pilot project
Period of Project; Jan, 2017 - Dec, 2019 (3 years)
Project Site: To the Ended Site: To the En

Project Site: Phnom Penh	Pilot Project Site: To be Decided				1
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal	(1) Environmental procedures are	(1) REG Implementation record			
Environmental and Social Considerations (ESC) in	implemented in line with Road Environmental Guidelines (REG)				
read sector is implemented property by with the	(2) Right of Way (ROW) management is	(2) RMS Implementation record			
	operated by using ROW Management System (RMS)				
Project Purpose	(1) Implementation framework of the project is	(1) Relevant documents of	MPWT takes initiative		
Capacity of MPWT officials on ESC is enhanced through applying REG and RMS	established by Task Force (TF) consisting of ICD, RID and DOP officials	institutional arrangement	RMS in road sector		
	(2) More than 5 members of TF are observed	(2) Result of the Capacity			
	their capacity enhancement on Environmental Considerations(EC) through continuous	(comprehension check test)			
	participation to the REG preparation process				
	in the factor of TF are abarrand	(3) Observation and interview by			
	their capacity enhancement on Social	JICA Experts			
	Considerations (SC) through continuous participation to the BMS preparation process				
	(4) More than 10 members of TF and Pilot Project Task Force (PTF) are trained to guide	(4) Records of dissemination seminars and final seminar			
	RMS operation to the other officials.				
Outputs 1. Implementation framework for the project is	1.1 Based on the JICA Guidelines for	1.1.1 JICA Expert Report	Policy on ESC and		
strengthened based on past experiences and	Environmental and Social Considerations	(Environmental Social considerations analysis)	legislation on ROW management system in		
present situation on ESC and ROVV management	experiences are organized and current issues	1.1.2 Relevant materials of TF	Cambodia government		
	on ESC and ROW management are analyzed	members in charge	changed.		
	1.2 Based on the land management	1.2.1 JICA Expert Report (ROW	Institutional		1
	framework in Cambodia and other countries,	management analysis)	organizations and JCC		
	ROW management are organized and current	members in charge	members related with the project are not		
	issues are analyzed		drastically changed.		1
	1.3 Institutional framework and responsibilities	1.3.1 JICA Expert Report (Institutional analysis)			
		1.3.2 Relevant materials of TF			
	4 Consolly approximant plan and	1 4 1 IICA Expert Report (Needs			
	procurement plan are developed through	analysis)			
	training needs assessment (analysis) of target group	1.4.2 Capacity enhancement plan 1.4.3 Procurement plan			
	1.5 As an implementation structure of the	1.5.1 TF organizing meeting record			
	project, TF is established	1.5.2 Documents related to TF			
		establishment			
2. Implementation framework of EC related to	2.1 Concept of EC and its implementation	2.1.1 Training records 2.1.2 Capacity Assessment check			
Environmental Management Plan (EMP) is		list			
strengthened	2.2 Authorizing level of REG as an official document is confirmed	2.2.1 Minutes of JCC 2.2.2 Meeting record of REG			
16 I.		authorization process			
	2.3 Lessons learned on EC in other countries	2.3.1 Relevant materials of training			
	are renected to REG development	2.3.2 Relevant materials of third			
		country technical exchanges 2.3.3 Records of Training and			
		seminar in Cambodia			
	2.4 REG is developed and authorized	2.4.1 REG Development Plan			
		development			
		2.4.3 Drafted REG			
	2.5 REG is monitored based on EIA/EMP	2.5.1 JICA Expert Report (REG			1
	related activities.	Monitoring Report)			1
3. Implementation framework of Social	3.1 Current situation of ROW management is	3.1.1 Development Plan of draft			
Considerations (SC) related to ROW management is strengthened	RMS is prepared	3.1.2 Meeting record of draft RMS			
	3.2 Authorizing level of ROW Management	development 3.2.1 Minutes of JCC			
	Guidelines (RMG) of RMS as an official	3.2.2 Meeting record of RMG			
	3.3 Draft RMG is prepared	3.3.1 Meeting Record of draft RMC			1.1
		preparation			
	3.4 Draft RMS Training Plan (RMS-TP) is	3.4.1 Meeting Record of draft RMS			
	prepared	TP preparation			
	a E Testalius POW/ Massagement Man (PMM)	3.4.2 Uran RMS-1P			
1	and tentative ROW Management Database	RMM preparation		-	
	(RMD) are prepared	3.5.2 Meeting Record of tentative RMD preparation			
		3.5.3 Tentative RMM and RMD		1	
	3.6 Lessons learned on SC through training in	3.6.1 Relevant materials of training	2		
	RMS discussion	3.6.2 Relevant materials of third			
1		country technical exchanges 3,6,3 Records of Training and		1	
		seminar in Cambodia			
	3.7 RMS is authorized	3.7.1 Finalized RMG, RMS-TP,			
1		3.7.2 Minutes of JCC			
1		3.7.3 Record of RMS final semina 3.7.4 Budget plan for RMS			
		implementation	_		
4. Capacity of SC required for ROW management	4.1 Pilot Project Implementation Plan is established	4.1.1 Meeting record of establishment of pilot project			
in and a garage and		implementation plan			
1	1	plan			
1	1	Les and a second s	3. The second	A2	

	4.2 PTF is established	4.2.1 PTF organizing meeting record 4.2.2 Documents related to PTF establishment		2	
	4.3 Pilot project of Current Status Identification (CSI) is completed	4.3.1 PTF activity record 4.3.2 Progress on RMM and RMD preparation 4.3.3 Training records			
	4.4 Pilot project of Illegal Encroschment Prevention (IEP) is completed	4.4.1 PTF activity record 4.4.2 Progress on RMM and RMD updating 4.4.3 Training records			
	4.5 At least 10 qualified trainers are trained	4.5.1 TOT implementation record 4.5.2 Record of the dissemination seminar 4.5.3 Observation and interview by JICA Experts			
Activities	Inputs		Pre-Conditions		
Activities for Output 1	The Japanese Side	The Cambodian Side	Target group members		
1.1 Analyze past projects, current tackling issues on EIA/EMP and ROW management in terms of ESC-GL 1.2 Collect and analyze information on land	1. Experts 1.1 Team Leader / Right of Way Management 1 1.2 Deputy Team Leader / Right of Way	1. Personnel (MPWT) 1.1 Project Director 1.2 Project Manager 1.3 Deputy Manager	assigned for the project are able to spend sufficient time to participate in activities		
management framework of land management system in Cambodia and other countries 1.3 Conduct institutional framework analysis for MPV/T	Management-2P 1.3 ESC/EI/4/EMP 1.4 Land Management Framework -1 1.5 Land Management Framework -2 / Delebase Development	1.4 Taskforce Members 1.5 Pilot Project Taskforce Members 1.6 Advisors for Taskforce Activity	Critical obstructions due to failure of coordination between other suthorities meyant to		
1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan	1.6 Land and House Investigation -1 1.7 Land and House Investigation -2 1.8 Training Plan and Implementation -1 1.9 Training Plan and Implementation -2	2. JCC Organization 2.1 JCC Members a. Ministry of Public Works and Transport (MPWT)	the project do not occur		
1.5 Discuss the TF framework	1.10 Institutional Analysis / PCM	b. Ministry of Economy and		-	
2.1 Conduct training on ESC of development	1.11 Project Coordinator / Database Management	Finance (MEF)	<issues and<="" td=""><td></td><td></td></issues>		
partners (DPs) 2.2 Discuss documentation level of REG (EIA and	1.12 Monitoring/Evaluation	3. Land, buildings and facilities	countermeasures>		
EMP) and confirm process of authorization	2. Training	3.1 Office space for JICA Experts			
2.3 Plan and conduct training in Japan and third countries	2.2 Technical exchange in third countries	3.3 Office Infrastructures			
2.4 Develop REG		b. Internet			
2.5 Monitor EIA/EMP related activities based on REG	3. Machinery and Equipment PC, Printer, Copy Machine, Video Camera	c. Desks, Shelf and others d. Other necessary items			
Activities for Output 3 3.1 Discuss Development Plan of draft RMS (consists of draft RMG, draft RMS-TP, tentative RMM, tentative RMD)	(Drone: unmanned aircraft), Projector and Screen, Total Station and other related equipment	4. Pilot Project site Preparation and implementation of the pilot project			
3.2 Discuss documentation level of RMG and process of authorization	4. Local Contract 4.1 Technical Assistant (ROW Management, ESC, Land Sussey, Manajar)				
3.3 Prepare draft RMG; Part 1: Current Status Identification (CSI) and Part 2: Illegal Encroachment Prevention (IEP) 3.4 Prevare draft RMS_TP	4.3 Administrative Assistant (Secretary, Interpreter, Translator) 4.3 Driver with car (rent-a-car)				
3.5 Prepare tentative RMM and tentative RMD	10 No. 12				
3.6 Plan and conduct training in Japan and third countries					
3.7 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as finalized RMS					
Activities for Output 4 4.1 Discuss the implementation plan of the pilot project by using draft RMS					
4.2 Discuss the framework of the Pilot Project Task Force (PTF)					
4.3 Implement the Pilot Project of CSI 4.4 Implement the Pilot Project of IEP 4.5 Conduct TOT based on draft RMS-TP					

PDMrev

		ser rem of Operation	Dated 4th,May,	2017 Itoring
rioject inte, vapacity cimancement or cirtitorinicatal and occiar opinion Induts		Year 1st Year 2nd Year 2nd Year Remarks	cs Issue	Solution
Extert				
Team Leader / Right of Way Management-1		Plan Actual Actual		
Deputy Team Leader / Right of Way Management-2				
Environmental and Social Considerations / Environmental				
Inspace Assessment / Environmental Management Pran		Actual		
Land Management Framework -1				
Land Management Framework -2 / Database Development		Actual		
Land and House Investigation -1				
Land and House Investigation -2		Plan Actual		
Training Plan and Implementation -1				
Training Plan and implementation -2		Plan Actual Actual Actual		
Institutional Analysis / PCM		Plan menungan dari dari dari dari dari dari dari dari		
Project Coordinator / Database Management		Plan Actual Actua		
Monitoring/Exalvation		Plan		
Equipment				
Office Facilities		Plan memory control of the second seco		
Tatia Station		Plan		
Training in Japan				
Training Course in Japan			-	
In-country/Third country Training				
Third Country Technical Exchange		Plan Ketual		
		Year 1st Year 2nd Year 3rd Year 4th Year Reeponsible Unge	anization	leeno 2
C.th. A citizities			GOC Achievements	Countermeasures
oue-Activities				
Output 1: Implementation framework for the project is strengthened based on past experiences a	and present situation of			
1.1 Analyze past projects, current tackling  issues on EIAJEMP and ROW management in	0	Plan		
terms of ESC-GL		Actual Actual		
1.2 Collect and analyze information on land   O  O		Plan		
management inamework or land management system in Cambodia and other countries		Actual		to
1.3 Conduct institutional framework analysis for	0	Plan ministration of the second se		6
MPWT		Verual		et
1.4 Conduct a needs assessment for training	0000	Plan		Ke
and develop capacity enhancement plan and procurement plan		Actual		24
e Nissens its TE famment	0	Plan		Cel
X DISCUSS THE I F ITAMIRMONT		Actual	_	2
Output 2: Implementation framework of Environmental Considerations (EC) related to Environmer	ntal Impact Assessmen	tt (EIA) and Environmental Management Plan (EMP) is strengthened		
2.1 Conduct training on ESC of development O @	0	Plan		
partners (DPs)		Actual		
2.2 Discuss documentation level of REG (EIA	0	Plan		
and EMP) and confirm process of authorization		Vetual	_	
2.3 Plan and conduct training in Japan and third	0	Pian Pian Pian Pian Pian Pian Pian Pian		
countries		Actual		
0	0	Plan		
2.4 Develop REG		Actual		
2.5 Monitor EIATEMP related activities based	0	Plan		
on REG	_	Vertra		

3.1 Discuss Development Plan of draft RMS (consists of draft RMG, draft RMS-TP, tentative RMM, tentative RMD) 3.2 Discuss documentation level of RMG and									-					and the second		-						T
RMM, tentative RMD) 3.2 Discuss documentation level of RMG and				0	0	Plan		_				+-										-
3.2 Discuss documentation level of RMG and						Actual									-							
					0	Plan																
process of authorization						Actual																
3.3 Prepare draft RMG; Part 1: Current Status @ Identification (CSI) and Part 2: Illecal	0	0		0	0	Plan																
Encroachment Prevention (IEP)						Actual																
3 d Prenare draft RMS-TP	0				0	Plan																
						Actual															-	
3.5 Proversition DAMM and footation DMD	0	0			0	Plan				100	-											
UND SAUGUST COMMANDER AND A SUBJECT CO						Actual																
3.6 Plan and conduct training in Japan and third	0			0	0	Plan										-						Γ
countries						Actual						-										
3.7 Modify draft RMG, RMS-TP, tentative RMM, @	0	0		0	0	Plan																
CWN DBIIREIII SE UND GARDAN AND AND						Actual																
Output 4: Capacity of SC required for ROW management	t is strengthe	bend																				
4.1 Discuss the implementation plan of the pilot		0		0	0	Plan	22															
project by using draft RMS						Actual																
4.2 Discuss the framework of the Priot Project					0	Plan																
Task Force (PTF)						Actual																
4.3 Immisment the Dilot Deviant of CCI	0	0			0	Plan																
			-			Actual																
4.4 Implement the Pilot Project of IEP	0	0		0	0	Plan																
				_		Actual																
4.5 Conduct TOT based on draft RMS-TP				0		Plan																
			_		-	Actual					+++								_		-	
Duration / Phasing						Actual																
Monitoring Plan						Year		1st Y	ear	$\left  \right $	2	id Year	Π		3rd Year		40	Year	Remarks	Gerie	Solutio	
Manifestine.							-	=	=	IN	=	=	N	-		2	H .		CUIDING	2000	00000	
						neld					-					-		-				
Joint Coordinating Committee						Actual		•			•			•		•						
Set-up the Detailed Plan of Operation						Actual	-	-														
Submission of Monitoring Sheet						Actual				-		-			4	•						1.
Monitoring Mission from Japan						Plan																2 b
Joint Monitoring						Plan																e
Post Monitoring						Plan																K
Reports/Documents						N																e
Inception Report						Actual		•														PR
Report of Past Experiences on ESC and ROW						Actual		•														l
Progress Report						Actual			-			•										0
Project Completion Report						Actual										•						
Public Relations						Plan																Π
Establishment and Operation of web Site						Actual					-											
Seminar, Academic Conference						Actual			•	-	-	+	-		-	•						

## Project Organization Chart



Annex 6

List of Proposed Members of Joint Coordinating Committee (JCC)

Assignment	Position
Chair Person	Secretary of State, Ministry of Public Works and Transport (MPWT)
Member	Director General, General Department of Technique, MPWT
Member	Director, International Cooperation Department (ICD), MPWT
Member	Director, Planning Department, MPWT
Member	Director, Road Infrastructure Department (RID), MPWT
Member	Chief of Domestic Public Investment III Office, Investment Department, General Department of Budget, Ministry of Economy and Finance (MEF)
Member	Representative(s), JICA Cambodia Office
Member	Experts, JICA Project Team

Relevant personnel or officials accepted by the Chair person will participate in JCC.

## RECORD OF DISCUSSIONS

## ON

## The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector

IN

the Kingdom of Cambodia

## AGREED UPON BETWEEN

## **Ministry of Public Works and Transport**

## AND

## JAPAN INTERNATIONAL COOPERATION AGENCY

Phnom Penh, February 29, 2016

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Itsu Adachi Chief Representative Cambodia Office Japan International Cooperation Agency

Tram Iv Tek Minister Ministry of Public Works and Transport Kingdom of Cambodia

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Based on the minutes of meetings on the Detailed Planning Survey on the Project for Capacity Enhancement on Environmental and social Considerations in Implementing Agency for Road Sector (hereinafter referred to as "the Project") signed on 30 October, 2015 between Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with MPWT and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that MPWT, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Kingdom of Cambodia.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on June 17, 2003 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on June 3, 2015 between the Government of Japan (hereinafter referred to as "GOJ") and the Royal Government of Cambodia (hereinafter referred to as "RGoC").

Appendix 1: Project Description

Appendix 2: Minutes of Meetings on Detailed Design Survey on the Project for Capacity Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

Appendix 1

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## PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description in the minutes of meetings for Detailed Design Survey on the Project signed on [date] (Appendix 3).

### I. BACKGROUND

Environmental and Social Considerations (ESC) has become crucial condition for smooth and appropriate implementation of infrastructure project, such as national road, railway, irrigation schemes, transmission line, SEZ development, and etc. ESC covers the issues in the field of natural environment including EIA, social environment including involuntary resettlement, and other environmental elements such as Environmental Management Plan (EMP), environmental measuring, and so on.

Concerning involuntary resettlement, JICA's TCP-COR (Technical cooperation Project on Capacity Enhancement of ESC for Resettlement) was implemented with MEF and MPWT from 2010 to 2012. TCP-COR focused on BRP (Basic Resettlement Procedures) including RAP updating based on Detailed Measurement Survey (DMS) and Replacement Cost Survey (RCS).

As the result of TCP-COR, procedures and implementation of resettlement are strengthened under the determinate framework. However insufficient management of state land causes problems, e.g. illegal occupation of state land, etc. Such problems make implementation of resettlement procedures much more complicated. Furthermore, MPWT doesn't have an integrated unit to manage the quality of ESC on public works, which makes smooth implementation of public works difficult, especially in road sectors.

For appropriate management of state land and qualified implementation of ESC procedures for road projects, capacity enhancement of MPWT on ESC is required.

#### II. OUTLINE OF THE PROJECT

Details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (Annex 1) and the Tentative Plan of Operation (Annex 2).

1. Title of the Project

The Project for Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

2. Overall Goal ESC in road sector is implemented properly by MPWT.

### 3. Project Purpose

Capacity of MPWT officials on ESC is enhanced through applying Road

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Environmental Guidelines (REG) and RoW Management System (RMS).

4. Outputs

- (1) Implementation framework for the project is strengthened based on past experiences and present situation on ESC and ROW management
- (2) Implementation framework of Environmental Considerations (EC) related to Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) is strengthened.
- (3) Implementation framework of Social Considerations (SC) related to ROW management is strengthened.
- (4) Capacity of SC required for ROW management is strengthened.

5. Activities

- 1.1 Analyze past projects and current tackling issues in terms of ESC Guidelines (ESC-GL) and ROW management.
- 1.2 Implement information collection and analysis on land management framework of land management system in Cambodia
- 1.3 Conduct institutional framework analysis for MPWT
- 1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan
- 1.5 Discuss the TF framework
- 2.1 Conduct training on ESC of development partners (DPs)
- 2.2 Discuss authorizing process and documentation level of REG (EIA and EMP)
- 2.3 Discuss REG Development Plan
- 2.4 Plan and conduct training in Japan and third countries
- 3.1 Discuss draft RMS (consists of draft RMG, draft RMS Training Plan (RMS-TP), tentative RMM, tentative RMD) Development Plan
- 3.2 Discuss authorizing process and documentation level of RMG
- 3.3 Develop draft RMG Part 1: Current Status Identification (CSI) and Part 2: Illegal Encroachment Prevention (IEP)
- 3.4 Develop draft RMS-TP
- 3.5 Develop tentative RMM and tentative RMD
- 3.6 Plan and conduct training in Japan and third countries
- 4.1 Discuss the implementation plan of the pilot project by using draft RMS
- 4.2 Discuss the framework of the Pilot Project Task Force (PTF) with coordination between Department of Public Works and Transport (DPWT) in charge of selected areas for the pilot project
- 4.3 Implement the Pilot Project of CSI
- 4.4 implement the Pilot Project of IEP
- 4.5 Conduct TOT based on draft RMS-TP
- 4.6 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as finalized RMS
- 6. Input
  - (1) Input by JICA
    - (a) Dispatch of Experts (Long/Short Term)
    - 1) Leader / ROW Management
    - 2) Sub Leader / ESC
    - 3) EIA / EMP

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Land Management Framework

5) Land and House Investigation

6) Training Plan and Implementation

7) Institutional Analysis / PCM

8) Project Coordinator / Database Management

(b) Training

Provision of training in Cambodia, in Japan and/or in other countries.

(c) Machinery and Equipment

Provision of machinery and equipment In case of importation, the machinery, equipment and other materials under II-6 (1) (c) above will become the property of the RGoC upon being delivered C.I.F. (cost, insurance and freight) to the Cambodia authorities concerned at the ports and/or airports of disembarkation.

Input other than indicated above will be determined through mutual consultations between JICA and MPWT during the implementation of the Project, as necessary.

### (2) Input by MPWT

MPWT will take necessary measures to provide at its own expense:

- MPWT's counterpart personnel and administrative (a) Services of personnel as referred to in II-7;
- (b) Suitable office space with necessary equipment;
- (c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- (d) Information as well as support in obtaining medical service;
- (e) Credentials or identification cards;
- (f) Available data (including maps and photographs) and information related to the Project;
- (g) Running expenses necessary for the implementation of the Project;
- (h) Expenses necessary for transportation within Cambodia of the equipment referred to in II-6 (1) as well as for the installation, operation and maintenance thereof; and
- (i) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Cambodia from Japan in connection with the implementation of the Project

#### 7. Implementation Structure

The project organization chart is given in the Annex 3. The roles and assignments of relevant organizations are as follows:

## (1) **MPWT**

(a) Project Director

Chairman will be responsible for overall administration and implementation of the Project.

(b) Project Manager

## (3) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to MPWT on any matters pertaining to the implementation of the Project.

## (4) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will review the progress, revise the overall plan when necessary, approve an annual work plan, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the Annex 4.

## 8. Project Site(s) and Beneficiaries Citizens in Cambodia

9. Duration

3 years from the Project commencement (Assignment of first Japanese expert in Cambodia).

10. Reports to JCC

MPWT and JICA experts will jointly prepare the following reports in English.

(1) Inception Report

(2) Progress Report on annual basis until the project completion.

(3) Project Completion Report at the time of project completion.

11. Environmental and Social Considerations

MPWT will abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

## III. UNDERTAKINGS OF MPWT

1.MPWT will take necessary measures to:

- (1) ensure that the technologies and knowledge acquired by the Cambodia nationals as a result of Japanese technical cooperation contributes to the economic and social development of Cambodia, and that the knowledge and experience acquired by the personnel of Cambodia from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
- (2) grant privileges, exemptions and benefits to the JICA experts referred to in II-6 (1) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Cambodia.

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2.MPWT will take necessary measures to:

- Provide security-related information as well as measures to ensure the safety of the JICA experts;
- (2) Permit the JICA experts to enter, leave and sojourn in Cambodia for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.
- (3) Exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;
- (4) Exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project; and
- (5) Meet taxes and any other charges on the equipment, machinery and other material, referred to in II-7 above, necessary for the implementation of the Project.
- 3.MPWT will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

## IV. MONITORING AND EVALUATION

JICA and the MPWT will jointly and regularly monitor the progress of the Project through the Monitoring Sheets based on the Project Design Matrix (PDM) and Plan of Operation (PO). The Monitoring Sheets will be reviewed every six (6) months.

Also, Project Completion Report will be drawn up one (1) month before the termination of the Project.

JICA will conduct the following evaluations and surveys to verify sustainability and impact of the Project and draw lessons. The MPWT is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle 2. Follow-up surveys on necessity basis

#### V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, MPWT will take appropriate measures to make the Project widely known to the people of Cambodia.

## VI. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MPWT and relevant organizations will provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public

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## organizations of the Cambodia.

MPWT and relevant organizations will not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

### VII. MUTUAL CONSULTATION

JICA and MPWT will consult each other whenever any major issues arise in the course of Project implementation.

## VIII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and MPWT. However, PO may be amended in the Monitoring Sheets. The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

## IX. OTHER RELEVANT ISSUES

- The resettlement issues, e.g. compensation, detailed measurement survey, resettlement cost survey, etc., under the mandate of Ministry of Economy and Finance and Inter-Ministerial Resettlement Committee are not included in the contents of the Project.
- MPWT will request appropriate necessary budget for RoW Management to Ministry of Economy and Finance utilizing a draft budget plan which is prepared in the Project.
- 3. Site of the Pilot Project will be selected at the first JCC (Kick-Off Meeting)

Annex 1 Logical Framework (Project Design Matrix:PDM)

- Annex 2 Tentative Plan of Operation
- Annex 3 Project Organization Chart
- Annex 4 A List of Proposed Members of Joint Coordinating Committee/ Steering Committee

PN Form 1 PDM

**Project Design Matrix** 

Project Title: Capacity Enhancement of Environmental and Social Considerations in Implementing Agency in Road Sector

Implementing Agency: Ministry of Public Works and Transport (MPWT). Cambodia

Dated 30 October, 2015

Version 0.0

Target Group: International Cooperation Department (ICD). Road Infrastructure Department (RID), and Department of Planning (DOP) in Ministry of Public Works and Transport (MPWT) and Department of Public Works and Transport (DPWT) in charge of selected areas for pilot project

Project Site: Phnom Penh	WAWAAA AA AT TOTO LADOW				
Narrative Summary	<b>Objectively Veriflable Indicators</b>	Means of Verification	Important Assumption	Achievement	Remarks
Zverall Goal Environmental and Social Considerations (ESC) in oad sector is implemented properly by MPWT	<ul> <li>(1) Environmental procedures are implemented in line with Road Environmental Guidelines (REG)</li> <li>(2) Right of Way (ROW) management is operated by using ROW Management System (RMS)</li> </ul>	<ul> <li>(1) REG applying record</li> <li>(2) RMS operational record</li> </ul>			
Project Purpose Capacity of MPWT officials on ESC is enhanced hrough applying REG and RMS	<ol> <li>Implementation framework of the project is established by Task Force (TF) consists of ICD, RID, and DOP officials</li> <li>80% of TF member record their capacity enhancement on Environmental Considerations (EC)</li> <li>More than 5 TF members are observed their capacity enhancement through continuous participation to the draft RMS preparation process</li> <li>More than 10 members (MPWT:5, DPWT:5) among TF and Project Task Force (PTF) consists of DPWT officials are trained to guide RMS operation to the other officials.</li> </ol>	<ol> <li>(1) Relevant documents of institutional arrangement</li> <li>(2) Result of the comprehension check test</li> <li>(3) Observation and interview by JICA Experts</li> <li>(4) Records of dissemination seminars and final seminar</li> </ol>	MPWT takes initiative on the process that project management units (PMUs) including ICD apply REG and RMS under cooperation with DOP and RID with DOP and RID		
Dutputs . Implementation framework for the project is strengthened based on past experiences and present situation on ESC and ROW management	<ol> <li>Based on the JICA Guidelines for Environmental and Social Considerations (ESC-GL), lessons learned from past experient issues on ESC and ROW management are analyzed 1.2 Based on the land management framework in Cambodia, lessons learned from past experiences on ROW management are organized and current issues are</li> </ol>	<ol> <li>1.1.1 JICA Expert Report (Environmental Social consideration analysis)</li> <li>1.1.2 Activity report of TF members in charge</li> <li>1.2.1 JICA Expert Report (ROW management analysis)</li> <li>1.2.2 Activity report of TF members in charge</li> </ol>	Policy on ESC and legislation on ROW management system in Cambodia government are not drastically changed. There Is no blg institutional change in project related	2.4 12	

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PM Form 1 PDM

organizations and JCC members			₹.			
<ol> <li>3.1 JICA Expert Report Institutional analysis)</li> <li>3.2 Activity report of TF members of harge</li> <li>4.1 JICA Expert Report (Needs malysis, Implementation capacity export</li> </ol>	<ul> <li>4.2 Training plan (Cambodia, 4.3 Equipment countries)</li> <li>4.3 Equipment procurement alan</li> <li>5.1 TF organizing meeting record</li> <li>5.2 Documents related to TF tablishment</li> </ul>	<ol> <li>Training records</li> <li>Comprehension check test</li> <li>Minutes of JCC</li> <li>REG Development Plan</li> <li>Meeting record of REC</li> </ol>	velopment 3.3 Authonized RFG 4.1 Participation Report to Ining courses in Japan 1.2 Participation Report to third	utrixy technical exchanges 1.2. Meeting record of RMS velopment 2.1 Minutes of JCC 3.1 Minutes of JCC 3.1 Meeting Record of RMG 610pment	1.2 Draft RMG 1.1 Meeting Record of RMS-TP Aelooment 1.1 Meeting Record of RMM Relopment 2.2 Meeting Record of RMD elopment 1 Reports on Training in Japan	A reports on recrinical hange in third countries 1 Meeting record of pilot project lementation plan 2 Pilot project implementation
ined developed arget an	of the 1 + 2 + 4 + 4 = 5	official 2.2	countries 2.5	V 3.10 ement 3.2 3.3 3.3 3.3 3.4 4ev	P) Is 3.3 3.4 P (RMM) 3.6 9.5 abase 4ev 3.5 ountries 3.6	Exc. 200
r-s mauuonal rramework and responsibilities in MPWT are exami 1.4 Capacity enhancement plan is d through training needs analysis of te group	1.5 As an implementation structure ( project, TF is established	<ul> <li>2.1 Concept of EC and its Implemen processs are understood</li> <li>2.2 Authorizing level of REG as an o document is confirmed</li> <li>2.3 REG is authorized</li> </ul>	2.4 Lessons learned on EC in other or are reflected to RMS development	<ol> <li>Current situation of existing ROW timanagement is confirmed and RMS Development Plan is prepared</li> <li>Authorizing level of ROW Managi Guidelines (RMG) of RMS as an offic document is confirmed</li> <li>Draft RMG is prepared</li> </ol>	<ol> <li>3.4 Draft RMS Training Plan (RMS-T) prepared</li> <li>3.5 Tentative ROW Management Mat and tentative ROW Management Dat (RMD) are prepared</li> <li>3.6 Lessons learned on SC in other oc are reflected to BMS discussion</li> </ol>	4.1 Pilot Project Implementation Plan established
		<ul> <li>Implementation framework of Environmental Considerations (EC) related to Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) is strengthened</li> </ul>		<ol> <li>Implementation framework of Social Considerations (SC) related to ROW management is strengthened</li> </ol>		. Capacity of SC required for ROW management 4 strengthened

P.W Form 1 PDM

I.2.1 Establishment of PTF	<ul><li>3.1 Procurement documents</li><li>3.2 PTF activity record</li><li>3.3 Progress on RMM and RMD</li></ul>	<ul> <li>1.3.4 Training records</li> <li>1.4.1 Procurement documents</li> <li>1.4.2 PTF activity record</li> <li>1.4.3 Progress on RMM and RMD</li> </ul>	pdating .5.1 TOT implementation record .5.2 Record of the dissemination	eminar .5.3 Observation and Interview by ICA Extracts .6.1 Established and approved MG .6.2 Established RMS-TP	.6.3 Established RMM .6.4 Established RMD .8.5 Record of RMS final seminar .6.6 Budget plan for RMS mplementation
4.2 PTF which involves DPWT Is established 4	4.3 Pllot projects of Current Status Identification (CSI) Is implemented	4.4 Pilot project of Illegal Encroachment Prevention (IEP) is implemented	u 4.5 At least 10 qualified trainers are trained	8 4.6 RMS is authorized 7 R	<u>v v v v </u>

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PN Form 1 PDN

	Activities	Inouts		Des Conditions
	Activities for Output 1	The Japanese Side	The Cambodian Side	Toront and
	1.1 Analyze past projects and current tackling	1 Evnerte	A Descent Architert Side	I arger group members
	1.2 Implement Information collection and analysis	1.1 Leader / ROW Mananement	1. Personnei (MPW I)	assigned for the project
	on land management framework of land	1 2 Sub Loader / COC		are able to participate
	management system in Cambodia	13 FIA / FMD	La Project Manager	activities with enough
	11.3 Conduct institutional framework analysis for		1.3 Deputy Manager	time
	MPWT	1.4 Land Management Framework	1.4 Fulltime Staffs	
	1.4 Conduct a needs assessment for training and	1.2 Land and House Investigation		Critical bars due to
	develop capacity enhancement nian and	1.6 Iraining Plan and implementation	2. JCC Members	failure of coordination
	Drocitrament alan	1.7 Institutional Analysis / PCM	2.1 Ministry of Environment (MOE)	hotwoon other
	1 5 Discrise the TF framework	1.8 Project Coordinator / Database	2.2 Ministry of Land Management	vithoritonlater to the
	Activities for Dutant 9	Management	Ilthan Dianting	aunonities related to the
				project do not emerge
	2.1 Conduct training on ESC of development	- Harden C	Construction (MLMUPC)	
	partners (DPs)	Z. Iraining		
	2.2 Discuss authorizing process and	2.1 Training in Japan	3. Land, buildings and facilities	
	documentation level of PEC /EIA and EMDA	2.2 Technical exchange in third countries	3.1 Office space for JICA Experts	<li>sues and</li>
		2.3 Training in Cambodia	3.2 Office space for equipment	countermeasures>
	2.4 Diam and conduct totation in the		3.3 Office Infrastructures	
	2.4 Light and conjuger realing in Japan and mird	3 Machinew and Equipment	a Electricity	
	countines			
	Activities for Output 3	Co. FIIINEL, COPY IMACINIE, VIGEO CAMERA,	D. Internet	
	3.1 Discuss draft RMS (consists of draft RMG.	Projector and Screen, Total Station and other	c. Desks, Shelf and others	
	draft RMS-TP. tentative RMM. tentative RMM	related equipment	d. Other necessary items	
	Development Plan		•	
	3.2 Discuss authorizing procees and	4. Local Contract	4. Pilot Project	
	dominantation land a CLA	4.1 Local lecturer from private sector	Prenaration and implementation of	
	3.3 Develop Arefi David David 1. Durant Statum	4.2 Database (RMM and RMD)	the nilot project	
		d 3 local Consultant () and Summy Manufact	the block block	
		A 1 2001 Description (Larid Survey, Mapping)		
	Encroaciment Prevention (IEP)	4.4 Local Consultant (Public Awareness		
	3.4 LEVEIOD DIAIT KINS-IP	ACII/IIIes)		
	3.5 Develop tentative RMM and tentative RMD	1.5 Secretary		
	3.6 Plan and conduct training in Janan and third <sup>4</sup>	1.6 Interpreter / Translator		
	countries	<ol> <li>Driver with car (rent-a-car)</li> </ol>	3	
	Activities for Output 4			
	4.1 Discuss the implementation plan of the pilot			-
	project by using draft RMS			
	4.2 Discuss the framework of the Pilot Project			
	Task Force (PTF) with coordination between			
	DPWT in charge of selected areas for the pilot			
	project			
	4.3 Implement the Pilot Project of CSI			
	4.4 Implement the Pilot Project of IEP			
	4.5 Conduct TOT based on draft RMS-TP			- 172-
	4.6 Modify draft RMG, RMS-TP, tentative RMM,			
	and tentative KMU as finalized RMS			
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management system in Cambodia		+	+				
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1.5 Olscota that I f harmework			-	Actival			
Output 2: Implementation framework of Environmen	tal Comideratio	na (EC) rolata	d to Environ	vental Impact A	Assessment (EU) and Embormantal Mana printme Plan (EMP) is a strengthened		
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2.3 Discuss REG Development Plan	>		>	Action		-	
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3.1 Discuss start RMS (consists of draft RMO, O			0	ž			
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Organization chart of the Project

Annex 3



Annex 4

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# LIST OF PROPOSED MEMBERS OF JOINT COORDINATING COMMITTEE (JCC)

Chairperson:

Secretary of State, MPWT

Members:

(1) Cambodian Side	
1) Project Director:	Secretary of State, MPWT
2) Project Manager:	Director, International Cooperation Department (ICD) MPN/C
3) Project Co-Manager:	Director, Road Infrastructure Department (RID), MPWT
	Director, Department of Planning (DoP), MPWT
4) Project Members:	
- MPWT	***** from ICD, MPWT

\*\*\*\*\* from RID, MPWT

5) Relevant personnel accepted by the Chairperson, if necessary.

(2) Japanese Side

1) JICA Cambodia Office

- Representative(s)

2) JICA Experts

- Leader / ROW Management

- Sub Leader / ESC

- EIA / EMP

- Land Management Framework

- Land and House Investigation

- Training Plan and Implementation

- Institutional Analysis / PCM

- Project Coordinator / Database Management

3) Other personnel, if necessary

JCC will be scheduled based on the maximum availability of the members listed above.

A4-3. Summary of JCC Meetings
### Summary List of Joint Coordinating Committee (JCC) Meeting

JCC Meetings	Objectives	Results
1 <sup>st</sup> JCC Meeting Date: 4 <sup>th</sup> May, 2017 Place: Himawari Hotel, Phnom Penh	<ul> <li>Discuss and Confirm items below:</li> <li>Revised PDM and PO ver. 1.0;</li> <li>Taskforce Structure;</li> <li>The documentation level of Road Environmental Guidelines (REG) and Right of Way Management Guidelines (RMG); and</li> <li>Other relevant issues.</li> </ul>	<ul> <li>Revised PDM and PO ver. 1.0 was reviewed and approved by the JCC members;</li> <li>Monitoring methods of the project were also approved by JCC members;</li> <li>Taskforce Structure were confirmed;</li> <li>REG and RMG were agreed to be issued as Prakas by MPWT; and</li> <li>Work plan and other activities were approved. (more details in the minutes of 1<sup>st</sup> JCC meeting)</li> </ul>
2 <sup>nd</sup> JCC Meeting Date: 6 <sup>th</sup> February, 2018 Place: SUNWAY Hotel, Phnom Penh	<ul> <li>Report the Project</li> <li>Progress;</li> <li>Discuss the following activities in 2018; and</li> <li>Discuss and Confirm items below;</li> <li>Draft of Road Environmental Guidelines (REG);</li> <li>Concept of ROW Management Map (RMM) and Database (RMD);</li> <li>Pilot Project Site for ROW Management System (RMS); and</li> <li>Reformed Taskforce Member</li> </ul>	<ul> <li>Reformed JCC and Taskforce members were confirmed and approved;</li> <li>The change of title of Road Environmental Guidelines to Road Environmental Guidebook (REG) was approved;</li> <li>REG was approved to be issued as Prakas by MPWT;</li> <li>Draft table of content of ROW Management Guidelines (RMG) was explained and got approval;</li> <li>National Road No.5 at the section to be improved by Japan's Yen Loan Project was approved to be the pilot project site; and</li> <li>Work plan and other activities were approved. (more details in the minutes of 2<sup>nd</sup> JCC meeting)</li> </ul>
3 <sup>rd</sup> JCC Meeting Date: 7 <sup>th</sup> February, 2019 Place: MWPT Meeting Room	<ul> <li>Report the Progress of Project;</li> <li>Overview the REG and Discuss the authorization Process of REG;</li> <li>Report the Technical Items for Right of Way (ROW) Management Task;</li> <li>Confirm the Following Activities in 2019; and</li> </ul>	<ul> <li>Progress and principal framework of draft ROW Management Guidelines (RMG) was confirmed;</li> <li>It was agreed that the location of Pilot Project Site for IEP approaches has been selected from the border between Kandal and Kampong Chhnang Province to Kampong Chhnang City for 43km along National Road No.5;</li> <li>It was also confirmed that CESCoR will participate in the annual conference of International Association for Impact Assessment (IAIA) in April to exchange our experiences and report our achievement to relevant countries and institution widely;</li> </ul>

JCC Meetings	Objectives	Results
	<ul> <li>Confirm main items below:</li> <li>Draft of RMG,</li> <li>Pilot Project Site for Illegal Encroachment Prevention (IEP),</li> <li>Participation in IAIA.</li> </ul>	<ul> <li>It was reported and confirmed that drafted Road Environmental Guidebook (REG) will be authorized as a Decision of MPWT;</li> <li>It was confirmed that appropriate budget securing is required to continue relevant activities and develop further capacity enhancement for comprehensive ROW management; and</li> <li>Taskforce on ROW Management made a suggestion regarding the bypasses along the National Road No.5 improvement project.</li> </ul>
4 <sup>th</sup> JCC Meeting Date: 5 <sup>th</sup> November, 2019 Place: MPWT Meeting Room	<ul> <li>Report the Project Completion Report;</li> <li>Report the Technical Items for EIA Task;</li> <li>Report the Technical Items for ROW Management; and</li> <li>Confirm main items below:</li> <li>Final draft project completion report;</li> <li>Final draft of ROW Management Guidelines (RMG);</li> <li>Level of RMG authorization; and</li> <li>Schedule of final seminar.</li> </ul>	<ul> <li>At the JCC Meeting:</li> <li>The final draft project completion report and final draft of ROW Management Guidelines (RMG) were confirmed by all participants;</li> <li>It was agreed RMG will be authorized as Decision by the Senior Minister of Ministry of Public Works and Transport. Follow-up authorization process of RMG will be done by ROW taskforce members after the project completes;</li> <li>It was also confirmed that final seminar will be held on December 6th 2019 in Phnom Penh city to disseminate results of the project;</li> <li>It was reported that Road Environmental Guidebook (REG) was officially authorized as a Decision of MPWT on July 2019. About 200 hard copies have been published and will be distributed to MPWT;</li> <li>It was confirmed that appropriate budget securing is required to continue relevant activities and develop further capacity enhancement for comprehensive ROW management. CESCOR project supported to make budgetary plan as a part of RMS and MPWT side make effort to allocate necessary budget to ROW management; and</li> <li>The meeting suggested that Environmental Management for Construction Specification to be attached with contract agreement for national budget project might be develop through collaboration with Ministry of Environment. Additionally, to achieve overall goal, JCC members committed to implement and expand the work to other provinces by applying REG</li> </ul>

4-4. Minutes of the first JCC Meeting4-5. Materials for the first JCC Meeting

The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCoR)

### Minutes of the First Joint Coordination Committee Meeting of The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia

The First Joint Coordination Committee (JCC) meeting among the Ministry of Public Works and Transport (MPWT) of Cambodia, Japan International Cooperation Agency (JICA), and the other agencies concerned of the Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCoR) was held at the Conference Room of HIMAWARI Hotel, Phnom Penh on the 04th of May, 2017. Discussions and exchanges of opinion were made, which resulted in the mutual agreement on several items as briefly described below.

### 1. JCC Members and Proposal on Taskforce Structures

Members of the JCC have been approved and fixed. The Taskforce Structures were proposed and accepted in this meeting. It was agreed that the taskforce members directly manage the implementation of the Project and report on all progress and achievements to the JCC. The lists of members of JCC and Taskforce are given in the Inception Report herewith attached as Attachment 3.

Taskforce is lead by three (3) Deputy Managers and divided into EIA/EMP (Environmental Impact Assessment/Environmental Management Plan) Team consisting of seven (7) members and ROW Management Team consisting of eight (8) members. The selected number of Taskforce members was limited to eighteen (18). Taskforce members will be supported by JICA Experts and advisors appointed by MPWT, Ministry of Environment (MOE), and Ministry of Land Management, Urban Planning and Construction (MLMUPC). Members of Taskforce are expected to sustainably utilize their knowledge and continue the technical transfer to their subordinates or concerned institutions after the completion of the Project.

### 2. Approval of Project Design Matrix (PDM) Ver. 1.0

The Project Design Matrix (hereinafter referred to as "PDM") Ver. 1.0 was reviewed and approved by the JCC members. The PDM Ver. 0.0, which was previously agreed, was revised into PDM Ver. 1.0. The PDM Ver. 0.0 and Ver. 1.0 are given in the Inception Report herewith attached as Attachment 3.

### 3. Approval of Plan of Operation (PO) Ver. 1.0

The Plan of Operation (hereinafter referred to as "PO") Ver. 1.0 was reviewed and approved by the JCC members as well. The PO Ver. 0.0 and Ver. 1.0 are given in the Inception Report attached as Attachment 3.

4. Monitoring of the Project

The monitoring methods of the Project were approved with the JCC members as follows:

- (1) To monitor the project progress every six (6) months.
- (2) To amend the target indicators or objectively verifiable indicators and/or required activities in consideration of the sustainability of the Project, if required.
- (3) In order to describe the progress of objectively verifiable indicators in the PDM, the progress of activities is to be described in the PO, and the amendments are to be shown in the Monitoring Sheet.

### 5. Documentation Level

It was agreed that Taskforce Members will keep working with JICA Expert Team on the preparation of Road Environmental Guidelines (REG) and Right of Way Management Guidelines (RMG). Both REG and RMG are approved to be issued as Prokas (Proclamation) by the end of the Project.

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The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCoR)

6. Work Plan

A Work Plan was submitted and its major points were explained. It was agreed that JICA Expert Team provides the Work Breakdown Structure (WBS) for the Taskforce Activities on EIA/EMP Team and ROW Management Team. It was proposed and agreed that EIA/EMP Team will complete the Activity 2-1 to 2-4 by the next JCC meeting early next year and Activity 2-5 by the end of the project. ROW Management Team agreed to complete the Activity 3-1 to 3-3 by the next JCC meeting early next year and start the Activity 3-4 to 3-7 and Activity 4-1 to 4-5 after the next JCC meeting. The detailed activities can be checked in PDM Ver.1.0 in the Inception Report herewith attached as Attachment 3.

### 7. Other Issues

It was re-confirmed that MPWT and MOE have appointed officials to attend the Training in Japan from 13th to 22nd of June, 2017 to improve capacity in Environmental and Social Considerations. The meeting also informed and explained the expected participants (eight persons) and objectives of the Technical Exchange in Third Countries which will be conducted in Myanmar and Thailand from 23rd to 28th of October, 2017.

JCC members discussed procurement of the equipment for Pilot Project. One (1) Unit of Total Station and one (1) Unit of Drone will be procured in Cambodia, so that the maintenance work can be smoothly conducted. The selection of pilot project site was agreed to be discussed in the 2nd JCC meeting.

It was agreed with the JCC members that the 2nd JCC meeting will be held in January, 2018 and Road Environmental Guidelines (REG) and the draft of Right of Way Management Guidelines (Draft RMG) will be explained and approved in the 2nd JCC meeting, based on the progress of the Project. It was also agreed that the 2nd Seminar will be jointly held with the 2nd JCC meeting. Additionally, JCC members suggested that JICA Experts should consider the involvement of local/provincial government and Ministry of Interior (MOI) in the preparation of REG and RMG.

Attachment: 1. Agenda,

- 2. Participants List,
- 3. Inception Report

**CONFIRMED BY:** 

H.E. TAUCH Chankosal Secretary of State Ministry of Public Works and Transport

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TXNAKA Kotaro Senior Representative JICA Cambodia Office

Trachida

TSUCHIDA Takayuki Team Leader JICA Project Team



### THE 1<sup>ST</sup> JOINT COORDINATING COMMITTEE (JCC)

OF

THE PROJECT FOR CAPACITY ENHANCEMENT ON ENVIRONMENTAL AND SOCIAL CONSIDERATIONS IN IMPLEMENTING AGENCY IN ROAD SECTOR IN CAMBODIA

04<sup>™</sup> MAY, 2017

HIMAWARI HOTEL, PHNOM PENH





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### AGENDA

### The 1st Joint Coordinating Committee (JCC)

of

### The Project for Capacity Enhancement on Environmental and Social Considerations in Implementing Agency in Road Sector in Cambodia (CESCoR)

### Himawari Hotel, Phnom Penh, 4th May 2017

Time	Program
09:00-09:20	Registration
09:20-09:30	Cambodian National Anthem
09:30-09:45	Opening Remarks
	(1) <b>H.E. Tauch Chankosal</b> ,
	Secretary of State, Ministry of Public Works and Transport
	(2) MIT. TANAKA Kotaro, Senior Representative, JICA Cambodia Office
09:45-09:50	Introduction of JCC Member
09:50-10:30	Session I: Agreement Items
	Explanation of proposed Project Framework
	Dr. TSUCHIDA Takayuki, JICA Project Team
	Discussion Items:
	(1) Revision of PDM and PO ver. 1.0
	(2) Confirmation of Taskforce Structures
	<ul> <li>(3) Confirmation of Documentation Level of Road Environmental Guidelines (REG) and Right of Way Management Guidelines (RMG)</li> </ul>
	(4) Other Relevant Issues
10:30-10:50	Coffee Break
10:50-11:30	Session II: Technical Items
	Concept of ROW Management for the Project
11:30-11:45	Session III: Following Activities
	Dr. TSUCHIDA Takayuki, JICA Project Team
11:45-11:50	Closing Remarks
	H.E. Tauch Chankosal,
	Secretary of State, Ministry of Public Works and Transport
11:50-13:30	Lunch Break

Note: MC: Mr. Chhim Phalla, Director, International Cooperation Department, MPWT





**Date:** 04 May 2017 **Time:** 9:00 – 11:50 **Location:** Himawari Hotel **Topic:** 1<sup>st</sup> JCC meeting

### Sign-in Sheet (JICA Project Team)

No	Name	Department/ Ministry	Position	Phone	E-mail	Signature
1	Dr. TSUCHIDA Takayuki	JICA project team	Team Leader			
2	Mr. YAMASHITA Akira	JICA project team	Deputy Team Leader			
3	Mr. KUMAGAI Takahiro	JICA project team	Project Coordinator /Database Management			
4	Ms. Ches Sophy	JICA project team	Administrative Assistant			
5	Mr. Penh Socheat	JICA project team	Technical Assistant			
9	Mr. Douk Khemera	JICA project team	Administrative Assistant			

# (MPWT Personnel)

nature	
Sig	
E-mail	
Phone	
Position	Secretary of State
Department/Ministry	MPWT
Name	H.E Tauch Chankosal
No	٢





Director General	Director	Director	Director	Deputy Chief of Office	Chief of Office	Official	Deputy Chief	Official	Official	Chief of Office	Deputy Chief of Office	Deputy Chief of Office	Deputy Chief of Office	Deputy Chief of Office
General Department of Technique	International Cooperation and Department, MPWT	Department of Planning, MPWT	Road Infrastructure Department, MPWT	E&S Office, DoP, MPWT	Monitoring and Evaluation office, ICD, MPWT	E&S Office, DoP, MPWT	Bilateral Cooperation Office, ICD, MPWT	ICD, MPWT	ICD, MPWT	ROW Office, RID, MPWT	ROW Office, RID, MPWT	ROW Office, RID, MPWT	ICD, MPWT	ICD, MPWT
H.E Nou Vaddhanak	Mr. Chhim Phalla	Mr. Prok Novida	Mr. Heng Rathpiseth	Mr. Uy Sambath	Mr. Dun Vandyreagan	Mr. Srey Vireak	Mr. Manh Vutha	Mr. Song Kimheng	Mr. Ngel Sovanarith	Mr. Chea Samnang	Mr. Khai Saray	Mr. Hay Chandara	Mr. Sor Yilin	Mr. Peang Samoeun
8	6	10	11	12	13	14	15	16	17	18	19	20	21	22





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ICD, MPWT 01	E&S Office, DoP, MPWT 0	Traffic Safety Office, RID, CI MPWT	ICD, MPWT OI	ICD, MPWT	
Miss. Laing Sengkim	Mr. Bour Chhay Ya	Mr. Khoun Kompheak	Mrs. Sreng Sorphea	Miss. Brasoeur Molyka	
23	24	25	26	27	

# (JICA Cambodia Office)

No	Name	Department/Ministry	Position	Phone	E-mail	Signature
28	Mr. TANAKA Kotaro	JICA Cambodia Office	Senior Representative			
29	Mr. FUKUZAWA Daisuke	JICA Cambodia Office	Representative			
30	Mr. Ouk Reaksmey	JICA Cambodia Office	Program Officer			

## (Observers)

No	Name	Department/Ministry	Position	Phone	E-mail	Signature
31	Mr. OGAWA Koichi	Project for Strengthening Capacity for Maintenance of Road and Bridge	Chief Advisor			





		Metropolitan Expressway			
32	Mr. CHIBA Toshiaki	Company Limited,	Deputy Director		
		Bangkok Office			

# (JCC Members, Advisors, Observers)

No	Name	Department/Ministry	Position	Phone	E-mail	Signature
33	Mr. Sek Sothirith	Urban Planning Department, MLUPC	Director			
34	Mr. Pat Sok	Department of Conservation, MLMUPC	Director			
35	Mr. Yong Sy	Department of Investment, MEF	Chief of Office			
36	Mr. Kong Youreth	Department of Public Infrastructure, MPWT	Chief of Office			
37	Ms. Em Sokchea	Department of Public Infrastructure, MPWT	Deputy Chief of Office			
38	Mr. Chhun Puthearith	MOWRAM	DDG			
39	Vong Lytet	DoP, MPWT	Official			
40	Bin Sopheakda	Cooperation Planning and Project Department, EDC	Deputy Chef of Environment Management Devision			



### **ROW Management System (RMS): Output 3**

- 1) ROW Management Guidelines (RMG) Part 1: Current Status Identification (CSI) Part 2: Illegal Encroachment Prevention (IEP)
- 2) RMS Training Plan (RMS-TP)
- 3) ROW Management Map (RMM)
- 4) ROW Management Database (RMD)



- successfully completed on 2012.
- However insufficient management of ROW causes illegal occupation of ROW and re-compensation of resettlement, etc.
- The Detail Planning Survey had carried out in 2015 and R/D had signed in February 29, 2016.
- The Project have been started on January 2017.

ESC: Environmental and Social Considerations, TCP-COR: Technical cooperation Project on Capacity Enhancement of ESC for Resettlement, BRP: Basic Resettlement Procedures, R/D: Record of Discussion





### Major Modification of PDM and PO

Item	Ver. 1.0, IC/R(Inception Report)
Project Title	(No Change)
Implementing Agency	(No Change)
Target Group	(No Change)
Period of Project	Jan. 2017 to Dec. 2019
Project Site	(No Change)
Pilot Project Site	To be discussed before 2 <sup>nd</sup> JCC
Overall Goal	(No Change)
Project Purpose	(No Change)
Outputs	(No Change)
Activity for Output	Minor Modification (To be Explained)
Objectively Verifiable Indicators	Minor Modification
Means of Verification	Minor Modification
Inputs	Minor Modification
Important Assumption	Minor Modification
Pre-Conditions	Minor Modification
Plan of Operation (PO)	Minor Modification

Item	Ver. 0.0, R/D (Record of Discussion)	Ver. 1.0, IC/R (Inception Report)
Activities for Output 1	<ol> <li>1.1 Analyze past projects and current tackling issues in terms of ESC-GL and ROW management</li> </ol>	1.1 Analyze past projects current tackling issues on EIA/EMP and ROW management in terms of ESC-GL
	1.2 Implement information collection and analysis on land management framework of land management system in Cambodia	1.2 Collect and analyze information on land management framework of land management system in Cambodia
	1.3 Conduct institutional framework analysis for MPWT	1.3 Conduct institutional framework analysis for MPWT
	1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan	1.4 Conduct a needs assessment for training and develop capacity enhancement plan and procurement plan
	1.5 Discuss the TF framework	1.5 Discuss the TF framework

### Major Modification of PDM (Activities for Output 4) Ver. 0.0, R/D Ver. 1.0, IC/R Item ard of Di Activities 4.1 Discuss the implementation plan of 4.1 Discuss the implementation plan of the pilot project by using draft RMS the pilot project by using draft RMS Output 4 4.2 Discuss the framework of the Pilot 4.2 Discuss the framework of the Pilot Project Task Force (PTF) with coordination between DPWT in charge Project Task Force (PTF) (to b deleted) of selected areas for the pilot project 4.3 Implement the Pilot Project of CSI 4.3 Implement the Pilot Project of CSI 4.4 Implement the Pilot Project of IEP 4.4 Implement the Pilot Project of IEP 4.5 Conduct TOT based on draft RMS-4.5 Conduct TOT based on draft RMS-TP TP 4.6 Modify draft RMG, RMS-TP, tentative RMM, and tentative RMD as (to Activity 3.7) finalized RMS



	Target Group (Tas	ikforce Members)				
deverse 1	Assignment	Name	Position			
1.0	Project Director	H.E. Tauch Chankosal	Secretary of State			
17 2	Project Manager	H.E. Nou Vaddhanak	DG, General Department of Technique			
	Deputy Manager	Mr. Chhim Phalla	Director, JCD			
	NO STREET, STR	International Contract Contra Contract Contract Contra	A/EMP Team			
	Deputy Manager	Mr. Prok Novida	Director, DOP			
	Taskforce Member	1. Mr. Uk Baksmey	Chief, Social and Environmental Office, DOP			
		2. Mr. Uy Sambath	Deputy Chief, Social and Environmental Office, DOP			
	a solution of the first second second second second second	3. Mr. Srey Vireak	Officer, Social and Environmental Office, DOP			
		4. Mr. Bour Chhay Ya	Officer, Social and Environmental Office, DOP			
		5. Mr. Manh Vutha	Deputy Chief, Bilateral Cooperation Office, ICD			
1.1	CARL CONTRACTOR	6. Mr. Song Kimheng	Officer, Administrative Office, ICD			
- X.		7. Mr. Ngel Sovanarith	Officer, Bilateral Cooperation Office, ICD			
	Advisor	Mr. Chea Leng	Deputy Director, Department of EIA, Ministry of Environment			
10	Observer	Mr. Kong Youreth	Chief, Environment and Public Service Office, PID, MPWT			
/	P ROW Management Team					
1 1	Deputy Manager	Mr. Heng Rathpiseth	Director, RID			
1 1	Taskforce Member	1. Mr. You Dara	Deputy Director, RID			
		2. Mr. Chea Samnang	Chief, ROW Management Office, RID			
/	and the second sec	3. Mr. Khoun Kompheak	Chief of Traffic Safety Office, Road Infrastructure Department			
		4. Mr. Khai Saray	Deputy Chief, ROW Management Office, RID			
		5. Mr. Hay Chandara	Deputy Chief, ROW Management Office, RID			
		g. Mr. Sor Yillin	Deputy Chief, Regional Cooperation Office, ICD			
		Z. Mr. Peang Samoeun	Deputy Chief, Administrative Office, ICD			
X		8. Ms. Laing Sengkim	Officer, Multiateral and International Organization Cooperation Office, ICD			
A I	Advisor	1, Mr. Sek Sothirith	Director, Urban Planning Department, MLMUPC			
		9 Mr. Dat Cold	Director Department of Consequences Mi Mi MC			
N N	CONTROL MANAGE	A PH PALAUN	Condition, Englartment of Conservation, Ph.M.DPL			

Dr. TSUCHIDA Takayuki Mr. YAMASHITA Akira Mr. ITO Tsuyoshi Mr. NARA Hiroshi Mr. KIYOTA Daisaku	CTII ESIC CTII CTII
Mr. YAMASHITA Akira Mr. ITO Tsuyoshi Mr. NARA Hiroshi Mr. KIYOTA Daisaku	ESIC CTII CTII
Mr. ITO Tsuyoshi Mr. NARA Hiroshi Mr. KIYOTA Daisaku	СТП
Mr. NARA Hiroshi Mr. KIYOTA Daisaku	CTII
Mr. KIYOTA Dalsaku	CTTT
	em
Mr. OCHI Masaki	CTII
(to be named)	CTII
Ms. NAKAYAMA Makiko	CTII
Mr. NISHIO Kyoichiro	HEX
Ms. MIZUYORI Tomoko	CTII
Mr. KUMAGAI Takahiro	CTII
Mr. ICHIKAWA Syunpei	CTII
	(to be named) Ms. NAKAYAMA Makiko Mr. NISHIO Kyoichiro Ms. MIZUYORI Tomoko Mr. KUMAGAI Takahiro Mr. ICHIKAWA Syunpei

Consultant Co., Ltd., HEX: Hanshin Expressway Company Limited

### Documentation Level of REG and RMG

The target of documentation level of REG and RMG will be "Prakas (Ministerial Order or Proclamations)"

A Sub-Decree (Anu-Kret) is used to clarify provisions within existing laws, set out the functions and duties of RGC bodies and appoint senior RGC officials. It is drafted within relevant ministries, approved by the Council of Ministers and endorsed by the Prime Minister. It is the most common governmental decision.

Ministerial Orders or Proclamations (Prakas) are executive regulations made at the ministerial level or signed at ministerial level to implement and clarify specific provisions within higher-level legislative documents and give instructions.

Decisions (Sech Kdei Samrach) are made by the Prime Minister or relevant ministers, and are used for a temporary purpose. They disappear once their goal is achieved.

A Circular (Sarachor) is issued by the Prime Minister or a Minister, and provides instructions relating to certain legal or regulatory measures, but is not legally binding. REG: Road Environmental Guideline, RMG: ROW management Guideline

## **Tentative Table of Contents of REG** Main Fads 1. Bockgrounds 1.1 Objectives and Users of the Guidelines 1.2 Robal Develoament Project Cycle and the ElA/EMP 2. Secretical Evolution of the Guidelines of ElA/EMP for Road Sector in Cambodia 3. Fresential Related Laws/Guidelines of ElA/EMP for Road Sector in Cambodia 4. Freatiscial Involvement Phases by AFWT for ElA Process in Road Sector in Cambodia 4. Freatiscial Involvement Phases by AFWT for ElA Process in Road Sector in Cambodia 4.1 ElA Roport Review Phase (Inter-Ambieteid) Meeting, etc.) 4.2 Project Monitoring Phase (1) Reviewing Verifying) Environmental Monitoring Plan (EMP) (2) Reviewing Verifying) Environmental Monitoring Report (3) Reviewing Verifying) Methods on Each Phase with Examples for MFWT in ElA Road Sector (3) Reviewing Verifying) Methods on Each Phase with Examples for MFWT in ElA Road Sector (3) Reviewing Verifying) Environmental Monitoring Phane (EMP) in Road Sector (3) Reviewing Verifying in the monitoring results with the Environmental Standards, etc.) (3) State and environmental Management Phan (EMP) in Road Sector (3) Reviewing environmental Management Phan (EMP) in Road Sector (4) Sector International Phane (EMP) in Road Sector (5) State and environmental Management Phan (EMP) in Road Sector (6) Sector Internation Phane (EMP) in Road Sector

(Bile vilif, comparing the monitoring results with the Entremember of Sector Appendix 1: Sample of Environmental Management Plan (EMP) in Road Sector Appendix 2: Sample of Environmental Monitoring Plan (EMP) in Road Sector Appendix 3: Sample of Environmental Monitoring Plan (EMOP) in Road Sector Appendix 4: Checkist for Reviewing EMP in Road Sector Appendix 4: Checkist for Reviewing EMP in Road Sector Appendix 6: Checkist for Reviewing EMP in Road Sector Appendix 6: Checkist for Reviewing EMP in Road Sector Appendix 6: Checkist for Reviewing EMP in Road Sector Appendix 6: Checkist for Reviewing EMP in Road Sector Appendix 8: Some Environmental Monitoring Report in Road Sector Appendix 8: Some Environmental Sampling Methody/Impact Evaluation Methods in Road Sector Note: The draft REG will be developed and finalized through a series of technical Regular Meeting for the ElA/EMP Members of Task Force (IF) until the end of December, 2017.

### Confirmation on Items to be Approved by JCC IC/R, including 1) PDM ver. 1.0 2) PO ver. 1.0 3) Project Organization (Implementation Framework) Documentation Level of the REG and RMG te: IC/R: Inception Report, PDM: Project Deign Matrix, PO: Plan of Operation, REG: Road Environmental Guideline, EMG: ROW Management Guideline

THE PROJECT FOR **CAPACITY ENHANCEMENT** ON ENVIRONMENTAL AND SOCIAL CONSIDERATIONS IN IMPLEMENTING AGENCY IN ROAD SECTOR IN THE KINGDOM OF CAMBODIA

CESCOR

Dr. TSUCHIDA Takayuki Team Leader, JICA Project Team

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### CESCoR 1<sup>st</sup> JCC Meeting at Himawari Hotel



- 3. Why ROW as State Land was Required
- 4. Bars for ROW Management
- 5. Relevant Institution of ROW Management
- 6. Review of Kick-off Meeting

puty Leader / ROW Management 2 (JICA Study Tean

### 1. ROW Chronology

### (1) Before Civil War

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It is said there was a concept similar to ROW during colonial period and people built houses with certain distance from edge of road

### (2) After Civil war until Peace Pact

- Private land title was not recognized in principle
- Local authority issued land use rights or certification equal to land title in some cases

### (3) After Peace Pact

- Any private land title before civil war was voided by the Land Law
- Road was defined one of the state property without specific ROW area

### (4) After Prakas 06

- ✓ Prakas 06 and following documents mentioned ROW for Roads and Railways
- Road improvement projects and resettlement issues become social interests

### ROW and COI Definition in World Bank

- Existing roads usually already have an established right-of-way (ROW)... Even in projects involving little or no formal land acquisition, displacement may nevertheless take place—sometimes on a large scale—within an existing ROW.
- Resettlement impacts are generally confined within a fairly narrow "corridor of impact (COI)," the area that is unsafe, where people are not permitted to occupy structures, carry out business activities, or cultivate land. The corridor may not be as wide as the legal ROW, but it is typically wider than the minimum required for pavement, shoulders, and roadside improvements.
- No fixed or predetermined width can be established for the COI, because it will vary according to local conditions.

### 3. Why ROW as State Land was required?

- Japan does NOT have ROW as public land, and road boundary is recorded based on land registration system
- For the future road development, target areas are just declared without land acquisition (land title is still belonging to private, etc.) but with some restrictions for construction/renovation of structures
- In Cambodia, land registration system was not functioned well in 90', but road improvement projects with ROW disputation are started
- Government needed to protect possible road widening area from new influx of residents to reduce compensation amount which is required by development partners
- ROW was declared with certain length from road centerline in 1999, in spite of unclear land title issues, area of state land, and other conditions in terms of land management

### 4. Bars for ROW Management

- Classification of "Urban Area" where ROW shall be determined separately and "Non-Urban Area" in ROW related legal documents is NOT defined. Who define by what kind of measures?
- There are numerous number of structures and land use in different history, status, and rights, within ROW in practical situation.
- In the Resettlement phase, Government does not clear all ROW but admit PAPs use the land between COI and ROW
- There is no integrated road improvement plan with final design of cross-section.
- Purpose of ROW management is not so clear. Reduce compensation for structures? Prevent road structure?

### 5. Relevant Institutions around ROW Management



### Review of Kick-Off Meeting

(1) Two Lanes National Road (e.g. NR-1: Widening Potential High)



### 6. Review of Kick-Off Meeting

(2) Four Lanes and more (e.g. Some sections of NR-4, future NR-5)







Still required full ROW management for next widening in the future? OR Fix practical boundary between Road and Private land and concentrate on protecting road structure?



- Activity 2-1 to 2-4 (Developing REG) will be completed by the next JCC on early next year.
- Activity 2-5 (Monitoring REG) will continue up to the end of the Project.
- "ROW Management Team" :
- Activity 3-1 to 3-3 (Developing draft RMG ) will be completed by the next JCC on early next year.
- Activity 3-4 to 3-7 (Finalizing RMS) and Activity 4-1 to 4-5 (Conducting Pilot Project) will start after the next JCC.

WBS: Work Breakdown Structure, EIA: Environmental Impact Assessment, EMP: Environmental Management Plan, JCC: Joint Coordinating Committee, ROW: Right of Way

### Japan Training

lanan Training

- Date: June 13 to 22, 2017 (10 days)
- Location: Osaka and Tokyo, Japan
- Purpose: 1) Concept of Environmental Consideration and its implementation process are understood, and 2) Implementation framework of ROW Management is understood.
- Outputs: The lesson learned on Environmental Consideration in Japan training are reflected to REG development.
- Participants: Management Level in charge of Environmental and Social Considerations from MPWT and MOE (10 persons)

: ROW: Right of Way, REG: Road Environmental Guideline, MOE: Ministry of Environment

### 2<sup>nd</sup> JCC Meeting

2. Drone

be considered.

in July 2017.

- Expected Date: January 2018
- Agreement Items: The following items will be approved by JCC
   Road Environmental Guideline (REG)
  - Activities 2-1 to 2-4: Environmental Considerations (EC)
  - Draft ROW Management Guideline (Draft RMG)

···1 Unit

The equipment will be procured in Cambodia so the maintenance work can

The equipment will be procured before commencement of trial pilot project

- Activities 3-1 to 3-3: Social Considerations (SC)
- Pilot Project Site will be determined
- Seminar: The 2<sup>nd</sup> Seminar will be jointly held with JCC

Name	Position	
Ms. SRENG Sorphea	Official, ICD, MPWT	
Mr. SONG Kimheng	Official, ICD, MPWT	
Mr. NGEL Sovanarith	Official, ICD, MPWT	
Mr. CHEA Samnang	Chief of ROW Management Office, RID, MPWT	
Mr. KHAI Saray	Deputy Chief of ROW Management Office, RID, MPWI	
Mr. PROK Novida	Director, DOP, MPWT	
Mr. SREY Vireak	Official, DOP, MPWT	
Mr. BOUR Chhayya	Official, DOP, MPWT	
Mr. CHUOP Sivutha	Deputy Director, MOE	
Mr. SOK Oror	Deputy Director, MOE	

