

## **別添 4: 討議議事録(M/D)**



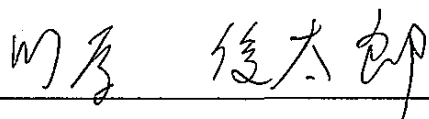
**MINUTES OF DISCUSSIONS  
ON THE PREPARATORY SURVEY FOR  
THE PROJECT FOR URGENT REPLACEMENT OF BRIDGES IN  
FLOOD-PRONE AREAS  
IN THE KINGDOM OF CAMBODIA**

In response to the request from the Kingdom of Cambodia (hereinafter referred to as "Cambodia"), the Government of Japan decided to conduct a Preparatory Survey for the Project for Urgent Replacement of Bridges in Flood-Prone Areas (hereinafter referred to as "the Project"), and entrusted the Preparatory Survey to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") to Cambodia headed by Mr. Shuntaro KAWAHARA, Senior Advisor, JICA, and is scheduled to stay in Cambodia from May 10 to June 30, 2016.

The Team held a series of discussions with the concerned officials of the Cambodian side and conducted a field survey in the Project areas. In the course of the discussions, both sides have confirmed the main items described in the attachment. The Team will proceed to further works and prepare the Interim Report.

Phnom Penh, May 19, 2016




**Shuntaro KAWAHARA**

Leader  
Preparatory Survey Team  
Japan International Cooperation Agency  
Japan



**H.E. TAUCH CHANKOSAL**

Secretary of State  
Ministry of Public Works and Transport  
Kingdom of Cambodia 

**ATTACHMENT****1. Objective of the Project**

The Objective of the project is to ensure safety, smooth and stable transportation and logistics in flood-prone areas through replacement of temporary bridges, thereby contributing to the mitigation of natural disasters in the target areas.

**2. Project Sites**

Both sides confirmed that the sites of the Project are shown in Annex-1.

**3. Executing Agency**

Both sides confirmed the executing agency is Ministry of Public Works and Transport (hereinafter referred to as "MPWT"). MPWT shall implement the Project, and coordinate with all the relevant agencies to ensure that undertakings of Cambodian sides are taken by relevant agencies properly and on time. MPWT will own the reconstructed bridges and properly maintain and operate them after the completion of the Project. The organization chart is shown in Annex-2.

**4. Items requested by the Cambodian side**

4-1 As a result of discussions, both sides confirmed that the items requested by the Cambodian side are as follows:

- Reconstruction of the seven existing bridges (Prek Sandan, Prek Rus, Anglong Khle, Prek Chhloung, Peam Te and Ba Baong No.1, Ba Baong No.2,) on National Road No. 73 and No. 11.

4-2 JICA will assess the appropriateness of the above requested items through the survey and will report findings, including priorities on the seven bridges, to the Government of Japan. The final components of the Project would be decided by the Government of Japan taking its budget constraint into consideration.

**5. Japanese Grant Scheme**

5-1 The Cambodian side understands the Japanese Grant Scheme and its procedures as described in Annex-3, Annex-4 and Annex-5, and necessary measures to be taken by the Cambodian side. A template of the Project Monitoring Report to be submitted by the executing agency is as attached in Annex 6.

5-2 The Cambodian side understands to take the necessary measures, as described in Annex 7, for smooth implementation of the Project, as a condition for the Japanese

Grant to be implemented. The detailed contents of the Annex-7 will be worked out during the survey and shall be agreed by the time of explanation of the Draft Preparatory Survey Report.

5-3 The Cambodian side understands major undertakings to be taken by each Government described in Annex-7, which will be used to determine the followings:

- (1) Scope of the Project;
- (2) Timing of the Project implementation; and
- (3) Necessary budget allocation.

Contents of Annex-7 will be updated as the Preparatory Survey progresses, and will finally be attached to the Grant Agreement.

## 6. Schedule of the Survey

6-1 The Team will proceed with further survey in Cambodia until June 30, 2016.

6-2 The Team will prepare a draft Preparatory Survey Report in English and dispatch a mission to Cambodia in order to explain its contents around November 2016.

6-3 If the contents of the draft Preparatory Survey Report is accepted in principle and the Undertakings are fully agreed by the Cambodian side, JICA will complete the final report in English and send it to the Cambodian side around March, 2017.

6-4 The above schedule is tentative and subject to change.

## 7. Environmental and Social Considerations

7-1 The Cambodian side confirmed to give due environmental and social considerations during implementation of the Project, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).

7-2 The Project is categorized as Category B because the scope of the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant. The Cambodian side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment (EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and make EIA/IEE report of the Project as needed. The EIA/IEE approval shall be received from the responsible authorities and submitted to JICA before the Cabinet approval of the Project by the Government of Japan.

7-3 For projects that will result in involuntary resettlement, the Cambodian side confirmed

to prepare a Resettlement Action Plan (RAP)/Abbreviated Resettlement Action Plan (ARAP) and make it available to the public. In addition, the Cambodian side confirmed to provide the affected people with sufficient compensation and/or support in accordance with RAP/ARAP, in a timely manner.

## 8. Other Relevant Issues

### 8-1 Provision of Conveniences to the Team by the Cambodian Side

The Cambodian side shall, at its own expenses, provide the Team with the following items in cooperation with MPWT and other organizations concerned.

- (1) Security-related information as well as measures to ensure the safety of the Team members;
- (2) Data and information necessary for the Survey.
- (3) Counterpart personnel;
- (4) Suitable office space with necessary equipment and services;
- (5) Credentials or identification cards;
- (6) Appointments arrangement;
- (7) Entry permits necessary for the Team members to conduct field surveys; and
- (8) Support in obtaining other privileges and benefits if necessary including:
  - 1) Permission to photograph and to enter into private properties and restricted areas for the Team for proper execution of the Survey, if necessary, and
  - 2) Arrangement to allow the Team to bring back to Japan any necessary data, maps and materials related to the survey, subject to approval by the of Cambodian side, in order to analyze the Project and prepare the reports.
  - 3) To arrange the supporting of police during execution of origin and destination survey and axial load survey.

### 8-2 Confirmation of necessary procedure for approving on-site works

The Team requested MPWT to confirm followings:

- (1) The necessary approvals by relevant agencies and their procedure for the Japanese contractor to conduct on-site works on roads;
- (2) Who owes costs of utility relocation; and
- (3) What kind of safety measures for on-site works on roads should be taken by Japanese contractor and relevant agencies.

### 8-3 Removal of UXOs and mines

Both sides reconfirmed that the Cambodian side shall take responsibility for the detection and the removal of unexploded ordnances (hereinafter referred to as "UXOs") and mines within the Project area. In case that the removal of UXOs and mines becomes necessary, the Cambodian side shall remove them.

### 8-4 Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, the Cambodian side shall provide JICA with additional such information as JICA may reasonably request.

8-5 Safety for construction works

The Cambodian side understood the importance of safety measure in construction and service stage. The Team explained "The Guidance for the Management of Safety for Construction Works in Japanese ODA Projects", and the Cambodian side explained that they will respect and refer this Guidance under the Project.

8-6 Acceleration of the Project progress

The Cambodian side requested to accelerate the project to secure safe, smooth and stable transportation and logistics in flood-prone areas.

The Team explained that it understood the urgency of the Project while reasonable project cost and duration must be considered based on the adequate survey and its findings.

8-7 Removal of existing bridges

If the reconstructed bridges are aligned along the present alignment, the Project will include removal of existing bridges and installation/removal of temporary detour roads. If the alignment is modified, the existing bridges will be utilized for securing traffic and will be removed after the completion of the Project by the Cambodian side.

The Team explained that the Draft Final Report would include recommendable method of removal including the estimated cost of these bridges.

Annex-1 Project Sites

Annex-2 Organization Chart

Annex-3 Japanese Grant

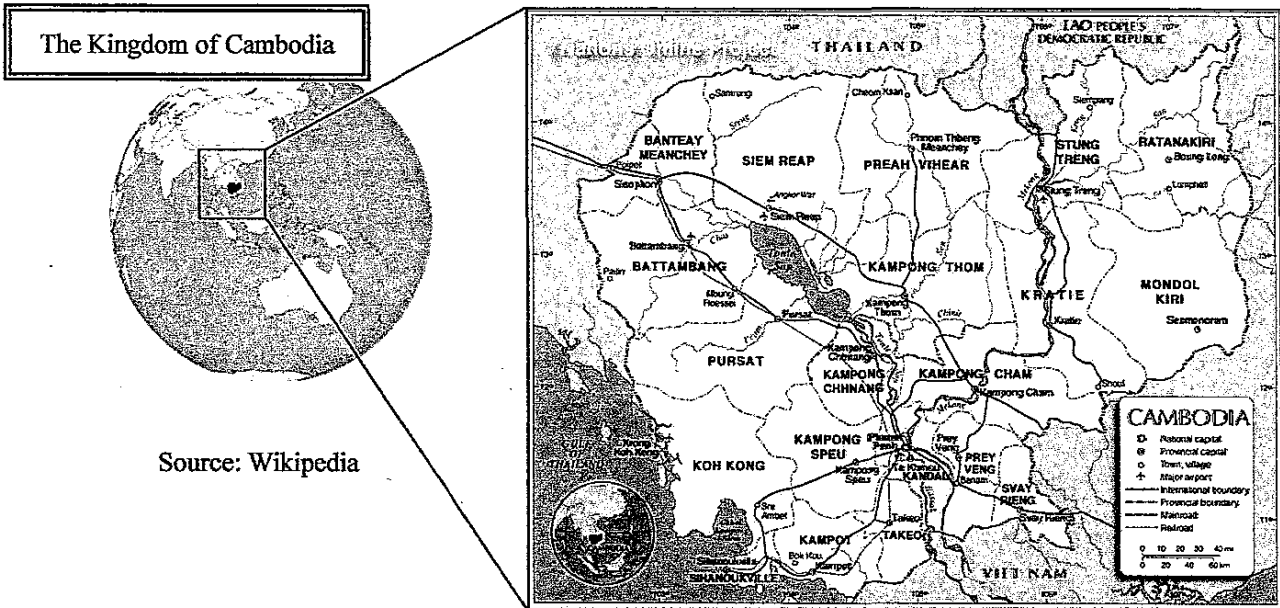
Annex-4 Flow Chart of Japanese Grant Procedures

Annex-5 Financial Flow of Japanese Grant

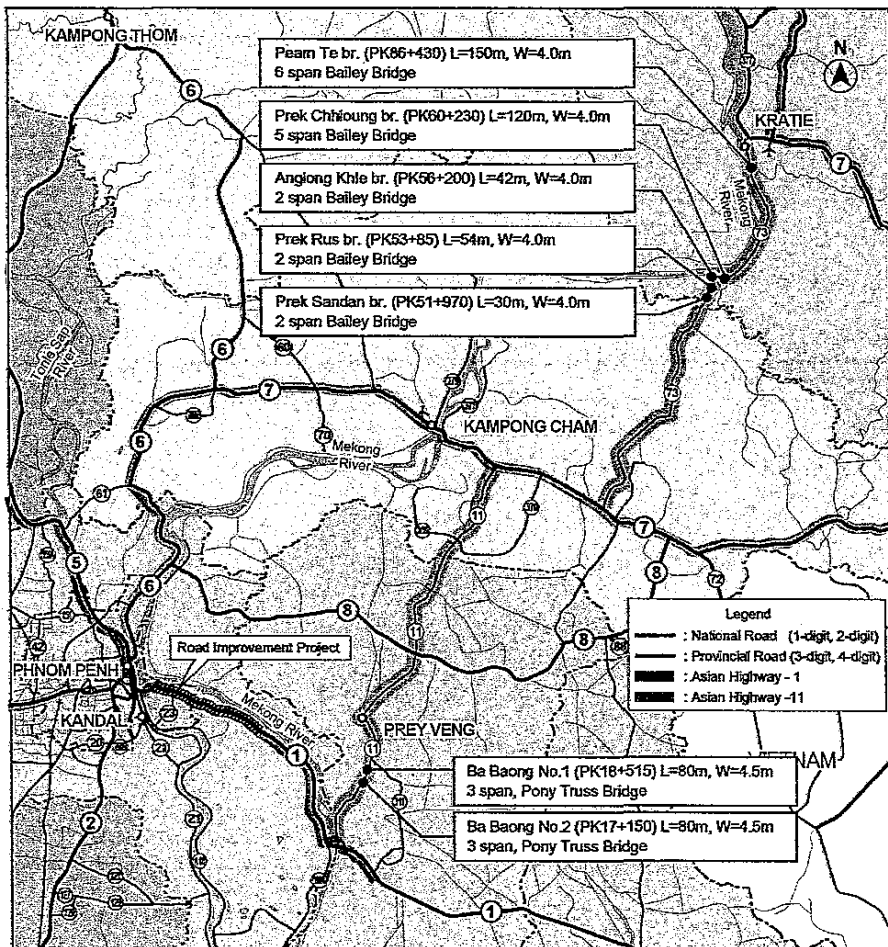
Annex-6 Project Monitoring Report (template)

Annex-7 Major Undertakings to be taken by Each Government

Annex-1: Project Sites



Source: Nations Online Project



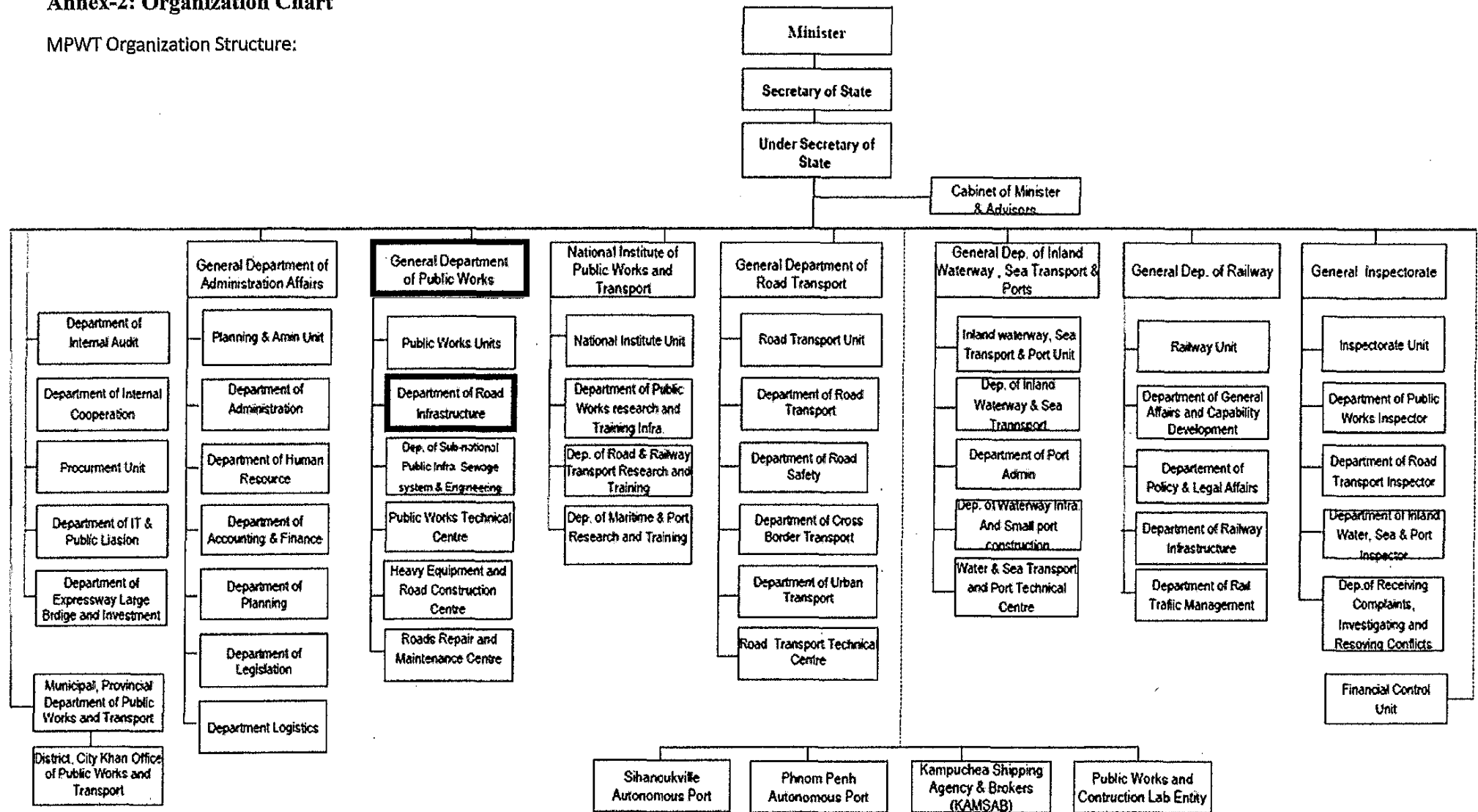
Source: Project Team

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**Annex-2: Organization Chart**

MPWT Organization Structure:



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Responsible Department

## Annex-3: Japan's Grant Aid Scheme

### JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the "Grant") is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

#### 1. Grant Procedures

The Grant is supplied through following procedures :


- Preparatory Survey
  - The Survey conducted by JICA
- Appraisal & Approval
  - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
  - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
  - Agreement concluded between JICA and a recipient country
- Implementation
  - Implementation of the Project on the basis of the G/A

#### 2. Preparatory Survey

##### (1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.



- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

#### (2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

#### (3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

### 3. Japanese Grant Scheme

#### (1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

#### (2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

#### (3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Environmental and Social Considerations

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010).

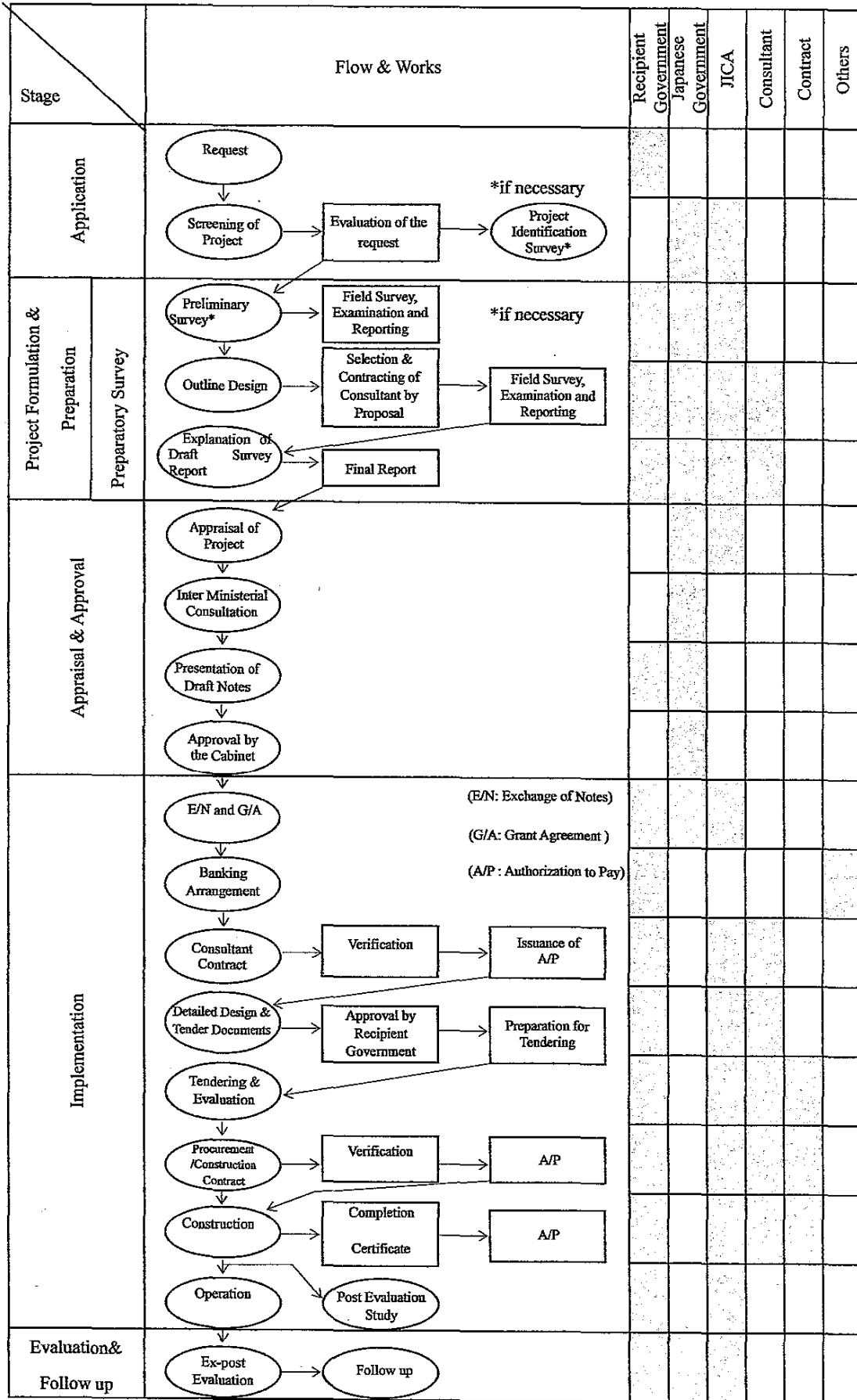
(11) Monitoring

The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

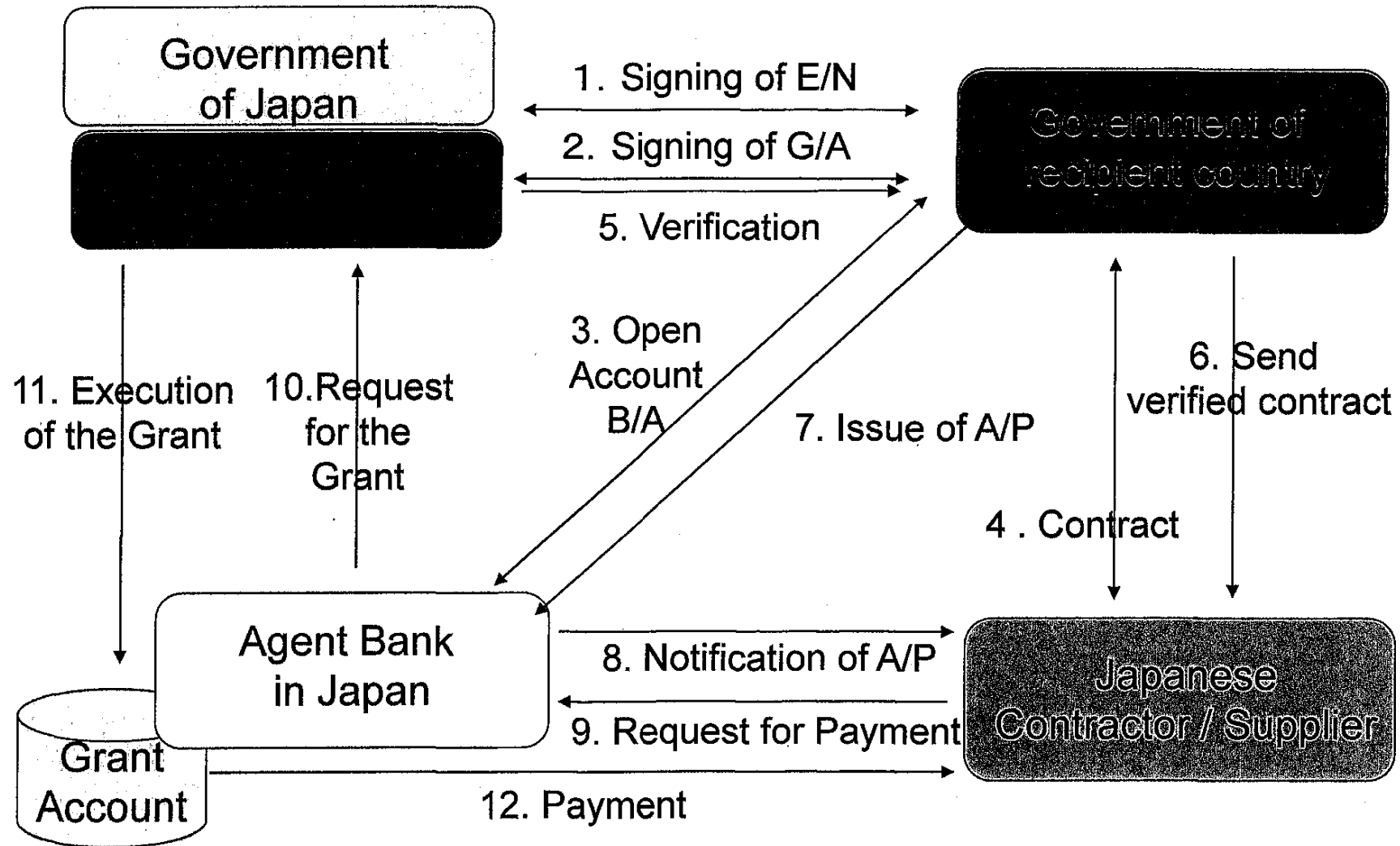
(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

FLOW CHART OF JAPANESE GRANT PROCEDURES



# Financial Flow of Grant Aid (A/P Type)



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**Project Monitoring Report**  
 on  
**Project Name**  
**Grant Agreement No. XXXXXXXX**

**Organization Information**

<b>Authority (Signer of the G/A)</b>	_____ Person in Charge _____ (Division) _____ Contacts      Address: _____ _____ Phone/FAX: _____ _____ Email: _____
<b>Executing Agency</b>	_____ Person in Charge _____ (Division) _____ Contacts      Address: _____ _____ Phone/FAX: _____ _____ Email: _____
<b>Line Ministry</b>	_____ Person in Charge _____ (Division) _____ Contacts      Address: _____ _____ Phone/FAX: _____ _____ Email: _____

**Outline of Grant Agreement:**

<b>Source of Finance</b>	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____
<b>Project Title</b>	
<b>E/N</b>	Signed date: Duration:
<b>G/A</b>	Signed date: Duration:

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**1: Project Description**

**1-1 Project Objective**

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**1-2 Necessity and Priority of the Project**

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

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**1-3 Effectiveness and the indicators**

- Effectiveness by the project

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**2: Project Implementation**

**2-1 Project Scope**

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D) Attachment(s):Map	Actual: (P/R and PCR) Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D)	(M/D)	(P/R and PCR)

**2-1-2 Reason(s) for the modification if there have been any.**

(P/R and PCR)

--

2-2 Implementation Schedule  
 2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
[M/D]	(M/D)		(P/R,PCR) As of (Date of Revision)
Project Completion Date*			Please state not only the most updated schedule but also other past revisions chronologically.

\*Project Completion was defined as \_\_\_\_\_ at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

(P/R and PCR)
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2-3 Undertakings by each Government

2-3-1 Major Undertakings  
 See Attachment 2.

2-3-2 Activities  
 See Attachment 3.

2-4 Project Cost

2-4-1 Project Cost

Table 2-3-1 Comparison of Original and Actual Cost by the Government of Japan  
 (Confidential until the Tender)

Items	Cost (Million Yen)			
	Original	Actual	Original	Actual
Construction Facilities (or Equipment)				
Consulting Services	- Detailed design - Procurement Management - Construction Supervision			
Total				

Note: 1) Date of estimation:  
 2) Exchange rate: 1 US Dollar = Yen


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Table 2-3-2 Comparison of Original and Actual Cost by the Government of XX

	Items		Cost (Million USD)	
	Original	Actual	Original	Actual
Total				

Note: 1) Date of estimation:  
 2) Exchange rate: 1 US Dollar = (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(P/R, PCR)

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (M/D)

Actual, if changed: (P/R and PCR)

2-6 Environmental and Social Impacts

Report based on the agreed environmental checklist and monitoring form (See Attachment 4)

**3: Operation and Maintenance (O&M)**

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

<b>Original: (M/D)</b>
<b>Actual: (PCR)</b>

**3-2 O&M Cost and Budget**  
 - The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

<b>Original: (M/D)</b>
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**4: Precautions (Risk Management)**

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

<b>Original Issues and Countermeasure(s): (M/D)</b>	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L

(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
<b>Actual issues and Countermeasure(s)</b>	
(P/R and PCR)	

**5: Evaluation**

**5-1 Overall evaluation**

Please describe your evaluation on the overall outcome of the project.

(PCR)

**5-2 Lessons Learnt and Recommendations**

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Monitoring report on environmental and social considerations

## 2. During the Project Implementation

NO	Items	Deadline	In charge	Cost	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract	MEF	***	
	2) Payment commission for A/P	every payment	MEF	***	
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country				
	1) Tax exemption and customs clearance of the products at the port of disembarkation	during the Project	MPWT	---	
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	MPWT	---	
4	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted; (By the end of the mission around November 2016, detailed items to be included in the aforementioned taxes are to be confirmed between the both sides.)	during the Project	MPWT	---	
5	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	MPWT	---	
6	To submit environmental monitoring report to JICA Cambodia Office	during the Project	MPWT	---	
7	To implement traffic control to secure traffic and work zone safety	during the Project	MPWT		

## 3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine/Periodic inspection	After completion of the construction	MPWT	***	
2	To implement EMP and EMoP	for a period based on EMP and EMoP	MPWT	---	
3	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between MPWT and JICA.	for three years after the Project	MPWT	---	
4	To remove existing bridges	by the beginning of next rainy season	MPWT	***	



**Major Undertakings to be covered by the Grant Aid**


No	Items	Deadline	Cost Estimated (Million Japanese Yen)*	
1	To construct roads/bridges (or To procure equipment)		XX.XX	
	- Reconstruction of the road			
	- Reconstruction of the bridge			
	1) To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country			
	a) Marine(Air) transportation of the products from Japan to the recipient country			
	b) Internal transportation from the port of disembarkation to the project site			
2)	To construct access roads			
	a) Within the site			
2	To implement detailed design, tender support and construction supervision (Consultant)		YY.YY	
3	Contingencies		ww.ww	
	Total		ZZ.ZZ	

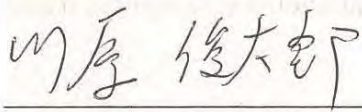


**Minutes of Discussions**  
**on the Preparatory Survey for the Project for**  
**Urgent Replacement of Bridges in Flood-Prone Areas**  
**in the Kingdom of Cambodia**  
**(Explanation on Draft Preparatory Survey Report)**

With reference to the minutes of discussions signed between Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on May 19, 2016, and in response to the request from the Government of the Kingdom of Cambodia (hereinafter referred to as "Cambodia") dated August 2, 2015, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Urgent Replacement of Bridges in Flood-Prone Areas (hereinafter referred to as "the Project"), headed by Mr. Shuntaro KAWAHARA, Senior Advisor, Infrastructure and Peacebuilding Department of JICA from 14<sup>th</sup> to 22<sup>nd</sup>, June 2017.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Phnom Penh, June 21<sup>st</sup>, 2017 



**Mr. Shuntaro KAWAHARA**  
Leader  
Preparatory Survey Team  
Japan International Cooperation Agency  
Japan



**H.E. TAUCH CHANKOSAL**  
Secretary of State  
Ministry of Public Works and Transport  
Kingdom of Cambodia

## ATTACHEMENT

1. Objective of the Project

The objective of the Project is to ensure safe, smooth and stable transportation and logistics in flood-prone areas through replacement of bridges, thereby contributing to the mitigation of natural disasters and the economic development in the target areas.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Urgent Replacement of Bridges in Flood-Prone Areas”.

3. Project site

Both sides confirmed that the sites of the Project are seven bridges on National Road No.11 and No.73, which is shown in Annex 1.

4. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Cambodian side agreed to its contents.

5. Cost estimate

Both sides confirmed that the cost estimate including the contingency described in Annex 2 is provisional and will be examined further by the Government of Japan for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions and so on.

6. Confidentiality of the cost estimate

Both sides confirmed that the cost estimate in Annex 2 should never be duplicated or disclosed to any third parties until all the contracts under the Project are concluded.

7. Procedures and Basic Principles of Japanese Grant

The Cambodian side agreed that the procedures and basic principles of Japanese Grant as described in Annex 3 shall be applied to the Project. In addition, the Cambodian side agreed to take necessary measures according to the procedures.

8. Timeline for the Project implementation

The Team explained to the Cambodian side that the expected timeline for the project implementation is as attached in Annex 4.

9. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Cambodian side will be responsible for the achievement of agreed key indicators targeted in year 2023 and shall monitor the progress based on those indicators.

[Quantitative indicators]

Effect Indicators	Site	Base Value (2016)	Target Value (2023)
Average waiting time in front of bridges (second/veh)	NR No.11	114	0
	NR No.73	42 ~ 162	0
Average required time (minute)	NR No.11 (Prey Veng ~ Neak Loueng)	46	40
	NR No.73 (Kratie ~ Boundary between Kratie Province and Kampong Chan Province)	120	107
Passable number of truck whose weight is more than 15 tons* (veh/day)	NR No.73	0	260
Shortened required time by a conversion of traffic (minute)	NR No.73	214 (via NR No.7)	140 (via NR No.73)
Annual passenger (number/year)	NR No.11	3,653,000	3,757,000
	NR No.73	6,289,000	9,663,000
Annual cargo weight (ton/year)	NR No.11	371,000	504,000
	NR No.73	325,000	721,000

\* Present load limit of temporary bridges along NR No.73 is 15 tons

[Qualitative indicators]

- Mitigation of disaster risk
- Improvement in the performance and safety of bridges and approach roads
- Securing safe, smooth and stable transportation and logistics
- Strengthening reliability of road network

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## 10. Undertakings of the Project

### 10-1. General Issues

Both sides confirmed the undertakings of the Project as described in Annex 5, and the Annex 5 will be used as an attachment of Grant Agreement (G/A).

The Cambodian side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

### 10-2. Tax Exemption

Both sides confirmed that the Cambodian side will ensure exemption of taxes including custom duty, internal taxes and other fiscal levies which may be imposed in the Cambodia with respect to the purchase of the products and/or the services.

Both sides confirmed that MPWT will clarify exemption procedures of taxes including import duties, value added taxes, income tax, and corporate tax in the bid documents during the implementation stage of the Project.

Both sides confirmed the following measures and procedures regarding tax exemption for the Project. The Cambodian side assured that it will promptly proceed with the procedures.

Tax items	Measure	Relevant Authorities and Application Procedure
Import Duty	Exemption	<u>Procedure</u> <ul style="list-style-type: none"><li>• Japanese Contractor prepares Master List of Importation.</li><li>• MPWT approves the Master List.</li><li>• Council of Development of Cambodia (CDC) approves the Master List.</li><li>• General Department of Taxation (GDT) respond against an Application for Non-taxable Supply.</li><li>• General Department of Customs and Excise (GDCE) issues Tax Exemption Letter.</li></ul>

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Value Added Tax	Exemption	<p><u>Procedure</u></p> <ul style="list-style-type: none"> <li>Japanese Contractor applies for Tax Exemption to MPWT with the Lists of Materials to be procured in Cambodia and Contract Document between Japanese contractor and local subcontractors.</li> <li>MPWT submits the application for Tax Exemption to GDT with submitted documents by Japanese Contractor.</li> <li>GDT forwards it to MEF after the internal approval in GDT.</li> <li>GDT issues the Letter of Tax Exemption.</li> <li>Japanese Contractor shall provide the list, tax identification number of supplying companies and photocopies of invoice for all the purchase of goods and services in the Kingdom of Cambodia to the GDT on a monthly basis for VAT exemption.</li> </ul> <p><u>Note</u> Japanese Contractor will have no VAT due since it will neither get VAT from MPWT nor pay VAT to its subcontractors.</p>
Income (Salary) Tax	Exemption	Income Tax of all employee including local staffs employed by Japanese Consultant and Contractor will be exempted.
Corporate (Profit) Tax	Exemption	Corporate Tax of Japanese Consultant and Contractor are exempted in Japanese grant Aid Project.

#### 11. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 6. The timing of submission of the PMR is described in Annex 5.

#### 12. Project completion

Both sides confirmed that the Project would complete when all the facilities constructed and equipment procured by the Grant are in operation. The completion of the Project will be reported to JICA promptly no later than six months after completion of the Project.

#### 13. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the Project completion, in principle, with respect to five evaluation criteria (Relevance,

Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Cambodian side is required to provide necessary support for the data collection.

#### 14. Schedule of the Study

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Cambodian side around August 2017.

#### 15. Environmental and Social Considerations

##### 15-1. General Issues

##### 15-1-1. Environmental Guidelines and Environmental Category

The Team explained that ‘JICA Guidelines for Environmental and Social Considerations (April 2010)’ (hereinafter referred to as “the Guidelines”) is applicable for the Project. The Project is categorized as B because the Project is not considered to be a large-scale road project, is not located in a sensitive area, and has none of the sensitive characteristics under the Guidelines; hence, it is not likely to have a significant adverse impact on the environment.

##### 15-1-2. Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 7. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, the Cambodian side shall submit the modified version to JICA in a timely manner.

##### 15-2. Environmental Issues

##### 15-2-1. Environmental Impact Assessment (EIA)

Both sides confirmed the EIA report and the IEE report are not required for the Project according to Cambodian legal system.

##### 15-2-2. Environmental Monitoring Plan

Both sides confirmed Environmental Monitoring Plan (EMoP) of the Project is as Annex 8. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMoP, which may be updated during the detailed design stage.

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### 15-3. Social Issues

#### 15-3-1. Land Acquisition and Resettlement

Both sides confirmed that:

- The 0.934 ha of residential and agricultural land will be acquired and 17 households will be relocated due to the implementation of the Project;
- All necessary procedures of land acquisition and resettlement should be conducted before the tender;
- Such land acquisition and resettlement shall be implemented based on the Abbreviated Resettlement Action Plan (ARAP); and
- Draft ARAP attached in Annex 9 will be authorized by the Cambodian side no later than September 2017.

The Cambodian side also explained that Inter-ministerial Resettlement Committee (IRC) will immediately commence Detailed Measurement Survey (DMS) when MPWT hands over design document to MEF to identify boundary, and that the ARAP finalized through DMS will be submitted to JICA to get its approval no later than December 2017.

Except for 0.934 ha of residential and agricultural land, 3.757 ha of land area consisting of river channels and so on will be occupied by river bed protection of the Project. The Cambodian side explained that almost all 3.757 ha of the lands are expected to be government property since the Government owes designated reserved area along river channels according to its laws and regulations, and that additional land title will be acquired, if necessary, according to DMS.

### 15-4. Environmental and Social Monitoring

#### 15-4-1. Environmental Monitoring

Both sides agreed that the Cambodian side will submit results of environmental monitoring to JICA with PMR by using the monitoring form attached as Annex 10. The timing of submission of the monitoring form is described in Annex 5.

#### 15-4-2. Social Monitoring

Both sides confirmed that the Cambodian side will implement social monitoring about land acquisition and resettlement proposed in the RAP. The Cambodian side and the Team agreed that MPWT will submit results of social monitoring to JICA with PMR by using the monitoring form attached as Annex 10.

#### 15-4-3. Information Disclosure of Monitoring Results

Both sides confirmed that the Cambodian side will disclose results of environmental and social monitoring to local stakeholders through their website / in their field offices.

The Cambodian side agreed JICA will disclose results of environmental and social monitoring submitted by the Cambodian side as the monitoring forms attached as Annex 10 on its website.

## 16. Other Relevant Issues

### 16-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

### 16-2. Safety Measures

To avoid accidents on site during the implementation of the Project, the Cambodian side agreed to cause the consultant and the contractor to enforce safety measures such as setting safety assurance to the site, providing information for security control to public, and deploying adequate security personnel, based on “The Guidance for Management of Safety for Construction Works in Japanese ODA Projects” which has been published on JICA’s URL below.

[http://www.jica.go.jp/activities/schemes/oda\\_safety/ku57pq00001nz4eu-att/guidance\\_en.pdf](http://www.jica.go.jp/activities/schemes/oda_safety/ku57pq00001nz4eu-att/guidance_en.pdf)

### 16-3. Operation and Maintenance of the Facilities

The Team explained the importance of operation and maintenance of the facilities constructed by the Project considering that proper asset management impacts greatly on life-span of the facilities and its maintenance cost. The Cambodian side shall secure enough staff and budgets necessary for appropriate operation and maintenance of the facilities as shown in the Draft Report. The annual operation and maintenance costs are estimated and shown in Annex 5.

Annex 1 Project Sites

Annex 2 Project Cost Estimation

Annex 3 Japanese Grant

Annex 4 Project Implementation Schedule

Annex 5 Major Undertakings to be taken by the Government of Cambodia

Annex 6 Project Monitoring Report (template)

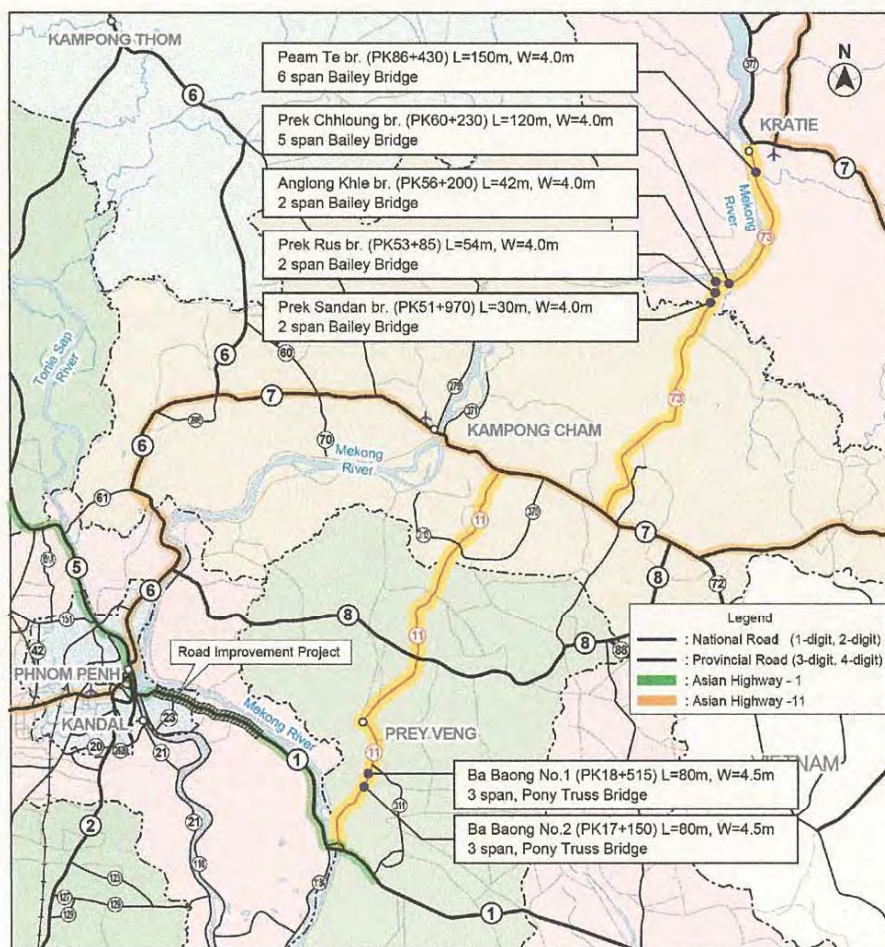
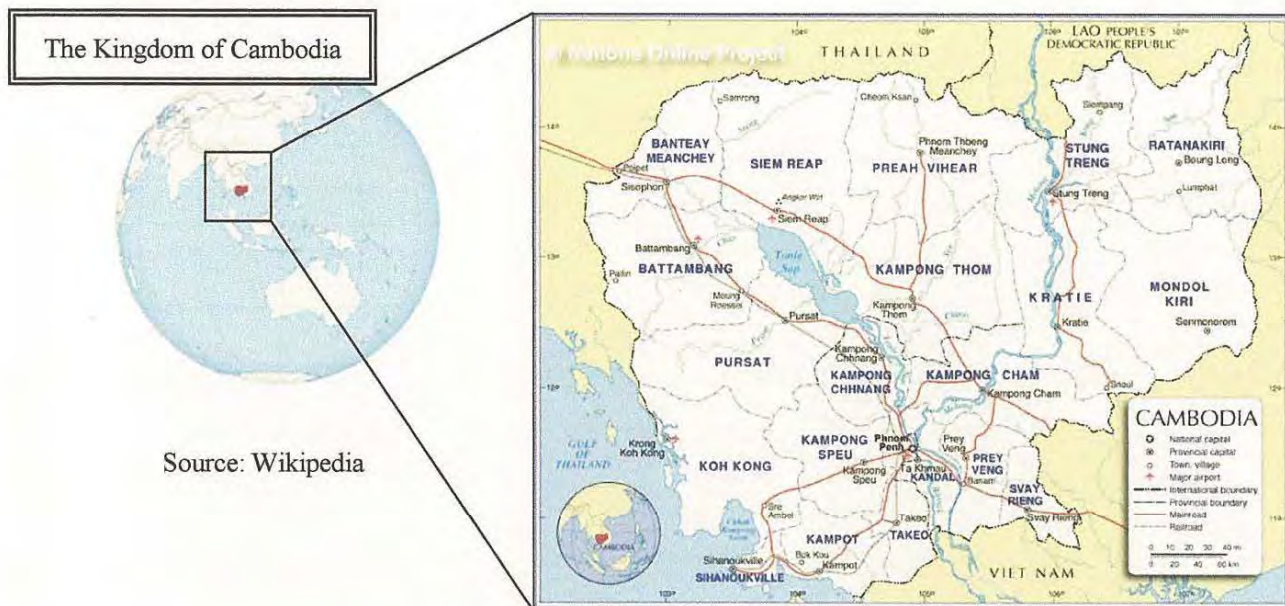
Annex 7 Environmental Check List

Annex 8 Environmental Monitoring Plan

Annex 9 Abbreviated Resettlement Action Plan

Annex 10 Environmental and Social Monitoring Form

Project Sites



Source: Project Team

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**Project Cost Estimation**

CONFIDENTIAL

(1) Cost Borne by the Government of Japan

The cost borne by the Japanese' s Grant Aid is not shown in this report due to the confidentiality.

(2) Cost Borne by the Government of the Kingdom of Cambodia

Total initial cost : USD 1.932 million

- Bank Charges : USD 0.074 million
- Land Acquisition/Secure Temporary Yard (Rental etc.) : USD 0.632 million
- Invest and Tread UXO/Mines : USD 0.600 million
- Relocations of utilities (water line, electric pole, etc.) : USD 0.191 million
- Buildings, houses and shop removal and Compensations : USD 0.210 million
- Removal of existing bridges (Peam Te Bridge and Chhloung Bridge) : USD 0.225 million

Total annual running cost : USD 0.1435 million

- Annual Maintenance Cost for Bridges : USD 0.0100 per bridge
- Annual Maintenance Cost for Approach Roads : USD 0.0105 per bridge

(3) Cost Estimation Condition

- Estimated timing : January 2017
- Exchange rates : USD 1.00 = JPY 110.41
- Others : The project is implemented in accordance with the system of Japan's Grant Aid. The above cost estimation does not assure the ceiling cost on the E/N and shall be reviewed by the Government of Japan before signing of the E/N between the two Governments.

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- (1) Cost borne by the Government of Japan
  - Total: JPY 2,021 million
  - Construction: JPY 1,438 million
  - Detailed Design and Construction Supervisory Service: JPY 192 million
  - Contingency: JPY 181 million
  
- (2) Cost borne by the Government of the Kingdom of Cambodia
  - Total initial cost: USD 1,992 million
  - Bank Charges: USD 0.014 million
  - Land Acquisition/Rescue Temporary Yield (rental etc.): USD 0.002 million
  - Invest and Travel Expenses: USD 0.008 million
  - Relocation of utilities (water line, electric pole, etc.): USD 0.191 million
  - Bridge, houses and shop removal and Compensation: USD 0.110 million
  - Removal of existing bridge (Beam Truss Bridge and Chain Bridge): USD 0.232 million
  - Total annual running cost: USD 0.1432 million
  - Annual Maintenance Cost for Bridges: USD 0.0100 per bridge
  - Annual Maintenance Cost for Approach Roads: USD 0.0102 per bridge
  
- (3) Cost Estimation Condition
  - Estimated during January 2017
  - Exchange rates: JSD 1.00 = JPY 110.41
  
- Others: The project is implemented in accordance with the terms of Japan's Grant Aid. The above cost estimation does not assure the ceiling cost on the EIM and shall be reviewed by the Government of Japan before signing of the EIM between the two Governments.

## JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as “the Recipient”) to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as “Project Grants”).

### 1. Procedures of Project Grants

Project Grants are conducted through following procedures (See “PROCEDURES OF JAPANESE GRANT” for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as “the Survey”) conducted by JICA

(2) Appraisal

- Appraisal by the government of Japan (hereinafter referred to as “GOJ”) and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

- The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as “the G/A”)

- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as “the B/A”)

- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as “the Bank”) to receive the grant

Construction works/procurement

- Implementation of the project (hereinafter referred to as “the Project”) on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

- Monitoring and evaluation at post-implementation stage

### 2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

## (2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

## (3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

### 3. Basic Principles of Project Grants

#### (1) Implementation Stage

##### 1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as “the E/N”) will be signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the “General Terms and Conditions for Japanese Grant (January 2016).”

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2) Banking Arrangements (B/A) (See “Financial Flow of Japanese Grant (A/P Type)” for details)

- a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
- b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the “Meeting”) will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

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Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

## (2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

## (3) Others

### 1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

### 2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

### 3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

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4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

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## PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
(14) Completion certificate		x			x	x		
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

notes:

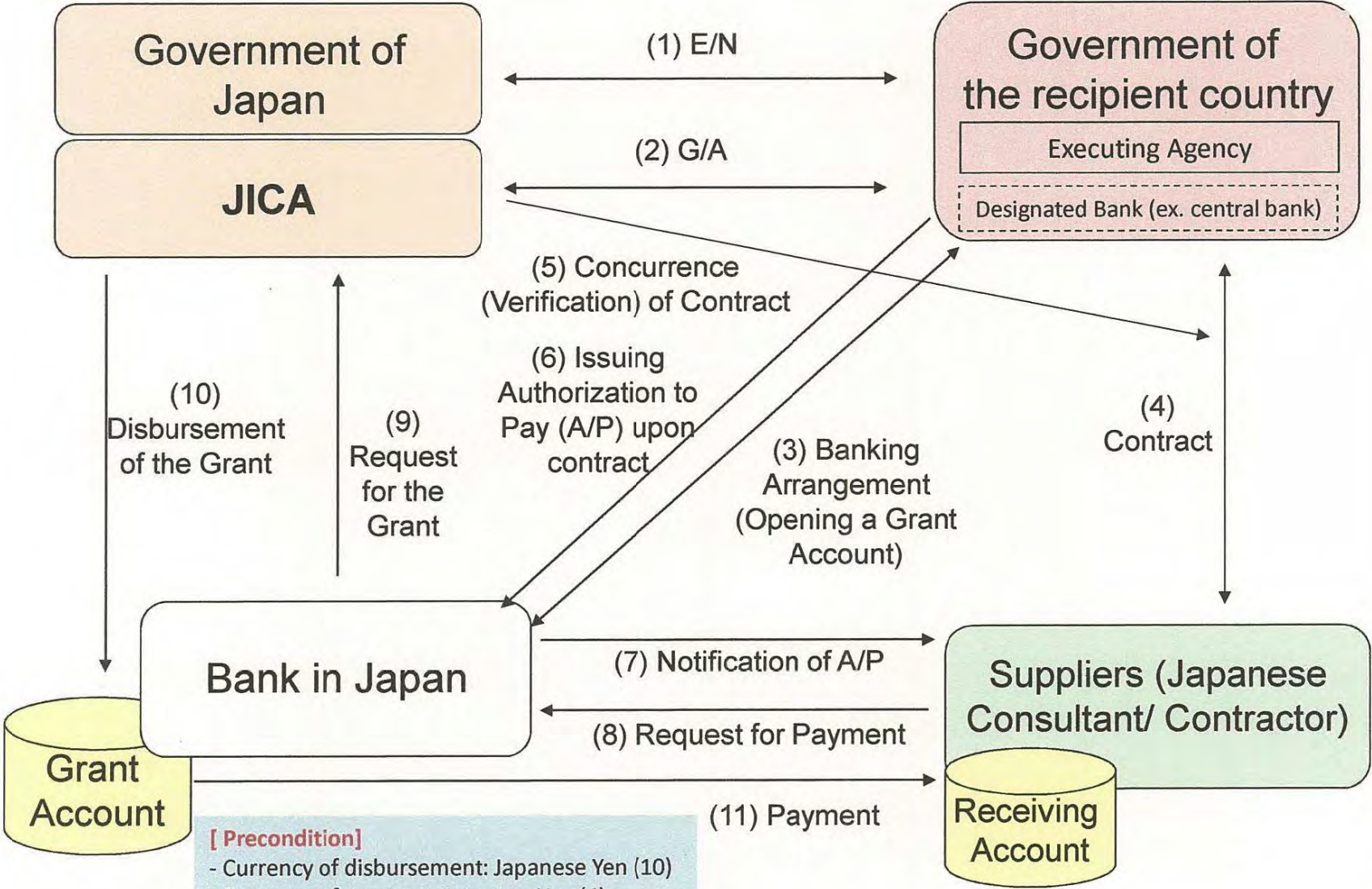
1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

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# Financial Flow of Japanese Grant (A/P Type)



**[ Precondition ]**

- Currency of disbursement: Japanese Yen (10)
- Currency of contract: Japanese Yen (4)
- Currency of payment: Japanese Yen (11)

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Financial Flow of a grant (V/P type)





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# Project Implementation Schedule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Detailed Design	█																			
			( Field Survey)																	
				(Domestic Work/Detailed Design)																
						█													(Total 6.0months)	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																									
Construction Activities	█		(Preparation Work)																																																		
																								█				(Kratie Area)																									
	█		█																										(Temporary Work)																								
				█																							(Substructure Work)																										
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						█																							(Superstructure Work)																								
										█																																											
											█																		(Road Work, etc.)																								
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	█		(Preparation Work)																																																		
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								█													(Substructure Work)																																
				█																							(Superstructure Work)																										
												█																																									
													█															(Road Work, etc.)																									
																						█		(Cleaning, etc.)																													
																				█		(Total 27.5 months)																															

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Category	Item	Value
1. 1st Quarter	Jan 2017	100
	Feb 2017	100
2. 2nd Quarter	Mar 2017	100
	Apr 2017	100
3. 3rd Quarter	May 2017	100
	Jun 2017	100
4. 4th Quarter	Jul 2017	100
	Aug 2017	100
5. Total	Q1	200
	Q2	200
6. Total	Q3	200
	Q4	200
7. Total	Q1-2	400
	Q3-4	400
8. Total	Q1-4	800
	Q1-4	800

Category	Item	Value
1. 1st Quarter	Jan 2017	100
	Feb 2017	100
2. 2nd Quarter	Mar 2017	100
	Apr 2017	100
3. 3rd Quarter	May 2017	100
	Jun 2017	100
4. 4th Quarter	Jul 2017	100
	Aug 2017	100
5. Total	Q1	200
	Q2	200
6. Total	Q3	200
	Q4	200
7. Total	Q1-2	400
	Q3-4	400
8. Total	Q1-4	800
	Q1-4	800

### Major Undertakings to be taken by the Government of Cambodia

#### 1. Specific obligations of the Government of Cambodia which will not be funded with the Grant

##### (1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	Within 1 month after G/A	MPWT	74,000	
2	To issue Authorization to Pay (A/P) to a bank in Japan (the Agent Bank) for the payment to the consultant	Within 1 month after the signing of contract	MPWT		
3	To allocate the budget of investigation and removal of UXO and Mines in all construction areas	Prior to signing of G/A	MPWT	600,000	
4	To negotiate and coordinate with land owner or management authorities etc. for temporary construction yard, stock yard, borrow pit and disposal site near the Project area	Before notice of the bidding document	MPWT		
5	To secure and clear the temporary construction yard, stock yard, borrow pit and disposal site near the Project area	Before start of the construction	MPWT	632,000	
6	To obtain the planning, zoning, building permit	before notice of the bidding document	MPWT		
7	To complete the investigation and removal of UXO and Mines in all construction areas	Prior to bidding	MPWT		
8	To relocate utilities (water line: 2,471m, electric pole: 56 Nos., buried telecommunication line: 798m and telecommunication pole: 28 Nos.)	Prior to bidding	MPWT	191,000	
9	To secure the necessary budget and implement land acquisition and resettlement (including preparation of resettlement sites), and compensation with full replacement cost in accordance with RAP	Before start of the construction	MEF /MPWT	210,000	
10	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	Until land acquisition and resettlement complete	MPWT		
11	To submit Project Monitoring Report (with the result of Detailed Design)	Before preparation of bidding documents	MPWT		

## (2) During implementation of the Project

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Supplier(s)	with 1 month after the signing of the contract(s)	MPWT		
2	To bear the following commissions to a bank of Japan for the banking services based upon B/A				
	1) Advising commission of A/P	with 1 month after the signing of the contract(s)	MPWT		
	2) Payment commission for A/P	Every payment	MPWT		
3	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country and so assist the Contractor(s) with internal transportation therein	During the project	MPWT		
	1) Tax exemption and customs clearance of the products at the port of disembarkation	during the Project	MEF		
	2) To assist Contractor (s) with internal transportation from the port of disembarkation to the project site	during the Project	MPWT		
4	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MEF /MPWT		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted	during the Project	MPWT		
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for implementation of the Project	during the Project	MPWT		
7	To submit Project Monitoring Report	Every month	MPWT		
8	To support to obtain the related permits necessary for the implementation of the Project	during the Project	MPWT		
9	To provide facilities for distribution of electricity and other incidental facilities necessary for implementation of the Project outside the sites	during the Project	MPWT		
10	To coordinate with Police for traffic diversion and implement traffic control to secure traffic and work zone safety	during the Project	MPWT		
11	To implement EMP and EMoP	during the Project	MPWT		
12	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the Project	MPWT		
13	To implement RAP (livelihood restoration program, if needed)	for a period based on livelihood restoration program	MPWT		

14	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report - Period of the monitoring may be extended if affected persons' livelihoods are not sufficiently restored, Extension of the monitoring will be decided based on agreement between MPWT and JICA	untill the end of livelihood restoration program (In case that livelihood restoration program is provided)	MPWT		
15	To remove the existing boundary wall of Pagoda, located at left bank of the Preck Chhloung Bridge, gantry entrance gates and all other disturbed items such as trees, etc. including to rebuild the same at new locations	During or after completerion of the Project	MPWT		

### (3) After the Project

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To submit Project Monitoring Report (Final)	Within 1 month after signing of Certificate of Completion for the works under the contracts	MPWT		
2	To submit a report concerning completion of the Project	Within 6 months after completion of the Project	MPWT		
3	To implement EMP and EMOp	For a period based on EMP and EMOp	MPWT		
4	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between MPWT and JICA.	For 3 years after the Project	MPWT		
5	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	MPWT	143,500 annual	
6	To demolish and remove parts of existing bridge such as totally 9 piers of Peam Te Bridge and Chhloung Bridge	In the first dry season after completion of the Project	MPWT	225,000	
7	To cooperation for facilitating the post evaluation	During post evaluation	MPWT		

**2. Other obligations of the Government of Cambodia funded with the Grant**

NO	Items	Deadline	Amount (Million Japanese Yen)*
1	To construct roads/bridges (or To procure equipment) - Reconstruction of the roads - Reconstruction of the bridges To conduct the following transportation a) Marine(Air) transportation of the products from Japan and the third country to the recipient country b) Internal transportation form the port of disembarkation to the Project site		/
2	To implement detailed design, bidding support and construction supervision (Consultant Service)		
Total			

\* The Amount is provisional. This is subject to the approval of the Government of Japan.


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**Project Monitoring Report**  
**on**  
**Project for Urgent Replacement of Bridges in Flood-Prone Areas**  
**Grant Agreement No. XXXXXXXX**  
 20XX, Month

**Organizational Information**

<b>Signer of the G/A (Recipient)</b>	_____ Person in Charge (Designation) _____ Contacts      Address: _____ Phone/FAX: _____ Email: _____
<b>Executing Agency</b>	_____ Person in Charge (Designation) _____ Contacts      Address: _____ Phone/FAX: _____ Email: _____
<b>Line Ministry</b>	_____ Person in Charge (Designation) _____ Contacts      Address: _____ Phone/FAX: _____ Email: _____

**General Information:**

<b>Project Title</b>	
<b>E/N</b>	Signed date: Duration:
<b>G/A</b>	Signed date: Duration:
<b>Source of Finance</b>	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

*M/2*

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**1: Project Description**

**1-1 Project Objective**

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**1-2 Project Rationale**

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

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**1-3 Indicators for measurement of "Effectiveness"**

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr )	Target (Yr )
Qualitative indicators to measure the attainment of project objectives		

**2: Details of the Project**

**2-1 Location**

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

**2-2 Scope of the work**

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)
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**2-3 Implementation Schedule**

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

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**2-4 Obligations by the Recipient**

**2-4-1 Progress of Specific Obligations**

See Attachment 2.

**2-4-2 Activities**

See Attachment 3.

**2-4-3 Report on RD**

See Attachment 11.

**2-5 Project Cost**

**2-5-1 Cost borne by the Grant(Confidential until the Bidding)**

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original <sup>1),2)</sup> <i>(proposed in the outline design)</i>	Actual
1.				
Total				

Note: 1) Date of estimation:  
 2) Exchange rate: 1 US Dollar = Yen

**2-5-2 Cost borne by the Recipient**

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original <sup>1),2)</sup> <i>(proposed in the outline design)</i>	Actual
1.				

- Note: 1) Date of estimation:  
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

**2-6 Executing Agency**

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

<b>Original</b> (at the time of outline design) name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
<b>Actual</b> (PMR)

**2-7 Environmental and Social Impacts**

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
  - The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
  - Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

**3: Operation and Maintenance (O&M)**

**3-1 Physical Arrangement**

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

<b>Original</b> (at the time of outline design)
<b>Actual</b> (PMR)

**3-2 Budgetary Arrangement**

- Required O&M cost and actual budget allocation for O&M

<b>Original</b> (at the time of outline design)
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Actual (PMR)

**4: Potential Risks and Mitigation Measures**

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

**Assessment of Potential Risks (at the time of outline design)**

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

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	Contingency Plan (if applicable):
<b>Actual Situation and Countermeasures</b> (PMR)	

**5: Evaluation and Monitoring Plan (after the work completion)**

**5-1 Overall evaluation**

Please describe your overall evaluation on the project.

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**5-2 Lessons Learnt and Recommendations**

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

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**5-3 Monitoring Plan of the Indicators for Post-Evaluation**

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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Indicator	Description of Risk

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Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant  
Appendix - Photocopy of Contractor's Progress Report (if any)
  - Consultant Member List
  - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/ Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
8. Pictures (by JPEG style by CD-R) (PMR (final) only)
9. Equipment List (PMR (final) only)
10. Drawing (PMR (final) only)
11. Report on RD (After project)

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## Monitoring sheet on price of specified materials

## 1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C-D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

## 2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st	2nd	3rd	4th	5th	6th
		● month, 2015	● month, 2015	● month, 2015			
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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-  
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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)  
(Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

Code	(A)D&P	(B)D&P	(C)D&P
1. Health and Accidents Code	(A)D&P	(B)D&P	(C)D&P
2. Insurance Code	(A)D&P	(B)D&P	(C)D&P
3. Finance Code	(A)D&P	(B)D&P	(C)D&P
4. Business Code	(A)D&P	(B)D&P	(C)D&P
5. Agriculture Code	(A)D&P	(B)D&P	(C)D&P
6. Industry Code	(A)D&P	(B)D&P	(C)D&P
7. Commerce Code	(A)D&P	(B)D&P	(C)D&P
8. Services Code	(A)D&P	(B)D&P	(C)D&P
9. Other Code	(A)D&P	(B)D&P	(C)D&P
10. Total	(A)D&P	(B)D&P	(C)D&P

(Y0-6) Health and Accidents Code (A)D&P, (B)D&P, (C)D&P

(Y0-6) Insurance Code (A)D&P, (B)D&P, (C)D&P



## Environmental Check List

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) N (b) N (c) N (d) N	(a)(b)(c) According to Cambodian environmental law, a EIA report for this project is not required. (d) The other permissions related to environmental management are not required.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Y (b) Y	(a) Stakeholder meetings were conducted in October, 2016 and March, 2017, and the understanding has been obtained from local stakeholders. (b) The results of interview surveys to the local people and stakeholder meetings with the other relevant organizations were reflected in the mitigation measures for environmental impacts during construction phase and Abbreviated Resettlement Action Plan (ARAP).
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) Y	(a) Several alternative plans on the bridge locations have been examined with social and environmental considerations at the preparatory study.
2 Pollution Control	(1) Air Quality	(a) Is there a possibility that air pollutants emitted from the project related sources, such as vehicles traffic will affect ambient air quality? Does ambient air quality comply with the country's air quality standards? Are any mitigating measures taken? (b) Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse?	(a) - (b) -	(a)(b) Continuous monitoring of the air quality is not conducted. It is unknown whether the air quality exceeds the environmental standards or not. However, because there are no air pollutant sources except for the target roads, the air quality may meet the standards.
	(2) Water Quality	(a) Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? (b) Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater? (c) Do effluents from various facilities, such as parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is	(a) N (b) N (c) N	(a) Turbid water will generate in the construction works. The turbid water will contaminate rivers and streams around the target bridges temporarily. (b) Impact on water resources of runoff from road surface is unlikely to occur. (c) Development of parking or service areas which generate waste water in operation phase are not included in the project.

		there a possibility that the effluents will cause areas not to comply with the country's ambient water quality standards?		
	(3) Wastes	(a) Are wastes generated from the project facilities, such as parking areas/service areas, properly treated and disposed of in accordance with the country's regulations?	(a) N	(a) Development of parking or service areas are not included in the project.
	(4) Noise and Vibration	(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?	(a) N	(a) The noise level on both sides of the target bridges exceed the environmental standards at present. However, because temporary bridges with metal will be changed to PC bridges by the project implementation, noise and vibration level caused by vehicle driving on the bridges will be reduced.
3 Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a) There are no protected areas in the site and project affected areas.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (d) Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock? (e) Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? (f) In cases the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments?	(a) N (b) N (c) N (d) Y (e) N (f) N	(a) There are no ecological valuable habitats in and around the site. (b) The habitats of endangered species have not been identified in and down the site. (c) Significant ecological impact will not occur. (d) The construction works is likely to have impacts on migration of aquatic life. To minimize the impact, the proper construction method will be considered. (e)(f) The project will not cause destruction of forest and poaching because of bridge construction works along existing road in urban and agricultural area.

	(3) Hydrology	(a) Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows?	(a) N	(a) Alteration of topographic features and tunnel construction are not included in the project.
	(4) Topography and Geology	(a) Is there any soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed? (b) Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides? (c) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?	(a) N (b) N (c) N	(a)(b) Small-scale cutting and filling works are included in the construction. However, there are no steep slope areas to occur slope failures or landslides in and around the site. (c) Adequate cutting and filling prevent accidental and sufficient soil runoff.
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Are the compensations going to be paid prior to the resettlement? (e) Are the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?	(a) Y(b) Y(c) Y(d) Y(e) Y(f) Y(g) Y(h) Y(i) Y(j) Y	(a) The project is likely to require involuntary resettlement of about 17 households or 77 persons.(b) Explanations of basic policy on compensation and resettlement assistance have been conducted in the local stakeholder meetings.(c) The Abbreviated Resettlement Action Plan (ARAP) involves the result of socioeconomic survey including the inventory of losses owned by Project Affected Persons (PAPs), compensation with replacement costs and livelihood restoration plan.(d) The compensations will be paid prior to the resettlement.(e) The compensation policies are mentioned in the ARAP.(f) The ARAP considers particular attention to vulnerable people such as owners of small shops.(g) The agreement formation has been conducted in a series of the stakeholder meetings.(h) The organizational framework according to the ARAP has been established to properly implement resettlement. The capacity and budget will be secured to implement the plan.(i) The monitoring and evaluation are mentioned in the ARAP.(j) The grievance redress mechanism is mentioned in the ARAP.

	(2) Living and Livelihood	<p>(a) Where roads are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts?</p> <p>(b) Is there any possibility that the project will adversely affect the living conditions of the inhabitants other than the target population? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>(c) Is there any possibility that diseases, including infectious diseases, such as HIV will be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p> <p>(d) Is there any possibility that the project will adversely affect road traffic in the surrounding areas (e.g., increase of traffic congestion and traffic accidents)?</p> <p>(e) Is there any possibility that roads will impede the movement of inhabitants?</p> <p>(f) Is there any possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference?</p>	<p>(a) N (b) N (c) N (d) Y (e) Y (f) N</p>	<p>(a)(b) Because of replacement project of existing bridges in developed area, the project will not cause significant adverse changes and impacts on the livelihood of the local people and road traffic in operation phase.</p> <p>(c) Because of improvement project of existing arterial road in developed area, mass immigration from other areas is unlikely to occur.</p> <p>(d) Traffic congestion and control will be inevitable in construction phase. The proper construction planning and traffic management will mitigate the impacts.</p> <p>(e) Impacts on movement of inhabitants will be inevitable in construction phase. The proper construction planning and traffic management will mitigate the impacts.</p> <p>(f) Because the project will not include elevated structures, impact on sun shading and radio interference will not occur.</p>
4 Social Environment	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) N	(a) There is no important heritage in the site and project affected areas. However, a fence of Preah Chan Reachea Pagoda located at left bank of Prek Chhloung bridge (NR73) will be partially removed due to land acquisition for the ROW.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) N	(a) There are no valuable landscape sites in and around the project sites.
	(5) Ethnic Minorities and Indigenous Peoples	<p>(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?</p> <p>(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources to be respected?</p>	<p>(a) N (b) N</p>	(a)(b) The project site is not area where ethnic minorities and indigenous people having unique culture and lifestyle are living.

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	(6) Working Conditions	<p>(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?</p> <p>(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?</p> <p>(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?</p> <p>(d) Are appropriate measures being taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?</p>	<p>(a) Y (b) Y (c) Y (d) Y</p>	<p>(a) Construction works will comply with the laws and ordinances associated with the working conditions.</p> <p>(b) Because construction works on higher ground are included, tangible safety considerations to prevent labor accidents will be involved in the project.</p> <p>(c)(d) Because the construction works are conducted along existing arterial road in agricultural or urban area, health program and safety training to construction workers, and considerations to local residents will be included in the environmental management plan.</p>
5 Others	(1) Impacts during Construction	<p>(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>(a) Y (b) Y (c) Y</p>	<p>(a) The adequate mitigation measures including coordination of construction time and methods, and monitoring plans to reduce impacts of pollution during the construction will be prepared.</p> <p>(b) The construction activities will not adversely affect the natural environment.</p> <p>(c) Because the construction works are conducted along existing arterial road in urban area, countermeasures against traffic jam will be included in the execution scheme.</p>
	(2) Monitoring	<p>(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>(b) What are the items, methods and frequencies of the monitoring program?</p> <p>(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>(a) Y (b) Y (c) Y (d) Y</p>	<p>(a) The monitoring plans mentioned in the preparatory survey report will be implemented during the construction and operation phase.</p> <p>(b)(c)(d) The preparatory survey report mentions monitoring plan including the methods and responsible agencies.</p>

6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation). (b) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).	(a) N(b) N	(a) Deforestation is not included in the project. (b) Relocation of existing power transmission lines will be limited in the right of way and has no serious environmental impacts.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed, if necessary (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) N	(a) Impacts to transboundary or global environmental issues will not occur.

- 1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.  
 In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).
- 2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

<p>(a) The project developer has conducted an environmental impact assessment (EIA) in accordance with the requirements of the host country's laws and regulations.</p> <p>(b) The project developer has conducted an EIA in accordance with the requirements of the host country's laws and regulations, and the results of the EIA are available to the public.</p> <p>(c) The project developer has conducted an EIA in accordance with the requirements of the host country's laws and regulations, and the results of the EIA are available to the public, and the project developer has taken appropriate measures to avoid, minimize, and compensate for adverse environmental impacts.</p>	<p>(a) Y</p> <p>(b) Y</p> <p>(c) Y</p>	<p>(a) Does the project developer have an environmental management plan (EMP) that addresses the environmental issues that may be associated with the project?</p> <p>(b) What are the main methods and procedures of the monitoring and reporting system?</p> <p>(c) Does the project developer have an environmental management system (EMS) that is integrated with the project's management system?</p> <p>(d) Are the project developer's environmental management system and procedures consistent with the requirements of the host country's laws and regulations?</p>	<p>(a) Y</p> <p>(b) Y</p> <p>(c) Y</p>
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## Environmental Monitoring Plan

Category	Environmental Item	Monitoring Item/ Parameter	Responsible Person and Organization	Location	Method	Frequency	
Pollution	Air pollution	<b>Construction Phase:</b> • Dust	Supervising Consultant Contractor	In and around construction site	Visual observation and interview to pedestrians	Visual observation: Daily Interview: Monthly or as needed	
		<b>Operation Phase:</b> • CO, PM10, PM2.5, NOx, SOx	MOE	Cities around target bridges	Instrumental analysis	1 time in dry season and 1 time in rainy season per year	
	Water pollution	<b>Construction Phase:</b> • Turbidity, pH, Dissolved Oxygen (DO) • Turbid water	Supervising Consultant Contractor	In and around construction site	Analysis using potable water quality meter  Visual observation	Water quality analysis: Weekly or as needed  Visual observation: Daily	
		<b>Operation Phase:</b> • Turbid water • Drainage conditions	Road Administrator	Around target bridges	Visual observation	During rainfall	
	Waste	<b>Construction Phase:</b> • Disposal methods of construction and general waste	Supervising Consultant Contractor	Construction site and disposal site	Visual observation and meeting with contractor	Visual observation: Daily Meeting: Monthly or as needed	
	Noise and vibration	<b>Construction Phase:</b> • Noise level • Vibration	Supervising Consultant Contractor	In and around construction site	Interview to residents and pedestrians Measurement using potable instrument	Interview: Monthly or as needed  Instrumental measurement: Weekly or as needed	
		<b>Operation Phase:</b> • Noise • Vibration	Road Administrator	Around target bridges	Interview to residents and pedestrians	1 time per year for 2 years after completion Total 2 times	
	Bottom sediment	<b>Construction Phase:</b> • Turbid water • Drainage conditions	Supervising Consultant Contractor	In and around construction site	Visual observation	During rainfall	
	Natural Environment	Ecosystem	<b>Construction Phase:</b> • Vegetation clearing works • Planting works • Sighting of Irrawaddy dolphin	Supervising Consultant Contractor	In and around construction site	Visual observation and meeting with contractor Collecting information from local people including fisherperson	Daily

Category	Environmental Item	Monitoring Item/ Parameter	Responsible Person and Organization	Location	Method	Frequency
	Hydrology	<b>Construction Phase:</b> • Soil runoff • Drainage conditions	Supervising Consultant Contractor	In and around construction site	Visual observation	During rainfall
Social Environment	Resettlement/ Land Acquisition	<b>Pre-Construction Phase:</b> • Progress of resettlement action plan	MPWT	Around target bridges and relocation sites	Site survey and meeting with PAPs	Monthly or as needed
	Poor people	<b>Pre-Construction Phase:</b> • Progress of resettlement action plan	MPWT	Around target bridges and relocation sites	Site survey and meeting with PAPs	Monthly or as needed
	Local economies, such as employment, livelihood, etc.	<b>Pre-Construction Phase:</b> • Progress of resettlement action plan	MPWT	Around target bridges and relocation sites	Site survey and meeting with PAPs	Monthly or as needed
		<b>Construction Phase:</b> • Local economic activities including fishery • Employment situation of unskilled labor	Supervising Consultant Contractor	In and around construction site	Site survey and interview to local people including fisherperson and unskilled labors	Monthly or as needed
	Land use and utilization of local resources	<b>Pre-Construction Phase:</b> • Progress of resettlement action plan	MPWT	Around target bridges and relocation sites	Site survey and meeting with PAPs	Monthly or as needed
	Water usage	<b>Construction Phase:</b> • Water channel conditions	Supervising Consultant Contractor	In and around construction site	Site survey and interview to water user	Monthly or as needed
	Existing social infrastructures and services	<b>Pre-Construction Phase:</b> • Relocation status of existing infrastructure facilities	MPWT	In and around construction site	Site survey and meeting with facility owners	Monthly or as needed
		<b>Construction Phase:</b> • Traffic congestion	Supervising Consultant Contractor	In and around construction site	Visual observation	Daily
	Misdistribution of benefits and damages	<b>Pre-Construction Phase:</b> • Progress of resettlement action plan	MPWT	Around target bridges and relocation sites	Site survey and meeting with PAPs	Monthly or as needed



Category	Environmental Item	Monitoring Item/ Parameter	Responsible Person and Organization	Location	Method	Frequency
	Cultural heritage	<b>Construction Phase:</b> • Removal or relocation works of religious structure and monument	Supervising Consultant Contractor	In and around construction site	Visual observation and meeting with contractor and local people	Visual observation: Daily Meeting: Monthly or as needed
		<b>Operation Phase:</b> • Utilization of access road to Preah Chan Reachea Pagoda	Local government	Preah Chan Reachea Pagoda	Interview to local people	Monthly or as need
	Working conditions (including occupational safety)	<b>Construction Phase:</b> • Workplace situations • Implementation status of accident prevention measures	Supervising Consultant Contractor	In and around construction site	Visual observation and meeting with contractor	Daily
Other	Accidents	<b>Construction Phase:</b> • Implementation status of accident prevention measures	Supervising Consultant Contractor	In and around construction site	Visual observation and meeting with contractor	Visual observation: Daily Meeting: Monthly or as needed
		<b>Operation Phase:</b> • Number of traffic accident	Road Administrator	Target road	Site survey and traffic accident data	Monthly or as needed for 2 years after completion

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Category	Sub-category	Item	Frequency	Method	Location	Notes
Other	Activities	Phase 1: Number of male residents	Yearly	Household Administration	Local Government	Phase 1: Number of male residents
		Phase 2: Improvement status of local government	Yearly	Community Development	Local Government	Phase 2: Improvement status of local government
Other	Working conditions (including occupational safety)	Construction Phase	Yearly	Construction	Local Government	Construction Phase
		Construction Phase	Yearly	Construction	Local Government	Construction Phase
Other	Activities	Phase 1: Number of male residents	Yearly	Household Administration	Local Government	Phase 1: Number of male residents
		Phase 2: Improvement status of local government	Yearly	Community Development	Local Government	Phase 2: Improvement status of local government
Other	Activities	Phase 1: Number of male residents	Yearly	Household Administration	Local Government	Phase 1: Number of male residents
		Phase 2: Improvement status of local government	Yearly	Community Development	Local Government	Phase 2: Improvement status of local government



**KINGDOM OF CAMBODIA**

**MINISTRY OF PUBLIC WORKS AND TRANSPORT**

**JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)**

**Draft Abbreviated Resettlement Action Planning**

**Preparatory Survey on the Project for Urgent  
Replacement of Bridge in Flood-Prone Areas in  
Kingdom of Cambodia**

**Submitted by**

**CTI ENGINEERING INTERNATIONAL CO., LTD.**

**JUNE 2017**

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**CURRENCY EQUIVALENTS**

Currency Unit	:	Riel (KHR)
	:	United States Dollar (USD)
KHR 4,000.00	=	USD 1.00

**ABBREVIATIONS**

AH	:	Affected Household
AP	:	Affected Person
ARAP	:	Abbreviated Resettlement Action Plan
DBST	:	Double Bituminous Surface Treatment
DMS	:	Detailed Measurement Survey
DP	:	Development Partner
DPWT	:	Department of Public Works and Transport
EA	:	Executing Agency
EMA	:	External Monitoring Agency
GDR	:	General Department of Resettlement
GMS	:	Greater Mekong Sub-region
HH	:	Household
IOL	:	Inventory of Losses
IRC	:	Inter-ministerial Resettlement Committee
IRP	:	Income Restoration Program
JBIC	:	Japan Bank for International Cooperation
JICA	:	Japan International Cooperation Agency
JICA Guidelines	:	JICA Guidelines for Environmental and Social Considerations (April 2010)
KRT	:	Kratie province
MAFF	:	Ministry of Agriculture, Forestry and Fisheries
MEF	:	Ministry of Economy and Finance
MDG	:	Millennium Development Goal
MLMUPC	:	Ministry of Land Management, Urban Planning, and Construction
MOE	:	Ministry of Environment
MOWRAM	:	Ministry of Water Resources and Meteorology
MPWT	:	Ministry of Public Works and Transport
NGO	:	Non-Government Organization
NR	:	National Road
PDEF	:	Provincial Department of Economy and Finance
PDPWT	:	Provincial Department of Public Works and Transport
PIB	:	Project Information Booklet
PMU	:	Project Management Unit
PMU-ES	:	Environmental Section of Project Management Unit
PRSC	:	Provincial Resettlement Sub-Committee
PRV	:	Prey Veng province
PRW	:	Provisional Road Width
RCS	:	Replacement Cost Study
RGC	:	Royal Government of Cambodia
RID	:	Road Infrastructure Department

ROW	:	Right-of-Way
SES	:	Socio-economic Survey
SHM	:	Stakeholder Meeting
TOR	:	Terms of Reference
WG	:	Working Group

**UNITS OF MEASUREMENT**

ha	:	hectare
kg	:	kilogram
km	:	kilometer
lm	:	linear meter
m	:	meter

**DEFINITION OF TERMS**

Affected person (AP)/ Affected household (AH)	: Refers to any person or persons, household, firm, private or public institution that, on account of changes resulting from the Project, will have its  (i) standard of living adversely affected; (ii) right, title or interest in any house, land (including residential, commercial, agricultural, forest and/or grazing land), water resources or any other moveable or fixed assets acquired, possessed, restricted or otherwise adversely affected, in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work or residence or habitat adversely affected, with or without displacement.  In the case of AH, it includes all members residing under one roof and operating as a single economic unit, who are adversely affected by a project or any of its components.
Abbreviated resettlement action plan (ARAP)	: This is a time-bound action plan with budget, setting out the resettlement objectives and strategies, entitlements, activities and responsibilities, and resettlement monitoring and evaluation.
Common/public property resources	: Mean all resources or assets that are held in communal or village ownership and include (but are not limited to) graves, burial grounds, wells, hand pumps and other affected drinking water sources, specimen trees, pagodas, churches and temples, shrines, religious symbols or sites, village ponds or community fishponds, schools, markets, community forest, community grazing land, irrigation canals and facilities, roads, paths, water supply lines and facilities, electricity lines and poles, and communication lines.
Compensation	: This is payment given in cash or in kind to AHs as replacement cost for assets, resources or income acquired or adversely affected by the project.
Cut-off date	: This refers to the date prior to which the occupation or use of the project area makes residents/users of the same eligible to be categorized as AHs. The cut-off date of the project coincides with the first day of the AH census and the inventory of losses (IOL) thereat was conducted on <b>13<sup>th</sup> October 2016</b> .  Persons not covered in the census are not eligible for compensation and other entitlements, unless they can show proof that  (i) they have been inadvertently missed out during the census and the IOL; or (ii) they have lawfully acquired the affected assets following completion of the census and the IOL, and prior to the conduct of the detailed measurement survey (DMS).

Detailed Measurement Survey (DMS)	: The DMS is a measuring activity to be conducted based on the approved detailed engineering drawings to measure and count all affected properties. This activity involves the finalization and/or validation of the results of the IOL, severity of impacts, and list of AHs earlier done during ARAP preparation. The final cost of resettlement will be determined after the DMS and updated RCS.
Entitlement	: Refers to a range of measures, such as compensation for loss of affected assets and assistance to be provided to the AHs depending on the type and severity of their losses.
Income restoration	: This involves the re-establishment of sources of income and livelihood of AHs.
Inventory of Losses (IOL)	: This is the process where all fixed assets (i.e., land used for residence, commerce, agriculture, including ponds; dwelling units; stalls and shops; secondary structures, such as fences, tombs, wells; standing crops and trees with commercial value; etc.) and sources of income and livelihood inside the PRW are identified, and their replacement costs calculated. The severity of impact on the affected assets, livelihood and productive capacity of the AHs are also determined.
Land acquisition	: Refers to the process whereby an individual, household, firm or private institution is compelled by the government through the Project's Executing Agency (EA) to alienate all or part of the land it owns or possesses to the ownership and possession of that agency for public purpose in return for compensation at replacement cost.
Provisional road width (PRW)	: It is the area which is required by the project or by the need to retain sites for future use for construction or for repair and maintenance.
Relocation	: This is the physical relocation of an AH from his/her pre-project place of residence and/or business.
Replacement cost	: The method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account.
Right-of way (ROW)	: ROW is the area, owned or still to be acquired, reserved for public use or for a government project.
Vulnerable group	: These are distinct groups of people who might suffer disproportionately or face the risk of being further marginalized by the effects of resettlement and specifically include: (i) households headed by women with dependents, (ii) disabled household heads with no other means of support, (iii) households falling under the generally accepted indicator for poverty, and (iv) children (younger than 18 years old) and the elderly (older than 60 years old) households who is without other means of support, and (v) landless household.

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## EXECUTIVE SUMMARY

1. The Kingdom of Cambodia is located in the Mekong delta region and the wide area of the country lies in low and flood-prone land. Cambodia has experienced two severe floods recently, in 2011 and 2013. The 2013 flood brought about huge damage. 188 people died, 1.7 million people injured and the total number of people evacuated reached 140 thousand. Many infrastructures such as roads and bridges were also damaged by the floods.

2. National Road 11 (NR11) and 73 (NR73) are Secondary National Roads functioning as an arterial for transportation of goods and daily commodities to the suburban areas. These roads serve the people of the areas that are located along the Mekong River and are prone to floods. There are many bridges along these roads. The Government of Cambodia (GOC) has been undertaking replacement/reconstruction of the bridges that are sub-standard (temporary Bailey bridge) and/or vulnerable to flood. At present, there are only seven bridges that are either sub-standard and/or vulnerable on NR11 and NR73. The replacement of these bridges will not only ensure safety, smooth and stable transportation and logistics in the area, but will also contribute in mitigating the potential risks from natural disaster.

3. To remedy the situation, the GOC made a request to the Government of Japan (GOJ) for a grant aid assistance to replace the seven bridges. The GOJ decided to conduct a preparatory survey on "the Project for the Urgent Replacement of Bridges in Flood-prone Areas in the Kingdom of Cambodia" and examine the viability of the project and entrusted the survey to Japan International Cooperation Agency (JICA).

4. Generally, the project required for both side of the replacement bridges, which is called Provisional Road Width (PRW). The PRW of the project is mostly within ROW which is called state land and needs to acquire some private land for the project implementation. In terms of such land acquisition and resettlement of the project, the abbreviated resettlement action plan (ARAP) is required to be prepared based on the Cambodian Laws and Regulations and the JICA Guidelines for Environmental and Social Considerations (2010) (hereinafter referred to as "the JICA Environmental Guidelines"). The ARAP has been prepared based on census and inventory of losses (IOL), baseline socio-economic survey (SES) and its main contents include scope of land acquisition and resettlement, compensation policy, assistance and allowances, entitlement matrix, role and responsibility, grievance redress mechanism and relocation strategy. During the ARAP preparation from October to November 2016, a number of Stakeholder Meetings (SHM) were also conducted to allow them understand about the Project.

5. For the project, there are three replacement bridges. The two replacement bridges are located in Kratie province, namely Peam Te and Prek Chhlong along NR73 and the other one is located in Prey Veng province, namely Ba Baong along NR11 (see Figure 1-1 and Figure 1-11 for the Project location map). The study has focused on both sides of the three replacement bridges. Table 1-1 shows affected areas and number of project affected households (AHs).

Table 1-1: Province, district/town located by the Bridge and Number AHs

Bridge/Commune	Total (AHs)
<b>1. Peam Te Bridge</b>	<b>17</b>
1.1 Commune: Bos Leav	10
1.2 Sangkat: Roka Kandal	7

Bridge/Commune	Total (AHs)
<b>2. Prek Chhlong Bridge</b>	<b>8</b>
2.1 Commune: Chhlong	1
2.1 Commune: Praek Saman	7
<b>3. Ba Baong Bridge</b>	<b>6</b>
3.1 Commune: Ba Baong	6
<b>Total (the Project)</b>	<b>31</b>

Source: Survey in October-2016

6. Stakeholders of the Project include provincial/district, commune/village officials, local people along the PRW of the Replacement Bridges, and managers and staff of PDPWT (See Table 8-1). Participation provides for the opportunity and the process by which stakeholders influence and become co-responsible for development initiatives and decisions that affect them. Through participation, the needs and priorities of the local population are solicited; the adverse social impacts of the Project, including the corresponding mitigating measures, are collectively identified; and the commitment and feeling of ownership over the Project is engendered among the AHs.

7. The focus of the resettlement policy is to compensate AHs for their lost assets at replacement cost, and provide with rehabilitation assistance to ensure improvement, or at least maintaining their living standards and income to the level they would have without the Project. The cut-off date is the first day of the IOL, which is on **13<sup>th</sup> October 2016**.

8. The estimated costs for resettlement and land acquisition based on the RCS and the IOL during the project preparatory study is USD 669,756.98, which includes cash compensation and assistance for USD 567,590.67, external monitoring and income restoration of USD 45,407.25, administration cost of 5% equivalent to USD 28,379.53, and contingency of 5% or equivalent to USD 28,379.53. The Government will ensure timely provision of funds for resettlement costs and will meet any unforeseen obligations in excess of the resettlement budget in order to satisfy resettlement objectives (*Appendix 5: Reference Tables for Resettlement Budget Calculation*). The resettlement estimated cost will be updated during the resettlement implementation based on the Detailed Measurement Survey (DMS) and the RCS.



**1 INTRODUCTION**

**1.1 Background**

1. The Kingdom of Cambodia is located in the Mekong delta region and the wide area of the country lies in low and flood-prone land. Cambodia has experienced two severe floods recently, in 2011 and 2013. The 2013 flood brought about huge damage, 188 people died, 1.7 million people injured and the total number of people evacuated reached 140 thousand. Many infrastructures such as roads and bridges were also damaged by the floods.

2. National Road 11 (NR11) and 73 (NR73) are Secondary National Roads functioning as an arterial for transportation of goods and daily commodities to the suburban areas. These roads serve the people of the areas that are located along the Mekong River and are prone to floods. There are many bridges along these roads. The Government of Cambodia (GOC) has been undertaking replacement/reconstruction of the bridges that are sub-standard (temporary Bailey bridge) and/or vulnerable to flood. At present, there are only seven bridges that are either sub-standard and/or vulnerable on NR11 and NR73. The replacement of these bridges will not only ensure safety, smooth and stable transportation and logistics in the area, but will also contribute in mitigating the potential risks from natural disaster.

3. To remedy the situation, the GOC made a request to the Government of Japan (GOJ) for a grant aid assistance to replace the seven bridges. The GOJ decided to conduct a preparatory survey on "the Project for the Urgent Replacement of Bridges in Flood-prone Areas in the Kingdom of Cambodia" and examine the viability of the project and entrusted the survey to Japan International Cooperation Agency (JICA).

**1.2 Resettlement Plan**

4. Generally, the project required for both side of the replacement bridges, which is called Provisional Road Width (PRW). The PRW of the project is mostly within ROW which is called state land and needs to acquire some private land for the project implementation. In terms of such land acquisition and resettlement of the project, the abbreviated resettlement action plan (ARAP) is required to be prepared based on the Cambodian Laws and Regulations and the JICA Guidelines for Environmental and Social Considerations (2010) (hereinafter referred to as "the JICA Environmental Guidelines"). The ARAP has been prepared based on census and inventory of losses (IOL), baseline socio-economic survey (SES) and its main contents include scope of land acquisition and resettlement, compensation policy, assistance and allowances, entitlement matrix, role and responsibility, grievance redress mechanism and relocation strategy. During the ARAP preparation from October to November 2016, a number of Stakeholder Meetings (SHM) were also conducted to allow them understand about the Project.

**1.3 Project Location and Impact Areas**

5. For the project, there are three replacement bridges. The two replacement bridges are located in Kratie province, namely Peam Te and Prek Chhloung along NR73 and the other one is located in Prey Veng province, namely Ba Baong along NR11 (see Figure 1-1) and Figure 1-1 for the Project location map). The study has focused on both sides of the three replacement bridges. Table 1-1 shows affected areas and number of project affected households (AHs).



**Figure 1-1: Ba Baong Bridge Location Map**



**Figure 1-2: Peam Te and Chhloung Bridge Location Map**

Table 1-1: Province, district/town located by the Bridge and Number AHs

Bridge/Commune	Total (AHs)
<b>1. Peam Te Bridge</b>	<b>17</b>
1.1 Commune: Bos Leav	10
1.2 Sangkat: Roka Kandal	7
<b>2. Prek Chhloung Bridge</b>	<b>8</b>
2.1 Commune: Chhlong	1
2.1 Commune: Praek Saman	7
<b>3. Ba Baong Bridge</b>	<b>6</b>
3.1 Commune: Ba Baong	6
<b>Total (the Project)</b>	<b>31</b>

Data source: Project Survey conducted in October 2016

1.4 Measures to Minimize Impacts

6. Measures to reduce resettlement impacts include the following:

- (i) Alignment of the bridges and its road accesses have been carefully discussed to avoid and minimize any form of land acquisition and resettlement as much as possible.
- (ii) During the discussion of the alignment, paying much attention to minimize new access road construction as much as possible and to use of existing roads, to avoid and reduce land acquisition and resettlement

2 LEGAL AND POLICY FRAMEWORK

7. Cambodia has experienced severe social, economic, and political turmoil during the last quarter century. Before the Khmer Rouge came to power in 1975, private land ownership was widespread and governed by the Cambodia Civil Code of 1920. Under the Khmer Rouge from 1975 to 1979 however, private property was abolished and all records were destroyed. After the said regime, the new government introduced usufruct rights to facilitate orderly occupation by people returning to urban areas, of vacant land and structures. However, all lands in Cambodia remained under the property of the state until private ownership on residential land of maximum 2,000m<sup>2</sup> was restored in 1989. The current legislations governing land ownership is the Land Laws of October 1992 and of August 2001, which recognize claims to land made after the downfall of the Khmer Rouge in 1979. In this background, the fundamental system for "resettlement", which are i) land management system, ii) policy and system for land acquisition, illegal occupation, and resettlement, and iii) methodology to fill up the gap between Development Partners' (DPs') policy on resettlement and the Cambodian laws and regulations related to resettlement, are still improving. Therefore, compromise between them is necessary in terms of dealing with resettlement issues caused by development projects.

2.1 Legal and Policy Framework in Cambodia

2.1.1 Relevant Laws

(a) 1993 Constitution

8. The 1993 Constitution of Cambodia has established one governing principle in Article 44 pertaining to land acquisition.

9. Article 44 states that "All persons, individually or collectively, shall have the right to ownership. Only Khmer legal entities and citizens of Khmer nationality shall have the right to own land. Legal private ownership shall be protected by law. The right to confiscate properties from any persons shall be exercised only in the public interest as provided for under the law and shall require fair and just compensation in advance."

(b) 2001 Land Law

10. The rights to land and property in Cambodia are governed by the 2001 Land Law, which are primarily based on the provisions of the 1993 Constitution. The law defines the scope of ownership of immovable properties, such as land, trees and fixed structures.

11. The Land Law, Article 5, states that "No person may be deprived of his ownership, unless it is in the public interest. Any ownership deprivation shall be carried out in accordance with the governing procedures provided by law and regulations, and after the payment of fair and just compensation in advance."

12. Other provisions of the Land Law that are relevant to land acquisition, compensation and resettlement include:

- Only legal possession as provided by law can be transformed to land ownership. (Article 6)
- Any regime of ownership of immovable property prior to 1979 shall not be recognized. (Article 7)
- Only person or legal entities of Khmer nationality are entitled to own land in Cambodia; or to buy or sell land. (Article 8, 66)
- Article 15 states that "the following properties are included as public properties of state and public legal entities: a) any property that has a natural origin, such as forests, courses and banks of navigable and floatable rivers or natural lakes and seashores; b) that is made available for public use such as quays of harbors, port, railways, railways station and airports; or, c) any property which is made available, either in its natural state or after development, for public use such as roads, tracks, oxcart ways, pathways, gardens or public parks and reserved lands."
- Article 18 states that "the following are null and void and cannot be made legal in any form whatever: a) any entering into possession of public properties of State and public legal entities and any transformation of possession of private properties of State into ownership rights that was not pursuant to the legal formalities and procedures that have been stipulated prior to that time, irrespective of the date of creation of possession or transformation; d) any entering into possession of private properties of State, through any means, that occurs after this law comes into effect".
- Article 19 states that "any persons whose land title or factual circumstance fall within the scope of article 18 of this law shall not have the right to claim compensation or reimbursement of expenses paid for the maintenance or management of immovable property that was illegally occupied. Any illegal and intentional of fraudulent acquisition of public properties of state or of public legal

entities shall be penalized pursuant to article 259 of this law. The penalties shall be doubled where any occupation of public properties because damages or delay to works undertaken in the general interest, especially the occupation of roadway reserves<sup>1</sup>.

- Ownership of immovable properties described in **Article 25** is granted by the state to indigenous minorities<sup>1</sup> as collective ownership. This collective ownership includes all of the rights and protections as enjoyed by private owners. The exercise of collective ownership rights shall be subject to the responsibility of the traditional authorities and decision-making mechanisms of the indigenous community, according to their customs and subject to the laws of general enforcement related to immovable property such as *the law on environmental protection*. (**Article 26**)
- No authority outside the community may acquire any rights to immovable properties belonging to the indigenous community. (**Article 28**)
- Persons with legally valid possession of land for five years (at the time the law came into effect) are allowed to be registered as the owner of the land (**Article 30**). Persons who (at the time the law came into effect) held legal possession but had not yet completed the five years were allowed to remain in possession until they were eligible to be registered as the owner. (**Article 31**)
- Any beginning of occupation for possession shall cease when this law comes into effect (**article 29**). After this law comes into force, any new occupant with title to an immovable property belonging to the public bodies or private persons shall be considered as illegal occupant and shall be subject to the penalties provided in **Article 259** of this Law. (**Articles 34**)
- **Article 38** states that "*in order to transform into ownership of immovable property, the possession shall be unambiguous, non-violent, and notorious to the public, continuous and in good faith*".
- Landless people may apply for land for residential and subsistence farming purposes at no cost, as part of a social land concessions scheme. The concessionaire may obtain ownership of this land after fulfilling conditions set out in a separate *Sub-Decree on Social Land Concessions*. (**Articles 50, 51**).

**(c) Expropriation Law Dec. February 2010** - procedures for acquiring private properties for national or public interest

13. **Article 2:** the law has the following purposes: (i) ensure reasonable and just deprivation of a legal right to ownership of private property; (ii) ensure payment of reasonable and just prior compensation; (iii) serve the public and national interests; and (iv) development of public physical infrastructure.
14. **Article 7:** Only the state may carry out an expropriation for use in the public and national interests. Expropriation may only be carried out for the implementation of projects stipulated in **Article 5** of this law.
15. **Article 8:** The state shall accept the purchase of the remaining part of the real property left over from an expropriation at a reasonable and just price at the request of the owner of land/or the

<sup>1</sup> As per Article 23 of the Land Law, "*An indigenous community is a group of people that resides in Cambodia whose members manifest ethnic, social, cultural and economic unity and who practice a traditional lifestyle, and who cultivate the lands in their possession according to the customary rules of collective use.*"

holder of rights in the expropriated real property, if he is no longer able to live near the expropriated scheme or build a residence or conduct any business.

16. **Article 12:** An Expropriation Committee shall be established and headed by a representative from the MFF and composed of representatives from relevant ministries and institutions. The organization and functioning of the expropriation committee shall be determined by a sub-decree.

17. **Article 16** states that "Prior to make any expropriation project proposal, the Expropriation Committee shall conduct a public survey by recording of a detailed description of all entitlements of the owners and/or of the holder of real right to immovable property and other properties subject to compensation as well as recording of all relevant issues.

18. In conducting the survey, the Expropriation Committee shall organize public consultations at the Capital, Municipal-Provincial, and District-Khan authority levels with Commune/Sangkat councils and Village or community representative to be affected by the expropriation to provide specific and concise information and collect inputs from all stakeholders regarding the proposed basic public infrastructure project.

19. In order to set a dateline for the expropriation or relocation or compensation, the Expropriation Committee shall conduct a dateline interview with all concerned parties about the issues of immovable property to be affected by the public physical infrastructure project.

20. Within 30 (thirty) working days after the completion of the survey, the Expropriation Committee shall produce a report with recommendations and submits it to the Royal Government for approval."

21. **Article 22:** Stipulates the amount of compensation to be paid to the owner of and/or holder of rights in the real property, which is based on the market value of the real property or the replacement cost as of the date of the issuance of the *Prakas* on the expropriation scheme. The market value or the replacement cost shall be determined by an independent commission or agent appointed by the expropriation committee.

**2.1.2 Other Relevant Regulations**

22. The private ownership of land was re-established in 1989, and confirmed in *the 2001 Land Law (Article 4)*. Cambodians are able to register the land they occupy with the local Cadastral Administration Office, whereupon a certificate of land title is granted. Issuing land titles is a lengthy process and most offices have a major backlog of applications. People are given a receipt and until the official title deed is issued, this receipt is accepted as a proof of real occupant of the land for land purpose or sale.

23. The present legal status of land use in Cambodia can be classified as follows:

- (i) **Privately owned land with title:** The owner has official title to land, and both owner and the Cadastral Administration Office have a copy of the deed.
- (ii) **Privately owned land without title:** The owner has made an application for title to land, and is waiting for the issuance of a title deed. The Cadastral Administration Office recognizes the owner.
- (iii) **Land use rights certified by the Government:** In this case, a receipt for long-term land use has been issued. This land use right is recognized by the Cadastral Administration Office.
- (iv) **Lease land:** The Government or private owners lease the land, usually for a short period. There is provision for the owner to reclaim land if it is needed for development.

- (v) **Non-legal occupation:** The user has no land use rights to State land that he occupies or uses. The Cadastral Administration Office does not recognize the use of this land.

24. **Sub-Decree on Social Land Concession, March 2003** - provides for allocations of free private state land to landless people of residential or family farming, including the replacement of land lost in the context of involuntary resettlement.

25. **Prakas No.6**, entitled "Measures to Crack Down on Anarchic Land Grabbing and Encroachments", sets ROW for road and railway. In support of this *Prakas*, MEF on 6 April 2000 issued *Decree No.961* prohibiting compensation for structures and other assets located in the ROWs. Some Road dimensions are modified by the *Sub-decree No.197* adopted on 23 November 2009 on to Management of ROW along the national road and railway in Cambodia.

**Table 2-1: Road and Railways ROW Dimensions**

Road Category	ROW Dimensions under Prakas No.06	ROW Dimensions under Sub-decree No.197
NR-1, 4, and 5	30 m from the centreline	30 m from the centreline
Other 1-digit NRS	25 m from the centreline	30 m from the centreline
2-digit NRS	25 m from the centreline	25 m from the centreline
Provincial roads	20 m from the centreline	not specified
Commune roads	15 m from the centreline	not specified
Railway outside city, province and crowned place	30 m from the centreline	30 m from the centreline
Railways in forest area	100 m from the centreline	100 m from the centreline

Source: JICA Study Team

**2.1.1 JICA's Policy on Involuntary Resettlement**

26. The policy provisions on involuntary resettlement of JICA are shown in the JICA Environmental Guidelines. And item 3 of Article 2.6 in this guideline describes that "JICA confirms that projects do not deviate significantly from the World Bank's Safeguard Policies". Item 2 of Article 1.6, "Requirement of project proponents" of the JICA Environmental Guidelines describes that involuntary resettlement in case of Category A project must be fulfil Article 7, "Involuntary Resettlement" of Annex 1 "Environmental and social consideration required for intended project": "it is desirable that the resettlement action plan include elements laid out in the World Bank Safeguard Policy, OP. 4.12, Annex A".

**2.2 Policy Gap Analysis**

27. Law and regulation framework on resettlement and land issues are still in the stage of development in Cambodia, and some implementation documents and institutions are not yet prepared completely, however, RGC understands such situation and Development Partners' safeguard policies, and considers supplemental measures and assistance in ARAP on a case by case.

28. Thus, in terms of practical operation, there is not so much crucial gap between Cambodian country system and JICA Guidelines' concept and requirements (see Table 2-2). Some other discussing points which are not mentioned clearly or concretely in Cambodian country system are also considered based on JICA Guidelines, ARAP, and other relevant documents to fulfil gaps.

**Table 2-2: Policy Gap Analysis between the JICA Environmental Guidelines and Cambodia's Country System (Land Acquisition and Resettlement)**

No.	The JICA Environmental Guidelines with World Bank Safeguard Policy	Domestic Law & Regulations and Its Gap	Countermeasures for Filling Gaps
1.	Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.	N/A	Based on the JICA Environmental Guidelines, land acquisition and resettlement shall be avoided and/or minimized during alignment decision process, structure planning, and any other implementation stages.
2.	When population displacement is unavoidable, effective measures to minimize impact and to compensate for losses should be taken	N/A	
3.	People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels.	N/A	Based on the JICA Environmental Guidelines, the ARAP secures "improve or at least restore their standard of living, income opportunities and production levels to pre-project levels"
4.	Compensation must be based on the full replacement cost as much as possible.	Article 22, Section 3 of Expropriation Law stipulates that market price or replacement cost shall be determined by an independent agency. However, the cases such as illegal encroachment are out of target.	Replacement Cost Survey (RCS) is conducted based on the JICA Environmental Guidelines, and referred as the unit price for compensation and any other assistances.
5.	Compensation and other kinds of assistance must be provided prior to displacement	Constitutions and Land Law stipulated "prior" compensation. Article 21 of Expropriation Law stipulates that the Expropriation Committee shall notify of the decision on expropriation and pay full compensation to the owner of and/or holder of real right to immovable property in advance prior to carrying out the expropriation.	Based on the JICA Environmental Guidelines, compensation, assistance, and relocation site have to be done and prepared prior to displacement.

No	The JICA Environmental Guidelines with World Bank Safeguard Policy	Domestic Law & Regulations and Its Gap	Countermeasures for Filling Gaps
6.	For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public	N/A	The ARAP is developed with sufficient adherence to the JICA Environmental Guidelines. Approved ARAP should be disclosed to the public.
7.	In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance.	Article 16, Chapter 4 of the Expropriation Law stipulates that the Expropriation Committee shall organize public consultations at the Capital, Municipal, Provincial, and District-Khan authority levels with Commune / Sangkat councils and Village or community representative to be affected by the expropriation to provide specific and concise information and collect inputs from all stakeholders regarding the proposed basic public infrastructure project. However, language using for the consultations are not specified, and the cases such as illegal encroachment are out of target.	Based on the JICA Environmental Guidelines, Stakeholder Meetings are organized at least twice, at the point of the draft scoping and at the point of the draft reporting (or scoping results), supplemented by focus group meetings. Such consultations have to be implemented in understandable language.
8.	When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people		
9.	Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.		
10.	Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.	Article 14 of Expropriation Law stipulates that a Grievance Redress Committee shall be established and led by a representative from the Ministry of Land Management, Urban Planning and Construction, and composed of representatives from relevant ministries/institutions. However, the cases such as illegal encroachment are out of target.	Based on the JICA Environmental Guidelines, Grievance Redress Mechanism are planned in ARAP.

No	The JICA Environmental Guidelines with World Bank Safeguard Policy	Domestic Law & Regulations and Its Gap	Countermeasures for Filling Gaps
11.	Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent a subsequent influx of encroachers of others who wish to take advance of such benefits	Article 23 of Expropriation Law stipulated that the owner of and/or holder of real right to the immovable property shall be entitled to compensation for any actual damage to the immovable property incurred from the date of the issuance of the declaration on the expropriation project, which is the cut-off date for being entitled to the fair and just compensation. However, the cases such as illegal encroachment are out of target.	Based on the JICA Environmental Guidelines, the cut-off-date is explained at the stakeholder meetings.
12.	Those eligible for benefits includes the PAPs who have formal legal rights to land (including customary and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying.	N/A * For the landless PAPs, land will be given based on Sub-Decree of Social Land Concession.	Based on the JICA Environmental Guidelines, appropriate entitlements are discussed in the ARAP for both formal and informal cases.
13.	Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based	N/A	PAPs shall be given compensation options based on the ARAP to choose "land for land" or "cash for land".
14.	Provide support for the transition period (between displacement and livelihood restoration).	Chapter 5 of Expropriation stipulated "Transitional Occupation and Management of the Immovable Property". However, the cases such as illegal encroachment are out of target.	During the process of ARAP discussion, compensation for temporary business disturbance, income restoration in early stage, or any other allowance are considered.

No.	The JICA Environmental Guidelines with World Bank Safeguard Policy	Domestic Law & Regulations and Its Gap	Countermeasures for Filling Gaps
15.	Particular attention must be paid to the needs of the vulnerable groups among those displaced, especially those below the poverty line, the landless, elderly, women and children, ethnic minorities etc.	Sub-Decree on Social Land Concession provides allocations of free private state land to landless people of residential or family farming, including the replacement of land lost in the context of involuntary resettlement.	Based on needs assessment through stakeholder meetings, socio-economic surveys, focus group meetings etc., special considerations for vulnerable groups, such as households headed/with woman, handicapped, elderly, poor, and etc., are discussed and reflected in the ARAP with items such as income restoration program, providing resettlement site, etc.
16.	For projects that entail land acquisition or involuntary resettlement of fewer than 200 people, an abbreviated resettlement plan is to be prepared.	N/A	Based on the JICA Environmental Guidelines, abbreviated RAP shall be prepared. * The project has no concerns to this item.
17.	Internal and external monitoring system must be established and implemented properly	N/A	Based on the JICA Environmental Guidelines, a monitoring framework composed by internal monitoring, external monitoring, and evaluation is established in the ARAP.

Source: JICA Study Team

### 3 PROJECT RESETTLEMENT POLICY

#### 3.1 Objectives

29. The objective of the Project Resettlement Policy is to ensure that AHs are not worse off because of the Project. The Project should provide an opportunity for the local population to derive benefits from it, and it should likewise serve as an occasion for the local population to participate in its planning and implementation, thereby engendering a sense of ownership over the same.

#### 3.2 Key Principles

30. The key principles of the resettlement policy are as follows:

- (i) Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives. When, after such an examination, avoidance is proved unfeasible, effective measures to minimize impact and to compensate for losses must be agreed upon with the people who will be affected.
- (ii) People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported by RGC in

a timely manner. Prior compensation, at full replacement cost, must be provided as much as possible. RGC must make efforts to enable people affected by projects and to improve their standard of living, income opportunities, and production levels, or at least to restore these to pre-project levels. Measures to achieve this may include: providing land and monetary compensation for losses (to cover land and property losses), supporting means for an alternative sustainable livelihood, and providing the expenses necessary for the relocation and re-establishment of communities at resettlement sites.

- (iii) Appropriate participation by affected people and their communities must be promoted in the planning, implementation, and monitoring of resettlement action plans and measures to prevent the loss of their means of livelihood. In addition, appropriate and accessible grievance mechanisms must be established for the affected people and their communities.
- (iv) Resettlement action plans must be prepared and made available to the public. In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance. When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.

#### 3.3 The Cut-off Date for eligibility

31. For the project, the cut-off date coincides with the first day of the census of AHs and the IOL thereat was conducted. The cut-off date for the project is on **13<sup>th</sup> October 2016**. This would mean that any land occupation or transfer, or structures to be built on affected land after the cut-off date will not be entitled to any compensation including the land use right.

32. The cut-off date was informed to AHs at stakeholder meetings before the cut-off dates at stakeholder meetings during ARAP preparation stage. At those meetings, AHs were informed that all structures constructed after the cut-off date (IOL survey) will not be entitled for any compensation from the Project, and that all people have to stop constructing any new buildings in the delineated area. The information will be continuously disseminated to prevent further population influx.

#### 3.4 Eligibility

33. Persons not covered in the census are not eligible for compensation and other entitlements, unless they can show proof that:

- (i) They have been inadvertently missed out during the census and the IOL and certified by local authorities; or
- (ii) They have lawfully acquired the affected assets following completion of the census and the IOL and prior to the conduct of the DMS.

34. Eligible AHs include anyone who, at the cut-off date of the Project, was located within the Project area or any of its component or subproject or part thereof, and would have their:

- (i) Standard of living adversely affected;
- (ii) Right, title or interest in any house, land (including residential, commercial, agricultural and for grazing), water resources, or any other movable or fixed assets acquired or possessed, in full or in part, temporarily or permanently by public sector acquisition; or
- (iii) Business, occupation, place of work or residence or habitat adversely affected by public sector intervention.

35. An AH refers to households and consists of all members residing under one roof and operating as a single economic unit, who are adversely affected by the Project. For resettlement purposes, Project AHs will be considered as members of the Project AHs including single person households.

### 3.5 Entitlements

36. The project entitlements were developed and presented as shown in Table 3-1: Entitlement Matrix. The entitlements adopted were guided by the applicable national laws and regulations and JICA Guidelines. The entitlements and assistance may be revised based on the actual status of impact, as necessary, in the updated version of this ARAP.

Table 3-1: Entitlement Matrix

TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
<b>A. LOSS OF LAND</b>			
<b>OUTSIDE ROW (PRIVATE LAND)</b>			
<b>I. Loss of Land (all kinds); Either Partial or Entire Land is Lost</b>	All Affected Households (AHs) with recognized proof of ownership whose land will be acquired for the construction of the replacement bridges.	AHs have two options: 1) Land replacement (land to land): Land replacement will be provided with similar land quality and productivity potential. 2) Cash compensation at replacement cost.	<ul style="list-style-type: none"> <li>AHs to be notified at least <b>90 days</b> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> <li>IRC will ensure payment of all compensation and allowances for which AHs are entitled to at least <b>30 days</b> prior to the scheduled start of civil works.</li> <li>IRC will support the AHs to separate or transform the affected land title certificate. Cost of the procedure will be borne by RGC.</li> </ul>
<b>INSIDE ROW (PUBLIC STATE LAND)</b>			
<b>I. Partial Loss of Residential and / or Commercial Land, in which the remaining land is STILL VIABLE for continued use</b>	AHs with main house and/or small shop (independent/family-owned business)	<ul style="list-style-type: none"> <li>AHs must be removed entirely from PRW and no cash compensation is available for affected land in ROW.</li> <li>No new permanent structures (i.e. structures on a foundation or wooden house larger than the affected one) are permitted to be constructed in the ROW.</li> </ul>	<ul style="list-style-type: none"> <li>AHs to be notified at least <b>90 days</b> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> <li>IRC will ensure payment of all compensation and allowances for which AHs are entitled to at least <b>30 days</b> prior to the scheduled start of civil works.</li> <li>Remaining ROW is still <b>public state land</b>.</li> </ul>
<b>II. Entire Loss of Residential and/or Commercial Land, or the remaining land is NOT</b>	AHs with main house and/or small shop (independent/family-owned business) and land is NOT	<ul style="list-style-type: none"> <li>No cash compensation for affected land in ROW.</li> <li>The landless AHs have two options:</li> </ul>	<ul style="list-style-type: none"> <li>AHs to be notified at least <b>90 days</b> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> </ul>

TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
<b>VIABLE<sup>2</sup> for continued use (Landless AHs)</b>	no more remaining land.	<p><b>1) Self relocation,</b> receive in lump sum: a) <b>6,533.00</b> per landless AH for Peam Te Bridge, and b) <b>53,736.50</b> per landless AH for Ba Baong Bridge as cash assistance for buying a land plot and preparing other basic infrastructure, plus cash compensation for their affected assets.</p> <p><b>2) Group relocation,</b> a resettlement site (RS) nearby existing villages will provided by the government.</p> <ul style="list-style-type: none"> <li>A land plot per landless AH will be 7.0m x 15.0m = 105.00m<sup>2</sup>.</li> <li>Basic infrastructures such as access roads, latrines, drainages, and pumping wells will be provided as part of resettlement site development. Electricity connection will also be provided if available in the area. However, AHs will bear the security deposit for electricity consumption required by service provider because the deposit will be refunded to AHs once the consumption is terminated.</li> <li>Land title for the land plot in the resettlement site with names of husband and wife will be provided to each AH after five consecutive</li> </ul>	<ul style="list-style-type: none"> <li>Each self-relocate landless AHs will receive the cost for resettle by calculating in average from the Cost Estimate of each RS (see section 10-3), plus cash compensation for their affected assets. The estimate cost in each resettlement site should be updated within the updated ARAP.</li> <li>IRC will ensure payment of all compensation and allowances for which AHs are entitled to at least <b>30 days</b> prior to the scheduled start of civil works.</li> <li>IRC will ensure allocation of cash or replacement land with sufficient time (at least <b>90 days</b>) for AHs to rebuild and relocate completely before the scheduled start of civil works.</li> <li>IRC will support the AHs to acquire land title certificate after five consecutive years of AHs' living on the land. Cost of the procedure will be borne by RGC.</li> <li>Remaining ROW is still <b>public state land</b>.</li> </ul>

<sup>2</sup> The remaining unaffected portion cannot accommodate purpose of activity/structure covered within the affected section. The size of viable land will be discussed between IRC-WG and the AHs during the detailed measurement survey (DMS).

TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
		years of living on the land at no cost.	
<b>III. Loss of Productive Land Use ; Either Partial or Entire Land is Lost</b>	All AHs occupying land or using land in the Provisional Road Width (PRW)	<ul style="list-style-type: none"> <li>No cash compensation is available for affected land in ROW.</li> <li>See also [C. LOSS OF CROPS AND TREES]</li> </ul>	<ul style="list-style-type: none"> <li>AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> <li>AHs will not be moved from the ROW outside the PRW without justifiable cause (i.e. unless or until the land is required by the government for the replacement bridges construction purposes).</li> <li>Remaining ROW is still <b>public state land</b>.</li> </ul>
<b>B. LOSS OF STRUCTURES</b>			
<b>I. Loss of Houses or Shop/Store; Either Partial or Entire Structure is Lost</b>	All the AHs confirmed to be residing in, doing business or having right over resources within the project affected area during the conduct of IOL and census of AH (on Cut -off Date)	<ul style="list-style-type: none"> <li>Cash compensation at replacement cost without deduction for depreciation or salvageable materials (i.e. present cost of construction materials in the locality plus cost of labor).</li> <li>AHs are also entitled to have transport allowance (see Item E).</li> </ul>	<ul style="list-style-type: none"> <li>AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> <li>AHs to get cash compensation at least <u>30 days</u> ahead of civil works in the locality to allow the AHs sufficient time to gradually reorganize the house and/or shop, thereby avoiding any disruption in their livelihood.</li> <li>AHs must completely cut, move back or relocate their houses/structures to new site within <u>30 days</u> after receiving compensation.</li> <li>If the structure is found no longer viable for living, compensation will be paid for the entire structure and the AH will also be entitled to other allowances.</li> </ul>
	Renters	Renters are entitled to get allowances as below: <ul style="list-style-type: none"> <li><b>Transportation (moving) allowance:</b> USD 40</li> </ul>	<ul style="list-style-type: none"> <li>AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> </ul>

TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
		<ul style="list-style-type: none"> <li><b>Disruption allowance:</b> A lump sum cash assistance of USD 50</li> <li><b>Rental allowance:</b> equivalent to two months' rent of a similar building in the locality.</li> <li>If AH belongs to any of the <b>vulnerable group</b>, see Item E.</li> <li>Provision of information in finding alternate rental accommodation.</li> </ul>	<ul style="list-style-type: none"> <li>IRC will ensure payment of all allowances for which AHs are entitled to at least <u>30 days</u> prior to the scheduled start of civil works.</li> <li>AHs that rent house and/or shop are entitled to a one time transport allowance only.</li> </ul>
<b>II. Other Structures (porch, extended eaves, spirit house, fence, etc.)</b>	All the AHs confirmed to be residing in, doing business or having right over resources within the project affected area during the conduct of IOL and census of AH (Cut- off Date)	Cash compensation at replacement cost without deduction for depreciation or salvageable materials (i.e. present cost of construction materials and labor in the locality).	<ul style="list-style-type: none"> <li>AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> <li>IRC will ensure payment of all allowances for which AHs are entitled to at least <u>30 days</u> prior to the scheduled start of civil works.</li> </ul>
<b>C. LOSS OF CROPS AND TREES</b>			
<b>I. Loss of Crops</b>	Owners of crops regardless of land tenure status	<ul style="list-style-type: none"> <li>To the extent possible, AHs will be <b>allowed to harvest</b> their annual and perennial crops prior to construction.</li> <li>If crops cannot be harvested due to construction schedule, AHs are entitled to cash compensation for the affected crops at replacement cost.</li> </ul>	<ul style="list-style-type: none"> <li>Annual Crops – AHs will be given <u>90 days'</u> notice that the land on which their crops are planted will be used by the project and that they must harvest their crops before the civil work.</li> </ul>
<b>II. Loss of Fruit or Shade Trees</b>	Owners of trees regardless of land tenure status	Affected trees will be compensated in cash at replacement cost.	<ul style="list-style-type: none"> <li>AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the locality of the actual date that the land will be acquired by the project.</li> </ul>
<b>D. LOSS OF COMMON PROPERTY RESOURCES</b>			
<b>I. Partial or Entire Loss of Community and/or Public Assets</b>	Affected communities or concerned government agencies who own the assets	Replacement by similar structures and quality at the area identified in consultation with affected	<ul style="list-style-type: none"> <li>Communities to be notified at least <u>90 days</u> in advance before the start of civil works in the locality of the actual date that</li> </ul>



TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
		communities and relevant authorities	the land will be acquired by the project
<b>E. ALLOWANCES AND ASSISTANCES</b>			
<b>I. Transport Allowance</b>	AHs that relocate their house or house/shop	<ul style="list-style-type: none"> <li>Shops and stalls made of light and temporary materials: USD 5 to USD 10 (depending on the scale of the structures to be relocated)</li> <li>Regular shops and houses moving to residual or adjacent areas: USD 50</li> <li>Regular shops and houses relocating within the same village outside of the ROW: USD 80</li> <li>Houses relocating in another village: USD 100</li> </ul>	<ul style="list-style-type: none"> <li>Owners of houses or houses/shops are entitled to a one time transport allowance only.</li> </ul>
<b>II. Allowance for Severely AHs and/or Vulnerable AHs</b>	Severely affected households <sup>3</sup> and Vulnerable AHs	<ul style="list-style-type: none"> <li>One time cash assistance equivalent to <b>USD 120 (20\$x6month)</b> per Severely Affected households and/or Vulnerable AHs.</li> <li>See also [V, Income Restoration Program (IRP)]</li> </ul>	<ul style="list-style-type: none"> <li>As indicated above, relocating landless AHs are entitled to replacement land with title at no cost</li> </ul>
<b>III. Disruption Allowance</b>	Relocating AHs to residual or adjacent areas (whose house type 2A to 2E) with floor area is less than 60m <sup>2</sup> .	One time cash assistance equivalent to USD 50.	Allowance shall be paid at the same time with compensation.
	Relocating AHs to residual or adjacent areas (whose house type 2A to 2E) with floor area is 60m <sup>2</sup> or more.	One time cash assistance equivalent to USD120.	
	Relocating AHs to residual or adjacent areas (whose house	One time cash assistance equivalent to USD160.	

<sup>3</sup> "Severely affected households" include but not limited to the AHs who will (i) lose 10% or more of their total productive land (income generating) and/or assets, and (ii) have to relocate due to the Project.

TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
	type from 2F or higher)		
	Relocating AHs to a new village or resettlement site	One time cash assistance equivalent to USD200.	
<b>IV. Temporary loss of business income during relocation</b>	Owners of shop who relocate their shop	Lump sum cash assistance of USD 70.	Allowance shall be paid at the same time with compensation.
<b>V. Income Restoration Program (IRP)</b>	Severely affected households and Vulnerable Ahs	An IRP will be provided during resettlement implementation.	<ul style="list-style-type: none"> <li>In-kind assistance to strengthen or initiate income-generating activities will be provided after need assessment through consultation with eligible AHs. Forms of assistance may include, but are not limited to, agricultural extension assistance, technical and other assistance to develop existing or new income-generating activities and project-related employment.</li> <li>Special attention to the needs of and opportunities for the vulnerable AHs.</li> </ul>
<b>F. TEMPORARY IMPACTS DUE TO BRIDGE CONSTRUCTION AND MAINTENANCE</b>			
<b>I. Affected Assets during construction</b>	Owners of assets	<ul style="list-style-type: none"> <li>Compensation for lost assets in cash at replacement cost, or</li> <li>Compensation as leasing fee based on replacement cost, and temporarily affected land will be returned to original owner/occupant.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor will be required by contract to pay these costs.</li> <li>Construction and maintenance will be carried out so as to minimize damage.</li> <li>Construction will be required by contract to stay within PRW.</li> </ul>
<b>II. Damage to fields and private or community infrastructure including bund walls, drains and channels, etc.</b>	Owners or persons using the field	Repair of damage or payment for repair of damage at replacement cost.	<ul style="list-style-type: none"> <li>As part of the civil works contract, all access roads/driveways to properties adjacent to the road will be repaired or replaced including culverts and other facilities, to a condition equal to or better than at present.</li> <li>The disruption period will be minimized as much as possible.</li> <li>The contractor will reinstate the land back to its original</li> </ul>

TYPE OF LOSS	ELIGIBLE PERSONS	ENTITLEMENTS	IMPLEMENTATION ISSUES
			condition before returning to the owners.

Source: JICA Study Team

#### 4 PROJECT IMPACTS

##### 4.1 Methodology Used in Preparing the Resettlement Plan

37. The following sections describe the processes and methods employed in the survey on adverse social impacts for project construction (replacement bridges and road section). The impact survey involved the conduct of IOL wherein all fixed assets (i.e., lands used for residence, commerce, agriculture, including ponds; dwelling units; stalls and shops; miscellaneous structures, such as fences, wells, trees with commercial value; etc.) located inside the PRW were identified, measured. The owners of those properties were identified, and their replacement values were also calculated. Likewise, the severity of impact on the affected assets and to the livelihood and productive capacity of AHs were determined. Photographs of the affected assets along with the AHs had also been taken. Also, information on the members of the AHs, sources of livelihood, income level, and ownership of productive assets had been gathered. The impacts survey and census of AHs were conducted in October 2016.

##### 4.1.1 Data Gathering Instrument

38. The basic tool used in the IOL and census of AHs was the survey questionnaire. Detailed socio-economic information on AHs whose main structures (i.e., houses and shops) will be partially or entirely affected was obtained with the use of the survey questionnaire in Khmer. The questionnaire covered concerns on socio-economic conditions of the AH, in addition to basic information on the household head, such as gender, age, educational attainment, and primary source of income. It also included the affected assets and income, and their perception on the Project (see Appendix 4: Inventory of Loss and Socio-Economic Survey Questionnaire Form for a copy of the impact survey questionnaire).

##### 4.1.2 Survey Team

39. In addition to the Study Team leader (resettlement specialist), a recruited team of 10 local research assistants including one field survey coordinator, one field supervisors, 2 enumerators, 2 local assistants, one data entry clerks, one data developer, and 2 replacement cost (market rates) researchers, including one field team leader, was organized to help prepare this ARAP. Except for the data entry and developer, the rest of the local research assistants were based in the field. The survey team is divided into 2 survey groups (i) IOL survey group included one supervisor, 2 enumerators, 2 local assistant (for measuring), one data entry clerk and local authorities; (ii) RC survey group included one master carpenter and one resettlement specialist. Field data gathering for the project survey commenced on 13<sup>th</sup> October 2016 and was completed on 23<sup>rd</sup> October 2016. The research team was accompanied by commune council or village officials during their data gathering activities.

##### 4.1.3 Setting of the Cut-off Date

40. The IOL and census of AHs were preceded by a series of stakeholder meetings in pagoda or school along at the project area. Among others, the purpose of the stakeholder meetings was to brief the local population about the Project background, activities of the survey team, the policy of JICA and the Cambodian government on involuntary resettlement for the Project, including the policy requirement on the cut-off date. The local people were informed that the cut-off date is the first day of holding the IOL and census of the AHs, which was on **13<sup>th</sup> October 2016**.

#### 4.1.4 Basic Unit Costs Used in the Resettlement Plan

41. In line with the IOL activities, an RCS of affected assets in the Project area was carried out by the research team which was led by a local resettlement/architecture specialist. The main objective of the RCS is to determine the rate of land prices based on actual transaction records of the affected areas, of affected main and secondary<sup>4</sup> structures, and of fruit trees, trees and crops. Based on the results of RCS, the AHs will receive compensation at replacement cost (reflecting market price) from RGC for their loss of land and property due to the Project.

42. The methodology employed in the RCS included the following:

- (i) **Sale/Market comparison method:** This method is based on data provided from recent sales of properties that are highly comparable to the subject property in the vicinity. The method is very useful for cost calculation of structure, land, crops and trees.
- (ii) **Contingent valuation method:** Survey based on willingness to accept (WTA) and/or willingness to pay (WTP). This method was used for land price estimation because of land transactions at the project area are minimal.
- (iii) **Income approach:** Sum of stream of incomes and sales proceeds. The principle here is that the value of a property is related to its ability to produce cash flow. The technique relies heavily on current market transactions involving the sale of comparable properties. This method was used for estimating the prices of crops and tree, particularly to calculate the compensation rates for temporary impact of agricultural land.
- (iv) **Replace cost approach:** This method was useful for structure cost calculation. The value of a structure is based on the current cost for building the concerned structure and labor cost. For this study, the value of structure and labor cost are derived from the current cost based on market price without depreciation.

##### (a) Unit Costs of Land

43. The affected private lands were divided into 2 main categories; Residential and Agricultural Land. The way to obtain data on market rates is to gather data on recent land sales, however sale cost recording could not be found at/around the Project area. Therefore, data of recent sales were collected by direct interviews with (i) land owners at/around the Project area who are both AHs and non-AHs, and (ii) local authorities at/around the Project area.

Table 4-1: Average Unit Price of Land in 2016

Province	District	Commune	Village	Type of Land	Unit	Price
KRATIE	Kratie	Roka Kandal	Phum 2	Residential	\$/m <sup>2</sup>	90.0
		Bos Leav	Ta Lus	Residential	\$/m <sup>2</sup>	50.0
	Chhlong	Prek Saman	Dey Thmey	Residential	\$/m <sup>2</sup>	30.0
PREY VENG	Peam Ro	Ba Baong	Ba Baonh	Residential	\$/m <sup>2</sup>	25.0
				Agricultural	\$/m <sup>2</sup>	3.0

Data source: Project Survey conducted in October 2016

<sup>4</sup> This includes fences, wells, pig pens, toilets, kitchens, etc.

**(b) Unit Costs of Structures**

44. The houses/structures affected by the Project have been categorized into two main groups – house/dwelling and other structures. The methodology employed for costing house/structures were composed of quantity survey and detailed measurement of the component parts of each structure. Labor costs were also assessed at market prices for the structure as a whole based on the information provided by local building contractors at the survey areas.

45. Although there are 2 main standard categories, some subcategories were introduced based on actual materials in each category. As a result of the survey, a total of 13 categories were identified in the Project area. The unit prices of a typical structure for each category are provided.

46. Other structures such as wells and fences, and cultural assets such as pagoda gate, have to be compensated at their market prices (replacement cost), and the results of the specific rates of structures are provided.

**Table 4-2: Unit Cost of Structures by Type in 2016**

Roof	Wall	Floor	Column	Story	Type	Total Cost US\$/m <sup>2</sup>
Zn/Fibro	Thatch	None/Soil	Timber	Single	2A	30.0
	Zn/Fibro	None/Soil	Timber/Iron	Single	2B	41.5
	Thatch	Bamboo	Timber/Iron	Single	2C	40.0
	Zn/Fibro	Bamboo	Timber/Iron/ Concrete	Single	2D	51.0
	Zn/Fibro	Wood/ Mortar	Wood/Iron/ Concrete	Single	2E	59.5
	Wood	Wood/ Mortar	Timber/ Concrete	Single	2F	75.0
	Brick	Mortar	Timber/ Concrete	Single	2G	85.0
	Brick	Tile	Timber/ Concrete	Single	2H	94.5
	Wood/Brick	Wood/ Mortar/Tile	Timber/ Concrete	Ground & First	2I	120.0
<b>Title Roof</b>	Wood	Wood/ Mortar/Tile	Timber/ Concrete	Single	3A	105.0
<b>SHELTER (SH)</b>						
Zn/Fibro	None	Mortar	Timber/Iron/ Concrete	Single	SH	25.0
<b>AWNING/Extended Eaves (AW)</b>						
Zn/Fibro	None	None/Soil	Timber/Iron/ Concrete	Single	AW1	14.0
	None	Mortar	Timber/Iron/ Concrete	Single	AW2	22.5

Data source: Project Survey conducted in October 2016

**Table 4-3: Unit Cost of Other Structures in 2016**

No.	TYPE OF ASSETS	UNIT	Unit Cost, USD
1	Pumped well (normal)	Set	250.0

No.	TYPE OF ASSETS	UNIT	Unit Cost, USD
2	Mortar/Karola/Brick floor	m <sup>2</sup>	8.5
3	Separated toilet (S<3m <sup>2</sup> )	set	200.0
<b>FENCE</b>			
4	Pole post with net/barbed wire	lm	5.5
5	Concrete post with net/barbed wire	lm	7.5
6	Brick Fence (100mm)	lm	40.0
7	Brick Fence (200mm)	lm	60.0
<b>SPIRIT HOUSE</b>			
8	Spirit house	set	40.0

Data source: Project Survey conducted in October 2016

**(c) Unit Costs of Crops and Trees**

47. The primary data was collected through interviews on the income at which owners/cultivators of crops and trees at the Project area. The market rates of crops and trees have been calculated based on the yield and the period of maturity of trees and crops as determined from interviews with farmers along the PRW of the Expressway and Bridge.

48. The formula used for fruit trees is as follows: (Number/Quantity of harvest per year) x (Market price) x (Number of years it will mature) + cost of seedling

49. In order to simplify the study, perennial trees that have a growth period of more than five years have been classified in to the following three types:

- ✓ Sapling tree (1-3 years), as it can replanted ; 1/3 of full price,
- ✓ Young tree (3-5 years), bearing some fruit ; 2/3 of full price,
- ✓ Mature tree (more than five years), fully bearing fruit ; compensate full price.

50. According to the survey, there are some trees that have a growth period of less than five years. Trees are also equivalent to full compensation cost if mature. Otherwise, their compensation value is their cost as a sapling tree or as a young tree.

**Table 4-4: Unit Cost of Fruit Tree by Type in 2016**

No.	Description	Unit	Quantity	Rate in 2016, USD
1	Banana (mature)	Tree	1	2.0
2	Coconut	Tree	1	50.5
3	Phyllanthus/Kantuot	Tree	1	12.5
4	Custard-apple	Tree	1	10.5
5	Mango/get income	Tree	1	63.5
6	Papaya	Tree	1	6.5

Data source: Project Survey conducted in October 2016.

**4.2 Inventory of Affected Assets**

**4.2.1 Land**

51. The inventory of affected land for PRW of the project was not performed for the ROW, since it is public state land. It will not be compensated by the Project. Nevertheless, the survey team also determined the categories of the land occupants or users, and if the affected lands are

accompanied with immovable assets such as trees, houses, shops and/or other structures. **The landless households were also considered.**

52. There were instances when the survey team could not complete their interviews with the AHs because the owners of the affected houses and shops were either closed or unattended during the survey. In such case, the survey team was only able to estimate the area of PRW lands used for residential or commercial purposes (i.e., footprint of the structures), and those that are fenced. These estimates will be validated and corrected as necessary during the updating of the ARAP, with the assistance of commune officials who will also sit as members of the Provincial Resettlement Sub-committee-Working Group (PRSC-WG), the main resettlement body that is tasked to carry out the DMS.

53. A total of **9,339.92 m<sup>2</sup>** of land (19 AHs) will be required for the construction of the Replacement Bridges. Of these, 89.67% (8,374.78 m<sup>2</sup>) is used for residential purpose and 10.33% (965.14 m<sup>2</sup>) is agricultural land. Table 4-5 shows the affected land area and the number of owners identified as AHs.

**Table 4-5: Number of Affected Households who will lose their Private Lands**

Province	Bridge	Krong/ District	Sangkat/ Commune	Residential Land		Agricultural Land	
				AH	m <sup>2</sup>	AH	m <sup>2</sup>
KRATIE	Peam Te	Kratie	Roka Kandal	4	454.49	-	-
		Chet Borei	Bos Leav	7	5,430.12	-	-
	Prek Chhlong	Chhlong	Prek Saman	5	2,471.17	-	-
PREY VENG	Ba Baong	Peam Ro	Ba Baong	2	19.00	1	965.14
<b>Total</b>				<b>18</b>	<b>8,374.78</b>	<b>1</b>	<b>965.14</b>

Data source: Project Survey conducted in October 2016

#### 4.2.2 Main Structures

54. A total of 17 AHs along the PRW of the Replacement Bridges, whose main structures (house, house-shop, and/or restaurant) will be affected by the Project. There is also other 4 AHs, whose only other structures will be affected.

**Table 4-6: Number of Affected Households who will lose their Main and Other Structures**

Province	Bridge	Krong/ District	Sangkat/ Commune	Number of Population who will be resettled	Number of AHs who will lose their main structures (house)	#AHs According to Type of Structure	
						Main Structure	Other Structure
KRATIE	Peam Te	Kratie	Roka Kandal	30	5	5 (House/Restaurant 1 House 4)	-
			Chet Borei	Bos Leav	9	2	2 (House 2)
	Prek Chhlong	Chhlong	Chhlong	4	1	1 (House 1)	-
			Prek Saman	17	4	4 (House/Restaurant 1 House/Shop 1 House 2)	2
PREY VENG	Ba Baong	Peam Ro	Ba Baong	17	5	5 (House/Shop 1 House 4)	-

Province	Bridge	Krong/ District	Sangkat/ Commune	Number of Population who will be resettled	Number of AHs who will lose their main structures (house)	#AHs According to Type of Structure			
						Main Structure	Other Structure		
<b>Total</b>						<b>77</b>	<b>17</b>	<b>17</b>	<b>4</b>

Data source: Project Survey conducted in October 2016

**Table 4-7: Floor Area (in m<sup>2</sup>) of Affected Main Structures by Type of Use and Materials**

Structure Type	House	House/Shop /Rest.	Kitchen	Craft / Workshop	Stall	Other	Total
2A	-	-	-	-	20.00	-	20.00
2B	-	40.00	-	58.28	-	-	98.28
2C	27.75	-	7.60	-	-	-	35.35
2D	72.21	-	7.40	-	-	-	79.61
2E	-	-	6.72	-	41.40	12.34	60.46
2F	534.47	198.00	34.11	-	-	54.60	821.18
2G	-	-	62.04	-	-	-	62.04
2H	-	-	-	-	-	7.96	7.96
2I	68.06	-	-	-	-	-	68.06
3A	-	107.36	-	-	-	-	107.36
SH	-	-	-	102.67	-	18.70	121.37
AW1	-	-	-	-	-	27.25	27.25
AW2	-	-	-	-	-	29.07	29.07

Data source: Project Survey conducted in October 2016

**Table 4-8: Other Structures**

Items	Unit	Total	Roka Kandal	Bos Leav	Prek Saman	Chhlong	Baboang
Pump Well	Set	3	-	-	1	-	2
Mortar	m <sup>2</sup>	53	23	-	-	-	30
Toilet	Set	1	-	1	-	-	-
<b>FENCE</b>							
Timber post with wire	Lm	79	-	79	-	-	-
Concrete post with wire	Lm	97	-	-	54	-	43
Brick fence, 100mm	Lm	16	16	-	-	-	-
Brick fence, 200mm	Lm	20	20	-	-	-	-
<b>GRAVE/STUPA/CHEDEY</b>							
Spirit house	Set	2	-	-	2	-	-

Data source: Project Survey conducted in October 2016

#### 4.2.3 Affected Crops and Trees

55. The start of civil works and the cropping schedule of AHs cultivating within the PRW will be synchronized to allow smooth transition between harvesting of standing crops and the start of Replacement Bridge construction in a particular section of the Project. Therefore, standing crops will not be affected if those can be harvested before construction work, but if they cannot be

harvested before it, the unharvested crops will be compensated at replacement cost. However, fruit or timber trees along the PRW will be cleared for the Project construction. With regard, there were a total of 13 fruit trees with various species along the PRW have been counted during the IOL.

**Table 4-9: Affected Trees**

No.	Type of Tree	Unit	Total	Roka Kandal	Bos Leav	Prek Saman	Chhlong	Baboang
1	Banana	Tree	1	-	1	-	-	-
2	Coconut	Tree	3	-	3	-	-	-
3	Kantuot	Tree	1	-	1	-	-	-
4	Custard apple	Tree	2	-	2	-	-	-
5	Mango	Tree	4	-	4	-	-	-
6	Papaya	Tree	2	-	2	-	-	-
<b>Total</b>		<b>Tree</b>	<b>13</b>	<b>-</b>	<b>13</b>	<b>-</b>	<b>-</b>	<b>-</b>

Data source: Project Survey conducted in October 2016

#### 4.3 Impact on Vulnerable Households

56. The AHs are more vulnerable to impoverishment caused by involuntary resettlement are the poor (i.e. under the national poverty line: income<33\$ per month/person), households headed by women, elderly, disabled without support mechanisms and landless households. The households falling within these groups were identified during the IOL will be updated at the time of DSM. They will get special cash assistance is needed to help them. The IOL result showed that there are 17 AHs with a total of 21 vulnerability factors. The additional special cash assistance for vulnerable AHs is \$120.00 per vulnerable AH.

**Table 4-11: Vulnerable Factors and Vulnerable AHs (VAHs)**

Province	Bridge	Aged ≥60 Yrs	Landless	Widow	Disabled	Poor	VAHs
Kratie	Peam Te	5	3	1	0	0	9
	Prek Chhlong	2	0	0	1	0	2
Prey Veng	Ba Baong	2	5	2	0	0	6
<b>TOTAL (Project)</b>		<b>9</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>17</b>
<b>21 Factors</b>							<b>17 AHs</b>

Data source: Project Survey conducted in October 2016.

#### 5 SOCIO-ECONOMIC PROFILE OF THE AFFECTED HOUSEHOLDS

57. An SES of AHs was also conducted at the same time of IOL survey. Most AHs, losing partially or entirely their assets such as structures, lands and/or trees, were interviewed for the purpose of gaining more information on their situation and present living standards. This activity was carried out aiming to prepare a more responsive ARAP for people and households affected by the Project. Since there were instances when the AHs were unattended to during the survey, only 20 AHs (with population 92) along the PRW of the Replacement Bridges have been interviewed. The number of AHs interviewed represented 64.52% of all AHs (31 AHs with population 144).

58. The main objective of the SES is to create baseline survey by collecting accurate statistical information about living standard of the AHs. The topics are investigated in the survey were basic demography, literacy and education, economically active population, housing condition, possession of durable goods and livestock, household expenditure and income. Additionally, the survey was also directed to studying the perception of AHs on the Project.

#### 5.1 Population and Household Composition

59. The total number of studied households is 20, which is composed of a population of 92. The population is comprised of 46 (50.0%) females and 46 (50.0%) males. Table 5-1 shows the details of population, sex ratio, as well as household size of the three provinces. An average household size is 4.6 and sex ratio is 100.0.

**Table 5-1: Population and Household Composition**

Bridge	Number of Households	Average HH Size	Population				Sex Ratio*		
			Both		Male			Female	
			No.	%	No.	%		No.	%
Peam Te	11	5.5	60	29	48.3	31	51.7	93.5	
Prek Chhlong	5	4.2	21	11	52.4	10	47.6	110.0	
Ba Baong	4	2.8	11	6	54.6	5	45.5	120.0	
Project Survey	20	4.6	92	46	50.0	46	50.0	100.0	

Data source: Project Survey conducted in October 2016.

\*Sex Ratio = (Number of male) / (Number of female) x 100(%)

**5.2 Age structure and Dependency**

60. The survey results for the age-sex distribution of the affected commune/sangkat are set out in Table 5-2. This entry provides the distribution of the population according to age. Information is included by sex and age group (0-13 years, 14-60 years, 60 years and over). The age structure of a population affects a nation's key socioeconomic issues. They indicate a young population under 18 years old, with about 35.9%. With young populations (high percentage under age 18) need to invest more in schools, while with older populations (high percentage ages 60 and over) need to invest more in the health sector.

**Table 5-2: Age-Sex distribution**

Bridge	Population	0-5		6-13		14-18		19-60		60+	
		No.	%	No.	%	No.	%	No.	%	No.	%
		M	29	0	0.0	3	10.3	4	13.8	20	69.0
F	31	5	16.1	6	19.4	4	12.9	13	41.9	3	9.7
T	60	5	8.3	9	15.0	8	13.3	33	55.0	5	8.3
M	11	1	9.1	1	9.1	1	9.1	6	54.5	2	18.2
F	10	1	10.0	3	30.0	1	10.0	5	50.0	0	0.0
T	21	2	9.5	4	19.0	2	9.5	11	52.4	2	9.5
M	6	1	16.7	0	0.0	1	16.7	4	66.7	0	0.0
F	5	0	0.0	1	20.0	0	0.0	3	60.0	1	20.0
T	11	1	9.1	1	9.1	1	9.1	7	63.6	1	9.1
M	46	2	4.3	4	8.7	6	13.0	30	65.2	4	8.7
F	46	6	13.0	10	21.7	5	10.9	21	45.7	4	8.7
T	92	8	8.7	14	15.2	11	12.0	51	55.4	8	8.7

Data source: Project Survey conducted in October 2016.

61. The dependency ratio used to measure the proportion of children (below 15 years) and old people (from 65 years and over) compared to the proportion of people of workforce age (15-64 years). The age dependency ratio is defined as the ratio of the sum of the population below 15 years and population from 65 years taken together divided by the active population between the age groups of 15 to 64 years. The age dependency ratio is a summary indicator that indicates the burden falling on the population of working age.

62. The age composition in table 5-3 shows that 66.3% of the population was aged between 15-64 years, 27.2% was below 15 years and 6.5% was 65 years and over. The table also provided detail about youth dependency ratio (41.0%) and old age dependency ratio (9.8%). The total dependency ratio is 50.8%. This means there were 50.8 persons outside the usual working age

group for every 100 persons in the age group 15-64 years who are economically dependent for economic support.

**Table 5-3: Age Composition and Dependency Ratio**

Bridge	Population	Below 15		15-64		65+		Dependency Ratio, %		
		No.	%	No.	%	No.	%	Youth	Old Age	Total
		M	29	5	17.2	22	75.9	2	6.9	
F	31	12	38.7	16	51.6	3	9.7	44.7	13.2	57.9
T	60	17	28.3	38	63.3	5	8.3			
M	11	2	18.2	9	81.8	0	0.0			
F	10	4	40.0	6	60.0	0	0.0	40.0	0.0	40.0
T	21	6	28.6	15	71.4	0	0.0			
M	6	1	16.7	5	83.3	0	0.0			
F	5	1	20.0	3	60.0	1	20.0	25.0	12.5	37.5
T	11	2	18.2	8	72.7	1	9.1			
M	46	8	17.4	36	78.3	2	4.3			
F	46	17	37.0	25	54.3	4	8.7	41.0	9.8	50.8
T	92	25	27.2	61	66.3	6	6.5			

Data source: Project Survey conducted in October 2016.

**5.3 Marital Status**

63. For classifying the marital status, 4 categories were used such as single (never married), currently married, divorced/separate and widowed. The currently married group included person who were living together whether or not their marriage had legal status. Although marital status information was collected for all age groups, it is useful to present data for the population aged 15 years and over only. For both sexes, 32.8% they are never married, 62.7% were currently married, 4.5% were widowed and none of them were divorced or separated.

**Table 5-4: Marital Status for Both Sexes by Age Group**

Age Group	Pop.	Single		Married		Widowed	
		No.	%	No.	%	No.	%
15+ yrs	67	22	32.8	42	62.7	3	4.5
15 - 19 yrs	11	9	81.8	2	18.2	0	0.0
20 - 24 yrs	8	8	100.0	0	0.0	0	0.0
25 - 29 yrs	9	4	44.4	5	55.6	0	0.0
30 - 34 yrs	2	0	0.0	2	100.0	0	0.0
35 - 39 yrs	5	0	0.0	5	100.0	0	0.0
40 - 44 yrs	5	1	20.0	4	80.0	0	0.0
45 - 49 yrs	6	0	0.0	6	100.0	0	0.0
50 - 54 yrs	9	0	0.0	9	100.0	0	0.0
55 - 59 yrs	4	0	0.0	4	100.0	0	0.0
60 - 64 yrs	2	0	0.0	1	50.0	1	50.0
65 - 69 yrs	5	0	0.0	4	80.0	1	20.0
70 - 74 yrs	1	0	0.0	0	0.0	1	100.0
75+ yrs	0	0	0.0	0	0.0	0	0.0

Data source: Project Survey conducted in October 2016.

#### 5.4 Ethnic Group and Religion

64. 100.0% of affected household heads are Khmer and Khmer speaking.

**Table 5-5: First Language and Ethnic Group of Household Heads**

Bridge	No. H/H	Mother tongue and Ethnic Group			
		Khmer		Other	
		No.	%	No.	%
Peam Te	11	11	100.0	0	0.0
Prek Chhlong	5	5	100.0	0	0.0
Ba Baong	4	4	100.0	0	0.0
Project	20	20	100.0	0	0.0

Data source: Project Survey conducted in October 2016.

65. Buddhism has been the dominant religion in Cambodia, in one form or another, since the reign of Jayavarman VII (c. 1181-1200). In Cambodia is currently estimated to be the faith of 95% of the population, but through the survey results it was found only 100.0% is Buddhism.

**Table 5-6: Religion of Household Heads**

Bridge	No. H/H	Religion			
		Buddhism		Other	
		No.	%	No.	%
Peam Te	11	11	100.0	0	0.0
Prek Chhlong	5	5	100.0	0	0.0
Ba Baong	4	4	100.0	0	0.0
Project	20	20	100.0	0	0.0

Data source: Project Survey conducted in October 2016.

#### 5.5 Vulnerable Groups

66. The study indicates that different types of vulnerable groups include elderly without supporting from youth, widow and female-headed households, physically and mentally handicapped, landless and poor household which their income is under national poverty line. Table 5-6 reported that 14.9% of sample is widow and female household heads. Poor women heads of household are forced by necessity to increasingly take men's roles and responsibilities, due to absence of male labor and inability to hire adult male labor. Female-headed households are indeed facing the double burden of taking care of the well-being of family members and other aspects compared to couple households.

67. Based on the survey results, an average percentage of each vulnerable factor in three different areas (Peam Te, Prek Chhlong and Ba Baong Bridge) of aged<sup>5</sup> household head, female household head, disabled household head and landless household is 45.0%, 10.0%, 5.0% and 35.0% respectively. There is no household living below poverty line (<33\$/capita/month).

<sup>5</sup> Aged was defined as a person who is more than 60 years old and without young to support.

**Table 5-7: Vulnerable Household Head**

Bridge	Number of HHs	Aged (≥60 years) <sup>a</sup>		Female HHs		Disabled HHs		Landless	
		No.	%	No.	%	No.	%	No.	%
Peam Te	11	5	45.5	1	9.1	0	0.0	3	27.3
Prek Chhlong	5	2	40.0	0	0.0	1	20.0	0	20.0
Ba Baong	4	2	50.0	1	25.0	0	0.0	4	100.0
Project Survey	20	9	45.0	2	10.0	1	5.0	7	35.0

<sup>a</sup> "Aged" Vulnerable Household; HH head is older than 60 years old and with no other means of support.

<sup>b</sup> No child-headed household was found in the project area.

Data source: Project Survey conducted in October 2016.

#### 5.6 Literacy

##### 5.6.1 Literacy of the Affected Households' Heads and Spouses

68. Literacy rates of male household head and female spouse are 100.0%. All 2 female household heads are also literate. Women, in general, receive less education than men, especially for widows, but the survey results show that female HH are equal literate to male HH. Normally, women enter the labor market with a lower education and less vocational skills than men. Even though, they (men and women) work the same job and same quality of work, but sometimes women still get a salary less than men.

**Table 5-8: Literacy of Affected Households' Heads and Spouses**

Bridge	Male AH Head			Female AH Head			Female Spouse		
	# AH	Yes	%	# AH	Yes	%	# AH	Yes	%
Peam Te	10	10	100.0	1	1	100.0	10	10	100.0
Prek Chhlong	5	5	100.0	0	0	0.0	4	4	100.0
Ba Baong	3	3	100.0	1	1	100.0	3	3	100.0
Project Survey	18	18	100.0	2	2	100.0	17	17	100.0

Data source: Project Survey conducted in October 2016

##### 5.6.2 Adult Literacy (age from 18 years and over)

69. Adult literacy rate is the percentage of the population aged 18 years and over who can both read and write a simple message in any language. The Table 5-9 presents an adult literacy rate of both male and female of 98.4% which is considerably high and the single literacy rate of male and female 100.0% and 96.2% respectively.

**Table 5-9: Adult Literacy (age from 18 years and over)**

Bridge	Both Sex			Male			Female		
	Pop.	Yes	%	Pop.	Yes	%	Pop.	Yes	%
Peam Te	40	39	97.5	23	23	100.0	17	16	94.1
Prek Chhlong	13	13	100.0	8	8	100.0	5	5	100.0
Ba Baong	8	8	100.0	4	4	100.0	4	4	100.0
Project Survey	61	60	98.4	35	35	100.0	26	25	96.2

Data source: Project Survey conducted in October 2016

### 5.7 Educational Attainment of the Population

70. Since 2000, education for all Cambodians has been re-energized by the world's commitment to the Millennium Development Goal (MDG). Based on its commitment toward the MDG, RGC, with assistance from its development partners and NGO communities, has made their efforts to develop a National Education Plan. Furthermore, the Ministry of Education, Youth and Sport has developed the Education for all policy documents.

71. In the Project area, 11.6% of the population (both male and female) has no or little education. The difference of none and little education between sexes is more than fourth with 19.5% for females and 4.4% for males. Around 65.1% of education attainment for both male and female has at least completed primary education and upper. As shown in Table 5-10, there are about 41.8 % who have completed lower secondary schooling and upper, and only 3.5% who have attended post-secondary education, while 8.1% have completed secondary school. None of female has attended in post-secondary school. The gap between sexes increases for higher level of education.

**Table 5-10: Education Attainment of Population aged 5 years and over**

Bridge	Sex	None or Little	Primary Not Completed	Completed Primary Education	Completed Lower Secondary Education	Completed Upper Secondary Education	Post-Secondary Education
		%	%	%	%	%	%
Peam Te	Male	3.4	13.8	34.5	20.7	17.2	10.3
	Female	22.2	18.5	14.8	40.7	3.7	0.0
	Both	12.5	16.1	25.0	30.4	10.7	5.4
Prek Chhlong	Male	9.1	36.4	18.2	27.3	9.1	0.0
	Female	11.1	44.4	22.2	22.2	0.0	0.0
	Both	10.0	40.0	20.0	25.0	5.0	0.0
Ba Baong	Male	0.0	40.0	0.0	60.0	0.0	0.0
	Female	20.0	20.0	40.0	20.0	0.0	0.0
	Both	10.0	30.0	20.0	40.0	0.0	0.0
Project Survey	Male	4.4	22.2	26.7	26.7	13.3	6.7
	Female	19.5	24.4	19.5	34.1	2.4	0.0
	Both	11.6	23.3	23.3	30.2	8.1	3.5

Data source: Project Survey conducted in October 2016

### 5.8 Current School Attendance

72. Information on school attendance was collected in respect of the population aged from 6 to 14 years old. School attendance was defined as enrolment and studying at a primary and lower secondary school. School attendance in primary education is 100.0%, while lower secondary school is 87.5%.

73. In particular, rural poorer families in the past, young girls are probably allowed to attend school of grade 6 in primary school and after that they stay at home to help their families as additional agricultural labor. At the present, most of the families send and encourage their daughters to go to school in higher level of education. The Table 5-11 shows that about 100.0% of pupils have attended primary or secondary school.

**Table 5-11: Current School Attendance for Primary and Lower Secondary**

Bridge	Sex	Primary School			Lower Secondary School		
		Age: 6-11	Attending	%	Age: 12-14	Attending	%
Peam Te	Male	2	2	100.0	3	2	66.7
	Female	4	4	100.0	3	3	100.0
	Both	6	6	100.0	6	5	83.3
Prek Chhlong	Male	0	0	0.0	1	1	100.0
	Female	3	3	100.0	0	0	0.0
	Both	3	3	100.0	1	1	100.0
Ba Baong	Male	0	0	0.0	0	0	0.0
	Female	0	0	0.0	1	1	100.0
	Both	0	0	0.0	1	1	100.0
Project Survey	Male	2	2	100.0	4	3	75.0
	Female	7	7	100.0	4	4	100.0
	Both	9	9	100.0	8	7	87.5

Data source: Project Survey conducted in October 2016

### 5.9 Affected Households' Head Engaged in Farming and No-farming

74. Only 20.0% of household heads are working on farms, while non-farming is 80.0% (non-farming is included aged or disable or unable to work.). Table 5-12 shows that the percentage of household heads working on farms is highest at Peam Te Bridge in Kratie province with 27.3%.

**Table 5-12: Farming and Non-farming Affected Households' Head**

Bridge	Number of Households	Non-farming		Farming		
		No.	%	No.	%	
Peam Te	Male	10	7	70.0	3	30.0
	Female	1	1	100.0	0	0.0
	Total	11	8	72.7	3	27.3
Prek Chhlong	Male	5	4	80.0	1	20.0
	Female	0	0	0.0	0	0.0
	Total	5	4	80.0	1	20.0
Ba Baong	Male	3	3	100.0	0	0.0
	Female	1	1	100.0	0	0.0
	Total	4	4	100.0	0	0.0
Project Survey	Male	18	14	77.8	4	22.2
	Female	2	2	100.0	0	0.0
	Total	20	16	80.0	4	20.0

Data source: Project Survey conducted in October 2016

### 5.10 Fishing Community

75. Among 20 AHs interviewed, there are only 5 AHs (25.0%) are in fishing as part of their income. 2 AHs of the 5 AHs (40.0%) of the fishing family, only fish for their leisure and eating, while other 3 AHs (60.0%) get income from fishing.



**Table 5-13: Fishing Activities around the Project Area**

Bridge	Number of HH	Fishing		Leisure/ Eating		Selling/Money	
		Yes	%	Yes	%	Yes	%
Peam Te	11	3	27.3	1	33.3	2	66.7
Prek Chhlong	5	1	20.0	0	0.0	1	100.0
Ba Baong	4	1	25.0	1	100.0	0	0.0
Project Survey	20	5	25.0	2	40.0	3	60.0

Data source: Project Survey conducted in October 2016

76. Based on the socio-economic survey, the main source of fishing for the 5 fishing households is a River (60%). Stream/Lake is also another main source for fishing of people in the project area.

**Table 5-14: A place to conduct the fishing**

Bridge	Number of HH	River		Stream/Lake	
		Yes	%	Yes	%
Peam Te	3	3	100.0	0	0.0
Prek Chhlong	1	0	0.0	1	100.0
Ba Baong	1	0	0.0	1	100.0
Project Survey	5	3	60.0	2	40.0

Data source: Project Survey conducted in October 2016

77. All 5 fishing families, they do fishing only in rainy season. None of them have joined in fishery community.

**Table 5-15: Duration of the fishing**

Bridge	Number of HH	Whole year		Rainy season		Dry season	
		Yes	%	Yes	%	Yes	%
Peam Te	3	0	0.0	3	100.0	0	0.0
Prek Chhlong	1	0	0.0	1	100.0	0	0.0
Ba Baong	1	0	0.0	1	100.0	0	0.0
Project Survey	5	0	0.0	5	100.0	0	0.0

Data source: Project Survey conducted in October 2016

**5.11 Main Sources of Income of Affected Households**

78. According to the survey, the main sources of income of the AHs include 45.0% from business/trade followed by 30.0% from wages/salary, and 15.0% depend on agricultural production. Fishing as same as house/land rental of 5.0% are also another main sources of household income.

**Table 5-16: Main Source of Income of the AHs**

Bridge	Project Survey		Peam Te		Prek Chhlong		Ba Baong	
	No.	%	No.	%	No.	%	No.	%
Wages/salary	6	30.0	3	27.3	1	20.0	2	50.0
Business/trade	9	45.0	4	36.4	3	60.0	2	50.0
Agricultural production	3	15.0	2	18.2	1	20.0	0	0.0
Fishing	1	5.0	1	9.1	0	0.0	0	0.0
House/land rental	1	5.0	1	9.1	0	0.0	0	0.0

Data source: Project Survey conducted in October 2016

**5.12 Affected Households Income**

79. Under the survey purposes, the affected household income included earnings and receipts from all sources received by all household members during the last year. Participants in the economic activity include employers, own account workers, employees or unpaid family workers, rentals (house, land, equipment, etc.) or recipient of pensions, grants, etc.

80. The two of female household heads reported that one is earning an annual income around USD 1,600, while another one reported an annual income is 2,750.

81. A significant number (72.2%) of male household heads reported that they are earning an annual income higher than USD 3,500, while 11.1% reported an annual income between USD 2,500 and USD 3,500. Only 16.7% of the male household heads reported that their earnings between USD 1,500 to USD 2,500. None of them earns income less than USD 1,500 a year.

**Table 5-17: Annual Income (USD) of AHs Headed by Males**

Bridge	<= 1,500		1,500+ -2,500		2,500+ -3,500		3,500+ -4,500		4,500+ -5,500		5,500+ -6,500		6,500+		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Peam Te	0	0.0	0	0.0	2	20.0	1	10.0	1	10.0	0	0.0	6	60.0	10	100.0
Prek Chhlong	0	0.0	2	40.0	0	0.0	0	0.0	1	20.0	0	0.0	2	40.0	5	100.0
Ba Baong	0	0.0	1	33.3	0	0.0	1	33.3	0	0.0	1	33.3	0	0.0	3	100.0
Project	0	0.0	3	16.7	2	11.1	2	11.1	2	11.1	1	5.6	8	44.4	18	100.0

Data source: Project Survey conducted in October 2016

82. Table 5-18 shows the sources of cash income of all 20 affected households interviewed. It reveals that the average monthly income of household and capita is USD 511.65 and USD 96.54, respectively.

**Table 5-18: Average Annual and Monthly Income (USD) per Capita**

Items	Case	Annual Income		
		USD	%	Average
Wages/salary	13	35,850.50	16.31	2,757.73
Business/trade	12	170,125.00	77.39	14,177.08
Agricultural production	8	5,495.00	2.50	686.88
Fishing	2	2,200.00	1.00	1,100.00
House/land rental	4	6,150.00	2.80	1,537.50

Items	Case	Annual Income		
		USD	%	Average
Total	39	219,820.50		100
Currency in USD		Annual		Monthly
Number of Interviewed AHs = 20				
Household income**		10,991.00		915.92
Capita income***		2,389.35		199.11

\* Each household gets income from more than one source

\*\* [Household income]=[Total Annual Income]/[Total Number of Interviewed HHs (20)]

\*\*\* [Capita income]=[Total Annual Income]/[Total Population (92)]

Data source: Project Survey conducted in October 2016

### 5.13 Credit

83. Generally, households in the project area have access to credits or loans from various agencies, both private/official and non-official credit institutions. The survey showed that only 20.0% (4 AHs) of the 20 AHs have received credit from different agencies. The credit sources of the 3 AHs include 75.0% from bank institutions and 25.0% from credit providers.

**Table 5-19: Credit Acquired During the Last Year**

Bridge	Number of HHs	Received credits		Bank		Credit Providers	
		No.	%	No.	%	No.	%
Peam Te	11	3	27.3	2	66.7	1	33.3
Prek Chhlong	5	1	20.0	1	100.0	0	0.0
Ba Baong	4	0	0.0	0	0.0	0	0.0
Project	20	4	20.0	3	75.0	1	25.0

Data source: Project Survey conducted in October 2016

84. Generally, households acquire loans for various purposes, such as for farming, health treatment, starting/expanding business, and family support. As shown in Table 5-20, most households (50.0%) get loans for their business expanding as well as supporting family members. Other 25.0% get loan for their farming same as for health care.

**Table 5-20: Purposes of Acquiring the Credit**

Items	Project		Peam Te		Prek Chhlong	
	No.	%*	No.	%	No.	%
Number of HHs	4		3		1	
Health care	1	25.0	1	33.3	0	0.0
Farming	1	25.0	0	0.0	1	100.0
Business expanding	2	50.0	1	33.3	1	100.0
Supporting family members	2	50.0	2	66.7	0	0.0

\* a few household have used credit in more than one purpose

Data source: Project Survey conducted in October 2016

### 5.14 Sanitation

#### 5.14.1 Water Sources for Drinking and Cooking

85. Of the interviewed households in the Project area, 80.0% use pipe water from waterworks. Only 20.0% have used water from protected wells, while 65.0% buy clean water for their daily consumption.

**Table 5-21: Water Sources for Drinking and Cooking**

Bridge	#HHs	Protected Well		B u y i n g		Waterworks	
		No.	%	No.	%	No.	%
Peam Te	11	0	0.0	7	63.6	11	100.0
Prek Chhlong	5	0	0.0	2	40.0	5	100.0
Ba Baong	4	4	100.0	4	100.0	0	0.0
Project	20	4	20.0	13	65.0	16	80.0

Data source: Project Survey conducted in October 2016

86. Only 10.0% of the interviewed households always boil their drinking water. Boiling water is by far the most common method for Cambodian people to protect from any bacteria. In addition, 50.0% of the interviewed households sometimes boil water before drinking, while 40.0% drink water without boiling.

**Table 5-22: Boiling Water for Drinking**

Bridge	Number of Households	Boiling Water for Drinking					
		Always		Sometimes		Never	
		No.	%	No.	%	No.	%
Peam Te	11	1	9.1	6	54.5	4	36.4
Prek Chhlong	5	1	20.0	4	80.0	0	0.0
Ba Baong	4	0	0.0	0	0.0	4	100.0
Project Survey	20	2	10.0	10	50.0	8	40.0

Data source: Project Survey conducted in October 2016

87. A significant number (80.0%) of interviewed households have used waterworks for their washing and bathing. Approximately 5.0% of interviewed households have to buy water for washing/bathing during the dry season. Wells and rainwater (35.0%) are the second common water sources for the local people to make a bath and wash (see Table 5-23 for detailed information).

**Table 5-23: Water Sources for Washing and Bathing**

Bridge	#HHs	Protected Well		Rainwater		B u y i n g		Waterworks	
		No.	%	No.	%	No.	%	No.	%
Peam Te	11	0	0.0	1	9.1	0	0.0	11	100.0
Prek Chhlong	5	0	0.0	0	0.0	1	20.0	5	100.0
Ba Baong	4	4	10.0	2	50.0	0	0.0	0	0.0
Project	20	4	20.0	3	15.0	1	5.0	16	80.0

Data source: Project Survey conducted in October 2016

#### 5.14.2 Toilet

88. In the Project area, 95.0% (19 AHs) of the interviewed households (20 AHs) have own latrine, while only one household does not have access to toilet facilities as they depend on “open defecation” or sharing toilets with their neighbours. In particular, 100.0% of respondents in Peam Te and Prek Chhlong Bridge/Kratie province have it. Except in Ba Baong Bridge/Prey Veng province, 90.0% of AHs have their own toilet.

#### 5.15 Energy Sources for Lighting and Cooking

89. In the past Battery is the most commonly used energy source for lighting in Cambodia’s rural areas, where electricity is not available. However, in the Project area, only 10.0% of the surveyed AHs claimed that they use rechargeable stationary batteries for lighting, while 90.0% of them use publicly provided electricity as their source.

**Table 5-24: Energy Sources for Lighting**

Bridge	Number of HHs	Electricity		Battery	
		No.	%	No.	%
Peam Te	11	11	100.0	0	0.0
Prek Chhlong	5	4	80.0	1	20.0
Ba Baong	4	3	75.0	1	25.0
Project Survey	20	18	90.0	2	10.0

Data source: Project Survey conducted in October 2016

90. Based on the survey results, 35.0% of interviewed households use liquefied petroleum gas as their source for cooking, while 40.0% and 35.0% use firewood and charcoal, respectively. Only 30.0% of interviewed households in the Project area use electricity as their energy source for cooking.

**Table 5-25: Energy Sources for Cooking**

Bridge	Number of HHs	Firewood		Electricity		Charcoal		Gas/Kerosene	
		No.	%	No.	%	No.	%	No.	%
Peam Te	11	5	45.5	1	9.1	6	54.4	1	9.1
Prek Chhlong	5	2	40.0	2	40.0	1	20.0	4	80.0
Ba Baong	4	1	25.0	3	75.0	0	0.0	2	50.0
Project	20	8	40.0	6	30.0	7	35.0	7	35.0

Data source: Project Survey conducted in October 2016

#### 5.16 Transportation

91. Bicycles are more commonly used as a mode of transportation in rural areas, while motorcycles are more conveniently and more commonly used in urban areas. In the study, it reveals that around 90.0% of interviewed households have motorbike and 65.0% have bicycles. Only a small amount of households have trucks at about 5.0%, and 25.0% have a car/pickup/minivan. It was estimated that the average value of transport equipment in the Project area is around USD 6,358.00 per household.

**Table 5-26: Transport Equipment and Its Values**

Mode of Transport	Total Value (US\$)	Total AHs = 120	
		# Having	%
Bicycle	590.0	13	65.0
Motorbike	31,270.0	18	90.0
Car/pickup/minivan	75,000.0	5	25.0
Truck	20,000.0	1	5.0
Boat without engine	300.0	3	15.0
<b>Grand Total</b>	<b>US\$ 127,160.00</b>		
<b>Average/Household</b>	<b>US\$ 6,358.00</b>		

Data source: Project Survey conducted in October 2016

#### 5.17 Household Appliances

92. Telephones are the most common household appliance among the AHs interviewed, with 20 households (100.0%) reporting that they own at least one or more per household. The second most common appliance is TV/VCR/VCP (85.0%). Table 5-27 shows the percentage of households owning other types of electrical appliances, such as 5.0% owning radio/cassette players. A small proportion of households own equipment for convenience such as generators at 20.0%, washing machines as well as air conditioners at 10.0%, and refrigerators 25.0%. It was estimated that the average value of other assets in the target area is around USD 642.50 per household.

**Table 5-27: Household Appliances and Its Values**

Stratum	Total Value (US\$)	Total Households = 20	
		#Having	%
Radio/cassette player	10.0	1	5.0
TV/VCR/VCP	3,190.0	17	85.0
Air conditioner	700.0	2	10.0
Washing machine	530.0	2	10.0
Refrigerator	1,790.0	5	25.0
Telephone	4,600.0	20	100.0
Generator	2,030.0	4	20.0
<b>Grand Total</b>	<b>US\$ 12,850.00</b>		
<b>Average/Household</b>	<b>US\$ 642.50</b>		

Data source: Project Survey conducted in October 2016

#### 5.18 Housing Characteristic

##### 5.18.1 Dwelling Space by Household

93. There are 20 dwellings in the sample. Average floor area of dwellings is 67.2 square meters (sqm) per household or 14.6 square meters per person (average household size is 4.6). For all Cambodia (CSES-2009), the average dwelling space per household is 43.1 sqm. The average floor area of dwelling ranged from 39.8 sqm per household in rural areas to 53.9 sqm in other urban areas, and to 61.8 sqm in urban Phnom Penh.

**Table 5-28: Dwelling Space**

Bridge	No. H/H	Total size in m <sup>2</sup>	Average in m <sup>2</sup>	≤ 20 m <sup>2</sup>		20+ - 50 m <sup>2</sup>		50+ - 100 m <sup>2</sup>		100+ m <sup>2</sup>	
				No.	%	No.	%	No.	%	No.	%
Peam Te	11	885.29	80.5	0	0.0	3	27.3	5	45.5	3	27.3
Prek Chhlong	5	347.09	69.4	0	0.0	1	20.0	3	60.0	1	20.0
Ba Baong	4	112.21	28.1	1	25.0	3	75.0	0	0.0	0	0.0
<b>Project</b>	<b>20</b>	<b>1344.59</b>	<b>67.2</b>	<b>1</b>	<b>5.0</b>	<b>7</b>	<b>35.0</b>	<b>8</b>	<b>40.0</b>	<b>4</b>	<b>20.0</b>

Data source: Project Survey conducted in October 2016

**5.18.2 Building Material**

94. In the studied area 85.0% of the roofs are built from galvanized iron, fibrocement and plastic sheet, while other 15% is made from roofing tile. None of them that their houses are concrete house. 15.0% of houses have galvanized iron, fibrocement and plastic sheet walls, the rest being mainly wooden walls with 70.0%. Only 5.0% of houses is made from thatch wall and 10% from brick wall. 55.0% have wooden floors. The remaining 20.0% is of bamboo floors. There is only 10.0% from floor tiles as well as mortar floor.

**Table 5-29: Building Material**

Construction Material (Total HH = 20)	Roof		Wall		Floor	
	No.	%	No.	%	No.	%
Thatch	0	0.0	1	5.0	0	0.0
Tin / Fibro/ Plastic Sheet	17	85.0	3	15.0	0	0.0
Wood	0	0.0	14	70.0	11	55.0
Bamboo	0	0.0	0	0.0	4	20.0
Roofing Tile	3	15.0	0	0.0	0	0.0
Floor Tile	0	0.0	0	0.0	2	10.0
Mortar	0	0.0	0	0.0	2	10.0
Earth	0	0.0	0	0.0	1	5.0
Brick	0	0.0	2	10.0	0	0.0

Data source: Project Survey conducted in October 2016

**5.19 People's Perception of the Project**

**5.19.1 Satisfaction with the Project**

95. AHs showed satisfaction with the Project since it was reported that 15.0% rated the Project as 'very good', and 45.0% rated it as 'good'. However, about 40.0% of the total households rated the Project as 'good and bad'.

**Table 5-30: Satisfaction with the Project**

Items	Project		Peam Te		Prek Chhlong		Ba Baong	
	No.	%	No.	%	No.	%	No.	%
No answer	0	0.0	0	0.0	0	0.0	0	0.0
Bad	0	0.0	0	0.0	0	0.0	0	0.0
Good and bad	8	40.0	5	45.5	1	20.0	2	50.0
Good	9	45.0	5	45.5	2	40.0	2	50.0
Very good	3	15.0	1	9.1	2	40.0	0	0.0
<b>Total</b>	<b>20</b>	<b>100.0</b>	<b>11</b>	<b>100.0</b>	<b>5</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>

"Bad": because the Project they will: 1) increase daily expend; 2) loss of good trading site; 3)increase accident;4)disturbs people and community;5) affect on house/shop; 6) loss of land use in ROW; 7) worsen access to school; 8) worsen environmental impact; 9) decrease household income;10) affected on public facilities; 11) loss of occupation; 12) worsen people health condition; and 13) make people migration away.

Data source: Project Survey conducted in October 2016

**5.19.2 Benefits of the Project**

96. In the area of improvements, interviews revealed that around 85.0% of AHs believed that the Project will help improve cargo transportation, while 75.0% mentioned it will decrease of congestion/accidents. About 40.0% responded that the Project will improve access to other facilities. Table 5-31 shows more detailed information on the Project benefits.

**Table 5-31: Three ranks of Project Benefits**

Most Important Benefits	Total Number of HHs = 20							
	Total		First		Second		Third	
	No.	%	No.	%	No.	%	No.	%
Improve cargo transportation	17	85.0	10	50.0	5	25.0	2	10.0
Appreciation of land prices	2	10.0	0	0.0	1	5.0	1	5.0
Decrease of congestion/accidents	15	75.0	5	25.0	9	45.0	1	5.0
Improve access to other facilities	8	40.0	3	15.0	0	0.0	5	25.0
Improve environment	3	15.0	0	0.0	2	10.0	1	5.0
Big push to outskirts area	9	45.0	1	5.0	2	10.0	6	30.0
Create more direct/indirect jobs	2	10.0	0	0.0	0	0.0	2	10.0
Improve local product marketing	1	5.0	0	0.0	0	0.0	1	5.0

Data source: Project Survey conducted in October 2016

**5.19.3 Perception of Affected Households with Regards to Relocation**

97. In terms of the perception of AHs concerning relocation due to the Project, all of interviewed households (20AHs) said that they agree to move from the PRW but will need some assistance from the Project (see Table 5-32 for details).

**Table 5-32: Perception of AHs with Regards to Relocation**

Bridge	Number of Households	No Answer		Refuse to Relocate		Agree with Assistance	
		No.	%	No.	%	No.	%
Peam Te	11	0	0.0	0	0.0	11	100.0
Prek Chhlong	5	0	0.0	0	0.0	5	100.0
Ba Baong	4	0	0.0	0	0.0	4	100.0
<b>Project</b>	<b>20</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>20</b>	<b>100.0</b>

Data source: Project Survey conducted in October 2016

**6 ORGANIZATIONAL FRAMEWORK**

98. The owner of the Project is the Executing Agency (EA) which is MPWT; therefore, it has overall responsibility for the successful implementation of the ARAP. The EA will be assisted by a number of Offices within and outside MPWT, starting with the Project Management Unit (PMU) which is tasked with undertaking the Project. The Environmental Section of PMU (PMU-ES) will be established to work closely with the GDR (General Department of

Resettlement) of the Inter-ministerial Resettlement Committee (IRC) for the preparation, updating, and implementation of the ARAP.

#### 6.1 The Environmental Section of the Project Management Unit (PMU-ES)

99. PMU-ES of MPWT under guidance of IRC will work closely with GDR as the lead arm of the PMU in the preparation and implementation of the ARAP. Its tasks include the followings:

- (i) Secure the approval of the ARAP by IRC;
- (ii) Secure prior approval from IRC and JICA for any variations in the approved ARAP;
- (iii) Secure the database of AHs and assets that will be gathered during the preparation and updating of the ARAP;
- (iv) Prepare progress reports on ARAP implementation for submission to MPWT, PMU and JICA.

#### 6.2 The Inter-ministerial Resettlement Committee (IRC) & the General Department of Resettlement (GDR)

100. IRC is a collegial body headed by the representative from MEF and composed of representatives from concerned line ministries, such as the Ministry of Interior; MPWT, MLMUPC; MEF and MAFF. Created by the Prime Minister through *Decision No.13, dated 18 March 1997*, in connection with the resettlement of AHs in the Highway 1 Project (Loan 1659-CAM), IRC has since been involved in other foreign-assisted government infrastructure projects with involuntary resettlement. IRC will be established on ad hoc basis for each project upon the request from Executing Agency. GDR is a secretariat of IRC and will work closely with other relevant institutions to deal with all resettlement issues caused by the project. The IRC will be established for the project.

101. The institutional setup for resettlement and land acquisition is indicated in Figure 6-1.

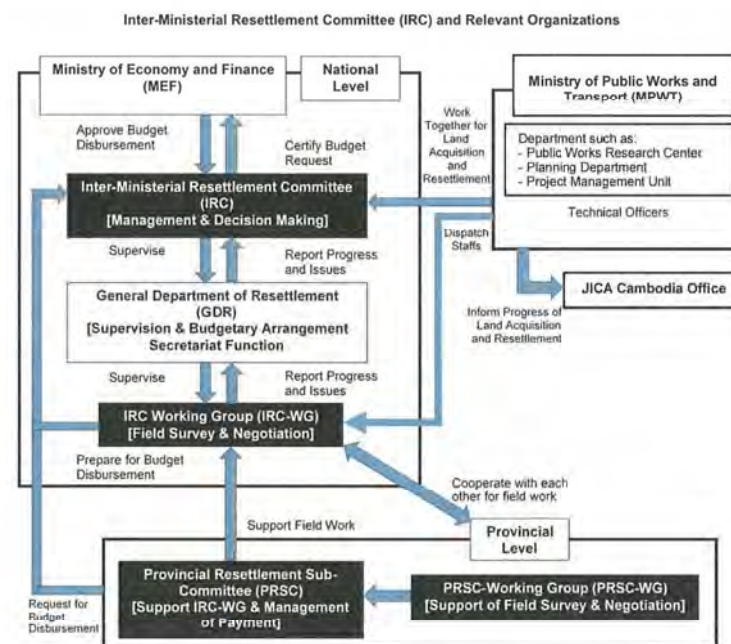


Figure 6-1: Inter-Ministerial Resettlement Committee (IRC) and relevant organizations

102. IRC will assume the function of a quasi-regulatory body, ensuring that funds for resettlement are spent properly and that the ARAP is carried out as intended. The technical arm of IRC is its GDR.

103. The GDR will assist IRC in the following tasks:

- (i) Reviewing and approving the ARAP, ensuring its consistency with JICA Guidelines and, later, the loan agreement;
- (ii) Submitting the approved ARAP to JICA;
- (iii) Request to Provincial Governor to establish PRSC and PRSC-WG;
- (iv) Orienting, as needed, PRSC and its WG (PRSC-WG) on their tasks relative to ARAP updating and implementation;
- (v) Manage and supervise the implementation of ARAP such as DMS;
- (vi) Negotiation and Contract making with APs;
- (vii) Securing from the national treasury the budget for carrying out the ARAP, ensuring that funds are available in a timely manner and in sufficient amounts;

- (viii) Ensuring the approval of all disbursements connected with the implementation of the ARAP, such as payment for compensation and other entitlements, acquisition and preparation of replacement plots, operational expenses of personnel, etc.;
- (ix) Ensuring that funds for resettlement are spent judiciously; and
- (x) Hire External Monitoring Agency to monitor the implementation of the ARAP, ensuring that this is carried out in compliance with the Project resettlement policy and with the loan agreement.

### 6.3 Provincial Resettlement Sub-Committee

104. The Provincial Resettlement Sub-Committee (PRSC) is a collegial body at the provincial level. Headed by the Provincial Governor or Provincial Vice-Governor, its members are provincial department directors of line ministries represented in IRC, and also the chiefs of the districts and communes traversed along the Project.

105. The technical arm of PRSC is PRSC-WG, which is headed by the Director (or a representative) of the Provincial Department of Public Works and Transport (PDPWT). The regular members of PRSC-WG come from the Provincial Government, the Provincial Department of Economy and Finance (PDEF), and the Ministry of Interior.

106. In an effort to make the whole process of resettlement effective, participatory and transparent, the chiefs of the affected communes and villages in affected communes will seat in PRSC-WG to tackle matters concerning their respective areas of jurisdiction.

107. PRSC, through PRSC-WG, will have the following functions:

- (i) Facilitate a sustained public information campaign, ensuring that the public, especially the AHs, are updated on any development regarding the Project and resettlement activities;
- (ii) Cooperate with IRC-WG in conducting the implementation of ARAP and assist public consultation and information disclosure meeting;
- (iii) Manage the delivery of compensation and other entitlements to the AHs;
- (iv) Receive and act on the complaints and grievances of AHs in accordance with the Project resettlement policy; and
- (v) Maintain a record of all public meetings, grievances, and actions taken to address complaints and grievances.

## 7 IMPLEMENTATION SCHEDULE

108. During the detailed design stage, DMS and RCS will be conducted under management of IRC-WG. DMS will be implemented by IRC-WG in close cooperation with PRSC-WG and relevant local authorities. RCS will be updated by independent agency hired by IRC. Based on the result of DM and RCS, IRC will calculate compensation amount and request budget disbursement to RGC.

109. During the DMS, consultation meeting will be held and project information booklet will be distributed to all AHs by IRC-WG assisted by PRSC-WG. The information program will precede the marking of the PRW. Grievance procedures and structure will be established prior to DMS. The preparation for the updating of the ARAP will follow immediately after the final identification survey and DMS.

110. After the compensation amount is expected to be undertaken simultaneously for different bridges, the compensation process, including agreement and certified record of quantities and valuation of properties and physical payment of cash compensation and formal transfer of

property in the form of land will take place before any construction start in a designated stretch of the bridge. Compensation payments are made at least 30 days before construction starts. The external monitor will be conducted during all of the above stages of implementation of the ARAP. The external monitor's benchmark survey will be carried out prior to any physical relocation of AHs and AH structures.

111. IRC will mobilize its working group to work closely with PRSC-WG and the EMA before commencement of any resettlement activities, i.e., before ARAP updating. Land acquisition and relocation of AHs will not commence until the updated ARAP has been reviewed and approved by both IRC and JICA.

112. MPWT will ensure that contractor will not be issued notice to commence for any part of a section of bridges to begin construction work unless it has (a) satisfactorily completed in accordance with the approved updated ARAP, compensation payment and relocation; (b) ensured that income restoration program is in place; and (c) area required for civil works is free of all encumbrances. Table 7-1 summarizes the various inter-related activities connected with the updating and implementation of the ARAP.

**Table 7-1: Indicative Schedule of Resettlement Activities (Temporal Assumption)**

ACTIVITIES	SCHEDULE
Submission of ARAP to MPWT and IRC/MEF	Apr. 2017
MPWT and IRC Approval of ARAP	Sep. 2017
ARAP Updating following Detailed Design	Start from Oct, 2017 and forwarding
Submission and JICA Approval of Updated ARAP	Dec. 2017
Implementation of the Approved Updated ARAP	Start from Jan. 2018 and forwarding
Internal Monitoring (Submission of Quarterly Progress Reports)	Start from Jan. 2018 and forwarding
External Monitoring (Intermittent)	Start from Jan. 2018 and forwarding
Post-evaluation	2020
Start of Civil Works*	Jun. 2018 and forwarding

\* For sections where there are no resettlement impacts.

## 8 PUBLIC PARTICIPATION AND CONSULTATION

113. Stakeholders of the Project include provincial/district, commune/village officials, local people along the PRW of the Replacement Bridges, and managers and staff of PDPWT (See Table 8-1). Participation provides for the opportunity and the process by which stakeholders influence and become co-responsible for development initiatives and decisions that affect them. Through participation, the needs and priorities of the local population are solicited; the adverse social impacts of the Project, including the corresponding mitigating measures, are collectively identified; and the commitment and feeling of ownership over the Project is engendered among the AHs.

### 8.1 Participatory Activities in ARAP's Planning

114. The public, especially the AHs, the local governments and bridge/road users will be consulted and their opinions solicited. They will in fact participate in the preparation of the ARAP. Table 8-1 summarizes the roles and responsibilities of the EA, local governments, and AHs in the preparation.

**Table 8-1: Participatory Activities in ARAP Planning**

Project Process Stage	Participatory Activities and Participants	Outputs	Responsible Institution
Preparation or Feasibility	Briefing of the provincial, district, commune, village officials, local people along the PRW of the Project, and PDPWT about the Project Technical Assistance, the resettlement impact, and activities of the consultant (first commune stakeholder meeting).	The local population including AHs and their representatives, local government officials, and managers and technical staff of PDPWT participated in the meeting and were consulted on the objectives, planning and impact of the project and of resettlement.	MPWT and Consultant (JICA Study Team)
	Conduct of IOL, census of AHs, social impact assessment, and RCS.	An IOL, census of AHs and RCS were conducted and the results were included in the ARAP.	Consultants (JICA Study Team), assisted by local authorities and PDPWT.
	Discussion/consultation with IRC-GDR and PMU-MPWT about the proposed project resettlement policy.	IRC were made fully aware of and consulted about social impact and resettlement policy.	Consultant (JICA Study Team)
	Drafting of the ARAP and project information booklet (PIB) <sup>6</sup> and submission to PMU-MPWT, IRC-GDR and JICA for review and approval.	Draft of RAP and PIB will be provided to and reviewed by MPWT, IRC-RD and JICA for approval.	Consultant (JICA Study Team)

**8.2 Public Consultations During Abbreviated RAP Preparation**

115. During ARAP preparation stage, the following public consultations were held at different project areas.

- a) Stakeholder Meeting (before cut-off date)
- b) Stakeholder Meeting (after cut-off date)

116. Major participants are possible project affected persons who were informed the stakeholder meeting by local government. Their socioeconomic status are examined through Census, Socio-economic Survey, and IOL.

**8.2.1 Schedule of Stakeholder Meetings**

117. The schedules of 1<sup>st</sup> stakeholder meetings (before cut-off date) held regarding the project are shown in Table 8-2 and 2<sup>nd</sup> stakeholder meetings (after cut-off date) are shown in table 8-3.

**Table 8-2: The 1<sup>st</sup> Stakeholder Meetings Held Regarding the Project**

<sup>6</sup> The Project information booklet will be written in Khmer. The PIB will be distributed to each AH during the DMS, and updated PIB will be distributed before signing contract with AHs. An English version draft of PIB in *Appendix 1: Project Information Booklet (English Draft Version)* will be translated in Khmer and be distributed during the DMS. The updated PIB to be distributed before signing contract with AHs, information of rehabilitation options (including outline of IRP) will be added.

Date & Time	Meeting Place	Province	District/ Town	Traversed Commune/Sangkat	Participant
12 Oct. 2016 8:00 am	Ta Lus Primary School	Kratie	Krong Kratie	Bos Leav Commune	Male=19 Female=17
			Chet Borei	Sangkat Roka Kandal	
12 Oct. 2016 10:00 am	Preah Chan Reachea pagoda	Kratie	Chhlong	Chhlong Commune	Male=17 Female=12
				Prek Saman Commune	
13 Oct. 2016 8:30 am	Ba Baong Leu Pagoda	Prey Veng	Peam Ro	Ba Baong	Male=60 Female=45
<b>Total</b>		<b>2</b>	<b>4</b>	<b>5</b>	

**Table 8-3: The 2<sup>nd</sup> Stakeholder Meetings Held Regarding the Project**

Date & Time	Meeting Place	Province	District/Town	Commune/Sangkat	Participant
29 Mar. 2017 9:30 am	Ta Lus rest hall	Kratie	- Kratie	- Roka Kandal	Male=17 Female=10
			- Chet Borei	- Bos Leav	
29 Mar. 2017 2:00 pm	Chan Reachea Pagoda	Kratie	- Chhlong	- Chhlong - Prek Saman	Male=27 Female=8
30 Mar. 2017 2:30 pm	Baboang commune center	Prey Veng	- Peam Ro	- Baboang	Male=20 Female=4
<b>Total</b>		<b>2</b>	<b>4</b>	<b>5</b>	

**8.2.2 Key Points Raised and Discussed**

**(a). The First Stakeholder Meeting (before cut-off date)**

118. One day before the IOL commenced on 13<sup>th</sup> October 2016, three public meetings at commune with stakeholders (e.g., road and bridge users, residents of traversed communities, transport operators, government agencies, civil society, etc.) was held in Kratie and Prey Veng provinces by the PMU-MPWT and the Consultant (JICA Study Team) for the purpose of discussing the following:

- (i) Project technical assistance background and objectives;
- (ii) Main activities of the research team (i.e., conduct of socio-economic household survey, IOL, RCS, etc.);
- (iii) The Project's policy on involuntary resettlement, including entitlement of compensation and other assistances, grievance procedure, etc.;
- (iv) Probable positive and adverse impacts of the Project, and recommendations on how to avoid and mitigate negative impacts;
- (v) Informing on Cut-Off Date: 13<sup>th</sup> October 2016 for the project; and
- (vi) Question and Response.

119. After an introduction of Local Authority, a Representative of PMU/MPWT described the project background and its current situation, background of the Project and its impacts, both

positive and negative. In each meeting, there was also an open floor for discussion among the participants. The results of discussion are summarized in Table below:

**Table 8-4: Questions and Responses of the First Stakeholder Meeting (Before cut-off date)**

Question	Response
<b>1. About the project implementation</b>	
<b>Participant, male:</b> When will the civil works start?	<b>PMU/MPWT:</b> At the moment we do not exactly know, because the project is still studying. We will know when the project is approved. Through temporal assumption, it will be started in next year.
<b>Participant, female:</b> Will the existing bridge demolish?	<b>PMU/MPWT:</b> The existing bridge will be kept for travelling during the replacement bridge are being constructed. It will be moved to other place when the replacement bridge are used.
<b>Participant, female:</b> Request to the project to start implementation as soon as possible.	<b>PMU/MPWT:</b> The study team will try to speed it up, but all process need to be order implemented. It may start in next year.
<b>2. About the ROW/PRW</b>	
<b>Participant, female:</b> What size of ROW of the NR73?	<b>PMU/MPWT:</b> Based on the sub-degree No.197 adopted on 23 November 2009 on Management of ROW along the national road and railway in Cambodia, the ROW will take 25 meters in each side from the road center line. Total is 50 meters.
<b>Participant, female:</b> Which side of the existing bridge will the replacement bridge (Peam Te) construct?	<b>PMU/MPWT:</b> It will construct on the river side.
<b>3. About the relocation</b>	
<b>Participant, male:</b> What will the Project do with the landless household?	<b>PMU/MPWT:</b> It is divided into two type of landless household: 1) All their private land was affected, so they will get full compensation for such land, and with the compensation amount they can restore their lost properties. 2) People who lives in ROW, they will not get any compensation for their land use in ROW, but they will get assistant from the project during the project implementation.
<b>Participant, female:</b> Who will respond for removing the affected structures?	<b>PMU/MPWT:</b> There are four stages in resettlement implementation: 1- Data collection stage: IRC WG will conduct the DMS to collect and register all AHs and affected properties. 2- Contract making stage: After DMS conducting, IRC WG comes again to make a negotiation with AHs for contact signing. 3- Compensation stage: After the contact signing, IRC will make compensation payment to the agreed AHs. 4- The last stage is relocation. AHs will be given enough time for relocating their affected properties.
<b>Participant, male:</b> The Project implementation will affect my house in PRW. The remained house will be not	<b>PMU/MPWT:</b> The affected house will be compensated at replacement cost which will be calculated by engineer or master carpenter. The construction materials and labor cost will be

Question	Response
available for living. What can the Project do for that?	calculated in market price in the local area. In such case the project will pay for the whole affected structure.
<b>4. About the compensation</b>	
<b>Participant, male:</b> Will the Project compensate for land improvement (refilled land) in PRW?	<b>PMU/MPWT:</b> If the people have filled the land (for house construction or business activity against a pond resulted from previous road construction) in PRW, such land will not be compensated. The project will compensate for only affected private land, but not for ROW or state land. People can take it to use if they want.
<b>Participant, male:</b> If people are not satisfy with the compensation rate for the affected land, how can people do?	<b>PMU/MPWT:</b> In this case, people can ask the project to get the replacement land or to make complain to the Grievance Committee.
<b>Participant, female:</b> When will compensation process start, before or after the relocation?	<b>PMU/MPWT:</b> The compensation payment will be started before the relocation process by IRC WG jointly by local authority and under observation of EMO.
<b>Participant, female:</b> In case the remained land is small, what will project do?	<b>PMU/MPWT:</b> In this case, project will pay for the whole land size if the remained land is not suitable for using.
<b>Participant, male:</b> I have bought a land in ROW and it will be affected. Will the Project compensate for the affected land?	<b>PMU/MPWT:</b> As everybody knows, the land in ROW is the state land. Therefore, there is no compensation at all for such affected land.
<b>Participant, male:</b> Will the Project compensate for the whole structure if it is affected in a part?	<b>PMU/MPWT:</b> It will be based on the actual structure figure. Sometimes, the structure is affected a part, but it cannot be cut so the compensation have to be done for the whole structure. On the contrary, if the structure can cut in affected part, so the compensation will be done only the affected size. The compensation for the affected structure will be divided by type, size and number of floor.
<b>Participant, male:</b> What project will do with affected land without land ownership certificate?	<b>PMU/MP WT:</b> In this case, the project will require certification from local authorities such as village chief or/and commune chief.
<b>Participant, male:</b> Will the Project compensate for my affected well in PRW?	<b>PMU/MP WT:</b> Of course, people will get compensation for their affected wells, even though it is constructed in ROW. But any structure is constructed after the Cut-off Date, it is not entitle for compensation.
<b>Participant, male:</b> Will the Project pay for the affected public asset such as pagoda gate?	<b>PMU/MPWT:</b> In general, the project will try to minimize the impact as much as possible. In case, the impact cannot be avoided, the affected public asset will be replaced with new ones. There is no compensation in cash.
<b>Participant, female:</b> Are there any compensate for the affected crop?	<b>PMU/MPWT:</b> The project will inform to people about the implementation schedule, so people can avoid any crop damage. In case it can't avoid the damage, the Project will compensate with the market price in order to support AH income, because their incomes from the crops or trees will be temporarily decreased by the Project Impact.



Question	Response
<b>Participant, female:</b> How will you know if the Project Policy are kept and met?	<b>PMU/MPWT:</b> All project activities will be monitored by IRC, Provincial Sub-Committee, Ministry of Public Works and Transport, and an External Monitoring Agency. Quarterly reports will be prepared and submitted to IRC and then IRC will forward it to JICA. The JICA will also monitor these activities in its regular supervision missions during the period of project implementation. The regular meeting will be set up to discuss on other issues and reporting on the work progress.

**(b). The Second Stakeholder Meeting (after cut-off date)**

120. The 2<sup>nd</sup> SHM was started from 29<sup>th</sup> to 30<sup>th</sup> March 2016. The same as first SHM, the three public meetings were conducted at commune/Sangkat with stakeholders (e.g., road and bridge users, residents of traversed communities, transport operators, government agencies, civil society, etc. and woman was encouraged to participate in the meeting.) in Kratie and Prey Veng provinces by the PMU-MPWT, PDPWT and the Consultant (JICA Study Team) for the purpose of discussing the following:

- (i) Project technical assistance background and objectives;
- (ii) Bridge alignment, especially for Prek Chhlong Bridge;
- (iii) Socio-economic profile of affected households;
- (iv) Project impact on private and community properties;
- (v) The Project's entitlement on participation and public consultation, compensation and other assistances, income restoration program and grievance procedure, etc.;
- (vi) Re-informing on Cut-Off Date: 13<sup>th</sup> October 2016 for the project; and
- (vii) Question, Response and other requirements.

121. After an opening remark by the Local Authority and Director of PDPWT, a Representative of PMU/MPWT described the project background and the current situation of traffic flow and the project impacts, both positive and negative. During the meeting, participants were re-informed about the Cut-off Date is 13<sup>th</sup> October 2016, and had explained to them the meaning of the Cut-off Date. In each meeting, there was also an open floor for discussion among the participants. The results of discussion are summarized in Table below:

**Table 8-5: Questions and Responses of the Second Stakeholder Meeting (After cut-off date)**

Question	Response
<b>1. About the project alignment and implementation</b>	
<b>Participant, female:</b> Why will the replacement (new) bridge (Peam Te) construct only on river side? Why not at existing (old) bridge?	<b>PMU/MPWT:</b> There are some reasons as follow: - It will double spend if we construct at the same place of existing bridge, because we need to clear the existing bridge and construct two more bridges (one is a replacement bridge and another one is for traffic diversion during the construction). - It will also spend more time for construction. <b>PMU/MPWT:</b> To reduce the project impact, the study team will try to minimize the open space between replace bridge and existing bridge as much as possible (closer each other). The

Question	Response
	project also will compensate for the affected properties at the market price.
<b>Participant, male:</b> When will the civil works start?	<b>PMU/MPWT:</b> At the moment we do not exactly know, because the project is still studying. It may start in 2018 and finish in 2020.
<b>The suggestion from participants (Peam Te Bridge, Kratie)</b>	- The replacement bridge should be constructed close to existing bridge as much as possible to minimize the project impact; - The ROW of the NR73 at Peam Te area should less than 15m, because it is an urban area; and - The designing should be focused on water flow. It is to avoid the water erosion during the flooding season.
<b>The suggestion from participants (Prek Chhlong Bridge, Kratie)</b>	- The replacement bridge should be constructed a retaining wall for both side of the river (east and west) to minimize the project impact; and - The ROW of the NR73 at Chhlong area should less than 15m, because it is an urban area; and
<b>Participant, male:</b> What is the size of the actual replacement bridge after the construction?	<b>PMU/MPWT:</b> It is not yet certain regarding the size of the replacement bridge as it is being studied; though, there could be two lanes for car and two walk sides. The actual bridge size will be known during the detailed design. According to the government policy, the Project will try to minimize its resettlement impact as much as possible.
<b>2. About the ROW/PRW</b>	
<b>Participant, female:</b> What size of ROW of the NR73?	<b>PMU/MPWT:</b> Based on the sub-degree No.197 adopted on 23 November 2009 on Management of ROW along the national road and railway in Cambodia, the ROW will take 25 meters in each side from the road center line. Total is 50 meters. <b>PMU/MPWT:</b> In article 8 of the sub-degree No.197, it states that the pavement of the road which cross the Capital or Provincial City or an Urban Area will be determined separately on the pavement on national roads of the Capital or Provincial City or an Urban Area. So the ROW of the NR73 at Peam Te area will be determine by a Provincial Committee.
<b>3. About the relocation</b>	
<b>Participant, male:</b> When will people remove their affected properties?	<b>PMU/MP WT:</b> The detailed measurement survey (DMS) will be conducted by IRC (MEF and MPWT) jointly with PRSC and Local Authorities. Then people will sing a contract and get the compensation payment. If the APs are not satisfied with the compensation or other reasons they can make complain through grievance redress. The APs will have enough time for remove their affected properties after they get full compensation. The civil work will start after the PRW has been cleared. So the relocation may in early 2018.
<b>The suggestion from participants (Baboang Bridge, Prey Veng)</b>	The resettlement site (for landless HH) should be settled in the same village along the NR11.
<b>4. About the compensation</b>	

Question	Response
<b>Participant, male:</b> When will compensation process start, before or after the relocation?	<b>PMU/MPWT:</b> The compensation will be done before the relocation process.
<b>Participant, male:</b> If the remained land is small (not suitable for using), How can we do?	<b>PMU/MPWT:</b> In this case, the compensation will be made for the whole land size.
<b>Participant, female:</b> I have bought a land in ROW (NR11). Will the Project compensate for the affected land?	<b>PMU/MPWT:</b> The land in ROW is the state land. Therefore, there is no compensation at all for such affected land. The compensation will be made for only affected private land.
<b>Participant, female:</b> What price the project will pay for my affected land?	<b>PMU/MPWT:</b> We can't say at this time (2017), because the compensation rate will be based on market price at the time relocation (2018) which will study by independent team who has widely experience for asset evaluation.
<b>Participant, male:</b> If the construction work affects religious worship places such as spirit houses, how does the Project compensate for the affected community?	<b>PMU/MPWT:</b> In this case, the Project will be tried to avoid its impact as much as possible. In case, it could not avoid the Project will discuss with the community to find a suitable place to reconstruct it. It ensure that the new one is the same as or better than the old one. The cost for ceremony also will be provided if it is needed.



**SHM at Peam Te Bridge, Kratie province**



**SHM at Prek Chhloung Bridge, Kratie province**



**SHM at Baboang Bridge, Prey Veng province**

## 9 GRIEVANCE REDRESS

122. Grievances of AHs in connection with the implementation of the ARAP will be handled through negotiation with the aim of achieving consensus. Complaints will go through three stages before they may be elevated to a court of law as a last resort. MPWT/IRC will shoulder all administrative and legal fees that will be incurred in the resolution of grievances and complaints.

### 9.1 First Stage, Commune/Sangkat Level

123. An aggrieved AH may bring his/her complaint to the Commune/Sangkat leader. The leader will call for a meeting of the group to decide the course of action to resolve the complaint within 15 days, following the lodging of complaint by the aggrieved AH. The meeting of the group consists of the commune/sangkat leader, representative/s from PRSC-WG of the district offices, and the aggrieved AH. The commune leader is responsible for documenting and keeping file of all complaints that are coursed through him/her. If after 15 days the aggrieved AH does not hear from Village or Commune, or if the AH is not satisfied with the decision taken by in the first stage, the complaint may be brought to the District Office either in writing or verbally.

### 9.2 Second Stage, District/Krong Office

124. The District/Krong office has 15 days within which to resolve the complaint to the satisfaction of all concerned. If the complaints cannot be solved in this stage, the district/krong office will bring the case to the Provincial Grievance Redress Committee.

### 9.3 Third Stage, Provincial Grievance Redress Committee

125. The Provincial Grievance Redress Committee, which consists of Provincial Governor or Deputy Governor as a committee chairman and Directors of relevant Provincial Departments as members will be established in each province prior to DMS, meets with the aggrieved party and tries to resolve the complaint. The Committee may ask to PRSC-WG for a review of the DMS by the EMA. Within 30 days of the submission of the grievance the Committee must make a written decision and submit a copy of the same to MPWT, the EMA, IRC and the AH.

### 9.4 Final Stage, the Court Procedures

126. If the aggrieved AH is not satisfied with the solution made by the Provincial Grievance Redress Committee based on the agreed policy in the RAP, the committee shall file administrative procedures against the AHs with the participation of provincial prosecutors. The case will be

brought to the Provincial Court and the same will be litigated under the rules of the court. At the same time, the AH can bring the case to the Provincial court. During the litigation of the case, RGC will request to the court that the project proceed without disruption while the case is being heard. If any party is unsatisfied with the ruling of the provincial court, that party can bring the case to a higher court. The RGC shall implement the decision of the court.

## 10 RELOCATION STRATEGY

### 10.1 Preferred Option by Landless AHs

127. Landless AHs have expressed their preferred option for relocation during stakeholder meeting in October 2016. They expressed their desire to relocate near the existing place and road or at near public facilities such as public hospitals, schools, markets, worships, and with provision of basic infrastructures such as access road in the resettlement sites, toilets, water supply connection, etc. Another consultation with them on relocation options and schedule to the new resettlement site will be conducted again during this ARAP implementation.

### 10.2 Relocation Strategy

128. Landless AHs will be given opportunities to decide on two relocation options during for their relocation. The two options are (1)-self relocation (individual household) with project assistance in cash and (2)-group relocation to resettlement sites prepared by the project.

- **Self-relocation option:** Landless AHs can have their own relocation to any location they preferred. The cash assistance for land use will be provided them to make their own relocation arrangements. This cash assistance will be calculated based on the cost resettlement site per landless household, if it is prepared by the project.
- **Group relocation to resettlement sites prepared by the project:** IRC-WG in collaboration with PRSC will acquire a piece of land for preparing a resettlement site based on consultation with landless AHs or their representatives. The location of the land will be as close as possible to their original land (existing place) and will have access to nearby or on-site primary and secondary schools, health facilities and market facilities. For this option, each landless AH will be relocated together in one resettlement site on a Commune or Sangkat basis, regardless village of his/her existing location.

129. Under group relocation option, each landless AH will be provided a plot of land of 105m<sup>2</sup> (7m x 15m) for free. After 3 consecutive years of living on the land, title to the land plot (secure tenure status) will be provided to the AHs. Similarly to private land owners who opt for land replacement, IRC will facilitate Ministry of Land Management, Urban Planning and Construction (MLMUPC) to provide the secure tenure status.

130. Prior to relocation of AHs, site development will ensure basic infrastructure including the following:

- (i) Source of water supply;
- (ii) Drainage system;
- (iii) Electricity to site; and
- (iv) Road access to the resettlement site.

131. All basic infrastructures at the resettlement site should be ready before AHs are asked to relocate there. Furthermore, impact on livelihood activities of all shop owners will be minimized. IRC-WG and PRSC-WG will consult with landless AHs about the relocation and civil work schedule including site development schedule during the DMS.

132. In addition to these, owners of affected private land can also opt for land replacement if they preferred and the land replacement will be equal size and located as close as possible to the

existing location. All replacement lands will be provided for free with secure tenure status. IRC will facilitate Ministry of Land Management, Urban Planning and Construction (MLMUPC) to provide the secure tenure status.

### 10.3 Summary Cost of Resettlement Site Development

133. The land location and price were identified and surveyed by the consultant team during the project preparation, and the budget for resettlement site development was also estimated. Since the final selection of the land location, for landless AHs at Peam Te and Ba Baong bridge, will be done during the ARAP implementation through consultation with the landless AHs, the budget for relocation site development will be revised based on the actual land location selection and its price.

#### 10.3.1 Resettlement Site at Peam Te bridge, Kratie province

134. For the replacement bridge (Peam Te), there are only 3 landless AHs. Each of them will be entitled to a land plot of 105m<sup>2</sup> (7m x 15m) at the new resettlement site. Basic infrastructures at resettlement site such as access roads, latrines, electricity and water supply will be provided.

**Table 10-1: Cost Estimate for Resettlement Site at Peam Te Bridge, Kratie province**

Item	Description	Unit	Quantity	Unit Rate (USD)	Amount (USD)
<b>Landless Household : 3 AHs</b>					
1	Land price	m <sup>2</sup>	320.00	50.00	16,000.00
2	Site cleaning and grubbing	m <sup>2</sup>	320.00	0.25	80.00
3	Land filling and compact	m <sup>3</sup>	400.00	2.50	1,000.00
4	Drainage system and main holds	lm	30.00	50.00	1,500.00
5	Latrine (WC)	set	3.00	200.00	600.00
6	Electrical connection fee	HH	3.00	60.00	180.00
7	Water supply connection fee	HH	3.00	80.00	240.00
<b>Total</b>					<b>19,600.00</b>

Note: The resettlement site is located along NR73, so no laterite access road is needed.

#### 10.3.2 Resettlement Site at Ba Baong Bridge, Prey Veng province

135. For the replacement bridge (Ba Baong), there are 5 landless AHs. The same as Peam Te RS, each landless AH will receive a land plot of 105m<sup>2</sup> (7m x 15m) when they relocate to a new resettlement site with basic infrastructures such as access roads, latrines, drainages, and pumping wells, etc.

**Table 10-2: Cost Estimate for Resettlement Site at Ba Baong Bridge, Prey Veng province**

Item	Description	Unit	Quantity	Unit Rate (USD)	Amount (USD)
<b>Landless Household : 5 AHs</b>					
1	Land price	m <sup>2</sup>	530.00	25.00	13,250.00
2	Site cleaning and grubbing	m <sup>2</sup>	530.00	0.25	132.50
3	Drainage system and main holds	Set	50.00	50.00	2,500.00

Item	Description	Unit	Quantity	Unit Rate (USD)	Amount (USD)
4	Latrine (WC)	Set	5.00	200.00	1,000.00
5	Electrical connection fee	HH	5.00	60.00	300.00
6	Deep well	Set	1.00	1,500.00	1,500.00
Total					18,682.50

Note: The resettlement site is located along NR11, therefore no laterite access road is needed. The land has already filled and compacted.

## 11 INCOME RESTORATION STRATEGY

136. Restoring the incomes of AHs, whose means of livelihood has been disturbed or removed, is a high priority for RGC and JICA. This is of particular concern with respect to households whose livelihoods as well as property are lost as a result of the bridge improvement. Therefore, an Income Restoration Program (IRP) will be developed during resettlement implementation stage, after DMS is conducted. IRC will contract out to implement IRP (See Appendix 3: Terms of Reference for Income Restoration Programs).

137. Possible measures to restore livelihood depend on sort of income sources. The Vulnerable, Severely and Relocating AHs will be entitled to an IRP to restore income and livelihood as affected by the project. Thus, the contents of income restoration should be discussed based on situations and need assessment of target groups. The result of SES and other surveys such as DMS can be utilized for the discussion to design an effective IRP.

## 12 COSTS AND BUDGET

138. The cost for resettlement will be covered by the government counterpart funds. Funds for the implementation of the ARAP are part of the Project Cost. The land acquisition and resettlement cost has been estimated based on results of the IOL and the RCS conducted during the Project Study in October 2016.

### 12.1 Procedures for Flow of Funds

139. IRC will request the resettlement budget from MEF and the compensation amount will be transferred to relevant PDEF for releasing compensation and allowances to AHs. Payment of compensation and other entitlements will be in cash and will be distributed in public place (commune centre, school, pagoda etc.). The AHs will be notified through the village chiefs with regards to the schedule of payment of compensation and other entitlements.

### 12.2 Updating of the Compensation Rates

140. An RCS were conducted by local consultant during the project preparatory study as basis unit rate to estimate the cost for resettlement and land acquisition. Since compensation to AHs will be commenced, the conducted RCS will be updated to reflect the current market price of affected property. The RCS updating will be conducted in parallel with the DMS.

### 12.3 Estimated Costs for Resettlement

141. The estimated costs for resettlement and land acquisition based on the RCS and the IOL during the project preparatory study is USD 669,756.98, which includes cash compensation and assistance for USD 567,590.67, external monitoring and income restoration of USD 45,407.25, administration cost of 5% equivalent to USD 28,379.53, and contingency of 5% or equivalent to USD 28,379.53. The Government will ensure timely provision of funds for resettlement costs and

will meet any unforeseen obligations in excess of the resettlement budget in order to satisfy resettlement objectives (Appendix 5: Reference Tables for Resettlement Budget Calculation). The resettlement estimated cost will be updated during the resettlement implementation based on the Detailed Measurement Survey (DMS) and the RCS.

Table 12-1: Summary of Land Acquisition and Resettlement Costs

No.	Items	Unit	Quantity	Rate (S/Unit)	AMOUNT (US\$)
<b>A</b>	<b>LAND</b>				<b>389,915.62</b>
1	Sangkat Roka Kandal Residential	m <sup>2</sup>	454.49	90.00	40,904.10
2	Bos Leav commune Residential	m <sup>2</sup>	5,430.12	50.00	271,506.00
3	Prek Saman commune Residential	m <sup>2</sup>	2,471.17	30.00	74,135.10
4	Ba Baong commune	Residential	m <sup>2</sup>	19.00	475.00
		Agricultural	m <sup>2</sup>	965.14	3.00
<b>B</b>	<b>STRUCTURES</b>				<b>104,874.05</b>
5	2A	m <sup>2</sup>	20.00	30.00	600.00
6	2B	m <sup>2</sup>	98.28	41.50	4,078.62
7	2C	m <sup>2</sup>	35.35	40.00	1,414.00
8	2D	m <sup>2</sup>	79.61	51.00	4,060.11
9	2E	m <sup>2</sup>	60.46	59.50	3,597.37
10	2F	m <sup>2</sup>	821.18	75.00	61,588.50
11	2G	m <sup>2</sup>	62.04	85.00	5,273.40
12	2H	m <sup>2</sup>	7.96	94.50	752.22
13	2I	m <sup>2</sup>	68.06	120.00	8,167.20
14	3A	m <sup>2</sup>	107.36	105.00	11,272.80
15	SH	m <sup>2</sup>	121.37	25.00	3,034.25
16	AW1	m <sup>2</sup>	27.25	14.00	381.50
17	AW2	m <sup>2</sup>	29.07	22.500	654.08
<b>C</b>	<b>OTHER FIXED TRUCTURES</b>				<b>4,482.50</b>
18	Pump Well	set	3.00	250.00	750.00
19	Cement Mortar/Karolar/Brick floor	m <sup>2</sup>	53.00	8.50	450.50
20	Toilet	set	1.00	200.00	200.00
21	Timber post with wire	lm	79.00	5.50	434.50
22	Concrete post with wire	lm	97.00	7.50	727.50
23	Brick fence, 100mm	lm	16.00	40.00	640.00
24	Brick fence, 200mm	lm	20.00	60.00	1,200.00
25	Spirit house with support-leg (small)	set	2.00	40.00	80.00

No.	Items	Unit	Quantity	Rate (\$/Unit)	AMOUNT (US\$)
<b>D</b>	<b>TREES AND FRUIT TREES</b>				<b>454.00</b>
26	Banana	tree	1.00	2.00	2.00
27	Coconut	tree	3.00	50.50	151.50
28	Phyllanthus/Kantuot	tree	1.00	12.50	12.50
29	Custard apple	tree	2.00	10.50	21.00
30	Mango	tree	4.00	63.50	254.00
31	Papaya	tree	2.00	6.50	13.00
<b>E</b>	<b>ALLOWANCES</b>				<b>8,200.00</b>
32	Transport Allowance (Table II-1)	AH	17.00	varied	1,360.00
33	Disruption Allowance (Table II-2)	AH	17.00	varied	2,520.00
34	Special Allowance/Vulnerable AHs/Severely AHs (Table II-3)	AH	36.00	120.00	4,320.00
<b>F</b>	<b>RESETTLEMENT SITE DEVELOPMENT</b>				<b>38,282.50</b>
35	Resettlement Site at Peam Te Bridge (Table II-4)	ls	-	-	19,600.00
36	Resettlement site at Ba Baong Bridge (Table II-5)	ls	-	-	18,682.50
<b>G</b>	<b>PUBLIC ASSETS</b>				<b>21,382.00</b>
37	Cost estimate for affected other structures (Table II-6)	ls	-	-	20,725.50
38	Cost estimate for affected trees (Table II-7)	tree	13.00	50.50	656.50
	<b>SUBTOTAL</b>				<b>567,590.67</b>
39	Administrative cost (5%)	ls	-	-	28,379.53
40	NGO/Income restoration (5%)	ls	-	-	28,379.53
41	External Monitoring (3%)	ls	-	-	17,027.72
42	Contingency (5%)	ls	-	-	28,379.53
	<b>GRAND TOTAL</b>				<b>669,756.98</b>

### 13 MONITORING AND EVALUATION

#### 13.1 Internal Monitoring

142. Department of General Affair (DGA) is a commandery of GDR, sub-degree #115/ANK/BK date on 26 May 2016, will conduct an internal monitoring on resettlement implementation. The monitoring will include progress reports, the status of the ARAP implementation, information on location and numbers of people affected, compensation amounts paid by item, and assistance provided to AHs. The report of monitoring results will be prepared by DGA and submitted to IRC and forward to MPWT and JICA on quarterly basis.

143. The following indicators will be monitored periodically by DGA/MEF:

- (i) Compensation and entitlements are computed at rates and procedures as provided in the approved ARAP;
- (ii) AHs are paid as per agreed policy provided in the ARAP by the Project authorities;
- (iii) Public information, public consultation and grievance redress procedures are followed as described in the approved ARAP;
- (iv) Public facilities and infrastructure affected by the Project are restored; and
- (v) The transition between resettlement and civil works is smooth.

#### 13.2 External Monitoring

144. The external monitor has the specific responsibility of studying and reporting on measures for income restoration and on social and economic situations of AHs particularly disrupted by the bridge works, including all households whose houses or shops and stalls are relocated. The external monitor also has the responsibility of reviewing potentials for job opportunities and training for AHs, including women and youth, which would be assisted by provincial authorities, and for which the Commune Resettlement Committees and local NGOs may provide additional support.

145. IRC will hire an External Monitoring Agency (EMA) to carry out external monitoring and post-implementation evaluation. The TOR for the engagement of the EMA is provided in *Appendix 2: Terms of Reference for External Monitoring Agency*. The external monitoring reports will be submitted to IRC on quarterly basis, and then IRC will forward to MPWT/PMU and JICA. The post evaluation will be conducted within one year after all resettlement activities are completed.

146. The EMA will assess (i) the achievement of resettlement objectives, (ii) changes in living standards and livelihoods, (iii) the restoration of the economic and social conditions of the AHs, (iv) the effectiveness, impact and sustainability of assistance measures, (v) the need for further mitigation measures, if any; and, (vi) identify strategic lessons for future policy formulation and planning. The EMA will also be responsible for checking the procedures and resolutions of grievances and complaints. The EMA may recommend further measures to be taken to redress unresolved grievances.

**Appendix 1: Project Information  
Booklet (English Draft  
Version)**

**PROJECT INFORMATION BOOKLET  
THE ABBRIVIATED RESETTLEMENT ACTION PLAN  
THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS  
IN THE KINGDOM OF CAMBODIA**



1. QUESTION: What is the Project for the Urgent Replacement of Bridges in Flood-prone Areas?

ANSWER: In the 2013 flood brought about huge damage. 188 people died, 1.7 million people injured and the total number of people evacuated reached 140 thousand. Many infrastructures such as roads and bridges were also damaged by the floods.

National Road 11 (NR11) and 73 (NR73) are Secondary National Roads functioning as an arterial for transportation of goods and daily commodities to the suburban areas. These roads serve the people of the areas that are located along the Mekong River and are prone to floods. The Government of Cambodia (GOC) has been undertaking replacement/reconstruction of the bridges that are sub-standard (temporary Bailey bridge) and/or vulnerable to flood. At present, there are only seven bridges that are either sub-standard and/or vulnerable on NR11 and NR73. The replacement of these bridges will not only ensure safety, smooth and stable transportation and logistics in the area, but will also contribute in mitigating the potential risks from natural disaster.

To remedy the situation, the GOC made a request to the Government of Japan (GOJ) for a grant aid assistance to replace the seven bridges. The GOJ decided to conduct a preparatory survey on "the Project for the Urgent Replacement of Bridges in Flood-prone Areas in the Kingdom of Cambodia" and examine the viability of the project and entrusted the survey to Japan International Cooperation Agency (JICA).

9. QUESTION: If in case there will be relocation of houses or businesses involved, how can the Project help me rebuild my house during relocation?

ANSWER: Houses or other properties will be compensated at replacement cost, which includes labor cost to build the houses and the properties. Apart from the compensation for loss of private land and other assets at replacement costs, the Project will ensure that the standard of living of AHs are maintained or better improved after the Project.

<<Entitlement Matrix will be inserted here>>

10. QUESTION: When will the detailed measurement survey be conducted?

ANSWER: The activity will be carried out after the actual alignment has been identified. The DMS survey team will be composed of:

- Representative of IRC;
- Team of Working Group MPWT;
- Provincial Sub-Committee, also involved representative District, Commune and Village authority; and
- External Monitoring Organization.

The activity will only be carried out in the presence of the AHs. The AHs and the local authorities will be informed a few days prior to the activity.

11. QUESTION: If there will be disagreements or problems that arise during project implementation such as compensation, technical and general project-related disputes, do I have the right to voice my complaint?

ANSWER: Yes. If the AH is not satisfied with the compensation package offered or, if for any reason, the

2. QUESTION: Who is responsible for the Project?

ANSWER: The Royal Government of Cambodia represented by IRC (Inter-ministerial Resettlement Committee) will supervise the abbreviated resettlement action plan (ARAP) implementation. MPWT (Ministry of Public Works and Transport) implements and monitors on ARAP for affected houses, land and other properties on the Project.

3. QUESTION: Is the development of the Project intended to benefit us?

ANSWER: Yes. The Bridge Replacement will allow the transportation of goods and people to be quicker, more efficient, safety and cheaper between towns and villages and also functioning as an arterial for transportation of goods and daily commodities to the suburban areas. It will help everybody to bring their products to market, get supplies, reduces poverty and to reach public services. It will be also to reduce a traffic accident.

4. QUESTION: If there will be the Replacement Bridge Project, will we be affected?

ANSWER: The design of the Project will affect the private land, trees and some houses, trading stalls and gardens and entrances etc... During detailed design, these potential effects may be avoided or minimized since actual alignments of the Replacement Bridges will be determined through consultation with you and the rest of the local communities.

In case negative impact on land, trees, house and structures cannot be avoided, the owners of affected properties will be properly compensated in cash or in kind for their private land, houses, structures, crops, trees and communal properties in order for them to restore their lost assets, resource or income. Rehabilitation assistance will also be provided to Affected Persons who

will be required to relocate in another location.

5. QUESTION: What if my private land will be affected by the Project?

ANSWER: For affected land, compensation can be in the form of replacement land or cash at current market value. If land replacement has been agreed by AHs, the replacement land should be of equal or better productive capacity of the lost land and satisfactory to AHs.

6. QUESTION: Does compensation apply to my affected houses or structures?

ANSWER: Yes. Houses and structures that will be affected by the Project shall be compensated at replacement cost without deduction for depreciation or salvageable materials.

7. QUESTION: What about my crops and trees?

ANSWER: For annual crops, AHs will be given 3 month notice that the land on which their crops are planted will be used by the Project and that they must harvest their crops in time. If standing crops are ripening and cannot be harvested, eligible AHs can be compensated for the loss of the un-harvested crops at the current market value.

For perennial crops, AHs will be compensated for the loss of fruit and timber trees located within the project area at replacement cost.

8. QUESTION: What about our common property resources like school building, pagoda, fence of pagoda and school, irrigation, well and ponds?

ANSWER: For common property resources, the affected land will be replaced in areas identified in consultation with affected communities and relevant organizations. Affected building and structures will be restored to original and better condition.

compensation does not materialize according to the agreed schedule, the AH has the right to lodge a complaint based on the Grievance Redress Mechanism as provided below.

- First Stage, Sangkat/Commune Level: An aggrieved AH may bring his/her complaint to the Sangkat/commune leader. The Sangkat/commune leader will call for a meeting of the group to decide the course of action to resolve the complaint within 15 days, following the lodging of complaint by the aggrieved AH. The meeting of the group consists of the Sangkat/commune leader, representative/s from PRSC-WG of the Krong/district offices, and the aggrieved AH. The Sangkat/commune leader is responsible for documenting and keeping file of all complaints that are coured through him/her. If after 15 days the aggrieved AH does not hear from Village or Sangkat/Commune, or if the AH is not satisfied with the decision taken by in the first stage, the complaint may be brought to the Krong/District Office either in writing or verbally.
- Second Stage, Krong/District Office: The Krong/District office has 15 days within which to resolve the complaint to the satisfaction of all concerned. If the complaints cannot be solved in this stage, the Krong/District office will bring the case to the Provincial Grievance Redress Committee.
- Third Stage, Provincial Grievance Redress Committee: The Provincial Grievance Redress Committee, which consists of Provincial Governor or Deputy Governor as a committee chairman and Directors of relevant Provincial Departments as members will be established in each province prior to DMS. meets with the aggrieved party and tries to resolve the complaint. The Committee may ask to

PRSC-WG for a review of the DMS by the EMA. Within 30 days of the submission of the grievance the Committee must make a written decision and submit a copy of the same to MPWT, the EMA, IRC and the AH.

- Final Stage, the Court Procedures: If the aggrieved AH is not satisfied with the solution made by the Provincial Grievance Redress Committee based on the agreed policy in the ARAP, the committee shall file administrative procedures against the AHs with the participation of provincial prosecutors. The case will be brought to the Provincial Court and the same will be litigated under the rules of the court. At the same time, the AH can bring the case to the Provincial court. During the litigation of the case, RGC will request to the court that the project proceed without disruption while the case is being heard. If any party is unsatisfied with the ruling of the provincial court, that party can bring the case to a higher court. The RGC shall implement the decision of the court.

The complaint issues will be solved under the agreed policy in the approved ARAP.

The concerned Grievance committees will properly document all complaints and resolutions. AHs will be exempted from all taxes, administrative and legal fees.

12. QUESTION: How will you know if these undertakings are kept and the objectives of this Project are met?

ANSWER: All project activities will be monitored by IRC, Provincial Sub-Committee, Ministry of Public Works and Transport, and an external monitoring agency. Quarterly reports will be prepared and submitted to IRC and then IRC will forward it to JICA. A post-

resettlement impact evaluation will also be undertaken to assess whether impacts of the Project have been mitigated adequately and the pre-project standard of living of AIs have been restored as a result of the resettlement and project. The JICA will also monitor these activities in its regular supervision missions during the period of project implementation.

If you have further queries and suggestions, please contact us at:

Kratie and Prey Veng Province, also Provincial  
Department of Public Works: Kratie and Prey Veng.

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## **Appendix 2: Terms of Reference for External Monitoring Agency**



**Terms of Reference**  
**External Monitoring Agency (EMA)**  
**Abbreviated Resettlement Action Plan (ARAP) Implementation**  
**The Project for the Urgent Replacement Bridges in Flood-prone Areas**  
**The Kingdom of Cambodia**

**I. Background**

1. The Kingdom of Cambodia is located in the Mekong delta region and the wide area of the country lies in low and flood-prone land. Cambodia has experienced two severe floods recently, in 2011 and 2013. The 2013 flood brought about huge damage, 188 people died, 1.7 million people injured and the total number of people evacuated reached 140 thousand. Many infrastructures such as roads and bridges were also damaged by the floods.

2. National Road 11 (NR11) and 73 (NR73) are Secondary National Roads functioning as an arterial for transportation of goods and daily commodities to the suburban areas. These roads serve the people of the areas that are located along the Mekong River and are prone to floods. There are many bridges along these roads. The Government of Cambodia (GOC) has been undertaking replacement/reconstruction of the bridges that are sub-standard (temporary Bailey bridge) and/or vulnerable to flood. At present, there are only seven bridges that are either sub-standard and/or vulnerable on NR11 and NR73. The replacement of these bridges will not only ensure safety, smooth and stable transportation and logistics in the area, but will also contribute in mitigating the potential risks from natural disaster.

3. To remedy the situation, the GOC made a request to the Government of Japan (GOJ) for a grant aid assistance to replace the seven bridges. The GOJ decided to conduct a preparatory survey on "the Project for the Urgent Replacement of Bridges in Flood-prone Areas in the Kingdom of Cambodia" and examine the viability of the project and entrusted the survey to Japan International Cooperation Agency (JICA).

4. Generally, the project required for both side of the replacement bridges, which is called Provisional Road Width (PRW). The PRW of the project is mostly within ROW which is called state land and needs to acquire some private land for the project implementation. In terms of such land acquisition and resettlement of the project, the abbreviated resettlement action plan (ARAP) is required to be prepared based on the Cambodian Laws and Regulations and the JICA Guidelines for Environmental and Social Considerations (2010) (hereinafter referred to as "the JICA Environmental Guidelines"). The ARAP has been prepared based on census and inventory of losses (IOL), baseline socio-economic survey (SES) and its main contents include scope of land acquisition and resettlement, compensation policy, assistance and allowances, entitlement matrix, role and responsibility, grievance redress mechanism and relocation strategy. During the ARAP preparation from October to November 2016, a number of Stakeholder Meetings (SHM) were also conducted to allow them understand about the Project.

5. For the project, there are three replacement bridges. The two replacement bridges are locate in Kratie province, namely Peam Te and Prek Chhlong along NR73 and the other one is located in Prey Veng province, namely Ba Baong along NR11 (see Figure 1-1 and Figure 1-11 for the Project location map). The study has focused on both sides of the three replacement bridges. Table 1-1 shows affected areas and number of project affected households (AHs).

**Table 1-1: Province, district/town located by the Bridge and Number AHs**

Bridge/Commune	Total (AHs)
<b>1. Peam Te Bridge</b>	<b>17</b>
1.1 Commune: Bos Leav	10
1.2 Sangkat: Roka Kandal	7
<b>2. Prek Chhlong Bridge</b>	<b>8</b>
2.1 Commune: Chhlong	1
2.1 Commune: Praek Saman	7
<b>3. Ba Baong Bridge</b>	<b>6</b>
3.1 Commune: Ba Baong	6
<b>Total (the Project)</b>	<b>31</b>

*Data source: Project Survey conducted in October 2016*

6. AHs are grouped into three broad categories, viz. Individual, Household and Communities, and other sub-groups are defined within each group. In particular within the household category, there are vulnerable groups defined as those that are socially or economically disadvantaged and who will suffer more economically and socially from relocation and improvement than the general population.
7. AHs falling into one or more of the following categories are defined as vulnerable groups:
  - (i) households headed by women with dependents,
  - (ii) disabled household heads with no other means of support,
  - (iii) households falling under the generally accepted indicator for poverty, and
  - (iv) children (younger than 18 years old) and the elderly (older than 60 years old) households who are landless and with no other means of support.
  - (v) Households are landless.
8. Field data gathering for the project survey commenced on 13<sup>th</sup> October 2016 and was completed on 23<sup>rd</sup> October 2016. The ARAP has been prepared based on i) census and inventory of all affected households; ii) baseline SES and SHM; and iii) replacement cost study for affected land, structure and trees.
9. The focus of the resettlement policy is to compensate AHs for their lost assets at replacement cost, and provide with rehabilitation assistance to ensure improvement, or at least maintaining their living standards and income to the level they would have without the Project. The cut-off date is the first day of the IOL, which is on **13<sup>th</sup> October 2016**.
10. Refer to the IOL results, 31 households to be affected by the Project. Among them, 19 AHs will lose their private land. A total of **9,339.92 m<sup>2</sup>** of land (19 AHs) will be required for the construction of the Project. Of these, 89.67% (8,374.78 m<sup>2</sup>) is used for residential purpose,

10.33% (965.14 m<sup>2</sup>) is agricultural land.

11. A total of 17 AHs along the PRW of the Replacement Bridges, whose main structures (house, house-shop, and/or restaurant) will be affected by the Project. There is also other 4 AHs, whose only other structures will be affected.

12. Fruit or timber trees along the PRW will be cleared for the Project construction. With regard, there were a total of 13 fruit trees with various species along the PRW have been counted during the IOL.

## II. Management and Monitoring

13. The ARAP requires that the external agency is contracted to provide external monitoring on the Implementation of the approved ARAP. The external monitor will indicate any corrective measures necessary to the approved ARAP during its implementation.

14. A particular responsibility of the EMA will be to monitor and evaluate, based on the approved ARAP, the effectiveness of measures to replace any loss and livelihoods of AHs and of measures to utilize resettlement planning and implementation to maximize the benefits to the immediately adjacent and wider populations of the bridge improvement and of its integration with social, economic and infrastructural development in the PRW.

## III. Requirement for external monitoring

### 3.1 Monitoring and Evaluation

15. The monitoring and evaluation agency will address specific issues as the following:

- (i) Field check/site visits coordinated with the resettlement activities that are taking place based on the approved ARAP:
  - a) Compensation payments, participatory design of relocation and rehabilitation options, and relocation;
  - b) Random review of DMS forms, if complaints exist, compared to the inventory of assets and entitlements; and
  - c) Random review of entitlement and compensation documents to ensure that the assessment of compensation is based on the agreed compensation matrix and that all entitlements have been accurately applied;
- (ii) Payment of compensation and allowances as per approved Update ARAP. Identify whether all AHs are covered under the Update ARAP and confirm that they are all eligible for compensation, resettlement and rehabilitation assistance, irrespective of tenure status, social or economic standing, and any such factors that may discriminate against achieving the project objectives.
- (iii) Timing of disbursement of payment and documentation Detailed Measurement Survey (DMS) and payments;
- (iv) Public consultation and awareness of resettlement entitlements;
- (v) Coordination of resettlement activities with the construction schedule;
- (vi) Land acquisition and transfer processes;
- (vii) Progress of construction/rebuilding of structures on residual land or to new relocation sites;
- (viii) Level of satisfaction of AHs with the provisions of each kind of compensation and implementation of the Update ARAP;
- (ix) Grievance redress mechanism (documentation, process, and resolution);
- (x) Capacity of AHs to restore/re-establish livelihoods and living standard. Special attention will be given to relocating AHs and vulnerable AHs;
- (xi) Trends in living standards. Throughout the ARAP implementation process, the EMA will observe and conduct surveys to monitor the progress AHs are making to restore

- living standards. Special attention will be paid to any differences based on gender. Any potential problems in the restoration of living standards will be reported;
- (xii) Effectiveness, impact and sustainability of entitlements and rehabilitation measures and the needs for further improvement, as required under the approved Update ARAP;
- (xiii) Gender impacts and strategy;
- (xiv) Capacity of AHs to restore/reestablish their livelihood and living standards. Special attention provided or to be provided to severely affected and/or vulnerable households;
- (xv) Resettlement impacts caused during construction activities; and
- (xvi) Receive complaints from AHs if any and explain to the aggrieved AHs the eligibility for compensation and livelihood restoration set out in the approved Update ARAP.
- (xvii) Participation of AHs in ARAP updating and implementation;
- (xviii) Institutional capacity, internal monitoring and reporting.

### 3.2 Post evaluation

16. Post-evaluation activities will also be carried out six months after the completion of all relocation activities.

## IV. Specific Purpose of External Monitoring

17. The Project requires the services of a domestic monitoring and evaluation team to conduct an independent assessment of the extent to which resettlement and rehabilitation objectives are being met.

18. Specifically, the objectives of the monitoring program are:

- (i) to ensure that the standard of living of AHs are restored or improved;
- (ii) to monitor whether the overall project and resettlement objectives are being met in accordance with the approved Update ARAP, and if not to suggest corrective measures;
- (iii) to assess if rehabilitation measures and compensation are sufficient and comply with JICA Guidelines;
- (iv) to identify problems or potential problems; and
- (v) to identify methods of responding immediately to mitigate and resolve problems.

## V. Methodology of Monitoring and Evaluation

19. The methods for external monitoring and evaluation include:

- (i) Review of ARAP approved by RGC.
- (ii) Check on a random basis the DMS process with AHs from identification to agreement on DMS results.
- (iii) Review of SES baseline prepared during ARAP preparation (Feasibility Study) and SES conducted by IRC at the detailed design stage. If land acquisition (i.e., Update ARAP implementation) does not occur for at least two (2) years, EMA will carry out another SES.
- (iv) A post resettlement survey will be carried out six months following completion of resettlement activities. Sampling will include 100% of relocating AHs. The same AHs interviewed during ARAP updating will be interviewed.
- (v) Participatory rapid appraisals (PRA): Consultation with AHs and various stakeholders such as resettlement committee, the Project Management Unit, community leaders; key informant interviews; community public meetings; focus group discussions; direct field observations; and in-depth case studies of good

practices and problems identified by internal or external monitoring and required special efforts to resolve.

- (vi) Random checks of payments disbursed to AHs during monitoring. The EMA will submit a post evaluation report per project in six months following completion of resettlement activities.

**VI. Team Composition, Timing, and Submission of Reports**

20. The domestic EMA will be composed of one team leader with extensive experience in monitoring and evaluation of resettlement activities in Cambodia and with strong ability in preparing resettlement compliance/monitoring reports. He/she should demonstrate good communication skill and have at least a bachelor degree in a relevant field. The team leader will be assisted by two (2) social enumerators. All reports will be submitted to IRC and MPWT.

21. The monitoring work will be consisted in period of one (1) years and post evaluation will be conducted in six months after completion of all resettlement activities.

22. The monitoring reports will include one inception report, 4 quarterly monitoring reports, one base line survey report (two months after signing the contract) and one post evaluation report.

23. Duration of Field visits and report preparation will be as follows:

No.	Position	Working Day	Number	Total Input
<b>Monitoring Work</b>				
1	Team Leader	80	1	80
2	Social Enumerator	50	2	100
<b>Base Line Survey</b>				
1	Team Leader	20	1	20
2	Social Enumerator	10	2	20
<b>Post Evaluation</b>				
1	Team Leader	20	1	20
2	Social Enumerator	10	2	20
<b>Total</b>				<b>260</b>

24. Submission of inception and quarterly report will be within two weeks (14 days) after starting monitoring activities while submission of post-evaluation report will be within one (1) month after post-evaluation activities.

25. The quarterly report will summarize the findings of the EMA, including (a) progress of Update ARAP implementation, including any deviations from the provisions of the Update ARAP; (b) identification of problem issues and recommended solutions to inform implementing agencies and resolve issues in a timely manner; (c) identification of specific gender issues, as relevant; and (d) report on progress of the follow-up of issues and problems identified in the previous reports. The report will be submitted in 14 days after monitoring activities in each quarter.

**VII. Expression of Interest**

26. Please prepare an estimation of the time and finances required to undertake this work. Should you be awarded the contract, a price would be negotiated to undertake and initial consultation and investigation with the community, after which a fixed amount contract would be set and agreed.

**Expressions of interest should be addressed to:**

27. [H.E. XXX, General Department of Resettlement, Ministry of Economy and Finance, St 92, Sngkat Wat Phnom, Khan Daunpenh, Phnom Penh]

28. Expressions of interest should be received no late than [time, date]

29. Inquiries may be directed to: [INSERT name, position, phone number]

## Appendix 3: Terms of Reference for Income Restoration Programs

### Terms of Reference for Training and Income Restoration

#### I. Background Information

1. A Training and Income Restoration Program (IRP) is part of the compensation package provided to all severely affected households and vulnerable affected households by works and land acquisition for the Project for the Urgent Replacement Bridges in Flood-prone Areas in the Kingdom of Cambodia (the Project). Severely affected households include but not limited to the affected households who will (i) lose 10% or more of their total productive land (income generating) and/or assets, and (ii) have to relocate due to the Project.
2. A Consulting firm/Non-Government Organization (NGO) will undertake overall management of the Training and IRP, and will be appointed for that purpose by Inter-ministerial Resettlement Committee (IRC) in the Ministry of Economy and Finance (MEF). The Program will be supervised by the General Department of Resettlement / the Ministry of Economic and Finance (GDR/MEF).
3. The Consulting firm/NGO will directly administer the off-farm training and IRP and will, for that purpose, manage a Training Fund and Income Restoration Training including an Apprenticeship Program<sup>7</sup> (i.e. vocational training). Based on IOL and SES results, only one AH will be lose his agricultural land (965.14m<sup>2</sup>). Therefore, no agricultural extension and training is needed.
4. Field data gathering for the project survey commenced on 13<sup>th</sup> October 2016 and was completed on 23<sup>rd</sup> October 2016. The ARAP has been prepared based on i) census and inventory of all affected households; ii) baseline SES and SHM; and iii) replacement cost study for affected land, structure and trees.
5. Refer to the IOL results, 31 households to be affected by the Project. Among them, 19 AHs will lose their private land. A total of **9,339.92 m<sup>2</sup>** of land (19 AHs) will be required for the construction of the Project. Of these, 89.67% (8,374.78 m<sup>2</sup>) is used for residential purpose and other 10.33% (965.14 m<sup>2</sup>) is used for agricultural purpose.
6. A total of 17 AHs along the PRW of the Project, whose main structures (house, house-shop, and/or shop/restaurant) will be affected by the Project. There is also other 4 AHs, whose only other structures will be affected.
7. With regard to fruit and timber trees, a total of 13 fruit and timber trees with various species and ages along the PRW have been counted during the IOL.

#### II. Appointment of NGO/Consulting firm

8. For that purpose IRC proposes to enlist the services of suitably qualified Consulting Firm or NGO to develop and implement the IRP which is required for the severely affected households and vulnerable affected households.
9. The Consulting firm/NGO should have the following qualifications:
  - (i) Must have good track records in designing and implementing IRP and Gender Development Program within Cambodia;
  - (ii) Must be familiar with the use of Participatory Rapid Appraisal tools;

<sup>7</sup> The apprenticeship program is available for one member of the severely and/or vulnerable affected households, although all the working adults who belong to severely and/or vulnerable affected households are eligible to agricultural extension and training.

- (iii) Must have the necessary community development and gender orientation and experience to appropriately deal with the poor and vulnerable AHs; and
- (iv) An inclusion of Gender Specialist in the Team.

### III. Objectives of Training and Income Restoration Program

10. The Consulting firm/NGO shall undertake overall management of the Training and IRP, and will be appointed for that purpose by the IRC. The Program will be supervised by GDR/MEF.

#### 1. General objective

11. The general objective or goal of the program is to minimize the impact of the project on the livelihoods of affected households, to restore their income and to reduce poverty and social exclusion in the project area.

#### 2. Specific project purposes

12. The specific project purposes are to improve the vocational skills of severely and/or vulnerable affected households by other means to restore and improve their livelihoods and incomes from off-farm (non-agricultural) employment.

### IV. Activities

13. To prepare the training and IRP, the Consulting firm/NGO will carry out the following tasks:

- (i) Carry out Situational and Needs Assessment Analysis
  - Analyze existing sources of income of severely and/or vulnerable affected households and existing sources of income in the relocated area to establish a baseline to gauge the success of IRP and estimate current actual income of the affected households;
  - Conduct consultations, needs, aptitude, and preference surveys among the affected households;
  - Determine whether poor/vulnerable affected households have special needs different to other households;
  - Identify the major socio-economic situations and problems of the affected households and it must be understood in the context of the basic profile and culture of the affected communities and the concrete descriptions of their way of life and livelihoods.
- (ii) Identify existing or planned programs of the Government, NGOs, and other agencies within the project area to design appropriate strategies to link up with or expand such programs.
- (iii) Prepare a gender strategy to include enhancement of opportunities for women's participation, and to provide women increased opportunities to learn new skills and participate in the decision-making process, and take advantage of new employment and income-generating opportunities.

14. Based on the results of the activities above, the Consulting firm/NGO will design the appropriate training and sustainable IRPs based on the number of severely and/or vulnerable AHs.

#### 1. Off-farm training

15. The Consulting firm/NGO will conduct a training needs survey during the first month of the program, making use of data from existing socio-economic surveys of the Project. On this basis the Consulting firm/NGO will provide 6 months vocational or pre-vocational training to a member of each severely affected household either household head, spouse, son or daughter.

16. Training will be mainly in skills for which there is an established employment demand, but may include basic literacy and numeracy. Skills for which training has provisionally been proposed include crafts production, building trades, motor repair, languages, computer, hairdressing and tailoring.

17. Training will be at a minimum of four (3) centres accessible in each of the three (3) replacement bridge of the Project and will be conducted in Khmer.

### 2. Job creation

18. Job creation will be undertaken by the Consulting firm/NGO as 2 month apprenticeships with established enterprises, if available in the area, primarily in Kratie and Prey Veng province aimed at providing on-the-job training and employment for a member in the severely and/or vulnerable affected households.

19. The Consulting firm/NGO will also facilitate hiring of affected households on a priority basis on ongoing project construction activities in order for affected households to benefit directly from the Project.

### 3. Access to small enterprise credit

20. The Consulting firm/NGO will facilitate access to existing credit programs to enable affected households to obtain small enterprise loans. Loans will be for crafts production equipment, tools for construction or repair work, and for shop and stall equipment and stock.

### V. Staffing and Other inputs

21. The Consulting firm/NGO will provide training personnel in accordance with the following requirements. Durations given below are indicative and subject to variation, during the currency of the services, by agreement with MEF, and estimated on the following basis.

- (i) It is assumed that the training and income restoration will be completed within 12 months;
- (ii) Person -month of personnel has been considered only the period stayed on the site or relevant institution, organizations or factories for training purpose. Time spent in other place such as Home office of Phnom Penh shall not be included in the person-month.

Personnel Inputs of Consulting Services:

Position	Number	Person-month <sup>8</sup>
Team Leader	1	8
Vocational Trainer	2	8
Credit Coordinator	1	2
Apprenticeship Trainer 1	2	6
Total	6	24

<sup>8</sup> The amount of person month will be revised during the ARAP updating.

**VI. Requirement for report and Reporting**

22. The Training and IRP must include concrete actions for income restoration, including budget, timetables, responsibility for implementation, economic assumptions and risks and contingency arrangements. The Reports will include, but not limited, to the following:

**23. Inception report**

- A review of current socioeconomic conditions of the affected household including income baseline. If the existing baseline data is not sufficient, the Consulting firm/NGO is required to carry out supplementary socio-economic survey;
- A summary of Affected households' preferences for training and income restoration (indicating description of methods used to elicit Affected households' views);
- A summary of potential training and IRPs (based on identified economic activities and opportunities prevalent in the area) and options available to affected households and of the process of matching affected households to particular programs or activities;
- A gender strategy.

**24. Training and IRP plan**

- Detailed feasibility studies of the technical, economic, financial and institutional viability of the proposed IRP<sup>9</sup>, including realistic estimation of incomes to be received by participating affected households and the number of affected households that can participate in each activity;
- A time-bound plan on specific programs for affected households who have lost their productivity means;
- A time-bound plan for development of human capital (appropriate trainings which have an established employment demand);
- A time-bound plan on job creation and provision of access to capital for small enterprise, small agricultural, and agro-industrial credit;
- Arrangements and indicators for monitoring the effectiveness of training and IRPs and for modifying plans found to be ineffective;
- Budget and Implementation Schedule.

**25. Progress reports (Quarterly)**

- The content will include progress based on arrangements and monitoring indicators as set out in the income restoration plan report. It will also include satisfaction of affected households, problems encountered and strategies or resolutions agreed on.

**26. Completion report**

- It will include concise history of the program, evaluation of the implementation, including financial audit statements.

**2. Reporting**

27. The selected Consulting firm/NGO will submit the following to IRC-MEF:

- Inception Report, one month after mobilization
- Training and Income Restoration Plan, within two months after submission of Inception report (contents as indicated in section VI above).
- Quarterly progress reports

<sup>9</sup> Can be existing or planned programs of the Government, NGOs, and other agencies within the project area with appropriate strategies to link up with or expand such programs.

- Completion Report

**VII. Schedule**

**1. Schedule**

28. The selected consulting firm/NGO for the IRP program will be hired for one year. The consulting firm/NGO will be engaged full-time for the first semester while in the second semester, the consulting firm/NGO will provide back-stop support to the participating affected households, as needed. Post-IRP evaluation will be carried at the end of year 3 or completion of the program.

### Appendix 4: Inventory of Loss and Socio-Economic Survey Questionnaire Form

### INVENTORY OF LOSS AND SOCIO-ECONOMIC QUESTIONNAIRE

QID:

Date of interview:...../...../ 2016 Starting time:.....

Interviewer's name:..... Ending time:.....

Supervisor's name:..... Village Headman: .....

#### I. LOCATION

PK: ..... (Road direction is from Phnom Penh to Bridge).

Code: 1=Peam Te Bridge 2=Prek Chhlong Bridge 3=Ba Baong Bridge

1-1 If the affected area is in ROW, do you know about the ROW area? ...meters;

1-2 Are you satisfy with the Project of Replacement Bridge? No  Yes

House No: ..... Village: .....

Commune: ..... District: ..... Province: .....

#### II. PROFILE OF HOUSEHOLD HEAD

Ask for head of household (if not present ask spouse or other adult, but over 18 years old)

2.1 H/H Name: ..... Call Name: .....

2.2 Age: ..... Sex: Male  Female

2.3 Occupation: .....

2.4 A- Ethnic group:

Code: 1=Khmer 2=Chinese 3=Cham 4= Vietnamese  
5=Other (specify).....

B- Religion:

Code: 1=Buddhism 2=Muslim 3=Christian 4= Other (specify) .....

2.5 The respondent is the household head?  Yes (If yes go to 2.8)  No

2.6 If no, what is the relationship with the household head? .....

Name of the respondent: .....

2.7 Age: ..... Sex: Male  Female

2.8 Fill HH head status in the box below (multi answers)

1= Aged (From 60 years old and older)    2= Landless    3=Widow    4=Disabled  
 5= Income<33\$/month/person (National Poverty Line for Rural Area-2013)    6= Lost of agricultural land more than 10%    7= Affected house more than 40%    8= Lost trading place

**III. SOCIOECONOMIC PROFILE OF AFFECTED HOUSEHOLD**

3.1 How many members are in the household? .....

3.2 How many couples are in the household? .....

3.3 If there is more than one family, who are living in this house, give all.

No.	Relationship to H/H (code)	Age	Sex 1=M 2=F	Marital status (code)	Literate 1=No 2=Yes	School attending 1=No 2=Yes	# Years of graded completed education	Working Activities (code)		
								1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										

Code B: 1=Self, 2=Spouse, 3=Son/Daughter, 4=Parent, 5= Relative, 6=Other (specify).....

Code E: 1=Single, 2=Married, 3=Divorced/separate 4= Widowed 5= Other.....

Code J, K and L:

00=None or Unable to work	09=Battery charging	18=Government officer
01=Small business	10=Garment factory worker	19=Manufacturer/Craftsman
02=Food processing for sale*	11=Fish production	20=Farmer (on own farm)
03=Hotel/tourism/restaurant	12=Fish farming	21=Fishman
04=Hair cut/dresser/Beauty shop	13=Credit provider/ Money exchange	22=Livestock Raising
05=Wedding host	14=Motor transporter	23=Company or NGO staff
06=Merchant/Market trader	15=Taxi driver	24=Migration out for job
07=Machinery/Vehicle mechanic	16=Agricultural laborer/Worker	25=Pupil/Student
08=Electrician	17=None agricultural laborer/Worker	26=Other (specify) .....

**3.4 Household Assets**

3.4.1 Agricultural equipment:

Equipment types	Number	Total Cost (Riel)	Equipment types	Number	Total Cost (Riel)
Oxcart			Tractor		
Plow			Hand tractor		
Harrow			Rice mill machine		
Water pump			Other.....		

3.4.2 Other Assets:

Equipment types	Number	Total Cost (US\$)	Equipment types	Number	Total Cost (US\$)
Bicycle			Air conditioner		
Motorbike			Washing machine		
Bamboo rail			Refrigerator		
Car/ Pickup/Minivan			Telephone		
Truck			Generator		
Boat without engine			Cast net		
Boat with engine			Gillnet		
Radio/Cassette Player			Bamboo/rattan trap		
TV/VCR/VCP			Hooked line		
Sewing machine			Other (specify) .....		

3.4.3 Livestock:

Type of livestock	Total Number		Sales of livestock in last year	
	Quantity	Value in US\$	Quantity	Value in US\$
Oxen				
Buffalo				
Pigs				
Horses				
Chickens				
Ducks				
Other (spec).....				

3.4.4 Main Trees:

Code of Trees

1=Bamboo    2=Banana    3=Coconut    4=Tamarind  
 5=Chan Kiri    6=Sapodilla    7=Deum Chan    8=Kamping Reach  
 9=Kantuot    10=Khvet    11=Jack Fruit    12=Korki  
 13=Kor    14=Krasaing    15=Mkak    16=Longan  
 17=Pring    18=Jujube    19=Sdau    20= Orange  
 21=Soda    22=Grapefruit    23=Custard apple    24=Sour sop  
 25=Guava    26=Teuk Dos Kou    27=Acacia/Eucalyptus    28=Lemon  
 29=Mango    30=Papaya    31= Sugar Palm    32=Cashew  
 33=Other.....

No.	Tree types	Unit	Total Quantity	Income in 2015 (US\$)	Number of affected trees
1					
2					
3					
4					



No.	Tree types	Unit	Total Quantity	Income in 2015 (US\$)	Number of affected trees
5					
6					
7					
8					
9					
10					
<b>Total Income (US\$)</b>					

3.4.5 Land and Agricultural products:

A. Affected Land in ROW (Left: .....m Right: .....m)

Land Category	Total of using (m <sup>2</sup> )	Affected Area		
		Length (m)	Width (m)	Size (m <sup>2</sup> )
Rice field (Sre)				
Orchard (Chamkar)				
Flooded Area				
Commercial				
House Plot / Home Garden				
Other (specify).....				

B. Affected Land outside ROW (Private Land)

Land Category	Total Owning (m <sup>2</sup> )	Affected Area		
		Length (m)	Width (m)	Size (m <sup>2</sup> )
Rice field (Sre)				
Orchard (Chamkar)				
Flooded Area				
Commercial				
House Plot / Home Garden				
Other (specify).....				

- In case all land will be affected, what kind of the compensation do you need?

In cash  In kind (land for land)

C. Agricultural production (all land):

Crop	Area grown (m <sup>2</sup> )	Harvested Amount (Kg)	Unit price (Riel/Kg)	Production cost (Riel)	Farming Expend (Riel)	Gross Return (Riel)
Dry rice						
Wet rice						
Vegetable						
Other crop .....						
Other crop .....						
<b>Total (Riel)</b>						

3.4.6 House and other Structures:

Structure Type Code:

- 1-House      2-House/Shop      3-Kitchen      4-Bathroom  
 5- Grange/Storage      6-Shop/Restaurant      7-Craft / Workshop  
 8= Stall / Market stall      9= Animal table/pigsty      10=Other (specify) .....

Floor Code:

- 1<sup>st</sup>=One floor      2<sup>nd</sup>=Two floors      3=Khmer Style      4= Other .....

Construction Material Code:

- 1- Temporary Material      2- Thatch      3- Tin / Fibro/ Plastic Sheet      4- Wood  
 5- Bamboo      6- Roofing Tile      7- Floor Tile      8- Mortar  
 9- Concrete      10- Earth      11-Metal      12- Brick  
 13-Others (spec.): .....

Material	Structure: ...	Structure: ...	Structure: ...	Structure: ...
Roof				
Wall				
Floor				
Column				
Story				
Type				
Total floor area, m <sup>2</sup>				
Affected area, m <sup>2</sup>				

- How many years have you been living here? ..... year(s)
- If you rent the affected structure, how much do you pay per month? ..... Riels
- Where will you relocate to resettle? Shifting back, to same village, other village

3.4.7 Other fixed assets:

No.	TYPE OF ASSETS	UNIT	Affected Quantity	Other
1.	Concrete Well	set		
2.	Pump Well	set		
3.	Timber post with wire	ml		
4.	Concrete post with wire	ml		
5.	Brick Wall, 100mm	ml		
6.	Brick Wall, 200mm	ml		
7.	Water supply system	m		
8.	Mortar	m <sup>2</sup>		
9.	Vehicle washing place	set		
10.	Toilet	set		
11.	Other (spec.): .....			

3.5 Incomes

3.5.1 What are the main sources of total income in your household?

1<sup>st</sup>       2<sup>nd</sup>       3<sup>rd</sup>       4<sup>th</sup>

1. Wages or salary      2. Farming hired labor      3. Business or trade  
 4. Agricultural production      5. Livestock      6. Fishing      7. Equipment making  
 8. Equipment renting      9. Transportation      10. House/land renting      11. Remittance

12. Fish farming      13. Fish production      14. Other (spec.).....

3.5.2 How much the total income (cash and kind) from these activities in *Last Year*:

- 1<sup>st</sup> ..... Riels  
 2<sup>nd</sup> ..... Riels  
 3<sup>rd</sup> ..... Riels  
 4<sup>th</sup> (others)..... Riels

**Total in** ..... Riels (convert to USD .....

3.6 Amount of cash income from making business in ROW: .....US\$/month

**3.7 Expenses**

Annual expense .....Riel converts to USD: .....

3.7.1 Daily expense (recently expense):

Item	Unit	Price per unit/Riel	Total price (Riel)
Rice			
Food (fish, meat, vegetable, and spices)			
Snack			
Wood/charcoal/fuel/gas			
Other (spec.).....			
Total:			
Annual total (365 days)			

3.7.2 Monthly expense:

Item	Unit	Price per unit/Riel	Total price (Riel)
Cosmetics (perfume, powder, and soap)			
Health (drug, treatment fee).			
Water			
Electricity power			
Other service			
Gasoline			
Other (spec.).....			
Total:			
Annual total (12 months)			

3.7.3 Yearly expense:

Item	Unit	Price per unit/Riel	Total price (Riel)
Clothes			
Education (material, tutoring, and meals at school)			
Furniture			
House repairing			
Ceremonies/marriages			
Entertainment/travel			
Other (spec.).....			
Annual total:			

**3.8 Health**

3.8.1 Where do you and your household members often go for? (Please tick)

Facility	Health Treatment	Serious Illness	Birth Delivery	How far? (Km)
Traditional Midwife				
Traditional Healer				
Drug shop				
Private Pharmacy				
Health Centre				
Provincial Hospital				
Private Clinic				
Private Hospital				
Other: .....				

3.8.2 What are the three most important problems with the public health services for the people in this village?

- 1 = Lack of beds/Equipment      2 = Not enough medicine  
 3 = No physician medical      4 = Poor quality of service  
 5 = No midwife      6 = High price  
 7 = Long distance      8 = Unsanitary  
 9 = Unhelpful staff      10 = Other (Describe).....

1. Most important   
 2. Second important   
 3. Third important

**3.9 Education**

3.9.1 How many children in household is primary school age (6-11)?

3.9.2 How many children in household attend primary school?

3.9.3 If children of primary school age, not attending school, main reason for non-attendance?

- 1 = Cannot afford school costs      2 = Have to help in business  
 3 = Takes too long to get to school      4 = other (describe).....

3.9.4 How many children in household is lower secondary school age (12-14)?

3.9.5 How many children in household attend lower secondary school?

3.9.6 If children of lower secondary school age, not attending school, main reason for non-attendance?

- 1 = Cannot afford school costs      2 = Have to help in business  
 3 = Takes too long to get to school      4 = other (describe).....

**3.10 Credit:**

3.10.1 Have you taken any loan?  No (skip to Q. 3.11)  Yes

3.10.2 If yes, please fill the table below:

When did you borrow money? Month/year	Credit Amount (Riel)	From Whom (Code)	Interest rate %

Code: 1 = Govt. /Bank      2 = NGOs / Society      3 = Landlord / traders  
 4 = Credit provider      5 = Relative      6 = other (specify).....

3.10.3 What did you use this money for (multi answers)?

- 1 = Food consumption      2 = Health care      3 = Schooling costs  
 4 = Building/Repairing house      5 = Ceremony/Wedding      6 = Farming  
 7 = Business improving      8 = Supporting to family members  
 9 = To meet cost caused by the Project      10 = other (specify).....

3.11 Living condition

A. Water source:

3.11.1 Drinking/cooking: ..... Washing/bathing.....

- 1 = Stream/river      2 = Lake/pond      3 = Protected well      4 = Unprotected well  
 5 = Rain water      6 = Buying      7 = Waterworks      8 = other (specify).....

3.11.2 If buying from vendor, how much it cost per day? ..... Riels

3.11.3 If you collect by yourself, how much time you spend to do so? ..... minutes

3.11.4 Is the drinking water filter?  Yes  No

3.11.5 Is the drinking water boiled?  Yes, always  Yes, sometimes  No

3.11.6 Is the drinking water filtered?  Yes  No

B. Sanitation:

3.11.7 Do you have a pit latrine?  Yes  No

3.11.8 Is there any drainage system near your house?  Yes  No

3.11.9 If yes, please tick in box as follow:

- Proper rain water drainage
- Waste water drainage
- An open drain

C. Energy source:

3.11.10 Lighting: ..... Cooking: .....

- 1 = None      2 = Fire wood      3 = Private generator  
 4 = State Electricity      5 = Battery      6 = Charcoal  
 7 = Gas / Kerosene      8 = Torch/Rubber      9 = Other (specify).....

3.12 Accessibility to other facility service

Please indicate the distance of following facility service:

Facilities	Average Distance (Km)
Nearest School	
Market	
Religious centre (Pagoda)	
Drug shop	
Health Centre/ Referral(or District) hospital	
Provincial/Municipality hospital	
Police Administrative Post	
Commune Centre	
District Centre	
Other Urban	

IV. PERCEPTION ON THE PROJECT

4.1 What do you think about the project?

0 = No answer      1 = Bad      2 = Good & Bad      3 = Good      4 = Very good

4.2 If good/very good, rank the 3 following statements in the boxes:

- |  |  |
|--|--|
| <input type="checkbox"/> Improve cargo transportation    | <input type="checkbox"/> Improve environment                 |
| <input type="checkbox"/> Decrease of congestion/accident | <input type="checkbox"/> Create more direct/indirect job     |
| <input type="checkbox"/> Improve travel of tourist       | <input type="checkbox"/> Reduced daily expenditures          |
| <input type="checkbox"/> Attract more investment         | <input type="checkbox"/> Flood prevent                       |
| <input type="checkbox"/> Increase land price             | <input type="checkbox"/> Big push to outskirts area (Bypass) |
| <input type="checkbox"/> Improve access other facilities | <input type="checkbox"/> Improve local product marketing     |
|  | <input type="checkbox"/> Others (spec.) .....                |

4.3 If you think there are some bad things about the project, rank 3 following statement in the boxes:

- |  |   |
|--|---|
| <input type="checkbox"/> Increase daily expenditures     | <input type="checkbox"/> Worsen environmental impact    |
| <input type="checkbox"/> Loss of goods trading site      | <input type="checkbox"/> Decrease household income      |
| <input type="checkbox"/> Increase accident               | <input type="checkbox"/> Affected on public facilities  |
| <input type="checkbox"/> Disturbs families and community | <input type="checkbox"/> Loss occupation                |
| <input type="checkbox"/> Loss house / shop               | <input type="checkbox"/> Worsen people health condition |
| <input type="checkbox"/> Loss of land use in ROW         | <input type="checkbox"/> Makes people migrate away      |
| <input type="checkbox"/> Worsen access to school         | <input type="checkbox"/> other (spec.) .....            |

4.4 Will you agree to move your affected properties from PRW?

0 = No answer      1 = Not agree      2 = Agree with assistant      3 = Voluntary to move

4.5 In case affected on all residential land, what do you need in compensation?

By cash: ..... By kind (land replace land): .....

4.6 Please list three types of skill are needed to improve for your household's member,

Example:

- *Agricultural sector: Crop farming (rice, bean...), Livestock raising (pig, duck & chicken...), Home garden (vegetable, fruit, mushroom...) and etc.*

- *Vocational Training: Mechanic (Repairing: motorbike & car...), Electrician (Repairing: phone, watch, TV, air-condition, refrigerator, washing machine ...), Tailor, Barber, Hairdresser, Facial make up, Wedding decorate service, Carpenter, Construction work, Language, Driving, Handicraft ... etc.*

- First.....
- Second.....
- Third.....

**Additional Question for Fishing**

Q1: Do you conduct fishing activities around your house?

- 1. Yes (go to next question) 2. No (end interview)

Q2: What do you conduct fishing activities for?

- 1. Leisure or Eating 2. Selling and Money 3. Others ( )

Q3: Where do you conduct fishing activities?

- 1. Reservoir 2. River 3. Fish Farm 4. Others ( )

Q4: When do you conduct fishing activities?

- 1. All year 2. Only Rainy Period 3. Only Dry Period

Q5: Are you a member of any community fishery group?

- 1. Yes 2. No

Q6: Did you pay an official fishing fee?

- 1. Yes 2. No

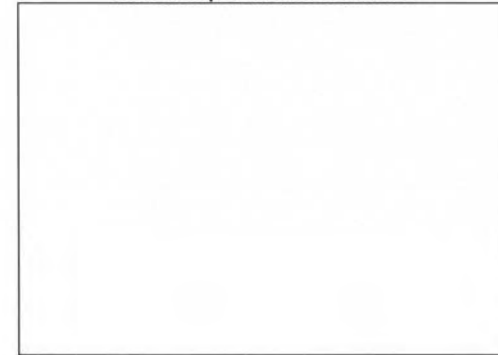
Q7: Did you think that construction of the Expressway or/and Bridge disturbs your fishing activities?

- 1. Yes (Reason: ) 2. No

SIGNATURE

Household Head    Village Headman    Interviewer

Sketch map of the affected house



## Appendix 5: Reference Tables for Resettlement Budget Calculation

### I. UNIT COST

**Table I-1: Unit Costs of Land in 2016**

Province	District	Commune	Village	Type of Land	Unit	Price
KRATIE	Kratie	Roka Kandal	Phum 2	Residential	\$/m <sup>2</sup>	90.0
		Bos Leav	Ta Lus	Residential	\$/m <sup>2</sup>	50.0
	Chhlong	Prek Saman	Dey Thmey	Residential	\$/m <sup>2</sup>	30.0
PREY VENG	Peam Ro	Ba Baong	Ba Baonh	Residential	\$/m <sup>2</sup>	25.0
				Agricultural	\$/m <sup>2</sup>	3.0

*Data source: Project Survey conducted in October 2016*

**Table I-2: Unit Costs of Structures by Type in 2016**

Roof	Wall	Floor	Column	Storey	Type	Total Cost US\$/m <sup>2</sup>
Zn/Fibro	Thatch	None/Soil	Timber	Single	2A	30.0
	Zn/Fibro	None/Soil	Timber/Iron	Single	2B	41.5
	Thatch	Bamboo	Timber/Iron	Single	2C	40.0
	Zn/Fibro	Bamboo	Timber/Iron/Concrete	Single	2D	51.0
	Zn/Fibro	Wood/Mortar	Wood/Iron/Concrete	Single	2E	59.5
	Wood	Wood/Mortar	Timber/Concrete	Single	2F	75.0
	Brick	Mortar	Timber/Concrete	Single	2G	85.0
	Brick	Tile	Timber/Concrete	Single	2H	94.5
	Wood/Brick	Wood/Mortar/Tile	Timber/Concrete	Ground & First	2I	120.0
<b>Title Roof</b>	Wood	Wood/Mortar/Tile	Timber/Concrete	Single	3A	105.0
<b>SHELTER (SH)</b>						
Zn/Fibro	None	Mortar	Timber/Iron/Concrete	Single	SH	25.0
<b>AWNING/Extended Eaves (AW)</b>						
Zn/Fibro	None	None/Soil	Timber/Iron/Concrete	Single	AW1	14.0
	None	Mortar	Timber/Iron/Concrete	Single	AW2	22.5

*Data source: Project Survey conducted in October 2016*

**Table I-3: Unit Costs of Other Structures in 2016**

No.	TYPE OF ASSETS	UNIT	Unit Cost, USD
1	Pumped well (normal)	Set	250.0
2	Mortar/Karola/Brick floor	m2	8.5
3	Separated toilet (S<3m <sup>2</sup> )	Set	200.0
<b>FENCE</b>			
4	Pole post with net/barbed wire	Lm	5.5
5	Concrete post with net/barbed wire	Lm	7.5
6	Brick Fence (100mm)	Lm	40.0
7	Brick Fence (200mm)	Lm	60.0
<b>SPIRIT HOUSE</b>			
8	Spirit house	Set	40.0

Data source: Project Survey conducted in October 2016

**Table I-4: Unit Costs of Fruit Trees by Type in 2016**

No.	Description	Unit	Quantity	Rate in 2016, USD
1	Banana (mature)	Tree	1	2.0
2	Coconut	Tree	1	50.5
3	Phyllanthus/Kantuot	Tree	1	12.5
4	Custard-apple	Tree	1	10.5
5	Mango/get income	Tree	1	63.5
6	Papaya	Tree	1	6.5

\* Unit Cost = (Number/Quantity of harvest per year) x (Market price) per unit  
 Compensation rate per Tree = (Unit cost) x (Number of years it will mature) + cost of seedling  
 Example for Coconut tree: (40 fruits per year x USD 0.25) x 5 years + USD 0.5 = USD 50.50

**II. COST ESTIMATE**

**Table II-1: Cost Estimate for Transport Allowance**

Type of relocated structures	Unit	Qty	Unit Rate (S)	Total, S
Shop/House made from semi-permanent relocate outside PRW, but in same village	AH	17	80	1,360.00
<b>Total</b>		<b>17</b>	<b>Varied</b>	<b>1,360.00</b>

**Table II-2: Cost Estimate for Disruption Allowance**

Type of relocated structures	Unit	Qty	Unit Rate (S)	Total, S
Relocating affected structures (from type 2A to 2E) with floor area is more than 60m <sup>2</sup> to residual area	AH	5	120	600.00
Relocating affected structures (from type 2E) to residual areas	AH	12	160	1,920.00
<b>Total</b>		<b>17</b>		<b>2,520.00</b>

**Table II-3: Allowance for Vulnerable Affected Households by factors and SAH**

Type of Vulnerable Group & SAHs	Unit	Qty	Unit Rate (S)	Total, S
Female headed household (3 factors)	AH	17	120	2,040.00
Elderly household head with >60 Yrs (9 factors)				
Disabled household head (1 factors)				
Landless household (8 factors)				
Poor household with monthly income less than USD 20 per capita (0 factors)	AH	19	120	2,280.00
Severely Affected Households				
<b>Total</b>		<b>36</b>	<b>120</b>	<b>4,320.00</b>

**Table II-4: Cost Estimate for Resettlement Site at Peam Te Bridge, Kratie province**

Item	Description	Unit	Quantity	Unit Rate (USD)	Amount (USD)
<b>Landless Household : 3 AHs</b>					
1	Land price	m <sup>2</sup>	320.00	50.00	16,000.00
2	Site cleaning and grubbing	m <sup>2</sup>	320.00	0.25	80.00
3	Land filling and compact	m <sup>3</sup>	400.00	2.50	1,000.00
4	Drainage system and main holds	lm	30.00	50.00	1,500.00
5	Latrine (WC)	set	3.00	200.00	600.00
6	Electrical connection fee	HH	3.00	60.00	180.00
7	Water supply connection fee	HH	3.00	80.00	240.00
<b>Total</b>					<b>19,600.00</b>

Note: The resettlement site is located along NR73, so no laterite access road is needed.

**Table II-5: Cost Estimate for Resettlement Site at Ba Baong Bridge, Prey Veng province**

Item	Description	Unit	Quantity	Unit Rate (USD)	Amount (USD)
<b>Landless Household : 5 AHs</b>					
1	Land price	m <sup>2</sup>	530.00	25.00	13,250.00
2	Site cleaning and grubbing	m <sup>2</sup>	530.00	0.25	132.50
3	Drainage system and main holds	set	50.00	50.00	2,500.00
4	Latrine (WC)	set	5.00	200.00	1,000.00
5	Electrical connection fee	HH	5.00	60.00	300.00
6	Deep well	set	1.00	1,500.00	1,500.00
<b>Total</b>					<b>18,682.50</b>

**Table II-6: Cost Estimate for Affected Public Assets**

Items	Unit	Quantity	Rate US\$/m <sup>2</sup>	Amount (US\$)
Bridge Sign (2.2m x 3.0m)	set	2.00	600.00	1,200.00
Dragon Statue (4m)	set	4.00	400.00	1,600.00
Mortar	m <sup>2</sup>	143.00	8.50	1,215.50
Lighting Pole (h=3m)	Set	3.00	170.00	510.00
Monk Statue (h=1.5m)	Set	5.00	120.00	600.00
Brick fence, 100mm	Lm	72.00	50.00	3,600.00
Pagoda Gate	Set	1.00	12,000.00	12,000.00
			<b>Total</b>	<b>20,725.50</b>

**Table II-7: Cost Estimate for Affected Public Trees**

No.	Description	Unit	Quantity	Rate US\$	Amount US\$
1	Coconut	Tree	13	50.50	656.50
	<b>Total</b>		<b>13</b>	<b>-</b>	<b>656.50</b>

**III. Summary of Land Acquisition and Resettlement Costs**

No.	Items		Unit	Quantity	Rate (\$/Unit)	AMOUNT (US\$)
<b>A</b>	<b>LAND</b>					<b>389,915.62</b>
1	Sangkat Roka Kandal	Residential	m <sup>2</sup>	454.49	90.00	40,904.10
2	Bos Leav commune	Residential	m <sup>2</sup>	5,430.12	50.00	271,506.00
3	Prek Saman commune	Residential	m <sup>2</sup>	2,471.17	30.00	74,135.10
4	Ba Baong commune	Residential	m <sup>2</sup>	19.00	25.00	475.00
		Agricultural	m <sup>2</sup>	965.14	3.00	2,895.42
<b>B</b>	<b>STRUCTURES</b>					<b>104,874.05</b>
5	2A		m <sup>2</sup>	20.00	30.00	600.00
6	2B		m <sup>2</sup>	98.28	41.50	4,078.62
7	2C		m <sup>2</sup>	35.35	40.00	1,414.00
8	2D		m <sup>2</sup>	79.61	51.00	4,060.11
9	2E		m <sup>2</sup>	60.46	59.50	3,597.37
10	2F		m <sup>2</sup>	821.18	75.00	61,588.50
11	2G		m <sup>2</sup>	62.04	85.00	5,273.40
12	2H		m <sup>2</sup>	7.96	94.50	752.22
13	2I		m <sup>2</sup>	68.06	120.00	8,167.20

No.	Items	Unit	Quantity	Rate (\$/Unit)	AMOUNT (US\$)
14	3A	m <sup>2</sup>	107.36	105.00	11,272.80
15	SH	m <sup>2</sup>	121.37	25.00	3,034.25
16	AW1	m <sup>2</sup>	27.25	14.00	381.50
17	AW2	m <sup>2</sup>	29.07	22.500	654.08
<b>C</b>	<b>OTHER FIXED TRUCTURES</b>				<b>4,482.50</b>
18	Pump Well	set	3.00	250.00	750.00
19	Cement Mortar/Karolar/Brick floor	m <sup>2</sup>	53.00	8.50	450.50
20	Toilet	set	1.00	200.00	200.00
21	Timber post with wire	lm	79.00	5.50	434.50
22	Concrete post with wire	lm	97.00	7.50	727.50
23	Brick fence, 100mm	lm	16.00	40.00	640.00
24	Brick fence, 200mm	lm	20.00	60.00	1,200.00
25	Spirit house with support-leg (small)	set	2.00	40.00	80.00
<b>D</b>	<b>TREES AND FRUIT TREES</b>				<b>454.00</b>
26	Banana	tree	1.00	2.00	2.00
27	Coconut	tree	3.00	50.50	151.50
28	Phyllanthus/Kantuot	tree	1.00	12.50	12.50
29	Custard apple	tree	2.00	10.50	21.00
30	Mango	tree	4.00	63.50	254.00
31	Papaya	tree	2.00	6.50	13.00
<b>E</b>	<b>ALLOWANCES</b>				<b>8,200.00</b>
32	Transport Allowance (Table II-1)	AH	17.00	varied	1,360.00
33	Disruption Allowance (Table II 2)	AH	17.00	varied	2,520.00
34	Special Allowance/Vulnerable AHs/Severely AHs (Table II-3)	AH	36.00	120.00	4,320.00
<b>F</b>	<b>RESETTLEMENT SITE DEVELOPMENT</b>				<b>38,282.50</b>
35	Resettlement Site at Peam Te Bridge (Table II-4)	ls	-	-	19,600.00
36	Resettlement site at Ba Baong Bridge (Table II-5)	ls	-	-	18,682.50
<b>G</b>	<b>PUBLIC ASSETS</b>				<b>21,382.00</b>
37	Cost estimate for affected other structures (Table II-6)	ls	-	-	20,725.50
38	Cost estimate for affected trees (Table II-7)	tree	13.00	50.50	656.50
<b>SUBTOTAL</b>					<b>567,590.67</b>

No.	Items	Unit	Quantity	Rate (S/Unit)	AMOUNT (US\$)
39	Administrative cost (5%)	ls	-	-	28,379.53
40	NGO/Income restoration (5%)	ls	-	-	28,379.53
41	External Monitoring (3%)	ls	-	-	17,027.72
42	Contingency (5%)	ls	-	-	28,379.53
<b>GRAND TOTAL</b>					<b>669,756.98</b>

## Appendix 6: Public Assets affected by the project



## 1. Kratie province

No.	Sangkat/ Commune	Village	Organization (owner)	Bridge	Affected Property	Unit	Number /Size
<b>1. Krong Kratie</b>							
1	Roka Kandal	Phum Pir	DPWT of Kratie province	Peam Te	Peam Te Bridge Sign (2.2m x 3.0m)	set	1.00
					Dragon Statue (4meters)	set	2.00
<b>2. Chhlong District</b>							
2	Chhlong	Kandal	DPWT of Kratie province	Prek Chhlong	Prek Chhlong Bridge Sign (2.2m x 3.0m)	set	1.00
					Dragon Statue (4meters)	set	2.00
3	Chhlong	Kandal	Preah Chan Reachea Pagoda	Prek Chhlong	Brick Fence (100mm)	m	72.00
					Pagoda Gate (medium)	set	1.00
					Mortar	m <sup>2</sup>	143.00
					Lighting Pole (h=3m)	set	3.00
					Monk Statue (h=1.5m)	set	5.00
					Coconut	tree	13.00

## Environmental and Social Monitoring Forms

Environmental and social impacts and implementation of mitigation measures shall be monitored using following Monitoring Forms. In the later phase of the Project, the forms and contents may be modified and updated to incorporate the latest site condition and design, the latest legislations, as well as the Environmental Management Framework of the MPWT.

## (1) Draft Environmental Monitoring Forms

Item	Parameter	Environmental Standard	Location	Frequency	Responsible Agency	Date/Result
<b>Construction Stage</b>						
Air quality	Dust	-	Construction site	Every day	Supervision Consultant Construction Contractor	
Noise	Noise level	60 dB	Construction site	Weekly or when needed	Supervision Consultant Construction Contractor	
Water Quality	Turbidity, pH, Dissolved Oxygen	-	Construction site	Weekly or when needed	Supervision Consultant Construction Contractor	
		6.5 - 8.5 2.0 - 7.5mg/l				
Waste	Waste disposal	-	Construction site	Every day	Supervision Consultant Construction Contractor	
<b>Operation Stage</b>						
Air quality	CO	20 mg/m3 (8h)	Local cities	2 times/year	MOE	
	TSP	0.33 mg/m3				
	NO2	0.1 mg/m3				
	SO2	0.3 mg/m3				
Noise and Vibration	Noise level	60 dB (Day) 45 dB (Night)	Around target bridges	2 times/year	Road Administrator	
	Vibration Level	-				
Water Quality	Turbid water	-	Around target bridges	Rainfall time	Road Administrator	

(2) Draft Monitoring Form of Land Acquisition and Resettlement

Preparation of Resettlement Site

No.	Explanation of the Site	Status Completed (date) or not	Details	Expected Date of Completion
1.				
2.				
3.				

Public Consultation

No.	Date	Place	Contents of the construction / Main comments and answers
1.			
2.			
3.			

Resettlement Activity	Planned Total	Unit	Progress in Quantity			Progress in %			Expected Date of Completion	Responsible Organization
			During the quarter	Till the Last quarter	Up to the Quarter	Till the Last quarter	Up to the Quarter			
Preparation of ARAP*										
Employment of Consultants		Man-Month								
Implementation of Census Survey										
Approval of ARAP			Date of Approval:							
Finalization of PAPs List		No. of PAPs*								
Progress of Compensation Payment (All Lots)		No. of HHs*								
Peam Te bridge		No. of HHs								
Prek Chhloung bridge		No. of HHs								
Ba Beong 2 bridge		No. of HHs								
Progress of Land Acquisition (All Lots)		ha								
Peam Te bridge		ha								
Prek Chhloung bridge		ha								
Ba Beong 2 bridge		ha								
Progress of Asset Replacement (All Lots)		No. of HHs								
Peam Te bridge		No. of HHs								
Prek Chhloung bridge		No. of HHs								
Ba Beong 2 bridge		No. of HHs								
Progress of Relocation of People (All Lots)		No. of HHs								
Peam Te bridge		No. of HHs								
Prek Chhloung bridge		No. of HHs								
Ba Beong 2 bridge		No. of HHs								
Progress of Asset Replacement (All Lots)		No. of Structures								
Peam Te bridge		No. of Structures								
Prek Chhloung bridge		No. of Structures								
Ba Beong 2 bridge		No. of Structures								

\* : ARAP: Abbreviated Resettlement Action Plan, PAPs: Project Affected Persons, HHs: Households

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