

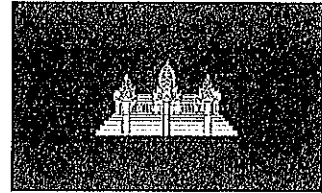
Environmental Monitoring Report

Project Number: 46009
September 2014

Cambodia: Flood Damage Emergency Reconstruction Project

Environment Monitoring Report April-June 2014

Prepared by Consultant of Project Coordination and Monitoring Unit for the Ministry of Economy and Finance and the Asian Development Bank.



**Royal Government of
Cambodia**

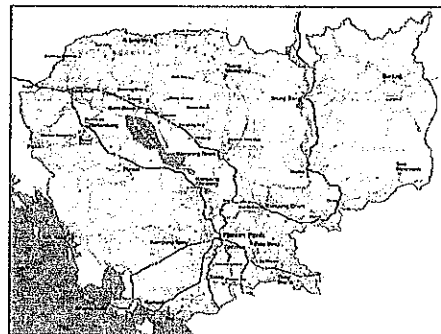
**Ministry of Public Works
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GRANT No. 0285-CAM (EF) and ADB LOAN No. 2852-CAM (SF)

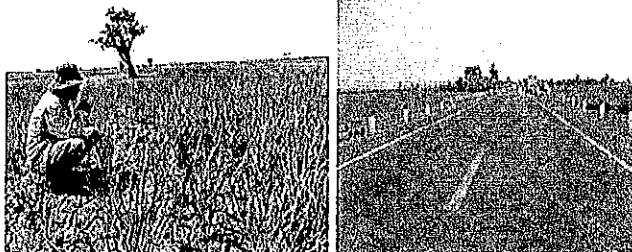
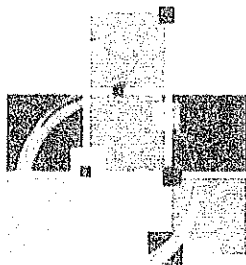
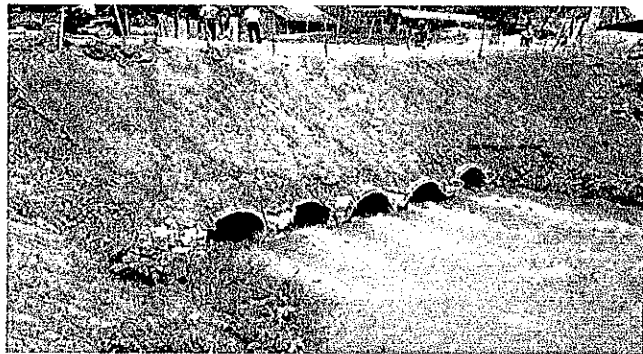
FLOOD DAMAGE EMERGENCY RECONSTRUCTION PROJECT

Construction Supervision

**Safeguards Monitoring
Report No.8**



April-May-June 2014



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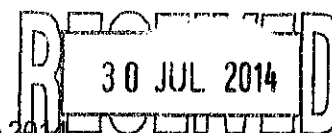
Project Name: Flood Damage Emergency Reconstruction

Project Grant No.0285-CAM (SF) and

ADB Loan No. 2852-CAM (SF)

Construction Supervision

ASIAN DEVELOPMENT BANK



Report Name: Safeguards Monitoring Report No.8: April– May– June 2014

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REVISION, PREPARATION, REVIEW AND ISSUE				
Revision	Date	Prepared by	Reviewed by	Issued to Distribution List by:

Document quality information

General information

Author(s)	Sao Vibol
Project name	FLOOD DAMAGE EMERGENCY RECONSTRUCTION PROJECT
Document name	Safeguards Monitoring Report No. 8
Date	June 2014
Reference	

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Abbreviations

Abbreviations

ADB	Asian Development Bank
AP	Affected Persons (those directly affected by the project activities)
COI	Corridor of Impact (a width over the road centerline agreed to as being the width within which resettlement-related impacts would be measured)
CSC	Construction Supervision Consultant
DDIC	Detailed Design and Implementation Consultant
EA	Executing Agency
EIA	Environmental Impact Assessment
EMoP	Environmental Monitoring Plan
EMP	Environmental Management Plan
IA	Implementation Agency
IEE	Initial Environmental Examination
IOL	Inventory of Losses (part of RP work)
MOE	Ministry of Environment
MPWT	Ministry of Public Works and Transport
NR	National Road
PIU	Project Implementation Unit
PMU	Project Management Unit
RCG	Royal Cambodian Government
ROW	Right-of-Way for road as defined by law
RP	Resettlement Plan
SEU	Social and Environment Unit –within MPWT-Phnom Penh
TL	Team Leader

Summary

This Safeguards Monitoring Report focuses on environmental management, monitoring plan and some gender concerns for the following subprojects which are under Stage 3 of FDERP:

- CW6a - the Emergency Reconstruction of DBST 8.5 km PR No. 270 in Kampong Cham province;
- CW6b - replace 3 structures on PR No. 270 section from Koh Roka to Peam Chikang in Kampong Cham province;
- CW6c - replace 7 small structures on PR No. 270 section from Peam Chikang to Rokakong in Kampong Cham province;
- CW7 - the Emergency Reconstruction of 8.1 km DBST on PR No. 270 in Kampong Cham province and
- CW8 - the Emergency Reconstruction of 34.6 km DBST on PR No. 159 in Banteay Meanchey and Battambang provinces.

The stage 2 subprojects namely CW1, CW2 and CW3 were completed 100% while the stage 3 subprojects namely CW6a, CW6b, CW7 and CW8 are under construction and CW4, CW5 and CW6c were completed 100%.

Based on field observations, mitigation measures that are being implemented by the contractors are as follows: use of approved borrow pit areas, installation of soil erosion/slope protection structures like stone masonry, gabion mattress, geotextile, investigation of the presence of UXOs and its safe removal, regular sprinkling of water on access roads, disposal of unsuitable excavated materials and other residual construction wastes to designated dumpsites, provision of PPE to workers and facilities such as kitchen, access to communication, toilet, bathroom, potable water, installation of warning/safety signs and employment of unskilled workers including women.

The project as whole has no significant negative environmental and social impacts. The implementation of the above mitigation measures reduces the occurrence of the following negative impacts: Loss of trees (during site clearing and quarrying of construction materials), damage to existing structures, risk of land mine or UXO, dust generation control, noise and vibration disturbance, water contamination, water-borne disease control, loss of agricultural land for borrow pits, soil erosion protection, generation of wastes, safety and health, traffic congestion, transmission of sexually transmitted disease (HIV), while the generation of employment is enhanced.

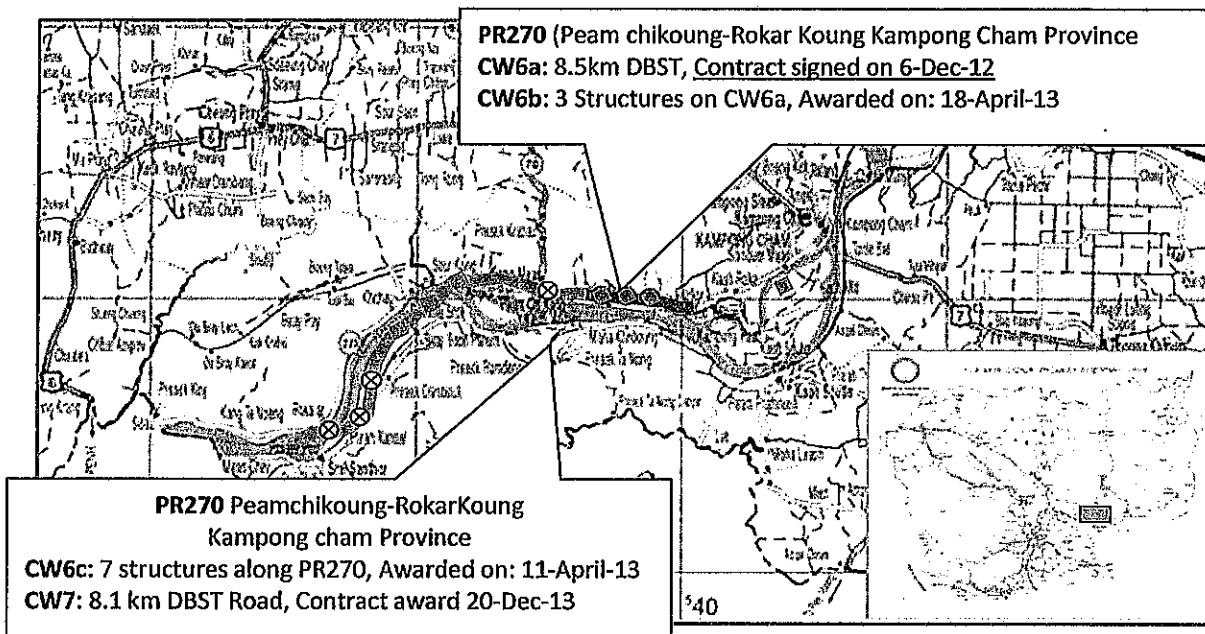
The contractors were able to minimize the impacts to acceptable levels during pre-construction and construction period, particularly the removal of UXO during the pre-construction phase. Required procedures were properly implemented with the details shown in the Annexes of this report.

To conclude, the contractors should continue the implementation of the Environmental Management Plan (EMP) as specified in the contract; perform self-monitoring works including the implementation of the Labor and Gender Action Plan. Monthly Reports with proper documentation should be submitted to MPWT and the CSC.

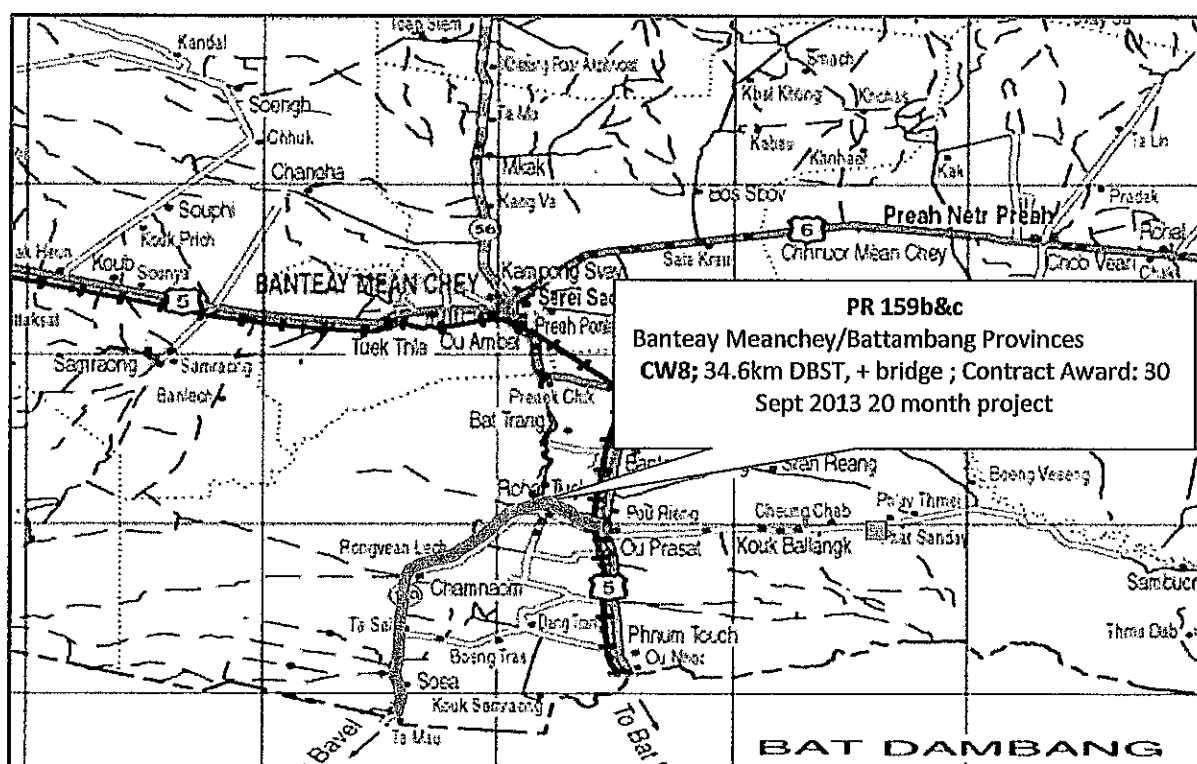
Project Location Maps

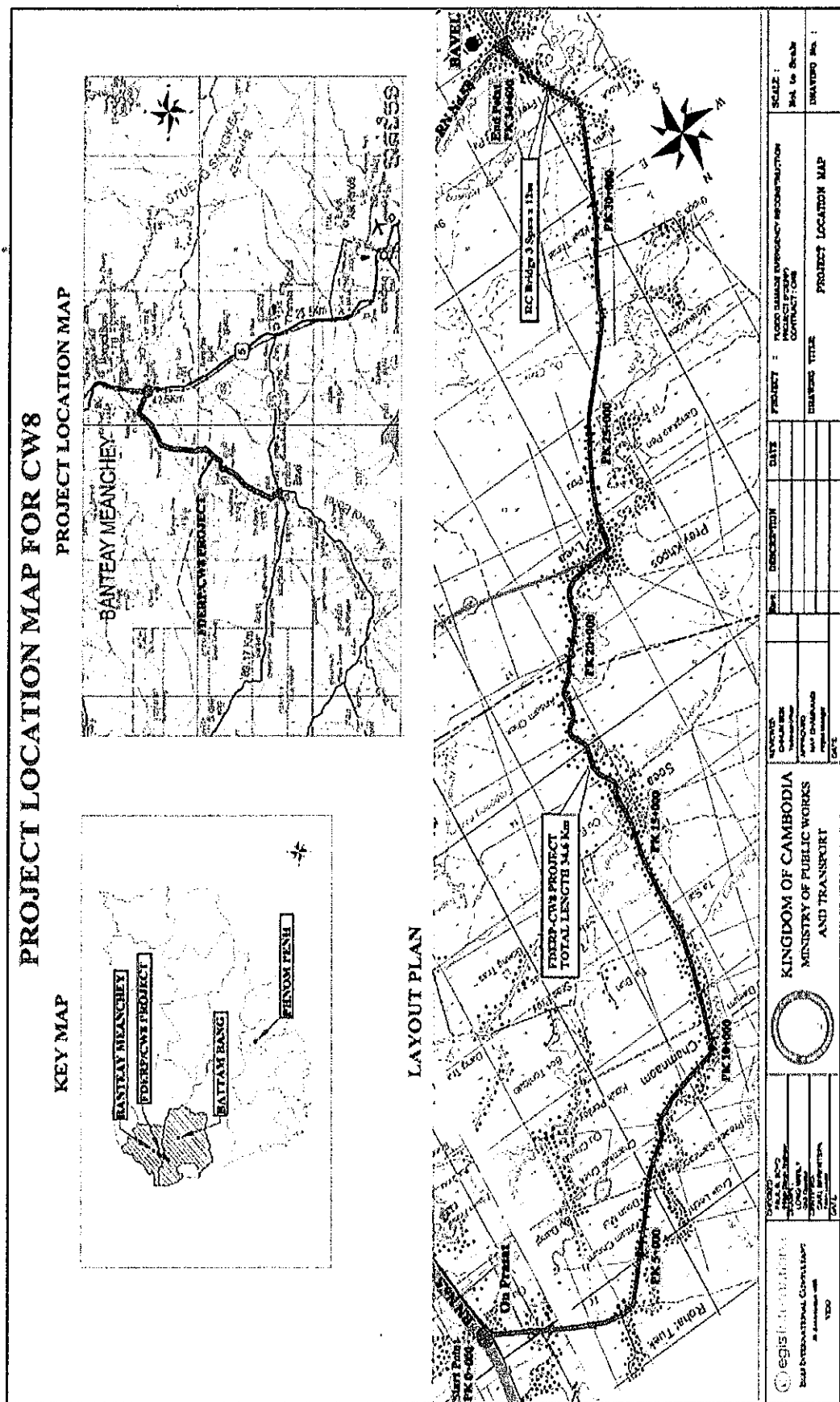
Map #1:

Projects CW6a, CW6b, CW6c and CW7 in Kampong Cham Province



Map #2: Projects CW8 in Banteay Meanchey and Battambang Province





Chapter 1 - General Background

1.1 Project Background and Objective

1. The Royal Government of Cambodia (RGC) has requested to Asian Development (ADB) for an Emergency Assistance Loan (EAL) for the proposed CAM: Flood Damaged Emergency Reconstruction Project (FDERP). The project aims to rehabilitate critical public and social infrastructure assets necessary to restore livelihood, access to project provinces that will be secured the social infrastructure services against future flooding.

2. One of the three (3) critical infrastructure sectors covered by the project is the rehabilitation of flood-damaged national and provincial roads under the supervision of the Ministry of Public Works and Transport (MPWT).

3. To systematize the delivery of project activities, the restoration of flood-damaged infrastructures were divided into three stages including:

- (i) Stage 1 – Immediate repairs to re-establish use of the infrastructure on a temporary basis and restore communications.
- (ii) Stage 2 – Fast track repairs where it is necessary to fully rehabilitate the damage structures before the next wet season to secure the existing (undamaged) works and thus avoid more extensive damage in the coming wet season.
- (iii) Stage 3 – Remaining flood damage restoration to complete the remaining damage repairs, preferably within the following two dry season construction periods.

4. Restoration works under Stage 1 may need additional works and will be undertaken in Stage 2. Stage 2 is limited only to urgent works where important civil works are started as early as possible to restore its functionality in time with the coming wet season. Stage 3 works are more complex that requires design inputs and possible land acquisition and resettlement as well.

5. The funding of the project is via a grant from the Government of Australia and the EAL from the Asian Development Bank (ADB).

1.2 Project Progress and Status

6. The progress of 10 Civil Works (CW) projects as of April 2014 is shown below. The specific works accomplished for the period are presented below:

7. CW1 is the Emergency Reconstruction of Rong Damrey Duke in Prey Veng City, Prey Veng province. Ly Chuong Construction Import & Export Co., Ltd. is the contractor. Construction works commenced in May 2012 with other details show below:

- The Completion Certificate was issued on 20 September 2013.
- The Defect Liability Period is 365 days and will end on 20 September 2014.
- Some repair works including defects on expansion joints, dragon holes must be done by contractor during Defect Liability Period.

8. CW2 is the Emergency Reconstruction of Baray Lex at PK 88+00 in Prey Veng City, Prey Veng province. Other information on the project status is presented below:

- The Completion Date was 18 March 2013.
- Completion Certificate was issued on 28 March 2013.
- The Defect Liability Period is 365 days and ended by 18 March 2014.

9. CW3 is the Emergency Reconstruction of Koh Rokar Bridge in Kampong Cham province. Ung Simsia Construction Co., Ltd. is the contractor with the construction works commenced on 6 June 2012. Works status is shown below:

- Completion Date is 18 March 2013.
- The Completion Certificate was issued on 28 March 2013.
- The Defect Liability Period is 365 days and ended by 18 March 2014.

10. For Stage 3, CW4 is the Emergency Reconstruction of Baray Koet Bridge at PK 83+900 in Prey Veng province. Ung Simsia Construction Co., Ltd. is the contractor. Construction works commenced on 19 December 2012 and works had been handed over to the Project Owner on 20 September 2013. Other information about the project is shown below:

- The Completion Certificate was issued on 20 September 2013.
- The Defect Liability Period is 365 days and will end on 20 September 2014.

11. CW5 is the Emergency Reconstruction of Sam Put Thour Bridge at PK 103+600 and Ampil Krao Bridge at PK 127+300 in Prey Veng province. Royal Mekong Construction & Development Pte., Ltd. is the contractor. Construction works commencement date was 11 January 2013 (three months behind) and the completion date was 11 November 2013. Work outputs for the period are as follow:

- The Completion date is 15 December 2013.
- The Completion Certificate was issued on 3 February 2014.
- The Defect Liability Period is 365 days and will end on 15 December 2014.

12. CW6a is the Emergency Reconstruction of 8.5 km DBST road in PR 270 at Kampong Cham Province. Royal Mekong Construction & Development Pte., Ltd. is the contractor. Construction works commencement date was 19 December 2012 and the completion date was 04 March 2014. Work outputs for the period are as follows:

- Contractor's site camp 100% completed and Engineer's site office 100% completed
- Resurvey works 100% completed, Mine/UXO Clearance 100% completed
- Clearing and grubbing ~100% completed
- Project Information board ~100% completed
- Substructure work (foundations, pipes,) ~100% completed
- Embankment work ~100% completed
- Sealing Aggregate 19, 12mm=completed 100%

13. CW6b is the Emergency Reconstruction of 3 Bridges in PR 270 at Kampong Cham Province. Seaboard Cambodian Development Construction Co., Ltd. is the contractor. Construction works commencement date was on 29 April 2013 and the expected completion date on 31 July 2014. Work outputs for the period which show progress as stated as follows:

- Contractor's site camp 100% completed and Engineer's site office 100% completed
- Resurvey works for CW6b-B1: 100% completed
- Mine/UXO Clearance for Bridge No.1, 2, 3: 100% completed
- Project Information board for Bridge No.1,2,3: 100% completed
- Detour road and temporary works Bridge No.1,2,3 : 100% completed
- Substructure work for Bridge No.1,2,3: ~65.22% completed
- Clearing and grubbing Bridge No.1,2,3: ~60% completed

14. CW6c is the Emergency Reconstruction of 7 Structures (3 RC Bridges and 4 RC Box Culverts) on PR 270 in Kampong Cham province. Ung Simsia Construction Co., Ltd. is the contractor. Construction works commencement date was 29 April 2013 and the completion date was 23 February 2014. Work outputs for the period are as follows:

- CW6c.1: Steel Guardrail, Steel Handrail, Guide Post, Protection wall
- CW6c.2: Steel Guardrail, Steel Handrail, Guide Post
- CW6c.3: Steel Guardrail, Steel Handrail, Guide Post
- CW6c.4: 4, 5, and 6: Steel Guardrail, Guide Post
Base course 100%
DBST 100%
- CW6c.7: Steel Guardrail, Steel Handrail, Guide Post

15. CW7 is the Emergency Reconstruction of 8.1 km DBST along PR 270 at Kampong Cham Province (starting from Peam Chikong to Angkor Ban commune). Tang Kim Eng Co., Ltd. is the contractor. Construction works commencement date was 23 December 2013 and the expected completion date is October, 2014. Work outputs for the period are as follows:

- Contractor's site camp 100% completed and Engineer's site office 100% completed
- Resurvey works 100% completed, Mine/UXO Clearance 100% completed
- Project Information board ~ 100% completed
- Clearing and grubbing ~ 100% completed
- Roadway excavation ~ 100% completed
- Embankment work ~ 100% completed
- Subgrade work ~ 100% completed
- Sub Base work dumping material on road 3.5km

16. CW8 is the Emergency Reconstruction of 34.6 km road along PR 159 at Banteay Meanchey and Battambang Province. Ung Simsia Construction Co., Ltd./Seaboard Co., Ltd. joint venture are the contractors. Construction works commencement date was 25 October 2013 and the expected completion date is 16 June, 2015. Based on the monthly work progress (February 2014), outputs for the period are as follows:

- Clearing and grubbing: 100% completed
- Roadway excavation, common: 57% completed
- Roadway excavation, unsuitable: 72% completed
- Embankment, 69% completed
- Selected subgrade material, 17% completed
- Removal of existing structure (Box culverts), 55% completed
- Removal of existing structure (Bridge), 100% completed
- Casting concrete for structure (pipe culverts and Box culverts), 34% completed
- Pile driving and Casting concrete for RC pile 300mmx300x12000mm (Bridge), 100% completed
- Casting concrete and installing for pipe culverts across the road: 70% completed
- Detour road for Box culverts, 82% completed
- Diversion road for Bridge, 100% completed.

1.3 Purpose of the report

17. The Safeguards Monitoring Report is a document which provides records to PMU and funding agencies, ADB through a loan and AusAID through a grant, on the status of compliance with the environmental and gender requirements.

Chapter 2 – EMP Implementation and Monitoring

2.1 EMP Implementation and Monitoring Arrangement

18. The Environmental Management Plan (EMP) is given in specification for guidance on how to mitigate the environmental concerns identified in connection with this project. The EMP deals with mitigation and management measures to be taken during the project implementation in order to avoid, reduce and mitigate the adverse environmental impacts.

19. IAs will ensure that the EMP is included in the tender documents for civil works. It will form part of the contract between the IA and the selected contractor and the requirements of the EMP will be contractually binding on the contractor. The conformity of contractors with environmental contract procedures and specifications shall be regularly monitored by the PCMU through the Social and Environmental Unit (SEU) during project implementation. PCMU/SEU shall be assisted by the Construction Supervision Consultant (CSC) to undertake EMP monitoring and to prepare corresponding semi-annual reports for submission to ADB.

2.2 Scope of Environmental Monitoring

20. The main tasks being performed for environmental monitoring during the implementation phase of the project covers the following:

- Review of available reports e.g. monthly progress report
- Site verification, observation, informal interview (if necessary), taking of photographs
- Use of monitoring checklist enclosed in the EMP and EMoP
- Modify and add items to the checklist, if necessary.

2.3 Methodology

21. As the construction of subprojects under FDERP generate manageable impacts, the construction activities are also closely checked to control any negative effects at the least or minimal level. The procedures being carried out are identified below:

- Review of available reports e.g. monthly progress reports
- Site verification, observation, informal interview (if necessary), taking of photographs
- Use of monitoring checklist enclosed in the EMP and EMoP
- Modify and add items to the checklist, if necessary.

Chapter 3 – Environmental Reports and Results of Monitoring

3.1 Environmental Reports Prepared by the CSC

3.1.1 Environmental Categorization

22. Environmental Categorization was performed for sub-projects (CW6a, CW6b, CW6c, CW7 and CW8). Based on the rapid environmental assessment conducted, sensitive areas such as cultural heritage site, protect area, wetland, mangrove, estuarine and buffer zone of protected areas are not adjacent nor within the project area. During construction, impacts on surface water quality, occupational health and safety, noise and vibration, poor sanitation and solid waste disposal are expected, however, these are minimal and short term where mitigation measures can be readily formulated and be implemented. As concluded, all sub-projects fall under Category B which means that its potential adverse environmental impacts are less adverse than those of Category A projects.

3.1.2 IEE and EMP

23. In compliance with ADB's Requirements, the Initial Environmental Examination (IEE) Report was prepared, one (1) for stage 2 and a separate document for stage 3. Environmental Management Plan (EMP) and Monitoring Plan for each subproject was also completed and officially transmitted to ADB.

3.1.3 Safeguards Monitoring and Reporting

24. To facilitate Safeguards Monitoring and Reporting on the status of EMP as well as LGAP implementation, forms were provided to the contractors which will be completed and submitted to MPWT on a monthly basis. Quarterly Safeguarding Report No. 8 was issued in June.

25. The contractors shall adhere to the policies related to good governance and gender mainstreaming. As stipulated in term 2 of Social and Gender dimension under Section IV of the Special Conditions of Contract (SCC), the contractors are required to (a) use local unskilled labor and prioritized employment of women and the poor based on targets set forth in the LGAP; (b) provide equal pay for equal work; (c) provide the timely payment of wages; (d) comply with all core employment; and (e) not employ child labor.

3.2 Environmental Report of the Contractor

26. As stipulated under Clause 1.10 PROTECTION OF THE ENVIRONMENT of Part B – Special Technical Specification of the Contract Document, the Contractor shall observe and comply with all the National Laws, Government Regulations, and Ministerial Regulations pertaining to environmental protection, pollution control, waste management and biodiversity protection.

27. In support to the Special Technical Specification, subproject-specific Environmental Management Plans (EMP) and Environmental Monitoring Plans (EMoP) were prepared. Contractors are obliged to implement the measures stipulate in the plans.

28. For the period, site instructions with the monitoring forms were issued to the contractors for them to completed and submit to the MPWT and CSC on a monthly basis. Through close coordinator with the contractors by the CSC, advance information were collected and incorporated in this Safeguards Monitoring Report.

3.3 Field Monitoring by CSC/Environmental Specialists

29. Based on field monitoring and interviews were conducted, the mitigation measures being implemented by the contractors are:

- Approved borrow pit/quarry areas are being used;
- The contractors are trying to minimize the impact to nearby structures as much as they could;
- The contractor have to install soil erosion/slop protection structure;
- The demining group investigated the present of UXOs up to 0.7 meter deep below the ground. UXOs found were removed;
- Not regular sprinkling of water on access roads/detour roads during day time;
- Vehicles transporting materials were not covered with tarpaulin or similar material;
- There were some complaints received from people regarding to noise and dust pollution;
- There was spilled oil/fuel observed on site. The contractors were also advised to improve oil/fuel storage facilities;
- Appropriate plants species will be planted on the slopes and other areas considered;
- Slope protection structures like stone masonry, gabion mattress, geotextile are being installed to minimize soil erosion;
- Unsuitable excavated materials and other residual construction wastes are brought to designated dumpsite;
- PPE are provided to workers all the times;
- Facilities such as kitchen, communication, toilet, bathroom, potable water are provided to workers;
- Warning/safety signs are installed at the paces;
- The contractor also provides workmen's compensation insurance (by Asia Insurance);
- Traffic/safety signs are installed;
- Temporary bypass and Bailey bridge are provided;
- Contractors submitted updates regarding employment generation, hiring of women workers in compliance with LGAP;
- Battambang farmers have pleaded with a construction company to stop blockading the local river which affected to their rice filed (dry season planting).

30. As also observed, the projects have small significant impacts on the environment and people as well. The implementations of the above mitigation measures reduce the occurrence of the following negative impacts: Loss of trees (during site clearing and quarrying of construction materials), damage to existing structures, risk of land mine or UXO, dust generation control, noise and vibration disturbance, water contamination, water-disease control, loss of agricultural land for borrow pits, soil erosion protection, generation of wastes, safety and health, traffic congestion, transmission of sexually transmitted disease (HIV), while the generation of employment is enhanced (Refer page 5- "summary").

31. The contractors were able to minimize the impacts to acceptable levels during pre-construction and construction period. Please see details on Annex 1 regarding the status of EMP compliance with other concerns reflected in Annex 2 or Monitoring Checklist.

Chapter 4 – Conclusion and Recommendation

4.1 Conclusion

32. For the period, site instructions with the monitoring forms were issued to the contractors for them to complete and submit to the MPWT and CSC on a monthly basis. Through Sites Inspection and close coordination with the contractors, the CSC was able to collect advance information relative to their compliance with the environmental requirements. As to date, the contractors are currently implementing the applicable mitigation measures.

4.2 Recommendation

33. The contractors shall be continued the implementation of the Environmental Management Plan which has been signed in the contract; perform self-monitoring works including the implementation of the Labor and Gender Action Plan. Monthly reports with proper documentation should be submitted to MPWT and CSC.

34. During site inspection, the Resident Engineers and other Project Personnel were again advised to submit the monthly reports. Verbal instruction was also provided to enhance the following mitigation measures:

- Ensure that need to retain of water flow as much as possible in order to provide water to downstream for bridge construction project;
- Regular sprinkling of water of access roads/detour roads during day time;
- Regular collection and disposal of spoils and excavated materials to designated location to avoid sedimentation/siltation of nearby water bodies;
- Proper storage of toxic materials like fuel and oil;
- Provide the first aid kit and additional sanitary facilities at site camp and worker camps;
- PPE should be provided to workers at construction sites;
- Backfill open borrow pits;
- Improve sanitary facilities for workers;
- Adequate sign boards, advisory on speed limit, humps, lights, barriers, refectories should be placed on critical locations.

Chapter 5 - Annexes

Annex 1: Status of EMP Compliance

A. Pre-Construction and construction phases

Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Status of Compliance (Note: photos were additional attached for reference)
Detailed Engineering Design and construction phases: Earthworks, site clearing, hauling of construction materials, piling works, Operation of construction/workers' camps, borrow operation, hauling of construction wastes to spoil sites	<ol style="list-style-type: none"> 1. Loss of trees (during site clearing and quarrying of construction materials) 2. Damage to existing structures 3. Risk of land mine or UXO 	<ul style="list-style-type: none"> On the design stage, ensure that there are acceptable alternative borrow pit areas that would have an overall beneficial advantage in terms of improved livelihood and reduced environmental impacts. The design should maximize benefits or avoid impacts on assets. Resettlement framework for the Project and Cambodian laws, policies, and regulations should be complied with. Consultative meetings with local communities are necessary to know clearly where there are risks of mines or UXO. Unsafe areas should be cleared before project implementation. 	<ul style="list-style-type: none"> Complied during clearance and earthwork activities construction for subprojects. The contractors are trying to minimize the impact to nearby structures as much as they could. The contractor installed soil erosion/slope protection structures UXOs had been cleared and destructed for subprojects of CW6 (a, b, c), CW7 and CW8 There was no any accident encountered.
Environmental Engineering	4. Dust generation	<ul style="list-style-type: none"> The Contractor will be required to formulate and implement a Dust Abatement Program that includes spraying of water on roads and work areas within villages close to the road. Vehicles transporting materials should be 	<ul style="list-style-type: none"> Not regular sprinkling of water Complaints received from people of dust pollution. No cover with tarpaulin of vehicles transporting materials.

Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Status of Compliance (Note: photos were additional attached for reference)
		covered with tarpaulin or similar material	
	5. Noise and vibration	<ul style="list-style-type: none"> The Contractor should consider proper scheduling of construction activities particularly in sensitive areas. Acoustic barriers or enclosures for working areas should be provided 	<ul style="list-style-type: none"> No complaints received from the people so far as proper scheduling of works is being done.
	6. Water contamination	<ul style="list-style-type: none"> Waste/used oil should be collected, properly stored and disposed to an approved site (according to national standard). Storage should be in drums raised off the ground and properly covered to keep rain water out. Lining or pan should be provided to contain any spills and simplify clean up. The Contractor shall prepare a Spill Management Plan (including measures to be taken and equipment to be used) to ensure adequate clean-up of any spills. 	<ul style="list-style-type: none"> There is no spilled oil/fuel into water resources observed. But the contractors were also advised to improve oil/fuel storage facilities. Dirty-looking and the smell is not so clean caused of bridge construction activities.
	7. Water-borne disease	<ul style="list-style-type: none"> Fill-up depressed areas to prevent water ponding which may be used as breeding ground for disease-carrying organisms mosquitoes. Borrow pits may be utilized for aquaculture or be developed as water reservoir for community use. 	<ul style="list-style-type: none"> Complaints were received from villagers of diarrhea and stomach pains.
	8. Water flow	<ul style="list-style-type: none"> The Constructor has to ensure that road and bridge construction will not be impacted of water flow. The alternative approaches should be: <ul style="list-style-type: none"> i. do not blockage of water ii. provide adequate cross drainage of water flow iii. construct divert of water flow. 	<ul style="list-style-type: none"> Complied.

Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Status of Compliance (Note: photos were additional attached for reference)
	9. Loss of agricultural land for borrow pits	<ul style="list-style-type: none"> The contractor will use only licensed borrow operators. There will be no side borrow permitted, unless agreed to with roadside residents. The contractor will be responsible for rehabilitating any borrow sites opened and operated by them 	<ul style="list-style-type: none"> Complied.
	10. Loss of trees	<ul style="list-style-type: none"> Tree clearing should be avoided as much as possible. The borrow pits will need to be re-vegetated before being handed back to the owner, or could be used for aquaculture. Tree planting should be carried out in the appropriate location of the road in consultation with competent authority(ies) regarding the species of trees to be used. 	<ul style="list-style-type: none"> Complied Appropriate vegetation will be planted on the slope and other areas required.
	11. Soil erosion	<ul style="list-style-type: none"> The contractor will be required to implement soil erosion control to minimize soil erosion and sedimentation of waterways. The alternative approaches should be: (1) provide adequate cross drainage to avoid over flow or flooding and (2) re-vegetation of erosion-prone areas. 	<ul style="list-style-type: none"> Slope protection structures like stone masonry, gabion mattress, geotextile are installed to minimize soil erosion.
	12. Generation of wastes	<ul style="list-style-type: none"> Sufficient garbage containers should be provided in construction camps and work sites Employ regular disposal of waste in an approved landfill or site Maintain cleanliness/orderliness at camps and work sites 	<ul style="list-style-type: none"> Unsuitable excavated materials and other residual construction wastes are brought to designated dumpsite Contractor should improve construction camp, living quarters, particularly a sanitary facility

Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Status of Compliance (Note: photos were additional attached for reference)
	13. Safety and Health	<ul style="list-style-type: none"> The Contractor should formulate and implement a Health and Safety Plan to protect both the public and the workers. A trained first aid personnel and health facility should be provided on site. Provide potable water and sanitary facilities to workers Install warning signs like "safety first" at the construction area including fences or enclosures Provide Protective Personal Equipment (PPE) to workers e.g. safety shoes, hardhats, earplugs, etc. 	<ul style="list-style-type: none"> PPE are provided to workers Facilities such as kitchen, communication, toilet, bathroom, first aid kits, and potable water are provided to workers. Warning/safety signs are installed. The contractor also provides workmen's compensation insurance (by Asia Insurance).
	14. Traffic congestion	<ul style="list-style-type: none"> Contractor should perform the following: (i) orient their drivers or equipment operators to comply with the required speed limit. (ii) drive at low speeds, especially in market, school, hospital, urban areas. (iii) keep the roadway or bypass accessible to commuters to avoid traffic jams. (iv) park at designated area. Prepare and implement a Traffic Management Plan Provide appropriate storage area for the construction materials Detour road should be provided and accessible to commuters Temporary access of equipment and trucks must be established and approved by the sub-district officials 	<ul style="list-style-type: none"> Temporary bypass and Bailey bridges are provided. Traffic safety measures should be implemented e.g. placing of traffic /warning signs including advisory on speed limit, provision of humps on the approach of the bridge, light/reflectorizes especially on deep excavations and work areas, deployment of flagmen on critical locations.

Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Status of Compliance (Note: photos were additional attached for reference)																												
	15. Transmission of sexually transmitted disease (HIV)	<ul style="list-style-type: none"> Prepare and implement a Health and Safety Plan including education of workers on sexually transmitted disease should be done. 	<ul style="list-style-type: none"> Workers are well informed regarding HIV/AIDS. 																												
	16. Generation of employment	<ul style="list-style-type: none"> The contractor should comply with the Labor and Gender Action Plan; employ people from villages including women and unskilled workers 	<ul style="list-style-type: none"> Contractors submitted updates regarding employment generation and LGAP implementation. Data as of June, 2014 are tabulated below: <table border="1"> <thead> <tr> <th colspan="4">% women employed in the project (2014)</th></tr> <tr> <th></th><th>April</th><th>May</th><th>June</th></tr> </thead> <tbody> <tr> <td>CW6a</td><td>31</td><td>0</td><td>0</td></tr> <tr> <td>CW6b</td><td>32</td><td>32</td><td>31</td></tr> <tr> <td>CW6c</td><td>35</td><td>20</td><td>0</td></tr> <tr> <td>CW7</td><td>27</td><td>24</td><td>25</td></tr> <tr> <td>CW8</td><td>51</td><td>48</td><td>51.5</td></tr> </tbody> </table>	% women employed in the project (2014)					April	May	June	CW6a	31	0	0	CW6b	32	32	31	CW6c	35	20	0	CW7	27	24	25	CW8	51	48	51.5
% women employed in the project (2014)																															
	April	May	June																												
CW6a	31	0	0																												
CW6b	32	32	31																												
CW6c	35	20	0																												
CW7	27	24	25																												
CW8	51	48	51.5																												

Annex 2: Monitoring Checklist

A. CW6a the Emergency Reconstruction of 8.5km DBST of PR 270 (Kampong Cham)

General information	DD/MM/YY	30/June /2014		
	Report prepared by	Sao Vibol		
	Name of road and location of construction site	PR No.270-CW6a-FDERP-MPWT		
	Name of contractor/ subcontractor	RMCD		
Permits, agreements	Request for obtaining a permit for quarry/borrow pit opening during construction	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Request for obtaining an agreement for disposal of construction waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Proper location of construction site/camp	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Aggregate/asphalt batching plants properly licensed and approved by Ministry of Environment (MOE).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of proper storage for fuel, oil and construction materials	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Proper maintenance of construction machinery and equipment (prevent leakage of fuel, oil, lubricants, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of temporary storage areas for excavated and demolished materials and construction wastes within the existing right-of-way	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Timely removal of excavated and demolished materials and construction waste from the temporary storage areas to planned and agreed places	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Use covered trucks for transportation of construction materials and waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean the surrounding area from dust by water sprinkling in construction zone (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean/ wash tires of vehicles before they get to dwellings and/or drive on highways (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Implementation of works at the established time (e.g. work during daytime 06.00 to 18.00)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
	Installation of road signs in construction sites, camps and along access roads	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Ensure proper sanitary/ hygienic conditions for workers at the construction site	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Restoration of the area of construction sites and camps when the construction works are over	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Replanting/planting of finished work areas (i.e. embankment slopes, borrow pits, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

B. CW6b the Emergency Reconstruction of 3 bridges (Kampong Cham)

General Information	DD/MM/YY	30/June /2014		
	Report prepared by	Sao Vibol		
	Name of road and location of construction site	PR No.270-CW6a-FDERP-MPWT		
	Name of contractor/ subcontractor	RMCD		
Permits, agreements	Request for obtaining a permit for quarry/borrow pit opening during construction	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Request for obtaining an agreement for disposal of construction waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Proper location of construction site/camp	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Aggregate/asphalt batching plants properly licensed and approved by Ministry of Environment (MOE).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of proper storage for fuel, oil and construction materials	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Proper maintenance of construction machinery and equipment (prevent leakage of fuel, oil, lubricants, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of temporary storage areas for excavated and demolished materials and construction wastes within the existing right-of-way	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Timely removal of excavated and demolished materials and construction waste from the temporary storage areas to planned and agreed places	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Use covered trucks for transportation of construction materials and waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean the surrounding area from dust by water sprinkling in construction zone (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean/ wash tires of vehicles before they get to dwellings and/or drive on highways (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Implementation of works at the established time (e.g. work during daytime 06.00 to 18.00)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
	Installation of road signs in construction sites, camps and along access roads	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Ensure proper sanitary/ hygienic conditions for workers at the construction site	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Restoration of the area of construction sites and camps when the construction works are over	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Replanting/planting of finished work areas (i.e. embankment slopes, borrow pits, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

C. CW6c the Emergency Reconstruction of 7 structures (Kampong Cham)

General information	DD/MM/YY	30/June /2014		
	Report prepared by	Sao Vibol		
	Name of road and location of construction site	PR No.270-CW6a-FDERP-MPWT		
	Name of contractor/ subcontractor	RMCD		
Permits, agreements	Request for obtaining a permit for quarry/borrow pit opening during construction	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Request for obtaining an agreement for disposal of construction waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Proper location of construction site/camp	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Aggregate/asphalt batching plants properly licensed and approved by Ministry of Environment (MOE).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of proper storage for fuel, oil and construction materials	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Proper maintenance of construction machinery and equipment (prevent leakage of fuel, oil, lubricants, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of temporary storage areas for excavated and demolished materials and construction wastes within the existing right-of-way	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Timely removal of excavated and demolished materials and construction waste from the temporary storage areas to planned and agreed places	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Use covered trucks for transportation of construction materials and waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean the surrounding area from dust by water sprinkling in construction zone (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean/ wash tires of vehicles before they get to dwellings and/or drive on highways (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Implementation of works at the established time (e.g. work during daytime 06.00 to 18.00)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
	Installation of road signs in construction sites, camps and along access roads	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Ensure proper sanitary/ hygienic conditions for workers at the construction site	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Management of construction sites	Restoration of the area of construction sites and camps when the construction works are over	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Replanting/planting of finished work areas (i.e. embankment slopes, borrow pits, etc.)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

D. CW7 the Emergency Reconstruction of 8.1km DBST of PR 270 (Kampong Cham)

General Information	DD/MM/YY	30/June /2014
	Report prepared by	Sao Vibol
	Name of road and location of construction site	PR No.270-CW6a-FDERP-MPWT
	Name of contractor/ subcontractor	RMCD
Permits, agreements	Request for obtaining a permit for quarry/borrow pit opening during construction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Request for obtaining an agreement for disposal of construction waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Management of construction sites	Proper location of construction site/camp	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Aggregate/asphalt batching plants properly licensed and approved by Ministry of Environment (MOE).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Availability of proper storage for fuel, oil and construction materials	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Proper maintenance of construction machinery and equipment (prevent leakage of fuel, oil, lubricants, etc.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Availability of temporary storage areas for excavated and demolished materials and construction wastes within the existing right-of-way	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Timely removal of excavated and demolished materials and construction waste from the temporary storage areas to planned and agreed places	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Use covered trucks for transportation of construction materials and waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Clean the surrounding area from dust by water sprinkling in construction zone (when necessary)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Clean/ wash tires of vehicles before they get to dwellings and/or drive on highways (when necessary)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Implementation of works at the established time (e.g. work during daytime 06.00 to 18.00)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
	Installation of road signs in construction sites, camps and along access roads	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Ensure proper sanitary/ hygienic conditions for workers at the construction site	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Management of construction sites	Restoration of the area of construction sites and camps when the construction works are over	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Replanting/planting of finished work areas (i.e. embankment slopes, borrow pits, etc.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

E. CW8 the Emergency Reconstruction of 34.6km Road (B. Meanchey & BTB)

General Information	DD/MM/YY	30/June /2014		
	Report prepared by	Sao Vibol		
	Name of road and location of construction site	PR No.270-CW6a-FDERP-MPWT		
	Name of contractor/ subcontractor	RMCD		
Permits, agreements	Request for obtaining a permit for quarry/borrow pit opening during construction	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Request for obtaining an agreement for disposal of construction waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Proper location of construction site/camp	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Aggregate/asphalt batching plants properly licensed and approved by Ministry of Environment (MOE).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of proper storage for fuel, oil and construction materials	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Proper maintenance of construction machinery and equipment (prevent leakage of fuel, oil, lubricants, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Availability of temporary storage areas for excavated and demolished materials and construction wastes within the existing right-of-way	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Timely removal of excavated and demolished materials and construction waste from the temporary storage areas to planned and agreed places	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Use covered trucks for transportation of construction materials and waste	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean the surrounding area from dust by water sprinkling in construction zone (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Clean/ wash tires of vehicles before they get to dwellings and/or drive on highways (when necessary)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Implementation of works at the established time (e.g. work during daytime 06.00 to 18.00)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
	Installation of road signs in construction sites, camps and along access roads	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Ensure proper sanitary/ hygienic conditions for workers at the construction site	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Management of construction sites	Restoration of the area of construction sites and camps when the construction works are over	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Replanting/planting of finished work areas (i.e. embankment slopes, borrow pits, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Annex 3: Photos



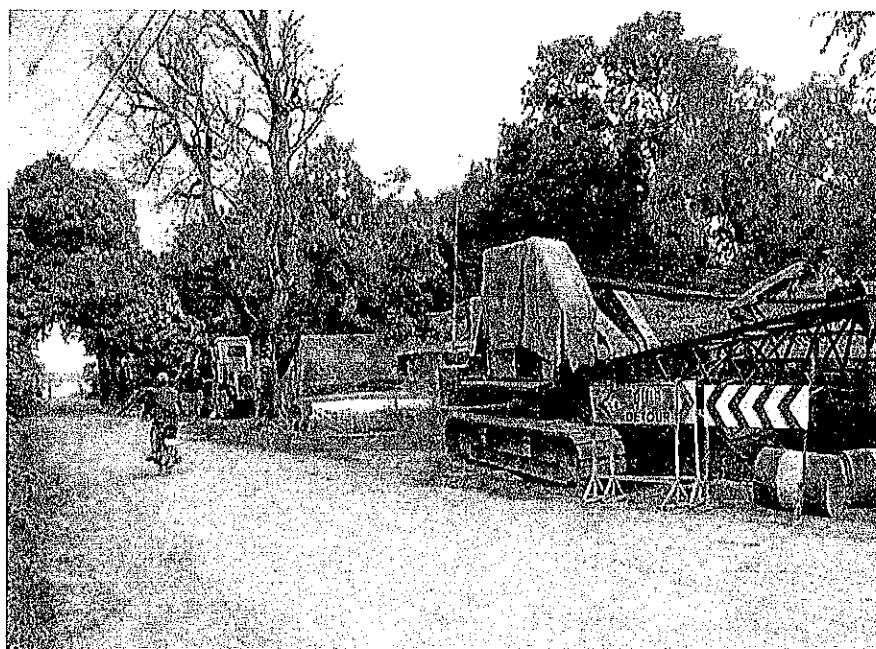
Rice field affected by project implementation due to water blockage of bridge construction



Outlet of pipe culverts under upstream cofferdam



Removing of cofferdam



Road sign was installed



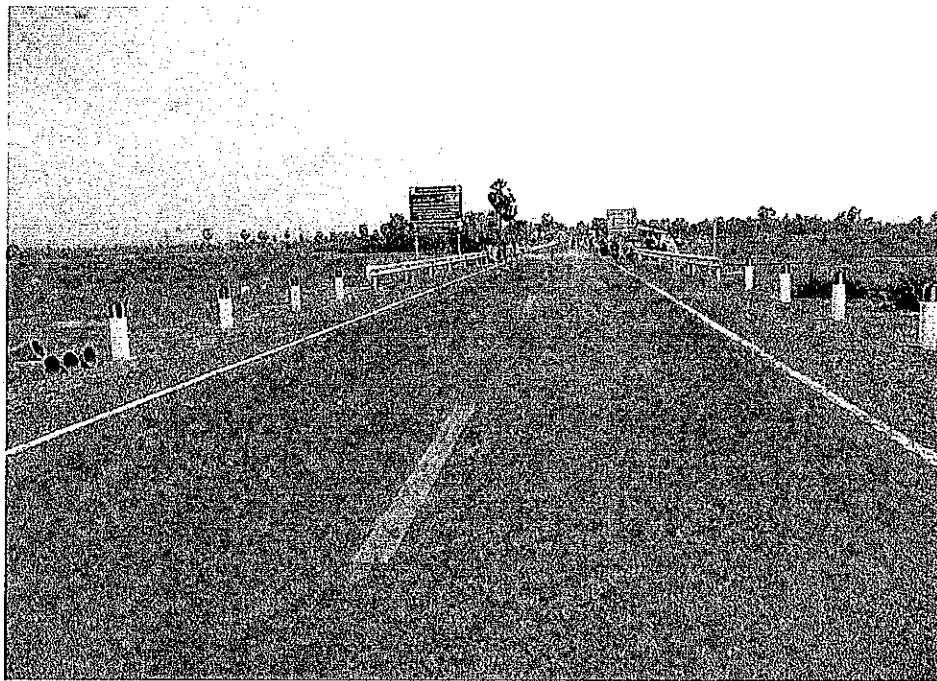
Woman worker provided job



Watering along the alignment



Dust pollution occurred during project implementation



Good environment after completed the construction

