

Environmental Monitoring Report

Semi-Annual Report
December 2018 – June 2020
March 2021

Cambodia: Second Greater Mekong Subregion Tourism Infrastructure for Inclusive Growth Project

CW 03: Kep Solid Waste Improvement Subproject (Kep Landfill Improvements)

CW 04: Kep-Angkol Coastal Road Improvement

CW 05: Kep-Rabbit Island Passenger Pier

Prepared by Ministry of Tourism and Ministry of Public Works and Transport for the Royal Government of Cambodia and the Asian Development Bank.

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Semi-Annual Environmental Monitoring Report

CAMBODIA

Ministry of Tourism

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**CAM: Second Greater Mekong Subregion Tourism
Infrastructure for Inclusive Growth Project**

**CW 03: Kep Solid Waste Improvement Subproject (Kep
Landfill Improvements**

CW 04: Kep-Angkol Coastal Road Improvement

CW 05: Kep-Rabbit Island Passenger Pier

Reporting Period: *December 2018- June 2020*

Date: *March 2021*

SEMR Report Number: *1*

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Annex 1 Environmental Quality Monitoring Results	a
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1 ENVIRONMENTAL SAFEGUARDS SUMMARY

1. The first Semi-annual Environment Monitoring Report (SEMR) covers the period of December 2018- June 2020 for Second Greater Mekong Subregion Tourism Infrastructure for Inclusive Growth Project (Cambodia). The SEMR has been prepared to fulfil the safeguard policy requirement of ADB.
2. The SEMR is prepared by PMCES and checked by PMU/ Ministry of Public Works and Transport.

1.1 Summary of Project Progress

3. The following table gives a brief summary of the project progress for contract award, construction and key activities in this reporting period:

Table 1 Project Progress Summary

Safeguards Category	Environment	B	
Reporting Period:	December 2018- June 2020	Date Last Report Issued:	Not applicable
Contracts Awarded to Date:	CW 03 (Kep Landfill Improvements) MTA Construction Co., Ltd, 7 May 2020 CW 04 (Kep-Angkol Coastal Road Improvement) – pre-construction period (design stage in progress) CW 05 (Kep-Rabbit Island Passenger Pier) - pre-construction period (design stage in progress)		
Construction Progress to Date:	As of June 2020 the physical construction progress is as follows: CW 03 (Kep Landfill Improvements) – 1.39% construction completed CW 04(Kep-Angkol Coastal Road Improvement) – pre-construction period (design stage in progress) CW 05 (Kep-Rabbit Island Passenger Pier) - pre-construction period (design stage in progress)		
Key Sub-project Activities in this Reporting Period:	CW 03 (Kep Landfill Improvements) <ul style="list-style-type: none"> – Completion of IESIA (Initial Environmental and social impact) Report and submitted to MOE and subsequent issuance of construction license. – mobilization of MTA Construction Co., Ltd to site on 4 June 2020. Construction of work camps and associated construction facilities such as fuel tank area – UXO clearance certificate issued for this project by NPMEC, EOD unit 213 and was signed by MG Mey Sophea on 18 June 2020. CW 04(Kep-Angkol Coastal Road Improvement) – pre-construction period (design stage in progress) CW 05 (Kep-Rabbit Island Passenger Pier) - pre-construction period (design stage in progress)		

	Permits or Consents Issued: Construction license for the Kep Landfill Subproject-CW03 issued by MOE on 10 April 2020
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Summary of EMP Implementation

4. EMP implementation is summarised in the following points, for this reporting period:
 - CW 03 (Kep Landfill Improvements)
 - The contractors works in the period were limited to mobilization activities of MTA Construction Co., Ltd, contractor in charge for the construction of Kep Landfill. The Camp installed in June 2020 includes provision of separate toilet with septic tank for male and female workers, wash area, waste bins; setting up of H&S signages at the construction site
 - Fuel tank area being constructed
 - Provision of first aid kit, fire extinguishers
 - UXO clearing activity completed with clearance certificated issued on 24 June attached
 - Potential impact to the location of three graveyards contiguous to the project area were avoided in the design phase by leaving the graveyards outside of the Landfill site and preserving free access.
 - The MTA Construction Co., Ltd, the contractor for the construction of Kep Landfill had just mobilized in 4 June 2020, just three weeks prior to the end of report period of this document. The contractor records 1.39% overall actual completion of work by the end of June 2020.
 - To date there are no issues affecting project environmental performance.
 - CW 04(Kep-Angkol Coastal

1.2 Summary of EMP Monitoring

5. EMP monitoring during the construction period is currently being established. MTA just mobilized at the project site in 4 June 2019. No sampling activity for air and water quality this month.

1.3 Summary of Complaints, Issues and Corrective Action

6. No grievance case reported in the period of December 2018- June 2020.

2 SAFEGUARDS STAFF, TRAINING AND DOCUMENTATION

2.1 Implementation Arrangements

7. The EMP defines the Environmental Safeguards roles and responsibilities. The roles are required to be filled in order to meet the EMP requirements. The following table gives the status of the key roles for EMP implementation:

Table 2. Status of Environmental Safeguard Roles

Safeguards Role	Status & Comment			
PMU- Environmental Control Officer (ECO)	Date Started:	01-May-2020	Full Time/ Part Time	PT
	Comment	Mr. Pen Socheat (PMU)		
PIU Environmental And Social Safeguards Staff]	Date Started:	12 March 2020	Full Time/ Part Time	PT
	Comment	Chhun ChanVan Thon		
PIU GRM Focal Point	Date Started:	12 March 2020	Full Time/ Part Time	PT
	Comment	Ken Sopheak		
PMCES international and national environmental specialists for the EMP	Date Started:	25 Aug-2019	Full Time/ Part Time	PT
	Comment	Dr. Almaji (IES). Not mobilized during SEMR 1 reporting period due to COVID-19 travel restrictions ; Mr. Mao Van Cchan (NES up to 15 April 2020; replaced by Mr. Chheang You from 05- May 2020		
Environmental Monitoring Institute (EMI)	Date Started:	TBA	Full Time/ Part Time	TBA
	Comment	Not yet hired by the Consultant during the report period		

. Contractor Environment Health & safety Staff	Date Started:	TBA	Part Time	TBA
	Comment	Not yet hired by MTA for CW03 Kep Landfill Improvement Subproject		
Contractor GRM Person	Date Started:	TBA	Full Time/ Part Time	TBA
	Comment	Not yet hired by the Consultant during the report period		

8. The project concludes that the environmental safeguards roles are in the process of filling up. The Environment, H& S position for MTA, the contractor for the Kep Landfill (CW03), is yet to be filled up.

2.2 Training & Capacity Building

9. No environmental safeguards training courses that have been completed during this reporting period due to COVID-19 restrictions. Training will be carried out as soon as Kep travel ban from Phnom Penh due to COVID-19 will be removed.

2.3 ADB Approvals

10. The following table gives information on the status of the safeguards documents. During this reporting period, only Kep Landfill Improvement Project (CW03) has available safeguard documents. The safeguard documents of other subprojects are in progress.

Table 3. Status of Environmental Safeguard Documents

Safeguards Documents	Update Issued (Latest Version)	Submitted to MoE	Submitted to ADB
IEE updated, Update based on the DED of Kep Solid Waste Management Improvements subproject. The updated IEE includes all details, environmental baseline data, Public Consultation reports and other requirements contained in the IESIA	May 2020	n.a	04 May 2020
EMP Subproject 1 (Kep Landfill Improvements CW03)	May 2020	updated EMP is included in the updated IEE	04 May 2020

<p>EMP, May 2020 updated based on DED of Kep Solid Waste Management Improvements subproject (https://www.adb.org/projects/documents/cam-49387-002-emp-1)</p> <p>EMP for Kep Subproject. January 2018 (draft) https://www.adb.org/projects/documents/cam-49387-002-emp-0</p>		[date or Not Applicable]	
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2.4 National Approvals

11. The following table gives an update on the necessary national approvals required for the project to proceed.

Table 4. Status of National Approvals for Environmental Documents

Documents	Submitted to MoE	Approved By MoE:	Status – if not approved	Comment
CW 03 IESIA (initial environmental and social impact) Report	10 January 2020	27 March 2020	Approved	
CW 04(Kep-Angkol Coastal Road Improvement) EMP	-	-	To be drafted. DED is yet to be finalized and is a prerequisite to this requirement	Project at pre-construction period (design stage in progress)
CW 05 (Kep-Rabbit Island Passenger Pier) EMP	-	-	To be drafted. DED is yet to be finalized and is a prerequisite to this requirement	Project at pre-construction period (design stage in progress)

2.5 Construction Environmental Management Plan (CEMP) Approvals

12. The following table confirms the status of the Construction Environmental Management Plan (CEMP) for each CW package:

Table 5. Status of CEMP Approvals

Civil Works Package/ Subproject	CEMP Given to PMU	Approved By PMU:	Comment:
CW03 Kep landfill CEMP	25 May 2020	Review in progress	
CW04 (Kep-Angkol Coastal Road Improvement) CEMP			Design stage in progress. To be drafted by the contractor of this package
CW 05 (Kep-Rabbit Island Passenger Pier) CEMP			Design stage in progress. To be drafted by the contractor of this package

3 EMP IMPLEMENTATION

3.1 Environmental Performance

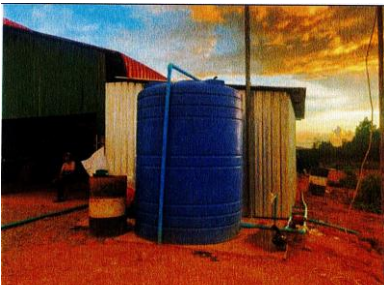


13. The following table gives the environmental impact mitigation measures in the Borrower (Project) EMP and the corresponding CEMP and how the project is progressing with implementing the mitigation measures, for each subproject.

14. The evidence for the compliance is through a combination of:

- Site visits to observe site practices;
- Consultation with affected people;
- Regular environmental reporting from MTA Construction Co., Ltd, the contractor for the construction of Kep Landfill CW03; and PMCES

Table 6. Status of EMP Compliance Kep Landfill Improvements (CW03)

EMP Requirement (Mitigation Measure)	Compliance & Description (Yes, No, Partial)	Comment or Further Explanation if Needed	Reasons for Not Full Compliance
1. Work camps	Partial	Camp is being established. Improvements to other associated facilities still in progress. Installation and ongoing improvement expected to finish by July 2020.	Contractor mobilized 4 June 2020. Work camp is being established. Installation and improvement of

		<p>MTA Construction Co., Ltd mobilized in 4 June 2020 commencing with installation of work camp with the associated facilities:</p>	<p>other associated facilities is ongoing. Expected to be finished by July 2020.</p>
<p>Water tank for domestic and drinking water</p>			
<ul style="list-style-type: none"> • Separate water closet (toilet) with septic for male and female workers • Wash/ bathing area 			
<ul style="list-style-type: none"> • Trash bins, fire extinguishers provided 			

				
		<ul style="list-style-type: none"> • H&S signages are being set up 		
		<ul style="list-style-type: none"> • First aid kit 		
<p>2. Construction materials</p>	<p>Partial</p>	<p>In progress.</p>		<p>Improvement to the area is ongoing taking into consideration</p>

acquisition, transport and storage subplan		Fuel tank area constructed. Some improvements in the area is ongoing.	potential incident of spillage, fire and other incidents related to the use of fuel tank area and its facilities.
3. Excavated spoil management sub-plan	Compliant	On 20 June 2020, the surveyors hired by PMCES completed the topographic survey needed to provide updated information on the actual site morphology as the basis for the DED of the 4 landfill cells. The reason for the resurvey was the impact of substantial borrow pit excavations made by other privates after the initial design and survey made by Norconsult. This problem was highlighted by PMCES CTL the inception report completed in August 2019, but the borrow pit excavations by private authorized by Kep Governor continued up until the end of May. In June 24 The Governor requested the Project to continue to receive the waste collected in Kep in the SLF area because no other dumping site is available in the province. This new waste volumes will increase the amount of the solid waste already dumped in the site before June 2020, thus increasing the volume of the waste volumes to be removed and handled by the contractor. The existing and new waste material will be temporarily deposited in the present dumping site up to the moment that the Cell no 1 is ready and lined. .	
4. Solid and liquid construction waste sub-plan	Compliant	Toilet with standard septic tank of adequate design and size installed at the work camps. Waste bins for solid wastes are provided in the construction area.	
5. Noise and dust sub-plan	Compliant	Considered in the CEMP. Implementation of noise and dust subplan by MTA to be reported when such measures are applicable especially at the start of earth movement activities and transportation of heavy goods to the project site.	
6. Implement utility and power disruption sub-plan	Compliant	Considered in the CEMP. . Implementation of such mitigation measure by MTA to be reported when such measures are necessary. There is no foreseen utility and power disruption which may be caused by the project construction activities of CW03 Kep Landfill Improvement Subproject.	

7. Tree and vegetation removal, and site restoration sub-plan	compliant	Considered in the CEMP. Implementation of such mitigation measure by MTA to be reported during any vegetation clearing activity at the construction site. No tree cut during this reporting period.	
8. Erosion control sub-plan	compliant	Considered in the CEMP. Implementation to be reported if there is any applicable erosion measure in the area.	
9. Implement worker and public safety sub-plan	Compliant	<p>H&S signages, workers' PPE and uniforms, trash bins provided. Please see details in the Monthly Environmental Monitoring Report for June 2020.</p> <p>Provision of first aid kits for workers and staff at the project site.</p> <p>COVID-19 information and temperature monitoring given currently to all workers.</p> <p>At the end of April 2020, PMCES submitted the updated IEE and EMP for inclusion in the Kep Landfill contract. On May 3, 2020 ADB provided NOL to sign and execute the Kep Landfill construction contract, which was then signed on 07 May between MPWT and MTA Construction Co., Ltd. On 10 June the Contractor MTA submitted its CEMP which was reviewed by PMCES and found not to fully comply with the requirement of the MOE approved EMP. The Contractor is presently revising the CEMP incorporating PMCES comments. PMCES also asked the Contractor to include in the CEMP a specific section presenting the measures for prevention of the spreading of COVID-19 among the workers.</p> <p>UXO clearing activity for Kep Landfill area and the access road was completed and certificate showing the project has been cleared was issued. The total area cleared is 238, 799 m². Certificate of UXO clearance issued for this project dated 18 June 2020 issued by NPMEC, EOD unit 213 and was signed by MG Mey Sophea.</p>	
10. Civil works	Compliant	Considered in the CEMP. Implementation to be reported in the following SEMR	

		No civil works carried out in this reporting period	
11. Cultural chance finds sub-plan	compliant	There are 3 graveyards contiguous to the Landfill area. PMCES confirmed that the design has no impact on the graveyards as well as on its free access by potential visitors. In the detailed design the three existing graveyards are kept outside of the Landfill construction site. The SLF perimeter of the SLF area assigned by Kep Government and handed over to MTA Construction Co., Ltd. does not include the three graveyard, that are therefore not impacted by the Construction works	
12. Construction and urban traffic sub-plan	Compliant	Construction not yet started in the reporting period. No road works carried out in this reporting period. Implementation to be reported in the following SEMR.	
13. Construction drainage sub-plan	Compliant	Construction not yet started in the reporting period ongoing. No drainage works carried out in this reporting period. Please see details in the Monthly Environmental Monitoring Report for June 2020.	

15. Most of the EMP subplans are assessed 'Partial' as the actions needed to solve compliance is ongoing. It should be noted that the Contractor for the construction of the Kep Landfill (CW03) just mobilized at the project site on 4 June 2020. Establishment of work camps is still in progress so are the mitigating measures for various construction activities.

3.2 Health and Safety Performance

16. The following table gives the Health and Safety impact mitigation measures in the Borrower EMP and how the project is progressing with implementing the mitigation measures, for all subprojects.

Table 7. Status of Health and Safety Compliance – Kep Landfill Improvement (CW03)

	Health and Safety Requirement	Compliance & Description (Yes, No, Partial)	Comment or Further Explanation if Needed	Reasons for Not Full Compliance
1	Workers Need to wear protective clothing	Yes	Subproject: Kep Landfill Improvement (CW03)	None

			Workers are provided with uniform and applicable PPEs. Facemasks are provide at the project sites	
2	First Aid kit needed on site	Yes	Subproject: Kep Landfill Improvement (CWO3) First Aid Kit available in site offices	None
3	Fire extinguishers needed on site	Yes	Subproject: Kep Landfill Improvement (CWO3) Fire extinguishers available in site offices and project site	None

4 EMP MONITORING

4.1 Environmental Quality Monitoring

17. Environmental quality monitoring requirements are defined in the Monitoring Plan section of the EMP. The following table gives a summary of the environmental quality monitoring requirements for each subproject

Table 8. EMP Environmental Quality Monitoring Requirements

Subproject	Environmental Issue Monitored	Location	Parameters	Responsible Organisation	Frequency
Kep Landfill Improvement - CW03	Qualitative Air, dust and noise levels, and ground and surface water; Qualitative turbidity levels	Along access road and on SLF boundary and nearest residential receptors. All construction sites. And Entrance road to the landfill	Air and noise Noise level Carbon monoxide Nitrogen Dioxide Sulfur Dioxide Total Suspended Particle (TSP) Ozone (O ₃)	Supervision: PMCES/PIU Implementation: Contractor	Continuously daily observations recorded in site diary

Subproject	Environmental Issue Monitored	Location	Parameters	Responsible Organisation	Frequency
Kep Landfill Improvement - CW03	Qualitative Air, dust and noise levels, and ground and surface water; Qualitative turbidity levels	Along access road and on SLF boundary and nearest residential receptors. All construction sites. And Entrance road to the landfill	Groundwater parameters pH Electrode Conductivity (EC) Total Dissolved Solids (TDS) Dissolved Oxygen (DO) Chemical Oxygen Demand(COD) Oil & Grease Ammonia (NH3) Ammonium(NH4) Detergents(MBAS) Nitrite(NO2) Nitrate (NO3) Phosphate(PO4) Total Nitrogen Total Phosphorus(TP) Arsenic(As) Cadmium (Cd) Copper (Cu) Iron (Fe, total) Lead(Pb) Zinc (Zn)	Supervision: PMCES/PIU Implementation: Contractor	Continuously daily observations recorded in site diary
Kep Landfill Improvement - CW03	Qualitative Air, dust and noise levels, and ground and surface water; Qualitative turbidity levels	Along access road and on SLF boundary and nearest residential receptors. All construction sites. And Entrance road to the landfill	Surface water parameters pH Temperature TDS	Supervision: PMCES/PIU Implementation: Contractor	Continuously daily observations recorded in site diary

Subproject	Environmental Issue Monitored	Location	Parameters	Responsible Organisation	Frequency
			DO TSS Chloride (Cl) Nitrate Phosphate Sulphate Ammonium BOD5 COD Total Nitrogen Total phosphorus Arsenic (As) Iron (Fe) Lead Mercury Total Coliform E-Coli Detergent Oil and Grease		
Kep Landfill Improvement - CW03	Operational health and Safety (OHS)	From all project-affected community areas, from hotline telephone number placed along access road and at gate to SLF.	Incidence of worker or public accident or injury	Supervision: PMCES/PIU Implementation: Contractor	Continuously daily observations recorded in site diary
Kep Landfill Improvement - CW03	Qualitative level of unmanaged and uncontained worker (domestic) and construction solid waste	At all construction areas	Public complaint, grievance case	Supervision: EA/PIU Implementation: PIU/ Contractor	Continuously daily observations recorded in site diary

Subproject	Environmental Issue Monitored	Location	Parameters	Responsible Organisation	Frequency
Kep-Angkol Coastal Road Improvement - CW04	To be established				
Kep-Rabbit Island Passenger Pier - CW05	To be established				

18. The above table gives information on the environmental quality monitoring to be implemented by MTA Construction Co., Ltd for the construction of Kep Landfill (CW03). MTA mobilized at the project on 4 June 2020. The implementation of the above will be reported in the reporting period. Detailed results will be compared to relevant national / international standards.
19. **Summary of Results – Noise.** Nothing to report during this reporting period.
20. **Summary of Results – Surface Water quality.** Nothing to report for this reporting period.
21. **Summary of Results – Groundwater quality.** Nothing to report during this reporting period.
22. **Summary of Results – Air quality.** Nothing to report during this reporting period.

4.2 Construction Phase Affected People Consultation

23. Consultation during the construction phase will be reported in the next reporting period. The contractor for the CW03 Kep Landfill, MTA Construction Co., Ltd, have just mobilized at the project site in June 2020, last month of the reporting period of this document.

5 COMPLAINTS, ISSUES, CORRECTIVE ACTION

5.1 Information Disclosure

24. The following table gives information on any information disclosure activities undertaken. The subproject components were introduced to the public and key stakeholders during initial consultation meetings for the FS designs of all three subprojects, and then again for the DED for Kep subproject which included verbal and visual presentations of all subproject components.
25. The second series of consultative meetings for environment for the DED of the solid waste management improvements were conducted in Town/City (Sangkat Kep), Sangkat Prey Thum and Sangkat Ou Krasa. The meetings were conducted in Kep with local authorities and villagers on 22-24 October 2018. Different provincial departments (Environment, Tourism, Agriculture and Public Works & Transport) and households / villages affected by the subproject components were invited. The 2nd stakeholder consultations in Kep again revealed overall positive support for the subproject. **Error! Reference source not found.** summarizes t

he comments and concerns raised. The environmental issues and concerns identified by the consultations were similar to the issues and concerns identified by the consultations for FS designs, and similarly, are addressed by the Mitigation and Monitoring Plans (see below).

Table 9. Information Disclosure

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
DED of Solid waste management improvement in Kep (CW03)	22-24 October 2018	consultative meeting (Sangkat Kep)	<ul style="list-style-type: none"> • Current practice is villagers burn and bury their dry waste on their property • Smell is a problem from garbage trucks during collection • Provide adequate waste bins for villages • Must prevent villagers from dumping garbage along the road and near the sea • Request extension activities for local people on waste management • The service price is 10,000 Riel/month • Request low price for waste collection service and free for poor people (poor level 1 &2)
DED of Solid waste management improvement in Kep (CW03)	22-24 October 2018	consultative meeting (Sangkat Prey Thum)	<ul style="list-style-type: none"> • During raining season the common dumping of waste access road to dump site must stop • Don't pollute local environment with leachate from landfill • There are many flies from dumpsite due to marine wastes (shrimp, crab, etc...) • Want the access road to landfill to wider to be able to eventually become another road to Phnom Penh

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
			<ul style="list-style-type: none"> • Enlarge width of access road to 8m wide • Improve waste collection in the Kep city/town to prevent aesthetic garbage problems for tourists and tourism especially from waste plastic bags • Agree with the DED of landfill, and support the project • Request closed drain pipes along access road in front of houses so households can easily cross to access their houses • Dust is currently is a big problem along access road • Soil trucks that use existing borrow pit must drive slowly and be covered to prevent dust, and reduce risk of accidents • There are many flies from the dumpsite • Compensation should be provided for all lost as trees and land from access road upgrades • Adequate drainage on both side of the access road is required to prevent rainy season flooding over the road
DED of Solid waste management improvement in Kep (CW03)	22-24 October 2018	consultative meeting (Sangkat Ou Krasar)	<ul style="list-style-type: none"> • Request that garbage trucks enter villages to collect garbage, just collect along major roads. • Provide sufficient waste bins for villages

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
			<ul style="list-style-type: none"> • Don't pollute local environment with leachate from landfill • Request low price for waste collection service, and free service for poor people (poor level 1 &2) • Request training and awareness for village on proper solid waste management • Service provider for waste collection must collect waste regularly as needed • Village agrees with separation of waste at source • Must stop current practice of septic vacuum trucks dumping on the road side • Must educated and prevent villagers from throw waste to streams.
DED of Solid waste management improvement in Kep (CW03)	22 October 2018	consultative meeting with the following <ul style="list-style-type: none"> • Governor of Kep • DPWT-3 • DOT-2 • DOE-2 • DOLM-1 • Kep Municipality-1 • Dept of Land Management, Urban Planning and Construction-1 	<ul style="list-style-type: none"> • All agree with, and support detailed design of upgraded landfill and solid waste collection • Questioned next steps after landfill is full after projected 20yr lifespan • Request that width of the access road increased from 6m to 7m • Initially unsure of location at landfill where waste would separated. MRF identified and explained including MRF requirement that wet waste must

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
			<p>be separated at source before arrival at MRF</p> <ul style="list-style-type: none"> • Request a place along access road be established where newly married couples can go to go to plant a trees, and not be negatively affected by garbage trucks. • Adequate side drains are needed along access road • Open drains along road must be 1m - 2 m wide • Training is required on solid waste management and operation of landfill for Kep municipality staff, and Sangkat and village personal as per SWN sub-decree 113 • Provide traffic signage at intersection of access road and NR 33 to indicate location landfill. • Does the administration building in landfill have a medical services for employees? • Request for finished landfill to become tourist site with garden area for • Tourists to visit and relax. • Will landfill have a place for composting wet waste for production of good soil for agriculture? Or only for dumping waste into cells?

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
			<ul style="list-style-type: none"> • Must provide construction schedule to DLMUPC prior to construction of the landfill cells • Construction company must inform local community of schedule of construction of access road upgrade, and landfill
IEE of Coastal Road (CW04) and Passenger Pier on Koh Tonsay Island (CW05) in Kep Province	28 May 2020	Consultation meeting with Provincial Department of Tourism, Kep.	<p>Led the meeting by H.E Sok Sokun, undersecretary of state of Tourism Ministry.</p> <ul style="list-style-type: none"> • There are 15 participants for this meeting • All agree and support these two subprojects (Pier and Coastal Road); • The meeting just wants to consider for another pier in Angkol village for fisherfolk; • The alignment of the road is not affected to the mangrove. • The location of proposed pier is in the former pier, but it was damaged. There are filled by rock already. No mangrove and other concern marine there. • They suggested to expand the width of walkway on island.
IEE of Coastal Road (CW04) and Passenger Pier on Koh Tonsay Island (CW05) in Kep Province	29 May 2020	Public consultation with Community of Koh Tonsay	<p>In general, the following are the concerns of the community:</p> <ul style="list-style-type: none"> • Community has positive support to the project • Potential disturbance to property and business

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
			<ul style="list-style-type: none"> • Influx of workers from other places • Security of water supply • Location of contractor work camp • Transportation of materials and goods might affect tourist <p>The following were the reactions of Koh Tonsay community members during the public consultation:</p> <p>Ms. Chea Am, 76 years old</p> <ul style="list-style-type: none"> - Pier structure is not much concern, I worry to disturb tourist in my business. - The project shall inform us on the actual schedule of working hours. <p>Ms. Chun Rim, 63 years old</p> <ul style="list-style-type: none"> - My bungalow and yard of food shop will be affected by walkway. - But for environment, it not much concern because it is only walkway and pier for tourism. <p>Ms. Khem Vouchleang, 51 years old (Community chief)</p> <ul style="list-style-type: none"> - I support the project; - But, we don't have workers here, so many of workers from different area to live here in the construction shall be not allowed to disturb our

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
			<p>guests after their work at night time.</p> <ul style="list-style-type: none"> - Water is not enough due to the real condition here. A solution should be found to ensure security; - Contractor camp location shall be discussed before settling; - Vehicles for transporting goods and materials should be discussed with PIU for avoiding matter with tourists <p>Mr. Hem Sin, 56 years old</p> <ul style="list-style-type: none"> - I will agree with project; - Happy with the project, but concerned on the sea water quality.

5.2 Grievance Redress Mechanism

26. No grievance case reported in the period of December 2018- June 2020

6 CONCLUSION & RECOMMENDATION

27. Conclusion: In general, the implementation of environmental management measures during pre-construction and construction phases of CW03 Kep Landfill Improvement Project as implicated in the EMPs, IEEs are currently taken into account and assessed to be partially compliant as actions to satisfy management measures are in progress. This assessment should be noted positively such that activities/ measures to comply with environmental management obligations are mostly in progress. The Kep-Angkol Coastal Road Improvement - CW04 and Kep-Rabbit Island Passenger Pier - CW05 are still at design stage. Environmental Safeguard documents are yet to be drafted and consequently CEMP by the contractors of these packages.

28. Due to travel restrictions related to COVID-19 which affected regular proceedings of the environmental activities including long period of no participation of the IES to the PMCES team and the absence of qualified Environment and Health and Safety Officer in the Contractor Team.
29. Recommendations: Monitoring to various environmental parameters will be reported in detail in the next reporting period of SEMR.

Annex 1 Environmental Quality Monitoring Results

For Ambient Air:

#	Parameter	Unir	Standard (MoE)
1	CO	mg/m ³	20
2	NO ₂	mg/m ³	0.1
3	SO ₂	mg/m ³	0.3
4	O ₃	mg/m ³	0.5
5	TSP	mg/m ³	0.33
6	Pb	mg/m ³	0.005
7	CH ₄	mg/m ³	-
8	PM10	mg/m ³	0.05
9	PM2.5	mg/m ³	0.025

- For Noise Level:

Survey Period		Noise Level dB(A)				Remarks
		LAeq	Standard(Leq)	Lmax	Lmin	
Day	6:00 - 7:00		70			
	7:00 - 8:00					
	8:00 - 9:00					
	9:00 - 10:00					
	10:00 - 11:00					
	11:00 - 12:00					
	12:00 - 13:00					
	13:00 - 14:00					
	14:00 - 15:00					
	15:00 - 16:00					
Evening	16:00 - 17:00					
	17:00 - 18:00					
	18:00 - 19:00		65			
	19:00 - 20:00					
20:00 - 21:00						
21:00 - 22:00						
Night	22:00 - 23:00		50			
	23:00 - 00:00					
	00:00 - 1:00					
	1:00 - 2:00					
	2:00 - 3:00					
	3:00 - 4:00					
	4:00 - 5:00					
5:00 - 6:00						
24 hours Average				48.6	33.7	

- For Vibration:

Time	Survey Period	Vibration Level dB				Remarks
		Leq	Standard(Leq)	Lmax	Lmin	
Day	6:00 - 7:00		65			
	7:00 - 8:00					
	8:00 - 9:00					
	9:00 - 10:00					
	10:00 - 11:00					
	11:00 - 12:00					
	12:00 - 13:00					
	13:00 - 14:00					
	14:00 - 15:00					
	15:00 - 16:00					
	16:00 - 17:00					
Night	17:00 - 18:00		60			
	18:00 - 19:00					
	19:00 - 20:00					
	20:00 - 21:00					
	21:00 - 22:00					
	22:00 - 23:00					
	23:00 - 00:00					
	00:00 - 1:00					
	1:00 - 2:00					
	2:00 - 3:00					
	3:00 - 4:00					
4:00 - 5:00						
5:00 - 6:00						
24 hours Average						

- For Surface Water

#	Parameter	Unit	Standard for lake and reservoir
1	pH	-	6.5-8.5
2	Total Dissolved Solid (TDS)	mg/l	<1000
3	Total Suspended Solid (TSS)	mg/l	1-15
4	Dissolved Oxygen (DO)	mg/l	7.5-2.0
5	Biochemical Oxygen Demand (BOD ₅)	mg/l	<30
6	Chemical Oxygen Demand (COD)	mg/l	1-8
7	Oil and Grease	mg/l	<5.0
8	Detergent	mg/l	<5.0
9	Sulphate (SO ₄)	mg/l	<300
10	Total Nitrogen (TN)	mg/l	0.1-0.6
11	Total Phosphorus (TP)	mg/l	0.005-0.05
12	Lead (Pb)	mg/l	<0.01
13	Arsenic (AS)	mg/l	<0.01
14	(Cd)	mg/l	<0.001
15	Iron (Fe)	mg/l	<1
16	Mercury (Hg)	mg/l	<0.0005
17	Total Coliform	-	<1000

Noted: this the parameters that MoE approved on IESIA for some pond nearby the project

- For Ground water quality

#	Parameter	Unit	Standard
1	pH	-	6.5-8.5
2	Turbidity	NTU	5
3	Electrode Conductivity (EC)	NTU	500-1500
4	Total Dissolved Solid (TDS)	mg/l	800
5	Total Hardness (as CaCO ₃)	mg/l	300
6	Chloride (Cl)	mg/l	250
7	Fluoride (F)	mg/l	1.5
8	Nitrate (NO ₃)	mg/l	50
9	Sulfate (SO ₄)	mg/l	250
10	Iron (Fe)	mg/l	0.3
11	Arsenic (As)	mg/l	0.05
12	Mercury (Hg)	mg/l	0.001
13	Chromium (Cr)	mg/l	0.05
14	Manganese (Mn)	mg/l	0.1
15	Aluminum (Al)	mg/l	0.2
16	Benzene (C ₆ H ₆)	mg/l	0.01
17	Dichloromethane (CH ₂ Cl ₂)	mg/l	-
18	Cadmium (Cd)	mg/l	0.003
19	Total Coliform	MPN/100ml	0
20	E-coli	MPN/100ml	0

Noted: this the parameters that MoE approved on IESIA for well nearby the project