

Environmental Assessment and Review Framework

March 2014

Cambodia: Greater Mekong Subregion Biodiversity
Conservation Corridors Project
– Additional Financing from Pilot Program for
Climate Resilience, Strategic Climate Fund

Prepared by the Ministry of Environment and the Ministry of Agriculture, Forestry and Fisheries
for the Asian Development Bank.

CURRENCY EQUIVALENTS

(as of 18 March 2014)

Currency unit	–	Cambodian riel (KHR)
KHR1.00	=	\$0.00025
\$1.00	=	KHR4,003.71

ABBREVIATIONS

ADB	Asian Development Bank
BCC	Biodiversity Conservation Corridors
BMP	Biodiversity Management Plan
CARM	ADB Cambodia Resident Mission
CBNRM	Community-Based Natural Resource Management
CIF	Climate Investment Funds
CNMC	Cambodia National Mekong Committee
CPCU	Central Project Coordinating Units
CSIRO	Center for Australian Weather and Climate Research
DFR	Draft final report
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GMS	Greater Mekong Subregion
FA	Forestry Administration
FS	Feasibility Study
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
GhG	Greenhouse Gas
GIS	Geographic Information System
GPP	Grievance Point Person
HH	Household
IA	Implementing Agency
IEE	Initial Environmental Examination
MAFF	Ministry of Agriculture, Forestry and Fisheries
MOE	Ministry of Environment
MPF	Mondulkiri Protected Forest
NCDD	National Committee for Sub-national Democratic Development
NGO	Non-government Organization
NPA	National Protected Area
NSDP	National Strategic Development Plan
NTFP	Non-timber Forest Products
O&M	Operation and Maintenance
PA	Protected Area
PAM	Project Administration Manual
PF	Protection Forest
PPCR	Pilot Program for Climate Resilience
PPMU	Provincial Project Management Unit
RGC	Royal Government of Cambodia
SRI	System of Rice Intensification
ToR	Terms of Reference
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund for Nature

NOTE

In this report, "\$" refers to US dollars.

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I. INTRODUCTION

A. The Original Biodiversity Conservation Corridors Project

1. The Greater Mekong Subregion (GMS) Biodiversity Conservation Corridors Project (BCC Project) covers three countries: Cambodia, Lao People's Democratic Republic (Lao PDR) and Viet Nam. The long-term impact of the Project is to achieve climate resilient sustainable forest ecosystems benefiting local livelihoods. The Project outcome is sustainably managed biodiversity corridors. The Project has four outputs: (i) institutions and communities strengthened for biodiversity corridor management; (ii) biodiversity corridors restored, protected and maintained; (iii) livelihood improvement and small-scale infrastructure support in villages; and (iv) project management and support services provided.

2. A Grant Agreement of \$19.0 million was signed between the Government of Cambodia (RGC) and ADB on 27 January 2011 to implement the GMS BCC Project in Cambodia over an eight year period (2011–2019) to establish sustainably managed biodiversity corridors in the GMS BCC Project provinces (Monduliri and Koh Kong). The captioned Grant became effective on 27 April 2011. The Project covers 80 villages in 10 districts (covering 22 communes) across Monduliri and Koh Kong provinces in Cambodia.

3. **Implementation arrangements.** The Ministry of Environment (MOE) and the Ministry of Agriculture, Forestry and Fisheries (MAFF) in Cambodia, having distinct implementation mandates over protected forest and protected areas in the biodiversity corridor landscapes of the BCC Project are the executing agencies (EAs). MOE and MAFF have delegated responsibility for day to day implementation to the General Department of Administration of Nature Conservation and Protection (GDANCP), and Forestry Administration (FA), respectively. A Central Project Coordination Unit (CPCU) has been established in each EA and is led by a National Project coordinator.

4. In the participating provinces of Koh Kong and Monduliri, two Provincial Project Management Units (PPMUs) have been established and are the implementing agencies. The PPMUs consists of three teams: the provincial FA Cantonment, provincial Protected Area (PA), and PPMU director's team. A PPMU director was assigned by the Provincial Governor to lead the planning of the project activities, including development and approval of the annual work plan and budget. Implementation rests within the mandates of the FA Cantonment for activities in and around protected forests, and provincial PA for activities in and around protected areas.

B. The Pilot Program for Climate Resilience (PPCR) Additional Cofinancing

5. The additional cofinancing is estimated at \$7.4 million, funded under the Pilot Program for Climate Resilience (PPCR). The additional cofinancing will complement BCC Project efforts to improve biodiversity conservation within the corridor and connectivity between national protected areas (NPAs) and other protection and production forest areas in the surrounding area.

6. The additional cofinancing from the PPCR is intended to: (i) support investment in infrastructure for future climate change scenarios that would support the original investments of the BCC Project; (ii) increase the number of subprojects under the BCC Project due to the future climate changes; or (iii) change the specification/design of original BCC subprojects due to the future climate changes. Geographically, the additional financing will support a bio-

engineered sea barrier in one additional commune of Kandal, Koh Kong, due to its vulnerability to saline intrusion, making the total number of the Project communes 23.

PPCR financing will fund subprojects in each of four proposed models: (i) rainwater harvesting ponds with climate resilient high value crop productivity; (ii) climate resilient irrigation and system of rice intensification (SRI) techniques; (iii) bioengineered sea barriers reducing salt water intrusion; and (iv) ecosystem-based adaptation in two catchments in Mondulkiri.

7. The BCC Project was classified as category B for environment in accordance with the ADB Safeguard Policy Statement (SPS) 2009. The Project has been designed to take environmental considerations into account for subprojects when they are being formulated. An Environmental Assessment and Review Framework (EARF) and an Initial Environment Examination (IEE) were prepared for the regional GMS BCC Project and an EARF and an IEE were also prepared for the BCC Project in Cambodia.

8. The activities under the PPCR additional cofinancing will trigger category B for environment, rendering the overall BCC Project including PPCR additional cofinancing category B for environment. In accordance with ADB SPS 2009, four IEEs have been conducted for four subprojects examined during the PPCR PPTA and are included in the feasibility study in order to, together with this updated EARF, detail mitigation measures to be incorporated in subproject selection, design, and implementation. For the fifth subproject of flood management through catchment planning framework, the planning exercise will result in investment plans, for which this EARF will be applied to ensure environmental safeguards.

9. The BCC Project takes a sector-like approach to many of its activities. Within the overall Project context, a number of the specific activities and locations will be determined during project implementation; these activities are referred to as subprojects. This approach requires the development of a mechanism for review and assessment of the environmental impacts of the subprojects prior to their implementation to ensure compliance with the ADB SPS 2009, as well as those of the RGC.

10. This updated EARF guides the screening of subprojects, sets out implementation arrangements in relation to environmental management and monitoring and defines environmental assessment guidelines for the overall Project including the ongoing BCC Project and the PPCR additional financing.

II. OVERVIEW OF TYPE OF SUBPROJECTS TO BE ASSESSED

A. The Original BCC Project

11. The original BCC Project activities that have been identified as potentially having a negative impact on the environment can be grouped into two categories based on the method in which they are planned and implemented. They include forestry activities for landscape connectivity,¹ as well as livelihood improvement activities, investments in small-scale infrastructure, and the provision of seed capital to commune development funds (CDF).² The forestry and livelihoods improvement activities and the small-scale infrastructure investments are undertaken by the EAs through the Forestry Administration (FA) cantonment under FA and

¹ Contributing to Output 2: Biodiversity corridors are restored, ecosystem services are protected and sustainably managed by local resource managers.

² Contributing to Output 3: Livelihoods are improved and small-scale infrastructure is supported.

the provincial Protected Area (PA) under MOE. Activities planning will be coordinated by the PPMU Director. The CDF activities are planned and implemented by the participating communes.

12. The EARF applies to all project activities that have a potential for negative impact on the environment. These activities will be identified based on the work plans that will be prepared by the Project at all levels.

B. The PPCR Additional Cofinancing

13. The PPCR component intends to undertake small-scale infrastructure works and community-based forestry and will be included in Output 3 of the original BCC Project, which potentially will have adverse impacts on the environment. PPCR subproject activities will be screened on a site-specific basis to exclude those that may cause significant damage and provide appropriate mitigation measures. In this context it is anticipated that the activities funded by the PPCR additional financing will not generate significant adverse environmental impacts; although some of the proposed PPCR subprojects may generate localised, manageable negative environmental impacts.

14. The four types of subprojects to be considered for PPCR additional cofinancing and corresponding environmental assessment needs are diverse. Site-specific IEEs of four subprojects were conducted as part of feasibility analyses during the PPCR additional financing preparation; these IEEs varied substantially in theme and scope and were used to support determination of environmental categories and environmental assessment requirements for other sites within each subproject-type. Environmental assessment requirements for and preliminary categorization of each subproject-type are described below.

15. **Climate Resilient Irrigation and System of Rice Intensification (SRI) Techniques.** A site IEE including an environmental management plan and an environmental monitoring plan (EMPs) was undertaken of proposed rehabilitation of existing irrigation and associated reservoir facilities at a village in the regulated use zone of a protected forest and adjacent to a wildlife sanctuary. The subproject was initially screened as Category B, and retained that category after environmental assessment; additional subprojects in this PPCR component should be viewed as Category B unless deemed otherwise during initial screening.

16. **Rainwater Harvesting Ponds with Climate Resilient High Value Crop Productivity.** A site IEE was undertaken of proposed water supply ponds and home gardens in a village located in a wildlife sanctuary. This subproject was initially screened as Category C given its small size, but noting its location in a wildlife sanctuary as a precautionary measure an environmental assessment (following IEE protocols) was conducted. Findings support categorization as Category C; crop-related conflict with threatened wildlife is possible at that and similar subproject sites but can be readily managed with non-lethal measures to deter wildlife. Screening of similar subproject sites should briefly assess potential for conflict with threatened wildlife in the area and if needed specify village-specific control measures. IEE for each subproject likely will not be necessary for most or all, assuming Category C designation is confirmed during screening; documentation of environmental implications as part of the screening process should be adequate.

17. **Ecosystem-based adaptation in two catchments in Mondulkiri.** Operational details will be developed in a Forest Management Plan (FMP) and annual harvest plans which will be subject to application of best-practices in sustainable use of forest resources 'Codes of

Practice' such as the Cambodia Code of Practice for Forest Harvesting (which was prepared by an international team following best practices in FAO and other codes available at that the time). FMP approval by RGC is subject to conduct of an Environmental and Social Impact Assessment. Preliminary assessment following IEE protocols of indicative activities that are anticipated for the proposed subproject site was undertaken; the findings suggest low risk to the environment and initial categorisation as Category B.

18. **Bioengineered Sea Barriers Reducing Salt Water Intrusion.** The subproject selected for feasibility study is located in a river-mouth mangrove area situated in a national park; the mangrove forest extends upriver into the national park and contains threatened wildlife species. This subproject site was initially screened as Category B and, accordingly, a site IEE was undertaken. The IEE confirmed need for site-specific mitigation and the Category B designation. Other sites considered within this subproject component will need screening to exclude category A subprojects – those that may cause significant environmental adverse impacts and require an environmental impact assessment.

III. COUNTRY'S ENVIRONMENTAL ASSESSMENT AND REVIEW PROCEDURES

19. The Law on Environmental Protection and Natural Resource Management (LEPNRM)³ of 24 December 1996 regulates the protection of the environment in Cambodia. RGC Sub-Decree 72.ANRK.BK of 11 August 1999 provides a screening list for determining which projects are subject to the preparation of an initial or full Environmental Impact Assessment (IEIA and EIA respectively) according to the modalities and procedures described in the Sub-Decree. Requirements for environmental assessment are also identified in Forestry Law 31 August 2002 and Natural Protected Areas Law 04 January 2008.

20. At present, none of the envisaged Project activities is expected to be of a nature, or to exceed any of the thresholds, listed in the Annex of the Sub-Decree that would trigger the requirement to prepare an IEIA or EIA. If an IEIA or EIA is required for a future subproject, the Khmer version of the IEE as acceptable to ADB will be used as the environmental safeguard document to be submitted to the Provincial Department of Environment for approval.

IV. SPECIFIC PROCEDURES TO BE USED FOR SUBPROJECTS UNDER THE BCC PROJECT INCLUDING THE PPCR ADDITIONAL COFINANCING

21. Overall, the BCC Project including the PPCR component will have a positive impact on the environment through its contribution to conservation of biodiversity. The potential for negative environmental impacts is overall limited, localised and most such impacts are reversible and can be mitigated. Yet, given the location of the Project inside and in the immediate vicinity of protected areas, there is a need to ensure that only activities that have a minimal negative impact on the environment are selected, and that the requirement for impact assessment, monitoring and management are met in a cost-effective way. Similarly, compliance with ADB's Safeguard Policy Statement (SPS) 2009 and with the national LEPNRM must be achieved in an efficient and pragmatic manner, as reflected in the present procedures to be used for subprojects under the Project.

³ No. NS/RKM/1296/36

A. Responsibilities and Authorities

22. MOE and MAFF as the Executing Agencies of the Project are responsible for compliance with the ADB SPS 2009 and RGC environmental safeguarding requirements. The Executing Agencies are the owners of the Project. The CPCUs under the EAs will engage an international and a national environmental safeguard specialist to assist them in the environmental safeguards due diligence at the subproject design stage, development of all environmental safeguard documents, and submission of all environmental safeguard documentation to the relevant competent authorities and ADB for approval.

23. At the provincial level, FA cantonment and provincial PA, with the assistance from the national environmental safeguard specialist, are responsible for the implementation of the environmental management plans and environmental monitoring plans of the subprojects in accordance with their respective mandates over protected forests and protected areas, respectively. Villages, communes and district levels will be involved in project implementation.

B. Environmental Criteria of Subproject Selection

24. During the inception phase of project implementation, a set of environmental safeguarding guidelines will be developed by the international environmental safeguards specialist in consultation with the EA. The guidelines are to be applied to all subprojects. These guidelines will ensure that the subprojects are designed in a way that does not alter the environmental classification of the Project in accordance with ADB's environmental safeguarding policy and procedures.⁴ Subprojects that would change the environmental classification of the Project to a category A project will not be eligible. Subprojects that fall into the list of prohibited investment activities list (Appendix 2) will not be eligible. The guidelines will list specific requirements in terms of the nature, characteristics, location, size, construction, and operation of potential subprojects.

25. The environmental safeguarding guidelines will be incorporated into the CDF operating regulations. The guidelines will also include an exhaustive list of permitted livelihoods improvement and small-scale infrastructure activities to be implemented by the Project. The guidelines will provide specific directions for interaction with locations of religious or cultural importance.

C. Procedures for Environmental Assessment of Subprojects

26. The Project implementation will be based on annual work plans. In addition, the CDF will prepare investment plans for the seed money they receive from the Project. These two plans with details of the subprojects are the basis for the environmental assessment of the subprojects.

27. **Screening.** The Project work plans will be prepared using the environmental safeguarding guidelines. In addition, the Project will prepare a screening checklist based on the relevant ADB Rapid Environmental Assessment (REA) checklists⁵ (Appendix 1) and the screening list of the RGC Sub-Decree 72.ANRK.BK. This screening checklist will be completed by the FA cantonment or provincial PA safeguard officer for their respective subprojects, and by the CDF managers for their subprojects, with assistance by the national environmental

⁴ ADB. 2009. *Safeguard Policy Statement*. Manila; and ADB. 2003. *Environmental Assessment Guidelines*. Manila.

⁵ ADB. 2003. *Environmental Assessment Guidelines*. Manila. pp. 109-143.

safeguards specialist (NESS). The completed checklists will be used together with the work plans to carry out a formal screening of the subprojects for environmental impact, both according to ADB SPS 2009 and according to those of the RGC.

28. With respect to the outcome of the screening of the subprojects according to ADB SPS 2009, the subprojects will be categorised as one of the three environmental categories for ADB projects as follows:

- (i) Category A: subproject is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works.
- (ii) Category B: subproject is likely to have potential adverse environmental impacts that are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects.
- (iii) Category C: subproject is likely to have minimal or no adverse environmental impacts.

29. Subprojects that are categorised as belonging to category A would alter the environmental categorisation of the entire Project and are therefore inadmissible. In such case, the work plan will be reviewed to remove the subproject or modify it so that it no longer qualifies as a category A subproject.

30. In the case of category B subprojects, an Initial Environmental Examination (IEE) including an environmental management plan and environmental monitoring plan (EMP) needs to be prepared. Suggested outline for an IEE in accordance with ADB SPS 2009 is in Appendix 4. The NESS will provide guidance to the relevant FA cantonment, provincial PA, or CDF managers involved for the preparation of the IEE and EMP.

31. The NESS will assist the relevant FA cantonment and Provincial PA in the preparation and submission of the required documentation including the categorization form (Appendix 3), the applicable REA checklist and the IEE for category B subprojects to their respective CPCU, who in turn will submit all documentation to ADB approval. In the case of category C subprojects, ADB is notified of the screening findings including the completed REA checklist and the categorisation of the subproject. No disbursement of the subprojects can proceed until an approval of the IEE has been reached from ADB. The approved EMP will be attached to the bid documents and the contract with the contractors.

32. With respect to the outcome of the screening of the subprojects according to RGC standards, subprojects may be required to prepare an IEIA, which may further require a full EIA. In the case where an IEIA is required, the NESS will provide guidance and support to the FA cantonment, provincial PA or the CDF managers to arrange and control quality of the translation of the IEE into Khmer language to submit to the relevant Department of Environment and facilitate the approval process.

33. **Monitoring and reporting** will be carried out in accordance with the environmental monitoring plan under the IEE for each category B subproject. The NESS will assist the relevant FA cantonment and provincial PA in preparing environmental safeguards monitoring report, as part of the quarterly project progress reports. The NESS will assist the FA cantonment, Provincial PA and CPCUs to track the status of screening, categorization and environmental assessment and review process for all subprojects. Table 1 provides a sample subproject environmental assessment tracking matrix.

Table 1: Tracking Matrix for Subproject Environmental Assessments (to be completed and updated on an ongoing basis by the FA cantonment or provincial PA Environment Officer with assistance by the NESS)

Province	District	Subproject	Sector	Subproject Environmental Assessment (EA) Status					Comments
				Category (A, B or C)	EA Completed ? Date?	Categorization and assessment - CPCU submitted? Date?	Screening and assessment – DOE approved?	Categorization and assessment - ADB Approved?	
Koh Kong		Subproject 1	<i>e.g.: Sanitation</i>	<i>e.g.: B</i>	<i>e.g.: Yes, 15/01/15</i>	<i>e.g.: Yes, 22/01/15</i>	<i>e.g.: Pending</i>	<i>e.g.: 27/01/15</i>	
		Subproject 2							
		Etc..							
Mondulkiri		Subproject 1	<i>e.g.: water supply</i>	<i>e.g.: B</i>	<i>e.g.: Yes, 15/01/15</i>	<i>e.g.: Yes, 22/01/15</i>		<i>e.g.: Pending</i>	
		Subproject 2							
		Etc..							

34. The Project will determine a process for public consultation and information disclosure, not only on the findings of the environmental safeguarding and review activities but also on the methods used. Public comments will be duly recorded and they will be forwarded to the appropriate Project implementation partners for response. The relevant FA cantonment and provincial PA with assistance from the NESS will keep a detailed record of the public consultation activities and ensure that the public has access to public documents related to the environmental safeguarding process.

V. CONSULTATION DISCLOSURE AND GRIEVANCE REDRESS MECHANISM

A. Consultation and Disclosure Mechanism

35. ADB's SPS 2009 requires projects to carry out meaningful public consultations on an ongoing basis. Consultations will be undertaken during the sub project identification and detailed engineering design. Additional consultations may be held as necessary. The subproject design, potential environmental impacts and proposed mitigation measures will be discussed with the community. The papers, documents (including minutes of meeting, list of attendants, statement on project (agreement or disagreement, and sample questionnaires) will be recorded. All relevant views raised during the consultation will be incorporated in the environmental impact assessments.

B. Grievance Redress Mechanism

36. A Project grievance can be defined as an actual or perceived Project-related problem that gives ground for complaint by an affected person (AP). As a general policy the BCC Project will work proactively toward preventing grievances through the implementation of impact mitigation measures and community liaison activities that anticipate and address potential issues before they become grievances. Nonetheless, during construction and operation it is possible that unanticipated impacts may occur if the mitigation measures are not properly implemented, or unforeseen issues occur. In order to address complaints if or when they arise, a Project grievance redress mechanism (GRM) has been developed in accordance with ADB requirements and RGC practices. A GRM is a systematic process for receiving, evaluating and addressing AP's Project-related grievances.

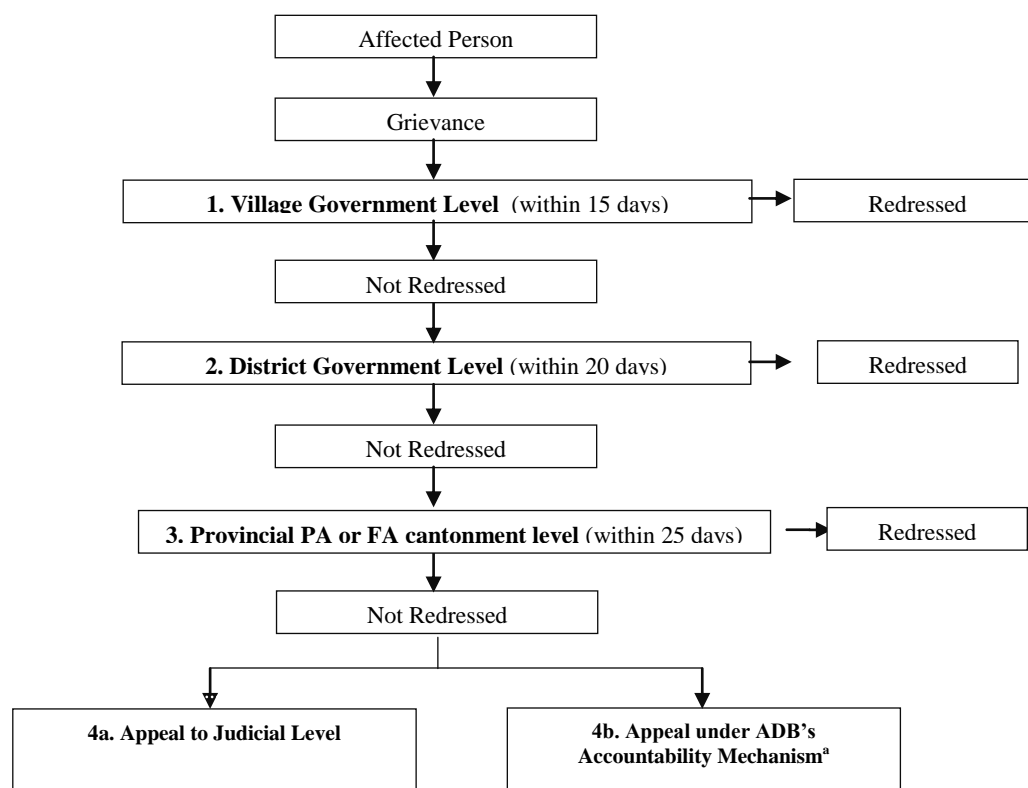
37. The FA cantonment in Koh Kong and Mondulhiri, and the PA in Koh Kong will make the public aware of the GRM through public awareness campaigns, training and capacity building. It is suggested that each FA cantonment and the Provincial PA will nominate their safeguard officer to be a Grievance Point Person (GPP) or other similar title for environment-related issues. The safeguard officers will be trained by the NESS on how to receive, record and respond to complaints on environment-related matters. Any person who has complaints regarding the environmental performance of the subproject during pre-construction, construction and operation phases shall have access to the GRM described in the subsequent section. The GPP will determine if the complaint is eligible and will work with the contractor to ensure all eligible concerns are addressed.

38. Any person affected by the BCC Project will be able to submit a grievance if they believe a subproject activity is having a detrimental impact on the community, the environment, or on their quality of life. The GRM will be made public throughout the public consultation process, and will be maintained during operation and maintenance.

39. **Grievance Resolution Process.** The GRM consists of 4 escalating steps, and is presented in Figure 2. Each step is explained below.

- (i) **Step 1: Village Level** Grievance is submitted by AP to the relevant Village Head. The Village Head forwards the grievance to the relevant implementing agency (FA cantonment or provincial PA). The FA cantonment or provincial PA GPP records it in writing, investigates the validity of the complaint and potential solutions with the relevant District Team, and informs the relevant CPCU (FA or MOE). The Village Head also investigates the complaint and then invites the AP and District Team to a meeting to attempt to resolve the grievance.
- (ii) **Step 2: District Level** The District Government department investigates the complaint and then invites the AP, FA cantonment or Provincial PA GPP, and the District team to a meeting to attempt to resolve the grievance.
- (iii) **Step 3: Provincial Level** The Provincial Government department investigates the complaint and then invites the AP, National Project Coordinator and FA cantonment or Provincial PA GPP to a meeting to attempt to resolve the grievance.
- (iv) **Step 4: Judicial Level** If the grievance remains unresolved the AP may advance the grievance to the judicial level for final resolution and settlement. All court fees will be borne by the Project. The AP may also choose to approach ADB under the Accountability Mechanism.

Figure 2: Grievance Redress Mechanism



^a The ADB Accountability Mechanism provides a forum where people adversely affected by ADB-assisted projects can voice and seek solutions to their problems and report alleged noncompliance of ADB's operational policies and procedures. It consists of two separate but complementary functions: consultation phase and compliance review phase. For more information see: <http://beta.adb.org/site/accountability-mechanism/main>

40. **Grievance Follow-up.** The relevant FA cantonment or provincial PA GPP or CPCU coordinators may contact the AP at a later stage to ensure that the activities continue to pose no further problems. If there is a remaining problem, the issue will be treated as a new grievance and re-enter the process.

41. **Confidentiality and Anonymity.** An AP submitting a grievance may wish to raise a concern in confidence. If the complainant asks the relevant FA cantonment, provincial PA or the CPCU to protect his or her identity, it should not be disclosed without consent.

42. The GPP will ensure that:

- (i) the grievance redress mechanism and the contact details of the GPPs are publicly disclosed, and posted in the offices of the affected communes and in strategic places of the subproject's area of influence;
- (ii) the grievance redress mechanism is accessible to all affected communities;
- (iii) the public, especially the residents and passers-by in the vicinities of influence of the subproject, are aware of their rights to access, and shall have access to the mechanism free of administrative and legal charges; and
- (iv) a registry of grievances received is maintained for reporting to ADB and higher Government authorities on associated follow-up, resolution or non-resolution of issues.

VI. STAFFING REQUIREMENTS AND BUDGET

43. The CPCUs will acquire the services of an International Environmental Safeguard Specialist (IESS) for three person-months. The IESS will update this EARF, set up the environmental safeguarding guidelines, develop REA checklists for all relevant project activities, complete a sample REA checklist for each kind of activities, and conduct sample IEE of category B subprojects, preferably of different types. The IESS will also train the national environmental safeguard specialist (NESS), the safeguard officers in the FA cantonment and provincial PA and relevant Project staff on environmental safeguard matters. The TOR of the IESS can be found in Appendix 5.

44. The CPCUs will also acquire the services of a NESS for the duration of the Project. The NESS will assist the Executing Agency and the relevant FA cantonment and Provincial PA in ensuring that all the environmental safeguarding requirements of the Project during its implementation are met. The NESS will help the Executing Agencies, the FA cantonment and Provincial PA coordinate and facilitate all related monitoring and reporting activities. The TOR of the NESS can be found in Appendix 6.

45. In addition, the CPCUs will engage an independent environmental safeguard monitoring entity to conduct surveys and produce environmental safeguards monitoring reports for submission to ADB. These reports will be disclosed on ADB website. The TOR for the independent environmental safeguard monitoring entity can be found in Appendix 7.

46. Each of the FA cantonment and Provincial PA in Koh Kong and Mondulkiri will assign a safeguard officer to ensure implementation of the environmental management plans of the subprojects, with assistance from the environmental safeguard specialists. The TOR of the environment officer is in Appendix 8.

47. Implementing the environmental assessment and review procedures will require the following staff (Environmental monitoring and reporting will be carried out throughout the

duration of the Project. Environmental monitoring will consist of systematic compliance inspections by the Provincial PA or FA cantonment environment officer, with assistance from the NESS, to ensure that the subproject mitigation measures are being implemented effectively. Under the original BCC project whereby subprojects are to be identified, category B subprojects will be inspected on a bimonthly basis during construction and a six-monthly basis during operation. One inspection during construction and yearly inspection will be required for category C subprojects. For subprojects identified under the PPCR additional cofinancing, the monitoring schedules are detailed in the subproject IEEs. Some subprojects will be inspected jointly by the ADB, CPCUs and FA cantonment or Provincial PA upon request during ADB review missions, especially for subprojects for which monitoring has identified persistent problems, if any. A sample subproject compliance inspection form is presented in Appendix 9.

48. The FA cantonment and Provincial PA Environment Officers, with assistance from NESS, will report the results of the monitoring on a quarterly basis to the relevant CPCUs (FA or MOE), including identifying any non-compliance, proposing actions and a timeline for rectifying deficiencies, following up on the status of previous non-compliances, results of the subproject environmental assessment process and subproject environmental monitoring. This report will be integrated into the overall Project's progress report to be submitted to ADB on a quarterly basis. Appendix 10 presents a sample quarterly report outline.

49. The supplementary allowance and travel cost of the environment officers in the FA cantonment and Provincial PA is included in the project management budget of the executing agencies and implementing agencies and is not reflected in Table 2 below.

Table 2: Staff Requirement and Budget Estimate for Environmental Safeguarding Activities

Items by input	Unit	Number of units
International Environmental Safeguard Specialist	person-month	3
National Environmental Safeguard specialist	person-month	24 (BCC) and 12 (PPCR)
Independent environmental safeguard monitoring entity	Time-based	1

B. Environmental Management and Monitoring

50. Environmental monitoring and reporting will be carried out throughout the duration of the Project. Environmental monitoring will consist of systematic compliance inspections by the Provincial PA or FA cantonment environment officer, with assistance from the NESS, to ensure that the subproject mitigation measures are being implemented effectively. Under the original BCC project whereby subprojects are to be identified, category B subprojects will be inspected on a bimonthly basis during construction and a six-monthly basis during operation. One inspection during construction and yearly inspection will be required for category C subprojects. For subprojects identified under the PPCR additional cofinancing, the monitoring schedules are detailed in the subproject IEEs. Some subprojects will be inspected jointly by the ADB, CPCUs and FA cantonment or Provincial PA upon request during ADB review missions, especially for subprojects for which monitoring has identified persistent problems, if any. A sample subproject compliance inspection form is presented in Appendix 9.

51. The FA cantonment and Provincial PA Environment Officers, with assistance from NESS, will report the results of the monitoring on a quarterly basis to the relevant CPCUs (FA or MOE), including identifying any non-compliance, proposing actions and a timeline for rectifying deficiencies, following up on the status of previous non-compliances, results of the subproject environmental assessment process and subproject environmental monitoring. This report will be integrated into the overall Project's progress report to be submitted to ADB on a quarterly basis. Appendix 10 presents a sample quarterly report outline.

APPENDIX 1: BCC Project Rapid Environmental Assessment Checklists

- Agro-Industrial
- Buildings
- Forestry
- Irrigation
- Sanitation
- Water Supply

Additional checklists may be added if required.

BCC Project Rapid Environmental Assessment (REA) Checklist

Agro-Industrial
Instructions:

- ☐ This checklist is to be prepared to support the environmental classification of subprojects proposed under the Cambodia Biodiversity Conservation Corridors Project (BCC Project).
- ☐ This checklist is to be prepared by the relevant Project Provincial Project Office (PPO) with assistance from the National Environmental Safeguards Specialist (NESS).
- ☐ It is to be attached to the BCC Project subproject environmental categorization form that is to be prepared by the NESS. The first categorization of a subproject within a sector will require prior approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the National Project Management Office (NPMO), and all subsequent subproject categorizations in that sector may be approved by the BCC Project Director.
- ☐ Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Subproject Title: _____

Province/District/Village: _____ **Date:** _____

Provincial Project Office: _____

ADB SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Bay	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ ecological disturbances arising from the establishment of a plant or facility complex in or near sensitive habitats?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ eventual degradation of water bodies due to discharge of wastes and other effluents from plant or facility complex?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ serious contamination of soil and groundwater?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ aggravation of solid waste problems in the area?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ public health risks from discharge of wastes and poor air quality; noise and foul odor from plant emissions?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ short-term construction impacts (e.g. soil erosion, deterioration of water and air quality, noise and vibration from construction equipment?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts arising from the influx of construction laborers from other areas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental degradation (e.g. erosion, soil and water contamination, loss of soil fertility, disruption of wildlife habitat) from intensification of agricultural land use to supply raw materials for plant operation; and modification of natural species diversity as a result of the transformation to monoculture practices?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ water pollution from discharge of liquid effluents?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ air pollution from all plant operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ gaseous and odor emissions to the atmosphere from processing operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ accidental release of potentially hazardous solvents, acidic and alkaline materials?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ uncontrolled in-migration with opening of roads to forest area and overloading of social infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ occupational health hazards due to fugitive dust, materials handling, noise, or other process operations?	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ disruption of transit patterns, creation of noise and congestion, and pedestrian hazards aggravated by heavy trucks?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ disease transmission from inadequate waste disposal?	<input type="checkbox"/>	<input type="checkbox"/>	

GOL screening as per Decision No. 697/PMO.WREA:

Type of Investment Project ¹	Category 1 Threshold (IEE Required)	Category 2 Threshold (EIA Required)	IEE or EIA Required?
I. Development Projects: energy sector			
Hydropower plants	<15 MW or water capacity <200,000,000 m ³ dam area <1,500 ha	>15 MW or water capacity >200,000,000 m ³ dam area >1,500 ha	
Natural gas power plants	5-50 MW	>50 MW	
High voltage transmission line ≥ 230 kV	≤ 50 km	>50 km	
High voltage transmission line < 230 kV	All	If TL passes through a forest conservation area or community	
II. Investment Projects: agriculture and forestry sector			
Industrial tree plantations	20-300 ha	>300 ha	
Industrial crop plantations	20-500 ha	>500 ha	
Irrigation project	100-2000 ha	>2000 ha	
Animal husbandry: cow, buffalo, horse, other	≥ 1000 animals		
Animal husbandry: pigs	≥ 200 pigs		
Aquaculture ponds	≥ 10 ha		
Freshwater net aquaculture	≥ 300 m ²		
III. Investment Projects: industrial processing sector			
Chemicals production plants		All	
Non-metallic mineral production plants		All	
Wood, rattan, straw and other processing factories	All		
Potable water factory	All		
IV. Investment Projects: infrastructure and services sector			
Industrial zone construction and Development	-	All	
Telecommunications network construction	All		
Sewer drainage system	All		
Waste water treatment plant (city, hospital and industrial processing plants)		All	
New roads through forestry zones (conservation, protection and production forests) and biodiversity zones		All	
New national, district, rural ² and special roads		All	
National, district, rural and special roads improvement and rehabilitation	All		
Hospitals	≤ 100 beds	≥100 beds	
Tourism developments in National Parks		All	
Community waste disposal areas	≤ 50 ha	50 ha≥	
Hazardous materials waste disposal areas		All	
Industrial hazardous materials waste disposal areas		All	
V. Investment Projects: minerals/ore sector			
Minerals, mining projects (non-chemical)		All	
Minerals, mining projects (using chemicals)		All	
Oil and gas drilling projects		All	

Rapid Environmental Assessment (REA) Checklist**BUILDINGS****Instructions:**

- ☐ This checklist is to be prepared to support the environmental classification of subprojects proposed under the Cambodia Biodiversity Conservation Corridors Project (the Project).
- ☐ This checklist is to be prepared by the Project's National Environmental Safeguards Specialist (NESS).
- ☐ It is to be attached to the subproject environmental categorization form that is to be prepared by the NESS. The first categorization of a subproject within a sector will require prior approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the Project's National Project Management Office (NPMO), and all subsequent subproject categorizations in that sector may be approved by the Project Director.
- ☐ Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Subproject Title: _____

Province/District/Village: _____ **Date:** _____

Provincial Project Office: _____

ADB SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the project area adjacent to or within any of the following areas:			
▪ Underground utilities	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ Encroachment on historical/cultural areas?	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ Encroachment on precious ecology (e.g. sensitive or protected areas)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Accident risks associated with increased vehicular traffic, leading to loss of life?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Increased noise and air pollution resulting from increased traffic volume?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Occupational and community health and safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Consumption or production of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Generation of dust in sensitive areas during construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Requirements for disposal of fill, excavation, and/or spoil materials?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Noise and vibration due to blasting and other civil works?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Social and/or health impacts from worker camps?			
▪ Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Human health risks caused by fire, electric shock, or failure of the buildings safety features during operation?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Human health and environmental risks caused by management and disposal of waste?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**FORESTRY****Instructions:**

- ☐ This checklist is to be prepared to support the environmental classification of subprojects proposed under the Cambodia Biodiversity Conservation Corridors Project (the Project).
- ☐ This checklist is to be prepared by the Project's National Environmental Safeguards Specialist (NESS).
- ☐ It is to be attached to the subproject environmental categorization form that is to be prepared by the NESS. The first categorization of a subproject within a sector will require prior approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the Project's National Project Management Office (NPMO), and all subsequent subproject categorizations in that sector may be approved by the Project Director.
- ☐ Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Subproject Title: _____**Province/District/Village:** _____ **Date:** _____**Provincial Project Office:** _____

ADB SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			
▪ increase in soil erosion and siltation?	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ increase in peak and flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ loss of downstream beneficial uses (water supply or fisheries)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of ecological and recreational opportunities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of beneficial uses of traditional forests?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ any loss of precious ecology?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ possible conflicts with established management policies?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ loss of downstream ecological and economic functions due to any construction of social infrastructure (e.g., road, training or information center, office or housing)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ displacement of people or reduce their access to forest resources?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ uncontrolled in-migration with opening of roads to forest area and overloading of social infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ unnecessary loss of ecological value and decreased biodiversity by replacement of natural forest with plantation with limited number of species?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ technology or land use modification that may change present social and economic activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ ecological problems due to land clearance prior to reforestation (e.g., soil erosion, disruption of hydrological cycle, loss of nutrients, decline in soil fertility)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ other ecological problems (e.g., pollution of water bodies from fertilizers, pesticides, and herbicides used in the plantation)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social problems and conflicts related to land tenure and resource use rights?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**IRRIGATION****Instructions:**

- ☐ This checklist is to be prepared to support the environmental classification of subprojects proposed under the Cambodia Biodiversity Conservation Corridors Project (the Project).
- ☐ This checklist is to be prepared by the Project's National Environmental Safeguards Specialist (NESS).
- ☐ It is to be attached to the subproject environmental categorization form that is to be prepared by the NESS. The first categorization of a subproject within a sector will require prior approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the Project's National Project Management Office (NPMO), and all subsequent subproject categorizations in that sector may be approved by the Project Director.
- ☐ Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Subproject Title: _____

Province/District/Village: _____ **Date:** _____

Provincial Project Office: _____

ADB SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Mangrove	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ conflicts in water supply rights and related social conflicts?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impediments to movements of people and animals?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Insufficient drainage leading to salinity intrusion?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ over pumping of groundwater, leading to salinization and ground subsidence?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ potential social conflicts arising from land tenure and land use issues?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ soil erosion before compaction and lining of canals?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise from construction equipment?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dust?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ labor-related social problems especially if workers from different areas are hired?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ waterlogging and soil salinization due to inadequate drainage and farm management?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ leaching of soil nutrients and changes in soil characteristics due to excessive application of irrigation water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ reduction of downstream water supply during peak seasons?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ soil pollution, polluted farm runoff and groundwater, and public health risks due to excessive application of fertilizers and pesticides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ soil erosion (furrow, surface)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ scouring of canals?	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ logging of canals by sediments?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ clogging of canals by weeds?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ seawater intrusion into downstream freshwater systems?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ introduction of increase in incidence of waterborne or water related diseases?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**SANITATION****Instructions:**

- ☐ This checklist is to be prepared to support the environmental classification of subprojects proposed under the Cambodia Biodiversity Conservation Corridors Project (the Project).
- ☐ This checklist is to be prepared by the Project's National Environmental Safeguards Specialist (NESS).
- ☐ It is to be attached to the subproject environmental categorization form that is to be prepared by the NESS. The first categorization of a subproject within a sector will require prior approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the Project's National Project Management Office (NPMO), and all subsequent subproject categorizations in that sector may be approved by the Project Director.
- ☐ Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Subproject Title: _____

Province/District/Village: _____ **Date:** _____

Provincial Project Office: _____

ADB SCREENING QUESTIONS	Yes	No	REMARKS
B. Project Siting			
Is the project area...			
▪ Densely populated?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Heavy with development activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Adjacent to or within any environmentally sensitive areas?	<input type="checkbox"/>	<input type="checkbox"/>	
• Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
• Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
• Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
• Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
• Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
A. Potential Environmental Impacts			
Will the Project cause...			
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ interference with other utilities and blocking of access to buildings; nuisance to neighboring areas due to noise, smell, and influx of insects, rodents, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of downstream water quality due to inadequate sewage treatment or release of untreated sewage?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ overflows and flooding of neighboring properties with raw sewage?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ environmental pollution due to inadequate sludge disposal or industrial waste discharges illegally disposed in sewers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and vibration due to blasting and other civil works?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ discharge of hazardous materials into sewers, resulting in damage to sewer system and danger to workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances, and protect facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ road blocking and temporary flooding due to land excavation during the rainy season?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ traffic disturbances due to construction material transport and wastes?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ temporary silt runoff due to construction?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazards to public health due to overflow flooding, and groundwater pollution due to failure of sewerage system?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ deterioration of water quality due to inadequate sludge disposal or direct discharge of untreated sewage water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ contamination of surface and ground waters due to sludge disposal on land?	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ health and safety hazards to workers from toxic gases and hazardous materials which may be contained in sewage flow and exposure to pathogens in sewage and sludge?	<input type="checkbox"/>	<input type="checkbox"/>	

Rapid Environmental Assessment (REA) Checklist**WATER SUPPLY****Instructions:**

- ☐ This checklist is to be prepared to support the environmental classification of subprojects proposed under the Cambodia Biodiversity Conservation Corridors Project (the Project).
- ☐ This checklist is to be prepared by the Project's National Environmental Safeguards Specialist (NESS).
- ☐ It is to be attached to the subproject environmental categorization form that is to be prepared by the NESS. The first categorization of a subproject within a sector will require prior approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the Project's National Project Management Office (NPMO), and all subsequent subproject categorizations in that sector may be approved by the Project Director.
- ☐ Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Subproject Title: _____

Province/District/Village: _____ **Date:** _____

Provincial Project Office: _____

ADB SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the project area...	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Densely populated?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Heavy with development activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site	<input type="checkbox"/>	<input type="checkbox"/>	
• Protected Area	<input type="checkbox"/>	<input type="checkbox"/>	
• Wetland	<input type="checkbox"/>	<input type="checkbox"/>	
• Buffer zone of protected area	<input type="checkbox"/>	<input type="checkbox"/>	
• Special area for protecting biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	
B. Potential Environmental Impacts			
Will the Project cause...			

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ pollution of raw water supply from upstream wastewater discharge from communities, industries, agriculture, and soil erosion runoff?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ hazard of land subsidence caused by excessive ground water pumping?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts arising from displacement of communities ?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ conflicts in abstraction of raw water for water supply with other beneficial water uses for surface and ground waters?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ unsatisfactory raw water supply (e.g. excessive pathogens or mineral constituents)?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ delivery of unsafe water to distribution system?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate protection of intake works or wells, leading to pollution of water supply?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ excessive algal growth in storage reservoir?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increase in production of sewage beyond capabilities of community facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate disposal of sludge from water treatment plants?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances and protect facilities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ impairments associated with transmission lines and access roads?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ health hazards arising from inadequate design of facilities for receiving, storing, and handling of chlorine and other hazardous chemicals.	<input type="checkbox"/>	<input type="checkbox"/>	
▪ health and safety hazards to workers from the management of chlorine used for disinfection and other contaminants?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ dislocation or involuntary resettlement of people	<input type="checkbox"/>	<input type="checkbox"/>	
▪ social conflicts between construction workers from other areas and community workers?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ noise and dust from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased road traffic due to interference of construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ continuing soil erosion/silt runoff from construction operations?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ delivery of unsafe water due to poor O&M treatment processes (especially mud accumulations in filters) and inadequate chlorination due to lack of adequate monitoring of chlorine residuals in distribution systems?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ delivery of water to distribution system, which is corrosive due to inadequate attention to feeding of corrective chemicals	<input type="checkbox"/>	<input type="checkbox"/>	

ADB SCREENING QUESTIONS	Yes	No	REMARKS
▪ accidental leakage of chlorine gas?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ excessive abstraction of water affecting downstream water users?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ competing uses of water?	<input type="checkbox"/>	<input type="checkbox"/>	
▪ increased volume of sullage (wastewater from cooking and washing) and sludge from wastewater treatment plant	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 2: ADB Prohibited Investment Activities List

The following do not qualify for Asian Development Bank financing:

- (i) production or activities involving harmful or exploitative forms of forced labor¹ or child labor;²
- (ii) production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase outs or bans, such as (a) pharmaceuticals,³ pesticides, and herbicides,⁴ (b) ozone-depleting substances,⁵ (c) polychlorinated biphenyls⁶ and other hazardous chemicals,⁷ (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,⁸ and (e) transboundary trade in waste or waste products;⁹
- (iii) production of or trade in weapons and munitions, including paramilitary materials;
- (iv) production of or trade in alcoholic beverages, excluding beer and wine;¹⁰
- (v) production of or trade in tobacco;¹⁰
- (vi) gambling, casinos, and equivalent enterprises;¹⁰
- (vii) production of or trade in radioactive materials,¹¹ including nuclear reactors and components thereof;
- (viii) production of, trade in, or use of unbonded asbestos fibers;¹²
- (ix) commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests; and
- (x) marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

¹ Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

² Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).

³ A list of pharmaceutical products subject to phaseouts or bans is available at <http://www.who.int>.

⁴ A list of pesticides and herbicides subject to phaseouts or bans is available at <http://www.pic.int>.

⁵ A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

⁶ A group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

⁷ A list of hazardous chemicals is available at <http://www.pic.int>.

⁸ A list is available at <http://www.cites.org>.

⁹ As defined by the Basel Convention; see <http://www.basel.int>.

¹⁰ This does not apply to project sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a project sponsor's primary operations.

¹¹ This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.

¹² This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

APPENDIX 3: SUBPROJECT ENVIRONMENTAL CATEGORIZATION FORM**A. Instructions:**

(i) This form is to be completed by the PPO environmental safeguard officer with assistance from the NESS and submitted to the Project Director for endorsement before being submitted to ADB for review and approval.

(ii) The environment categorization of a subproject is a continuing process. If there is a change in the components or/and site of a subproject that may result in category change, another categorization form should be resubmitted to ADB for review and approval.

B. Subproject Data:

Title: _____

Province/District/Village: _____ Date: _____

Provincial Project Office: _____ Processing Stage: _____

Coverage: ☐ Province ☐ District ☐ Village

C. ADB Environment Category: ☐ New ☐ Recategorization --- Previous Category _____

☐ Category A

☐ Category B

☐ Category C

Comments:

D. GOL Environment Category

☐ Category 1

☐ Category 2

Comments:

E. Documents attached: *The categorization will be considered incomplete if proper documentation is not attached.*

Basis for Categorization/ Recategorization:

☐ REA Checklist

☒ Subproject and/or Site Description (must be attached)

☐ Other: _____

Terms of Reference for EIA/IEE:

☐ Key issues identified and attached

☐ Under preparation and will be submitted on _____ (date)

F. ADB Environmental Assessment Requirements*Please check one:*☐ **Category A:**

- Environmental Impact Assessment (EIA)
- Environmental Management Plan including a Budget
- Public Consultation (at least twice)
- Disclosure 120 days in advance of Board Consideration

☐ **Category B:**

- Initial Environmental Examination (IEE)
- Public Consultation

☐ **Category C:**

- Review of Environmental Implications

G. GOL Environmental Assessment Requirements*Please check one:*☐ **Category 1:**

- Initial Environmental Examination (IEE)

☐ **Category 2:**

- Environmental Impact Assessment (EIA)

☐ **No assessment required****H. Signatures***Please check one:*☐ **ADB to Approve**☐ **NPMO to Approve**

Note: The first categorization of a subproject within a sector will require approval of ADB. If the recommended categorization is approved by ADB, authority for categorization approvals in that sector will be delegated to the NPMO, and all subsequent subprojects categorizations in that sector may be approved by the Project Director. ADB will be informed of the results.

NPMO*Category Assigned by:*_____
Project NESS

Date: _____

*Approved by:*_____
Project Director

Date: _____

ADB*Endorsed by:*_____
Director, RSES

Date: _____

*Approved by:*_____
Chief Compliance Officer

Date: _____

APPENDIX 4: RECOMMENDED OUTLINE OF INITIAL ENVIRONMENTAL EXAMINATION

1. This outline is part of the Safeguard Requirements 1 of ADB's SPS 2009. An environmental assessment report is required for all environment category "A" and "B" projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. A typical EIA report contains the following major elements, and an IEE may have a narrower scope depending on the nature of the project. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown.

A. Executive Summary

2. This section describes concisely the critical facts, significant findings, and recommended actions.

B. Policy, Legal, and Administrative Framework

3. This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project relevant international environmental agreements to which the country is a party.

C. Description of the Project

4. This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

D. Description of the Environment (Baseline Data)

5. This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

E. Anticipated Environmental Impacts and Mitigation Measures

6. This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational) health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media [Appendix 2, para. 6]), and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, and cumulative impacts as appropriate.

F. Analysis of Alternatives *(to be included for category “A” projects only)*

7. This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

G. Information Disclosure, Consultation, and Participation

8. This section:

- (i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;
- (ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and
- (iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

H. Grievance Redress Mechanism

9. This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

I. Environmental Management Plan

10. This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

- (i) Mitigation
 - (a) identifies and summarizes anticipated significant adverse environmental impacts and risks;
 - (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and
 - (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.

- (ii) Monitoring
 - (a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and
 - (b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.
- (iii) Implementation arrangements
 - (a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
 - (b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
 - (c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.
- (iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

J. Conclusion and Recommendation

11. This section provides the conclusions drawn from the assessment and provides recommendations.

APPENDIX 5: TOR OF THE INTERNATIONAL ENVIRONMENTAL SAFEGUARD SPECIALIST (3 PM)

The International Environmental Safeguard Specialist (IESS) will be engaged at the start of Project implementation. The IESS will develop a number of critical tools that will be used during Project implementation to ensure its compliance with the environmental safeguarding requirements of ADB and Government. The IESS will have secondary qualifications and/or experience in forestry. Specifically, the IESS, in collaboration with the National Environmental Safeguarding Specialist (NESS), other Project staff, implementing partners and stakeholders, will:

- (i) Update the EARF as required;
- (ii) Develop detailed environmental safeguarding guidelines for project implementation and the identification and design of subprojects tailored to the different implementing partners. Particular focus will be given to the technical aspects of the forestry activities, activities located inside protected areas, and small-scale infrastructure subprojects;
- (iii) Develop screening (rapid environmental assessment) checklists for subprojects and guidance material on their use;
- (iv) Complete sample rapid environmental assessment checklists for a number of subprojects of different types together with the NESS and the FA/PA safeguard officers;
- (v) Develop sample initial environmental examinations for a number of subprojects of different types together with the NESS and the FA/PA safeguard officers;
- (vi) Develop an appropriate monitoring schedule of the subprojects identified; and
- (vii) Train the NESS in applying the EARF and familiarise the NESS with ADB environmental safeguarding procedures and requirements, including reporting.

APPENDIX 6: TERMS OF REFERENCE OF THE NATIONAL ENVIRONMENTAL SAFEGUARD SPECIALIST (36 PERSON-MONTHS)

- (i) The National Environmental Safeguard Specialist (NESS) will ensure that the Project is implemented in accordance with the environmental safeguarding requirements of ADB and the Government. The NESS will be attached to the CPCU office for coordination among provinces. The NESS will coordinate and facilitate all related monitoring and reporting activities. Specifically, the NESS, in collaboration with other the International Environmental Safeguarding Specialist (IESS), Project staff, implementing partners and stakeholders, will:
- (ii) Assist the FA cantonment and Provincial PA to comply with the ADB and Government environmental safeguarding requirements;
- (iii) Coordinate and facilitate all environmental safeguarding monitoring and reporting activities for the Project; prepare detailed monitoring schedules as well as the final monitoring reports for inclusion into the project progress report for submission to ADB;
- (iv) Support villages, communes and district-level involved in Project implementation, in particular in the management of the CDF, with meeting the environmental safeguarding requirements for the Project;
- (v) Assist villages and communes with the integration of the environmental safeguarding guidelines into the CDF operating regulations;
- (vi) Liaise on environmental matters with other technical agencies that will provide support services to the provinces;
- (vii) Contribute to developing a detailed monitoring and reporting schedule for the Project in consultation with ADB to ensure that the environmental safeguarding requirements associated with the selected subprojects are effectively met;
- (viii) Assist the FA cantonment and Provincial PA with completing the rapid environmental assessment checklists and based on the screening exercise, assist the FA cantonment and Provincial PA and CDF managers to categorize subprojects;
- (ix) Apply the set of environmental safeguarding guidelines that will be developed to all subprojects to ensure that the subprojects are designed in a way that does not alter the environmental classification of the Project in accordance with ADB's environmental safeguarding policy and procedures;
- (x) Review Project work plans and CDF investment plans for the environmental assessment of the subprojects as they will be finalized during project implementation;
- (xi) Assist the Provincial PA, FA cantonment, or CDF managers involved in the preparation of Initial Environmental Examinations (IEE) for category B subprojects;
- (xii) Prepare the required documentation to report to ADB the outcome of the screening and categorization process, as well as any IEE documentation;
- (xiii) In the case of category C subprojects, notify ADB of the screening findings and the categorization of the subproject;
- (xiv) Provide guidance and support to the FA cantonment, Provincial PA, or the CDF managers to prepare and submit the environmental impact assessment for subprojects according to the RGC requirements;
- (xv) Keep a detailed record of the public consultation activities and ensure that the public has access to public documents related to the environmental safeguarding process.

APPENDIX 7: DRAFT TERMS OF REFERENCE OF INDEPENDENT ENVIRONMENTAL SAFEGUARD MONITORING ENTITY

I. Required Safeguards Monitoring Entities (SMEs) and its Services

1. In addition to the internal monitoring, the Project Administration Manual (PAM) requires independent monitoring on the safeguards to ensure that all recommendations and mitigation measures under the IEEs of all category B subprojects are implemented.

2. An SME will be required to provide services to both Project provinces, Koh Kong and Mondulhiri. The required SME will be recruited jointly by CPCUs. Interested entities such as local NGOs, or domestic universities and institutions must provide amplified Expressions of Interest (EOI) which includes the information showing that they are qualified to perform the services, giving the entity general experience for similar assignments and CVs of Key personnel with academic background, experience in similar assignments, knowledge of local conditions, etc. The completed EOI form can be found in CSRN of the ADB website.

II. Overall Schedule of Safeguards Monitoring

3. Independent environmental monitoring will be undertaken during the project implementation period from 2015 to 2019. The SME will provide the services for all the category B subprojects¹⁸ under the Greater Mekong Subregion Biodiversity Conservation Corridor (BCC) project in Cambodia, including interventions funded by the Pilot Program for Climate Resilience (PPCR). Procedures for environmental safeguards of the Project can be found in the Environmental Assessment and Review Framework (Linked document 11). The environmental monitoring will follow the Environmental Management and Monitoring Plans (EMPs) included in the Initial Environmental Examinations.

III. Scope of Works

1. Scope of Works

4. The Safeguards Monitoring Entity will focus on assessing progress and compliance with the Environmental Monitoring Plans (EMPs) under the IEEs of the relevant subprojects, identifying constraints and developing remedial actions to effectively address these.

5. Key responsibilities of the SME include:

- (i) To review the IEEs, including the EMPs of the relevant core subprojects for familiarization of environmental monitoring requirements
- (ii) To develop a monitoring and assessment plan, including plan for baseline establishment where baseline data do not exist. Based on the IEEs, the SME will develop a monitoring and assessment plan responding to the scope of works outlined in these terms of reference, including the detailed field survey plan where necessary.
- (iii) To conduct monitoring as specified in the EMPs under the IEEs.

2. Deliverables

¹⁸ Categorization based on ADB Safeguard Policy Statement 2009

- (i) A monitoring and assessment plan responding to the scope of works outlined in these terms of reference including the detailed field survey plan for each mission. Four missions per year will be conducted for subprojects under construction and two missions per year will be conducted for subprojects under operation (post construction).
- (ii) Baseline data (e.g. water quality parameters, etc.) for each subproject (primary data to be collected or secondary data if available);
- (iii) Draft quarterly monitoring report including results of laboratory testing where necessary, submitted to the CPCUs. Hard copies of the reports must be accompanied with soft copies.
- (iv) Final quarterly monitoring report based on the CPCUs' comments. Hard copies of the reports must be accompanied with soft copies.

3. Requirements for the SME

a. Team Composition and Required Inputs

6. The required SME will be qualified a local NGO, a domestic university or institution. The SME will have laboratory facilities adequate to undertake the sample analysis for the water quality parameters required by the EMP. The estimated team composition and required inputs are summarized below.

No.	Position	No. of Persons	Inputs (p-m)	Total
1	Safeguards Monitoring Team Leader and Environment Specialist (TL)	1	4.0	4.0
2	Assistant surveyor	2	4.0	8.0
	Total	3		12.0

b. Duties, Responsibilities and Qualifications

(i) Environmental Safeguard Monitoring Team Leader

7. The Environmental Safeguard Monitoring Team Leader will be responsible in the overall planning and management of the Safeguards Monitoring of the subprojects. Specifically, she/he will lead the monitoring team and be responsible for the following:

- (i) Review the IEEs including the EMPs of all subprojects under the BCC Project;
- (ii) Develop a monitoring and assessment plan responding to the scope of works outlined in these terms of reference including the detailed field survey plan;
- (iii) Conduct the field monitoring surveys, including those for baseline establishment where necessary, according to the monitoring and assessment plan.
- (iv) Conduct the environmental safeguard monitoring and laboratory testing if required; and
- (v) Prepare the quarterly monitoring reports, which include the results and assessment on the EMPs, and recommendations for any organizational or methodological improvements where applicable.

8. The Environmental Safeguard Monitoring Team Leader must have at least 10 years of relevant experience on the planning and conduct of environmental impact assessment of flood management, rural infrastructure, or agricultural development projects. She/he must hold at

least a BS Degree on Chemistry, Environmental Science, Environmental Management or equivalent.

(ii) Assistant Surveyor

9. One (1) assistant surveyor should be selected for each province.

4. Time Schedule and Reporting

10. Four (4) missions of environmental safeguard monitoring per year to each category B subproject that is under construction, and two (2) missions of environmental safeguard monitoring per year to each category B subproject that is under operation. A monitoring baseline (primary data or secondary data if available) will be established before the start of any subproject. Quarterly environmental monitoring reports will be submitted covering all subprojects. The duration of the services will coincide with the Project implementation period.

5. Estimated Budget

11. The estimated budget for this package is approximately \$40,000.

APPENDIX 8: TERMS OF REFERENCE FOR ENVIRONMENT OFFICER

A. Scope and Duration of Work

1. Four (4) officers will be assigned to the FA cantonment in each of the two Project provinces, and Provincial PA in each of the two Project provinces to screen all subprojects for categorization, submit all documentation to CPCU and the Department of Environment (where applicable) for approval and implement the environmental management plan of category B subprojects. The officers will report to the FA cantonment or Provincial PA coordinator. The position is for the entire project duration.

B. Qualifications

2. The officer will have: (i) an undergraduate degree or higher in environmental management or related field; (ii) at least five years of experience in environmental management, monitoring, and/or impact assessment; (iii) ability to communicate and work effectively with local communities, contractors, and government agencies; (iv) ability to analyze data and prepare technical reports; (v) willingness and health to regularly visit the project construction sites and in different seasons; and (vi) ideally, proficiency in spoken and written English.

C. Detailed Tasks

3. The officer will be responsible for the following:
- (i) Categorize all subprojects using the applicable rapid environmental assessment checklist, with assistance from the NESS
 - (ii) Participate in the preparation of the IEE including the EMP for category B subprojects;
 - (iii) Obtain approval from the Department of Environment of *Khmer* version of the IEE in replacement of the applicable IEIA or EIA where required;
 - (iv) Assess whether the EMP requires updating due to any changes in project design which may have occurred after the EMP was prepared.
 - (v) Distribute the *Khmer* language version of the EMP to all relevant agencies, including the implementing agencies, provincial and municipal agencies for environment protection, forestry, water resources, and/or land planning, contractors, and construction supervision companies. This should occur at least three months before construction begins.
 - (vi) Conduct meetings with agencies as necessary to ensure they understand their specific responsibilities described in the EMP.
 - (vii) Ensure that relevant mitigation, monitoring and reporting measures in the EMP are included in the bidding documents and contracts.
 - (viii) Confirm that the agencies responsible for the internal environment monitoring described in the EMP understand their tasks and will implement the monitoring in a timely fashion.
 - (ix) At least two months before construction begins, establish and implement the project Grievance Redress Mechanism (GRM) described in the EMP. This will include: (a) prepare a simple table and budget identifying the type, number and cost of materials needed to inform local communities about the GRM and starting dates and scope of construction; (b) design, prepare and distribute these materials, and plan and conduct the community meetings; (c) prepare a form to record any public complaints; (d) prepare a summary table to record all

complaints, including dates, issues, and how they were resolved; and (e) ensure that all relevant agencies, including contractors, understand their role in the GRM.

- (x) Prior to construction, ensure that contractors and construction supervision companies have informed their personnel, including all construction workers, of the EMP requirements. This will include all mitigation measures relating to impacts to air, water, noise, soil, sensitive sites, ecological values, cultural values, worker and community health and safety, respectful behavior when communicating with local communities, and responding to and reporting any complaints.
- (xi) During project construction, make regular site visits to assess progress, meet with contractors and/or local communities, and assess compliance with the EMP.
- (xii) Ensure that all relevant agencies submit required progress reports and information, including environmental monitoring and reports of any issues or grievances.
- (xiii) Compile, review, and store environmental progress reports from the contractors and internal monitoring agencies, records of any grievances, and any other relevant issues. Maintain digital copies of all information. When necessary, enter data into summary tables in digital format (e.g. to transfer records of grievances from hard copy forms). Ensure that all information is stored in the PIU filing system, backed up, and can be easily retrieved.
- (xiv) With assistance from the national environmental safeguard specialist, prepare quarterly environment monitoring reports during construction and annual environment monitoring reports during operation.
- (xv) Work closely with the PIU, contractors, project management consultants, and other agencies and personnel as necessary to conduct these tasks.

D. Logistical Support Provided by FA Cantonment or Provincial PA to the Environment Officer

4. Provision of hard and soft copies of the project EMP, domestic and project environmental reports, feasibility study reports, loan and project agreements, maps, and other supporting materials as necessary to ensure the officer can implement the tasks.

5. Vehicle transport, office materials, and other logistical support as necessary for the officer to visit the project construction sites and local communities, arrange and conduct meetings, and prepare and distribute consultation materials.

6. Overall coordination, including review of the draft environment monitoring reports and final responsibility for submission to ADB.

APPENDIX 9: BCC SUBPROJECT ENVIRONMENTAL COMPLIANCE INSPECTION FORM

Subproject : _____ **Contractor/Implementing Agency:** _____
Sector : _____ **Inspection Date** : _____
Location : _____ **Reporting Period** : _____

1. Mitigation Compliance Inspection

Mitigation Measure	Mitigations Implemented	Mitigations Effective? (1 to 5)*	Impact Observed / Location	Action Required	Contractor Response / Comment
e.g.: - Permits obtained? - Dust control measures in place? (Column to be based on subproject IEEs)					

* Mitigation Effectiveness Rating Criteria

1. Very Good (all required mitigations implemented)
2. Good (the majority of required mitigations implemented)
3. Fair (some mitigations implemented)
4. Poor (few mitigations implemented)

2. Very Poor (Very few mitigations implemented) Environmental Incidents During Reporting Period (if relevant)

Environmental Incidents (accidents, spills, complaint)	Date	Reported by	Description / Location	Action Taken	Further Action Required	Comments

3. Summary of Actions Required and Follow-up (if relevant)

Action Required	Timeframe (e.g. within one week)	Responsible Parties	Follow-up (to be completed if actions are required)
			Required Action Taken:
			Effectiveness:
			Prepared by:
			Date:

Inspection Completed by: _____ **Date:** _____

Signature:

Add Attachments as appropriate (e.g. list of inspection participation, map(s) showing sites, etc. Photographs are especially useful)

APPENDIX 10: SUGGESTED FORMAT FOR BCC QUARTERLY ENVIRONMENTAL PROGRESS REPORTS

As part of the overall Project reporting to ADB, the NESS will prepare quarterly environmental progress reports that summarize the status of the subproject environmental assessment processes, subproject environmental monitoring, and any compliance issues and corrective actions. A sample outline which can be adapted as necessary is provided below. Ranking systems for compliance, mitigation effectiveness, etc., are indicative examples only and can be modified or disregarded as appropriate.

- 1. Introduction and Report Purpose**
- 2. Subproject Environmental Assessment**
Status of subproject screening, categorization and environmental assessment.
Identification of key issues encountered in the environmental assessment process (if any) and the means by which issues have been, or will be, addressed.
- 3. Environmental Monitoring**
 - 3.1. Summary of Compliance Monitoring Inspections Activities
 - 3.2. Assessment of Mitigation Compliance¹
 - 3.3. Assessment Mitigation Effectiveness²
- 4. Key Environmental Issues**
 - 4.1.1. Key Issues Identified
 - 4.1.2. Action Taken
 - 4.1.3. Additional Action Required
- 5. Conclusion**
 - 5.1. Overall Progress of Implementation of Environmental Management Measures³
 - 5.2. Problems Identified and Actions Recommended
- Appendices**
 1. Subproject Inspection Reports
 2. Photographs
 3. Others

¹ Overall compliance with mitigation implementation requirements could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good (all required mitigations implemented)
2. Good (the majority of required mitigations implemented)
3. Fair (some mitigations implemented)
4. Poor (few mitigations implemented)
5. Very Poor (very few or no mitigations implemented)

Additional explanatory comments should be provided as necessary.

² Effectiveness of mitigation implementation could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good (mitigations are fully effective)
2. Good (mitigations are generally effective)
3. Fair (mitigations are partially effective)
4. Poor (mitigations are generally ineffective)
5. Very Poor (mitigations are completely ineffective)

Additional explanatory comments should be provided as necessary.

³ Overall sector environmental management progress could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good
2. Good
3. Fair
4. Poor
5. Very Poor

Additional explanatory comments should be provided as necessary.