Cover Page for Project/Program Approval Request

Cover Page for Project/Program Approval Request			
1. Country/Region:	Cambodia	**2. CIF Project ID#**:	XPCRKH011A
3. Source of Funding:	☐ FIP	☑ PPCR	☐ SREP
4. Project/Program Title:	**Promoting Climate-Resilient Agriculture in Koh Kong and Mondulkiri Provinces as part of the Greater Mekong Subregion Biodiversity Conservation Corridors Project**		
5. Type of CIF Investment:	☑ Public	☐ Private	☐ Mixed
6. Funding Request in million USD equivalent:	*Grant: US$7.4.0 million,*	*Non-Grant:0*	
7. Implementing MDB(s):	*Asian Development Bank*		
8. National Implementing Agency:	*Ministry of Agriculture, Forestry, and Fishery (MAFF)* *Ministry of Environment (MOE)*		
9. MDB Focal Point and Project/Program Task Team Leader (TTL):	*Headquarters- Focal Point:* Cinzia G. Losenno Senior Environment Specialist (Climate Change Adaptation)	*TTL:* Thuy Trang Dang Environment Specialist	

10. Project/Program Description (including objectives and expected outcomes)**:**

In December 2010 ADB approved a grant of $19 million from ADB's Special Fund resources to the Kingdom of Cambodia for the Greater Mekong Subregion (GMS) Biodiversity Conservation Corridors Project (the BCC Project).[1] The impact of the BCC Project is climate-resilient sustainable forest ecosystems benefiting local livelihoods. The outcome is sustainably managed biodiversity corridors in Koh Kong and Mondulkiri provinces. The outputs include: (1) institutions and communities strengthened for biodiversity corridor management; (2) biodiversity corridors restored, protected, and maintained; (3) livelihoods improved and small-scale infrastructure support provided in target villages and communes; and (4) project management and support services operationalized. Implementation arrangements are detailed in the Project Administration Manual (PAM) and summarized on page 11 of Summary Approval Request.

As stated in the SPCR, PPCR funding will strengthen the climate adaptation measures of the BCC Project. The "*Promoting Climate-Resilient Agriculture in Koh Kong and Mondulkiri Provinces as part of the Greater Mekong Subregion Biodiversity Conservation Corridors Project*" Project, which aims at strengthening adaptive capacity and reducing climate vulnerability of ecosystems and communities in the Koh Kong and Mondulkri provinces.[2]

The PPCR funds will be used to enhance adaptive capacity of an additional 4,300 households in the Project area and support diversified livelihoods and income generating opportunities. The design and monitoring framework of the BCC Project has been revised to reflect the additional

[1] ADB. 2010. Report and Recommendation of the President to the Board of Directors. Proposed Loan and Grants Kingdom of Cambodia, Lao Peoples Democratic Republic, and Socialist Republic of Viet Nam: Greater Mekong Subregion Biodiversity Conservation Corridors Project.

[2] The ADB Board Paper for the Project is referred to as Additional Financing: Proposed Administration of Grant Kingdom of Cambodia: Greater Mekong Subregion Biodiversity Conservation Corridors Project

results to be achieved with the PPCR funds under outputs 3 and 4.

Output 3 of the ongoing BCC Project will be expanded to include:[3]

(i) Rainwater harvesting ponds for climate resilient high value crop productivity in Mondulkiri and Koh Kong[4];
(ii) Climate resilient irrigation and system of rice intensification (SRI) techniques in Mondulkiri[5];
(iii) Bioengineered sea barriers reducing saltwater intrusion in Koh Kong and adoption of salinity resistant crops[6]; and
(iv) Ecosystem based adaptation to improve forest cover, soil and water management through catchment development planning and investment in Mondulkiri.[7]

Under output 3, extensive training and capacity building will be provided to the communities on the following: (i) best SRI practices in Cambodia, including water conservation techniques, pest management, fertilizer application, land preparation; (ii) branding schemes for high value rice and non-rice products; (iii) rice seed production cooperative organization; (iv) best practices of production of saline-resilient and drought resilient crops in Cambodia, including drip irrigation, water conservation techniques, use of micro-irrigation, raised beds, crop-rotation, plastic and vegetative mulching, green manures, and composting as appropriate; (v) operation and management (O&M) of the water-harvesting ponds, the irrigation scheme and the sea-barriers; (vi) best practices of community fish production in the rainwater harvesting ponds; (vii) storage plans for household consumption and marketing plans for surplus of home garden products; (viii) infant and family nutrition, the link between infant weight and adult health and home garden products linking to provision of rainwater harvesting ponds and horticultural production; (ix) mangrove nursery establishment and maintenance and mangrove planting; and (x) forest conservation planning and implementation such as inventory, GIS-based patrolling, planting, and sustainable use of forest resources. All training materials will be gender and indigenous peoples friendly. See pages 5-8 of the Summary Request for further details.

Output 4 of the ongoing BCC Project will be expanded to include the following: (a) consulting services which covers incremental increase in inputs from several positions in the existing consultant team to help manage the PPCR-funded activities such as team leader, safeguards and gender specialists, engineers and procurement specialist, as well as a number of positions to support new areas of work including ecosystem-based adaptation, catchment planning and climate-resilient crops; and (b) incremental project implementation management costs that include (i) project monitoring and reporting, knowledge documentation and sharing; (ii) procurement, incremental operations costs; and (iii) incremental safeguard monitoring costs. A Project Administration Manual (Supplementary Appendix B to the Board Paper) has been updated to guide the implementation of the additional activities funded by the PPCR. See pages 5-8 of the Summary Request for further details

Economic and Financial Analysis. Four representative investments were examined in an economic and financial analysis (Supplementary Appendix E to the Board Paper), including: (i) forest border irrigation and climate resilient rice production; (ii) rainwater harvesting and climate resilient home garden; (iii) ecosystem-based adaptation in two catchments; and (iv) bioengineered sea barriers. Economic analysis of these investments generated economic

[3] See Board Paper and its Appendix – project design and monitoring framework.
[4] Feasibility Study of the intervention can be found in Supplementary Appendix P to the Board Paper.
[5] Feasibility Study of the intervention can be found in Supplementary Appendix Q to the Board Paper.
[6] Feasibility Study of the intervention can be found in Supplementary Appendix R to the Board Paper.
[7] Framework for the intervention can be found in Supplementary Appendix S to the Board Paper.

internal rates of return in the range of 15.5-17.1% based on benefits that are readily quantifiable, compared to the threshold of 12%. Sensitivity analysis indicated that none of the risk factors appeared to place these interventions' economic viability in immediate jeopardy. Financial analysis indicated that household income (as measured by return to land and labor) would significantly increase as compared with the income levels in the without-project scenario due to increased cropping intensity and yields of existing crops and adoption of higher value vegetable and fruit crops. Capacity building interventions are also expected to generate significant but unquantifiable social benefits that accrue to communities, local governments, private sector and nongovernment organizations through stakeholder empowerment.

11. Consistency with Investment Criteria:

The proposed investments will pilot and demonstrate approaches for integration of climate risk and resilience into development policies in the agriculture sector. A suite of (i) structural investments which incorporates climate risks into the design of bioengineered sea barriers, irrigation, and rainwater harvesting ponds; and (ii) non-structural investments such as training on salinity resilient crops, system of rice intensification (SRI), establishment of water users groups, training on nutrition and choice of crop varieties, and organization of catchment governance committees and forest user groups will be implemented. These investments will respond to the local needs and local vulnerability to climate change, with the potential to be scaled up using the same principles.

Design of the PPCR investments that incorporates projections of climate changes by 2025 to enhance climate resilience will be used as a demonstration to further promote the integration of climate resilience into development planning, in particular in the agriculture and forestry sectors**. Capacity of the relevant staff from the two executing agencies** – Ministry of Environment and Ministry of Agriculture, Forestry and Fisheries - **will be strengthened** through on-the-job training as well as training workshops.

The proposed investments **build on other ongoing initiatives to scale-up and leverage climate resilient investment**. For example, the sea-barrier investment in Koh Kong, which aims to raise the dike height considering sea level rise projections, is building on a project in the same area that used earthen dikes and maintenance by the communities and has worked well because of its simplicity and importance to the crops. The rainwater harvesting investment acknowledges efforts from the local communities to provide rain water harvesting, but scales it up to support a group of 50 households per pond, and considers the water demand for both cattle and home gardens, with storage tanks for the dry season. The ecosystem-based adaptation in two catchments intervention looks beyond the ongoing BCC project which works within community protected areas (within MOE's mandate) and community forests (within MAFF's mandate) to consider planning and investments for the whole catchment.

The PPCR Project has **a strong knowledge sharing element** nested in its proposed interventions. During project implementation, technical specialists including catchment planners and engineers for sea barrier, irrigation and ponds will be engaged to focus on development of relevant knowledge products, including, among others, incorporation of higher risk parameters in infrastructure design due to climate change such as in sea barriers, irrigation and water harvesting ponds. Information generated as a consequence will be analyzed and used in informing infrastructure design which, in itself, will be a knowledge product for replication within and outside the country. An evaluation expert will be engaged specifically to complete case studies and lesson learned reports for each subproject. Knowledge products for farmers will also be produced for the introduction of system of rice intensification, saline-resilient crops and drought-resilient crops by the consultants involved in training for these activities. Case study and

policy workshops are planned to share experiences and lessons learnt from implementing different interventions in a catchment context. Stock taking meetings will be held regularly with the communities to ensure constant learning. Knowledge products for farmers will be produced as part of the training program. The website to be developed for the ongoing BCC Project will be strengthened to include information pertaining to or generated under the PPCR supported interventions in Khmer and in English for wider dissemination.

Furthermore, as the PPCR Project is part of a Greater Mekong Subregion Project in Cambodia, Lao PDR and Viet Nam, the existing mechanism will ensure **information sharing and learning at the regional level** which includes one meeting a year, possibly exchange site visits, and other regular correspondences between project implementers in the three countries.

12. Stakeholder engagement:

A number of consultations with target communities have taken place during PPCR project preparation and design, including socio-economic surveys and focus group discussions undertaken to prepare the feasibility studies of the four proposed interventions. Community members participated in the vulnerability and needs assessment, prioritized their preferred options and assisted the feasibility teams in providing useful insights and local information. The communities have expressed their desire to participate actively in the Water User Groups and the Forest Conservation Groups. A detailed consultation summary with information pertaining to consultation team participants, consultation dates, and key findings for each of the proposed interventions can be found in Supplementary Appendixes P, Q, R and S of the Board Paper.

During the PPCR project preparation, coordination and cooperation with other stakeholders was achieved through a series of consultation workshops, joint field visits, and meetings conducted by various members of the design team to discuss climate resilience and other aspects of the PPCR support. Different departments within MOE and MAFF, provincial governments of Koh Kong and Mondulkiri, provincial departments of water resources and meteorology, Forestry Administration cantonment offices, Provincial Protected Area Divisions in the two participating provinces were consulted both in separate meetings and in the formal inception, midterm and final workshops during project preparation, as well as during the ADB fact finding mission in March 2014. The NGOs consulted, included International Union for Conservation of Nature (IUCN), World Wildlife Fund for Nature (WWF) and Wildlife Conservation Society (WCS). Development partners consulted included the United Nations Development Programme (UNDP), United States Agency for International Development (USAID), Danish International Development Agency (DANIDA), the Cambodia Climate Change Alliance (CCCA), the European Union (EU), and L'Agence Française de Développement through their projects were also consulted. See page 71 of PAM for the stakeholder communication strategy.

13. Gender considerations:

The interventions under the PPCR Project are considered effective gender mainstreaming according to ADB classification. The Project supports women farmers' access to economic and financial resources and provides opportunities for women's participation and voice in community water resources management. See the gender action plan (Supplementary Appendix H of the Board Paper) for details. A summary of gender dimensions is presented on page 15 of the Summary Approval Request and paragraph 10 of the Board Paper.

14. Indicators and Targets (consistent with results framework):

Core Indicators	Targets

1. Degree of integration of climate change into national, including sector planning	• Three case studies on integration of climate change in design of water infrastructures such as sea barriers, irrigation, and rainwater harvesting ponds developed, documented and discussed within MOE and MAFF, and with relevant ministries such as Ministry of Water Resources and Meteorology in at least 3 workshops • One policy[8] improvement on community forestry as an ecosystem-based adaptation measure, through empowerment of communities in forest conservation to improve climate resilience • Policy recommendations for climate proofing of sea barriers and irrigation infrastructure developed and discussed with MOE, MAFF and Ministry of Water Resources and Meteorology •
2. Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience	• 65 provincial and district officials acquire capacity to integrate climate change concerns into development planning and budgeting • Capacity of provincial officials developed on catchment planning and investments in Mondulkiri • Provincial officials in Koh Kong update standards for climate proofing of sea barriers
3. Quality and extent to which climate responsive instruments / investment models are developed and tested	• 15 km of bioengineered sea barriers with self-closing culverts preventing incursion of saline water during winter high tides benefiting 750 ha. • 40 rainwater harvesting ponds for 60 ha of home garden crop production • One climate resilient irrigation scheme rehabilitated with a command area of 250 ha • 9000-ha of forest sustainably managed for ecosystem-based adaptation • Climate resilient construction standards for irrigation, rainwater harvesting ponds, and sea dykes are tested in the PPCR-funded project area
4. Extent to which vulnerable households and communities use improved PPCR supported tools, instruments, strategies and activities to respond to climate variability and climate change	• 1,000 households adopt climate resilient Cambodian SRI • 400 households benefit from reduced seawater intrusion with enhanced productivity from salinity-resistant crops • 2,000 households have reliable water for cattle and home gardens • 900 households benefit from reduced flood risk, improved soil quality, and reduced impact from drought by diversifying income and climate resilient livelihoods through ecosystem based adaptation in two catchments

[8] Targeting Sub-decree on Community Forestry (2003) and Community Forestry Guidelines (Prakas) issued by MAFF in 2006

5. Number of people supported by the PPCR to cope with climate change and climate variability	About 4,300 households to benefit from project interventions, in which: • 80% women trainees on training to improve home garden productivity and water conservation; • 40% women trainees on system of rice intensification; • 50% women farmers involved in mangrove planting • 25-30% women farmers for demonstration plots for salinity-resilient crops; • 30% women in management positions in water users groups and forest conservation groups; and • 30% of water users groups women members to be trained in operation and maintenance
Development Indicator(s):	Detailed in the Design and Monitoring Framework, Appendix to the Board Paper

15. Co-Financing:		
	Amount (in USD million):	*Type of contribution:*
• ADB	19.00	Grant
Co-Financing Total:	19.00	

16. Expected Board/MDB Management approval date: December 2014