# Cambodia: Uplands Irrigation and Water Resources Management Sector Project

**Project Name**: Uplands Irrigation and Water Resources Management Sector Project  
**Project Number**: 44328-013  
**Country**: Cambodia  
**Project Status**: Active  
**Project Type / Modality of Assistance**: Loan  
**Source of Funding / Amount**: Loan 3289-CAM: Uplands Irrigation and Water Resources Management Sector Project

### Strategic Agendas
- Environmentally sustainable growth  
- Inclusive economic growth  
- Effective gender mainstreaming  
- Concessional ordinary capital resources lending / Asian Development Fund

### Source of Funding / Amount
**US$ 60.00 million**

### Description
The proposed Uplands Irrigation and Water Resources Management Sector Project will help the Government of Cambodia increase agricultural productivity through irrigation and to counteract the impacts of climate change. Irrigation consumes about 70% of Cambodia's water. Efficient, effective, and sustainable management of the country's water resources largely depends upon how smartly irrigation systems are managed to match the use of water with the seasonal crop requirements and minimize the losses.

Irrigation systems are critical to Cambodia's food security. However, the deterioration of existing irrigation infrastructure is seriously compromising the government's plans to achieve these goals. In addition, droughts and floods threaten the country's food security. The project will deliver two outputs: (i) Output 1: Enhanced efficiency and climate resilience of irrigation systems; and (ii) Output 2: Improved water resource management.

### Project Rationale and Linkage to Country/Regional Strategy
Improved macroeconomic stability and public financial management reforms have helped Cambodia's economy grow during 2004-2014. Gross domestic product grew by 7.0% in 2014 and is expected to expand by 7.4% during 2015-2016. Agriculture accounts for 29% of gross domestic product and employs 72.3% of the country's workforce, or about 5 million people. The livelihoods of 80.0% of Cambodians depend on the sector. Farming in Cambodia is mostly subsistence-level, rain-fed, and devoted to paddy rice production. Even though Cambodia has become self-sufficient in rice and a rice exporter, its rice-based farming generates low incomes for its people. Nearly one-quarter of its provinces have food deficits, and 16.1% of the population is undernourished, even though the annual paddy surplus now stands at 3.3 million tons.

Rainfall distribution and river discharges vary significantly from season to season in Cambodia, which makes sustained year-round agricultural production difficult and increases vulnerability of the farmers' livelihood and rural economy. The timely availability and efficient management of water is of prime importance to enhancing agriculture productivity and achieving diversification in agriculture production and the rural economy. The deterioration of existing irrigation infrastructure is seriously compromising the government's plans to achieve these goals. In addition, droughts and floods threaten the country's food security. The project will contribute to achieving targets defined in the government's strategy. The strategy aims to develop and expand the country's irrigated land and manage its water resources more effectively by improving existing irrigation systems, making water user communities more efficient, and reducing the vulnerability of the Cambodia's people to disasters caused by natural hazards.

### Impact
Inclusive economic growth through agriculture and irrigation (Rectangular Strategy on Growth, Employment, Equity, and Efficiency, Phase III, 2014 to 2018)

### Description of Outcome
Water and agriculture productivity enhanced in the project area
As of 20 August 2018, physical progress was estimated at 73% against the elapsed time of 46% from the loan effective date. The Project is currently far ahead of schedule with six out of eight civil works contracts have been awarded. Construction works for three major packages were completed between December 2017 and August 2018 while progress of construction works for other three subprojects were estimated on average of 90% and construction work of another subproject (CW05 O Kranhak) started on 20 August. Installation of 15 automatic weather stations and 15 hydromet stations and training to concerned staff have been completed and they are now in operations. Establishment of two Farmer Water User Communities (FWUCs) for Taing Krasaing and Prek Chik irrigation schemes have been completed and trainings are being provided to strengthen their capacities.

**Implementation Progress**

**Description of Project Outputs**  
1. Efficiency and climate resilience of irrigation systems in the project area enhanced  
2. Water resource management improved

**Status of Implementation Progress (Outputs, Activities, and Issues)**  
Due to the lack of interested service providers, PMU suggested that MOWRAM FWUC Department be tasked to handle FWUC formation. The designated team of the FWUC Department has organized meetings in 28 target villages and 8 communes to disseminate the process of FWUC formation and development. Two training modules were prepared and conducted for the training of trainers (TOT) in January and February 2018. Work plan for FWUC formation has been revised and the process has been started in TK and PC systems to be completed in May 2018 while the capacity building sessions will continue till the end of February 2019. Project will ensure that this target is met. Project will ensure that this target is met. The draft tripartite agreement for Taing Krasaing irrigation system has been prepared in December after consultation with all concerned and the final version will be adopted in the coming months after further deliberations and consultations with the concerned stakeholders. Not yet due. The government allocated $15 million for O&M of all irrigation systems in 2016. After the completion of the project, the irrigation systems rehabilitated by the project will be listed for O&M by the government budget. 15 AWSs and 15 AHSs have been installed, and field inspection has been conducted to fix the devices that are not working properly. This will be measured after completion of works on main and distribution canal of each irrigation system. The EA is planning to pilot 500 hectares by using the unallocated funds to finance the activities. Discussions with MAF under the Rice-SDP project are ongoing. Assessment will be undertaken after completion of construction work and during the operation of the irrigation, drainage, and flood protection facilities. Prek Chik and Taing Krasaing main canal and head works have been completed 100%. Civil works for upgrading, modernization, and extension of Chroab, Korkoah, Prek Chik Package 1 and Package 2 distribution systems have been in progress. Improvement of drainage of Prek Chik and Taing Krasaing is ongoing. This is being ensured by incorporating as a clause in the works contracts.

**Geographical Location**  
Battambang, Kampong Thom

**Safeguard Categories**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>B</td>
</tr>
<tr>
<td>Involuntary Resettlement</td>
<td>C</td>
</tr>
<tr>
<td>Indigenous Peoples</td>
<td>C</td>
</tr>
</tbody>
</table>

**Summary of Environmental and Social Aspects**

**Environmental Aspects**  
The project is classified as category B for environment. The IEE prepared in 2015 during the PPTA covers two subprojects, Taing Krasaing Scheme in Kampong Thom and Prek Chik Scheme in Battambang. The IEEs for Package CW03, 04 and 07, are being prepared and drafts will be submitted for ADB review.

**Involuntary Resettlement**  
The project is classified as category C for involuntary resettlement. A resettlement framework was developed to guide the screening of all sub-projects. The PMU submitted resettlement categorization reports with involuntary resettlement impact categorization to ADB for works packages CW 03, CW 04, and CW 07 in July and October 2016. Those were reviewed and responded by the Social Development Specialist.

**Indigenous Peoples**  
The project is category C for indigenous people. No indigenous people live in the project area, and none are expected to be impacted by the project.

**Stakeholder Communication, Participation, and Consultation**

**During Project Design**  
Farmer water user communities (FWUCs) will be involved in the design process. The FWUCs will be consulted during PPTA implementation through focus group meetings, community consultation meetings and day to day field work. A mapping of other CSOs will be done and NGOs involved in the water and irrigation sector will be consulted.

**During Project Implementation**  
Subproject agreements will be signed with FWUCs for participating in implementation of the subprojects and taking over operation and maintenance responsibility of tertiary canals.

**Business Opportunities**

**Consulting Services**  
The project will require 58 person-months of international consultant services and 630 person-months of national consultant services to provide technical support to help the PMU manage and implement the project efficiently. The consultant firms will be recruited in accordance with ADB’s Guidelines on the Use of Consultants (2013, as amended from time to time).

**Procurement**  
Procurement is expected to involve small and large works contracts and goods and will be done using ADB’s national and international competitive bidding and shopping methods. An imprest account will be maintained at the PMU level for ADB loan funds.

**Responsible ADB Officer**  
Long, Piseth Vou

**Responsible ADB Department**  
Southeast Asia Department

**Responsible ADB Division**  
Cambodia Resident Mission

**Executing Agencies**  
Ministry of Water Resources and Meteorology  
364 Monivong Blvd, Khan Chamkamorn Phnom Penh, Cambodia

**Timetable**

<table>
<thead>
<tr>
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<tr>
<td>Concept Clearance</td>
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<td>Fact Finding</td>
<td>16 Jun 2015 to 26 Jun 2015</td>
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<tr>
<td>MRM</td>
<td>04 Aug 2015</td>
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<tr>
<td>Approval</td>
<td>24 Sep 2015</td>
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<td>Last Review Mission</td>
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## Loan 3289-CAM

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<tr>
<th>Approval</th>
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<th>Effectivity Date</th>
<th>Closing</th>
<th>Original</th>
<th>Revised</th>
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<tr>
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<td>10 Nov 2015</td>
<td>06 Jan 2016</td>
<td>30 Sep 2021</td>
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### Financing Plan

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<th>Others</th>
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