RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Rating	Mitigation Measures	Responsibility
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Project effectiveness could suffer due to the lack of sufficient human resources within the executing agencies (MIH and MPWT) for project management and implementation.	M	The project includes provision for PIAC services to support project management and supervision of the works and on-the-job training for the PMUs within the MIH and MPWT. Adequately staffed PIUs will be established in the participating PWWs and DPWTs, the implementing agencies. The executing agencies will recruit additional staff when needed to support the project and post-project activities. The development partners will also provide project start-up support.	MIH, MPWT, PIAC
Limited absorptive capacity and skills of the PIUs could delay project implementation.	Н	Implementation of several subprojects will use a design, build and installation approach. This may result in technology and construction techniques new to Cambodia. It will also require experience and skills for monitoring compliance with performance standards and specifications, and for acceptance and commissioning of the completed works. Assessment of guarantees requested for energy efficient design and operations and related maintenance costs will also require specific knowledge.	PMUs, Start-up consultants, PIAC
		Project management may involve unfamiliar requirements, so additional support was provided under the TR-TA to assist in the preparation of design-build bidding documents for advance contracting. The PIUs within the implementing agencies PWWs and DPWTs will be strengthened with staff members who have the requisite skills and capacity building will be provided to develop the necessary capacities. The PIAC will be selected from companies with experience in the project management of technically similar design and build water supply and sanitation contracts. For advance action support bid preparation, suitably experienced start-up consultants will be recruited under the ICS.	
Public Financial Management: 1. PWWs – the financial sustainability of water investments could be adversely affected by a lack of financial management skills, an inadequate tariff structure, and irregular tariff adjustments.	L	The PIAC will provide training and capacity development in project financial management for PWW financial staff and for nonfinancial managers. The project will support the GDPWS within MIH in making the tariff adjustments necessary to keep pace with cost escalation and cost recovery. The participating PWWs are to become autonomous stateowned enterprises by 2018, in line with the Government's National Strategic Development Plan for 2014–2018.	PIAC, PWWs

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2. PWUs – the financial sustainability of wastewater investments could be adversely affected by a lack of financial management skills, poor tariff structures, and recovery of O&M costs.	M	The PIAC will provide training and capacity development in project financial management for DPWT and/or PWU financial staff and for nonfinancial managers involved in the wastewater and septage activities. The project will support the GDPW within MPWT with (i) the structuring of appropriate tariffs with uniformity between the DPWTs and PWUs, (ii) the structuring of management processes for improving the recovery of fees and charges for operations and maintenance, and (iii) regular tariff adjustments to keep pace with cost escalation and cost recovery.	PIAC, DPWTs, PWUs
Procurement: 1. The lack of familiarity with procurement processes could cause delays in the recruitment of consultants and the procurement of goods, equipment, and services.	Н	The MIH has established a procurement department with limited numbers of staff who have partial English language proficiency and resources that are insufficient for the intended procurement. MPWT will establish a procurement department and commit staff, and resources. Under Output 3 of the project, the staff members of the PMUs within MIH and MPWT will be strengthened and will receive training on ADB's processes for procurement and recruitment of consultants under start-up support and from the PIAC once established. The procurement officer at the ADB Cambodia Resident Mission will provide assistance before and during the procurement of the PIAC will be supported under project start-up arrangements.	MIH, MPWT, Start-up consultants, PIAC
Corruption: Political interference could adversely affect bidding and operations, and corruption could impair procurement and implementation.	M	The leadership at MIH and MPWT are focused on sector reform, transparency, sustainability, and increased autonomy. Project design with review before and after procurement of bidding documents, bid evaluation, contract award, project management, procurement compliance, and financial audits will help to mitigate the risk. Cambodia's anticorruption law adopted in April 2010 provides sanctions against conflicts of interest. An ACU headed by a senior minister has been established in the Prime Minister's Office.	Start-up consultant, PIAC, ACU, NAA, external auditor
Other: 1. The project could damage the environment through poor environmental management.	L	Environment safeguards measures will be integrated into the project design and planning stages and EMPs will be in place and monitored during the implementation to ensure (i) no water source pollution occurs through poor management of water treatment plant	PMUs, PIUs, environment consultant, PIAC

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¹ Output3: Project implementation supported and operation and maintenance developed.

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2. The presence of UXO could cause safety issues and/or delay project implementation.	Rating L	waste chemicals, and (ii) no water pollution occurs through the discharge of poor quality effluent from wastewater treatment plants. The Contractor Code of Conduct will include provisions for noise and dust control. The subproject work sites are in urban areas and are occupied by the urban populations. The consultation with the district government agencies, communes, and village chiefs has not identified any potential risk of UXO. Bid documents will emphasize the need for contractors to be aware of the risk with a requirement to consult the provincial, district and village administrations regarding potential risks and to plan their work accordingly. Where	Contractor, PIAC, PWW, DPWT
		unexpected UXO are encountered, the contract documents shall require that work is to cease until the UXO contamination has been identified and any necessary clearance and decontamination has been undertaken by a specialized contractor, managed by the respective PMU and PIUs. A clearance certificate and appropriate supporting documentation must be submitted to the government and ADB before any works start in areas where the presence of UXO is suspected.	
3. Inadequate availability of suitable sources of water could affect the project design and the ability to expand coverage.	M	The adequacy of water resources has been considered under the preliminary engineering designs prepared by the CDIA component of the PPTA. For Battambang the demands on the Sangké river are such that the river flows and the available resource reduce significantly in the dry season. This presents a need for careful management of the available resource and practical steps to limit and reduce consumption and demand. Standard templates for the preparation of WSPs prepared by MIH and GDPWS with the assistance of the WHO have been adopted during the PPTA. Training has been provided for the preparation of PWW specific WSPs by the participating PWWs and will continue during implementation. These were provided for demand management, water conservation, drought management, and	PWW (Battambang), PWWs
		climate adaptation. Community WATSAN training will include the need for dry season water use economy.	

H = high; S = substantial; M = moderate; L = low.

ACU = anticorruption unit; ADB = Asian Development Bank; CDIA = Cities Development Initiative in Asia; DPWT = Department of Public Works and Transport; EMP = environmental management plan; GDPW = General Department of Public Works; GDPWS = General Department of Potable Water Supply; ICB = international competitive bidding; ICS = individual consultant selection; MEF = Ministry of Economy and Finance; MIH = Ministry of Industry and Handicrafts; MPWT = Ministry of Public Works and Transport; NAA = National Audit Authority; NCB = national competitive bidding; O&M = operation and maintenance; PIAC = project implementation assistance consultant; PIU = project implementation

unit; PMU = project management unit, PPTA = project preparatory technical assistance; PWU = provincial wastewater unit; PWW = provincial waterworks; UXO = unexploded ordinance; WHO = World Health Authority; WSP = water safety plan.

Source: Asian Development Bank.