

## PROJECT PREPARATORY TECHNICAL ASSISTANCE

### A. Justification

1. There is an urgent need to support the government in the development of the urban water supply and sanitation sector in Cambodia and to identify appropriate projects and implementation options with them, including potential engagement with the private sector. The government has identified a number of priority towns to be covered under the ensuing project loan. A project preparatory technical assistance (TA) is required to review the available studies and designs, prepare additional studies and designs, prepare a master plan and roadmap, and develop a project suitable for ADB funding in terms of technical, financial, economic, institutional, sector policy, legal, social, poverty, gender and safeguard contexts, in conjunction with the country partnership strategy (CPS), operational experience, and lessons from evaluations of previous projects.

2. The Project will contribute to the Government's target for 100% urban water supply coverage by 2025 and align with proposed government targets for urban sanitation. The Project will expand water supply and sanitation coverage in selected towns<sup>1</sup>, including (i) increased access to 24-hour supply and improving water quality, to meet Cambodia's national drinking water standards, in at least four towns from Battambang, Kampong Thom, Pursat, and Svay Rieng provinces, which have been identified as being most in need by the MIH to meet demand in these rapidly expanding towns; (ii) rehabilitation/expansion of urban sanitation services, under the MPWT, will focus on the provision of septage management services and/or sewerage system development for Battambang, Pursat, Svay Rieng, and Sihanoukville, to complement the expansion of the water supply systems and ongoing/planned ADB urban development projects<sup>2</sup>; (iii) TA to pave the way for further investment to improve services in other provincial and sub-provincial towns, which is an increasing area of concern for the Government; (iv) capacity development to assist the MIH to improve water utility performance, service provision, and tariff setting by replicating similar initiatives that made Phnom Penh Water Supply Authority (PPWSA) successful,<sup>3</sup> including on-the-job training for staff; and (v) capacity development to assist the MPWT to establish septage management services, improve existing sewerage services, and improve financial sustainability. In addition, the Project will provide opportunities for the two ministries to collaborate more closely and pilot initiatives, such as sanitation tariffs being included in the water billing. The project interventions will build on lessons from previous ADB projects.<sup>4</sup>

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<sup>1</sup> Additional Appendix 5 contains a full list of towns for consideration during the PPTA, which will be prioritized based on the available budget.

<sup>2</sup> Loan 2983-CAM *GMS Southern Economic Corridor Towns Development Project* approved in December 2012; the proposed loan for the *Integrated Urban Environmental Management in the Tonle Sap Basin Project*, for approval in 2015; and the proposed Loan for the *Second GMS Corridor Towns Development Project*, for approval in 2016.

<sup>3</sup> The factors that have contributed to PPWSA's success included (i) strong and continuous leadership, (ii) financial autonomy, (iii) continuous staff development and performance-based bonuses, (iv) customer-orientated service, (v) high-quality infrastructure and equipment, and (vi) a strong focus on NRW reduction and energy efficiency.

<sup>4</sup> ADB Provincial Towns Improvement Project (loans 1725-CAM and 2013-CAM). Among lessons learned are the need to (i) promote high quality design for water treatment plants to allow flexible operation, (ii) procure good-quality equipment, and (iii) select equipment that can be easily repaired or replaced.

## B. Major Outputs and Activities

3. The TA will be structured into two activities (i) technical pre-feasibility studies, cost estimates, and preliminary engineering designs for priority projects will be prepared by the Cities Development Initiative for Asia (CDIA)<sup>5</sup> and (ii) project preparation and safeguards will be prepared by ADB's TA consultants. To provide more advanced studies and designs to be developed ready for project preparation and safeguards assessments, preparation of activity (i) will precede that of (ii). The CDIA Consultants will maintain close coordination and collaboration with the TA Consultants to ensure that financial and economic analyses are consistent with the project components and the outputs of the safeguards assessments are included in the proposed design of each component.

4. The CDIA activities are not covered by the TA but are planned to include (i) conduct rapid assessments for nine towns to confirm the final towns selected for the Project; (ii) review and assist in the update of long and medium term development plans for the sector; (iii) prepare a 20-year roadmap for increasing urban water supply and sanitation coverage; (iv) undertake technical feasibility studies and assist the EA to evaluate and prioritize subproject towns; (v) prepare cost estimates, (vi) prepare preliminary engineering designs for priority subprojects and sample bidding documents, (vii) prepare a procurement capacity assessment for the executing and implementing agencies; and (viii) detailed implementation and procurement arrangements. The preliminary list of project towns for rapid assessment and proposed focus is included Table A3.1.

**Table A3.1: Summary of Consulting Services Requirement**

<b>Town</b>	<b>Water Supply</b>	<b>Sanitation</b>
Battambang	Yes	Yes
Pursat	Yes	Yes
Svay Rieng	Yes	Yes
Stueng Saen (Kampong Thom Province)	Yes	Yes
Stoung (Kampong Thom Province)	Yes	No
Taing Krasang (Kampong Thom Province)	Yes	No
Mondul Kiri	Yes	No
Serei Saophoan (Banteay Meanchey Province)	No	Yes
Sihanoukville	No	Yes

Source: Asian Development Bank

5. The TA will prepare (i) financial and economic viability and sustainability, including assessment of the project's cost recovery objectives, tariff setting mechanisms, affordability, financial management assessment, and financial analysis of entities; (ii) environmental and social soundness (including safeguards due diligence; documentation and consultations with affected households and other stakeholders; and preparation of other safeguards plans as required, based on social impact analysis); (iii) assessments of the capacity of MIH and MPWT

<sup>5</sup> CDIA is a regional initiative established in 2007 by the Asian Development Bank and the Government of Germany, with additional funding support from the governments of Austria, Sweden, Switzerland and the Shanghai Municipal Government. The Initiative provides assistance to medium-sized Asian cities to bridge the gap between their development plans and the implementation of their infrastructure investments. CDIA uses a demand driven approach to support the identification and development of urban investment projects in the framework of existing city development plans that emphasize environmental sustainability, pro-poor development, good governance, and climate change mitigation/adaptation. To facilitate these initiatives at city level, CDIA provides a range of international and domestic expertise to cities that can include support for the preparation of pre-feasibility studies for high priority infrastructure investment projects as one of several elements.

to implement monitor safeguards; and (iv) prepare a program for institutional development and capacity building. The major outputs and activities of the TA are summarized in Table A3.2.

**Table A3.2: Summary of Major Outputs and Activities  
(including Proposed CDIA Activities in italics)**

<b>Major Activities</b> ( <i>CDIA tasks shown in italics to show links to the TA</i> )	<b>Major Outputs</b>	<b>Expected Completion Date</b>
1. <i>CDIA Preparatory Activities</i>	<i>CDIA Inception Report</i>	15 March 2016
1.1 <i>Establish methodology and context</i>		
1.2 <i>Develop work program</i>		
1.3 <i>Conduct rapid assessments</i>		
2. ADB TA Preparatory Activities	TA Inception Report	15 April 2016
2.1 Conduct stakeholder Analysis and prepare Stakeholder Communication Strategy <sup>6</sup>		
2.2 Establish TA methodology for project preparation		
2.3 Develop work program		
3. <i>CDIA Sector Analysis, Data Collection, and Review of Government Proposals</i>	<i>CDIA Interim Report</i>	31 May 2016
3.1 <i>Review sector strategy and recommend improvements</i>		
3.2 <i>Refine project rationale</i>		
3.3 <i>Review existing data and feasibility studies, and identify data gaps</i>		
3.4 <i>Conduct Surveys and data collection</i>		
3.5 <i>Confirm and prioritize sub-projects for the selected towns</i>		
4. <i>CDIA Roadmap and Pre-Feasibility Assessment:</i>	<i>CDIA Draft Pre-Feasibility Report</i>	31 August 2016
4.1 <i>Update existing and prepare new pre-feasibility studies</i>		
4.2 <i>Prepare Roadmap</i>	<i>CDIA Pre-Final Feasibility Report</i>	31 October 2016
4.3 <i>Prepare technical pre-feasibility studies for the selected towns</i>		
4.4 <i>Prepare preliminary engineering designs for priority subprojects</i>		
4.5 <i>Prepare cost estimates and sample bidding documents</i>		
5. ADB TA Project Preparation and Due Diligence	TA Interim Report	31 July 2016
5.1 Conduct stakeholder consultations	TA Draft Final Report	30 November 2016
5.2 Assess capacity of MIH and MPWT to implement safeguards		
5.3 Conduct financial management assessment of MIH and MPWT	TA Final report	31 January 2017
5.4 Assess economic and financial viability and sustainability and affordability		
5.5 Assess social, poverty, and gender impacts and prepare SPRSS, GAP, SCS and PP		
5.6 Assess environmental and social impacts; prepare IEEs, RPs, and IPPs, as required		
5.7 Develop detailed implementation arrangements		
5.8 Institutional Strengthening and Capacity Development		
5.9 Identify key stakeholders and assess institutional capacity constraints		
5.10 Develop institutional capacity building plan		
5.11 Prepare RRP, PAM, procurement plan, and financing plan		

IEE = initial environmental examination; IPP = indigenous people plan; PAM = project administration manual; RP = resettlement plan; RRP = Report and Recommendation of the President, TA = technical assistance.

Source: Asian Development Bank.

<sup>6</sup> Using ADB guidelines and templates for preparation of Stakeholder Analysis and Stakeholder Communication Strategies.

### C. Cost Estimate and Proposed Financing Arrangement

6. The TA is estimated to cost \$700,000 equivalent financed on a grant basis, including (i) \$500,000 will be financed on a grant basis by the Cooperation Fund for Project Preparation in the GMS and in Other Specific Asian Countries and administered by ADB,<sup>7</sup> and (ii) \$200,000 from the TA Special Fund. CDIA will also be requested to finance upfront technical feasibility studies for the selected towns. The government will provide in-kind contributions including office space, where available, and counterpart staff. The government was advised that approval of the TA does not commit ADB to finance any ensuing project. The detailed cost estimate is presented in Table A3.3.

**Table A3.3: Cost Estimates and Financing Plan**  
(\$'000)

Item	Total Cost
<b>A. ADB Financing<sup>a</sup></b>	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (20 person-months)	418.0
ii. National consultants (25 person-months)	95.5
b. International and local travel	25.0
c. Reports and communications	5.0
2. Equipment (computer, printer, etc.) <sup>b</sup>	10.0
3. Workshops, training, seminars, and conferences <sup>c</sup>	
a. Facilitators	6.0
b. Workshops/training	20.0
4. Land transportation <sup>d</sup>	16.0
5. Surveys and investigations	30.0
6. Miscellaneous administration and support costs	20.0
7. Representative for contract negotiations	5.0
8. Contingencies <sup>e</sup>	49.5
<b>Total</b>	<b>700.0</b>

<sup>a</sup> Joint financing of \$500,000 from AFD and \$200,000 from ADB's TA special fund.

<sup>b</sup> Technical Assistance Supervising Units need to report equipment purchased under TA budget to OAS Asset Management and Commercial Services in compliance with AO 4.02, Appendix 2, paragraphs 1.5 and 1.6. All equipment procured under the PPTA will be turned over to the EA upon completion of the PPTA, which will include the following:

Type	Quantity	Cost
Desktop and laptop computers with software, 1 color laser printer, 1 black and white laser printer, 1 photocopy machine, and office furniture.	1 set	\$10,000

<sup>c</sup> Workshops, training, seminars, and conferences will be prepared and conducted by the TA consultants.

Purpose	Venue
Inception, interim, and final workshops	Government Offices or hotel

<sup>d</sup> Vehicle (no ministry vehicles available)

	Expected length of use
Vehicle hire for consultants use for fieldwork (multiple locations) and liaison purpose	8 vehicle months

<sup>e</sup> Contingencies may be used to engage additional international procurement expertise to assist the EA with advance actions, ADB procedures and documentation, and recruitment of the project implementation assistance consultant  
Source: Asian Development Bank estimates.

### D. Consulting Services

7. All consultants will be engaged through a firm(s), except the Finance Specialist and Economist, which will be recruited as individual consultants. The TA will require seven positions

<sup>7</sup> Financing partner: The Government of France.

and 20 person-months of international consulting services and 6 positions and 25 person-months of national consulting services. ADB will select and engage consultants according to ADB's *Guidelines on Use of Consultants* (2013, as amended from time to time) and other arrangements satisfactory to ADB for the selection and engagement of national consultants. The quality and cost-based selection method, using the quality cost ratio of 90:10 will be followed, since a high degree of technical quality is required. Simplified technical proposals will be required. Table A3.4 summarizes the consulting services required.

**Table A3.4: Summary of Consulting Services Requirement**

<b>International Name of Positions</b>	<b>Person- months</b>	<b>National Name of Positions</b>	<b>Person- months</b>
Team Leader/ Urban Water Supply and Sanitation Specialist	6	Deputy Team Leader/ Urban Water Supply and Sanitation Specialist	8
Institutional Development Specialist	2	Institutional Development Specialist	3
Economist	2	Economist	3
Finance Specialist	2	Finance Specialist	3
Environment Specialist	3	Environment specialist	4
Social Development/ Gender Specialist	3	Social Development/ Gender Specialist	4
Social Safeguards Specialist	2		

Source: Asian Development Bank

8. The outline terms of reference for the TA consultants are described in paras. 9–18 below.

9. The Team Leader will (i) provide overall organization of the TA; (ii) guide, supervise, and coordinate the work of all team members; (iii) prepare risk and procurement assessments to establish appropriate project categorization; and (iv) take overall responsibility for preparing reports and consolidating reports prepared by all team members,. The Deputy Team Leader will assist the Team Leader to accomplish all tasks and coordinate the national team members.

10. The international and national urban water supply and sanitation specialists will (i) review and assist in the finalization of all plans, reports, and feasibility studies of CDIA to ensure their suitability for the Project; and (ii) where appropriate recommend potential improvements using new technologies to improve performance and reduce energy consumption and carbon footprints. The international and national water supply engineers and national urban sanitation specialist will (i) consult key stakeholders, in collaboration with international and national social development and gender specialists, to identify major issues and bottlenecks to service delivery; (ii) confirm the priority areas and finalize the infrastructure investment subprojects; and (iii) prepare operation and maintenance plans.

11. The international and national institutional development specialists will (i) identify policy, institutional, and human resource bottlenecks for urban management; (ii) assess the managerial, technical, and administrative capacities disaggregated by sex; (iii) review existing training programs; (iv) prepare an institutional analysis including institutional gender assessment; and (v) develop a capacity development program.

12. The international and national finance specialists will (i) conduct financial management assessment of the EA and each PWW and recommend measures to strengthen financial management; (ii) prepare a project financing plan and design the funds flow and disbursement mechanism; (iii) propose auditor arrangements; and (v) for each subproject, review the IA's current tariff structure and cost recovery, and recommend appropriate actions to enhance finance viability, sustainability and affordability, and prepare a financial analysis. Relevant

guides and tools relevant to financial due diligence on ADB projects can be found at <http://www.adb.org/projects/operations/financial-management-resources>.

13. The international and national economists will (i) conduct socioeconomic surveys and prepare baseline data, in collaboration with international and national social development and gender specialists (ii) conduct a 'strength, weakness, opportunities and threats' SWOT analysis, and (iii) prepare economic analyses for individual project components and the project as a whole, following ADB's guidelines, including the opportunity cost of any land acquisition. In conducting the economic analysis, the 10 key areas of economic analysis will be covered as outlined in OM Section G1 and elaborated in 'Key Areas of Economic Analysis of Investment Projects-An Overview'.<sup>8</sup> In addition, reference will be made to the 'Economic Analysis of Water Supply Projects'<sup>9</sup> and the 'Cost-Benefit Analysis for Development: A Practical Guide'<sup>10</sup> in preparing the economic analysis for the subprojects.

14. The international and national environment specialists will (i) accomplish ADB's rapid environmental assessment (REA) and climate change checklists to support the Project's overall environmental categorization to be approved by ADB's Chief Compliance Officer; (ii) based on the approved categorization, prepare the required environmental assessment reports (e.g., IEE, EMP) for each urban area identifying direct, indirect, cumulative and induced impacts of the project as well as climate change and natural hazards considerations; (iii) undertake necessary activities in the preparation of the reports (e.g., fieldworks, public disclosure and/or stakeholders consultation); (iv) ensure that the environmental assessment reports conform to ADB's Safeguard Policy Statement 2009; (v) ensure that mitigating/enhancement measures identified in the IEEs/EMPs are integrated/incorporated into project design; and (vi) ensure EA/IA's compliance with applicable RGC national environmental requirements.

15. In addition, international and national environment specialists will (i) assess the institutional capacity of MIH and MPWT to prepare IEEs, and implement and monitor EMPs; (ii) design and incorporate environmental safeguard capacity building measures in the Project design; (iii) assess the gap between the country's environmental laws and regulations, and ADB's environmental safeguard requirements; (iv) prepare an EARF incorporating capacity building and environmental safeguard requirement gap-filling measures, as well as seek endorsement of MIH and MPWT; (v) prepare IEE(s) for one or two sample water supply subproject(s), and IEE(s) for one or two sample sanitation subproject(s).

16. The international national social development/gender specialists will conduct stakeholder analysis to inform social development action plans and project's social inclusion measures. The specialists will (i) conduct socioeconomic surveys, in collaboration with other specialists; (ii) review the Government policies and strategies for poverty reduction and gender development; (iii) conduct a public perception survey to identify public problems and development priorities; (iv) conduct a poverty, social, and gender analysis; (v) prepare a poverty reduction and social strategy; (vi) prepare a gender action plan and other social action plans; and (vii) prepare an SCS and the PP in collaboration with EA counterparts and relevant TA specialists.

17. The international and national social safeguards specialists will (i) review Government laws and regulations relevant to land acquisition and resettlement, and indigenous peoples/ethnic minorities; (ii) collect adequate data via surveys and consultations with affected

<sup>8</sup> <http://www.adb.org/documents/key-areas-economic-analysis-investment-projects-overview>.

<sup>9</sup> <http://lnadbg1.asiandevbank.org/edr0019p.nsf/webview?OpenView&Start=1&count=500>.

<sup>10</sup> <http://www.adb.org/documents/cost-benefit-analysis-development-practical-guide>

households and other stakeholders to assess the project's land acquisition and resettlement impacts, as well as impacts on indigenous peoples and/or ethnic minorities; (iii) work closely with other TA consultants in disclosing project information and obtaining feedback from project stakeholders, especially project affected households (AHs); (iv) work closely with other TA consultants to ensure that AHs' feedback, including suggested mitigation measures, are integrated in project design; (v) confirm the presence of any indigenous peoples at the project locations, (vi) prepare resettlement plans (RPs) and indigenous peoples plans (IPPs), as required;<sup>11</sup> (vii) ensure that the resettlement framework, IPPF, RP(s), and IPP(s) conform to ADB's Safeguards Policy Statement 2009; (viii) help the Government initiate a participatory process for RP and IPP preparation and disclosure; (ix) ensure the EA is aware of ADB social safeguards requirements; (x) assess the capacity of the responsible institutions to prepare, update, implement, and monitor RPs and IPPs, and propose capacity building and training programs as needed; and, (xi) prepare involuntary resettlement and indigenous peoples categorization forms and checklists.

18. Close coordination with the CDIA consultants engaged to undertake the feasibility studies and preliminary engineering will be essential and timing of deliverables for use by the PPTA consultants will be agreed between the two parties to ensure the efficient use of each consultants' inputs. Responsibility for this coordination will be for the two Team Leaders.

## E. Implementation Arrangements

19. The MIH and MPWT will be the two EAs, while the selected PWWs and provincial departments of PWT will be the IAs. The TA consultants will be based in Phnom Penh at a single project office. The project implementation units will provide temporary office space to the consultants when they travel to the field. The government will provide qualified counterpart staff, office administrative support services and logistics, and necessary data and reports. The EAs and ADB will be responsible for supervision of the quality of the TA work.

20. Disbursements under the TA will be done in accordance with the ADB's *Technical Assistance Disbursement Handbook* (May 2010, amended from time to time). The consultants may procure equipment through shopping according to ADB's *Procurement Guidelines* (2015, amended from time to time). The equipment procured will be transferred to the project management unit upon completion of the TA.

21. The TA is expected to commence on 1 March 2016 and be completed by 31 January 2017. The proposed TA processing and implementation schedule is listed in Table A3.5.

**Table A3.5: Proposed Technical Assistance Processing and Implementation Schedule**

<b>Major Milestones</b>	<b>Expected Completion Date</b>
Commencement	1 March 2016
Inception report	31 March 2016
Interim report	31 July 2016
Draft final report	31 October 2016
Final Report	31 January 2017
Financial closure (including loan start-up activities)	31 December 2017

<sup>11</sup> Social Safeguards Due Diligence Reports (DDRs) will be prepared for subprojects that do not have any involuntary resettlement and/or indigenous peoples impacts.

## ATTACHMENT A

### OUTLINE TERMS OF REFERENCE CONSULTING SERVICES THROUGH CDIA FOR FEASIBILITY STUDIES AND PRELIMINARY ENGINEERING

#### A. Consulting Services

1. All consultants will be engaged through a firm(s). The TA will require 4 positions and 16 person-months of international consulting services and 10 positions and 50 person-months of national consulting services. ADB/CDIA will select and engage consultants according to ADB's *Guidelines on Use of Consultants* (2013, as amended from time to time) and other arrangements satisfactory to ADB for the selection and engagement of national consultants. The quality and cost-based selection method, using the quality cost ratio of 90:10 will be followed, since a high degree of technical quality is required. Short-technical proposals will be required.

**Table A3.6: Summary of Consulting Services Requirement**

International Name of Positions	Person- months	National Name of Positions	Person- months
Team Leader/ Urban Water Supply Engineer	7	Deputy Team Leader/ Urban Water Supply and Sanitation Specialist	9
Urban Drainage and Sanitation Engineer	5	Urban Water Supply Engineer	6
Electro-Mechanical Engineer	2	Urban Sanitation Engineer	6
Procurement Specialist	2	Structural Engineer	3
		Mechanical Engineer	3
		Electrical Engineer	3
		Costing Engineer/Procurement Specialist	4
		Senior Surveyor	4
		CAD Technicians (2 positions)	12

Source: Asian Development Bank

2. The consultants will conduct a rapid assessment (including cost estimates) of the needs for about nine towns, as agreed with ADB and the Ministry of Industry and Handicraft (MIH), responsible for urban water supply, and the Ministry of Public Works and Transport (MPWT), responsible for urban sanitation. Based on the results of the rapid assessments, a number of towns will be selected for feasibility study and preliminary design. The preliminary list of project towns and proposed focus is included Table A3.1 in the main text, and final selection of towns will be based on detailed selection criteria, which will include such items as (i) compatibility with ADB's Water Operation Plan; (ii) compatibility with ongoing and planned ADB urban development projects; (iii) willingness and readiness of project towns to participate; (iv) provision/expansion of both water supply and sanitation services; and (v) financial and operational sustainability of the infrastructure and services.

3. The outline terms of reference for the consultants are described in paras. 4–10 below.

4. The Team Leader (TL) will (i) provide overall organization and management of the Team and for data collection and analysis, feasibility studies, preliminary engineering design, and sample bidding/procurement documents; (ii) guide, supervise, and coordinate the work of all team members; and (iii) take overall responsibility for preparing reports and consolidating reports prepared by all team members. The Deputy Team Leader (DTL) will assist the TL to accomplish all tasks and coordinate the national team members.



5. The TL and DTL, in their roles as urban water supply engineers, will take an active role in supporting the national Water Supply Engineer in the development of the rapid assessments, water supply subproject solutions, and preparation of the feasibility studies and preliminary engineering designs. The TL will utilize his/her experience to recommend appropriate technical solutions and innovative technologies, where appropriate, to improve performance, reduce energy consumption and carbon footprints, and provide cost-effective operation and maintenance. A roadmap for short, medium, and long-term interventions for water supply development is required.
6. The international Urban Drainage and Sanitation Engineer, supported by the DTL and national Urban Sanitation Specialist will prepare detailed criteria for selection of the towns and assist with the rapid assessment, develop subproject solutions, prepare feasibility studies, and prepare preliminary engineering designs for the sanitation subprojects. Utilizing his/her experience, the international expert will recommend appropriate technical solutions and innovative technologies, where appropriate, to improve performance, reduce energy consumption and carbon footprints, and reduce pollution of local watercourses. Consideration of appropriate solutions using septage management, sewerage, and decentralized sewerage or a combination of these is required, together with a sanitation roadmap for future development. Proposed operation and maintenance of the subprojects should be minimized and reflect local capabilities and conditions.
7. The International Electro-Mechanical Engineer and national Electrical and Mechanical Engineers will work together with the water supply and sanitation engineers/specialists to support the development of the subprojects for water supply and sanitation. In particular, the use of appropriate technologies to enhance performance and reduce energy consumption is required, married to cost effective and simple operation and maintenance to suit local conditions.
8. The international and national Procurement Specialists will prepare draft procurements documents for selected projects for international and national competitive bidding for works and for goods and services, as needed, in accordance with ADB's standard bidding documents and procedures. The national specialist will also prepare detailed cost estimates for all subprojects based on previous recent projects and knowledge of local contractors pricing. The international specialist will review the cost estimates and other documents prepared accordingly. Both specialists will need to work closely with the engineers to ensure compatibility of scope.
9. The national Surveyor will report to the international water supply and sanitation engineers and prepare all necessary survey documents and scope based on discussions with the engineers. The Surveyor will also supervise/oversee the surveys and coordinate with the CAD technicians on any drawings, formats, and electronic files to be produced by the survey contractors.
10. Close coordination with the PPTA consultants engaged on the various due diligence work will be essential and timing of deliverables for use by the PPTA consultants will be agreed between the two parties to ensure the efficient use of each consultants' inputs. Responsibility for this coordination will be for the two Team Leaders.

## B. Cost Estimate and Proposed Financing Arrangement

11. The CDIA TA is estimated to cost \$700,000 equivalent financed on a grant basis to finance technical feasibility studies and preliminary engineering design for the selected towns. The Government, provinces, and towns will provide 20% in-kind contributions including office space, where available, and counterpart staff. The Government was advised that approval of the TA does not commit ADB to finance any ensuing project. The detailed cost estimate is presented in Table A3.7.

**Table A3.7: Cost Estimates and Financing Plan for CDIA Component**  
(\$'000)

Item	Total Cost
<b>A. ADB Financing</b>	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (16 person-months)	343.0
ii. National consultants (50 person-months)	164.0
b. International and local travel	20.0
c. Reports and communications	5.0
2. Equipment (computer, printer, etc.) <sup>a</sup>	15.0
3. Workshops, training, seminars, and conferences <sup>b</sup>	
a. Facilitators	4.0
b. Workshops/training	14.0
4. Vehicles <sup>c</sup>	16.0
5. Surveys and investigations	60.0
6. Miscellaneous administration and support costs	20.0
7. Contingencies	39.0
<b>Total</b>	<b>700.0</b>

<sup>a</sup> Technical Assistance Supervising Units need to report equipment purchased under TA budget to OAS Asset Management and Commercial Services in compliance with AO 4.02, Appendix 2, paragraphs 1.5 and 1.6. All equipment procured under the PPTA will be turned over to the EA upon completion of the PPTA, which will include the following:

Type	Quantity	Cost
Desktop and laptop computers with software (including CAD), 1 color laser printer, 1 black and white laser printer, 1 color A1 plotter, 1 photocopy machine, and office furniture.	1 set	\$15,000

<sup>b</sup> Workshops, training, seminars, and conferences will be prepared and conducted by the TA consultants.

Purpose	Venue
Inception, interim, and final workshops	Government Offices or hotel

<sup>c</sup> Vehicle (no ministry vehicles available)

	Expected length of use
Vehicle hire for consultants use for fieldwork (multiple locations) and liaison purpose	8 vehicle months

Source: Asian Development Bank estimates

## E. Implementation Arrangements

12. The MIH and MPWT will be the two EAs, while the selected PWWs and provincial departments of PWT will be the IAs. The consultants will be based in Phnom Penh at a single project office, which may be shared with the PPTA consultants. The project implementation units will provide temporary office space to the consultants when they travel to the field. The government will provide qualified counterpart staff, office administrative support services and logistics, and necessary data and reports. The EAs and ADB will be responsible for supervision of the quality of the TA work.

13. Disbursements under the TA will be done in accordance with the ADB's *Technical Assistance Disbursement Handbook* (May 2010, amended from time to time). The consultants may procure equipment through shopping according to ADB's *Procurement Guidelines*. The equipment procured will be transferred to the project management unit upon completion of the TA.

14. The proposed schedule is listed in Table A3.8.

**Table A3.8: Proposed Implementation Schedule**

<b>Major Milestones</b>	<b>Expected Completion Date</b>
Commencement	1 February 2016
Inception report including rapid assessments	15 March 2016
Interim report	31 May 2016
Draft final report	31 August 2016
Final Report	31 October 2016