



Technical Assistance Report

Project Number: 46474-001
Regional–Capacity Development Technical Assistance (R-CDTA)
December 2012

Green Cities–A Sustainable Urban Future in Southeast Asia

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
CPS	–	country partnership strategy
SEUW	–	Southeast Asia Urban Development and Water Division
TA	–	technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Regional–Capacity development technical assistance (R-CDTA)
Targeting classification	–	General intervention
Sector (subsector)	–	Multisector (urban sector development, land-based natural resources management, renewable energy, energy efficiency and conservation, water supply and sanitation, waste management, other municipal services)
Theme (subthemes)	–	Environmental sustainability (urban environmental improvement), economic growth (knowledge, science, and technological capacities), social development (disaster risk management), capacity development (institutional development)
Climate change	–	Climate change adaptation
Location (impact)	–	Urban (high), national (medium), regional (medium)

NOTE

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

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Director General	K. Senga, Southeast Asia Department (SERD)
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I. INTRODUCTION

1. Under Strategy 2020, the Asian Development Bank (ADB) identifies environmentally sustainable growth, including infrastructure and climate change, as a priority for development and operations.¹ The regional capacity development technical assistance (TA) for green cities will operationalize ADB's Urban Operational Plan,² 2012–2020 focusing on its three principles of environment, equity, and economics; and build on existing knowledge products developed by the urban community of practice to ensure green, inclusive, and competitive cities. The design and monitoring framework is in Appendix 1.³

2. The TA emerged from discussions related to green city action plans by the Indonesia–Malaysia–Thailand Growth Triangle subregional economic cooperation program of ADB's Southeast Asia Regional Cooperation Division. Scoping studies for the plans were fielded under a 2010 regional TA project for the cities of Melaka, Malaysia and Songkhla, Thailand.⁴

3. The proposed green cities TA will focus on Indonesia, Myanmar, the Philippines, and Viet Nam to assess the potential for replicability in Southeast Asian cities. It will develop green city action plans for two cities from the participating countries, subject to the agreement of the respective governments. The TA will pilot test innovative approaches for urban management for green cities. It will catalyze sustainable urban development of selected Southeast Asian cities as regional economic green growth centers with improved quality of life.

4. The TA is aligned with the urban sector assessments, strategies, road maps, and country partnership strategies (CPSs) of Southeast Asian countries. The green city initiative is included as part of the stock taking and lessons from the ADB CPS, 2007–2011 and for the CPS 2012–2016 for Thailand;⁵ the interim CPS, 2011–2012 for Malaysia;⁶ and the country operations business plans, assessments, strategies, and road maps for Cambodia, Lao People's Democratic Republic, and Viet Nam, which prioritize integrated urban development and capacity building. The TA could provide a model for taking this forward. The TA is aligned with the five strategic thrusts of the Greater Mekong Subregion Economic Cooperation Program Strategic Framework, 2012–2022.⁷ Subject to government agreement, in coordination with the resident missions, the model could be applied in all Southeast Asian countries.

II. ISSUES

5. Rapid urbanization is a key challenge for balancing economic growth and environmental sustainability to achieve improved quality of life. While Southeast Asia is one of the world's least urbanized regions, its urban population is growing 1.75 times faster than the world's urban population.⁸ Rapid urbanization strains a municipality's capacity to meet infrastructure and other

¹ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

² ADB. 2012. *Urban Operational Plan, 2012–2020*. Manila.

³ The TA first appeared in the business opportunities section of ADB's website on 29 November 2012.

⁴ ADB. 2010. *Technical Assistance for Public–Private Partnership Development in Brunei Darussalam–Indonesia–Malaysia–Philippines East ASEAN Growth Area and Indonesia–Malaysia–Thailand Growth Triangle*. Manila (TA7626-REG, \$1,000,000, approved on 22 October). The scoping studies were allocated \$200,000.

⁵ ADB. 2007. *Country Partnership Strategy: Thailand, 2007–2011*. Manila; ADB. Forthcoming. *Country Partnership Strategy: Thailand, 2012–2016*. Manila.

⁶ ADB. 2011. *Interim Country Partnership Strategy: Malaysia, 2011–2012*. Manila.

⁷ ADB. 2011. *Greater Mekong Subregion Economic Cooperation Program Strategic Framework, 2012–2022*. Manila.

⁸ B. Yuen and L. Kong. 2009. Climate Change and Urban Planning in Southeast Asia. *Cities and Climate Change*. 2 (3).

urban service demands. Cities, as drivers of economic growth, are resource intensive. They occupy about 2% of the world's land, consume 75% of land resources, and contribute to global climate change with their increased rate of greenhouse gas emissions. Despite the challenges brought on by climate change, energy production and consumption in Southeast Asia remains unchanged and continues to generate enormous quantities of waste and pollution, contributing to environmental degradation.

6. Lack of comprehensive urban planning and increased vulnerability from impacts of climate-induced change are exacerbating the challenge. Cities are confronted with increasing air and water pollution, inadequate water supply, nonrevenue water, inefficient sanitation, deficient drainage, flooding, and inundation due to increased vulnerability to climate change impacts. Poverty makes the urban poor vulnerable to even the slightest local weather change. About 28% (57 million) of Southeast Asia's urban population lives in informal settlements often located in unsafe areas, which generates further risks to life, health, and property.

7. Lack of coordination between environmental management and urban planning has led to inefficient use of resources and the deterioration of environmental conditions, affecting urban services and quality of life in Southeast Asian cities. Urban systems are complex, involving multiple sectors, administrative boundaries, and jurisdictions. Thus urban governance and management are key to the effective delivery of urban services. The capacity of local government units and other stakeholders to mainstream environmental management quality and resilience into urban planning processes and service delivery needs to be enhanced. This will lead to efficient resource utilization and improved environment conditions, making cities livable.

8. For selected cities in the participating countries, the TA will promote a paradigm shift and develop comprehensive green city action plans in response to urbanization and environmental challenges to balance new initiatives with required retrofits as short-, medium-, and long-term strategies.

9. The TA will help build capacity among developing member countries to develop and implement policies, programs, and projects that mainstream integrated urban planning and environmental management that will enhance the economic, social, and environmental sustainability of urban infrastructure and services. The TA will build on knowledge products developed by the urban community of practice and synergize with proposed TA projects of the Regional and Sustainable Development Department for developing urban management partnerships for capacity enhancement of urban sector agencies. Increased capacity among developing member countries will enable ADB to better align all urban operations with the three strategic agendas of Strategy 2020: inclusive economic growth, environmentally sustainable growth, and regional integration.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The impact will be sustainable green cities with improved quality of life in selected Southeast Asian countries. Such improvements will be measured by city adoption and implementation of green city action plans. The outcome will be enhanced capacity of local government units and other stakeholders for green city development and resource-efficient urban planning in selected cities in Southeast Asia.

B. Methodology and Key Activities

11. The TA will have two outputs: green city action plans and urban management partnerships. Additional activities, or additions to initial activities, may be proposed later based on knowledge-sharing partnerships.

12. **Green city action plans.** Plans will be developed for each city in the selected countries by 2015 to mainstream an integrated urban planning and development process by incorporating environmental criteria and climate change adaptation and mitigation to improve urban service quality and resilience. The plans will create a pipeline of projects and key investments for green cities by

- (i) developing an urban profile covering environment and socioeconomic conditions, and a needs assessment for each city to identify and prioritize potential urban sector projects for increasing resource efficiency and resilience in urban services; and
- (ii) developing an urban management and implementation plan, including investment and capacity development plans for new initiatives and retrofits for the short and long term. Short-term investment projects will focus on resilient urban services in transport, energy, and environment (water, wastewater, and solid waste).

13. **Urban management partnerships.** Partnership will be established to develop the core capacities of national and local governments, civil society, and the private sector in green city planning and management by developing innovative implementation mechanisms based on two broad pillars:

- (i) **Knowledge.** Partnerships will support knowledge sharing and improved competency in integrated urban planning, environmental management, and climate resilience to strengthen capacity for green city project implementation. Partnerships will strengthen linkages with national strategies to support the education curriculum, skills and vocational education for green industry, and civil society awareness and ability to act as agents for delivery. Ultimately this will lead to a green economy and green jobs. Partnerships will also provide the platform for green technology exchange and private sector participation, which could be developed and anchored within a broader regional knowledge hub for Southeast Asia.
- (ii) **Finance.** A review of existing financial mechanisms for urban sectors in the selected countries will identify innovative finance mechanisms for sustainable green city development, such as structuring country-specific models for urban infrastructure finance facilities, and their scope of operation and indicative financing needs.

14. The TA will promote synergies with ongoing TA projects and knowledge products for institutional development and comprehensive needs assessments. It proposes to build on the Urban Climate Change Resilience Trust Fund currently being prepared.⁹ The TA will utilize related knowledge products as applicable from ADB's Urban Operational Plan, such as the integrated urban sustainability assessments, the green cities and inclusive cities toolkits, and

⁹ To be financed by the Department for International Development of United Kingdom and the Rockefeller Foundation.

tools such as the rapid assessment of city emissions and transport emissions evaluation models for project cities in partnership with the Clean Air Initiative for Asian Cities. These will be used to conduct economic, environmental, social, financial, and capacity needs assessments in preparing the green city action plans. Prioritization of projects can be conducted in partnership with the Cities Development Initiative for Asia using the city infrastructure investment programming and prioritization toolkit.

C. Cost and Financing

15. The TA is estimated to cost \$720,000, which will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The governments will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions. No activities will be financed in any participating country unless a no objection is obtained from the government of that country. The detailed cost estimates and financing plan is presented in Appendix 2.

D. Implementation Arrangements

16. As the executing agency, ADB will administer the TA, through the Southeast Asia Urban Development and Water Division (SEUW). It expects to implement the TA from January 2013 to July 2015. SEUW, in close coordination with Southeast Asia Regional Cooperation and Operations Coordination Division; Regional and Sustainable Development Department; and country offices, will work in cooperation with the national government organizations, local governments, nongovernment organizations, and other international organizations in the targeted countries. An urban development expert (international consultant, 15 person-months) will coordinate the TA. The consultant will collaborate and coordinate inputs from key divisions within ADB and other agencies to develop synergies with sustainable transport, energy efficiency, and regional cooperation. ADB will engage an international consulting firm (about 56 person-months), including national specialists to carry out the TA activities in close coordination with the project officer and urban development consultant (Appendix 3). Key expertise will include an urban and regional planner, environmental engineer, energy efficiency specialist, sustainable transport specialist, water and wastewater specialist, solid waste management specialist, institutional management specialist, financial specialist, and social development specialist. ADB will engage the consultants using the quality- and cost-based selection with 90:10 weightage for technical and financial expertise. This ratio is proposed due to the importance of specific technical skills required in delivering the task, comprising the integration of urban planning, environment management, climate resilience, and institutional capacity development. Consultants will be selected in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). Proceeds of the TA will be disbursed in accordance with the *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

17. The TA will adopt an implementation framework for each participating country (supplementary appendix, available upon request). Each country will establish a national working group and a city working group to implement the TA. These groups will comprise senior government officials and enable incorporation of green growth strategies linked to long-term national economic development policies. The green growth strategies will influence project management in the cities and be coordinated across various local departments focusing on urban development. Each ministry will designate a green growth officer to oversee its projects and coordinate with the national and city working groups. The working groups will include representatives from the planning, finance, energy, environment, urban development, housing,

public works, and transport ministries. They will provide strategic direction, policy reform, and guidelines to prepare green city action plans; develop and operationalize a green growth strategy; prepare a time-bound action plan with specific targets and indicators; and establish the legal framework for enactment. City working groups will be established in local governments and include representatives of local government, private sector, academia, industry, nongovernment organizations, and community-based organizations. The TA will generate ideas for engaging the private sector to mobilize green city investments.

18. SEUW will develop a monitoring system for the TA to cover activities, inputs, outputs, outcomes, and financial management. A regional conference and in-country workshops will be used to disseminate project results and knowledge products on successful, replicable international practices, and develop country-appropriate response mechanisms for green city growth. A green city index (indicators) will be developed as part of the TA's environment quality data and urban profile. Green city citizen scorecards will be developed for the city governments to monitor quality of life indicators. Community-based organizations will participate in developing the criteria for scoring and in mobilizing the citizen feedback mechanism.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$720,000 on a grant basis for Green Cities—A Sustainable Urban Future in Southeast Asia, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Sustainable green cities with improved quality of life in selected Southeast Asian cities</p>	<p>Green city action plans adopted and implemented by selected cities by 2025</p> <p>Environmental management and resilience incorporated into urban planning processes</p> <p>Cities rank “above average” in Asian green city index</p>	<p>Urban development masterplans and policy statements</p> <p>Urban sector budgets (national and local governments)</p> <p>Departments of planning, construction, environment, and health</p> <p>Planning department, local government records, city government records, business council</p>	<p>Assumptions Central and provincial governments continue to support the development and growth of participating cities</p> <p>Favorable business climate prevails in the participating provinces and cities</p> <p>Complementary subregional cooperation initiatives for transport connectivity in IMT-GT cities proceed as planned</p> <p>Risks Cities are adversely affected by international economic developments</p> <p>Private sector does not have sufficient incentives to develop green solutions</p>
<p>Outcome Enhanced capacity of local government units and other stakeholders for green city development and resource-efficient urban planning in selected cities in Southeast Asia</p>	<p>Capacity of local government departments enhanced by 2015 with at least key persons able to plan, deliver, and manage urban infrastructure and services in each of the selected cities</p> <p>Efficiency of urban public utilities increased by 5% by 2020</p>	<p>Urban development masterplans and policy statements</p> <p>Urban sector budgets (national and local governments)</p> <p>TA reports</p> <p>Departments of planning, construction, environment, and health</p>	<p>Assumptions Central, provincial, and city governments and leadership remain fully committed to the project</p> <p>Communities are aware, and understand how they can participate and benefit</p> <p>Risk Political priorities may change</p>
<p>Outputs</p> <p>1. Development of green city action plans for each participating city in the selected countries</p> <p>2. Urban management partnerships established for</p> <p>(i) Knowledge-sharing and improved competency in integrated urban</p>	<p>Green city action plans developed by 2015 for at least two selected cities in each participating country</p> <p>Green city index (indicators) developed by 2015 comprising environment quality data and urban profile</p> <p>Regional conference and in-country workshops conducted for the participating cities in</p>	<p>Planning department</p> <p>Local government records</p> <p>Departments of environment, health, construction, and/or transport annual reports and studies</p> <p>TA reports</p>	<p>Assumptions Private sector has motivation and incentives to invest in green projects</p> <p>Key decision-makers and other key staff attend the workshops and conferences</p> <p>Risk Key urban managers are not able to commit fully to the capacity development program due to other assigned tasks</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks											
<p>planning, environmental management, and climate resilience; and strengthened capacity for green city project implementation, skills development, and vocational education for green city</p> <p>(ii) Review of applicability for structuring country-specific models for urban infrastructure finance facility</p>	<p>selected countries by 2015</p> <p>Green city citizen scorecards developed for monitoring by the city government, with CBO participation to advise on scoring criteria and mobilize the citizen feedback mechanism</p> <p>Urban management partnerships established with functional national and city working groups</p>													
<p>Activities with Milestones</p> <p>1. Develop green city action plan</p> <p>1.1 Conduct scoping studies for selected cities from March 2013 to April 2014</p> <p>1.2 Hold in-country workshops and technical discussions by October 2013</p> <p>1.3 Identify potential projects by November 2013</p> <p>1.4 Develop knowledge products and technical papers: May–October 2013</p> <p>1.5 Finalize green city action plans by December 2014</p> <p>2. Establish urban management partnerships</p> <p>2.1 Identify potential learning partners by May 2013</p> <p>2.2 Hold in-country workshops and technical discussions by October 2013</p> <p>2.3 Conduct regional conferences</p> <p>(i) Interim conference for knowledge sharing, technology: November 2013</p> <p>(ii) Dissemination workshop: November 2014</p>		<p>Inputs</p> <p>ADB (TASF-other sources): \$720,000</p> <table border="1" data-bbox="834 825 1443 1035"> <thead> <tr> <th data-bbox="834 825 1140 852">Item</th> <th data-bbox="1140 825 1443 852">Amount (\$'000)</th> </tr> </thead> <tbody> <tr> <td data-bbox="834 852 1140 882">Consulting services</td> <td data-bbox="1140 852 1443 882">676.0</td> </tr> <tr> <td data-bbox="834 882 1140 911">Training, seminars, and conferences</td> <td data-bbox="1140 882 1443 911">20.0</td> </tr> <tr> <td data-bbox="834 911 1140 940">Surveys</td> <td data-bbox="1140 911 1443 940">5.0</td> </tr> <tr> <td data-bbox="834 940 1140 997">Miscellaneous administration and support costs</td> <td data-bbox="1140 940 1443 997">6.0</td> </tr> <tr> <td data-bbox="834 997 1140 1035">Contingencies</td> <td data-bbox="1140 997 1443 1035">13.0</td> </tr> </tbody> </table> <p>Note: The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions.</p>	Item	Amount (\$'000)	Consulting services	676.0	Training, seminars, and conferences	20.0	Surveys	5.0	Miscellaneous administration and support costs	6.0	Contingencies	13.0
Item	Amount (\$'000)													
Consulting services	676.0													
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Surveys	5.0													
Miscellaneous administration and support costs	6.0													
Contingencies	13.0													

ADB = Asian Development Bank, CBO = community-based organization, IMT-GT = Indonesia–Malaysia–Thailand Growth Triangle, TA = technical assistance.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants ^b	468.00
ii. National consultants	141.00
b. International and local travel	60.00
c. Reports and communications	7.00
2. Training, seminars, and conferences	20.00
3. Surveys	5.00
4. Miscellaneous administration and support costs	6.00
5. Contingencies	13.00
Total	720.00

Note: The governments will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions.

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-other sources).

^b Includes 15 person-months for an urban development specialist to be hired as an independent individual consultant.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. **Consulting firm.** The development of green city action plans will be carried out by a consulting firm (international and national counterparts) comprising a multidisciplinary team including an urban and regional planner, environmental engineer, energy efficiency specialist, sustainable transport specialist, water and wastewater specialist, solid waste management specialist, institutional management specialist, financial specialist, and social development specialist. In each participating city, a core team of professionals is proposed to coordinate and contribute to all activities, and conduct consultations and technical discussions. Table A3 provides a summary of qualification and experience requirements with indicative inputs (person-months) for each position.

2. The consultants will assess and review
 - (i) urbanization trends in the cities, including financial, management, governance, and institutional capacity to undertake urban development programs and projects;
 - (ii) medium- and long-term urban development and sector plans in the cities, such as
 - (a) existing policies, plans, reports, standards, and studies relating to urban infrastructure investments, physical planning, design, and management;
 - (b) current socioeconomic development plans and city master plans (if any); social equity concerns (recommendations on policy and institutional reform) and readiness to address these challenges, and identify best practice across cities;
 - (c) existing subsector development plans (as applicable to sustainability) including urban roads and drainage, water supply and sanitation, solid waste management, and border-gate development in the project cities;
 - (d) future development and priority needs in the project cities, including retrofitting options; and inform the integrated urban sustainability assessments for improvements and necessary updates for the existing development plans; (based on this the consultant will formulate an urban profile and baseline); and
 - (e) other information related to sustainability of (existing) investments in the urban sector, including climate vulnerability especially, parameters such as sea level rise and inundation, which may affect critical urban infrastructure;
 - (iii) the core capacity and institutional structures required for integrated urban planning and environment management: plans and policies, program and project formulation, and management of service delivery with the objective of developing urban management partnerships for the countries (potential options for developing the following innovative mechanisms for implementing sustainable green cities will be explored and recommended):
 - (a) knowledge sharing and improved competency in integrated urban planning, environmental management, and climate resilience; strengthened capacity for green city project implementation; skills development; and vocational education for green industry;
 - (b) existing financial mechanisms for the urban sector in the selected countries and innovative finance mechanisms for sustainable green city development, such as structuring country-specific models for urban infrastructure finance facilities and their scope of operations and indicative financing needs;

- (iv) spatial development needs covering policies and applications related to
 - (a) land management including mixed land use and densification;
 - (b) sustainable transport;
 - (c) technologies related to green buildings;
 - (d) public space management including greenways and neighborhood greening, public space for recreation, open spaces, street lighting, home zones, and urban farming;
 - (e) infrastructure resilience covering essential services such as water supply; wastewater treatment; solid waste management; sewerage systems and storm-water drainage; adequacy, coverage, and efficiency of urban services taking particular note of the environmental conditions, i.e., sanitation, street drainage, garbage collection, and urban forestation; and
 - (f) urban density, overcrowding, and quality of housing with particular consideration to poor urban communities;
- (v) water and sanitation needs, including policies and applications related to
 - (a) water resource management, i.e., basin-level management of shared water resources, including delineating, mapping, and managing urban watersheds;
 - (b) water security: household, economic, and environmental water security, including waterborne diseases; and water-related disaster resilience;
 - (c) water management, governance, and use, e.g., regulatory framework; demand-side management and planning; institutional coordination and capacity; efficiency of water-saving devices, nonrevenue water, and private sector participation;
 - (d) water supply, such as energy efficiency in water production, infrastructure, coverage, access, quality of service;
 - (e) sanitation and wastewater management, i.e., access to sanitation, sewerage collection, treatment plants, wastewater disposal, treatment facilities, and recycling; and
 - (f) flood control, including efficient street drainage;
- (vi) solid waste management needs including policies and applications related to waste management: regulatory framework, planning, institutional coordination and capacity, sewerage and septage collection, treatment plants and waste treatment technology, and e-waste disposal;
- (vii) potential for redeveloping and retrofitting
 - (a) brownfields, including industrial sites, urban renewal, and infill buildings;
 - (b) old buildings and infrastructure to improve resource consumption and energy efficiency; and
 - (c) innovative, environment-sensitive technologies for infrastructure such as water, sanitation, energy, building technologies, including waste to energy, and enhanced composting;
- (viii) good practice examples and potential for replication in the selected cities including
 - (a) improvement of environment infrastructure; climate resilience of critical infrastructure such as water supply, wastewater, and solid waste management; application of innovative treatment technologies; and
 - (b) improved livelihood and employment potential through improved tourism, green industries, and low carbon transport;

3. The consultants will develop a comprehensive green city database, comprising environment quality data and urban profiles. The consultants will develop the green city action plan and provide long-term recommendations including

- (i) policy and institutional reform, readiness to address identified challenges in each participating city, and identification of best practice across cities;
- (ii) development and adoption of an environment charter;
- (iii) identification of short-, medium- and long-term goals, actions, and targets with performance indicators covering means and options to conserve energy and water, reduce waste, address global warming, tailor urban design, protect natural habitats, improve transportation options, and reduce risks to human health;
- (iv) identify options and potential solutions for improved, sustainable, and energy efficient water supply, sanitation, and solid waste management in the selected project cities;
- (v) financial mechanisms for accessing resources;
- (vi) institutional mechanism for implementation and capacity development plans; and
- (vii) alignment with global targets such as the United Nations Environment Programme accords and applicability of international green city environment monitoring indicators, monitoring green city performance, and structuring a comprehensive green city database comprising environment quality data and urban profile; and development of a green city scorecard.

4. The consultants will conduct the proposed regional conference and in-country workshops to share knowledge products related to key competencies of urban management, particularly integrated urban development planning and climate change adaptation processes and technology options, and review existing financial mechanisms and associated institutional structures.

5. **Urban development specialist** (international). The specialist will coordinate the technical assistance (TA). Responsibilities include

- (i) monitor project preparation, from design to implementation;
- (ii) integrate Asian Development Bank (ADB) policies and guidelines in the project design; apply and introduce urban management toolkits, particularly but not limited to Integrated Urban Sustainability Assessment (IUSA, Green Cities, Inclusive Cities, and Competitive Cities, developed under the Urban Operational Plan; collaborate and coordinate inputs from other key operations divisions within ADB and other agencies to develop synergies with sustainable transport, energy efficiency, and regional cooperation;
- (iii) review reports and documentation provided by the TA consultants, especially regarding medium- and long-term urban development and sector plans such as (a) existing policies, plans, reports, standards, and studies relating to urban infrastructure investments, physical planning, design and management; (b) current socioeconomic development plans and city master plans; (c) existing subsector development plans (as applicable) including urban roads and drainage, water supply and sanitation, solid waste management, and border-gate development in the project cities; and (d) future development and priority needs in the project cities, and inform the project design for improvements and necessary updates of the existing development, including integration of climate resilience and adaptation in infrastructure design and improvements;
- (iv) review and research (as applicable) reports and other information related to sustainability of investments in the urban water sector, including climate

- vulnerability, especially parameters such as sea level rise and inundation, which may affect critical urban infrastructure;
- (v) support the design of workshops and conferences, and provide facilitation as required;
 - (vi) support the assessment of capacity and institutional development needs of the executing and implementing agencies; and
 - (vii) support and assist in project-related documentation.

6. The international urban development specialist will be deployed on an intermittent basis for 15 person-months over 2 years. The specialist will have a master's degree in urban and regional planning and development or a related subject and at least 10 years professional experience in urban planning and development, urban renewal, policy and management and institutional analysis, and knowledge and capacity development in urban management, preferably ADB and/or aid agency-funded.

Table A3: Team Composition and Qualification Requirements

Expertise	Minimum Requirements	Inputs (person-months)
International		19
Urban and regional planner, institutional management, team leader	10 years of professional experience in urban planning and development, urban renewal and rehabilitation, policy and management, institutional analysis, knowledge and capacity and skill enhancement	6
Environmental engineer and/or planner	10 years of professional experience in environmental management, clean technologies, planning and policy, applications of environmentally sustainable water sanitation and solid waste management techniques	6
Energy efficiency specialist and climate change	10 years of professional experience in energy efficiency applications and retrofits to urban services	2
Sustainable transport specialist	10 years of professional experience in sustainable and alternate transport planning, mobility options in urban areas	2
Social development and gender specialist.	10 years of professional experience in social and community development, gender, inclusiveness, and participatory methodologies	2
Economist and/or financial management specialist	10 years of professional experience in economic analysis, municipal finance, financial management, financial analysis	1
International individual consultant	10 years professional experience in urban planning and development, urban renewal, policy and management, institutional analysis, knowledge and capacity development in urban management. Experience with ADB and/or aid agency-funded essential	15
National	Team of core professionals in each participating city and/or country	34
Urban planner, institutional management, deputy team leader	7 years of professional experience in urban planning and development, urban renewal and rehabilitation, policy and management, institutional analysis	9
Environmental engineer and/or	7 years of professional experience in environmental	7

Expertise	Minimum Requirements	Inputs (person-months)
planner	management, industrial applications and regulatory compliance, water, sanitation, wastewater, and solid waste management	
Energy efficiency specialist and climate change	7 years of professional experience in energy efficiency applications and retrofits to urban services	4
Transport specialist	7 years of professional experience in transport planning and transport options in urban areas	4
Capacity building specialist	7 years of professional experience in preparation and implementation of capacity building and training programs	3
Social development and gender specialist.	7 years of professional experience in social and community development, gender, inclusiveness, and participatory methodologies	3
Economist and/or financial management	7 years of professional experience in economic analysis, municipal finance, financial management, financial analysis	4

Source: Asian Development Bank.