TERMS OF REFERENCE FOR CONSULTANTS

A. Project background

1. The Urban Development and Water Division of the Asian Development Bank's (ADB) Southeast Asia Regional Department (SEUW/SERD) prepares and administers loan and grant financed infrastructure projects in the following countries: Cambodia, Indonesia, Lao PDR, Myanmar, Philippines and Viet Nam. SEUWs projects predominantly focus on water supply, sanitation and waste water, solid waste and drainage in urban areas. SEUWs projects are guided by ADB's Urban Operational Plan (UOP) which sets out the future direction and approach for the urban sector operations of the ADB, by effectively addressing the investment opportunities and programmatic issues hindering the efficient, sustainable, and equitable development of cities.

2. The consultants recruited under this TRTA facility will prepare the project loans which are planned in six countries in Southeast Asia over the period 2019 to 2022. It is expected that up to four projects will be prepared under the current contract and budget but may increase depending on budget availability. Likewise, the consultant's Terms of Reference may be expanded, and contract amount may increase to prepare these additional project loans, subject to the performance of the consultant. The consultants will also provide support in the administration of the portfolio through capacity building and knowledge transfer.

3. The Transaction Technical Assistance (TA) facility will support the preparation and administration of the urban development portfolio in Southeast Asian Developing Member Countries (DMCs) over the period 2019 to 2022.

4. Combining the preparation of these project loans under a single TA is expected to improve the Asian Development Bank's (ADB's) urban portfolio in Southeast Asia due to: (i) lower ADB transaction costs; and (ii) higher quality consultant's outputs.

5. Development projects as administered by SEUW encounter similar challenges: expansion of infrastructure (rehabilitate and expand services), improvement of human and institutional capacity (ensure sustainability) and creation of an enabling environment (improve legal and regulatory setting). The project preparation and administration of any Southeast Asian urban development project will need to address these challenges, although the proposed outputs will be specific for each DMC and sub-sector.

B. Outcome and Outputs

6. The TA facility will support improving urban services in Southeast Asian DMCs, specifically by effectively integrating urban climate change resilience principles into project planning, preparation, implementation, and monitoring. This will be done through the following outputs: (i) improved planning, project design, and readiness; (ii) improved DMC staff capacity in project administration and urban service delivery; and (iii) improved knowledge management and sharing among Southeast Asia DMCs.

C. Implementation Arrangements

7. ADB will administer the TA facility while SEUW/SERD will implement it. SEUW will appoint a senior staff member as facility manager, who will be responsible for the day-to-day management of the facility. The facility manager is directly responsible to Director, SEUW. The TRTA facility will be implemented over 42 months, commencing in October 2018.

8. The TA activities for an ensuing project (output 1) will only start after ADB approves the project concept paper of the ensuing project. The activities under the other outputs may start once the TA facility is approved.

9. To implement the TA facility, ADB will recruit consultants through a single firm and/or joint venture and through advance contracting following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions. These consultants will have their permanent base at ADB HQ, preferably close to SEUW offices to ensure integration of consultant activities into SEUW's workplan. Offices at project locations will be established when required, either at counterpart premises, ADB resident mission, or rental offices, depending on project need, project location and availability.

10. The recruitment of the consulting firm will follow a Quality and Cost Based Selection (90:10) process with full technical proposal, whereby technical evaluation takes place on the proposed methodology, and skills and experience of the proposed experts; and financial evaluation on the remuneration charges of the proposed experts. The consultants will consist of engineers as primary experts, supplemented by financial, social development, social and environmental safeguards, gender mainstreaming expertise, and other experts as required. The experts will have to demonstrate sound technical knowledge of urban development issues.

11. The successful proposal will constitute the basis for awarding one retainer contract to one firm for the entire range of services. For each assignment, the firm will be required to prepare a proposition that will be agreed with ADB, which will include the proposed approach and methodology, work plan and technical and financial information, including team composition, CV's, work plan and consultants' time input.

12. Upon approval of the proposition, ADB will issue a Task Order, describing specific scope of transaction activities (such as the preparation of a specific loan), the related costs, and the expertise required. The consultant will carry out the services at the agreed price under the retainer contract.

D. Objective and Purpose of the Assignment

13. The consultants will assist SEUW to achieve the outputs as formulated above by providing inputs that will be identified and specified on a case by case basis, to be agreed upon through a Task Order. The inputs under each output may include, but are not limited to:

- **Output 1: Improved planning, project design, and readiness.** The consultant is expected to prepare feasibility studies and/or detailed engineering designs for the ensuing investments and carry out related due diligence assessment on social and environmental safeguards, poverty reduction, social inclusion, gender, climate risks and vulnerability, financial and economic viability, and financial and procurement management capacity. The findings will be reported in relevant studies, plans, and frameworks.

  The indicative list of projects, with brief descriptions, to be supported by this TA facility under this output is in Attachment 1. As stated, the actual number of loans to be prepared is expected to be four but may be expanded subject to budget availability.

- **Output 2: Improved developing member country staff capacity in project administration and urban service delivery.** The consultant is expected to assist SEUW DMC counterpart staff through all stages of project management: project identification, preparation, implementation, and evaluation. This will lead to better-prepared projects to be approved during the contract period (including advance readiness), and better project implementation of ongoing projects. The required services may include but will not be limited to: (i) peer-to-peer arrangements for urban service delivery; (ii) project administration oversight; and (iii) support in establishing design standards, policy, and regulatory frameworks. Assistance to ADB staff will be provided for specific fields of expertise, which may include but not limited to: (i) technical expertise on advanced technology based on market development in core urban services (water supply, sanitation, solid waste management, flood control and drainage, and road engineering); (ii) procurement and contract management (resolving bid evaluation and contractual disputes); (iii) social and environmental safeguard monitoring (resolving non-compliance issues); and (iv) social development and gender mainstreaming (due diligence quality control).

- **Output 3: Improved knowledge management and sharing among Southeast Asia DMCs.** The TA facility will support knowledge management and sharing through organization of trainings, workshops, and conferences at the regional level, enhancing knowledge and lesson sharing among Southeast Asian DMCs. The TA facility will also support, when required, the production of knowledge products and will work in close collaboration with ADB's Urban and Water Sector Groups to collect and disseminate appropriate lessons learned.

E. Required Expertise

14. The Consultant will be required to provide the following expertise at various times during the assignment:

- Water supply engineering
- Waste water/sanitation engineering
- Environmental science
- Procurement, contracting and contract management
- Water resources/drainage engineering
- Hydrology
- Solid waste management engineering
- Structural engineering
- Tunnel engineering
- Geotechnical engineering
- Geology
- Electrical engineering
- Mechanical engineering
- Climate change mitigation and adaptation
- Quantity surveying and cost engineering
- Social Development and Gender
- Project and municipal financing
- Project economics
- Land acquisition and resettlement
- GIS

15. Other expertise may also be required and will be determined as individual assignments or projects becomes more clearly defined.

16. **Core team:** the consultant must mobilize a core team of key experts which will be expected to lead or be responsible to oversee the work of sub-team of experts during the various assignments. The core team consists of the following key experts:

- Water supply engineer
- Waste water/sanitation engineer
- Environmental specialist
- Procurement specialist

17. Either one of these experts may be assigned the Team Leader role. The core team members are expected to be permanent employees of the consulting firm or experts working exclusively for the firm or joint venture member, with ample experience with the firm in relevant field of activities. The team will be based at ADB HQ in Manila but may be required to travel to project sites frequently. Each expert will have an input of 10 months per year for the duration of the assignment.

18. The specific education and expertise requirements of the core team experts are as follows:

Position	Education requirement	Experience requirement	Proposed tasks
Team leader	Post graduate degree in civil engineering; Project management courses completed.	Minimum of 20 years' experience in engineering works in urban areas; minimum of 10 years' experience in management of complex projects	(i) overall liaison with ADB; (ii) preparation of propositions for each individual assignment and negotiations with ADB; (iii) coordination of the input and output of the sub-teams of consultants (both in the field and home based) involved in the individual assignments; (iv) quality control of work carried out and output delivered by the sub-teams; (v) overall management and administration of the contract; and (vi) reporting to ADB on progress of work.
Water supply engineer	Post graduate degree in water supply engineering.	Minimum of 15 years' experience in water supply works in urban areas.	(i) advising the Team Leader in the preparation of propositions for subprojects with water supply components; (ii) monitoring the work and output of the sub-teams involved in carrying out subprojects with water supply components;

Position	Education requirement	Experience requirement	Proposed tasks
			(iii) advising the Team Leader and the implementing agencies on matters related to water supply.
Waste water/sanitation engineer	Post graduate degree in waste water/sanitation engineering.	Minimum of 15 years' experience in waste water/sanitation works in urban areas.	(i) advising the Team Leader in the preparation of propositions for subprojects with waste water/sanitation components; (ii) monitoring the work and output of the sub-teams involved in carrying out subprojects with waste water/sanitation components; (iii) advising the Team Leader and the implementing agencies on matters related to waste water/sanitation.
Environmental and climate change specialist	Post graduate degree in environmental science; advance courses in climate change resilience completed.	Minimum of 15 years' experience in environmental engineering; minimum of 5 years' experience in climate change resilience and mitigation work.	(i) advising the Team Leader in the preparation of propositions for subprojects on environmental impacts of the projects and mitigation measures, particularly related to climate change; (ii) proposing climate-resilient design standards and climate-adaptive engineering measures; (iii) monitoring the work and output of the sub-teams on environmental and climate mitigation aspects; (iv) advising the Team Leader and the implementing agencies on matters related to environmental/climate change impacts and mitigation.
Procurement specialist	Post graduate degree in relevant engineering field; advance training in procurement completed, including dispute resolution	Minimum of 15 years' experience in relevant engineering; minimum of 10 years' experience in procurement of civil works.	(i) advising the Team Leader in the preparation of propositions for subprojects on procurement matters; (ii) monitoring the work and output of the sub-teams on procurement aspects;

Position	Education requirement	Experience requirement	Proposed tasks
			(iii) advising the Team Leader and the implementing agencies on matters related to procurement.

19. **Sub-teams:** the consultant must mobilize sub-teams for each assignment immediately once a Task Order for that assignment has been issued by ADB. This sub-team of experts will be composed of experts as proposed by the consultant and approved by ADB, as listed in the Task Order.

F. Proposal Preparation

20. **Approach and Methodology**. The shortlisted consulting firms are required to prepare a detailed description of how they propose to deliver the outputs of the contract in the section of their proposal called "Approach and Methodology." In this narrative, firms should clearly explain how they will achieve the outputs and include detailed information on key and non-key experts that will comprise the core project team and their proposed input. The Consultant must also describe the experience of the firm or joint venture, and core team key experts in Southeast Asia.

21. **Personnel.** The shortlisted firms will submit:

- one CV for each of the core team members and clearly state which of the members is proposed as team leader (4 CVs);
- one CV for the international, non-core, senior positions on each of the areas of expertise (11 CVs);
- one CV for the international, non-core, junior positions on the areas of expertise (15 CVs); and
- one CV for the national positions on six of the areas of expertise, for each of the four countries: Cambodia; Indonesia; Philippines; Viet Nam (24 CVs). The national experts should have the nationality of the country they are proposed for.

22. The requirements for none-core team members are summarized below:

Area of expertise	International senior position Minimum qualifications	International junior position Minimum qualifications	National position Minimum qualifications
1. Water supply engineer	N/A; core team member	Under graduate degree in relevant field 5 years' experience	Graduate degree in relevant field 15 years' experience
2. Waste water/sanitation engineer	N/A; core team member	Under graduate degree in relevant field 5 years' experience	Graduate degree in relevant field 15 years' experience
3. Environmental specialist	N/A; core team member	Under graduate degree in relevant field 5 years' experience	Graduate degree in relevant field 15 years' experience
4. Procurement specialist	N/A; core team member	Under graduate degree in relevant field 5 years' experience	N/A
5. Water resources/drainage engineer	Graduate degree in relevant field	Under graduate degree in relevant field	N/A

Area of expertise	International senior position Minimum qualifications	International junior position Minimum qualifications	National position Minimum qualifications
	15 years' experience	5 years' experience	
6. Solid waste management engineer	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A
7. Structural engineer	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A
8. Geotechnical engineer	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A
9. Climate change resilience expert	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A
10. Social Development and Gender expert	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	Graduate degree in relevant field 5 years' experience
11. Financial expert	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A
12. Economist	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A
13. Sociologist	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	Graduate degree in relevant field 5 years' experience
14. Land acquisition and resettlement specialist	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	Graduate degree in relevant field 5 years' experience
15. GIS expert	Graduate degree in relevant field 15 years' experience	Under graduate degree in relevant field 5 years' experience	N/A

23. **Non-key experts.** In addition to the mandatory key experts described above, shortlisted consultant is expected to provide non-key experts to provide technical and administrative support and to ensure all aspects of the work can be undertaken and all deliverables and reports are completed in accordance with the implementation schedule. All non-key experts must have adequate qualifications and experience in a relevant field.

24. **Financial proposal.** The consultants' financial proposal should list the monthly remuneration rates for each of the key experts. The cost of the non-key experts is expected to be included in the proposed remuneration rates of the experts.

25. The budget of the assignment is $9 million. Only the remuneration costs for the experts are competitive items. All other budget items, including per diem and travel, are non-competitive.

26. For each assignment, the per diem will be based on the ADB issued per diem rates for the specific countries and/or cities. The air travel costs will be budgeted on a case by case basis based on the costs for full economy class ticket for the most direct route.

G. Evaluation criteria

27. The technical evaluation will consider: (i) experience and qualifications of the Consulting firm; (ii) the proposed approach and methodology; and (iii) the qualifications of the proposed key experts.

28. The CV's of the core team experts will be scored and will contribute to the technical scoring of the proposal. The CV's of the non-core team experts will not be scored, but ADB will review these and may reject the CVs of non-key experts if the experience and qualification of the experts are considered inadequate or substandard. Nevertheless, the overall composition of the Core Team, the credentials of non-core key experts, and the design of the team as a whole – including the appropriateness of the level of inputs (home, field, total) – will be taken into consideration in the evaluation of Quality of Approach and Work Plan and Personnel Schedule criteria.

29. The most qualified bidder will be requested to substitute the rejected CV's by acceptable CV's during contract negotiations. All accepted CV's will be the basis for reviewing proposed experts of corresponding positions when negotiations the various assignments and concluding Task Orders.

30. The financial evaluation will only consider the remuneration as a competitive item. All other cost items are non-competitive. For the purpose of the evaluation, person months for each of the key experts have been estimated. The bidders are expected to provide monthly remuneration fees of all 28 international and 30 national experts. These fees should include the cost of adequate support by non-key staff as indicated above.

H. Services Provided by the Employer

31. The Core Team will be based at ADB HQ in Manila. ADB will provide furnished office accommodation in Manila, office communications (local calls and internet connection), and other in-kind contributions. ADB will also provide office accommodation at either ADB resident offices or government offices at the location of the sub-projects. When such office cannot be provided, offices may be rented and charged to the TA under the relevant cost category (provisional sum).

32. ADB shall assist in obtaining the clearances and government no-objections to the implementation of the sub-projects and outputs of the consultants. ADB will facilitate field visits and arrange meetings with relevant authorities and agencies.

I. Equipment

33. The consultant proposal should identify the critical element of equipment, furniture and supplies that will be required by the Core Team. Personal computers are expected to be provided by the individual consultants and cost included in remuneration. Other equipment may be rented, with prior approval of ADB, and charged to relevant cost item (provisional sum).

Attachment 1
Indicative list of projects to be approved in 2019-2022

	Country	Project name	Loan amount ($million)	Approval
1.	Viet Nam	Ho Chi Minh City Climate Resilient Urban Services Project	250	2019
2.	Cambodia	Water Supply and Sanitation Investment Program	80	2020
3.	Philippines	Livable Cities Investment Project	100	2020
4.	Indonesia	Water Supply Improvement Investment Project	200	2020
5.	Indonesia	Livable Cities Investment Project	200	2022

VIET NAM: HO CHI MINH CITY CLIMATE RESILIENT URBAN SERVICES PROJECT

Impact: Environmentally sustainable and inclusive growth of HCMC improved.

Outcome: Climate resilient wastewater and drainage services in HCMC improved.

Outputs: (i) Urban environmental infrastructure improved; and (ii) institutional effectiveness and policy and planning environment enhanced.

1. HCMC, the largest city in Viet Nam, with 8.0 million inhabitants, is the center of Viet Nam's economic activity, contributing 27% of the national gross domestic product in 2014. Under the government's long-term strategic vision, the city will remain the main engine of Viet Nam's urbanization and industrialization. While its growth has been underpinned by investments on basic urban infrastructures, its development stands at a turning point. Weak wastewater and drainage system has become a bottleneck as surface water quality of inland canals and rivers has rapidly deteriorated, raising serious public health and environmental concerns.

2. The city faces large-scale sector challenges of: (i) lack of reliable wastewater and drainage systems to treat domestic wastewater; (ii) limited finance for new investment, and operation and maintenance; and (iii) pollution from industrial wastewater discharge. They are rooted to specific constraints: (i) only 50–80% of user connections to the sewer network even in the central districts; (ii) predominant use of a combined sewer and storm water collection system; (iii) limited number of centralized wastewater treatment plants that treat less than 10% of the city's domestic wastewater; (iv) about 80% of households relying of septic tanks with many lacking proper septage management; and (v) weak enforcement on industrial wastewater discharge. Although regulations on industrial wastewater management and financial cost recovery have been issued, the limited financial resources of local governments and lack of institutional capacity to implement cause a spiral of technical, financial and market failures in sector performance.

3. HCMC's vulnerability to climate change exacerbates the problem. The city is one of the 10 cities in the world likely to face the early impacts of climate change. The projected sea-level rise of 100 centimeters by 2100 is alarming as 40–45% of the city's central districts are within 100 centimeters above sea-level. By 2050, 12 out of 14 wastewater related facilities will be inundated in regular flood events. The city's wastewater and drainage systems need to adopt measures against rising sea-level, uneven rainfall patterns and enhanced storm surges.

4. HCMC urgently needs a robust city wastewater and drainage system that soundly combines climate-proven centralized and de-centralized systems (e.g., septic tanks). Its annual fiscal budgets in 2011–2015 cover less than 10% of the annual fund requirement of $890 million in the sector. The city has borrowed actively for the sector, for a total of $1.1 billion (in 2005 constant prices), from the government of Belgium, Japan International Cooperation Agency, and the World Bank, since 1998. Yet, still many catchments have been left out. The city's master plan and sector development plan do not recognize climate risk appropriately. The city needs a medium-term plan to rationalize its investment and optimize the benefit of prior interventions, and to stretch its limited budget by mobilizing private funds.

5. The project will strengthen HCMC's basic urban services as the socioeconomic growth pole of Viet Nam. The project will finance: (i) climate resilient sewer and drainage system; (ii) household septage management in peri-urban areas; and (iii) institutional capacity strengthening for planning, designing, operation and maintenance to improve overall sector performance.

A. Project Preparation

6. The preparation of the project involves carrying out feasibility and viability studies of proposed infrastructure improvements in the field of wastewater, drainage and drainage canal environmental upgrading. The proposed infrastructure projects should directly benefit the most vulnerable population of the proposed cities.

7. The proposed outputs of the project preparation are: (i) feasibility studies and/or detailed engineering designs; (ii) financial and economic evaluation; (iii) municipal financial management capacity and risk assessment; (iv) procurement capacity and risk assessment; (v) socioeconomic and gender analysis: communication strategies and gender action plans; and (vi) environment management, involuntary resettlement and indigenous peoples framework and/or plans.

8. In addition, specific focus is on climate risk and vulnerability assessments in base data collection and preparation of investment and capacity building plans: (i) integration of climate risk mitigation measures in infrastructure and services planning and delivery processes; and (ii) creation of linkages and create synergies among communities, government and non-government agencies and thus increase the cities capacity to absorb shocks and stresses related to urban climate change.

CAMBODIA: WATER SUPPLY AND SANITATION INVESTMENT PROGRAM – TRANCHE 1

Impact: Urban environments and quality of life for the urban residents improved.

Outcome: Sustainable piped water supply and sanitation (WSS) services provided in selected provincial cities.

Outputs: (i) Improved water supply; (ii) improved sanitation; and (ii) improved institutional effectiveness.

1. Cambodia's population was estimated at 15.2 million in 2016, spread across 24 provinces, 26 cities, and numerous district towns. While Cambodia remains almost 80% rural, urbanization is accelerating, and the urban population is expected to reach 30% of the national total by 2030. This urban growth has been centered mostly in and around the capital, Phnom Penh.

2. Since 2000, provincial cities and towns have been impacted by the increasing urbanization and have played an increasingly important role in the country's economy. The provincial capitals are growing to become important secondary cities, commercial and connectivity hubs, and tourism centers. Rapid economic development and urban migration in the cities highlighted the importance of basic urban services, especially WSS, and the necessity to upgrade and expand the infrastructure and improve service quality.

3. Countrywide, population access to improved water supply in urban areas (excluding Phnom Penh) is 69.7%, while access to piped water supply is low at only 42.2%. Rapid expansion of the infrastructure is required to meet the government's 2025 target of 100% access to potable water for the entire population. Access to improved sanitation in urban areas is 80.2%, while access to sewerage and wastewater treatment is only 10.7%; a large proportion (69.3%) have individual systems (septic tanks). Open defecation in urban areas remains unacceptably high at 17.3%. The low sanitation coverage across the country has led to widespread pollution, affecting rivers, coastal areas, and tourist areas.

4. Except for Phnom Penh, the government has been unable to invest adequately in urban WSS since the mid-1990s resulting in significant service delivery gaps due to (i) inadequate funds for capital investment and operation, (ii) weak regulatory framework and sector planning, and (iii) weak institutional capacity to implement and provide sustainable services. Since 2014, however, activity in the urban WSS sector has increased significantly, supported by the government's sector reforms and financing from Asian Development Bank (ADB), Agence Française de Développement, and Japan International Cooperation Agency.

5. The project aims to continue the momentum in the sector and improve WSS in an additional 12 provincial towns across the country; initially with 4 in the first tranche of the program.

A. Project Preparation

6. The preparation of this project involves carrying out feasibility and viability studies of proposed infrastructure and service improvements in the fields of WSS, including (i) engagement with the private sector, (ii) climate change resilience, and (iii) pro-poor and gender initiatives.

7. The proposed outputs of the project preparation are: (i) feasibility studies and/or detailed engineering designs; (ii) financial and economic evaluation; (iii) municipal or utility financial management capacity and risk assessment; (iv) procurement capacity and risk assessment; (v) socioeconomic and gender analysis: communication strategies and gender action plans; and (vi) environment management, involuntary resettlement and indigenous peoples framework and/or plans.

PHILIPPINES: LIVABLE CITIES INVESTMENT PROJECT

Anticipated approval: 2020. The project aims to cover at least two main trade hub cities in the Mindanao region and at least two main tourism hub cities in the Visayas region.

Impact: Inclusive economic growth improved.

Outcome: Urban services improved.

Outputs: (i) improve basic services such as sewerage, drainage and solid waste management; (ii) effectively integrate urban climate change resilience (UCCR) principles into project planning, preparation, implementation and monitoring; and (iii) support urban development strategies and master plans, improve staff capacity for urban services delivery, and raise community awareness.

1. By 2050, 70% of the world's urban population will be living in the Asia-Pacific region. Cities are central to the Southeast Asian national economies with economies that continue to shift more towards industry and services. Therefore, the need for adequate housing and basic infrastructure services increases. Also, Southeast Asian cities are particularly exposed to climate change-related events. The concentration of low-lying coastal population facing sea-level rise, higher intensity rainfall and increasing frequency and severity of natural disasters in the region has rendered it imperative to make urban infrastructure climate resilient. ADB's vision is to transform the archetypical chaotic, polluted, inequitable city of Asia into a competitive, equitable, and environmentally sustainable urban region - in short, a livable city.

2. The Philippines is among the fastest growing economies in Southeast Asia. ADB's country partnership strategy 2018-2023 stresses the need for investments in urban development to address infrastructure deficits in large cities and promotes a greater focus on local economic growth and development in Mindanao and the Visayas to address wide income disparities across regions.

A. Project Preparation

3. The preparation of this project involves carrying out feasibility and viability studies of proposed infrastructure improvements in the field of urban drainage, sanitation and solid waste management. ADB will provide a long-term (10-20 years) support to several cities in the Philippines to implement approaches towards livable cities, starting with Mindanao then the Visayas region.

4. The **Livable Cities Investment Program in the Mindanao region** may focus on **four major trade hub cities**:

- **Cagayan de Oro**: located in the Misamis Oriental province with estimated 676,000 inhabitants, belongs to the Tagaloan river basin where a Flood control program is already in place; Cagayan de Oro was covered by the USAID program "Strengthening Urban Resilience for Growth with Equity" (SURGE), and JICA is already active in the city, meaning extensive urban data is available and a strong potential for cofinancing exists. The city has already submitted a proposal for citywide sewerage system to NEDA for consideration for 2019.

- **Cotabato**: located in the Maguindanao province with estimated 300,000 inhabitants; JICA has expressed interest in working in this city, which reinforces the potential for investment; the city has submitted a proposal for a septage management project to NEDA for consideration for 2019.
- **General Santos**: located in South Cotabato province with estimated 594,000 inhabitants, belongs to the Buayan-Malungun river basin where ADB is developing a flood control program. The city was covered by the USAID/SURGE program.
- **Tagum City**: located in Davao del Norte province with estimated 259,000 inhabitants, belongs to the Tagum-Libuganon river basin where ADB is developing a flood control program. The city is already requesting the NSSMP subsidy for Septage Treatment Plant in partnership with Tagum Water District.

5. The **Livable Cities Investment Program in the Visayas region** may focus on four **major tourism hub cities**:

- **Coron**: located in Palawan province with estimated 52,000 inhabitants. The city is already requesting the NSSMP subsidy for the proposed Sewerage and Sewage Treatment Plant Project.
- **Malay**: located in Aklan province with estimated 53,000 inhabitants. The city is already requesting the NSSMP subsidy for a drainage sewerage system in the Island of Boracay.
- **Puerto Princesa**: located in Palawan province with estimated 255,000 inhabitants. The city was covered by the USAID/SURGE program.
- **Tagbilaran**: located in Bohol province with estimated 105,000 inhabitants. The city was covered by the USAID/SURGE program. The city is already requesting the NSSMP subsidy for a Septage Treatment Plant.

City	Population[1]	Province	Region	River Basin	USAID	PWSSMP[2]	NSSMP[3]	Flood control
Cagayan de Oro	675,950	Misamis Oriental	Mindanao	Tagaloan	SURGE	Sewerage		Available
Cotabato	299,438	Maguindanao	Mindanao	-		Septage		
General Santos	594,446	South Cotabato	Mindanao	Buayan	SURGE			N.A. but ADB project
Tagum City	259,444	Davao del Norte	Mindanao	Tagum			Sewerage	N.A. but ADB project
Coron	51,803	Palawan	Visayas	-			Sewerage	
Malay	52,973	Aklan	Visayas	-			Sewerage	
Puerto Princesa	255,116	Palawan	Visayas	-	SURGE			
Tagbilaran	10,5051	Bohol	Visayas	-	SURGE		Septage	

[1] According to 2015 census.
[2] List of projects and programs submitted to NEDA for consideration for FY 2019, at concept or proposal stage, as of March 2018, from regional consultation during the Philippine Water Supply and Sanitation Masterplan (PWSSMP).
[3] List of LGUs who have expressed interest in the National Sewerage and Septage Management Program (NSSMP) of the Department of Public Works and Housing (DPWH).

INDONESIA: WATER SUPPLY IMPROVEMENT PROJECT; JATIGEDE AND KARIAN WATER SUPPLY PROJECT

Impact: Access to safe and reliable piped water supply services for urban population in Indonesia expanded.

Outcome: Performance of participating local water supply companies (PDAMs) in delivering sustainable water supply services improved.

Outputs: (i) Capacity Development programs for PDAMs; and (ii) construction of new and extension of existing water supply systems in project cities.

1. Rapid urbanization has resulted in over half of Indonesia's population living in urban areas (137.4 million in 2015). An overall underinvestment in infrastructure over the past decade has led to a significant infrastructure gap. Drinking water infrastructure in urban areas lags behind urban population growth. Only one third of the urban population has access to piped water services.

2. The National Medium-term Development Plan 2015-2019 sets out a target to achieve universal provision of basic services. This has been translated by the Ministry of Public Works and Housing (MPWH) into its “100-0-100” program of providing universal access to water and sanitation, including the end to open defecation, and eliminating slums by 2019.

3. A study by the Water and Sanitation Program carried out in 2015 estimated that about 14.6 million additional people will require access to public water supply per year if this target is to be met; and USD 19 billion (IDR 252 trillion) in total capital investments will be needed. MPWH’s Strategic Planning (2015-2019) estimates that to support the urban water supply development agenda of providing about 10 million new household connections, a total cost of US$6 billion will be required.

4. MPWH has a performance-rating system for the PDAMs, in which 209 PDAMs area categorized as "Healthy", 103 as "Less Healthy" and 66 as "Sick" in 2017. MPWH also notes that the operational performance of PDAM is generally low, with average national non-revenue water estimated at 32.8%, and only 30% of PDAMs were found to be operating at cost recovery tariff levels despite guidelines on water tariff settings have been provided by Ministry of Home Affairs. Key capacity constraints faced by PDAMs and local governments are: (i) a limited understanding of commercial operations of water utilities; (ii) a limited understanding of and commitment to full cost recovery tariffs; (iii) an inability to identify projects and develop project proposals; and (iv) a general limited technical and operational knowledge and skills.

5. MPWH continues to invest more than local governments, particularly through mandated investment in bulk water supply, regional systems, and remote areas. Moreover, many PDAMs are also facing issues related to limited access to sources of raw water and limited land for the construction of water treatment facilities. To help these PDAMs and in line with their mandate, MPWH has been developing regional water supply systems. In this system, a single water intake could serve more than one cities/urban areas. For example, under the Jatigede regional water supply system, an intake from the Jatigede dam is planned to serve four urban areas, and a water treatment plant at Kabupaten Kadipaten is expected to serve three urban areas. Similarly, under the Karian system, seven urban areas are expected to be covered.

6. Supporting the development of regional water supply system and helping PDAMs to further improve their capacity in the managing their water supply system is expected to contribute the achievement of the universal target of 100% services of water supply through an expanded access to quality and reliable piped water supply services in urban areas.

A. Project preparation

7. The Jatigede system will be implemented into two stages with the total capacity of 3,500 liter/second (l/s). The first stage is planned to be implemented in 2020-2022 (1,500l/s), and the second stage in 2023-2025 (2,000 l/s). Karian system will also be implemented in two stages with the first stage is expected to be implemented in 2020 (6,000 l/s), and the second stage in 2025 (4,000 l/s). About 240,000 connections are expected to be installed in the first stage and the second stage of the Jatigede system; the Karian system is expected to serve about 60,000 new connections. Both proposed projects are included in the government bluebook 2015-2019.[4]

8. ADB will support MPWH in developing the Jatigede and Karian regional water supply systems through the provision of investment loan to finance the construction of water treatment facilities as well as the distribution systems. Capacity development program for PDAMs will also be covered. The expected cities and regencies to be covered under these regional systems are:

- **Jatigede:** Cirebon City, Cirebon Regency, Indramayu Regency, Majalengka Regency and Sumedang Regency. The city and regencies are all located in West Java province.
- **Karian:** Tangerang Regency, Bogor Regency, Lebak Regency, Serang Regency, Serang City, Cilegon City. Bogor regency is part of West Java province, while the others are part of Banten Province.

9. ADB is considering merging the two systems in one investment loan project. To support the preparation of the project, a team of experts will be recruited. The preparation work will cover data collection and analytics, stakeholder consultations, preparation of due diligence documents, economic and financial analysis, and other related activities. The team will be mobilized through a firm under a proposed technical assistance facility that ADB will establish. Project kick-off is expected in 2018, while investments are expected to be included in the 2020 loan approval process.

[4] A document issued by the Ministry of National Development Planning (BAPPENAS), which includes lists of projects to be financed from foreign financing.

INDONESIA: LIVABLE CITIES INVESTMENT PROJECT

Impact: Increased inclusive economic growth

Outcome: Improved quality of life in Indonesian cities

Outputs: (i) Improving planning systems; (ii) Improving governance and service delivery; (iii) Improving finance and credit worthiness; and (iv) Building on research and private sector efficiencies.

1. More than half of Indonesia's population of about 260 million live in urban areas, and it is projected that by 2035, about two-thirds of the population will be living in cities. The country's rapid urbanization has the potential to generate significant economic gains and through the benefits of economies of scale and network effects of agglomeration, this urbanization can enhance access to employment, productivity and incomes.

2. While this rapid and unplanned urbanization can undermine quality of life, exacerbate inequality, and cause environment stress, Indonesia's cities and utilities have an opportunity to mitigate the associated risks by capitalizing on the exponential growth of technology. The mass deployment of broadband infrastructure, mobile telecom penetration, and wireless connectivity across the country provides an excellent opportunity for cities and utilities to plan, govern and finance urban basic services.

3. Analyzing urban development and sprawl, capturing value of land, interpreting earth observation data, analyzing habitation patterns through socioeconomic profiles, understanding citizen needs, analyzing service usage patterns, analyzing climate change events and forecasting future events are few of the advantages technology evolution provides in identifying smart solutions to tackle urban challenges.

4. Building on efforts of various Indonesian cities and utilities, and by working closely with various tiers of governments, ministries and state-owned enterprises, the following approaches may be considered to improve the quality of life in cities.

A. Project Preparation

5. ADB will provide a long-term (10-20 years) support to a select number of cities in Indonesia to test out approaches to create livable cities. Agreed cities for the proposed Indonesia Livable Cities Program include:

- **Makassar:** located in Sulawesi island with estimated 1.5 million inhabitants;
- **Patung Raya Agung:** located in Sumatra island and with estimated 3 million inhabitants residing in Kota Palembang and the Regencies of Betung (Banyuasin), Indralaya (Ogan Ilir) and Kayu Agung (Ogan Komering Ilir); and
- **Mataram:** located in Lombok island and with estimated 0.4 million inhabitants.

6. For each city, ADB will recruit a national urban development expert to be based in the city. Additional expertise to support the data collection and analytics, stakeholder consultations, project identification exercises, training and outreach as well as detailed project preparation, will be mobilized through a firm under a proposed technical assistance facility that ADB will establish.

7. Project kick-off is expected in Q3 2018 while investments are expected to be included in the 2021 loan approval process.