

TERMS OF REFERENCE FOR CONSULTANTS

A. Individual Consultants

International Experts

1. **Water Supply Specialist (International, 4 person-months).** The consultant will assess and recommend water supply schemes introducing international best practices in water supply and demand management, nonrevenue water reduction, smart water management, etc. The specialist will (i) lead technical review of engineering designs for proposed water supply and projects including modelling, cost estimates for relevant components, and investment plans for selected projects; (ii) recommend institutional and implementation modalities for construction, operation and maintenance (O&M) with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) work closely with environmental and social safeguard specialist for integrating social and environmental safeguards mitigation measures into project designs; and (v) introduce smart technologies in water supply management into the projects. The specialist may function as a team leader and (i) ensure the delivery of project outputs and outcomes as expected in the project design; (ii) provide advice to executing agencies in risk mitigation for project implementation; and (iii) support procurement specialist in preparation and evaluation of bid documents. The specialist will have a degree in environmental engineering (or similar) and have at least 15 years' experience in planning, designing, and implementing urban water supply and sanitation infrastructure. Experience in working on externally financed projects will be an asset. Experience working in South Asian countries is preferred.

2. **Sanitation/Drainage Specialist (International, 1 person-month).** The consultant will assess and recommend sanitation management schemes introducing international best practices in wastewater, drainage and human waste management emphasizing energy generation, fecal sludge management, city-wide inclusive sanitation, recycling of wastewater for commercial, industrial, or domestic purposes and provide advice on integration of smart technologies for wastewater management. The specialist will (i) lead technical review of engineering designs for proposed sanitation and/or sewerage projects including modelling, cost estimates for relevant components, and investment plans for selected projects; (ii) recommend institutional and implementation modalities for construction, O&M with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) ensure environment and social safeguard requirements are incorporated into project design in order to avoid and minimize potential impacts from the start of the process by working closely with the environment and safeguards consultants; and (v) introduce smart technologies in fecal waste management for the selected cities. The consultant should have bachelor's degree in environmental, water supply or civil engineering with at least 15 years practical experience in sanitation, and hygiene sector projects. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

3. **Institutional Development Specialist (International, 3 person-months).** The expert will provide institutional and governance related support to relevant agencies to help ensure readiness for the ensuing projects and improve interagency coordination and collaboration. Specific tasks include (i) identification and prioritization of policy and institutional gaps and required reforms or strategies to ensure cohesive development of the urban development sector combined or not with other sectors (e.g., energy, transport, etc.); (ii) support for policy reforms

or institutional measures, as identified and agreed; (iii) preparation of policy, governance and institutional improvement action plans, and regular monitoring of the agreed action plan between multiple agencies; (iv) support for Asian Development Bank financed investment program preparation, particularly related to policy and institutional issues; (v) preparation of ADB-financed investment program components; (vi) active participation in urban thematic working groups at client and ADB levels (as required); (vii) support preparation and implementation of project communication strategies; and (viii) other tasks as needed. The expert is preferred to have at least 15 years of experience in institutional reform and policy support with solid experience in urban institutional reforms. He/ she is preferred to have a master's degree or higher in engineering, urban planning or similar discipline. Experience working in South Asian countries is preferred.

4. **Environment Specialist (International, 2 person-months).** The consultant will ensure environmental safeguards consideration in project design at the earliest possible. The consultant will ensure projects will avoid adverse environmental impacts, contribute to internationally accepted performance indicators¹ to ensure projects apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety (EHS) Guidelines and adopt cleaner production processes and good energy efficiency practices. The consultant will (i) prepare frameworks, environmental assessment documents environmental impact assessment (EIA), initial environmental examination (IEE), environmental due diligence report (DDR), and/or environmental management plans (EMPs) as required by country's environmental legal frameworks and ADB's Safeguard Policy Statement (SPS) 2009; (ii) ensure that the relevant provisions of EMP are fully included in bid and contract documents; (iii) calculate and provide to relevant team members the indicative costs to implement package-wise EMPs, environmental monitoring programs, awareness programs, etc.; (iv) assess borrower and/or client's safeguards system and develop appropriate safeguards implementation arrangement including terms of reference for safeguards staff at executing and implementing agencies, and for support consultants, if required; (v) lead the environmental baseline data collection, assessment of hazards and risks the projects may pose to the environment and people, develop EMPs, conduct of meaningful consultations with project-affected people and other works for preparation of environment safeguard documents; (vi) develop monitoring checklists and templates for use of executing and implementing agencies during implementation phase; and (vii) ensure quality of EIA/IEE/environmental DDRs submitted to ADB. The consultant would also assist with any capacity building activities for project proponents. The consultant will also ensure projects will consider proactive environmental sustainability measures to align projects with ADB Strategy 2030. The consultant should have a degree in environmental management, EIA or related fields and at least 15 years of experience in managing and coordinating environmental assessments of infrastructure projects. Prior to document preparation, the environment specialist will (i) work closely with engineering and planning consultants to ensure avoidance and minimization measures included in project design from the start; (ii) confirm data collection is in order to identify up to date and robust baseline situation against which to undertake impact assessment; (iii) follow standards and measures set out in the relevant EHS Guidelines; (iv) support quantified impact assessment of all direct, indirect, cumulative, and induced impacts with respect to physical, biological, socioeconomic, especially health and safety and livelihoods, and physical cultural resources; and (v) conduct necessary existing facilities audit and associated facilities due diligence. Working experience with similar assignments, ADB environmental safeguard policies and for

¹ THESE ARE IMPORTANT SPECIFICALLY FOR DESIGN-BUILD-OPERATE PACKAGES AND/OR WHEN THE DETAILED DESIGN WILL BE COMPLETED DURING IMPLEMENTATION.

donor-funded projects is preferred. In conjunction with the social safeguards' specialist, the consultant will also prepare a manual for safeguards monitoring and reporting requirements to be followed by the executing and implementing agencies during the construction and operation phase of the projects. The expert is required to have master's degrees in environmental engineering or related field, and 15 years of experience working on environmental assessments for complex urban infrastructure projects. Experience working in South Asian countries is preferred.

National Experts

5. **Water Supply Specialist (National, 8 person-months).** The consultant will assess and recommend water supply management schemes introducing smart water management practices in water supply and demand management, and nonrevenue water reduction. The specialist will (i) lead technical review of engineering designs and detailed project reports for proposed water supply projects including modelling, cost estimates for relevant components, and investment plans for selected subprojects; (ii) recommend institutional and implementation modalities for construction, O&M with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) work closely with environment and social safeguards specialists for integration of social and environmental safeguards considerations into the project designs; and (v) introduce smart water management principles into the project designs. The consultant should have bachelor's degree in environmental, water supply or civil engineering with at least 10 years practical experience in water supply and environmental engineering projects. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

6. **Sanitation/Drainage Specialist (National, 3 person-months).** The consultant will assess and recommend sanitation management schemes introducing international best practices in wastewater, drainage and human waste management emphasizing energy generation, fecal sludge management, city-wide inclusive sanitation, recycling of wastewater for commercial, industrial, or domestic purposes and provide advice on integration of smart technologies for wastewater management. The specialist will (i) lead technical review of engineering designs for proposed sanitation and or sewerage projects including modelling, cost estimates for relevant components, and investment plans for selected projects; (ii) recommend institutional and implementation modalities for construction, operation and maintenance with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) ensure environment and social safeguard requirements are incorporated into project design in order to avoid and minimize potential impacts from the start of the process by working closely with the environment and safeguards consultants; and (v) introduce smart technologies in fecal waste management for the selected cities. The consultant should have bachelor's degree in environmental, water supply or civil engineering with at least 10 years practical experience in sanitation, drainage and hygiene sector projects. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

7. **Procurement Specialist (National, 6 person-months).** The consultant will (i) undertake procurement capacity assessment including e-procurement capacity of executing and implementing agencies; (ii) conduct procurement classification of proposed projects; (iii) perform an assessment or survey for both international and national markets for the relevant sectors for anticipated procurement packages; (iv) define a sensible procurement packaging based on the market assessment; (v) develop a procurement plan in ADB template format; (vi) support

executing agencies in the preparation and review of bidding documents for goods, works, and services; (vii) work closely with environmental and social safeguards experts to ensure that environment and social safeguard requirements are incorporated in the relevant sections of the bidding documents; and (viii) support advance contracting activities. The expert should also assist the executing agencies in the preparation of documents for consultant recruitment (following ADB's procurement guidelines) and provide support in recruitment of loan consulting firm/s. The experts should have degrees in civil engineering, business administration or related fields, and at least 10 years of experience in handling procurement in the public sector and/or private sector including preparation and evaluation of bid documents. Experience with use of FIDIC (International Federation of Consulting Engineers) bidding documents and FIDIC accreditation is an additional advantage. Working experience with similar assignments and familiarity with ADB's Procurement Policy (2017, as amended from time to time) is preferred. Experience working or living in South Asian developing member countries is preferred.

8. **Economist (National, 3 person-month).** The economist will lead the economic assessment for the proposed projects being supported by the technical assistance (TA) facility. He/she will work closely with the government and other members of the team to prepare a project meeting ADB's funding requirements. In compliance with ADB's Guidelines for the Economic Analysis of Projects (2017), and relevant technical notes published by ADB's Economic Research Department, the consultant will undertake the economic analysis including the following analytical works, and prepare the relevant documents required for project processing: (i) macro-economic analysis; (ii) sector analysis; (iii) demand analysis; (iv) least economic cost analysis; (v) economic cost and (vi) benefit analysis; (vii) economic internal rates of return; (viii) incremental economic costs; (ix) sensitivity analysis; (x) risk analysis; benefit distributional analysis; and (xi) poverty impact ratios, and assessment of subsidies, and other relevant works. The economist will review, and guide feasibility study prepared by the government, and undertake detailed economic analysis of the proposed project in accordance with ADB guidelines. He/she will be preferable to have 15 years of experience in project economic analyses, and post-graduate degrees in economics and finance field and experience in working on donor-funded projects. Experience working on donor-funded urban projects is an advantage.

9. **Financial Specialist (National, 3 person-months).** The expert will have a degree in accounting, finance, or a related field, and will have a recognized professional accountancy qualification. The expert should have at least 8 years' experience, including in financial due diligence (FDD). The expert will conduct FDD in accordance with ADB's requirements. Relevant guidance is available at <http://www.adb.org/projects/operations/financial-management-resources>. The FDD will include: (i) conducting a financial management assessment of the executing and implementing agencies, including (a) assessing whether previous financial management assessments have been conducted by ADB or other agencies and, if so, reviewing the results and ascertaining whether these can be used as input, (b) assessing capacity for planning and budgeting, management and financial accounting, reporting, auditing, internal controls, and information systems, (c) reviewing proposed disbursement and funds-flow arrangements, and (d) concluding the financial management risk rating and identifying and confirming measures for addressing identified deficiencies; (ii) supporting the preparation and agreement of cost estimates and a financing plan, which are based on verifiable data and are sufficient to support project implementation; (iii) preparing financial projections and conducting financial analyses of the executing and implementing agencies, and incremental recurrent costs, to determine financial sustainability, and reviewing proposed cost-recovery and tariff policies, including affordability; (iv) conducting financial evaluations (financial cost-benefit analyses) including sensitivity analyses of project components that have a cost-recovery objective;

(v) where significant risks are identified to project financial sustainability or viability, proposing relevant financial performance indicators to be incorporated in financial covenants; and (vi) assessing and reaching agreement on financial reporting, auditing and public disclosure arrangements for the project, and, as appropriate, identifying and agreeing on arrangements for receiving financial statements from executing and/or implementing agencies. The expert will work with oversight by ADB financial management specialist.

10. **Social Safeguards Specialist (National, 5 person-months).** The consultant will be in charge of screening, scoping and proposing involuntary resettlement and indigenous peoples categorization of the project; preparation, review, and finalization of safeguard documents (resettlement plans, DDRs, indigenous people plan (IPP), indigenous people plan framework, resettlement frameworks, and social safeguard monitoring reports); and ensure compliance with ADB's public disclosure requirements. The consultant will work closely with ADB staff, engineering and planning consultants, and consulting firms and executing and implementing agencies. The consultant will be responsible for conducting site visits and field based due diligence, assessment of alternatives, collecting land records and primary data on affected persons and conduct and documentation of meaningful consultations with affected persons and site-specific stakeholder consultations, and translation of any documents in local language. The consultant will (i) ensure SAUW projects under processing are in compliance with ADB's SPS, 2009 for involuntary resettlement and indigenous peoples and related Operations Manual F1 on Safeguards; (ii) work closely with engineering and planning consultants to ensure avoidance and minimization measures based on assessment of alternatives is included in project design from the start; (iii) assist in preparation of social safeguard documents such as resettlement plans, IPPs and DDRs through adequate and meaningful consultations with affected people; (iv) fill any gaps in information for completing loan documentation through site visits and meetings with executing and implementing agencies; and (v) conduct field verification/project monitoring as well as capacity building on safeguards, when required. Together with the Gender Specialist, will ensure relevant resettlement plan/IPP provisions and conditions are incorporated in bid and contract documents, and in draft/updated/final resettlement plan/IPP/social safeguards due diligence reports. Specialist should have master's degrees in social sciences/ urban planning or similar with at least 7 years' experience of preparing social assessments (including undertaking community consultations) for public sector infrastructure projects.

11. **Gender Specialist (National, 3 person-months).** The expert will (i) carry out social, poverty and gender analysis in the communities of the project area that is directly related to the nature, scope and planned interventions of the project; and look at issues such as gender division of labor, women's time poverty related to water supply and sanitation, percentage of female headed households, women's skills and relevant training needs to participate in skilled construction labor, female/male membership and leadership in existing water user committees, and women's skills and leadership training needs to manage these committees. The consultant will (i) study the poverty and vulnerability profile of the community and identify ways and means of including the poor and vulnerable in project design and implementation as well as in project benefits; (ii) contribute to survey and questionnaire design, coordinate collection of sex-disaggregated secondary and primary baseline data and information on reference points in relation to all performance indicators and targets that could possibly be included in the design and monitoring framework and the gender action plan (GAP) or gender and social inclusion plan (GESI); (iii) conduct independent consultations with women's groups and mixed groups to validate survey results; (iv) prepare a social, poverty and gender analysis report and contribute to preparation of draft initial poverty and social analysis and/or summary poverty reduction and social strategy; (v) identify scope for gender mainstreaming and social inclusion in the proposed subprojects and prepare a GAP or GESI based on the findings of the gender mainstreaming

analysis and with clear reference to the gender results that is intended to be achieved including clear baseline information and targets that are evidence-based; (vi) prepare a clear relationship between these results and the proposed actions to achieve these results, including clear baseline information and targets that are evidence-based; (vii) propose capacity building measures for the executing and implementing agencies to develop inclusive subprojects; (viii) develop the GAP/GESI monitoring and reporting matrix, with guidelines; and (ix) coordinate/liase with executing and implementing agencies to incorporate lessons and capacity building measures for gender from the previously financed externally funded projects. The specialist should have master's degrees in social sciences and minimum 7 years of experience in carrying out social, poverty and gender analysis and preparing gender action frameworks and plans preferably for ADB-financed (or other international financial institutions) projects in the sector.

12. Climate Change Resilience and Disaster Risk Management Specialist (National, 3 person-months). The expert will support the climate risk and vulnerability assessment and advise on how to improve climate and disaster risk resilience of sub-projects. The expert will do preliminary work to (i) identify data and information that are needed for assessing climate change scenarios; (ii) assess climate change scenarios based on the available data and inputs with particular focus on current and future vulnerabilities; (iii) strengthen the capacity and raise the awareness of various stakeholders regarding climate change and urban resilience; (iv) identify various physical and non-physical interventions required to effectively and sustainably adapt to climate change impacts, with reference to international best practices; (v) identify disaster risk mitigation solutions for proposed infrastructures; (vi) work closely with engineering and safeguard specialist for integrating climate and disaster risk resilience features into project design (including detailed calculations required for the engineering team); (vii) prepare the climate risk and vulnerability assessment and disaster risk mitigation linked documents for the loan projects; (viii) ensure the integration of priority climate and disaster risk resilience into proposed subprojects including delivering presentations, workshops if needed (for client buy in and capacity development); and (ix) any other tasks required for integration of climate change resilience and disaster risk mitigation in ensuing projects. The expert will have degrees in environmental engineering, urban and regional planning, climate change or related fields, and at least 10 years of experience in climate risk and vulnerability analysis in urban systems and climate-and disaster resilient infrastructure planning and implementation. Working experience with similar assignments and for donor-funded projects is an advantage.

13. Environment Specialist (National, 6 person-months). For project processing, the Environment Specialist will work closely with ADB staff, executing and implementing agencies, and consulting firms hired to prepare technical, economic, safeguards work, etc. to ensure necessary safeguards outputs meet ADB SPS, 2009. The consultant will work directly with the international environment specialist for the screening, scoping, and proposed environmental categorization of the project. The consultant will prepare, update, and/or finalize Rapid Environmental Assessment Checklists to confirm proposed categorization, EIA/IEE/environmental due diligence reports, environmental frameworks, and other related loan processing documents to ensure compliance with national laws/rules/regulations, ADB SPS, 2009 requirements, and ADB disclosure policy. For document preparation, the environment specialist will (i) work closely with engineering and planning consultants to ensure avoidance and minimization measures included in project design from the start; (ii) confirm that the data collection is in order to identify up to date and robust baseline situation to undertake impact assessment; (iii) follow standards and measures set out in the relevant EHS Guidelines; (iv) support quantified impact assessment of all direct, indirect, cumulative, and induced impacts with respect to physical, biological, socioeconomic, especially health and safety and livelihoods,

and physical cultural resources; and (v) conduct necessary existing facilities audit and associated facilities due diligence. The Environment Specialist will also conduct meaningful consultations, field verifications and/or project monitoring as well as capacity building on safeguards, health and safety, core labor standards, when required. The consultant will provide advisory support to implementing agencies on statutory requirements related to environmental clearances and permits, physical cultural resources, biodiversity protection, workers and community health, safety, welfare, sanitation, and working conditions. The consultant will also ensure projects will consider proactive environmental sustainability measures to align projects with ADB Strategy 2030. Together with the International Environment Specialist, the consultant will ensure relevant EMP provisions and statutory clearances conditions are incorporated in bid and contract documents, and in draft/updated/final EIA/IEEs/environmental DDRs. The environment specialist should have master's degrees in environmental sciences or similar with at least 7 years' experience of preparing environmental assessments for public sector infrastructure projects. Experience in supervising construction works and/or occupational safety and health will be an advantage.

B. Firms

International Experts

14. **Water Supply Specialist (International, 2 person-months).** The consultant will assess and recommend water supply schemes introducing international best practices in water supply and demand management, non-revenue water reduction, smart water management etc. The specialist will (i) lead technical review of engineering designs for proposed water supply and projects including modelling, cost estimates for relevant components, and investment plans for selected projects; (ii) recommend institutional and implementation modalities for construction, O&M with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) work closely with environmental and social safeguard specialist for integrating social and environmental safeguards mitigation measures into project designs; and (v) introduce smart technologies in water supply management into the projects. The specialist may function as a team leader and (i) ensure the delivery of project outputs and outcomes as expected in the project design; (ii) provide advice to executing agencies in risk mitigation for project implementation; and (iii) support procurement specialist in preparation and evaluation of bid documents. The specialist will have a degree in environmental engineering (or similar) and have at least 15 years' experience in planning, designing, and implementing urban water supply and sanitation infrastructure. Experience in working on externally financed projects will be an asset. Experience working in South Asian countries is preferred.

15. **Sanitation/Drainage Specialist (International, 2 person-months).** The consultant will assess and recommend sanitation management schemes introducing international best practices in wastewater, drainage and human waste management emphasizing energy generation, fecal sludge management, city-wide inclusive sanitation, recycling of wastewater for commercial, industrial, or domestic purposes and provide advice on integration of smart technologies for wastewater management. The specialist will (i) lead technical review of engineering designs for proposed sanitation and/ or sewerage projects including modelling, cost estimates for relevant components, and investment plans for selected projects; (ii) recommend institutional and implementation modalities for construction, O&M with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) ensure environment and social safeguard requirements are

incorporated into project design in order to avoid and minimize potential impacts from the start of the process by working closely with the environment and safeguards consultants; and (v) introduce smart technologies in fecal waste management for the selected cities. The consultant should have bachelor's degree in environmental, water supply or civil engineering with at least 15 years practical experience in sanitation, and hygiene sector projects. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

16. Urban Infrastructure Specialist (International, 3.0 person-months). The specialist is expected to support ADB and executing and/ or implementing agencies on a day-to-day basis for a wide range of tasks related to project administration, project development and project processing. The expert may also be required to contribute to the preparation of knowledge products and review engineering designs. The assignment requires frequent interaction and communication with project implementation stakeholders. The expert will (i) provide information and analyses towards the development of policy and strategies for urban development in developing member countries (DMCs) in consultation with relevant government agencies and field offices; (ii) contribute information and analyses for sector work and interdepartmental working groups on urban development; (iii) contribute in the development and processing of loan and TA projects in the urban sector and integrate ADB's policies and guidelines in the design and implementation of loan and TA projects; (iv) ensure the delivery of project outputs and outcomes as expected in the project design; (v) provide advice to executing agencies in resolving various issues during project implementation; (vi) be responsible to ensure environment and social safeguard requirements are incorporated into project design in order to avoid and minimize potential impacts from the start of the process by working closely with the environment and safeguards consultants; (vii) review of the executing agencies' actions in procurement and recruitment of consultants; and (viii) participate in and contribute to internal and external training and conferences on urban development and other activities for advocacy, dissemination and knowledge building. The expert is preferred to have a master's degree in Engineering or Urban Planning or related field, and at least 10 years of experience working on construction management, engineering design, project design and/or procurement. Preference would be given to candidates with prior work experience in projects financed by international financial institutions. Experience working in South Asian countries is preferred.

17. Environment Specialist (International, 1 person-month). The consultant will ensure environmental safeguards consideration in project design at the earliest possible. The consultant will ensure projects will avoid adverse environmental impacts, contribute internationally accepted performance indicators² to ensure projects apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's EHS Guidelines and adopt cleaner production processes and good energy efficiency practices. The consultant will (i) prepare frameworks, environmental assessment documents EIA, IEE, environmental DDR, and/or EMPs as required by country's environmental legal frameworks and ADB's SPS 2009; (ii) ensure that the relevant provisions of EMP are fully included in bid and contract documents; (iii) calculate and provide to relevant team members the indicative costs to implement package-wise EMPs, environmental monitoring programs, awareness programs, etc.; (iv) assess borrower and/or client's safeguards system and develop appropriate safeguards implementation arrangement including terms of reference for safeguards staff at executing and implementing agencies, and for support consultants, if required; (v) lead the environmental baseline data

² THESE ARE IMPORTANT SPECIFICALLY FOR DESIGN-BUILD-OPERATE PACKAGES AND/OR WHEN THE DETAILED DESIGN WILL BE COMPLETED DURING IMPLEMENTATION.

collection, assessment of hazards and risks the projects may pose to the environment and people, develop EMPs, conduct of meaningful consultations with project-affected people and other works for preparation of environment safeguard documents; (vi) develop monitoring checklists and templates for use of executing and implementing agencies during implementation phase; and (vii) ensure quality of EIA/IEE/environmental DDRs submitted to ADB. The consultant would also assist with any capacity building activities for project proponents. The consultant will also ensure projects will consider proactive environmental sustainability measures to align projects with ADB Strategy 2030. The consultant should have a degree in environmental management, EIA or related fields and at least 15 years of experience in managing and coordinating environmental assessments of infrastructure projects. Prior to document preparation, the environment specialist will (i) work closely with engineering and planning consultants to ensure avoidance and minimization measures included in project design from the start; (ii) confirm data collection is in order to identify up to date and robust baseline situation against which to undertake impact assessment; (iii) follow standards and measures set out in the relevant EHS Guidelines; (iv) support quantified impact assessment of all direct, indirect, cumulative, and induced impacts with respect to physical, biological, socioeconomic, especially health and safety and livelihoods, and physical cultural resources; and (v) necessary existing facilities audit and associated facilities due diligence. Working experience with similar assignments, ADB environmental safeguard policies and for donor-funded projects is preferred. In conjunction with the social safeguards' specialist, the consultant will also prepare a manual for safeguards monitoring and reporting requirements to be followed by the executing and implementing agencies during the construction and operation phase of the projects. The expert is required to have master's degrees in environmental engineering or related field, and 15 years of experience working on environmental assessments for complex urban infrastructure projects. Experience working in South Asian countries is preferred.

National Experts

18. **Urban Development Specialist (National, 6.0 person-months).** The specialist is expected to support ADB and executing and/ or implementing agencies on a day-to-day basis for a wide range of tasks related to project administration, project development and project processing. The expert may also be required to contribute to the preparation of knowledge products and review engineering designs. The assignment requires frequent interaction and communication with project implementation stakeholders. The expert will (i) provide information and analyses towards the development of policy and strategies for urban development in DMCs in consultation with relevant government agencies and field offices; (ii) contribute information and analyses for sector work and interdepartmental working groups on urban development; (iii) contribute in the development and processing of loan and TA projects in the urban sector and integrate ADB's policies and guidelines in the design and implementation of loan and TA projects; (iv) ensure the delivery of project outputs and outcomes as expected in the project design; (v) provide advice to executing agencies in resolving various issues during project implementation; (vi) be responsible to ensure environment and social safeguard requirements are incorporated into project design in order to avoid and minimize potential impacts from the start of the process by working closely with the environment and safeguards consultants; (vii) review of the executing agencies' actions in procurement and recruitment of consultants; and (viii) participate in and contribute to internal and external training and conferences on urban development and other activities for advocacy, dissemination and knowledge building. The expert is preferred to have a master's degree in Engineering or Urban Planning or related field, and at least 7 years of experience working on construction management, engineering design,

project design and/or procurement. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

19. **Water Supply Specialist (National, 4 person-months).** The consultant will assess and recommend water supply management schemes introducing smart water management practices in water supply and demand management, and nonrevenue water reduction. The specialist will (i) lead technical review of engineering designs and detailed project reports for proposed water supply projects including modelling, cost estimates for relevant components, and investment plans for selected subprojects; (ii) recommend institutional and implementation modalities for construction, O&M with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) work closely with environment and social safeguards specialists for integration of social and environmental safeguards considerations into the project designs; and (v) introduce smart water management principles into the project designs. The consultant should have bachelor's degree in environmental, water supply or civil engineering with at least 10 years practical experience in water supply and environmental engineering projects. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

20. **Sanitation/Drainage Specialist (National, 7 person-months).** The consultant will assess and recommend sanitation management schemes introducing international best practices in wastewater, drainage and human waste management emphasizing energy generation, fecal sludge management, city-wide inclusive sanitation, recycling of wastewater for commercial, industrial, or domestic purposes and provide advice on integration of smart technologies for wastewater management. The specialist will (i) lead technical review of engineering designs for proposed sanitation and/ or sewerage projects including modelling, cost estimates for relevant components, and investment plans for selected projects; (ii) recommend institutional and implementation modalities for construction, O&M with special attention to technical and financial sustainability; (iii) define performance parameters in performance-based contracts for turnkey contracts; (iv) ensure environment and social safeguard requirements are incorporated into project design in order to avoid and minimize potential impacts from the start of the process by working closely with the environment and safeguards consultants; and (v) introduce smart technologies in fecal waste management for the selected cities. The consultant should have bachelor's degree in environmental, water supply or civil engineering with at least 10 years practical experience in sanitation, drainage and hygiene sector projects. Preference would be given to candidates with prior work experience in projects financed by international financial institutions.

21. **Solid Waste Management Specialist (National, 1 person-month).** The expert will have preferably a Master's degree in civil or environmental engineering or related discipline; and a minimum of 10 years relevant international project experience involving SWM including planning, design and implementation. The expert will identify appropriate interventions involving innovative technologies, international best practices and propose the implementation process stemming from climate-resilient integrated urban planning. The expert should also propose an institutional and implementation modality for construction and O&M, such as service contracts, design-build operate, and performance-based contract, with special attention to technical and financial sustainability and the scope of private sector involvement.

22. **Procurement Specialist (National, 9 person-months).** The consultant will (i) undertake procurement capacity assessment including e-procurement capacity of executing and implementing agencies; (ii) conduct procurement classification of proposed projects; (iii) perform an assessment or survey for both international and national markets for the relevant sectors for

anticipated procurement packages; (iv) define a sensible procurement packaging based on the market assessment; (v) develop a procurement plan in ADB template format; (vi) support executing agencies in the preparation and review of bidding documents for goods, works, and services; (vii) work closely with environmental and social safeguards experts to ensure that environment and social safeguard requirements are incorporated in the relevant sections of the bidding documents; and (viii) support advance contracting activities. The expert should also assist the executing agencies in the preparation of documents for consultant recruitment (following ADB's procurement guidelines) and provide support in recruitment of loan consulting firm/s. The experts should have degrees in civil engineering, business administration or related fields, and at least 10 years of experience in handling procurement in the public sector and/or private sector including preparation and evaluation of bid documents. Experience with use of FIDIC bidding documents and FIDIC accreditation is an additional advantage. Working experience with similar assignments and familiarity with ADB's Procurement Policy (2017, as amended from time to time) is preferred. Experience working or living in South Asian developing member countries is preferred.

23. Economist (National, 4.5 person-month) Economist will lead the economic assessment for the proposed projects being supported by the TA facility. He/she will work closely with the government and other members of the team to prepare a project meeting ADB's funding requirements. In compliance with ADB's Guidelines for the Economic Analysis of Projects (2017), and relevant technical notes published by ADB's Economic Research Department, the consultant will undertake the economic analysis including the following analytical works, and prepare the relevant documents required for project processing: (i) macro-economic analysis; (ii) sector analysis; (iii) demand analysis; (iv) least economic cost analysis; (v) economic cost and benefit analysis; (vi) economic internal rates of return; (vii) incremental economic costs; (viii) sensitivity analysis; (ix) risk analysis; (x) benefit distributional analysis; and (xi) poverty impact ratios, and assessment of subsidies, and other relevant works. The economist will review, and guide feasibility study prepared by the government, and undertake detailed economic analysis of the proposed project in accordance with ADB guidelines. He/she will be preferable to have 15 years of experience in project economic analyses, and post-graduate degrees in economics and finance field with experience in working on donor-funded projects. Experience working on donor-funded urban projects is an advantage.

24. Financial Specialist (National, 4.5 person-months). The expert will have a degree in accounting, finance, or a related field, and will have a recognized professional accountancy qualification. The expert should have at least 8 years' experience, including in FDD. The expert will conduct FDD in accordance with ADB's requirements. Relevant guidance is available at <http://www.adb.org/projects/operations/financial-management-resources>. The FDD will include: (i) conducting a financial management assessment of the executing and implementing agencies, including (a) assessing whether previous financial management assessments have been conducted by ADB or other agencies and, if so, reviewing the results and ascertaining whether these can be used as input, (b) assessing capacity for planning and budgeting, management and financial accounting, reporting, auditing, internal controls, and information systems (c) reviewing proposed disbursement and funds-flow arrangements, and (d) concluding the financial management risk rating and identifying and confirming measures for addressing identified deficiencies; (ii) supporting the preparation and agreement of cost estimates and a financing plan, which are based on verifiable data and are sufficient to support project implementation; (iii) preparing financial projections and conducting financial analyses of the executing and implementing agencies, and incremental recurrent costs, to determine financial sustainability, and reviewing proposed cost-recovery and tariff policies, including affordability; (iv) conducting financial evaluations (financial cost-benefit analyses) including sensitivity

analyses of project components that have a cost-recovery objective; (v) where significant risks are identified to project financial sustainability or viability, proposing relevant financial performance indicators to be incorporated in financial covenants; and (vi) assessing and reaching agreement on financial reporting, auditing and public disclosure arrangements for the project, and, as appropriate, identifying and agreeing on arrangements for receiving financial statements from executing and/or implementing agencies. The expert will work with oversight by ADB financial management specialist.

25. **Social Safeguards Specialist (National, 8 person-months).** The consultant will be in charge of screening, scoping and proposed involuntary resettlement and indigenous peoples categorization of the project; preparation, review, and finalization of safeguard documents (resettlement plans, DDRs, IPP, IPPF resettlement frameworks and social safeguard monitoring reports); and ensure compliance with ADB's public disclosure requirements. The consultant will work closely with ADB staff, engineering and planning consultants and consulting firms and executing and implementing agencies. The consultant will be responsible for conducting site visits and field based due diligence, assessment of alternatives, collecting land records and primary data on affected persons and conduct and document meaningful consultations with affected persons and site-specific stakeholder consultations, and translate any documents in local language. The consultant will (i) ensure SAUW projects under processing are in compliance with ADB's SPS, 2009 for involuntary resettlement and indigenous peoples and related Operations Manual F1 on Safeguards; (ii) will work closely with engineering and planning consultants to ensure avoidance and minimization measures based on assessment of alternatives is included in project design from the start; (iii) assist in preparation of social safeguard documents such as resettlement plans, indigenous peoples plans and due diligence reports through adequate and meaningful consultations with affected people; (iv) fill any gaps in information for completing loan documentation through site visits and meetings with executing and implementing agencies; and (v) conduct field verification/project monitoring as well as capacity building on safeguards, when required. Together with the Gender Specialist, will ensure relevant resettlement plan/IPP provisions and conditions are incorporated in bid and contract documents, and in draft/updated/final resettlement plan/IPP/social safeguards DDRs. Specialist should have master's degrees in social sciences/ urban planning or similar with at least 7 years' experience of preparing social assessments (including undertaking community consultations) for public sector infrastructure projects.

26. **Gender Specialist (National, 4 person-months).** The expert will (i) carry out social, poverty and gender analysis in the communities of the project area that is directly related to the nature, scope and planned interventions of the project; and look at issues such as gender division of labor, women's time poverty related to water supply and sanitation, percentage of female headed households, women's skills and relevant training needs to participate in skilled construction labor, female/male membership and leadership in existing water user committees, and women's skills and leadership training needs to manage these committees. The consultant will (i) study the poverty and vulnerability profile of the community and identify ways and means of including the poor and vulnerable in project design and implementation as well as in project benefits; (ii) contribute to survey and questionnaire design, coordinate collection of sex-disaggregated secondary and primary baseline data and information on reference points in relation to all performance indicators and targets that could possibly be included in the design and monitoring framework and the GAP or gender and social inclusion plan (GESI); (iii) conduct independent consultations with women's groups and mixed groups to validate survey results; (iv) prepare a social, poverty and gender analysis report and contribute to preparation of draft initial poverty and social analysis and/or summary poverty reduction and social strategy; (v) identify scope for gender mainstreaming and social inclusion in the proposed subprojects

and prepare a GAP or GESI based on the findings of the gender mainstreaming analysis and with clear reference to the gender results that we intend to achieve including clear baseline information and targets that are evidence-based; (vi) prepare a clear relationship between these results and the proposed actions to achieve these results, including clear baseline information and targets that are evidence-based; (vii) propose capacity building measures for the executing and implementing agencies to develop inclusive subprojects; (viii) develop the GAP/GESI monitoring and reporting matrix, with guidelines; and (ix) coordinate/liase with executing and implementing agencies to incorporate lessons and capacity building measures for gender from the previously financed externally funded projects. The specialist should have master's degrees in social sciences and minimum 7 years of experience in carrying out social, poverty and gender analysis and preparing gender action frameworks and plans preferably for ADB-financed (or other international financial institutions) projects in the sector.

27. Climate Change Resilience and Disaster Risk Management Specialist (National, 5 person-months). The expert will support the climate risk and vulnerability assessment and advise on how to improve climate and disaster risk resilience of sub-projects. The expert will do preliminary work to (i) identify data and information that are needed for assessing climate change scenarios; (ii) assess climate change scenarios based on the available data and inputs with particular focus on current and future vulnerabilities; (iii) strengthen the capacity and raise the awareness of various stakeholders regarding climate change and urban resilience; (iv) identify various physical and non-physical interventions required to effectively and sustainably adapt to climate change impacts, with reference to international best practices; (v) identify disaster risk mitigation solutions for proposed infrastructures; (vi) work closely with engineering and safeguard specialist for integrating climate and disaster risk resilience features into project design (including detailed calculations required for the engineering team); (vii) prepare the climate risk and vulnerability assessment and disaster risk mitigation linked documents for the loan projects; (viii) ensure the integration of priority climate and disaster risk resilience into proposed subprojects including delivering presentations, workshops if needed (for client buy in and capacity development); and (ix) any other tasks required for integration of climate change resilience and disaster risk mitigation in ensuing projects. The expert will have degrees in environmental engineering, urban and regional planning, climate change or related fields, and at least 10 years of experience in climate risk and vulnerability analysis in urban systems and climate-and disaster resilient infrastructure planning and implementation. Working experience with similar assignments and for donor-funded projects is an advantage.

28. Environment Specialist (National, 9 person-months). For project processing, the Environment Specialist will work closely with ADB staff, executing and implementing agencies, and consulting firms hired to prepare technical, economic, safeguards work, etc. to ensure necessary safeguards outputs meet ADB SPS, 2009. The consultant will work directly with the international environment specialist for the screening, scoping, and proposed environmental categorization of the project. The consultant will prepare, update, and/or finalize Rapid Environmental Assessment Checklists to confirm proposed categorization, EIA/IEE/environmental DDRs, environmental frameworks, and other related loan processing documents to ensure compliance with national laws/rules/regulations, ADB SPS, 2009 requirements, and ADB disclosure policy. For document preparation, the environment specialist will (i) work closely with engineering and planning consultants to ensure avoidance and minimization measures included in project design from the start; (ii) confirm that the data collection is in order to identify up to date and robust baseline situation to undertake impact assessment; (iii) follow standards and measures set out in the relevant EHS Guidelines; (iv) support quantified impact assessment of all direct, indirect, cumulative, and induced impacts with respect to physical, biological, socioeconomic, especially health and safety and livelihoods,

and physical cultural resources; and (v) conduct necessary existing facilities audit and associated facilities due diligence. The Environment Specialist will also conduct meaningful consultations, field verifications and/or project monitoring as well as capacity building on safeguards, health and safety, core labor standards, when required. The consultant will provide advisory support to implementing agencies on statutory requirements related to environmental clearances and permits, physical cultural resources, biodiversity protection, workers and community health, safety, welfare, sanitation, and working conditions. The consultant will also ensure projects will consider proactive environmental sustainability measures to align projects with ADB Strategy 2030. Together with the International Environment Specialist, the consultant will ensure relevant EMP provisions and statutory clearances conditions are incorporated in bid and contract documents, and in draft/updated/final EIA/IEEs/environmental DDRs. The environment specialist should have master's degrees in environmental sciences or similar with at least 7 years' experience of preparing environmental assessments for public sector infrastructure projects. Experience in supervising construction works and/or occupational safety and health will be an advantage.