



Technical Assistance Report

Project Number: 47039
Capacity Development Technical Assistance (CDTA)
October 2013

Mongolia: Ulaanbaatar Urban Planning Improvement (Financed by the Japan Fund for Poverty Reduction)

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 30 September 2013)

Currency unit	–	togrog (MNT)
MNT1.00	=	\$0.00061
\$1.00	=	MNT1,638.00

ABBREVIATIONS

ADB	–	Asian Development Bank
CDTA	–	capacity development technical assistance
GIS	–	geographic information system
JFPR	–	Japan Fund for Poverty Reduction
JICA	–	Japan International Cooperation Agency
MPACC	–	Master Planning Agency of Capital City
MUB	–	Municipality of Ulaanbaatar
TA	–	technical assistance
UPADI	–	Urban Planning, Architecture and Design Institute of Ulaanbaatar City

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Capacity development technical assistance (CDTA)
Targeting classification	–	Targeted intervention (geographic)
Sectors (subsector)	–	Multisector (urban sector development, public administration)
Themes (subthemes)	–	Capacity development (institutional development, organizational development); economic growth (promoting economic efficiency and enabling business environment); governance (public administration, civil society participation); social development (human development)
Location (impact)	–	Urban (high), rural (low), national (medium), regional (low)
Partnership	–	Japan Fund for Poverty Reduction

NOTE

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

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I. INTRODUCTION

1. The Municipality of Ulaanbaatar (MUB) requested Asian Development Bank (ADB) to provide a technical assistance (TA) that will enhance its in-house resources, capacity, and institutional arrangements related to urban planning for better delivery of master and local plans and efficient plan implementation.¹ After the TA fact-finding mission on 28 November–12 December 2012, the Mayor of Ulaanbaatar and the Director General of the Economic Cooperation, Loan and Assistance Policy Department at the Ministry of Economic Development signed a memorandum of understanding. The mission consulted the Master Planning Agency of Capital City (MPACC) of MUB and the Urban Planning, Architecture and Design Institute of Ulaanbaatar City (UPADI).² Both entities agreed on the TA's impact, outcome, outputs, implementation arrangements, cost and financing, and outline terms of reference for consulting services. The design and monitoring framework is in Appendix 1.

II. ISSUES

2. Rapid urbanization is taking place in Ulaanbaatar, but strategic urban infrastructure and planning are inadequate. MUB needs to build its capacity to plan, regulate, and implement its urban development to overcome long-term economic, social, and environmental problems; and to improve the people's quality of life. Parliamentary approval of the Ulaanbaatar Urban Development Master Plan 2030 in February 2013 and adoption of new laws to regulate the urban development of Ulaanbaatar provided a framework for the city's development. However, the existing technical capacity and institutional arrangements for urban planning in the MUB make it difficult to implement the master plan effectively, and are inadequate for the urban development requirements of the rapidly growing city.

3. **Institutional arrangements.** The main government bodies involved in urban planning are as follows:

- (i) The Ministry of Construction and Urban Development is responsible for (a) preparing the legal framework for urban planning, including laws on urban development, land management, and construction; and (b) reviewing and approving the urban plans of Ulaanbaatar before submission to the Parliament.
- (ii) The MPACC of MUB is responsible for (a) formulating policies on urban development, land administration, and infrastructure; (b) preparing master plans and detailed development plans; (c) developing the urban planning database; and (d) monitoring development and construction activities. The agency has a division that manages the geographic information system (GIS) and urban database.
- (iii) UPADI is an agency under the MPACC and is responsible for formulating the city's master plan, associated detailed plans, and building and infrastructure design according to the economic and social objectives of the city.
- (iv) Several other municipal agencies such as Agency for Economic Development are also involved in the planning process and implementation. Sector agencies are responsible for developing their own sector master plans, such as water and wastewater master plan, transport master plan, and energy master plan.

4. Currently, implementation and enforcement of urban master and local plans are ineffective due to (i) segmentation of urban planning functions in MUB; (ii) lack of integrated protocols,

¹ The TA first appeared in the business opportunities section of ADB's website on 5 April 2013.

² Previously, the name of the Master Planning Agency of Capital City was the Construction, Urban Development, and Planning Department.

approval mechanisms, and information sharing among the main players directly involved in urban plan formulation and implementation; and (iii) weak links among urban planning, land management processes, and legal framework.

5. **Urban planning principles.** Although the system of urban development planning has undergone changes since the early 1990s, current planning procedures, regulations, and standards still largely reflect the central “top-down” planning approach. In particular, the process is still heavily oriented towards the use of prescriptive end-state master plans. Urban planning needs to adopt modern, integrated, multisector approaches; and to shift away from the construction-based plans of the past. In particular, it should include plans that are more flexible in responding to the market-led economy, and accord greater role to communities in determining the future of their urban areas through participatory consultations on plans.

6. **Urban planning capacity.** Changes in the planning system will need significant technical support to train a new generation of urban planners, widespread dissemination of information, and training in new ways of urban planning. To date, the majority of the city’s professionals working in planning are architects rather than urban planners. They come from a design-based background that perpetuates the detailed construction-based master plan approach rather than modern, broad-based planning, which embraces economic, social, and environmental considerations. Introduction and enforcement of new policies, plans, and laws will be dependent on availability of sufficient municipal capacity. Without proper capacity and adequate professional skills of the city staff, the city master plan along with the associated detailed plans cannot be produced and implemented with desired quality standards.

7. **Planning software.** Updated management and design software—in particular, a comprehensive GIS—are fundamental tools for making decisions in planning in a complex urban system such as Ulaanbaatar. A GIS database is already being assembled by the MPACC. However, it is being used primarily for data storage and mapping, rather than as an analytical tool or for assisting in information sharing and decision-making.

8. **The city master plan.** Parliament approved the Ulaanbaatar Urban Development Master Plan 2030 in February 2013. One of the master plan’s key aspects is that, for the first time, the redevelopment of the poor and highly polluted peri-urban *ger* areas is formally and fully incorporated in the city’s overall development and urban infrastructure programming.³ The extension of urban services through a network of subcenters will unlock the economic development potential and improve the livelihood of people in these poor urban areas. The implementation of the master plan is essential to alleviate poverty and improve the environment in the city. However, the master plan is still preliminary and provides only general development directions. Further refinement and adjustment is expected to start soon in detailed local plans based on the approved master plan. Also, a large number of sector-based projects are being planned or implemented within the city by development partners. It is critical that each development partner’s assistance plan aligns with the master plan and government programs. The master plan and its associated detailed plans need to recognize and incorporate the ongoing project activities, as the master plan will have the legal authority in guiding overall urban development. It is critical for the city to have the capacity to develop plans that build on ongoing urban projects supported by development partners and serve as a tool to coordinate their assistance. Close coordination with relevant ministries, departments, and development partners will also be required.

³ *Ger* areas are named after *ger* tents.

9. **Legal and regulatory framework.** Several changes are being proposed to current urban laws, and the Ministry of Construction and Urban Development is receiving assistance from development partners such as ADB, Japan International Cooperation Agency (JICA) and World Bank. The proposed urban laws will create a significantly better planning and legal environment for upgrading city development. However, an important condition for this is the harmonization of the proposed urban laws with other laws related to urban planning and development, along with the capacity to enforce them through adequate regulations.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The impact of the TA will be improved living conditions in Ulaanbaatar. The outcome will be stronger capacity of MUB for urban planning.

B. Methodology and Key Activities

11. The objective of the TA will be to strengthen Ulaanbaatar's development strategies and plans by building MUB's capacity and mechanisms in urban planning based on international standards. Assistance will involve provision of training materials, working group, and workshops focused on disseminating methodologies for and experiences in strategic planning processes. Improvement of master and local planning capacity will specifically emphasize (i) strengthening the critical links between (a) the urban infrastructure sectors—e.g., water, transport, and energy—in integrated urban planning and development processes; and (b) economic development and physical and infrastructure planning, urban laws and policies, poverty reduction, and environmental improvement; (ii) financing requirements of investment plans, revenue generation from different urban infrastructure services, and implications for local government debt, budget, and other key financing indicators; (iii) full engagement of government and nongovernment stakeholders, private sector, and communities in the planning process through participatory planning methods; and (iv) enhancement of environmental and safeguard skills and mechanisms to lay the foundation for green development as well as strategic environmental assessment with measurable indicators. The TA will have four components with the following outputs.

12. **Output 1: Enhancement of technical skills for urban planning and development of master and local plans.** This will mainly target the MPACC and UPADI staff but could be extended to other related institutions in the MUB.⁴ The TA will (i) analyze urban planning capacity and assess training needs; (ii) extend advisory services from a team of international and national consultants who will strengthen the current MUB urban planning teams at different levels of the planning process; (iii) provide training and materials on urban planning to introduce (a) modern, integrated, multisector, and sustainable urban planning practices and participatory approaches; (b) updated norms and standards for urban land use planning, urban design, green development, and construction; and (c) international best practices, lessons, and case studies from other overseas cities, particularly post-communist cities and cities with similar climate settings as Ulaanbaatar; (iv) provide training by inviting external speakers to increase the international exposure of municipal staff; (v) undertake case studies and workshops on concrete and agreed urban development plan scenarios or sector plans; (vi) launch a pilot planning program to apply the learned technical capacities and skills to the practical plan-making process; (vii) train trainers to ensure the sustainability of the technical skills enhancement; and (viii) produce knowledge

⁴ This includes the newly established Agency of Economic Development of MUB.

products on strategic urban development and lessons learned from capacity building activities. MPACC and UPADI staff will receive certificates upon completion of the training programs.

13. Output 2: Strengthening of urban planning function with a more participatory process and efficient organizational arrangement. The TA will (i) perform an in-depth assessment of the current institutional arrangements and decision-making mechanisms within urban planning and conduct case studies; (ii) develop with the key stakeholders a road map for organizational restructuring within MUB, and produce an agreed time-bound organizational development plan; (iii) introduce the participatory planning approach, build it into the decision-making process, and establish an action plan on a participatory, bottom-up approach; (iv) define and agree with key stakeholders a road map for master plan implementation and a step-by-step approach of establishing mechanisms to plan, manage, and promptly update master and local plans, policies, and standards in response to the changing demands of the growing city; (v) recommend links between urban planning, regulatory, and legal frameworks; and (vi) prepare an operations manual for departmental responsibilities with staff job descriptions and management processes.

14. Output 3: Establishment of shared urban database. A properly functioning urban planning database will be established, with proper hardware and software and trained staff for database operation and maintenance. The TA will (i) propose specific solutions and protocols to ensure that planning activities by the municipality are prepared using the same base maps, with standardized coordinates and data sources; (ii) provide institutional and technical advice to install a GIS and a geospatial center within municipal departments and agencies to ensure that the items mentioned above are developed and implemented in a coordinated manner; and (iii) propose a step-by-step harmonization of all the geospatial tools now used by different agencies (e.g., Ulaanbaatar water and sewerage company, transport planning agencies) in a standardized and integrated system and platform. The shared urban database could be provided by establishing a one-stop shop containing all planning information of Ulaanbaatar, including maps, data, laws, and reports. A board of directors that will include representatives from municipal departments and agencies will manage the database.

15. Output 4: Upgrade of planning software. Geospatial systems will be established and used with proper software and trained staff for operation and maintenance. Up-to-date GIS, geospatial tools, as well as management and design software and their official licenses will be developed or purchased to support the daily planning activities and the shared urban database. When conducting technical analysis and feasibility work, where necessary, specialized software will be purchased and training will be provided.

C. Cost and Financing

16. The TA is estimated to cost \$1,700,000, of which \$1,500,000 which will be financed on a grant basis by the Japan Fund for Poverty Reduction (JFPR) administered by ADB. The government will provide in-kind counterpart support through the provision of office space, equipment, office communications, and remuneration and per diem of counterpart staff. The cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

17. MUB will be the executing and implementing agency for the TA. It is proposed that the TA be implemented through the MPACC, one of MUB's departments in charge of planning. The capacity development activities will mainly target the MPACC and the UPADI, which is the agency under MPACC, but if found necessary, the activities will be extended to other relevant

agencies in MUB to promote integration. A TA project management unit will be established within the MPACC and will report to the management of MUB. MUB will form a steering committee to provide overall guidance, monitoring, and evaluation on implementation of the TA. The steering committee is proposed to include key government departments and agencies, stakeholders, and key development partners to ensure that assistance in urban planning is coordinated, updated information is shared, and synergy between key players and development partners is maximized. The TA will be closely coordinated with ADB's proposed urban development program and JICA's capacity development project.⁵

18. The TA will be implemented over 24 months, and is expected to start on 1 October 2013 and finish by 30 September 2015. The TA will finance consulting services, workshops, training, equipment, and software. It will require an estimated 74 person-months of consulting services (34 person-months of international consultants and 40 person-months of national consultants). The main fields of expertise will be urban planning, institutional reform, capacity building, and the GIS. Proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

19. The TA will engage a consulting firm and individual consultants. The consulting firm will have total inputs of 66 person-months (30 international and 36 national). The firm will be selected through the quality- and cost-based selection method with a 90:10 ratio.⁶ ADB's full technical proposal will be used to select and engage the consultants. The individual consultants (international and national) will have total inputs of 8 person-months. The outline terms of reference are in Appendix 3. The consultants will be engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The equipment for TA implementation will be procured in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and will be turned over to MUB after completion of the TA.

20. During TA implementation, a report on the strategic urban development of Ulaanbaatar will be produced as a knowledge product. After completion of the TA, another report will be produced to disseminate the evaluation of outputs and expected outcome with lessons learned from capacity development activities in urban planning practices in Ulaanbaatar.

IV. THE PRESIDENT'S DECISION

21. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of \$1,500,000 to the Government of Mongolia to be financed on a grant basis by the Japan Fund for Poverty Reduction for Ulaanbaatar Urban Planning Improvement, and hereby reports this action to the Board.

⁵ This TA will support the formulation of improved community-led local planning in the targeted areas of the ADB Proposed Multitranchise Financing Facility to Mongolia for the Ulaanbaatar Urban Services and Ger Areas Development Investment Program. While the JICA project on Advisor for Urban Planning and Urban Planning Law will focus on the legal framework and redevelopment issues in Ulaanbaatar working with MUB's Ger Area Development Agency, this TA will focus on urban planning capacity building in Ulaanbaatar working with MUB's MPACC and UPADI.

⁶ The selection ratio is considered appropriate because of the complexity of the subject and the high technical qualification requirement.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Improved living conditions in Ulaanbaatar	By 2020 Funding gap in urban infrastructure is addressed in the urban plans (Urban infrastructure investment by MUB in Ulaanbaatar is increased by 20%. Baseline \$85 million in 2011).	National Statistical Office reports	Assumptions Implementation and operation arrangements of other infrastructure projects are going smoothly once planning capacity is improved. The government and MUB remain committed to improving urban planning capacity when formulating integrated master and local plans. Risk Change in political leadership affects government priorities and commitment level.
Outcome Stronger capacity of MUB for urban planning	By 2017 Updated version of Ulaanbaatar's master and local plans supports best practices and principles of inclusiveness, competitiveness, and green development; and has broad-based support from governments, communities, and nongovernment stakeholders	Government feedback and urban planning practices after the TA Monitoring against capacity benchmarks on performance of city district governments and other city agencies External peer review	Assumption Information from meetings with stakeholders and community consultations are reflected in the planning process. Risk Governments are unable or unwilling to quickly change existing systems, norms, and standards.
Outputs 1. Enhancement of technical skills of MPACC and UPADI staff for urban planning and development of master and local plans	By 2015 Urban planning training and materials are provided with 15 training sessions and 10 workshops delivered Total of 25 staff from MPACC and UPADI receive training on urban planning and its related subjects, and receive certificates upon completion of the training programs Knowledge product to disseminate the evaluation of outputs and expected outcome with lessons learned	Report reviews by the ADB internal review group and project steering committee on drafts of TA reports TA progress report	Assumptions Agencies and departments involved in urban planning are cooperative and provide data and information. MUB involves appropriate staff in capacity building activities.

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks																
2. Strengthening of urban planning function with a more participatory process, and efficient organizational arrangement	Priority sector or targeted study cases are finalized. Time-bound organizational development action plan is agreed on. Participatory action plan with bottom-up approach is established. Road map for master plan implementation with a step-by-step approach is defined, agreed on, and ongoing. Operations manual for departmental responsibilities with staff job descriptions and management processes is completed.	MUB's organizational chart of urban planning function Technical skills evaluation Report reviews by the ADB internal review group and project steering committee on drafts of TA reports	Risks Ineffective coordination of government departments, agencies, and consultants International best practices are not applicable to local conditions.																
3. Establishment of shared urban database	Urban planning database is established and properly functioning, with appropriate hardware and software and 2 trained staff for database operation and maintenance.	Technical skills evaluation Survey on the urban data user																	
4. Upgrade of planning software	Geospatial systems are established and in use, with proper software system and 4 trained staff for software operation and maintenance.	Report reviews by the ADB internal review group and project steering committee on drafts of TA reports																	
Activities with Milestones Output 1: Technical skills enhancement 1.1 Assess MUB's urban planning capacity and training needs, and identify international best practices relevant to Ulaanbaatar (months 1–3) 1.2 Conduct stakeholder workshops 1.3 Provide advisory services to strengthen the current MUB staff in charge of urban planning at different stages of the planning process (months 4–8) 1.4 Develop training materials (months 4–8) 1.5 Deliver training sessions and workshops (months 9–20) 1.6 Work on a pilot planning program to apply the acquired skills (months 9–18) 1.7 Deliver workshops and invite external resource speakers to broaden international exposure of MUB staff (months 12–18) 1.8 Finalize training materials for future sustainable use, pilot planning program, agreed road maps and action plan for implementation of master and local plans (month 20) 1.9 Reports on the strategic urban development of Ulaanbaatar and lesson learned from the capacity building are prepared (month 20)		Inputs Japan Fund for Poverty Reduction: \$1,500,000 <table><tr><th>Item</th><th>Amount (\$'000)</th></tr><tr><td>Consultants</td><td></td></tr><tr><td>International (34 person-months)</td><td>833.0</td></tr><tr><td>National (40 person-months)</td><td>120.0</td></tr><tr><td>International and local travel</td><td>94.0</td></tr><tr><td>Reports and communications</td><td>20.0</td></tr><tr><td>Equipment and software</td><td>138.0</td></tr><tr><td>Training, seminars, and conferences</td><td>120.0</td></tr></table>		Item	Amount (\$'000)	Consultants		International (34 person-months)	833.0	National (40 person-months)	120.0	International and local travel	94.0	Reports and communications	20.0	Equipment and software	138.0	Training, seminars, and conferences	120.0
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Equipment and software	138.0																		
Training, seminars, and conferences	120.0																		

Activities with Milestones	Inputs
	Amount (\$'000)
Output 2: Institutional and organizational strengthening 2.1 Perform an in-depth assessment of the current institutional arrangements and decision-making mechanisms within the MUB urban planning function (months 1–3) 2.2 Conduct stakeholder workshops 2.3 Develop with the key stakeholders a road map for institutional and organizational restructuring (months 4–8) 2.4 Deliver workshops on participatory planning and methods to incorporate them into decision-making process (months 9–15) 2.5 Recommend links between urban planning, regulatory, and legal frameworks (months 12–18)	Surveys 40.0 Miscellaneous administration and support costs 20.0 Representative for contract negotiations 5.0 Contingencies 110.0
Output 3: Establishment of shared urban database 3.1 Assess the existing urban mapping system by relevant departments of MUB and identify existing urban data/information (months 1–3) 3.2 Propose specific solutions and protocols to ensure that planning activities conducted by MUB are prepared using the same base maps, with standardized coordinates and data sources (months 1–6) 3.3 Conduct stakeholder workshops 3.4 Provide institutional and technical advice to install a GIS and a geospatial center within the MUB departments and agencies (months 7–18) 3.5 Finalize the urban one-stop-shop function (month 20)	Note: The government will provide in-kind counterpart support in the form of provision of office space, equipment, office communications, and remuneration and per diem of counterpart staff.
Output 4: Upgrade of planning software 4.1 Assess MUB staff capacity, existing urban mapping system; define improvements, methodology, and needs for hardware and software (months 1–3) 4.2 Prepare training contents and material (months 1–6) 4.3 Purchase required equipment and software for MUB (month 6) 4.4 Deliver training for MUB staff in charge of GIS and mapping (months 7–18)	

ADB = Asian Development Bank; GIS = geographic information system; MPACC = Master Planning Agency of Capital City; MUB = Municipality of Ulaanbaatar; TA = technical assistance; UPADI = Urban Planning, Architecture and Design Institute of Ulaanbaatar City.

Source: Asian Development Bank estimates.

COST ESTIMATES AND FINANCING PLAN (\$'000)

Item	Amount
Japan Fund for Poverty Reduction^a	
1. Consultants	1,067.0
a. Remuneration and per diem	
i. International consultants	833.0
ii. National consultants	120.0
b. International and local travel	94.0
c. Reports and communications	20.0
2. Equipment and software ^b	138.0
3. Training, seminars, and conferences	120.0
4. Surveys	40.0
5. Miscellaneous administration and support costs	20.0
6. Representative for contract negotiations	5.0
7. Contingencies	110.0
Total	1,500.0

Note: The technical assistance (TA) is estimated to cost \$1,700,000, of which contributions from the Japan Fund for Poverty Reduction is presented in the table above. The government will provide counterpart support in the form of office space, equipment, office communications, and remuneration and per diem of counterpart staff. The value of government contribution is estimated to account for 12% of the total TA cost.

^a Administered by the Asian Development Bank (ADB).

^b Equipment and software will be procured by the Municipality of Ulaanbaatar, the implementing agency, in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and policy guidelines of the Japan Fund for Poverty Reduction. Upon completion of the TA, all equipment and software procured under the project as indicated in the table below will be handed over to and retained by the Municipality of Ulaanbaatar.

Type	Quantity	Cost (\$)
Computer	10	15,000
Data server system for shared database	1	50,000
Licensed GIS software package and user licenses	15	30,000
Various digitizing equipment (e.g., scanner, plotter, printer)		43,000

GIS = geographic information system.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. General

1. The Municipality of Ulaanbaatar (MUB), which has implemented many Asian Development Bank (ADB) and World Bank projects, will be the executing and implementing agency of the proposed technical assistance (TA). The TA will be implemented over a period of 24 months, and is expected to start on 1 October 2013 and finish by 30 September 2015. The TA will finance consulting services, workshops, training, equipment, and software. It will require an estimated 74 person-months of consulting services (34 international and 40 national). The main fields of expertise will be urban planning, institutional reform, capacity building, and geographic information system (GIS). The proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

2. The TA will engage a consulting firm and individual consultants. The table in para. 3 of this appendix summarizes the required consulting services. The consulting firm will have total inputs of 66 person-months (30 international and 36 national). The firm will (i) conduct detailed assessment of capacity development needs; (ii) establish capacity development methodologies and training curriculum based on the assessment, preparation, and drafting of training materials; (iii) define resource persons, equipment, and software to be purchased for the GIS and database; (iv) perform logistical arrangements; (v) deliver training and workshops; and (vi) monitor project progress and outcome. The firm will be selected through the quality- and cost-based selection method with a 90:10 ratio,¹ using full technical proposal procedures in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The core team of the firm consists of key eight experts will be responsible for overall management of the TA implementation and design of training program, and will be fielded from the project inception stage. During the TA inception stage, the core team will assess further in a participatory manner the urban planning capacity of the MUB, training needs, and identify international best practices relevant to Ulaanbaatar mainly for the MPACC and UPADI but also if adequate, training will be extended to other MUB agencies involved in the strategic planning of urban development such as Agency of Economic Development. The core team will then detail and adjust the urban planning capacity development plan, output and activities to be implemented by the technical team and will present it to the MUB and the ADB team for validation. As a source of technical experts and in order to establish a sustainable capacity building environment, partnering with an urban planning institute from a selected country, urban practitioners, and exchange of experts between cities could be considered as options. The outline terms of reference for the key eight experts in the core team are in paras. 5–10, and the technical team is in para. 11.

3. International individual consultants will be recruited for a total of 4 person-months, and national individual consultants will have the same inputs. From project kick-off until the consulting firm is recruited, the consultants will perform a preliminary review, conduct a needs assessment, and provide guidance. During TA implementation, they will externally monitor the training contents and progress of the capacity development, and provide advice and additional inputs to the project team. The terms of reference for the individual consultants are in para. 12.

¹ The selection ratio is considered appropriate because of the complexity of the subject and because it requires high technical qualification.

Summary of Consulting Services Requirement

International/ Positions	Person- months	National/ Positions	Person- months
Consulting firm			
(i) Core team			
Team leader/urban planner/institutional specialist	7.0	Deputy team leader/urban planner	9.0
Capacity building specialist/ training facilitator	3.0	Capacity building specialist/ training facilitator	4.0
GIS specialist/ IT manager	3.0	Institutional reform specialist	3.5
		GIS specialist/IT manager	3.0
		Translator/ urban specialist	6.5
(ii) Technical team			
Urban design specialist	1.5	Civil engineers/ infrastructure programming experts	1.5
Civil engineer/ infrastructure programming specialist	2.0	Participatory planning/ community specialist	1.5
Poverty, gender, social, and community participation specialist	2.0	Poverty, gender, and social specialist	1.0
Environment/ green areas specialist	2.0	Environment/ green areas specialist	1.5
Land management/ resettlement specialist	2.0	Land management/ resettlement specialist	1.0
Transport specialist	2.0	Transport specialist	1.5
Housing/ real estate development specialist	2.0	Housing/ real estate development specialist	1.0
Municipal finance specialist	1.5	Finance/ private sector specialist	1.0
Urban economist/ economic development specialist	2.0		
Subtotal	30.0	Subtotal	36.0
Individual			
Individual consultants	4.0	Individual consultants	4.0
Subtotal	4.0	Subtotal	4.0
Total	34.0	Total	40.0

GIS = geographic information system, IT = information technology.

Source: Asian Development Bank estimates.

4. Equipment will be procured in accordance with ADB's Procurement Guidelines (2010, as amended from time to time) and in line with the policy guidelines of the Japan Fund for Poverty Reduction, and will be turned over to MUB after completion of the TA.

B. Terms of Reference

5. **Team leader and expert on urban planning and institutional reform** (international, 7 person-months). The consultant should have a strong academic background with a postgraduate degree in urban planning or relevant social science fields, good communication skills and fluency in English, and at least 15 years of practical experience in integrated urban planning, urban governance, and infrastructure programming. Working experience in a post-communist transition economy and in ADB or other development partners' projects in the urban sector is highly desirable. As a team leader, the person will (i) manage the overall implementation of the TA; (ii) coordinate closely with the executing agency, relevant departments, stakeholders, Japan International Cooperation Agency (JICA), and other

development partners; (iii) coordinate and supervise capacity development programs implemented for each component for best outcomes; (vi) ensure timely and quality inputs from international and national consultants; and (v) be responsible for delivering various outputs under the TA and ensure smooth coordination and links between components. As an expert on urban planning and institutional reform, the person will (i) assess the urban planning capacity development needs of the MPACC, UPADI, and relevant agencies for better implementation of urban planning and management; (ii) work with the national institutional reform expert to clarify the institutional arrangement for urban planning and assess the issues and scope for reform; (iii) work with the capacity building specialists in formulating training programs for capacity development of urban planning and institutional reform; (iv) prepare outlines of training materials; (v) introduce international case studies relevant to the project; (vi) identify international resource persons for training and workshops; and (vii) coordinate and ensure the technical inputs to the reports and knowledge products.

6. Deputy team leader and expert on urban planning (national, 9 person-months). The consultant should have a strong academic background with a postgraduate degree in urban planning or relevant civil engineering fields, be familiar with urban planning practices in Mongolia, with at least 15 years of practical experience in urban planning and infrastructure programming, including in Ulaanbaatar. The deputy team leader will have a good local network of urban planning agencies and practitioners in Ulaanbaatar and Mongolia, with good communication skills and fluency in English. Under the guidance of the team leader, and using local networks and knowledge, the deputy team leader will support the team leader in managing the overall implementation of the TA, and coordinate with JICA experts on a regular basis. As an expert on urban planning, the consultant will (i) provide the team with the information, background, legal settings, institutional arrangement, and implementation practices of Mongolian planning practices; (ii) assess urban planning capacity development needs; (iii) ensure that training programs and materials in the local language are of high quality and applicable to the Mongolian context; (iv) introduce local planning case studies relevant to the project; (v) identify national resource persons for training and workshops; (vi) coordinate and ensure the technical inputs to the reports and knowledge products; and (vii) perform other related tasks requested by the team leader or as agreed in the inception report.

7. Experts on capacity building and training facilitation (international, 3 person-months; national, 4 person-months). The experts should have good communication skills and fluency in English, and a strong academic background with a postgraduate degree in capacity building or relevant social science field, with at least 10 years of experience in designing and facilitating capacity development programs and training on transition economies. They will work closely with the MPACC, UPADI, related agencies, and consulting team members to incorporate the needs for capacity development; and formulate a suitable training program outline and delivery methods. The international expert will (i) introduce international best practice in capacity development; (ii) assess the capacity of staff with the help of technical experts and propose a suitable training methodology; (iii) formulate a road map for achieving the targeted goal with clear time schedules and inputs; (iv) monitor the quality of training sessions and workshop delivery; and (v) ensure and formulate a strategy for long-term sustainability of the training materials and impacts. The national expert will (i) provide the national context for delivering capacity building activities to team members; (ii) facilitate training sessions and workshops to ensure effective delivery of training and advice; (iii) solicit feedback from training and workshops and incorporate them for improvement; (iv) arrange logistics and organization of the training and workshops; and (v) provide support to other experts and resource persons for effective formulation and delivery of capacity development programs. Both experts will perform other related tasks requested by the team leader or as agreed in the inception report.

8. **Expert on institutional reform** (national, 3.5 person-months). The expert should have a strong academic background with a postgraduate degree in governance, management, or relevant social science field, with at least 10 years of experience in governance and institutional management. The person will work closely with the team leader and (i) perform an in-depth assessment of the current institutional arrangements and decision-making mechanisms within the urban planning function; (ii) assess the issues or merit and propose the scope for improvement; (iii) develop with key stakeholders a road map for institutional and organizational restructuring; (iv) set adequate and flexible monitoring and safeguard mechanisms to plan, manage, and update promptly the master and local plans, policies, and standards in response to the changing demands of the growing city; (v) recommend links between urban planning and the regulatory and legal framework; (vi) work with the capacity development expert in formulating a training course for targeted officials on institutional reform; (vii) work with GIS experts and propose a suitable institutional arrangement for efficient implementation of a shared database and one-stop shop containing planning information of Ulaanbaatar's maps, data, laws, and reports; (viii) encourage dialogue between concerned institutional bodies; (ix) arrange and coordinate with the board of directors consisting of representatives from municipal departments and agencies on how to govern the shared urban database; (x) provide technical inputs to the reports and knowledge products; and (xi) perform other related tasks requested by the team leader or as agreed in the inception report.

9. **Experts on geographic information system and information technology management** (international, 3 person-months; national, 3 person-months). The specialists should have a postgraduate degree in geography, computer engineering, civil engineering, or relevant fields, and have at least 7 years of GIS experience. A good understanding of various GIS software is required, and experience in establishing an urban GIS-related database is essential. The specialists will (i) assess the staff level, existing GIS used at MUB agencies, and information technology (IT) environment for GIS and urban database; (ii) define a methodology for establishing a shared urban database and identifying needs for hardware and software; (iii) formulate a road map for long-term GIS usage, including license and system maintenance issues; (iv) working closely with the institutional reform expert, propose specific solutions and protocols to ensure that planning activities conducted by MUB are prepared using the same base maps, with standardized coordinates and data sources; (v) provide institutional and technical advice to install a GIS and a geospatial center within MUB agencies to ensure coordinated implementation; (vi) propose a step-by-step harmonization of all the geospatial tools now used by different agencies in one integrated system and platform; (vii) establish a shared urban database and one-stop shop and prepare an operational manual; (viii) formulate training and workshops for long-term sustainable utilization of the GIS, urban database, and one-stop-shop function; (ix) if necessary, integrate the specialized software in urban planning into the IT system; (x) provide technical inputs to the reports and knowledge products; and (xi) perform other related tasks requested by the team leader or as agreed in the inception report.

10. **Translator–interpreter and expert on urban planning** (national, 6.5 person-months). The expert should have a postgraduate degree in urban planning taught in the English language, and have at least 3 years of work experience in urban-planning-related fields. The person should have good exposure to international urban planning theories and cases, as well as good knowledge of Mongolian urban planning philosophy and systems. With high-quality communication skills in both English and Mongolian and a good understanding of urban planning theories and technical terms in both international and local contexts, the expert will interpret the communication between officials and experts from MUB agencies and international experts, resource persons, ADB, and other urban planning stakeholders in both English and

Mongolian. The expert will also ensure the technical accuracy of translations as well as the language quality for all the prepared training materials, workshop handouts, reports to be submitted to ADB, and for knowledge product inputs. The expert will perform other related tasks requested by the team leader or as agreed in the inception report.

11. **Technical team** (international, 17 person-months; national, 10 person-months). Various experts in subjects relating to urban planning as indicated in the table above will conduct the training and capacity building activities. The technical team experts will (i) formulate training plans on their subject based on the capacity development needs assessment with the help of capacity building experts; (ii) prepare training materials by consulting with the MPACC and UPADI; (iii) deliver training and workshops; (iv) provide learning support to the trainees during the TA implementation period; (v) incorporate trainees' feedback and finalize training materials; (vi) prepare inputs for knowledge products; and (vii) perform other related tasks requested by the team leader or as agreed in the inception report.

12. **Individual consultants** (international and national) will be recruited for a total of 8 person-months as supplementary inputs for the TA from project start-up to expedite the initial stage of TA implementation, as there will be a time gap between TA approval and fielding of a consulting firm. The consultants will have a strong academic background with postgraduate degrees in urban planning and social science; good understanding of integrated urban planning and international case studies; and more than 10 years of relevant practical work experience in transition countries, ideally in post-communist countries, on urban planning and infrastructure programming. From project kick-off until the consulting firm is recruited, the consultants will carry out a preliminary review, conduct a needs assessment, and provide guidance through assessment of (i) MUB's urban planning capacity and training needs, and international best practices relevant to Ulaanbaatar; (ii) current institutional arrangements and decision-making mechanisms within the MUB urban planning function; (iii) existing urban mapping systems by relevant departments of MUB, and existing urban data and information; and (iv) MUB staff capacity, existing urban mapping systems, improvement methodology, and needs for hardware and software. Consultants with urban geography, institutional reform, urban economy, or other specialization as found necessary during TA implementation will externally monitor the training contents and progress on capacity development, and provide advice and additional inputs to the project team.