ADB ASIAN DEVELOPMENT BANK

Afghanistan: Kabul Managed Aquifer Recharge Project

Project Name	Kabul Managed Aquifer Recharge Project
Project Number	49187-002
Country	Afghanistan
Project Status	Proposed
Project Type / Modality of Assistance	Grant
Source of Funding / Amount	Grant: Kabul Managed Aquifer Recharge Project concessional ordinary capital resources lending / Asian Development Fund — US$ 1.00 million
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth
Drivers of Change	Knowledge solutions Partnerships
Sector / Subsector	Agriculture and Natural Resources - Agriculture, natural resources and rural development
Gender Equity and Mainstreaming	Some gender elements
Description	The proposed Kabul Managed Aquifer Recharge project will focus in the southern part of the Kabul river basin. Through a low-cost investment, it aims to increase the availability of ground water in Kabul. While many Kabul surface and underground water resources are polluted from human activities, through aquifer recharge protection zones, extraction point management and appropriate domestic water treatment, the approach can produce potable quality water. Fully satisfying unmet demand will require further investment. The impact of the proposed project is aligned with proper management of existing water and other natural resources. The project outcome is increased availability of groundwater for Kabul. The project has four outputs (i) Kabul basin MAR infrastructure operational, (ii) capacity of the communities and staff developed in water monitoring and management, (iii) aquifer protection zone/s performing, and (iv) legislative and regulatory reforms available.
Project Rationale and Linkage to Country/Regional Strategy	The proposed project is an investment grant to finance the infrastructure and requisite soft component strengthening to facilitate accelerated aquifer recharge, increasing potable water supply essential to millions of Kabul residents. The Kabul Basin is the most important river basin of Afghanistan. It accounts for 35% of the country's population, including half of the urban population. Kabul is the fifth fastest growing city in the world. Its population in mid-2014 was estimated at 4.5 million and is expected to increase to about 8 million by 2050. Majority of the residents in Kabul are undersupplied with water, averaging about 16 liters per capita per day (lpcd), compared to a desirable level of a minimum of 80 lpcd and a rate of over 200 lpcd for water piped to homes in developed countries. Unmet water demand is multiples of current supply. As a result of lack of water storage and seasonal variability of river flows, Kabul city is among the world's most water-stressed cities. It almost entirely depends on groundwater from four aquifers in the Logar-Upper Kabul river basin, with the majority of groundwater water coming from the shallow aquifer which reaches to 150 - 200m. Most households meet domestic supplies from privately owned and dug tube wells within the urban and peri-urban area, with many households, particularly in the informal hill side settlement areas, relying on expensive tanker-delivered water. Water tables vary considerably under Kabul, typically from 30 to 70 meters, depending on distance from the main riverine recharge source and extent of local extraction. A study conducted by the US Geological Survey between 2004 and 2012 showed that groundwater levels in Kabul city had fallen by an average of 1.5 meters/year during 2008 2012. Overdraw in 2011 was estimated at 9.2% of supply. As water tables fall, the costs of pumping water and digging, drilling or deepening wells will rise. With per capita water demand expected to double over the next 15 20 years, combined with population increases, urban water supplies are under increasing pressure. Managed aquifer recharge (MAR) takes advantage of water supplies available during the snowmelt and rainy seasons when river flows thru Kabul are 15 times greater than in the dry season, and artificially augments recharge to increase underground water supplies for future use. MAR can help stabilize or raise groundwater levels, improving the availability of primary water supply for potable uses and making Kabul urban water supplies more secure. In addition, MAR has the potential support the development of commercial well-fields. However, groundwater often suffers from microbial and chemical pollutants, and requires treatment to meet potable water standards. The project is relevant to Afghanistan's National Priority Programs (NPP), and fits well with the NPP's promotion of integrated river basin and water resources management. Government commitment to these NPPs was reinforced in the paper Towards Self Reliance. Urban water supply was identified as a priority in the Afghanistan National Development Strategy (2008 2013). The project is well coordinated with other development partners, with its focus on quality water supply, while other actors have focused on specific urban water issues. The project fits within the third pillar of the Asian Development Bank (ADB), 2014 2015 interim country partnership strategy (CPS), i.e., supporting agriculture and natural resources (including irrigation and water resource management), and focusing on improved water resources management. The project is included in the Afghanistan country operations business plan (COBP), 2015 2017, which indicates that the Afghanistan Infrastructure Trust Fund (AITF) , approved by the ADB Board of Directors in November 2010, will facilitate additional investment from financing partners during this COBP period. A project preparatory technical assistance (TA) will be provided
Impact	Proper management of existing water and other natural resources
Outcome	Increased groundwater availability for Kabul
Outputs	Kabul basin MAR infrastructure operational Capacity of the communities and staff developed in water monitoring and management Aquifer protection zones performing Legislative and regulatory reforms available
Geographical Location	

Safeguard Categories	
Environment	B
Involuntary Resettlement	B

Indigenous Peoples	C

Summary of Environmental and Social Aspects	
Environmental Aspects	Environmental Safeguards. The project will need to include measures to ensure that downstream riparian users on the rivers, including transboundary beneficiaries, are not adversely affected. Water quality and water tables will need careful monitoring and managed. The project will be tentatively categorized as B. If during the PPTA it is determined that environmental safeguards should be category A, the project will be re categorized, and an environmental impact assessment prepared.
Involuntary Resettlement	Involuntary resettlement is likely to be required. Based on the PPTA research, a land acquisition and resettlement plan will be required and prepared. The project will be tentatively categorized as B for the involuntary resettlement safeguard;
Indigenous Peoples	Indigenous peoples: Indigenous peoples are not known to inhabit the project area. However, the situation will be reviewed under the PPTA and if necessary an indigenous people's plan will be prepared. The project will be categorized as C for the indigenous peoples safeguard.
Stakeholder Communication, Participation, and Consultation	
During Project Design	Participation via consultation will be undertaken to the extent possible given the security situation during the PPTA. The poor and excluded are located in greater concentrations in the informal settlements of Southern Kabul, and up the hillsides in and around Kabul, the latter with a high dependence on purchased water. The project prepatory TA will consider community monitoring of water for Output 3. The project preparatory TA will undertake more detailed stakeholder analysis and prepare a participation plan. Consultation will be limited by the prevailing security environment as well as lack of water-sector local NGO/CSOs.
During Project Implementation	

Business Opportunities	
Consulting Services	The project preparatory TA will use a performance-based consulting contract with estimated value of $6.45 million, justified by the extensive outputs for which they are responsible (see Table A3.1), and the inclusion of $800,000 of costs for pilot scheme engineering works and test drilling. Key positions are detailed in Table A3.3, with an estimated 87 person-months of international consulting services and 59 person-months of national consultants for the key positions. It is anticipated that a total of 132 person-months of international consulting services and 204 person-months of national consultants will be required. The consultants will be engaged through an international firm, associated with a national firm, by ADB in accordance with the Guidelines on the Use of Consultants (2013, as amended from time to time), using. Consultant selection will be through quality- and cost-based selection at a ratio of 90:10. Subject to ADB approval, the consultant firm will be responsible for the procurement and management of (i) small-scale civil works associated with the pilot projects using shopping method; and (ii) test bore drilling services, as required, using shopping method. The consultant contract will be two phase, with the second phase, being output 4, subject to approval from MEW with no objection from ADB.

Responsible ADB Officer	Radstake, Frank
Responsible ADB Department	Central and West Asia Department
Responsible ADB Division	Environment, Natural Resources & Agriculture Division, CWRD
Executing Agencies	Ministry of Finance Pashtunistan Watt, Kabul, Islamic Republic of Afghanistan

Timetable	
Concept Clearance	08 Sep 2015
Fact Finding	05 Apr 2019 to 05 Apr 2019
MRM	15 Jul 2019
Approval	-
Last Review Mission	-
Last PDS Update	15 Sep 2015

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