

## RISK ASSESSMENT AND RISK MANAGEMENT PLAN

<b>Risk Description</b>	<b>Risk Assessment</b>	<b>Mitigation Measures or Risk Management Plan</b>	<b>Responsibility</b>
<b>Financial management</b> Inadequate cost recovery and financial sustainability because of low water tariff	Moderate	The NWSDB is committed to continuing policy dialogue with the government for approval of regular tariff adjustment and establishment of an independent regulator of water services.	Ministry of City Planning and Water Supply and National Water Supply and Drainage Board
Inadequate tariff affects cost recovery and financial sustainability due to inadequate revisions in water tariffs	Low	Awareness campaigns for consumers on improved service levels linked to marginally higher tariffs will be conducted, and continuing policy dialogue for gradual and continuous volumetric tariff increases will be implemented.	Project management, coordination and implementation unit and Project management consultants
<b>Procurement and implementation</b> Lack of qualified contractors and challenges in availability of cleared sites may lead to delays in project implementation and result in cost and time overruns	Moderate	The NWSDB has conducted several pre-bid meetings to explain the bid documents to the potential bidders. The NWSDB has taken advance actions for timely possession and securing of the land acquired for project works. The NWSDB employed a senior manager to ensure availability of unencumbered land and minimize private land acquisition. The NWSDB obligations include ensuring right of access for laying pipelines and construction of treatment plants and water tanks.	National Water Supply and Drainage Board
<b>Source sustainability</b> Lack of sustained support from fishing communities for the desalination plant will cause implementation delays and cost overruns	Moderate	PMCIU has carried out the public consultation. The project design addressed concerns raised by the stakeholders through specific design requirements of the desalination plant and livelihood improvements for the local fishing communities.	Project management, coordination and implementation unit, Project management consultants
Inadequate management of environmental issues will lead to incompleteness of the desalination plant	Moderate	The bidding documents have provided detailed environmental studies to help the contractor manage the risks. During the implementation stage, careful environmental monitoring and supervision will be carried out by an independent third party.	National Water Supply and Drainage Board, Project management, coordination and implementation unit, and Project management consultants

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Desalination plant is not operated properly during the post-construction period	Moderate	Desalination plant implementation is through composite design–build–operate contract. The contractor's remuneration is linked to performance, with built-in incentives for nonrevenue water reduction through effective network management. Sufficient O&M funding is included in the project cost.	National Water Supply and Drainage Board and Project management, coordination and implementation unit
Lack of skilled operating staff of the desalination plant	Moderate	The NWSDB will prepare a structured skills development program for the desalination plant. The project will ensure effective and continuous coordination with the contractor to improve the availability of skilled operators by the time the component is handed over to the NWSDB. The proposed attached capacity building TA will help to improve skills of operating staff.	National Water Supply and Drainage Board
High nonrevenue water results in low cost recovery and low demand satisfaction levels	Moderate	The NWSDB will continue to encourage maintenance of low water losses and high performance efficiency. Training and capacity building will be provided to NWSDB operational staff in continuously checking and monitoring the level of losses in the networks.	National Water Supply and Drainage Board and Project management consultants
Climate change-related risks adversely affect the construction schedule and longevity of infrastructure components of the project due to extreme events	Low	Risk screening will be done to identify the type and intensity of climate risks the project will face. If risks are found to be relevant, adaptation or resilience measures to protect the investments from pre-identified risks will be incorporated into the project design.	National Water Supply and Drainage Board and Project management consultants
<b>Overall</b>	Moderate		

MCPWS = Ministry of City Planning and Water Supply, NWSDB = National Water Supply and Drainage Board, O&M = operation and maintenance, PMC= Project management consultants, PMCIU=Project management, coordination and implementation unit, TA = technical assistance.

Source: Asian Development Bank