

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Risk Assessment	Management Measures or Risk Management
A. Public Financial Management Inadequate PMO staff provided by BWDB	Low	1. Specific loan covenant is provided to ensure that BWDB fields the full PMO staff complement from its present staff resources and through fresh recruitment, if required. 2. PMO staff will be supported by experienced project management consultants, and will receive training in ADB procurement and disbursement procedures.
Potential decline of financial management capacity due to changes of PMO staff	Medium	1. PMO accounting staff will receive training in ADB procedures. 2. BWDB will ensure that regular internal and external auditing of the project will be prioritized. 3. Computerized accounting will be adopted and staff will be trained. Financial information will form part of the management information system to be established under the project.
Insufficient interagency coordination, especially between BWDB and DDM	Medium	1. Key relevant government agencies, including BWDB and DDM, will be members of a program steering committee chaired by the Secretary, Water Resources; and the committee will oversee program implementation and ensure proactive participation of all agencies concerned. 2. BWDB and DDM will sign MOU before the commencement of physical works, defining clear distribution of responsibilities. 3. A single project management consultant team will provide project implementation support for both BWDB and DDM. 4. BWDB will hold annual workshops, inviting stakeholders from different agencies to share project achievements and concerns.
Inadequate support from <i>upazila</i> (administrative unit under a district) disaster management committees under DDM	Low	1. The program will provide NGO services to support communications between <i>upazila</i> and community-based disaster management committees. 2. During the initial phase, DDM, with the support of the project management consultant team, will establish communication link between the consultant team, NGOs, and <i>upazila</i> and community-based disaster management units. 3. DDM headquarters will continue close monitoring of and guidance to <i>upazila</i> disaster management committees.
B. Procurement Delayed payment to the consultants and contractors	Low	1. Specific loan covenant is provided to ensure that BWDB fields the full staff to the PMO, including financial officers.

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C. Anticorruption Potential discrepancies between required and executed work quantities of underwater riverbank protection works	Medium	<ol style="list-style-type: none"> 2. BWDB, as standard operating procedures of externally aided projects, will apply ADB's direct payment method to international consultants and contractors. 3. ADB will monitor and facilitate PMO's timely submission of financial documents to ensure timely replenishment of an imprest account. <hr/> <ol style="list-style-type: none"> 1. PMO will ensure transparency, through developing a project website, and posting procurement and recruitment information on the project and ADB websites. 2. The project design minimized the number of contracts. 3. Bid documents and civil works contracts will include regular underwater surveys during and after the construction and submission of survey results to BWDB. 4. Regular inspection of completed underwater works by BWDB using technologies that can make underwater works visible, such as video recording by divers or surveys by high resolution echo-sounders. 5. PMO and SMO will ensure systematic and detailed recording of physical progress of underwater works. 6. The project management consultant team will include adequate inputs of quality control experts, and PMO and SMO staff supported by the consultants will visit sites regularly. 7. The project management consultant team will include adequate inputs of procurement experts. 8. BWDB's project staff will receive procurement training from ADB.
D. Others Excess floods exceeding design return period	Low	<ol style="list-style-type: none"> 1. The program contains support for enhancing community resilience against excessive floods through community capacity enhancement and early warning. 2. MFF's flexibility allows BWDB to provide the necessary rehabilitation or mitigation measures to affected areas during the subsequent tranches.
Increased flooding caused by climate change	Low	<ol style="list-style-type: none"> 1. Climate change related risk reduction measures are built in the program design, and incorporated in the design of flood embankments.
A shift in the government's development priority moving away from the river stabilization of the main rivers	Low	<ol style="list-style-type: none"> 1. ADB will maintain close dialogue with the government and BWDB to ensure priority remains. 2. ADB will continue close dialogue with other development partners involved in the sector for continued priority of the river stabilization

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Delayed commencement of civil works for flood embankments caused by long delays in land acquisition by deputy commissioners at district level	Medium	<p>of the main rivers.</p> <ol style="list-style-type: none"> 1. Land acquisition and resettlement plan implementation form part of the agreed advance actions to be initiated prior to loan approval. 2. BWDB and ADB will monitor implementation of the time-bound action plan and initiate corrective measures, if necessary. 3. PMO will maintain frequent communication with deputy commissioners' offices, and will continue stringent monitoring of the progress.
Inadequate construction quality of underwater riverbank protection works	Medium	<ol style="list-style-type: none"> 1. Bid documents and civil works contracts will include regular underwater surveys during and after the construction and submission of survey results to BWDB. 2. Regular inspection of completed underwater works by BWDB using technologies that can make underwater works visible, such as video recording by divers or surveys by high resolution echo-sounders. 3. PMO and SMO will ensure systematic and detailed recording of physical progress of underwater works. 4. The project management consultant team will include adequate inputs of quality control experts, and PMO and SMO staff supported by the consultants will visit sites regularly.
Inadequate attention to non-structural measures by BWDB, which is largely oriented toward structural measures	Medium	<ol style="list-style-type: none"> 1. BWDB is fully aware of the emphasis of the government and development partners on non-structural measures for flood and erosion risk management that forms part of the project design. 2. The community-based flood risk management subcomponent, one of non-structural measures, will be implemented by DDM, an agency mandated for the task. BWDB and DDM will sign an MOU incorporating the respective functions and responsibilities in implementing the subcomponent. 3. The team of consultants tasked with the implementation of BWDB's structural and non-structural measures will also assist DDM in implementing the community-based flood management subcomponent, maintaining integration of all structural and non-structural measures.
Overall	Medium	

ADB = Asian Development Bank, BWDB = Bangladesh Water Development Board, DDM = Department for Disaster Management, MFF = multitranchise financing facility, MOU = memorandum of understanding, MOWR = Ministry of Water Resources, NGO = nongovernment organization, PMO = program management office, SMO = subproject management office.

Source: Asian Development Bank.