PROJECT CLIMATE RISK ASSESSMENT AND MANAGEMENT REPORTING

I. Basic Project Information

Project Title: Third Urban Governance and Infrastructure Improvement (Sector) Project
Project Budget: $125 million from ADB
Location: 30 pre-selected municipalities in Bangladesh
Sector: Water and other urban infrastructure and services
Theme: Environmental Sustainability, Governance, Gender Equity, and Capacity Development
Brief Description: The project will strengthen urban governance and improve urban infrastructure and service delivery in 30 pourashavas (municipalities) in Bangladesh. The project will focus on key municipal infrastructure such as roads, drainage, water supply and sanitation (including septage management), and solid waste management.

II. Summary of Climate Risk Screening and Assessment

A. Sensitivity of project component(s) to climate/weather conditions and sea level

Increase in rainfall intensity would exacerbate waterlogging problems in pourashavas, which are already facing infrastructure deficit even under the current climate. Sea-level rise will not be a major issue as project pourashavas are not located in low-lying coastal areas of Bangladesh.

Project component	*Sensitivity to climate/weather conditions and sea level*
1. Improvement of urban roads 2. Improvement of urban water supply 3. Improvement of urban sanitation 4. Improvement of urban drainage 5. Improvement of solid waste management 6. Others	1. Intensity and frequency of heavy rainfall events 2. Increase in temperature

B. Climate Risk Screening

Risk topic	Description of the risk
1. Increase in rainfall intensity 2. Temperature increase	1. Urban drainage systems may need to be strengthened to cater to more intense rainfall. 2. Free-board allowance may be required for key facilities to be constructed under the project. 3. Urban roads may be damaged faster if waterlogged very often.

Climate Risk Classification: Low; although Bangladesh is a high-risk country to the impacts of climate change, the project location and scope will not be highly sensitive to climate impacts.

C. Climate risk assessment

Climate model projections do not agree that seasonal precipitation will increase in the project location which could indicate a relatively high degree of uncertainty. However, climate change is projected to influence the frequency and intensity of flood events. Existing engineering designs need to take into consideration the impact of climate change on the risks from flooding and waterlogging.

III. Climate Risk Management Response within the Project

1. "Key design considerations" have been prepared to take into account climate impacts. The considerations include (i) use of cement concrete for roads vulnerable to frequent waterlogging; (ii) additional free-board allowance for key facilities such as production tube-wells, pump houses, and water treatment plant; (iii) at least 15% extra reinforcement of overhead tanks to stand more intense cyclones and heavy winds; and (iv) 10% additional capacity in drainage systems to accommodate additional run-off due to increased rainfall intensity. These will be incorporated in the preliminary and detailed engineering designs.
2. Control of development activities will be strengthened by pourashavas, with support from the consultants. Encroachment into public lands including rivers and canals will be prevented to keep the outflow capacity and reduce disaster risks.