

Climate Change: Project Adaptation Action (PAA) Report

Part 1: Climate Change Adaptation

BASIC PROJECT INFORMATION	
Project Title: SASEC Road Connectivity Investment Program (SRCIP) – AH-2 and AH-48	Sector: Transport
Location: West Bengal, India	Estimated ADB Financing: \$155.3 million
Brief Description:	Implementation Period: 2014 - 2016
<p>The scope of SRCIP – tranche I involves improvement of two existing national highways in the state of West Bengal. Improvements will entail: geometric correction, improvement to proper two lane standard, expansion to four lane standard in some sections, construction of bridges construction of cross and longitudinal drainage structures, junction improvements and construction of bypasses. The two roads are:</p> <p>1) AH-2: Panitanki (Nepal border) – Fulbari (Bangladesh border) (48.7km) 2) AH-48: Jaigaon (Bhutan border) – Changrabandha (Bangladesh border) (97km)</p>	
Climate Change Classification: Adaptation	
SUMMARY of CLIMATE RISK SCREENING	
<i>A. Projected changes under A2 scenario</i>	
Temperature (°C): Ah-2 and AH-48 roads are not sensitive to changes in temperature	Precipitation (mm): Data from the AWARE tool suggests that the project is located in a region which has experienced recurring major flood events in the recent past. The risk and type of flooding is dependent on local geographical factors including: <ul style="list-style-type: none"> • Proximity to the coast and inland water courses • Local topography • Urban drainage infrastructure
<i>B. Climate Risks</i>	
Flooding: Medium to High Landslide Triggered by Precipitation - None Landslide Triggered by Earthquake – None Earthquake – Low Fire - None	<ul style="list-style-type: none"> • Climate change is projected to influence the frequency and intensity of flood events. • Existing engineering designs may not take into consideration the impact of climate change on the risks from flooding. (Source: AWARE for Projects)
<i>C. Recommendations</i>	
Activities: The design standards need to incorporate all risks identified to climate-proof all project roads with reference to flood-prone areas/sections, this may include the incorporation of adequate land drainage, increase the clearance of bridges, raise the base height, etc.	Requirements for TOR: More localised and in-depth assessment on flooding.
Risk Classification: Low to Medium	

DUE DILIGENCE

The Environmental Impact Assessment (EIA) report includes a chapter on Climate Change Screening and Mitigation. As part of the EIA a climate change assessment has been carried out focusing on the potential flooding risks along the two project roads. In addition risk screening was also done with the support of SAOD as well by using the AWARE tool. Results of all the three assessments show flooding to be the key climate change related risk.

In the design of the hydraulic structures the return period adopted were 100 years for new bridges, 50 years for existing bridges and 25 years for culverts and road side drainage systems.

PROJECT DESIGN CHANGE OR ADAPTATION RESPONSE

- Two bridges on AH 48 that were found to be without adequate hydraulic capacity are proposed for reconstruction
- Additional culverts are proposed on both AH02 (40 numbers) and AH 48 (113 numbers) to facilitate proper drainage and avoid stagnation of water and flooding problems.
- To address risk of flooding, all existing roads upgrading will have road surface at least 0.6 meter higher than the HFL while all by-passes will be at least 1.0m freeboard from the HFL.