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## Global Drivers Influencing Water Productivity, Food Security and Livelihood of the Local People in the Coastal Areas of the Ganges Basin

ZAHIRUL HAQUE KHAN<sup>1</sup>, FARHANA AKHTER KAMAL<sup>1</sup>, DR. BHARAT R. SHARMA<sup>2</sup>,  
DR. M. SHAH ALAM KHAN<sup>3</sup>, MD MAHFUZUR RAHMAN<sup>4</sup> AND ABU SALEH KHAN<sup>1</sup>

<sup>1</sup>Institute of Water Modelling, Bangladesh

<sup>2</sup>International Water Management Institute (IWMI), India

<sup>3</sup>Institute of Water and Flood Management, Bangladesh

<sup>4</sup>Bangladesh Water Development Board

[zhk@iwmbd.org](mailto:zhk@iwmbd.org)

**Session: Basin (Ganges) and Global Drivers**

### Key Message

The coastal zone of the Ganges River Basin in Bangladesh is experiencing salinity intrusion, drainage congestion, reduction of flow availability, siltation of river beds and inundation by cyclonic storm surges. These effects of the external drivers will influence water productivity, food security and livelihood of the local people in future.

## Summary

“G4: Assessment of the impact of anticipated external drivers of change on water resources of the coastal zone” is one of the CPWF’s Phase II projects undertaken in six river basins all over the world to increase the resilience of social and ecological systems. The water resources in the Ganges basin are vital for crop-production and livelihoods. G4 will address the global drivers as well as local driving forces and their effects on water resources of the coastal zone of the Ganges Basin in Bangladesh. This project will develop a comprehensive list of external drivers based on past research, literature review and interaction with major stakeholders and peers. Key drivers will be identified through a prioritizing

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procedure. Appropriate models will simulate the baseline condition and impacts of the key drivers on salinity intrusion, water availability, drainage congestion, and cyclonic storm-surge inundation risks. On the basis of the anticipated impacts, different adaptation strategies will be devised in consultation with projects G2 and G3. Policy implications on these strategies and a required governance structure will also be explored in a participatory way. The 3-year project is only at the inception stage and G4 will explore the study area and its hydraulic characteristics. It will also present a preliminary list of the external drivers and salinity monitoring results in the coastal zone of the Ganges basin.

An integrated modeling technology will enable G4 to simulate future scenarios and the research outputs will be milestones for formulating adaptation strategies, water management and improved crop-pattern.