

## Field Investigation of Bank Protection Measures along the Jamuna River in Bangladesh

○Hao ZHANG, Hajime NAKAGAWA, Yasuyuki BABA, Kenji KAWAIKE

### 1. Introduction

The Brahmaputra-Jamuna River (named Jamuna River in Bangladesh) is one of the largest rivers in the world in terms of both sediment and water discharges. The river originates from the Himalayas and flows across China, India and Bangladesh. It meets with some major rivers in its lower part: the Teesta, the Ganges and the Meghna and supplies sediment into one of the world's largest deltas before finally entering the Bay of Bengal. The erosion, widening and westerly migration of the Jamuna River in response to floods make thousands of people homeless and destroy important infrastructures in Bangladesh every year. A lot of indigenous bank protection measures have been developed by the local people according to historical experiences. On the other hand, measures imported from western countries were also implemented in

many places. Amongst these measures, some were confirmed to be successful but many of them were failed. It demonstrates that effective and applicable bank protection measures must be based on scientific evidences and should take into account indigenous knowledge as well.

For the security of the west river bank, also known as the Brahmaputra Right Embankment (BRE) and the stabilization of the channel course, the government of Bangladesh has launched plans to implement bank protection measures at some priority areas recently. The construction of the Betil/Enayetpur spur dykes in Sirajganj District is amongst those measures. The spur dykes failed several times after their completion. In this paper, some typical bank protection measures were introduced and the morphological consequences of the Betil spur dyke are investigated in details.

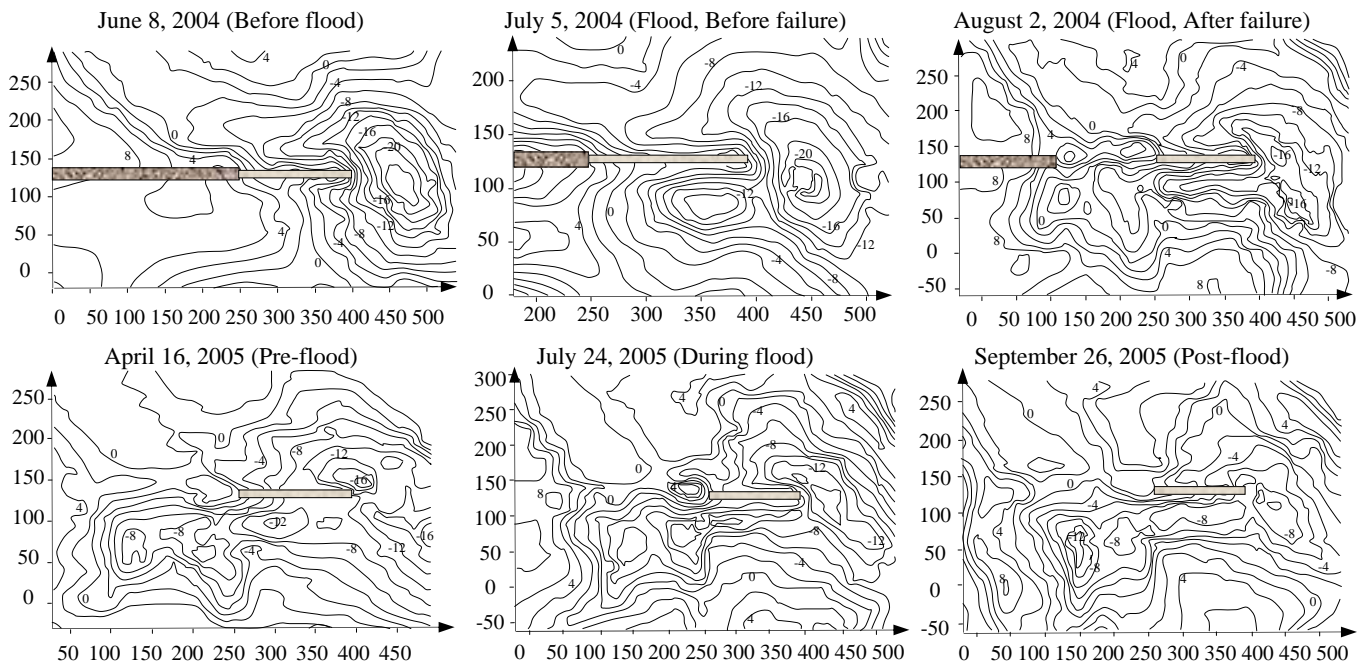


Fig.1 Morphological consequence of the Betil spur dyke (Coordinates: Horizontal: East; Vertical: North Unit: m)