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## EROSION PROTECTION WORKS ALONG BANKS OF BRAHMAPUTRA RIVER - ROHMORIA, ASSAM

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**MACCAFERRI ENVIRONMENTAL SOLUTIONS PVT. LTD.**

**BRIEF:**

Brahmaputra river is one of the major and aggressive rivers in Asia. Over the past 20 years, the river has destroyed many paddy fields, homes, schools and plantations in the village of Rohmoría. To mitigate the problem of bank erosion, Water Resource Department of Assam had proposed to carry out emergent measures for bank protection works in Rohmoría village, Dibrugarh district. The anti-erosion work using Geotextile bags for river bank protection works are being implemented in a 2.60 kilometer stretch along the Brahmaputra river from Bogoritolía to Kasuoni that was been identified as highly affected zone. It is estimated that 18,000 Hectare area is benefitted from the entire scheme. Maccaferri Environmental Solutions Pvt. Ltd. had appointed Genstru Consultants Pvt. Ltd. as their sub-consultant for technical supervision during construction of erosion protection works along banks of Brahmaputra river.

**Contractor:** Maccaferri Environmental Solutions Pvt. Ltd.

**Location:** Dibrugarh, Assam, India.

**Role of Genstru:** Technical Consultant to Maccaferri Environmental Solutions Pvt. Ltd.



**Scouring of the banks of the Brahmaputra River**

**PROJECT HIGHLIGHTS NAD MAIN DELIVERABLES:**

The scheme was proposed by Water Resources Department to protect bed and bank of river. Proper bank and toe protection works was the key to the system proposed. This was followed by well dressed bank slope and the height of slope was approximately 5.5m. The bank and bed protection were carried out with geotextile bags placed on geotextile filter layer. Peripheral strips of Steel Gabion and PP rope gabions filled with layers of geotextile bags were placed at regular intervals to impart further stability to the scour protection measure.

High quality Non woven Geotextile materials as a filter and separator to protect the bank slope beneath the Geotextile bag revetments. The PP rope gabions filled with Geotextile bags in two layers were installed at the toe of the slope excavation. The bank revetment was at a slope 1:3 so the bank slopes were trimmed at same slopes. The high quality Non woven Geotextile filter was then laid and Geotextile bags in three layered system were laid or placed on the slope. The PVC coated double twisted wire mesh gabions were used on the slopes in rib form which were also filled with Geotextile bags. Geotextile bags used were of lay flat sizes 1.03m x 0.7m and when filled with dry sand the bags weighed minimum of 126 kgs.



**Condition of Geotextile Bags & River Bank After Flood**