

SOME ADVERSE EFFECT OF KOSI AND FARAKKA BARRAGES IN INDIA

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Abstract

Kosi and Farakka barrages were constructed on rivers Kosi and Ganga in the years 1963 & 1971 respectively for flow diversion. While Kosi barrage was built to divert flow into eastern and western Kosi canals, purpose of Farakka barrage was to forcefully divert flow from Ganga to Bhagirathi/Hooghly river due to siltation of its offtake at Jangipur resulting in huge dredging cost for survival of Kolkata port, loss of navigation and water supply. During the period 1731 to 1954, river Kosi had been shifting its course from east to west by a distance of 112 km causing devastating floods in Bihar. It was decided to Jacket the river by building flood embankments 144 km on east side and 123 km on west side. Kosi breached its flood embankments on several occasions and 378 nos. of spurs had to be built on either side to save the embankments and to ensure that the barrage is safe and the river does not outflank the barrage. Yet, the river breached its left embankment in the year 2018 at Kusaha about 15 km upstream of Kosi barrage resulting in devastation in several districts in Bihar.

River Ganga has also breached its left marginal flood embankment upstream of Farakka barrage occasionally causing loss of life and properties, crop damage in Malda district in West Bengal. Estimated cost of damages due to 1998 flood alone is Rs.1000 crore. On the downstream side of Farakka barrage, river Ganga has severely eroded right bank of the river washing out important townships in the district Murshidabad in West Bengal. 76 spurs were built to protect the right bank downstream of the barrage to arrest erosion. These were washed out in the floods and the river is severely threatening the feeder canal, National Highway (NH-34) and Railway line connecting Kolkata with North-East of India. 27 nos. of spurs which were constructed on the left embankment on east side to protect the flood embankment and train the river up to the barrage were washed out. Yet the river breached the flood embankment 7 times and retired embankments were built 8 times to avoid outflanking of the barrage. Unless the breach is controlled, the river is likely to wash out NH-34, railway line, loss of life and properties and crop damage. Malda town will be severely affected and utility of the barrage will be lost. Needless to mention that the river training measures that had to be adopted to protect life and properties in a periodic manner involved huge cost. But even then the measures are often found ineffective.

In this paper, author wishes to discuss the case histories of the barrages at Bhimnagar on Kosi river and Farakka barrage on Ganga river at Farakka and try to analyze the different reasons for such devastations brought out post barrage construction.