

Not floods but criminal design failure

by [Sadanand Menon](#), 11 September 2008



[Business Standard, September 5, 2008](#)

The jacketing or embanking of the river systems in north Bihar must go down as among the most ill-thought out schemes in Independent India.

I am talking about the so-called 'floods' in north Bihar. Many adjectives have been spun by political and media establishments over the past three weeks to describe the unprecedented inundation of 16 districts and displacement of close to five million people. It has been called a deluge, devastation and a 'national calamity'. No one, however, has used the term 'criminal design failure' and sought to expose the culpability of political and technical establishments in the whole sordid affair.

No one has pointed out that it was a 50-year-old time-bomb waiting to explode. Even as the first of this modern-Indian project of embanking the Kosi began in 1955, it was clear that a recipe for disaster had been drawn up and that Bihar was due for a jala-samadhi sooner or later.

There is an attempt to treat the August 18 breach in the eastern embankment of Kosi at Kusaha, on the Indo-Nepal border, as some kind of a unique, one-off event. As if this was a 'natural disaster' due to unusually heavy rainfall in the Himalayan slopes from where the river originates. Worse, as if Nepal was to blame, as it allegedly reneged on its commitments to maintain and dredge the barrage and the embankments on its side of the border due its preoccupation with the political change of guard there.

No one has so much as whispered that the maintenance of the barrage and the embankments is the responsibility of the engineers of the Bihar Water Resources Department. Demonising Nepal is one of those convenient blame games the media likes to indulge in and it is not new, in the context of a drowning Bihar. In earlier years too such accusations have been made along with contradictory proposals to seek multi-national corporate investments to build and operate mega dams on the Nepal part of the river, particularly the Kosi High Dam at Barakhshetra.

From the time I travelled in these parts 20 years ago, studying the repeating annual cycle of water-logging, food or water famines, homelessness and epidemics in the 16 districts of north Bihar, it has been clear to me that there is a deep criminality in the planning, designing and execution of the river embankment projects of this region.

The basic story is about how the north to south flowing rivers in Bihar like the Mahananda, Kosi, Kamala, Dhousa, Adhwara, Bagmati, Burhi Gandak, Gandak and Ghaghra were subjected to

systematic embanking since 1954. The initial intention was to contain the natural swing of these rivers as they gushed down from the foothills of Nepal to the plains of Bihar.

The plan was to introduce about 150 kilometres of embankment on the Kosi to protect a declared 'flood prone' area in the state of some 25 lakh hectares. Today, some 50 years later, north Bihar is a warren of over 3,500 kilometres of embankments, with the declared 'flood prone' area having crossed a staggering 75 lakh hectares. And this staggering debacle has been at the cost of over Rs 3, 000 crore.

The embankment debate had, in fact, begun in the late 19th century and there exist at least 70 years of records till the 1950s in which most expert opinion warns against pursuing the embankment route to tackle perennial overflowing or swing in a river's temperament, as it would impede natural drainage. Kosi's character was to rush down the hills with an immense load of top soil and spread it across the plains, enabling a bumper crop the next year.

The initial embankments, eight feet high, converted the Kosi bed into a catchment area for silt. As the first phase ended in 1965, the river had risen four feet. The bund had to be raised further. This became a regular cycle. Today, Kosi flows a good 25 to 30 feet above ground level. Every time there is a threat of flooding, parts of the embankment are strategically dynamited to let the water out. This is what gets labelled the 'flood'.

But this is a flood that cannot recede. The river basin is way above ground level and water cannot flow upwards. The inundated villages between as well as outside the embankments stay water-logged for months on end, leading to rise in soil salinity, water-borne diseases and producing hordes of migrant labour. Even before the current crisis in Bihar — for the past twenty-five years — at least 3.5 million people have been living in shacks atop the embankments, making rotis out of the seeds of a grass that grows on its slopes.

The embankment project is one of the greatest 'design failures' of our times. This is not the last we are going to hear of the floods. Bihar is destined to stay submerged for a long time.