

An Analysis of the Recent Flood Scenario (2017) of the Southern Districts of the State of West Bengal, India

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Abstract : The State of West Bengal is mostly watered by innumerable rivers, and they are different in nature in both the northern and the southern part of the state. The southern part of West Bengal is mainly drained with the river Bhagirathi-Hooghly, and its major distributaries and tributaries have divided this major river basin into many subparts like the Ichamati-Bidyadhari, Pagla-Bansloi, Mayurakshi-Babla, Ajay, Damodar, Kangsabati Sub-basin to name a few. These rivers basically drain the Districts of Bankura, Burdwan, Hooghly, Nadia and Purulia, Birbhum, Midnapore, Murshidabad, North 24-Parganas, Kolkata, Howrah and South 24-Parganas. West Bengal has a huge number of flood-prone blocks in the southern part of the state of West Bengal, the responsible factors for flood situation are the shape and size of the catchment area, its steep gradient starting from plateau to flat terrain, the river bank erosion and its siltation, tidal condition especially in the lower Ganga Basin and very low maintenance of the embankments which are mostly used as communication links. Along with these factors, DVC (Damodar Valley Corporation) plays an important role in the generation (with the release of water) and controlling the flood situation. This year the whole Gangetic West Bengal is being flooded due to high intensity and long duration rainfall, and the release of water from the Durgapur Barrage As most of the rivers are interstate in nature at times floods also take place with release of water from the dams of the neighbouring states like Jharkhand. Other than Embankments, there is no such structural measures for combatting flood in West Bengal. This paper tries to analyse the reasons behind the flood situation this year especially with the help of climatic data collected from the Indian Metrological Department, flood related data from the Irrigation and Waterways Department, West Bengal and GPM (General Precipitation Measurement) data for rainfall analysis. Based on the threshold value derived from the calculation of the past available flood data, it is possible to predict the flood events which may occur in the near future and with the help of social media it can be spread out within a very short span of time to aware the mass. On a larger or a governmental scale, heightening the settlements situated on the either banks of the river can yield a better result than building up embankments.

Keywords : dam failure, embankments, flood, rainfall

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