

## **Preface**

Floodplain is built up of layers of sediment deposited by the river when it periodically overflows its normal banks. There is a natural tendency for a river to deposit sediment in its channel during times of low flow, so that an equilibrium state is attained at where the river comfortably fills its main channel under normal conditions. Therefore the river spread out automatically onto its floodplain during periods of high flow. Expansion of human settlements and cultivation in the floodplains hinders free movement of flood water and thereby creating a disaster like situation. In terms the beneficial role of flood becomes disastrous to the society, environment and the economy.

Sub-Himalayan Jalpaiguri district is endowed with an intensive network of river systems. Most of the rivers are considered to be highly notorious for their unpredictable nature, letting loose fury of flood and problem of extensive and regular bank erosion, avulsion, renders thousands of homeless during the rainy season. The majority of the rivers originates in the Himalayas and enters from a north to northwesterly direction and flows south to southeasterly direction. As many of the rivers originate at the same hill, flood often occurs simultaneously and the rivers coalesce to form a single vast sheet of water.

Deforestation via-a-vis environmental degradation in the watersheds indeed plays the decisive role in contemporary increased frequency and magnitude of flood hazards in Jalpaiguri district. Vicious cycle of degradation has already been established. Flood protection measures so far taken have been found counter-productive and instead of offering the desired protection practically complicated the problem further.

Perhaps, the only possibility to save the habitable environment lies into the pro-active watershed management. It is thus, our imperative duty to inform the people living in threshold areas i.e., prohibitive and restrictive zone within the watersheds categorically about the hard reality of possible hardship during the different stages of watershed restoration and management processes.