



## **Physical vulnerability analysis of a flood prone community: a study on Nabinagar Thana of Bhramanbaria District**

**Md. Sohel Rana**

Town Planner, Meherpur Municipality, Meherpur-7100, Bangladesh

The vulnerability concept is intuitively simple but surprisingly difficult to define and even more difficult to quantify. There is a variety of (and far from being consistent) definitions about the vulnerability concept. Vulnerability analysis is a strategy to quantify human groups who are vulnerable; where are they vulnerable and which strategies could be used to reduce their vulnerability. It provides support to governmental and non-governmental agencies for decision making towards an opportune and adequate risk management. The objective of this paper is to introduce a methodology using GIS and remote sensing for vulnerability and risk analysis. Flood is such an event which can't be avoided but people have to face all the consequence of it. So what can be done that is to identify the most vulnerable areas to flood disaster and take measures to mitigate all its negative impacts as soon as possible. Thus such a study can help people to be ready to face the situation through policy and strategy making. In this paper an attempt is taken to assess the comparative vulnerability among all unions of Nabinagar thana through physical data with the help of GIS and remote sensing. A number of mathematical equations are used to calculate vulnerability. After the physical vulnerability analysis, the unions of Nabinagar thana have been classified into three broad vulnerable groups- high vulnerable, medium vulnerable and low vulnerable union and it has been found that seven unions are highly vulnerable, six unions are medium vulnerable and the rest are low vulnerable in the context of physical aspects.