



## **Developing a flood disaster risk index**

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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. And risk is the possibility to be affected adversely by disaster which is influenced by vulnerability of the community. A risk index derived through calculation of vulnerability and risk can provide support to governmental and non-governmental agencies for decision making towards an opportune and adequate risk management. The objective of this research is to introduce a GIS, remote sensing and statistical methodology based vulnerability and risk analysis. Flood is such an event which can not be avoided but people have to face all the consequence of it. So what can be done is to identify the most vulnerable and risky areas due to flood and take measures to mitigate all its negative impacts as far as possible. This study is expected to have contributions in flood disaster management policy and strategy formulation. In this study an attempt have been made to assess comparative vulnerability and risk among all 19 unions of Nabinagar Upazila using physical and socioeconomic information. A number of mathematical equations have been used to calculate vulnerability and risk. After the physical and social risk analysis, unions of Nabinagar upazila have been classified into three broad risk groups- high risk, medium risk and low risk unions and it has been found that six unions are at high risk, four unions are at medium risk and five unions are at low risk.