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1. Report Title and Type (Title: Methodology For Socio-economic Vulnerability Assessment For Flood Disaster Risk Management In Bangkok And Hanoi)(Type: Thesis work)
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   This study can support the flood mitigation measures of Hanoi and Bangkok cities in several ways. Firstly, the information from the result of loss functions can be used as guidelines for possible improvement of structural measures and planning. Secondly, loss curves can be used for rapid flood damage estimation. The estimates can be useful for rapid damage estimation in planning for relief works, financial supports for affected people and preparedness measures.
8. Abstract of the Work:
   With the increase of the occurrence of most damaging type of disaster “flood”, around the world in urbanized areas, assessment of economic loss and estimating potential losses has become an urgent necessity for disaster risk management. Flood affects socio-economic activities of people and damages to human settlements and developments. Loss estimation methodology can evaluate the risk and facilitate in taking flood disaster mitigation measures at the local, regional, state and national levels of government.
This study effort develops a methodology for loss estimation on socio-economic aspect in two major cities in South-east Asia, Hanoi and Bangkok, which are the capital of Vietnam and Thailand, resp. These two areas are selected as the study area because these two cities had several severe flood events during the last two decades. Questionnaire survey is conducted out to collect data on flood damages and losses for residential, commercial and industrial buildings in both the cities. Recent flood events are selected which are from 2000 to 2003. Besides, other flood events during 1996 for Hanoi and 1995 for Bangkok are also selected.

The damages are estimated, in terms of direct, indirect and intangible damages for different categories. Relationships are developed for flood damage with different damage influencing parameters. The parameters are both in qualitative and quantitative nature. For the qualitative parameters quantification process is applied. Flood loss curve is developed for structural damage from residential survey samples of Hanoi.

Vulnerability is a function of element at risk. In this study element at risk is considered in monetary value which effects on damage. Vulnerability indices are developed for two variables: “building floor area” and “plinth level”. Finally, a loss map is developed considering structural damage for a particular area in Hanoi. For loss map development a scenario is analyzed which is supplied by Institute of Meterology and Hydrology, under the Ministry of Natural Resources and Environment, Hanoi. These indices and loss map can be helpful for rapid damage estimation in planning for preparedness activities, relief works, city planning, etc.

9. Keywords: Flood, Vulnerability, Risk Management, Loss Function, Loss Map

10. Bibliographic data:


Hanoi Statistical Year Book (2003), Hanoi Statistical Office.


Institute of Meteorology and Hydrology, Ministry of Natural Resources and Environment, Vietnam (2005), Flood Scenario.


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14. AIT Code Number

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