Assessment of Flood Risk of Cross River State Using Geographic Information System (GIS).

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SUMMARY

Floods are the major disaster affecting many countries in the world from year to year causing great human and economic loss. The impact of floods has increased due to a number of factors which includes rising sea level and increased developmental activity on the floodplains). Considering the enormity of this problem, the United Nations Environmental Program (UNEP) in 1991 pointed out that many countries considered uncontrolled storm water to be their greatest problems as far as the preservation or urban infrastructure is concerned. In cities such as Bangkok, Culcutta, Dares Salam, Jakarta, Guayanguil, Manila, Lagos, many neighborhoods are flooded at least once a year, and inhabitants have to cope with the water in their dwellings. The trend of urban expansion has continued just as industrial activities has opened up new fields without critically considering the consequences of this unbridled development on the environment. Farming and other agricultural activities are increasingly being carried out on the flood plains. This leads to the loosening and disintegration of the resilient nature of the soil structure and texture in this area. Going by the above, it is therefore necessary and expedient for a study such as this to be carried out if the state is to avoid the associated problems of floods faced by many countries in the world.

The potential of Geographic information System (GIS) in flood studies cannot be over emphasized. It allows for a proper integration of all physical, socio-economic and demographic data, as data management and map representation capabilities of GIS help in exploring the environment and its integration with Remote Sensing, enhances the ability for forecasting/predicting of new scenarios and preparation of flood hazard maps. This work is aimed at assessing the flood risk vulnerability of Cross-River State of Nigeria using geospatial technologies.

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