

FACTORS AND IMPACTS OF GULLY EROSION IN GOMBE METROPOLIS

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Abstract

Gully erosion is one of the most serious and extensive environmental degradation problems in Gombe, north eastern Nigeria. The development of effective strategies of prevention and mitigation of this hazard requires an understanding of the factors and controls of its initiation and intensification from a catchment-scale perspective. A combination of socio-economic, hydro-geomorphic, terrain, soil, land use land cover and rainfall data was employed to investigate the factors, impacts and controls of gully erosion in Gombe metropolis. The results showed that inappropriate farming and land management practices, logging, deforestation, overgrazing, road building, poorly terminated drainage works, urbanisation and increasing rainfall are key triggers of gully erosion processes in the metropolis. Strategies to combat and prevent gully erosion in Gombe metropolis should be holistic and include a combination of appropriate land management and soil conservation measures, reforestation, regulated developments and road/drainage construction works that adheres to recommended design standards, taking into consideration the hydrologic, geomorphic and terrain conditions of the area.

Keywords: Gully erosion, Erosion control, NEWMAP, Gombe