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# AN URBAN LAND-USE SUITABILITY APPROACH TO DISASTER RISK MANAGEMENT: THE CASE OF THE GREATER TAUNG LOCAL MUNICIPALITY

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## Abstract

The Greater Taung Local Municipality (GTLM), situated in the North West Province of South Africa, experienced costly damages as well as loss of human lives due to flood related disasters over the last decade. The areas that were the most severely affected were the low income settlements in the municipality. To evaluate the threat posed by flooding to existing low income settlements as well as future urban developments in and around these settlements, and to inform overall disaster risk management in the area, a Geographic Information System (GIS) based Land-Use Conflict Identification Analysis (LUCIA) was applied to the region. The results shows the areas in the GTLM that are highly susceptible to flooding, i.e. flood risk areas; existing developments that are in flood risk areas; the areas that are most likely to be developed in the future; and areas that are most likely to be developed in the future that falls within flood risk areas. The results can be used to inform both spatial planning and disaster risk management to ensure sustainable and safe development in the GTLM.

**Keywords:** Flood risk, Development suitability, conflict analysis, South Africa

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