

https://dspace.org/

The impact of planning in mitigating the effect of floods on road transportation

Chuene, Solly

2021
https://hdl.handle.net/10539/32920

Downloaded from a DSpace repository. https://dspace.org/

Abstract

Road transport is an essential part of the transport system and is regarded as a lifeline for development, especially for people in rural areas, playing a critical role in poverty reduction. South Africa depends heavily on the road network as a communication channel and a link with the international community, especially the six countries it shares borders with. It is against this backdrop that the mitigation of risks impacting road transportation should be an important focus of the disaster risk management framework. In light of the potentially disruptive effect that flood disasters, in particular, have on the South African road network, it is important to understand the degree to which the current South African policy framework is effective in enabling adequate preparedness and responses to flood disasters affecting road transportation.

In this study, the South African disaster management policy of road authorities in the national, provincial and municipal (metropolitan) sphere was evaluated in comparison with three international examples (India, Japan and the United States of America) in terms of five identified policy attributes, namely institutional arrangements, legislative mandate, layout and content, resources and funding, and feasibility.

The research was conducted following a qualitative research approach and utilising a desktop research methodology for data gathering, followed by document analysis using the five attributes referred to above.

The study found that national legislative guidelines and instruments, as well as international examples, create an enabling environment for the development of effective policy to mitigate against flood disaster risks affecting road transportation in all three government spheres. However, it is only in the municipal (metropolitan) sphere that disaster management plans have been developed in compliance with the relevant legislation. These plans cover the management of all disaster risks affecting the municipality's services and infrastructure, not only the risk of flooding and the impact thereof on the road network. Nonetheless, the study found these plans to be feasible as base policy documents to mitigate against the impact of flood disasters on the road network.

As far as the provincial and national road agencies were concerned, no policy had been developed in accordance with the legislative requirements to address the mitigation of disaster risks (including that of flood disasters) in the context of road transportation. The study, therefore, identified a clear need for such policy to be developed in order to enable effectiveness in all areas of the reduction of flood disaster risk in the road transportation sector, namely prevention, mitigation, preparedness, response and recovery.

Key terms: disaster risk management, policy analysis, flood risk; road transportation, risk reduction, risk prevention, risk mitigation, risk response, Disaster Management Act.