



Integration of satellite-derived precipitation estimates and GeoNode capabilities for addressing the risk of flooding to local communities

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Natural hazards such as flood and drought are one of the main cause of economic losses and casualties over Africa. A number of initiatives are being implemented at a global and a local scale to reduce the risk of natural disasters. These initiatives often relies on the use and the efficient sharing of open source EO datasets in order to enable policy-makers and the public to have access to the right information in an easy and timely manner. While the commonly used datasets often include Geographic Information System (GIS) based information for the disaster monitoring and damage impact assessment, the integration with EO data of impending hazards is still at an early stage. The aim of this paper is to illustrate a methodology for combining satellite-derived precipitation estimates and spatial analysis capabilities for the production of extreme rainfall warning maps, through the use of GeoNode, a Web platform for the management and publication of geospatial data. In particular the methodology is presented for a case study over Malawi, in the framework of the Malawi Spatial Data Platform (MASDAP), a GeoNode-based platform promoted by the Government of Malawi in order to support development of the country and build resilience against natural hazards. This approach is considered to be particularly valuable in order to enable communities to better understand the risk of extreme precipitation and to have a tool for effectively evaluate main areas where flooding may develop rapidly causing significant damages, such as seasonal rivers.