

Seismicity of the Okavango Delta Region: Contribution of IMS and Local stations

The Okavango Delta region (ODR) in Botswana is one of the largest alluvial fans on earth and is hosted in a graben structure that could be the terminus of a southwesterly extension of the East African Rift System (EARS). The delta comprises the upstream panhandle and the downstream mega-fan situated in the middle of the Kgalagadi Basin. The ODR has been observed to be characterized by the highest level of seismicity compared with other regions of Botswana. Data from the online bulletin of the International Seismological Centre (ISC) shows that many of the seismic events in the ODR have been detected by distant seismic stations at distances beyond 500 km from the heart of the delta, thus resulting in relatively poor location determinations. We present the results based on the data recorded by seismic stations deployed in the Network of Autonomously Recording Stations (NARS)-Botswana Project. The station distribution during this project allowed for better computation of focal mechanism and characterization of fault system of the region. We also use IMS in the region (LBTB, LSZ, BOSA, MATP, TSUM, and SUR) and other regional stations to review the location of seismic events that occurred before installation of the local monitoring stations.

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Track Classification: Theme 1. The Earth as a Complex System