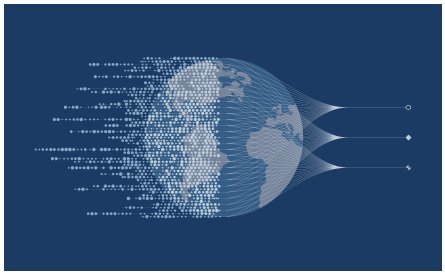

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Unusual earthquakes of the Central Kalahari Game Reserve Botswana: Anomalies in a Stable Continental Plate

Friday 12 September 2025 10:00 (1 hour)

Botswana is generally regarded as a seismically quiet region, characterized by low to moderate seismic activity. This relative stability is attributable to its location on the stable continental part of the African Plate, far from tectonic plate boundaries (Roger M Key and Neil Ayres, 1998). Nevertheless, on 3 April 3 2017, at 19:40:16.95 local time, an unexpected earthquake with a magnitude of 6.5 Mw struck the Central Kalahari Game Reserve (CKGR). Fortunately, the event's impact was mitigated by the region's remote location, sparse population, and limited infrastructure, resulting in minimal damage. Prior to the establishment of the Botswana Seismic Network (BSN), the seismicity of Botswana was not well documented due to the absence of systematic recording. The historical record of major seismic events in Botswana began with two significant earthquakes in the Okavango Delta Region in 1952. The first event, on 11 September 1952, had a Richter magnitude of 6.1. This was followed by a 6.7 earthquake on 11 October 1952 (Reeves, 1972). Despite the lack of comprehensive data at the time, these events provided important insights into the seismic potential of the region. The deployment of the BSN has since improved the documentation and understanding of seismic activities in Botswana.

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