



SEISMOLOGY BULLETIN

January 2024

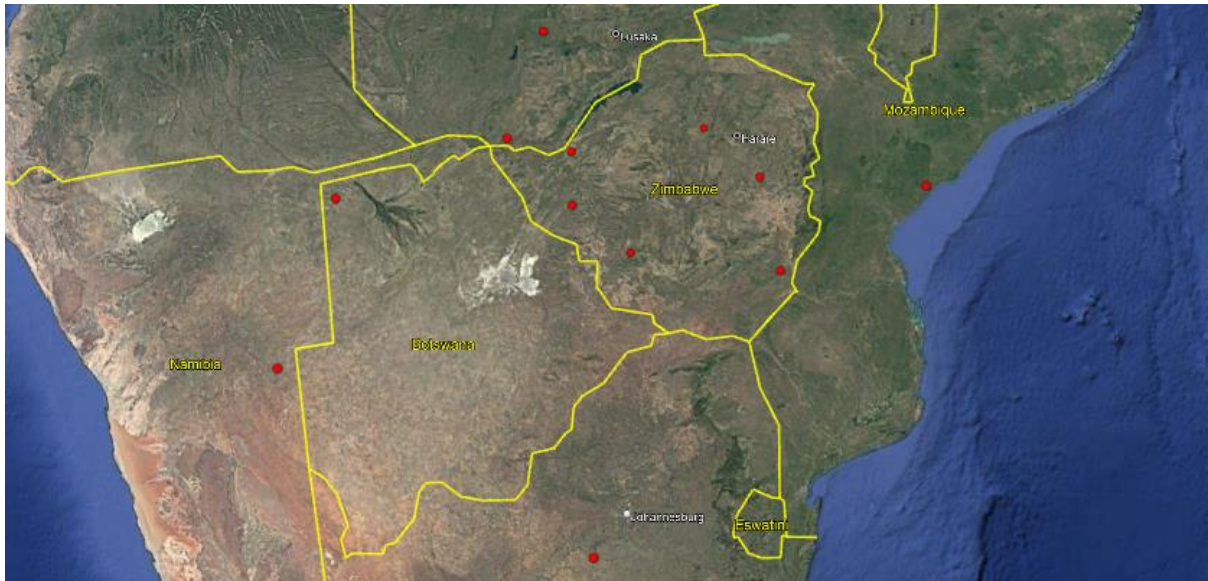
DESCRIPTION OF THE SEISMIC EVENTS

During the month of January 2024, a total of 15 events were recorded and analyzed, with 6 local, 7 regional and 2 teleseismic (distant) events. The biggest local earthquake was of magnitude 3.6 and the epicenters was in Binga. The area is part of the Zambezi Basin which is influenced by the Kariba Dam (reservoir induced seismicity) and the Deka fault (plate tectonics). This area extends from the northern tip of the country, in a south-westerly direction through Lake Kariba, Devil's Gorge, the Deka Fault, to the Westerly edge of the country. This region is the most active seismic region in Zimbabwe.

LOCAL EVENTS

Table 1: Epicenters of Local Events

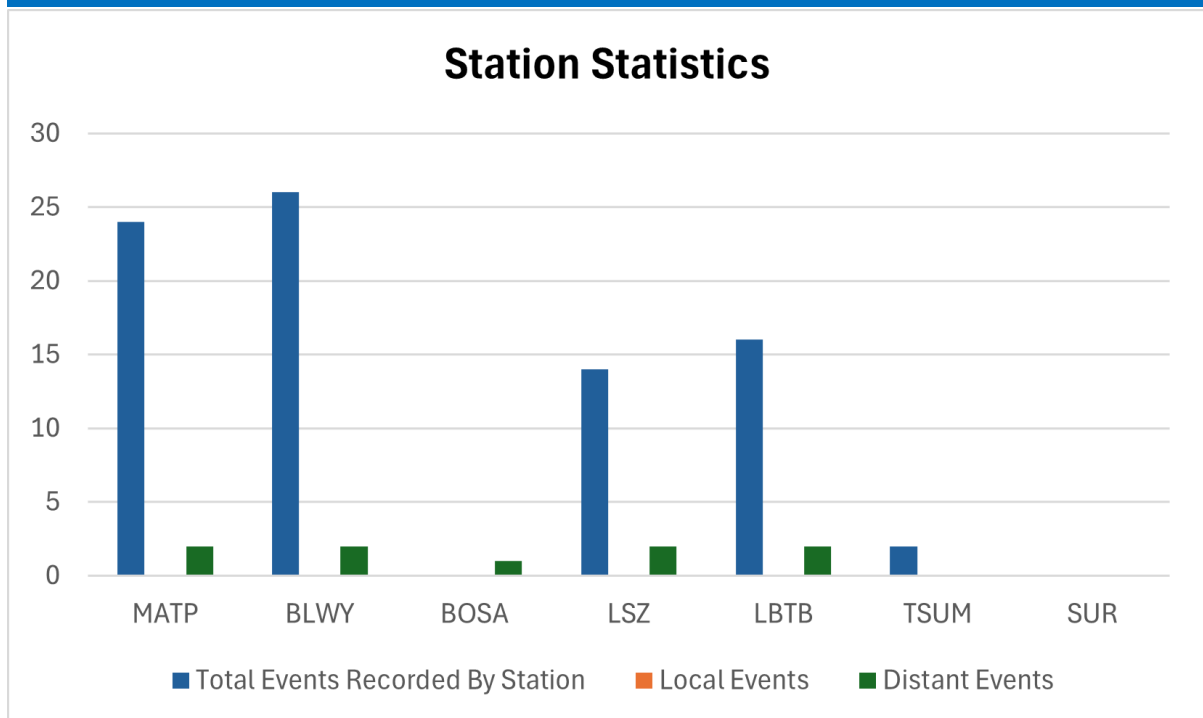
No. Of events	Areas felt in Zimbabwe	Date	Time (UTC)	Location of events	X	Y	Magnitude
1.	Non	20/01/24	0920hrs	Binga	-18.034	27.226	3.6
2.	Non	20/01/24	1517hrs	Hwange	-19.237	27.182	3.4
3.	Non	21/01/24	1336hrs	Chiredzi	-20.868	32.100	3.4
4.	Non	23/01/24	0323hrs	Chinhoyi	-17.639	30.376	2.7
5.	Non	24/01/24	0457hrs	Matopos	-20.367	28.540	3.0
6.	Non	31/01/24	1625hrs	Wedza	-18.771	31.660	3.3



CURRENT NETWORK STATUS

MATP is the only station currently functioning effectively. The battery for BLWY is non-operational, so it only functions when there's electricity. We no longer have KRI and CHIP stations. Our coverage and station network are very poor, this adversely impacts the accuracy of our results, particularly the locations of local events. Additionally, the limited number of stations hinders our ability to analyse several events.

STATISTICS OF STATIONS USED IN DATA ANALYSIS



Number of events selected with given stations	15
Number of events with no phases	0
Number of events with waveforms	15
Number of events with only waveforms	0
Total number of waveform files	15
Total number of local events	6
Total number of regional events	7
Total number of distant events	2
Total number of events	15