

TRUA Project: upgrading Israel's seismic warning network – towards earthquake early warning in Israel

Kurzon I. (1), Nof R.(1), Lutzky (1), Polozov A. (2), Zakosky D. (2), Shwartzburg A. (2), Giller V. (2), Bar-Natan A. (2), Reich B. (2), Gorstein M. (2), Feldman L. (2), Giller D. (2), Avirav V. (2), Portnoy P. (2), Ben-Dor G. (2), Aizenshtat-Soffer E. (2), Wetzler N. (1)

1. Geological Survey of Israel, 32 Yesha'ayahu Leibowitz, Jerusalem 9371234, Israel
2. Geophysical Institute of Israel, P.O.Box 182, Lod 71100, Israel

ittaik@gsi.gov.il

The Geological Survey of Israel is in the final Stage of upgrading the seismic network of Israel, aiming to achieve Earthquake Early Warning capabilities for the state of Israel. The new network will consist of 120 stations, 24 of them are with co-located broadband seismometers and strong motion accelerometers, and the rest with high-quality strong motion accelerometers. In addition, the network will consist of 8 stations with high rate GNSS instrumentation. The network will have many levels of redundancy in order to achieve high availability of the network in cases of crisis. The network is designed to have two routes of telemetry from each station, in which the fast route will have <1s latency, while the backup route will have <3s latency.

The new seismic network has been going through the upgrade and expansion process since June 2017, consisting to-date: a) 94 out of the 120 stations planned, and b) 2 datacenters, one as main and the other as recovery. Both data-hubs are currently collocated for testing in the Seismology division at the Geophysical Institute in Lod. Once tests will prove an efficient operation and synchronization between both data-hubs, the main data-hub will be re-located to the new Geological Survey location in Jerusalem. Data is already available through an FDSN server operated by the Division of Seismology (see poster of Nof et al. 2019), and the high density continuous data acquisition had already proven to add significant data to the seismic catalogue in Israel, especially during the July-August 2018 seismic swarm in Sea of Galilee. In addition, still in testing mode, but hopefully operative by the end of 2019 – we hope to achieve full operational capabilities by the end of 2019, with the Earthquake Early Warning System.