



## **Establishing seismic network capabilities in Haïti**

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The January 12, 2010 earthquake ruptured a poorly instrumented region that is located on a complex, wide, deformed zone on the boundary between the Caribbean Plate and the North American Plate. This event evidenced the need for a permanent seismic network in Haïti. Immediately after the 2010 earthquake, a strong motion network was deployed by USGS and 3 broadband seismometers were installed by the NRCAN. All this instrumentation is still working, however, it is mainly located around Port-au-Prince. In 2011, the UTS (Technical Unit of Seismology) was created by the BME (Mining and Energy Bureau) to take in charge the seismic monitoring of the national territory and a Memorandum of Understanding was signed with IPGP that would help through its Antilles Volcano and Seismic Observatories. After a 2-month training in Martinique of Haïtian operators, Earthworm and Seiscomp3 were installed on the UTS server and neighboring country stations were include to the detection network. To enlarge the seismic networks to the whole territory, 10 broadband seismometers and 6 accelerometers were acquired. With these new stations, which will be installed in 2014 in secured places equipped with internet or VSAT antenna and with network code AY, the seismic performance standards for the detection and analysis of earthquakes change: 1) Earthquake detection from 30 seconds to 10, 2) Minimum magnitude threshold from M3.8 to M2.8, and 3) Initial hypocenter error from 5km to less than 2 km. The remaining efforts should focus on permanent and qualified human resources to maintain these networks.