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The P-Alert Patras Array: Bridging School and Citizen Seismology through earthquake alerting

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A collaborative strong motion array comprised mainly of low cost sensors has been deployed in the Patras city, Greece. Currently, it combines: 4 standard accelerometric stations operated by the National Observatory of Athens, Institute of Geodynamics (NOA) and 15 P-Alert MEMS acceleration devices deployed in public sector buildings, schools and private dwellings. It aims, in an operational manner, to assess rapidly the intensity of a felt event in a highly populated environment. However, the deployment of low cost sensors, especially in schools, demonstrated the involvement of pupils, in primary and secondary education, towards exploring School Seismology issues, in an area where strong felt earthquakes are frequent. Simple exercises in class, using the recorded data after a felt event have been completed such as: locating the event, estimating the magnitude, show the distribution of max PGA values in the city etc. Taking advantage of the school – local community link, the resilience increase has been demonstrated in the local community through happenings, popularized seminars and local press postings. A connection with the Municipalities and the Communal public sector allowed the expansion of the citizen involvement (Citizen Seismology) through the use of dedicated smartphone app. Citizens are informed and also pass their felt experience. This allows improved estimation and distribution of the shaking in a second phase, useful for Civil Protection Agencies. Increase of the resilience and public awareness is under monitor with the collaboration of local media, with the aim to expand and link the project to other cities – towns in the greater vicinity.