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The Central and Eastern European Earthquake Research Network – CE3RN

Pier Luigi Bragato (1), Giovanni Costa (2), Antonella Gallo (2,3), Andrej Gosar (4), Nikolaus Horn (5), Wolfgang Lenhardt (5), Marco Mucciarelli (1), Damiano Pesaresi (1), Rudolf Steiner (5), Peter Suhadolc (2), Lara Tiberi (2), Mladen Živčić (4), and Giuliana Zoppé (2)

(1) OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale), Trieste, Italy, (2) SeisRaM group, Department of Matematics and Geosciences, University of Trieste, Trieste, Italy, (3) AREA Science Park, Trieste, Italy, (4) Agencija Republike Slovenije za Okolje (ARSO), Ljubljana, Slovenia, (5) Zentralanstalt für Meteorologie und Geodynamik (ZAMG), Vienna, Austria

The region of the Central and Eastern Europe is an area characterised by a relatively high seismicity. The active seismogenic structures and the related potentially destructive events are located in the proximity of the political boundaries between several countries existing in the area. An example is the seismic region between the NE Italy (FVG, Trentino-Alto Adige and Veneto), Austria (Tyrol, Carinthia) and Slovenia. So when a destructive earthquake occurs in the area, all the three countries are involved. In the year 2001 the Agencija Republike Slovenije za Okolje (ARSO) in Slovenia, the Department of Mathematics and Geoscience of the University of Trieste (DMG), the OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale) in Italy and the Zentralanstalt für Meteorologie und Geodynamik (ZAMG) in Austria signed an agreement for the real-time seismological data exchange in the Southeastern Alps region. Soon after the Interreg IIIa Italia-Austria projects "Trans-National Seismological Networks in the South-Eastern Alps" and "FASTLINK" started. The main goal of these projects was the creation of a transfrontier network for the common seismic monitoring of the region for scientific and civil defense purposes. During these years the high quality data recorded by the transfrontier network has been used, by the involved institutions, for their scientific research, for institutional activities and for the civil defense services. Several common international projects have been realized with success. The instrumentation has been continuously upgraded, the installations quality improved as well as the data transmission efficiency.
In the 2013 ARSO, DMG, OGS and ZAMG decided to name the cooperative network "Central and Eastern European Earthquake Research Network – CE3RN". The national/regional seismic networks actually involved in the CE3RN network are:

• Austrian national BB network (ZAMG - OE)
• Friuli Veneto SP network (OGS - FV)
• Friuli VG accelerometric network (DMG - RF)
• NE Italy BB Network, (OGS & DMG - NI)
• Slovene national BB network (ARSO –SL)
• South Tyrol BB Network, (ZAMG - SI)
• HAREIA strong motion stations, (ZAMG & DMG - HA)

Starting from the 2001, the CE3RN represents an excellent example of international high quality research infrastructure and the starting point for the enlargement of the transfrontier network to all countries and their seismological institutions of the Central and Eastern Europe region. Furthermore, one of the main goals of the CE3RN is to intensify the cooperation between these institutions through common research activities and preparation of common international projects.
The characteristics of the CE3RN will be described along with the examples of some research results and of common projects realized during the first 13 years of network activity.