A first attempt at compiling a map of active faults of the Adria region

L. Piccardi (1), L. Toth (2), E. Vittori (3), S. Aliaj (4), G. Cello (5), W. D. Cunningham (6), G. Drakatos (7), A. Gosar (8), D. Herak (9), M. Herak (9), S. Sebela (10), E. Sulstarova (4), G. Windhoffer (2), B. Glavatovic (11), A. Kiratzi (12), A. Ganas (7), M. Omerbashich (13), S. Pavlides (12), L. Petro (14), G. Sijaric (13), B. Tomljenovic (15), E. Tondi (5)

(1) CNR Istituto di Geoscienze e Georisorse, Via G. La Pira 4, 50121 Firenze, ITALY
(2) Seismological Observatory, Meredek u. 18, H-1112 Budapest, HUNGARY
(3) Agency for Environment Protection and for Technical Services-Geological Survey of Italy (APAT), via V. Brancati 48, 00144 Roma, ITALY
(eutizio.vittori@apat.it / Fax +39 064465159 / Phone +39 0650074478)
(4) Seismological Institute, Academy of Sciences of Albania, Albania
(5) Dipartimento di Scienze della Terra, Universita’ degli Studi di Camerino, Italy
(6) Dept. of Geology, University of Leicester, U.K.
(7) National Observatory of Athens, Institute of Geodynamics, Athens, Greece
(8) Environmental Agency of the Republic of Slovenia, Ljubljana, Slovenia
(9) Department of Geophysics, University of Zagreb, Zagreb, Croatia
(10) Karst Research Institute, Postojna, Slovenia
(11) University of Montenegro, Podgorica, Montenegro
(12) Dept. of Geophysics, Aristotle University of Thessaloniki, Thessaloniki, Greece
(13) Faculty of Sciences, University of Sarajevo, Sarajevo, Bosnia
(14) Geological Survey of Slovak Republic, Kosice, Slovak Republic
(15) Faculty of Mining, Geology and Petroleum, University of Zagreb, Croatia
Within the framework of the COST action 625 “3D monitoring of active tectonic structures”, a Task Group, composed of a large number of authors from many countries, whose contribution is acknowledged here, has been focused on the compilation of a “Map of active faults of the Adria region”. The results presented here are the outcome of this task group.

The project has proven an extremely complex task, due to the vast heterogeneity or even complete lack of information regarding seismogenic structures. At least, more or less detailed and reliable data have been collected, trying to adapt to a common legend based on the ITHACA capable fault mapping project developed by APAT, for the following countries of the region so far participating to the project: Italy, Greece, Albania, Slovenia, Croatia, Montenegro, Hungary, Bulgaria. No data could be obtained at all about Bosnia or Serbia, which are areas of high historical seismicity (Bosnia in particular has hosted some of the most devastating earthquakes of the former Yugoslavia). Also the knowledge about fault activity in the Adriatic and Ionian seas is still scarce, notwithstanding the efforts now ongoing, requiring major attention, due to the certainly non trivial tsunamigenic potential of the already known but poorly characterized submarine faults.

The present compilation of fault and seismicity data, highlighting the zones of weak knowledge together with the tectonic structures of already ascertained high capability, has been conceived as a basic essential tool to call for attention from the European Community, which just now has welcomed several countries of the Adriatic area and to plan new necessarily coordinated efforts among the largest possible number of specialists of this highly seismic region.