Report from the Spanish Scientific Team in Emilia Romagna (Italy), Earthquake 2012 TEC – Lessons Learnt

On 20 May 2012 an earthquake of magnitude 6.1 struck Emilia Romagna (Northern Italy), affecting 8 villages, causing surface rupture, ground cracks, liquefaction and damage to buildings. The Geological Survey of Spain immediately gathered earthquake experts and activated the Geological Emergency Team to offer help to the Italian authorities. Dr. Miguel A. Rodríguez and I, Earthquake Geologists and TEC's Members were charged to lead a multidisciplinary Spanish scientific team which was deployed seven days after the earthquake.

The objectives of the mission were: to collect relevant information about the damage to the medieval edifices and churches of architectural value and to provide geological assessment about secondary effects of earthquakes (ground cracking and liquefaction).

Dr. Miguel A. Rodríguez collecting data at Sant Agostino

The TEC had taught us important lessons to bear in mind during missions: **Quality of training**: The TEC trains experts to deal with different disaster scenarios: earthquakes, hurricanes, floods, forest fires, etc. **Planning**: How to arrange a mission, assign roles to the team members, logistics, and official passes to reach the area. **Visibility**: all members of the Spanish Team wore the Orange Vest, with ID card, EU flag and Official Pass provided by the Italian authorities. **Safety**: all members carried the individual emergency kit for earthquakes; were trained in "how to walk in a destroyed city" and wore helmets, boots and safety clothes. And remember, when you leave the Red Zone you always have to inform the local authorities. Otherwise, should a strong aftershock occur, a SAR Team may be organized for your search and rescue. **Local authorities**: Who is managing the emergency? Each village was managed by different agencies and firefighters were deployed in all cities. **Information**: local maps, closed roads and local restrictions.

We learnt that real tragedy is always worse than training. Nevertheless, the TEC taught us how to work with empathy, efficiency and professionalism. The data gathered are being used for the study and the analysis of the damaged buildings. Preservation of the cultural heritage of a people is as important as saving lives.

Dr. Raul PEREZ LOPEZ, IGME –Geological Survey of Spain, 2011 TEC member

Forest fires 2012 challenged Portuguese authorities

The forest fire season 2012 started already in February. An average of 166 forest fires per day over 6 weeks led to an extraordinary mobilization of terrestrial and aerial means and burnt 33.889 ha – 32 % of the total burnt area registered until the 15 October. July, August and September, were quite typical, with long periods of high temperatures, low humidity levels and moderate winds leading to 10.316 registered forest fires.

On 3rd September all available means were engaged in ongoing operations. Therefore, the Portuguese National Authority for Civil Protection activated the European Mechanism for Civil Protection, requesting the mobilization of 2 modules for aerial forest fire-fighting using airplanes.

French aerial forest fire fighting module using planes. Copyright José GF Leite