

INQUA TERPRO – Commission on Terrestrial Processes Deposits, and History
Focus Area on Paleoseismology and Active Tectonics – 2007/2011

MINUTE OF THE 3rd BUSINESS MEETING

held during the 1st INQUA - IGCP 567 - International Workshop on Earthquake
Archaeology and Paleoseismology, Baelo Claudia, Spain, 9th September 2009

Agenda

1) PROJECT 0811 "A GLOBAL CATALOGUE AND MAPPING OF EARTHQUAKE ENVIRONMENTAL EFFECTS"

- EEE CATALOGUE WEB IMPLEMENTATION
- STATE OF PROGRESS
- LINKS WITH OTHER INITIATIVES

2) GENERAL REMARKS ON THE APPLICATION OF THE ESI 2007

3) NEXT MEETINGS AND 2010 ACTIVITIES

List of Participants: (26 people from 11 countries)

A. AGNON, T. BARDAJI, A.M. BLUMETTI, A. CARO MONTERO, A. CHATZIPETROS, E. GALLI, E. GATH, J. L. GINER ROBLES, B. GOODMAN, L. GUERRIERI, M. KAZMER, Y.S. KIM, K. JIN, A.M. MICHETTI, N. MORNER, I. PAPANIKOLAU, G. PAPATHANASSIOU, R. PEREZ LOPEZ, S. PORFIDO, K. REICHERTER, T. ROCKWELL, M.A. RODRIGUEZ PASCUA, H. SAMARI, P.G. SILVA, S. SIMAN TOV, M. SINTUBIN, R. TATEVOSSIAN E. VITTORI, A. VOTT

PREFACE

The 3rd Business Meeting of the INQUA TERPRO Focus Area on Paleoseismicity and Active Tectonics was held on 9th September in the frame of the International Workshop on Earthquake Archaeology and Paleoseismology organized in the Baelo Claudia archeological site (Southern Spain) by the Universities of Salamanca and Aachen and sponsored by INQUA 0811 and IGCP 567 projects.

In the workshop programme were scheduled scientific sessions (oral communications + posters), two field trips in the Gibraltar Strait area and a 2 days long training course on archeoseismology and paleoseismology.

The INQUA Business Meeting was joined with the meeting of the IGCP 567 project.

This was an opportunity for exploring the possibility of further collaborations

between the paleoseismic and archeoseismic scientific communities.

1. PROJECT 0811 "A GLOBAL CATALOGUE AND MAPPING OF EARTHQUAKE ENVIRONMENTAL EFFECTS"

MICHETTI, Chairman of the INQUA TERPRO Focus Area on Paleoseismicity and Active Tectonics remarks the current activities of the Focus Area mostly aimed at compiling a global catalogue of Earthquake Environmental Effects (EEE Catalogue). He reminds that the results of the activities have to be finalized in time for the XVIII INQUA Congress, which will be held in Switzerland in August 2011.

• EEE CATALOGUE WEB IMPLEMENTATION

GUERRIERI provides some more detailed information about the project. In particular he communicates that the Web Implementation interface of the EEE Catalogue is ready for data collection from modern, historical and paleoevents. (<http://www.eeecatalog.sinanet.apat.it/login.php>).

Therefore, he strongly encourages to compile the catalogue with available datasets on the EEEs induced by a seismic event, even if not exhaustive of the entire scenario. In fact, previous studies clearly show that effects documented in historical and paleoseismic sources are frequently the most remarkable effects. Thus, an intensity assessment is still possible beyond such differences in data quality, resolution and completeness.

A Scientific Committee will check the quality of collected data. Only validated data will be published on the public version of the EEE catalogue. Of course, authors of data collection will be formally cited in the catalogue, and their contribution will be acknowledged through a certificate formally issued by the INQUA Focus Area.

• STATE OF PROGRESS

GUERRIERI illustrates the state of progress of the EEE Catalogue which actually collects data from 16 earthquake records completed or in progress (4 paleo, 4 historical, 8 modern earthquakes). About 30 earthquake records of the pioneer EEE database will be included in the EEE Catalogue in the next weeks.

The Italian Working Group will contribute with 5 modern earthquakes, 12 historical earthquakes and paleoearthquakes in 9 selected areas with good paleoseismic record.

SILVA informs that the Spanish Working Group is going to publish the Spanish Catalogue of Earthquake Environmental Effects which will be promptly included into the EEE Catalogue.

PAPANIKOLAU communicates that the Greek Working Group will contribute with the revision of some recent earthquakes. PAPATHANASSIOU provides the data on liquefactions induced by about 80 earthquakes in Greece and surrounding areas. Furthermore, SAMARI will contribute with some examples from Iran.

MICHETTI reminds that many other scientists that did not participate to the Baelo Claudia Workshop have communicated their intention to contribute to the EEE Catalogue.

- LINKS WITH OTHER INITIATIVES

GUERRIERI reminds that the EEE Catalogue will contribute to the 2009-2011 GEO¹Work-Plan as a subtask into the Task “Systematic Monitoring for Geohazards Risk Assessment” (DI-09- 01), concerning the in-situ validation of seismic hazard assessment from remote sensing analyses. The linkage of the catalogue into the GEOSS is expected to strongly stimulate all participants to provide data on earthquake environmental effects which will significantly contribute to the implementation of the catalogue.

A first presentation of the contribution of the INQUA 0811 project to the GEO Community was held at the 33rd International Symposium on the Remote Sensing of Environment (Stresa, 4-8 May 2009).

SINTUBIN outlines the need to explore any possible collaboration with the IGCP 567 project, mainly focussed on archeoseismology. In particular, he suggests to use a shared infrastructure to collect EEE and EAE (Earthquake Archeological Effects) data.

2) GENERAL REMARKS ON THE APPLICATION OF THE ESI 2007

In the latter period, the ESI 2007 has been applied to several earthquakes worldwide.

In principle most of the applications have clearly shown the added value provided by a more systematic use of the scale and the good agreement with traditional damage based intensity scales, as shown for example by VITTORI for the 2009 L’Aquila earthquake.

Some participants (SINTUBIN, MORNER, SILVA, REICHERTER) outline a weak point in the use of some effects as a diagnostic tool for ESI intensity assessment, with specific regard to the tsunami effects occurred at a distance in the order of thousands of km from the epicentral area.

MICHETTI and TATEVOSSIAN outline that the use of such effects is significant at local level but cannot be considered as a diagnostic element for intensity assessment in the epicentral area. Moreover, they remark that the ESI scale must be applied as it is and cannot be changed frequently. In any case, this point should be better clarified through a specific recommendation.

¹ The Group on Earth Observations (GEO, www.earthobservations.org) is a voluntary partnership of governments and international organizations with the aim to build the Global Earth Observation System of Systems (GEOSS).

The purpose of GEOSS is to achieve comprehensive, coordinated and sustained observations of the Earth system, in order to improve monitoring of the state of the Earth, increase understanding of Earth processes, and enhance prediction of the behaviour of the Earth system.

4) NEXT MEETINGS

- **European Geosciences Union General Assembly, Vienna, Austria, 02 – 07 May, 2010.**

A specific session sponsored by INQUA TERPRO Focus Area on Paleoseismicity and the IGCP 567 project will be submitted in the frame of the Natural Hazard Programm NH9 – Natural Hazards and Society (Risk, Vulnerability, Reinsurance, Education, Communications, etc.).

- **XXVII INQUA Congress, Bern, Switzerland, 20 - 27 July, 2011**

During this Congress will be illustrated the final results of the activities of the INQUA TERPRO Focus Area on Paleoseismicity for the period 2008-2011, including the EEE Catalogue.

Other potential meetings have been proposed in **Greece** and **Colombia**. Dates are not fixed yet but need to be tuned (i.e. not very close in time) with the XXVII INQUA Congress.