

IASPEI Working Group "Historical Seismology" (October 2005-April 2007)

A Report on the activity done and planned to build up An Open-Access Archive of Historical Earthquake Studies

Paola ALBINI (Milano, Italy) and Katsuhiko ISHIBASHI (Kobe, Japan)

Background and goals

Around the world, in the last 20 years the Historical Earthquake Studies increased in number and quality, as the result of the joint efforts of multidisciplinary teams. In general terms, there is a huge amount of scientific historical earthquake data that sometimes are not available or not easily traceable outside the local or national organizations that have funded and taken care of reporting the investigation. To master this problem an ad hoc WG was proposed to IASPEI in July and approved in October 2005 on the occasion of the General Assembly in Santiago, Chile.

The activity of the WG aims at establishing an Open Access Archive of Worldwide Historical Earthquake Studies, according to the following criteria.

1. What are the Historical Earthquake Studies

A Historical Earthquake Study reports how the historical records on earthquakes have been collected and how they have been interpreted so to become historical macroseismic data. Such a study should state the procedures used and be formalised to include the evaluation of macroseismic intensity for each place affected (IDP: intensity data point). This study should contain both the historical and the seismological interpretation, so to allow the seismological community to be able to evaluate the quality of the data it supplies.

2. Why should they be archived

The reporting format for the Historical Earthquake Studies is far from being homogeneous. In fact, most of them have remained unpublished, as they are born as "internal reports". Only a few are published on scientific journals, and those staying in the dark of some drawers seriously expose themselves to disappearance. But the seismological community rely upon their availability to upgrade and improve the databases of seismological data and, as a consequence, the parametric catalogues.

3. How and where to archive them

Facing the challenge of how to preserve the Historical Earthquake Studies, the criteria adopted and the planned activities in the framework of the Working Group are:

- ❖ inventorying the published and unpublished material supplying historical earthquake data; the inventory takes the form of a critical and annotated bibliographical list; it is continuously upgraded, and implemented going back in time, as far as 1960, to start with;
- ❖ collecting and preserving as many inventoried items as possible, both on hard copy and in digital format;
- ❖ efficiently and user-friendly storing the data in an up-to-date and structured archive in digital form; the environment chosen to prepare a prototype of the archive is Open Source and OpenAccess.

Deliverables and related Activities

deliverable	activity	date of release
D1. Critical inventory	Inventorying the Studies, in their original language; items in languages other than English could be given an English translation of the title	<i>continuous</i>
	Annotating the inventory by means of keywords	<i>sample July 2007</i>
	Distributing the inventory within the scientific community, for a cross-check of the contents	<i>October 2007</i>
	Periodical update and release of the inventory	<i>continuous</i>
D2. Open Source and Open Access tools	Identifying the ad hoc software	<i>in progress</i>
D3. Building the Archive	Collecting a copy of as many as possible items listed in the inventory (Hardcopy Archive); this activity aims at preserving the Historical Earthquake Studies from their extinction launching a collection campaign in the seismological institutions around the world	<i>continuous</i>
	Transforming the collected items in digital form (scan or other techniques)	<i>continuous</i>
D4. An Open Access Archive of the Historical Earthquake Studies	Making the collected items available in the format of an Open-Access Archive	<i>early 2008</i>

Remark: The success of the initiative will depend on the interest this activity will raise and the cooperation of the researchers active in this field. This activity is slow and time-consuming by definition. The WG should stay alive for two, perhaps four, years more.

A test website is accessible at <http://emidius.mi.ingv.it/HISEIS/>

Paola Albini and Katsuhiko Ishibashi, 8 July 2007