Report

'Annual Meeting' May 13, 2017 – Zaragoza, Spain

Plan of the report

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- 4. Discussions on future strategy and activities
- 5. Next meeting of the FWG

1. General comment

The annual meeting took place on Saturday 13th May (13.15-15.00), during the last day of the PAGES 5th OSM in Zaragoza, Spain. It was the second most attended WG meeting with around 30 people. This well highlights the interest of the different communities for this initiative.

After a brief introduction of the FWG (available here), the meeting was structured in three parts: i) presentations of ongoing projects ('who is who' and 'database'), ii) emerging projects ('integration of multi-archive data' and 'link to stakeholders') and iii) a possible strategy and related activities for the next year(s) of the working group.

The goal of the meeting was to receive feedback and initiate discussions about activities in the FWG. Moreover, this meeting represented a new opportunity for many researchers to get involved in the activities developed within the FWG. However, the time frame was too short (< 2 hours) to have in depth discussion about ongoing and emerging projects and activities. For the next months, new activities have been proposed, which will lead to a more 'in-depth' discussion and result in concrete contributions from the FWG members (see section 5 of this report).

2. Ongoing projects

'Who is who' project

Marieke Ahlborn, leader of this project, introduced the 'Who is who in the FWG' project launched at the beginning of the year. It aims to better know the FWG members and to strengthen the FWG network by collecting scientific profiles of FWG members. We encourage of all of you to contribute by sending the requested information (done in 5 minutes) to marieke@gfz-potsdam.de. The FWG mailing list has 234 members (May 18, 2017). The current list in the 'Who is Who' file (ongoing update) includes 71 people, and is available here.

'Database' project

Michael Kahle, leader of this project, summarized the key progress of this project during the last year, but also poses open questions and challenges to manage. The main advance in developing a

joint database is the agreement for a common data structure that would enable to compile all (minimal to maximal) information from different (historical and natural) archives. This information has been identified through discussions with the <u>sub-group coordinators</u>. The next steps for the coming year are:

- enhance LiPD format (http://linked.earth/) to cover also historical data,
- find online platform and database and,
- implement the database.

Michael has also shown the large amount and diversity of data that this database would host, thanks to the <u>metadata collection</u> launched a few months ago. Almost 300 records have already been listed. We thank very much all contributors and encourage further contributions!

Slides of Michael's talk are available here.

As a feedback, attendees pointed out that the information stored in the database should consider and discuss a potential use of the data stored in the database. This is related to further science questions, but also the use for other communities (stakeholders). Thus, we need to better identify why we need a database, what do we expect from a database, and which products do we consider.

3. Emerging projects

'Integration of multidisciplinary datasets'

Lothar Schulte introduced this challenging project that aims to find a consistent way to integrate flood information coming from different archives to get a complete picture of the flood variability at the regional scale. Questions that arise in such an exercise have been highlighted through a case study relying on fluvial, lacustrine and historical archives and on instrumental data in the Bernese Alps. To reach a real data integration, this project develops a method that enables to deal with e.g. the uncertainties of the records, the distinct system processes and archive sensitivities to record floods, the different time and spatial resolution of flood information. People interested to contribute to this project are invited to contact Lothar Schulte (schulte@ub.edu).

Slides of Lothar's talk are available <u>here</u>.

'Linking our science to the stakeholder needs'

Juan Ballesteros presented initial ideas for linking scientific knowledge about past floods to stakeholder needs. Stakeholders who need flood information for different purposes and in different sectors (e.g. landuse planning in municipalities, farming activities, tourism etc.) can benefit from available paleoflood information. However, communication of flood information to stakeholders is challenging due to various barriers and scientific language (e.g. data presentation, data uncertainties etc.). The direct engagement of stakeholders in paleoflood projects, however, may largely increase the benefit of available paleoflood information. For an improved project design (potentially codesigned projects by scientists and stakeholders), different activities have been proposed e.g. mapping relevant stakeholders, identifying existing stakeholder networks (e.g. city networks), designing event (formats) or workshop to improve communication. People who are interested to contribute, are invited to contact Juan (Juan.Ballesteros@unige.ch).

4. Discussions on future strategy and activities

Three activities have been identified during the meeting. They all aim to create a collaboration between the members of the working group.

1. White paper

Discussions with FWG members revealed that i) the strategy and related activities of the working group are not clear enough and ii) that many researchers would be more involved in the group activities but do not know how they can make it happen. Then, we propose to involve all members in the writing of a 'white paper' to jointly identify i) the key goals of the FWG, ii) the actions we should follow to reach these goals and iii) the persons in charge of the different sections/goals. This paper will be first an internal document to better structure the working group and then a document to communicate externally on what is the intention of the working group. Examples of white papers for other groups can be found below:

ECRA, on Sea Level Change: hereWCRP, on Climate Extremes: here

A paper structure was proposed during the meeting and leaders for starting writing the actions (incl. deadlines) have been proposed. Initial abstracts will be drafted by the leaders (ca. one page in lenght). Further refinements on structure and content will be open to all interested members of the FWG. The goal is to finalize this document in autumn. This document could be used in a later stage as a proposal to get network funding.

2. Review paper

We proposed the production of a review paper in a short-term perspective as a product of the whole FWG that is considered as a unique consortium of experts in the field of 'flood hydrology of the past'. This paper signed up by the "PAGES Floods Consortium" would describe all the different archives that can be used to provide information on past flood occurrence and magnitude (with details about the historical development of the archive studies, the type of data that can be achieved, the methodological limitations and perspectives). This would be a non-technical paper to reach a broad audience, e.g. hydrologists, engineers and risk managers but also from advanced students to researchers). The proposed format and journal is an 'overview' article in the new Wiley Interdisciplinary Reviews (WIREs): Water. We will work in the next weeks on the paper structure and will come back to you.

3. Short communication for publication in e.g. Water Resources Research

Gerardo Benito and Victor Baker will be preparing a "Commentary" for the American Geophysical Union journal - <u>Water Resources Research</u>. This is a widely read and cited journal that reaches the world-wide hydrology community, including academic, government, and private-sector professionals. Our purpose will be to impress upon this larger community the scientific and societal relevance of paleoflood information, including recent developments in the field and particular application to problems of future climatic change. This paper will update an earlier paper (Baker et al., 2006), and it will emphasize the role of the new PAGES working group. Members of the FWG will be invited to contribute.

Reference: Baker V., Webb R.H. and Kyle House P. (2002) The scientific and societal value of paleoflood hydrology. In: Ancient Floods, Modem Hazards: Principles and Applications of Paleoflood Hydrology Water Science and Application Volume 5, pages 1-19.

5. Next meetings of the FWG

Place, date and format of the next meeting have been briefly discussed. One option is to organize an event beside the next EGU. This will be further discussed in the next months in regard to the advances in the different projects. Beside this on-site event, online meetings will be organized by the project leaders to progress on the different projects.