

Interactive comment on “Quantitative historical hydrology in Europe” by G. Benito et al.

G. Benito et al.

benito@mncn.csic.es

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We appreciate very much the reviewer comments and particularly the suggested improvements to the English use of the manuscript. We have changed the text accordingly.

Regarding some of the specific recommendations:

1.- We have extended the text regarding the synergies of documentary floods with other methods of palaeoflood studies, namely lichenometry and dendro-geomorphology. The following paragraph was included.

In non-varved lake systems, palaeoflood stratigraphy can be compared to historically documented flood records, as a mean to improve the age-depth model of the stratigraphic log (Schillereff et al., 2014). Another group of palaeoflood techniques suitable

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to combine with documentary sources are those based on botanical and ecological evidences (Bodoque et al., 2014). The presence of lichens on boulders in river channels can be used to date the flood responsible of their transport, once a lichenometric growth curve for the lichen species for the area of study has been established (Foulds et al., 2014). Dendrogeomorphology uses information from flood damages in trees and bushes, dating floods at annual scale (Bodoque et al., 2014). Commonly, these palaeoflood methods are most suitable for mountain streams environments, where documentary sources provide a mean to establish the age biases to minimize errors during the calibration process

2.- We have added a new sentence regarding the selection of the discharge threshold to be use in the FFA.

It is recommended to select a sample above a high discharge threshold in order to produce an exhaustive and homogeneous set, avoiding bias in relation with archive availability or flood risk exposure (Barriendos et al., 2003). Macdonald et al. (2014) analysed the sensitivity of the application of different discharge thresholds, showing that the selection of a high discharge threshold decreased the uncertainty for high magnitude flood estimation.

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