

Session Introduction: Global correlation on late Quaternary paleovalley systems

INQUA 2015 NAGOYA – SESSION CMP14

January 2015

K.M. Cohen, A. Amorosi, F.S. Busschers, K. Hori, S. Tanabe

All around the world, paleovalley systems have trapped great amounts of deposits and hold a quite complete Late Quaternary record. Uniquely, these records directly interlink the shelf marine with the hinterland fluvial realms. In the vicinity of ice sheets, in similar ways, paleovalleys interlink the glacial record with the non-glacial domain. Considerable advances have been made in their study over the past decades, and many case well-dated and well-mapped case studies are now available. The means for comparison of records from older glacials and interglacials with that of the youngest ones have also improved. To further improve our understanding of the paleovalley systems, it is timely to start to intercompare the many cases at the new obtained resolutions. This is a correlation exercise in which we can make use of our established chronologies, sea-level histories, sedimentary evolution, human impact history and what is more. This is not just needed for the paleovalley system research itself, but also to unlock the records from the lower reaches of rivers and of deltas, estuaries and shelf areas for global research questions (climate responses and feedbacks, sediment fluxes, chronostratigraphy).

This session introduction will give a quick tour around a series of events holding large correlation potential, via downstream and via upstream controls. E.g. the recording of transgression and high stand in the Last Interglacial and the Holocene, of regressions and low stands in the Last Glacial and earlier, of sustained climatic amelioration and deterioration at Milanković-scales, of shorter-lived events. Some of these correlation targets will work better than others, and case-to-case differences in performance are expected, as the presentations and discussions in the further session hopefully will show.