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The temporal and spatial characteristics of river accumulation events from LIA(Little Ice Age) in Taiwan

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When the global change became an important issue, the frequency and scale of extreme events and their impacts have got more and more attentions. Since the magnitude 7.3 Chi-Chi earthquake in 1999, the Typhoon Morakot pushes everyone's attention to a highest summit. However, the Typhoon Morakot only attacked significantly the flood plain that not affected by flood roughly since 50 to 100 years ago. Above the modern river bed, there are many terraces directly formed by the valley filled of debris flow and hyperconcentrated flood flow sediments and the subsequently river re-incised. These terraces are often higher than present riverbed by up to 20 to 30 meters, and the ages of terrace deposits are usually only several hundred years. The importance of these terraces including [U+FF1A]
1. The scales of past extreme events were even larger than the events caused by Typhoon Morakot, or there were several specific periods in the past, the extreme events had a higher frequency.
2. In mountain area, the terraces formed by these extreme events are the important land use area, and have higher land use risk.
Therefore, this study investigate the lowest level of river terraces formed by the large-scale river filled and renewed downcutting since Little Ice Age, which is more or less about the time since 600 years to 100 years before present. Then the temporal and spatial distribution of the extreme events and their environmental implications could be analyzed and discussed. The results will be the basis for the hazard analysis or the landuse risk assessment.