Geophysical Research Abstracts
Vol. 15, EGU2013-1708, 2013
EGU General Assembly 2013

Pre-Columbian Agriculture: Construction history of raised fields in Bermeo, in the Bolivian Lowlands

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Since the beginning of the 1960s, research in the Amazon has revealed that in Pre-Columbian times, landscapes that were viewed as challenging living environments were nevertheless altered in several ways. Raised fields agriculture is one of the most impressive phenomena that can be found in South-eastern Amazonia.
Pre-Columbian raised fields are earth platforms of differing shape and dimension that are elevated above the landscape's natural surface. The Llanos de Moxos, situated in the Bolivian Lowlands is one of the areas with the highest density of raised fields. In spite of the high interest in raised field agriculture, very few field-based investigations have been performed. As a result, there remains little explanation as to how they were constructed, managed or for what time frame they were in use.
Recently, more detailed investigations have been performed on raised fields located in the indigenous community of Bermeo, in the vicinity of San Ignacio de Moxos. Combined data from fieldwork and laboratory analysis including particle size distribution, thin section micromorphology and radiocarbon analyses as well as optically stimulated luminescence analysis has given an insight into the history of their construction.
Applied to the Bolivian Lowlands, the current study provides for the first time data showing aspects of the Pre-Columbian management of the raised fields, and a chronological sequence of utilization and abandonment of these fields. Radiocarbon dating has shown that the raised fields had been in use since as early as 900 AD. Two distinct paleosols identified in the field sequence point to the existence of two separate prolonged soil formation periods. The paleosols are characterized by initial stages of Bt-horizons. Each soil sequence indicates therefore a particular stable period of the field during which no new earth was heaped up. This suggests that contrary to the well supported theory that raised fields were managed through continuous accumulation of sediments transported from the canal to the field, the raised fields were more likely built during large, single construction events.