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**Occurrence of 1 ka-old corals on a raised marine terrace in west Luzon, Philippines: Evidence of a prehistoric high-energy wave event in Southeast Asia?**

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Recent investigations on the raised coral terraces fringing west Luzon Island, Philippines have provided new insights on Late Quaternary processes along the Manila subduction zone. Regional sea level changes alongside accumulated uplift from aseismic and seismic processes along the Manila Trench and nearby faults may have contributed to the emergence of raised coral platforms and marine notches. Select areas in west Luzon have a good preservation of emerged sea level indicators, allowing us to examine their age and height distribution across Luzon Island. New geomorphic data and <sup>230</sup>Th dating of fossil corals reveal variable uplift that is probably associated with upper plate structures across the fore arc basin. In Badoc Island, offshore west of Luzon mainland, young fossil corals, dated 1 ka, were found on top of a ~ 4 m-high sand-covered terrace step. Older (~7.5 ky to ~6 ky) fossil corals, meanwhile, are collected from the lower terrace of Badoc Island as well as other localities in west Luzon coast and are possibly related to the mid-Holocene marine transgression. Whether the young corals are in situ or transported, the occurrence of a prehistoric strong wave event is hereby inferred. To constrain our model, we will employ numerical simulations to characterize the high-energy waves that affected west Luzon about 1 ka. These initial models will contribute to our understanding and assessment of coastal hazards at the eastern border of Southeast Asia.

