Holocene sea-level observation obtained from Samar island, Philippines

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Holocene relative sea level observation obtained from the sites located far-away from the former ice sheets (far-field) are useful in two ways. One of them is to reconstruct the melting history of the Antarctic ice sheet and the other is to constrain the physical properties of the solid earth. We studied geomorphologic sea-level indicators around the Samar island in the mid Philippines and found 3 distinct tidal notches extensively distributed around the island. 40 locations around the island were surveyed and detailed studied were conducted at the 3 sites; Buyoyowon, Tinabanan, and Guimitin located from east (Pacific coast) to the west (Samar coast). Radiocarbon dating for coral and bored shells revealed the age of the formation of notches and the highest, middle and the lowest notches were formed respectively 5.5-4.0 ka BP, 7.5-6 ka BP, and 2.5-2.0 ka BP. Westward tilting was observed from the height and age of these notches are attributed as the activities of the Philippines fault. The timing of the highest reach of the sea-level in Samar during the Holocene was 5.5-4.0 ka BP and is consistent from other observation around the Philippines. We therefore report the timing of the ceasing of the major postglacial melting of the global ice sheets was 5.5-4 ka BP.