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Geomorphic evidence for large subduction zone earthquakes along the Manila and Philippine trenches

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Potential of large subduction zone mega-thrust earthquakes along the Manila and Philippine trenches is poorly known. We mapped raised abrasion platforms and coral reefs near Bolinao Municipality, Pangasinan Province, on the western coast of the Luzon Island facing to the Manila trench and near Manay Municipality, Davao Oriental Province, on the eastern coast of the Mindanao Island facing to the Philippine trench. We identified several terraces as high as 10 m above mean seal level, which probably record coseismic uplift of the coastal area during large subduction zone earthquakes. Fossil corals on the terraces were sampled and are being dated to construct history of large seismic events along these subduction zones.