



Geomorphology evolution of semi-enclosed embayment in response to human activities

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Coastal embayments, as an important type of coastal system, are undergoing a heavy influence by strong human activities. Tongan Bay is a typical semi-enclosed embayment adjacent to Xiamen Island, southeast China. Due to construction of the Gaoji Seawall, the Tongan Bay have occurred a heavy accretion from 1950s', and the hydrodynamic processes were changed obviously, and the fine fraction of the sediment increased. Since 2000, the Tongan Bay was experienced a series of complicated rearrangement, and hydrodynamic processes were changed again, and associated suspended sediment and bedload transport patterns were also altered, and then the new sediment distribution pattern and geomorphology structure were established correspondingly. The evolution of geomorphology in Tongan Bay is experiencing the adjustment from naturally developed pattern to artificial geomorphology types. After the complicated rearrangement, it will be fashioned into a set of new geomorphology pattern which is the net effects of physical hydrodynamic processes and human activities.