



Assessment of wind and wave climate in the Shenzhen coastal zone of the South China Sea

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Wind and wave climate in the Shenzhen coastal zone adjacent to Hong Kong in the south China Sea have been studied by means of observational data from six buoys. These are the first available measurements of wind and wave parameters from buoys for the period 2014-2016 covering the area of the study, including Dapeng Bay and Daya Bay, and the area between them, as well as Shenzhen Bay. Water depths at buoy locations are very shallow, ranging from 3 to 22 m. Results show that annual mean wind speed in the region varied between 3.1 and 4.1 m/s, leading to mean wind power values of between 37 and 94 Wm⁻². Significant wave heights and wave powers at the buoy locations were very small over the period 2014-2016, with annual mean values ranging between 0.1 and 0.6 m, and 0.03 and 1.25 Wm⁻¹, respectively. Monthly and seasonal variability of wave heights and wave powers differ between buoys, as do wind and wave directions, which do not match with typical monsoon characteristics in the South China Sea.