

Changes in shorebird use of the Maroochy River estuary, Sunshine Coast, Queensland over 25 years

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The lower Maroochy River estuary is surrounded by densely populated areas of Maroochydhore, a rapidly growing population centre on the Sunshine Coast in south-east Queensland, Australia. To inform management of shorebirds, we conducted surveys of shorebird use of the estuary over three seasons 2020/21 to 2022/23 and reviewed long-term monitoring data of the Queensland Wader Study Group to analyse long-term trends in shorebird numbers in relation to the changes in the estuary. The approximately 87 ha of tidal flats in the lower estuary supported an average of 114.4 ± 39.4 (maximum of 173) migratory shorebirds and an average of 9.9 ± 5.1 (maximum of 16) resident shorebirds at low tide during eight summer-season surveys in 2020/21 to 2022/23. Only two of five known roost sites were used by shorebirds during seven high tide surveys in 2020/21 to 2022/23, with 40 to 109 migratory shorebirds and 2 to 12 resident shorebirds present. Since 1997, roosting abundance has declined significantly for four species, increased significantly for two species, with two species showing no trend. Declines were at least partly related to increased human disturbance that caused the abandonment of a previously preferred roost site. Since 2011, abundance at low tide has declined significantly for four species, with four species showing no trend.

Keywords: Conservation, disturbance, East Asian–Australasian Flyway, shorebirds