

Water surface behaviour of Irrawaddy dolphin *Orcaella brevirostris* (Owen in Gray, 1866) and influencing factors in the Bay of Brunei, Brunei Darussalam

ABSTRACT

There is limited information on Irrawaddy dolphins (*Orcaella brevirostris*) in the Bay of Brunei, Brunei Darussalam. This research was carried out from 2016 to 2018 to determine the water surface behaviour of Irrawaddy dolphins in the bay, the relationship between behaviour and abiotic factors and the number of individuals displaying the behaviour. Behavioural categories, i.e., feeding, socializing, and travelling in groups or individually, and water parameters were documented during boat-based line transect surveys. "Feeding" (n = 188) behaviour was the dominant activity exhibited by the dolphins. The chi-square test (χ^2) shows that the frequency of feeding, socializing, and travelling to the water depth range is significantly high (p-value = 0.03). Forty-six percent (46%) of all behavioural categories occurred at depths 1.00–5.99 m. The number of individuals displaying "feeding" behaviour has a weak positive relationship with depth (p-value = 0.07), turbidity (p-value = 0.7), sea surface temperature (p-value = 0.9) and salinity (p-value = 0.9). This study may serve as a baseline for future research. It can help in planning conservation projects and management for Irrawaddy dolphins in the Bay of Brunei, Brunei Darussalam.