

## Seasonal variation of the distribution and abundance of blue whales (*Balaenoptera musculus*) in two sensitive habitats in Sri Lanka

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Coastal waters of Sri Lanka have been identified as one of the blue whale (*Balaenoptera musculus*) hot spots in the world. The high abundance and distribution of the blue whales were recorded in the southern tip of Sri Lanka, where they aggregate for feeding just by one of the busiest shipping lanes connecting East and West, causing a heavy annual mortality rate. In order to conserve this natural wonder, a properly planned management and conservation programme has been identified as an utmost importance. To facilitate that, basic knowledge on the distribution, abundance, population size, seasonality, and the environmental parameters influencing the above factors are very essential. Two 230 km long dedicated visual transect surveys were completed for the Southwest (Tangalle to Galle) coastal region (2015 Inter-monsoon - 2016 Southwest monsoon) and one survey for East coastal region from Pulmudei to Sampur (2016 Northeast monsoon) covering 2400 km<sup>2</sup>. Eight conductivity, temperature, depth profiles were done along the mid points of each transect line with a 10 km distance in between. The thermocline of both seasons of the Southwest and Northeast coasts lies between 70-80 m (23-24 °C) and below 120 m respectively. The highest chlorophyll-*a* range, 1-2 mg/l above thermocline revealed the depth of the highest primary productivity in this area. The highest number of blue whale sightings during both Southwest monsoon and Inter-monsoon period was recorded close to the continental shelf, off Mirissa area exactly on the dense shipping lane, while in Northeast coast, it was observed close to the Mahaweli river mouth during Northeast monsoon. Average blue whale density of the Southwest coast is 0.024 indivi. km<sup>-2</sup> which is smaller than 0.0670 indivi. km<sup>-2</sup>, that of Northeast coast. But the highest blue whale mortalities were observed in the Southwest coast.

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