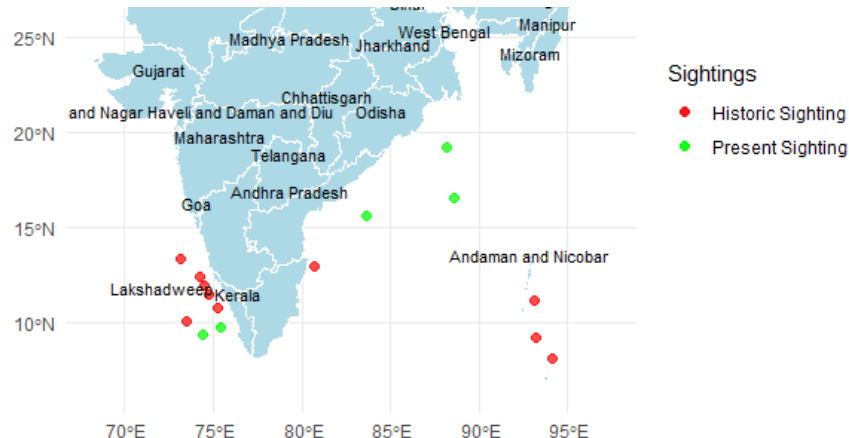


A brief note on the mass sightings of the Risso's dolphin in the Indian EEZ

Grampus griseus (Cuvier, 1812), commonly known as Risso's dolphin, is the only known species in the genus of *Grampus* belonging to the family Delphinidae. They are distributed in the tropical and temperate regions of the Atlantic, Pacific,

and Indian Oceans. (Dohl *et al.* 1983; Palka 2006; Jefferson *et al.* 2014). The species can be found in habitats ranging from steeply sloped bottoms close to the outer edge of the continental shelf to open oceanic areas (Kruse 1989;

Jefferson *et al.* 1993; Amano 2009). IUCN has listed this species as least concern in the Red List of Threatened Species (IUCN 2018), and in India, it is listed under Schedule-1 of the Wild Life (Protection) Act, 1972. Risso's dolphin is identified by their peculiar features such as a robust blunt square shaped head with a broad melon without distinct beaks, upwardly sloped mouthlines, and presence of vertical crease on the front of the melon, long pointed recurved flippers, and tall moderately falcate dorsal fin (Ratheesh Kumar *et al.*, 2022). Historical sightings of Risso's dolphins in the Indian EEZ were reported by Alling 1986, Vivekanandan & Jeyabaskaran 2012, and the Marine Mammal Research and Conservation Network of India database. These reports reveal that the occurrence of this species is mainly confined to the Arabian Sea and near the Andaman and Nicobar Islands. The consolidated stranding report by Jayasankar *et al.*, 2022 accounts for



Historical and present sighting records of Risso's dolphin in the Indian EEZ



Risso's dolphin sighted off West Bengal on 25th October 2021

a total of 8 individuals of the species stranded in the eastern coastal states of India. The significant gap in our knowledge of their distribution in the Western Bay of Bengal indicates a shortfall of survey efforts in this region. In this report, we provide detailed information on recent sighting events of Risso's dolphins, which will contribute to understanding the extended distribution of this species in the Indian EEZ. Five sighting events of Risso's dolphin with a total of 229 individuals, were observed in the marine mammal survey

conducted by ICAR-CMFRI in Indian EEZ during 2021. The average group size was approximately 45, greater than the global average (30) of this species (Kruse *et al.*, 1999) and all sightings were observed in depth over 1300 m. Sixty-four numbers of Risso's dolphins (*Grampus griseus*) were observed during a marine mammal survey in FSI Lavanika, with two consecutive sightings on 23rd and 24th February 2021 in the Arabian Sea. The individuals were sighted off Kerala (9.749183, 75.446317 and 9.360512, 74.3797) at a distance

range of 400 to 500 m from the vessel, both at the starboard and port side positions, at a depth range of 1360-2600 m. The surface water temperature at the locations of the sightings was recorded as 29°C and 31°C, while the salinity remained constant at 36 ppt for both sighting events. The sea state was calm-ripple, and the weather matched with a Beaufort scale reading of one. During the marine mammal survey conducted in FSI Matsya Shikhari on 19th and 25th August 2021 in the Bay of Bengal, two sighting events of Risso's dolphins were encountered during an offshore voyage off the coast of Andhra Pradesh. A total of 110 individuals were observed (16.5816, 88.56, and 15.64, 83.69) at distances ranging from 50 to 600 meters from the vessel, on both the port side and starboard positions, at depths ranging from 1610 to 3175 meters. The surface water temperatures at the sighting locations were recorded as 29.3°C and 29°C respectively, with a salinity range of 35-36 ppt. The sea state during the sightings varied from moderate to rough, and the weather conditions matched a Beaufort scale reading of four to five. Another mass sighting of Risso's dolphins was observed during a Marine Mammal survey aboard the FSI MFV Shikhari on 25th October, 2021, in the Northern Bay of Bengal. A large pod consisting of approximately 55 individuals was spotted in West Bengal (19.250277, 88.200277), at a distance range of 400 to 500 meters from the vessel. The dolphins were observed within an angular range of zero to 360° from the bow of the vessel, at a depth of 1760 meters. The surface water temperature at the sighting location was recorded as 28.5° C, with a salinity of 30 ppt. The sea state was slight, and the weather conditions corresponded to a Beaufort scale reading of three.

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