**APPENDIX S3** Data sources and references used to obtain modern sperm whale occurrence records and survey effort

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| --- | --- | --- | --- | --- | --- |
| Source | Description | General area of survey | Timeframe | Number of sperm whale records | Sampling effort available? |
| Census of Marine Life Yankee Whaler database (Smith et al. 2012). | Distribution of right whales, humpback whales, and sperm whales derived from logbook records of American whaling ships. | Opportunistic data from Indian Ocean | 1792 - 1912 | 601 | No |
| REMMOA: Census of marine mammals and other pelagic megafauna by aerial survey (Mannocci et al. 2013) | Aerial transect of six survey blocks that were selected based on ecosystemic and logistical grounds. | Southwest Indian Ocean | Austral summer of  2009 - 2010 | 46 | Yes |
| Ocean Alliance (Wise et al. 2009, de Vos et al. 2012) | Collected cetacean identifications along established route through visual and acoustic observation from research vessel during daylight hours. | Isolated data from West Indian Ocean | 2002 - 2004 | 96 | Yes |
| MRAG (SFPO)  BIOT Patrol | Opportunistic visual data collection along patrol route during different time frames. | Chagos Archipelago | 2015 - 2019 | 1 | No |
| NOAA (National Oceanic and Atmospheric Administration; Ballance & Pitman 1998, Ballance 1996, 2001) | Collected visual data on cetacean distribution and abundance using line transect methodology. | West Indian Ocean | 1995 | 102 | Yes |
| De Boer (De Boer 2000) | Collected cetacean identifications along established route through visual observation from research vessel during daylight hours. | Mauritius | 1999 | 2 | No |

Ballance LT, R L Pitman, Reilly SB, Force MP. 1996. Report of a Cetacean, Seabird, Marine Turtle, and Flying Fish Survey of the Western Tropical Indian Ocean Aboard, The Research Vessel Malcolm Baldridge, March 21-July, 1995. NOAA Technical Memorandum NMFS. NOAA

Ballance LT, Anderson RC, Pitman RL, Stafford KM. 2001. Cetacean sightings around the Republic of the Maldives, April 1998. Journal of Cetacean Resources and Management.

Ballance LT, Pitman RL. 1998. Cetaceans of the Western Tropical Indian Ocean: Distribution, Relative Abundance, and Comparisons with Cetacean Communities of two other Tropical Ecosystems. Marine Mammal Science 14:429–459.

De Boer MN. 2000. A note on cetacean observations in the Indian Ocean Sanctuary and the South China Sea, Mauritius to the Philippines, April 1999. Journal of Cetacean Resources and Management. 2:197–200.

Block BA et al. 2011. Tracking apex marine predator movements in a dynamic ocean. Nature 475:86–90.

de Vos A, Clark R, Johnson C, Johnson G, Kerr I, Payne R, and Madsen P T 2012. Cetacean sightings and acoustic detections in the offshore waters of Sri Lanka: March–June 2003. Journal of Cetacean Resources and Management. 12(2), 185–193.

Wise JP et al. 2009. A global assessment of chromium pollution using sperm whales (Physeter macrocephalus) as an indicator species. Chemosphere 75:1461–1467.