The use of land-based surveys to monitor small cetaceans in the south coast of Portugal

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Introduction

The south of Portugal is an important area for several cetacean species. In the past years cetacean investigation in the Algarve has been conducted by boat-based surveys, including platforms of opportunity (Castro et al., 2020). Here we present a pilot study using land-based surveys to monitor the presence and behaviour of cetaceans in this region (Fig. 1). This method is used globally and allows the collection of various data such as the presence, movement and behaviour of animals without the impact associated with the observer’s presence (Giacoma et al., 2013).

Methodology

Land-based surveys were conducted from a fixed point in Albufeira, at approximately 28.5m of altitude (Fig. 1 & 2). Surveys were conducted from April to November of 2022, with sea state conditions of Beaufort 0–3 and visibility of ≥1 km. During the surveys, ≥2 observers were scanning the water with binoculars and one person collected data.

Results

Sampling effort amounted to a total of 201 hours within 82 days. This resulted in 18 sightings of cetaceans (16 hours), with bottlenose dolphins (Tursiops truncatus) corresponding to 83.3% of the observations, unidentified odontocetes to 11.1% and common dolphins (Delphinus delphis) to 5.6% (Table 1).

Bottlenose dolphins presented:
• Highest encounter rate (0.07);
• Month with most sightings: October;
• Mean group size: 10.1 ± 7.6 (2 – 22, n = 15);
• Predominant behaviour: travelling (40.7% - Fig. 3);
• Average distance from shore: 3.2 km;
• 75.6% of sightings had ≥1 touristic boat present (Fig. 4).

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References
