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# Common dolphin (*Delphinus delphis*) response to boating pressure in the south coast of Portugal

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## INTRODUCTION

The southern region of Portugal, Algarve, is the destination of thousands of tourists every summer and its population triplicates during this period. Consequently, in the coastal zone of the larger cities, the boating pressure rises considerably (**Fig. 1**). At least eight species of cetaceans were reported in these waters, and the most sighted one is the common dolphin (*Delphinus delphis*) (Castro, 2010; Laborde, 2011).

## METHODOLOGY

In the summers of 2010 and 2011 the behaviour of this species upon the presence of vessels was recorded. Observations were carried out, from whale watching boats, in a high-pressure area (Albufeira) and a low-pressure area (Sagres). The response of the group was categorised into three types: approach, indifference and evasion. The behaviour was registered during 2 minutes after the vessel entered within a 300 m radius area around the group.





**Fig.1** Common dolphins surrounded by whale-watching and recreational vessels

## RESULTS

Common dolphins were observed in 514 encounters, 399 in Albufeira and 115 in Sagres. In 62% of the encounters, either positive (approach) or negative (evasion) interaction was recorded.. The number of avoidance behaviours varied over the season, peaking in August which is the month with the greatest anthropogenic pressure (Table I).

**Table.I** Degree of avoidance behaviour displayed by common dolphins Upon the presence of vessels in both studied locations

Avoidance behaviour	 Albufeira		 Sagres
Whole summer	8%		4%
August	12%		5%



**Fig. 2** Six vessels encircling a group of common dolphins. Maximum allowance is three.

## DISCUSSION

The analysis suggests that the animals are somehow disturbed by the vessel traffic and that **interaction behaviour towards the vessels is likely to change in areas with different pressure levels**. These results reinforce the need to increase the authorities' control, since during most of the encounters in high-pressure areas, the number of vessels encircling the groups of dolphins exceeds that allowed by the national law (**Fig. 2**).

## ACKNOWLEDGMENTS

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## REFERENCES

- Castro, J. (2010). Characterization of cetaceans in the south coast of Portugal between Lagos and Cape São Vicente. MSc Thesis, University of Lisbon.
- Laborde, M. I., Gonçalves, J., Verborgh, P., de Stephanis, R. & Castro, J. (2011). "Cetacean research network in the south of Portugal: establishing a low-cost and long-term monitoring programme". 25<sup>th</sup> Conference of the European Cetacean Society, Cadiz.

