

Author's Accepted Manuscript

Estimating the cumulative effects of the nature-based tourism in a coastal dolphin population from southern Kenya

Sergi Pérez-Jorge, Maite Louzao, Daniel Oro, Thalia Pereira, Chloe Corne, Zeno Wijtten, Inês Gomes, John Wambua, Fredrik Christiansen



www.elsevier.com/locate/dsr2

PII: S0967-0645(16)30247-8
DOI: <http://dx.doi.org/10.1016/j.dsr2.2016.08.011>
Reference: DSRII4126

To appear in: *Deep-Sea Research Part II*

Received date: 8 December 2015
Revised date: 22 August 2016
Accepted date: 23 August 2016

Cite this article as: Sergi Pérez-Jorge, Maite Louzao, Daniel Oro, Thalia Pereira, Chloe Corne, Zeno Wijtten, Inês Gomes, John Wambua and Fredrik Christiansen: Estimating the cumulative effects of the nature-based tourism in a coastal dolphin population from southern Kenya, *Deep-Sea Research Part II* <http://dx.doi.org/10.1016/j.dsr2.2016.08.011>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Estimating the cumulative effects of the nature-based tourism in a coastal dolphin population from southern Kenya

Sergi Pérez-Jorge^{a,b,*}, Maite Louzao^c, Daniel Oro^b, Thalia Pereira^a, Chloe Corne^a, Zeno Wijtten^a, Inês Gomes^{a,d}, John Wambua^e, Fredrik Christiansen^f.

^a Global Vision International 7 The Space, Stibitz Road Westlake Business Park Westlake, 7945 Cape Town.

^b Population Ecology Group, IMEDEA (UIB-CSIC) C/ Miquel Marques 21, 07190 Esporles (Balearic Islands) Spain

^c AZTI Fundazioa, Herrera Kaia, Portualdea z/g, Pasaia, Spain.

^d Departamento de Biologia & CESAM, Universidade de Aveiro, Campus Universitario de Santiago, Aveiro, Portugal

^e Kenya Wildlife Service (KWS) P.O.Box 55, Ukunda, 80400, Kenya.

^f Cetacean Research Unit, School of Veterinary and Life Sciences Murdoch University, Murdoch, WA 6150, Australia

*Corresponding author at: Population Ecology Group, IMEDEA (UIB-CSIC) C/ Miquel Marques 21, 07190 Esporles (Balearic Islands) Spain. Tel: +34 646019971

*Correspondence author. E-mail: sergiperezjorge@gmail.com

Abstract

Due to the growth of nature-based tourism worldwide, behavioural studies are needed to assess the impact of this industry on wildlife populations and understand their short-term effect. Tourism impact on dolphin populations remain poorly documented in developing countries. This study investigates the effects of nature-based tourism on the behaviour of the Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) in southern Kenya. We used Markov chain models to estimate transition probabilities between behavioural states in the presence and absence of tourist boats, and assess the overall behavioural budgets. Based on these data and the tourism intensity in the area, we quantified the potential tourist boat disturbance over the period 2006-2013. Our results demonstrated that tourist boat interactions affected dolphins' behavioural budgets, with a significant decrease in the overall amount of time travelling and an increase in diving. The average duration of travelling and resting decreased significantly in the presence of boats. Although the cumulative tourism exposure was not significant for the dolphin population at their current levels, these impacts should be taken into consideration with the potential tourism growth in the area. This is particularly important if tourism reaches periods of high intensity, as we have shown that these periods could have a significant impact for the species, particularly where home-range and core areas are highly overlap by this activity. Understanding the effect of human disturbance variations from previous years may help to predict the consequences on dolphin populations, towards achieving a more ecological and economic sustainability of the activity.

Keywords: tourism exposure, marine mammals, behavioural disturbance, Kenya

1 Introduction

Over the last decades, the impact of human disturbance on wildlife populations has increased worldwide due to the growing of nature-based tourism, which involves tours to national parks and wilderness areas where a major percentage of the world's biodiversity is concentrated (Balmford et al., 2009; Olson et al., 2001). Consequently, human-wildlife interactions are

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات