#### Ocean & Coastal Management 142 (2017) 173-185



Contents lists available at ScienceDirect

### Ocean & Coastal Management

journal homepage: www.elsevier.com/locate/ocecoaman

## Evaluation of the scenic value of 100 beaches in Cuba: Implications for coastal tourism management





G. Anfuso <sup>a, \*</sup>, A.T. Williams <sup>b, c</sup>, G. Casas Martínez <sup>d</sup>, C.M. Botero <sup>e</sup>, J.A. Cabrera Hernández <sup>f</sup>, E. Pranzini <sup>g</sup>

<sup>a</sup> Departamento de Ciencias de la Terra, Universidad de Cádiz, España

<sup>b</sup> Univ. Wales, Trinity St David, Swansea, Wales, UK

<sup>c</sup> CICS.NOVA. FCSH.UN., Portugal

<sup>d</sup> Centro de Estudios y Servicios Ambientales, Villa Clara, Cuba

<sup>e</sup> Grupo de Investigación en Sistemas Costeros, Playascol Corporation, and Grupo GEESA, Universidad de La Costa, Colombia

<sup>f</sup> Centro de Estudios de Medio ambiente y Energía, Universidad de Matanzas, Cuba

<sup>g</sup> Dipartimento di Scienze della Terra, Università di Firenze, Italia

#### ARTICLE INFO

Article history: Received 15 September 2016 Received in revised form 25 March 2017 Accepted 31 March 2017

Keywords: Coastal scenic evaluation Physical and human parameters Fuzzy Logic Assessment (FLA) Tourism

#### ABSTRACT

This paper provides coastal scenic values of 100 sites along coastal Cuba by the use of a weighted, fuzzy logic, based checklist containing 26 physical/human factors. Sites were categorized into five classes from Class I, top grade scenery, to Class V, poor scenery. Seven beaches belonged to Class I, *e.g.* rural areas with a low impact of human activities and high scores of natural parameters. Most Class II beaches were located at international resort areas in cays having white coral sand beaches, turquoise water and vigorous vegetation together with a low impact of tourist developments because of appropriate location and design. Classes III, IV and V presented a wide distribution and their lower scores were linked to a poor environmental setting. Results allow for improvements to beach management plans to be formulated for current international tourist destinations (in cays) and other potentially attractive coastal areas at new developing tourist destinations.

© 2017 Elsevier Ltd. All rights reserved.

#### 1. Introduction

In order to benefit from coastal tourist demand (Clark, 1996; Houston, 2013), many tourism oriented countries, *e.g.* around the Mediterranean, the Caribbean, etc., have developed proactive growth policies along the coastal area (Klein et al., 2004; Benoit and Comeau, 2005). The "3 S" market (Dodds and Kelman, 2008) achieves great importance in the Caribbean region which recorded 23.9 million visitors in 2015, with Cuba increasing by 5% from 2013 to 2014 and 18% from 2014 to 2015, giving a total of 3491 million visitors (UNWTO, 2015; 2016).

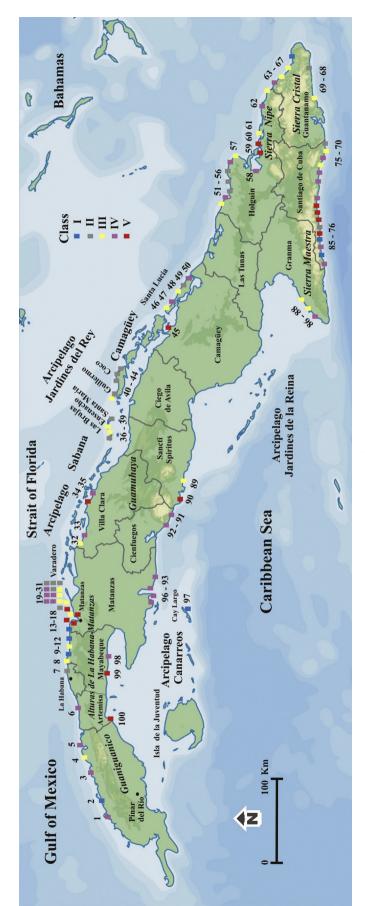
Most tourists, especially at good weather destinations, are interested in the bathing area (Botero et al., 2013; Williams, 2011; Williams et al., 2016) and numerous questionnaire surveys have showed that five parameters have been of prime importance with respect to beach choice (Williams and Micallef, 2009; Williams,

\* Corresponding author. *E-mail address:* giorgio.anfuso@uca.es (G. Anfuso). 2011): "safety, facilities, water quality, no litter and scenery" and the latter is the focus of this paper.

In a first study, carried out in June 2012 by Anfuso et al. (2014), 43 beach sites located in north-western Cuba were classified from a scenic viewpoint. In a following investigation, carried out in May and June 2015, 57 additional beaches were classified along the central and eastern coast of Cuba. Results from the previously mentioned investigations (*i.e.* 2012 and 2015) have been incorporated into this paper (Fig. 1, Table 1), which provides a general and complete scenic assessment view of the Cuban coast so allowing considerations for coastal zone management.

#### 2. Study area

The Cuban Archipelago, located in the Caribbean Region (Fig. 1), contains the Island of Cuba, the Isla de la Juventud (Island of Youth) and more than 1200 smaller islands and cays, with a total extension of 110,922 km<sup>2</sup>. Three main chains of cays and reef crests are developed in shallow waters of the submarine plains of the Cuban insular shelf; Archipelago Jardines de la Reina and Archipelago





# دريافت فورى 🛶 متن كامل مقاله

- 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
- ISIArticles مرجع مقالات تخصصی ایران