Tourism Management 35 (2013) 41–58

Contents lists available at SciVerse ScienceDirect

Tourism Management

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

Assessing and managing scenery of the Caribbean Coast of Colombia

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HIGHLIGHTS

- Coastal scenery achieves great importance in the Colombian Caribbean littoral.
- Scenic assessment of 135 sites by means of 26 physical and human parameters.
- The scenic beauty was categorised from top (Class 1) to poor scenery (Class 5).
- 55% of coastal areas in Classes 1 and 2, 18% Class 3 and 47% Classes 4 and 5.
- Upgrade human parameters eliminating litter, sewage evidences, vegetation debris.

ARTICLE INFO

Article history:
Received 15 December 2011
Accepted 18 May 2012

Keywords:
Littoral
Coastal tourism
Scenery assessment
Physical and human parameters
Fuzzy logic
Colombia

ABSTRACT

This study provides the coastal scenery assessment of 135 sites along the Colombian Caribbean littoral by analysing 26 physical and human factors. Sites were categorised into five classes from Class 1, top grade scenery, to Class 5, poor scenery. Fifty five percent of the investigated coastal areas were included in Classes 1 and 2, 18% belonged to Class 3 and 47% of the sites fall into Classes 4 and 5. Classification of analysed sites depends on the geological setting and the degree of human occupation. Classes 1 and 2 sites are located in natural protected areas in La Guajira and Magdalena departments. Low classification recorded at Classes 3, 4 and 5 corresponds to a progressive decrease of both natural and (especially) human parameters. Concerning coastal management issues, emphasis should be given to the upgrading of human parameters eliminating litter and sewage evidences, vegetation debris and enhancing beach nourishment works.

1. Introduction

This paper provides a scenic assessment of 135 sites along the Colombian Caribbean coast (Fig. 1, Table 1), which used fuzzy logic analysis and parameter weighting matrices in order to overcome subjectivity and quantifying uncertainties (Ergin, Karaesmen, Micallef, & Williams, 2004). Location and characteristics of all investigated sites are indicated in Table 1 but unfortunately, it was not possible to present all sites in Fig. 1 due to space considerations.

The work deals with the main factors relating to an innovative scenic assessment methodology applied to a tropical area in a developing country whose intrinsic climatic characteristics and particular physical context, affect and control some of the natural factors considered in the classification and will result in a major thrust for coastal tourism. The technique opens new perspectives for analysis of the potential for coastal tourism development in natural areas and for scenic quality improvement of current tourist-developed areas.

1.1. Travel and tourism

This is the world's biggest industry (Klein, Osleeb, & Viola, 2004; World Tourism Organization WTO, 2001). In 2006, global tourism was worth US$733 billion, employed 8% of the global workforce and estimates were for 1.6 billion international tourists by 2020 (United Nations World Tourism Organization UNWT, 2008). Travel and Tourism worldwide, is expected to grow at 4.0% per year over the next ten years and it is one of the largest growth industries in the world (UNWT, 2008). Beaches are considered as a major player in this market (Houston, 2008; Lencek & Bosker, 1998). To benefit from this dynamic, many tourism oriented countries, e.g. in the

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doi:10.1016/j.tourman.2012.05.008

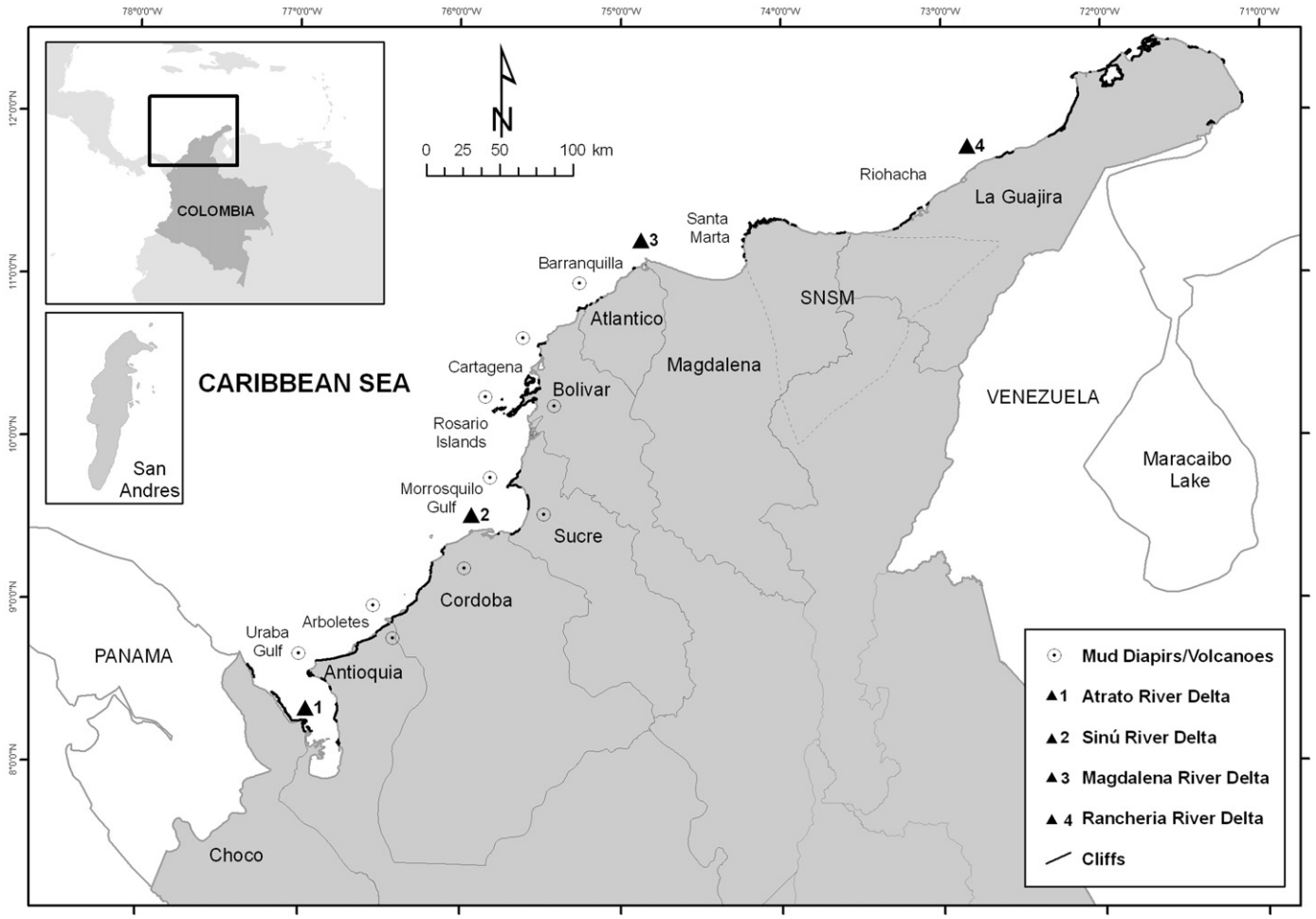

Fig. 1. Study area with indication of cliffed sectors and delta and mud volcanoes location.

Mediterranean, utilise proactive growth policies along the coastal strip (Benoit & Comeau, 2005). Highly seasonal tourism (three summer months and concentrated along the coast) is the most important activity in the Mediterranean coastal zone, in which visitors were estimated as some 250 millions (international and domestic) in 2008 and this number will increase substantially, in line with a forecasted 368 million tourists by 2020 (Unep & Unwto, 2008). In detail, in Spain, France, Italy, Greece and Turkey, tourism receipts account for some 5% of the gross domestic product (UNWTO, 2006), these countries accounting for '*the most significant flow of tourists…. a sun, sea and sand (3S) market*' (Doods & Kelman, 2008, p. 58).

Even in the UK, a '*non sun, sea and sand market*', more than 40% of all tourism is motivated by coastal visits and brings in £110 billion, providing employment for >1.3 million people (5% of all employed people; Netherlands Development Organisation, SNV, 2009). Travel and tourism in the USA generate an estimated US$746 billion per annum, providing 10% of the gross domestic product representing the second largest contributing industry (Houston, 1995). The US coastal areas receive annually 180 million recreational visitors, coastal states producing 85% of the national revenue related to tourism (Cicin-Sain & Knecht, 1998; Hughes, 2011). In California, USA, beach visits exceed 567 million/year compared to 286 million to *all* USA National Parks and in the 1995–1999 period brought annual tax revenues from tourism of more than US$14 billion (King, 1999). Along the Caribbean, tourist arrivals have increased five fold, from 166 million in 1970 to 935 million in 2010. Cruise arrivals grew more rapidly over the same period increasing from 1.3 in 1970 to 20 millions in 2010 (Caribean Tourism Organization, 2011). Barbados beaches are worth more than US$13 million to the local economy (Dharmaratne & Braithwaite, 1998). Despite the fact that Colombia has been affected by a number of social, political and security problems that have limited coastal development, actually this country plus Costa Rica, Brazil, Panama and the Dominican Republic accounts for the maximum average revenue per arrival, e.g. 1500 US$/per tourist (UNWTO, 2008). Therefore, beautiful beaches are worth billions of tourist dollars (Clark, 1996).

1.2. What do these tourists want from a coastal tourist location?

The main answer is the bathing area. According to Williams (2011), beach users are essentially interested in 'safety, facilities, water quality, no litter and scenery' and it is the later, as has been shown by studies of e.g. Ergin et al. (2004), that is the focus of this paper. These parameters have been found in surveys of beach users' preferences and priorities in many countries, e.g. Turkey, UK, Malta, Croatia, Portugal, and the USA. The *priority* changes, e.g., in resort areas safety and water quality are dominant; in rural areas bathing, scenery and litter absence are the main criterions: the 'Big Five' virtually dominate all other considerations (Williams, 2011; Williams & Micallef, 2009). Furthermore, surveys in the UK have shown that irrespective of social