

# The commercial images promoting Caribbean mangroves to tourists: Case studies in Jamaica, Guadeloupe and Martinique

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## ABSTRACT

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This paper examines the image used to promote tourism activities in mangroves and how those activities are actually managed and interact with mangroves in Caribbean islands. The study focused on Jamaica (Black River Lower Morass), Guadeloupe (Grand Cul-de-Sac Marin) and Martinique (Bay of Genipa). The communication (arguments and illustrations) used by the local travel agents to attract people in the mangroves were studied and local actors interviewed. Firstly, it was noticeable that communications used ecological characteristics for each studied area, transport modalities together with stereotypes about the “postcard picture” of the environment in the Caribbean. Despite their activities linked to mangrove ecosystems, 62% of operators directly proposed mangrove areas in their promotional literature and 38% used other arguments (sun, snorkeling, food & drinks, among others). Two kinds of illustrations were most used to attract visitors into mangrove areas. On the one hand these forests are displayed as mysterious natural and wild sites and on the other hand as a good place to practice leisure activities and to relax, enjoying the paradisiacal seascape. Secondly, we investigated the actual use of the mangrove by tourism. Mangroves are involved at three levels: physical, temporal and cultural. And for the commercial image which represents the mangrove, the requested resources and interest degree in activities are different. It was concluded that tourism in mangrove areas is presented as a “soft” form of ecotourism, a one day trip which combines the discovery of particular natural sceneries and relaxing activities.

**ADDITIONAL INDEX WORDS:** *communication, ecotourism, coastal management*

## INTRODUCTION

The Caribbean islands are well developed tourist destinations and correspond to the model of the four "S" (Sea, Sand, Sex and Sun), adopted for several decades by many Western tourists (Weaver, 2004), but they also have a rich natural heritage and natural protected areas, although the state of the environment varies greatly from one country to another; Baldwin, (2007). Some Caribbean/Central American countries, are known to emphasize the richness of their natural and cultural features (Conway, 2004), such as Costa Rica and the Dominican Republic, whereas other countries used to, but saw their resources decline over time (Ellison & Farnsworth, 1996).

The mangrove, an inescapable coastal forest ecosystem in the Caribbean, could be an asset for promoting environmental tourism. If the ecosystem has been considered for a long time as an unattractive place by men, its condition is stabilizing around the Caribbean (FAO, 2007).

A quick trip around the world shows that the exploitation of mangroves for tourism is common. Mangroves of the Everglades in Florida have been a mecca for American leisure for many decades. The mangroves in the Delta of Saloum (Senegal) are cited and praised in most brochures of tour operators. In contrast, some emerging destinations offer great places with intact mangroves to visit, using the argument of "ecotourism" to praise the discovery of the site. This is the case of countries like Cameroon, Madagascar and even Guatemala.

This study analyzes the image used to promote tourism activities in three Caribbean countries with mangroves and elaborates how these activities make use of the mangrove goods and services for their operations.

## Study Area

The study sites located in Jamaica, Guadeloupe and Martinique, were selected taking into account the conservation status of mangroves and the tourist activities taking place. The Black River

Lower Morass in Jamaica (18°04'N - 77° 48') is a protected area by the Jamaican Wildlife Protection Act (Forestry Department, 1999), a Ramsar Site since 1997 (5700 ha) and a *Managed Resource Protected Area* (UICN, cat.VI). The Grand Cul-de-Sac Marin in Guadeloupe (16°20'N - 61°35'W) is a French National Park since 1990 (2115 ha) and a Ramsar site since 1993. Finally, the Bay of Genipa in Martinique (14°29'N - 60°58'W) did not have any special conservation status, except normal national environment and conservation laws.

## METHODS

Two supports form the raw material of this research. Firstly, the advertising available to the public by operators and secondly, the interviews conducted with stakeholders involved in activities in mangrove forests.

The study focuses on the elements composing the messages and images presented to stimulate the desire to go into an "unattractive environment" surrounded by a 'postcard' landscape such as many Caribbean destinations often propose. Publicity supports are divided in two groups: web and paper formats advertising made by operators but in all of those the term 'mangrove' appears at least once. For analysis, we used the Jakobson's model of communication (1963), which focuses on the message transmitted, and this was applied to the message transmitted to tourists regarding tourism services in the mangroves.

Semi-directive interviews were held with local stakeholders (*cf.* Kaufmann, 1996), a method integrating both the standard techniques of semi-structured interviews and those of qualitative empirical research, primarily in technical anthropological studies involving informants (Kaufmann, 2007). For each response additional details was asked for, e.g. anecdotes, advice on any particular subject.

## RESULTS

The study identified 31 local operators (from private and public sectors) for the three studied areas. The distribution of actors between the sites is:

- Grand Cul-de-Sac Marin - GCSM (Guadeloupe): 24 operators spread around the communes of Sainte-Rose, Morne-Rouge, Pointe-à-Pitre, Vieux-Bourg, Petit-Canal and Port Louis. The *Conservatoire du Littoral* (France) manages a boardwalk trail in the mangrove of Port Louis.
- Bay of Genipa (Martinique): five operators spread over the municipalities of Trois-Îlets and Ducos (Cocotte Canal).
- Black River Lower Morass - BRLM (Jamaica): There are only two official operators. Many fishermen are also prepared to take tourists into the mangrove swamp on their boats, but official operators were the only people interviewed for this paper.

The study analyzed arguments and illustrations used in communication from paper advertising and operator websites used to attract people toward mangroves.

Results show that 62% of local stakeholders use the mangroves directly as the main message for their business. Out of those using motorized transports, only 31% still use mangroves as the major message to attract tourists, whereas operators proposing non-motorized transports (such as kayaks, sea bikes and trails) all

focused directly on the mangrove in their offer. Thus, the attention to mangroves appears to depend on the means of transportation.

Regarding the use of illustrations, only 23% of operators explicitly use an image of mangrove (mainly *Rhizophora mangle*) as part of advertising, whereas 77% use various illustrations such as the islets with white sandy beaches, palm trees or a turquoise blue seascape. However, in 94% of ads, operators used at least one element directly linked to the ecosystem (for instance wildlife). Only 7% of operators never made use of an image linked to the mangroves (even if they announced it as their main activity, see Figure 1.A)

Forty six percent of the analyzed websites offer a complete section dedicated to the explanation about what a mangrove is, the associated ecosystems, flora and fauna, and special cautions to go there.

## ANALYSIS

### Communicating 'the mangrove forest'

Written messages and illustrations show that the actors highlight the ecological characteristics of each of the mangroves studied, the transport arrangements together with photographs that refer to the 'postcard image' of the Caribbean:

- The wild and mysterious mangrove: As few people know about mangroves, operators are required to give one or two keywords that easily describe the ecosystem such as 'aerial roots', 'jungle', 'Land-Water world,' 'animal refuge', 'impenetrable' and terms with adjectives emphasizing the unknown mangrove: 'mysterious', 'savage', 'another planet', 'unique', etc. The operators in the Bay of Genipa (Martinique) focus on the presence of several channels forming a closed canopy which gives, for instance, a 'sense of total immersion in nature where man is alone.'

For advertising of the Black River Lower Morass, the vocabulary used 'Experience,' 'Lifetime' and 'Jungle' presenting the trip as an unforgettable adventure (see Figure 1.B). But in fact the activity is quiet, so a large public can go into the mangroves. A local operator said that he never used the term 'mangrove' because the majority of the tourists have no idea what a mangrove forest is.

- The mangrove as a background: We see that behind the representation of the mangrove, the messages continues to refer to activities/images from classic seaside tourism. The scuba diving, the resting activities in the 'shade of palm trees' or the local gastronomy are messages that are associated with tourism activities in the mangroves. The mysterious image of the wild mangrove is always accompanied by an element intended to reassure the visitor that other traditional activities will take place as well. The aim is to merge well-known practices by tourists with the adventurous side of the activities.

This is particularly true for the Grand Cul-de-Sac Marin (GCSM) (Guadeloupe), where related activities are numerous and take place in 100% of analyzed reports. The proximity of coral reefs and small "dream" islands close to the mangroves is a major asset that operators show. The mangrove appears to be an added value to the offer, through its tourism potential as bird watching area or below- canopy visits.

In the case of the Black River Lower Morass Jamaica), the official operators explain that the presence of crocodiles is an undeniable asset to the business; the mangrove swamp is considered as the background for the message and constitutes a sort of bonus linked to the crocodile and bird observation.



Figure 1. Mangrove offers in the Grand Cul-de-Sac Marin in Guadeloupe (A) and in the Black River Lower Morass in Jamaica (B). In both cases the mangrove is the main site of the activity, but it is not presented as such in the tourist message. Operators prefer to use classical and well-known pictures of tourism. Photos taken in January 2009 and March 2009, respectively.

### Uses of mangroves in the field

Beyond the communication, operators using mangroves for their activities propose different tourist offers to lead the visitor into mangroves. These offers range from simple kayak rentals (Bay of Genipa and GCSM), over a boardwalk trail with signposts (GCSM), to hiking by motor boat for several hours (BRLM) or even a full day package including picnic, resting, dance lessons and/or scuba diving (GCSM). The actual use of the mangrove by tourism at three levels: **physical**, **temporal** visited and **cultural**, was investigated.

- **Physical**: The mangrove is physically visited during periods of preparation (pier and/or desk building, channel planning, sign planting) and activities (visiting, climbing, fishing, snorkelling, observing). In some cases, access by visitors to the mangrove areas start from a distant point, whereas in other cases, the whole activity from the beginning to the end, takes place within the mangrove ecosystem. In yet other cases, the actors remain completely outside the mangrove forest, or inversely, the interaction is very strong like with kayak hiking (Figure 2). The intensity of the contact with the mangrove depends on the type of transport used. The larger and more powerful the boat, the less is the immersion in the mangroves because the boat is restricted to deep channels. Smaller and shallower boats can get closer to the mangroves or enter into small shallow creeks below the canopy. The impacts will be different, small boats increase the risk of direct damage to trees and fauna but larger motorized boats make a lot of noise, and produce water pollution and waves that may erode the substrate between the aerial roots of the mangrove. A boardwalk built and used by local stakeholders to bring visitors in the mangrove of the Islet Caret in the Grand Cul-de-Sac Marin (Guadeloupe) is another example to promote close contact with mangrove ecosystems (Figure 3).

- **Temporal**: The mangrove is more popular during certain periods of the day, especially in the morning, because of the weather. When the discovery of the mangrove is a part of a bigger program, it is always (87% of the cases) in the morning or during the first part of a trip (except in the case of rentals that last for an hour or two during which the mangrove is the main attraction of the entire activity). The reason, according to some operators, is that people have more motivation in the morning and are more attentive and responsive to cultural activities. Interviewed operators even reported that in the afternoon, visitors are often more relaxed and more tired and therefore less receptive to an educative experience about mangroves (or other natural or cultural topics). Many operators also limit the explanatory judgments in the afternoon when the heat is strongest. The only exception noticed is the birdwatching, where visitors are invited to visit at sunset to observe birds returning to mangrove nesting sites.

- **Cultural**: The interest taken in mangroves varies considerably depending on the activity and on the actors. In some cases, visiting the ecosystem is only one step in a larger circuit, while in other cases it is the main object of an activity. For instance, in hiking with kayaks in the Bay of Genipa of the GCSM, mangroves are the focus of the activity and a French metropolitan or a local guide gives a lot of information about the ecosystem. Some guides in the GCSM propose to visitors at the end of a visit to plant seedlings and samplings of *R. mangle* in the sand to create a future new mangrove area.

Conversely, the mangrove is either a playground or a site of curiosity among many. Several day tours in the GCSM evoke the existence of mangroves when boat visitors, pass close to them. For other operators, mangroves did not arouse particular field interest, in contrast to what was announced in their activity program.



Figure 2. Tourists visiting mangroves with 'sea bikes', a local making, through below-canopy creeklets. Photo taken in the Grand Cul-de-Sac Marin (Guadeloupe) in March 2009.

Another special case is the observation of aquatic and avian fauna. The first motivation of the visitor is to observe wildlife. The best illustration is the observation of crocodiles in the BRLM. Visitors do not go in the mangrove for visiting an entire ecosystem but rather to observe "ferocious" and "dangerous" reptiles which, as reported by locals, are living in a "hostile" environment.

## DISCUSSION

Tourist expectations have changed considerably over the last fifteen years, as seen through the development of hiking, or the (re) discovery of natural and cultural heritage sites. The interest for 'green tourism', and off-road excursions has also increased. Mangroves illustrate the complex relationship between tourism and natural environments.

The most inaccessible sites gradually open to all, and the most "inhospitable" and "repulsive" ecosystems become places for both recreation and discovery. Mangrove ecosystems are examples of this changing process, becoming tourist attractions from natives to travellers.

This is a tourist operation that has developed, structured and organized itself for over a decade. It is difficult to assess the real increase of operators and tourists in mangroves because of the lack of statistics for the studied sites, but all interviewees agreed that there has been an increase of different actors and offers over the past ten years. "*The days seem long ago when engulfing in the mangrove was real 'Adventoursim'*" said Horace Griffith, the oldest guide working in the BRLM. "*In the '60s and '70s, we travelled along the river with strangers for one or more days and we took food, water and weapons, particularly because of crocodiles. Now, the boatloads of tourists travel to the mangrove tirelessly for several hours in search of Bill or John the crocodile*", he says.

Results show that it is no longer necessary to be an adventurer or in good health to venture into these swampy areas which until recently were considered as inhospitable. The investigation shows that the supply has diversified in parallel with the changing expectations and tourism practices, as well as conservation efforts. However, not documented in these sites, is



Figure 3. Boardwalk built and used by local stakeholders to bring visitors in the mangrove of the Islet Caret in the Grand Cul-de-Sac Marin (Guadeloupe). This small mangrove is dominated by *Rhizophora mangle*. Photo taken by in March 2009.

the extent to which, for instance, the planting of saplings is organised at the end of a tourist tour in the intertidal zone, which will give the best chance for survival (cf. Kairo *et al.*, 2001; Bosire *et al.*, 2008), let alone whether the new plantation is expected to gain any functionality in terms of fauna or environmental processes (Bosire *et al.*, 2004, 2005).

The enthusiasm of visitors and the presence of numerous well-organized service operators show that mangroves and surrounding environments are no longer to be avoided strangers. The offer, organizational structure and supervision at every stage of the service, is probably equivalent to that for some famous sights and landmarks around the world. Development has partly been made possible by the willingness of the authorities to diversify Caribbean tourism over nature activities (Dehoorne, 2007).

The communication and advertising network established reflects the well-structured organization of services (French Antilles), and the importance of local and national authorities to their natural resources (BRLM). Maybe operators do not have the logistics of large tourism companies, however, some work in collaboration with them, but they have an advertising skill that exceeds the craft stage. Operators of the GCSM and the Bay of Genipa exceeded certain levels of the boat trip activity in the mangroves and offer an elaborate plan, both in terms of transport (motor boats, kayaks, trails, jetski, etc.) and activities (diving, picnic, hiking, dancing, sports, etc.). Offers are more limited in

some sites (BRLM), in other places there are more than 12 different ones, with a duration ranging from hours to a whole day.

## CONCLUSION

Historically regarded as unhealthy and inhospitable environments, mangroves are now recognized for their role in the ecological balance of tropical coasts and part of the economies of countries with these ecosystems (Dahdouh-Guebas & Koedam, 2008). Mangrove forests are among of the most productive and biologically important ecosystems of the world but are threatened by human activities) such as conversion to aquaculture, agriculture and urban land uses (Duke et al., 2007).

The tourism sector also has an influence on the mangroves, either because it changes the ecosystem indirectly (climate change) and directly for other facilities, including reception facilities and leisure (Moreno & Amelung, 2009) or, more recently, using the mangrove itself to provide tourists with various income-generating activities, including the discovery of this rich and misunderstood ecosystem (Holden, 2008).

It comes in many facets, combining the characteristics of mass tourism to those of budding ecotourism. The analysis of communication and tourism advertising shows how the configuration of the mangrove, its richness, diversity associated ecosystems such as seagrass beds, coral reefs and the easily observable presence of an abundant wildlife have promoted the development of tourist services in areas within and adjacent to mangrove forests. Excursions in mangroves can be expected to capture a kind of tourist who would a priori not venture far from the hotel or the beach, a tourist model that is still dominant in the Caribbean area. Mangrove tourism is presented as 'soft' ecotourism, a day trip combining discovery of natural landscapes and ecosystems, into more classical leisure activities.

## LITERATURE CITED

- Baldwin, J., 2007. Understanding tourist beaches as eco-social landscapes; seeking sustainability through integration of human and non-human wealth production. *Téoros*; Dossier tourisme aux Caraïbes, ESG UQAM, Montréal, printemps, 26 (1): 40-45.
- Bosire, J.O., Dahdouh-Guebas, F.; Kairo, J.G.; Cannicci, S. and Koedam, N., 2004. Spatial variations in macrobenthic fauna recolonisation in a tropical mangrove bay. *Biodiversity and Conservation* 13(6): 1059-1074.
- Bosire, J.O., Dahdouh-Guebas, F., Kairo, J.G.; Kazungu, J.; Dehairs, F. and Koedam, N., 2005. Litter degradation and CN dynamics in reforested mangrove plantations at Gazi Bay, Kenya. *Biological Conservation* 126: 287-296.
- Bosire, J.O.; Dahdouh-Guebas, F.; Walton, M.; Crona, B.I.; Lewis III, R.R.; Field, C.; Kairo, J.G. and Koedam, N., 2008. Functionality of restored mangroves: a review. *Aquatic Botany* 89(2): 251-259.
- Conway, D., 2004. Tourism, environmental conservation and management and local agriculture in the eastern Caribbean; is there an appropriate, sustainable future for them? In: Duval, D.T. (ed.) *Tourism in the Caribbean, trends, development, prospects*. London and New York, Routledge, pp.187-204.
- Dahdouh-Guebas, F. and Koedam, N., 2008. Long-term retrospection on mangrove development using transdisciplinary approaches: a review. *Aquatic Botany* 89(2): 80-92.
- Dehoorne, O., 2007. Le tourisme dans la Caraïbe: de la nécessité de sortir du tourisme de masse. *Téoros*. Dossier tourisme aux Caraïbes, ESG UQAM, Montréal, Canada, printemps, 26:3- 5.
- Duke, N.C., Meynecke, J.-O.; Dittmann, S.; Ellison, A.M.; Anger, K.; Berger, U.; Cannicci, S.; Diele, K.; Ewel, K.C.; Field, C.D.; Koedam, N.; Lee, S.Y.; Marchand, C.; Nordhaus, I. and Dahdouh-Guebas, F., 2007. A world without mangroves? *Science* 317: 41-42.
- Ellison, A.M. and Farnsworth, E.J., 1996. Anthropogenic disturbance of Caribbean mangrove ecosystems: past impacts, present trends, and future predictions. *Biotropica* 24(4a): 549-565.
- FAO (Food and Agriculture Organization), 2007. The world's mangrove: 1980 – 2005. A thematic study prepared in the framework of the Global Forest Resources Assessment. Food and Agriculture Organization of the United Nations. Rome, 77p.
- Holden, A., 2008, *Environment and tourism*, Routledge, New York, 274 p.
- Jakobson, R., 1963. *Essais de linguistique générale : les fondations du langage*. Tome 1, Paris, Ed. de Minuit, 317p.
- Kairo, J.G., Dahdouh-Guebas, F.; Bosire, J. and Koedam, N., 2001. Restoration and management of mangrove systems – A lesson for and from the East African region. *South African Journal of Botany* 67: 383-389.
- Kaufmann, J.-C., 1996. *L'entretien compréhensif*. Paris, Ed. Nathan Universities, 128p.
- Moreno, A., and Amelung, B., 2009. Climate Change and Coastal & Marine Tourism : Review and Analysis, *Journal of Coastal Research*, volume 1, Lisbon, Portugal, pp.1140 -1144.
- Schleupner, C., 2008, Evaluation of coastal squeeze and its consequences for the Caribbean island Martinique. *Ocean & Coastal Management*, volume 51, Issue 5, pp. 383-390.
- Weaver, D.B., 2004. Manifestations of ecotourism in the Caribbean. In: Duval, D.T. (coord.) *Tourism in the Caribbean, trends, development, prospects*. Routledge, New York, pp. 172-186.

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