

COMPARATIVE STUDIES ON TOURISM AND COAST DEVELOPMENT IN ALMERIA, JAMAICA, AUSTRALIA AND VIETNAM

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Developing high-end resorts has become the prime strategy in many coasts around the world. However, infrastructure development has not matched the tourism growth, leading to some significant environmental problems. This paper studies the coast area in Cala Panizo in Almería Spain, Montego Bay in Jamaica and Hoi An City in Vietnam. The three areas selected, even though they are very far from each other, have a lot in common. With an extraordinary beauty coast area, a wonderful style of life from small population, they attract millions of tourists a year. However infrastructures for rubbish and wastewater treatment are a major problem in the areas. Not only that, the lack of clearly-defined development strategy is another problem and the lack of participation of all the actors affected, especially the public participation, can drive the development to undesirable outcome. The paper stresses that local public participation where sanitary infrastructure, cultural heritage and environment consideration should be placed forward in their agenda to stay the pace with tourism development.

1. Tourism aspects

Hoi An City is located in Quang Nam province on the South Central Coast of Vietnam. It is bordered by Thua Thien Hue province to the north, the nation of Laos to the west, Kon Tum province to the south, Quang Ngai province to the southwest, the South China Sea to the east, and the city of Da Nang to the northeast. In 1999, Hoi An City was declared a World Heritage site by UNESCO as a well-preserved example of a Southeast Asian trading port of the 15th to 19th centuries, with buildings that display a unique blend of local and foreign influences. Together with My Son temple complex are the two UNESCO World Heritage Sites in the province. It also lies on the World Heritage Road that connects different World Heritage Sites in Central Vietnam. Quang Nam has also known for two famous traditional products: the world's highest essential oil content Trà My cinnamon (Saigon cinnamon) and Ng c Linh ginseng. Today, Hoi An is still a small city, but it attracts a fair number of tourists, also being a well-established place on the backpacker trail. Many visit for the numerous art and craft shops and tailors, who produce made-to-measure clothes for a fraction of the western price. Several Internet cafés, bars and restaurants have opened along the riverfront. Hoi An is famed for its centuries old Cao l u noodle.

Cala Panizo beach, is located in the Almerian coast, South East Iberian Peninsula, in Cuevas de Almanzora County, with a population of 12,000 inhabitants. The area, of 293 square kilometers, receives very little rainfall, with an average of 200 mm per year. In this area, the annual precipitation is very unpredictable, with periodic extreme flood events occurring approximately every 11 years. Flood events generate a massive transportation of soil to the coast through its Mediterranean type gully of waterless rivers, called “ramblas”. Cala Panizo is surrounded by several outstanding

geological features such as the Tabernas desert, the Caves of Sorbas or the volcanic outcrops of the Gata Mountain, with Cabo de Gata-Níjar Marime Nature Park located just a few kilometers west from the area of study. The arid conditions of the Almerian coast and its isolation from economical and social epicenters (such as Andalusia and the rest of Spain) have slowed its development rate, in comparison to other coastal areas, in the last 30 years. In the last ten years these features have become appealing for tourists, attracted to the number of sunny days a year and the untouched landscape. Some littoral areas, like Vera to the west, and San Juan de los Terreros to the east of Cala Panizo, have suffered a quick and unsustainable tourism property growth with the ratio of sandy beach square meter/building cubic meter decreasing year by year. Consequently only rocky areas have survived the change.

The above description is enough to place in almost all touristic guides from abroad travel agencies a plan to visit these coastal areas when considering for example to travel to Vietnam or Spain in a holiday trip. But to these amazing attractions we must add a spectacular pristine seaside, wonderful sandy beaches and a potential littoral area to invest.



Fig. 1. Resort complex. Jamaica (Photo Pedro Fernández).

Similar tendencies can easily be found in other beaches, naturally with the particularity of each country, that can be understood following the data of 2008 from Quang Nam Tourism Promotion Centre, Vietnam: 2.27 million tourists visited Quang Nam province, that included 650,520 tourists from overseas. Earnings from tourism were 45 million USD. Compare this with the Fig.s in 2004, when a total of 1.02 million tourists visited the province, including 508,857 international tourists. Hoi An

City alone attracted 429,316 tourists in 2004, including 212,490 international tourists, equivalent to nearly half of total tourists to the province. Earnings from tourism were 11 million USD.

Overall, the number of tourists to Quang Nam has increased steadily over the years: 1.02m (2004), 1.36m (2005), 1.65m (2006), 1.90m (2007) and 2.27m (2008). While the number of tourists more than doubled within five years, earnings from tourism jumped by four times. However, international tourists have increased: 508,857 (2004), 712,529 (2005), 800,000 (2006), to 1 million in 2007, then sharply reduced 35 per cent to 650,520 in 2008. The sources of decline were largely from developed countries. In the first two months of 2009, Quang Nam welcomed 118,870 visitors, including 91,050 international tourists.

International visitors to Vietnam in first two months of 2009 reached 688,753 arrivals, 10% lower than those in the same period of 2008. Vietnam welcomed 4.3 million international tourists in the whole year 2008.

It is predicted that by 2010, the number of rooms in the hotels in Vietnam will increase by 50% from 180,000 in 2007 to 270,000. By the end of 2010, the expected international arrivals will be 5.5-6 million visitors, the domestic tourists will be around 25 million and income from tourism is estimated at \$5 billion. Similar growth Fig.s can be found in Spain, Jamaica and Australia.

2. Beaches

2.1. Cua Dai Beach, Hoi An, Vietnam.

Cua Dai Beach is located in the area of Cam An Ward, about 4 km to the northeast of Hoi An Town. Cua Dai Beach is over 3 km in length and up to 300 m in width. The beach boasts with fine white sand, clear and blue water, moderate slopes and small waves, which make it ideal for recreational activities like swimming and other sea sports. This beach is the closest to Hoi An, is very beautiful and incredibly long with loads of room to wander off for a bit of personal space, which is sometimes difficult to find in Vietnam. If you spend a day at the beach and elect to take a deck-chair, you will be asked to buy either a baguette, some lovely pineapple or a drink, otherwise you will have to pay for the seat. After visiting the relics in the old town, visitors can go to Cua Dai Beach to enjoy seafood specialties in an ideal environment of immense sky and sunshine.

The fine sands of palm-lined Cua Dai Beach are popular at weekends, but can often be deserted at other times. Safe swimming is usually only possible between April and October, but it's nice to walk or just hang out here. The beach continues all the way up to Da Nang, about 30 km of pristine white sands. During the full moon, people wander around until late at night. Fresh seafood and refreshments are sold at a line of kiosks that lead to the beachfront.

In the shady palm-lined road bordering Cua Dai Beach stand some large seaside resorts: Hoi An Beach Resort, Victoria Resort, Swiss-Belhotel Golden Sand Resort, Palm Garden Resort, Dong An Beach Hotel, and Agribank Resort. Most of the resorts are five-star. With a total of 770 rooms altogether, they welcomed 80,000 international tourists in the first half of 2008.

On the nearby Ha My Beach, 10 km from Hoi An City, lies the super five-star hotel The Nam Hai, opened on 1st December 2006. Situated on 85 acres of landscaped tropical gardens overlooking the South China Sea, this all-villa property features 60 one-bedroom villas and 40 pool villas ranging from one to five bedrooms, each with its own luxurious infinity pool. The Nam Hai also features two gourmet restaurants; a tropical spa beside a lagoon; three beachfront swimming pools and an 18-hole golf course. This is now the most expensive beach resort in Vietnam (rates 300-2000 USD)



Fig. 2. Wild grass will give place to high-end beach resorts in Hoi An.
(Photo Thu Lan Ho).

Hoi An Commerce and Tourism Division said construction has started for three real estate tourism projects, namely: Cham Island Tourism Project, Novotel Imperial Hoi An Resort, and Tri Viet Sea Sports Tourism Project. Meanwhile seven other large tourism projects were waiting to be approved.

2.2. Cala Panizo, Pozo del Esparto and Mar Serena beaches, Almeria, Spain.

Cala Panizo is a very special littoral place where the need of tourist development is integrated with the amazing natural geology, typical of the area. The recent tectonic history of Almeria, SE Spain, has produced some varied and interesting geology, the key reason for the planning proposed. The region lies within the Cordillera Betic, a mountain range produced as Africa collided with Europe in the Alpine orogeny.

The thrust sheets, or nappes, generated by this collision form the high Sierras. The study area is located in the vicinity of Carboneras, which is rich in dark metamorphic rocks, Fig. 2. These formed when the sediments were deeply buried, causing the growth of new minerals at higher temperatures and pressures, and then they were brought back to the surface by the thrusting. Following formation of the Betics, the tectonic regime changed about 10 million years ago, with the initiation of left lateral strike-slip faults (like the San Andreas Fault, with the opposite sense of movement). Historical records of Almeria and other nearby cities being flattened show that some are still active today – the last recorded big earthquake was in 1865.



Fig. 3. Mar Serena beach, Almeria, Spain. (Photo Pedro Fernández)

In the nearby beach called “Serena” in the San Juan de los Terreros, less than 4 kilometers to the east of Cala Panizo, we can appreciate the high level of tourism density, and very close second houses that will extend some kilometers inland in the next years, compared with the level and type of occupation in the same day, August 2005, in Cala Panizo. The first data was recorded from local owners in Pozo del Esparto Village, 500 meters from Cala Panizo. People from Cala Panizo and Pozo del Esparto are mainly residents in the same area, but they normally reside not further away than 30 km inland and, in summer time, they usually move to their family houses around the old fishing town [1] P. Fernandez y C. Danese, 2007. In the coastline, from San Juan de los Terreros to Vera, about 40 km, it can be appreciated a growth in the purchase and sale of apartments for tourists. The rocky area has not yet been developed in the same way only because there is still space available in the neighborhood beaches. The erosion expected coming from upstream of the coast area

is estimated about 27,06 tons per hectare per year, according to [2] Esteban et al (2003). Sample sand test were taken from three beaches: Serena, Pozo del Esparto and Cala Panizo, and they are in the same sediment budget that moves between the Rambla de Terreros, in the east, to river Almanzora, in the west. This indicates that adopting beach nourishment techniques will transform those areas into a sandy beach tourist model, with the negative consequences experienced in San Juan de los Terros and in Vera villages, and with the loss of the natural volcanic sediment.

2.3. Montego Bay area, Jamaica.

In this case a few areas around Montego Bay has been visited, they are mainly the future artificial beaches for resort and were in the process of analysis to design the size, the beach profile, the amount and type and sand necessary and the engineering defense coastal structures to maintain stable all the elements that conform the beaches in their places. We recognized many gaps in these projects, they all try to replicate the stereotype image of a Caribbean beach, where white sand play a main role, but they have forgotten a coral bottom that has not been taken in account and that will give a extraordinary new perspective in the design if they have realized of this value and beauty property. The development of these areas have been done with no connection with the rest of activities in the littoral, in fact they can consider as discontinuities in the coast line and they will become an island inside the Island of Jamaica.



Fig. 4. Beach resort project in Montego Bay, Jamaica. (Photo Pedro Fernández)

2.4. Herbey Bay, Australia

Hervey Bay is a city in southeastern Queensland, Australia. The city is situated approximately 292 kilometres north of the state capital, Brisbane, and lies on the

coast of a natural bay between the Queensland mainland and nearby Fraser Island. The local economy relies on tourism, for which whale watching, Fraser Island and Lady Elliot Island are the major travel agencies attractive. The coastal management is more focused in coastal engineering works. Hervey Bay City Council has investigated various options to provide erosion protection and improve the recreational amenity of the beach systems within the local government area, a trial of a new technology called 'Pressure Equalisation Modules' was undertaken by Hervey Bay City Council. Though Hervey Bay City Council is doing a big effort in coastal management, they has under-estimated the value of future residential property growth, and the pressure to be located in one of the most attractive targets for many travel agencies.



Fig. 5. Hervey Bay, Australia. (Photo Pedro Fernández).

3. The littoral

Even the environmental today does not seem to have been experimenting a intensive deterioration and while the beaches are maintained visibly clean, some coastal resorts have been found to discharge wastewater into the rivers, which then carry contamination to the sea [3] (Ho T.L., 2008). Wastewater treatment is only one of many environmental issues including waste disposal, fresh water shortage and loss of protection forests.

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littoral place where the need of tourist development is integrated with the amazing natural geology, typical of the area. The recent tectonic history of Almeria, SE Spain, has produced some varied and interesting geology, the key reason for the planning proposed. The region lies within the Cordillera Betic, a mountain range produced as Africa collided with Europe in the Alpine orogeny.

It seems clear that all the studies made until now show that the area is in danger, and it could be totally transformed in the next few years unless emphasis is put on the special characteristics of this littoral zone. Often, the typical image of a sandy beach has been imposed as the only attractive possibility for tourism; voices need to be raised to defend other qualities and attractive interests of the coast.

Tourism seems to lift up the local people's consciousness for hygiene, but waste disposal infrastructure is lagging behind. In Hoi An, solid waste is still dumped in expanding landfill sites that is washed down by the rain. An initiative by the authorities to persuade locals to separate organic waste from non-organic has come to an end as people find out that there is no composting facility and all wastes, after being separated, end up in the same landfill. Now Hoi An is waiting for a French-sponsored project to build a waste treatment plant with a daily processing capacity of 55 tones, a waste water treatment plant with a daily capacity of 6,700 cubic meters, and a rubbish and waste water treatment station for a 300-bed hospital [4] (Viet-NamNet, 2006). These plants are expected to come into operation in 2009-10. The city has also started to engage in a Japanese project on Reduce-Reuse-Recycle [5] (Ho T.L., 2008).

4. Future activities

It is very important where the beaches are located but some generalized imperatives can be made for Jamaica, Spain, Australia and Vietnam. To detect the threats on the biodiversity of the area, find solutions for a sustainable environment and protect the environment, we should first know it. A sustainable development together with the conservation of biodiversity will be discussed according to the results of years of study conducted by expert teams in different fields. The entire marine area has to be studied without any gaps. The starting and the ending coordinates of each biodiversity, facieses using quadrates, water quality studies, as oceanographic survey study area has to be positioned and cartographed. All these studies will let us define the distribution of protected species and the threatening areas for biodiversity and to quantify the threats on the littoral: Damage on the sea meadows, solid wastes, fresh water inputs, waste water, among others.

Other relevant aspect is the integrated management of archaeological heritage. Usually original contexts of several archaeological sites have been transformed into different environments due to coastal evolutions throughout centuries by natural processes. The impacts of human activities: urbanization, tourism, agriculture, energy production, industry, transportation and infrastructure have severe effects. Through international developments, structuring integrated conservation approaches towards the coastal cultural and archaeological environments became the major scope of conservation policies since these are highly challenging environments due to the: vulnerability of the heritage to be protected, rapid change of the context stemming from

coastal development activities, the complexity of problems aroused by natural and human impacts.

To discuss issues related to values and problems of coastal archaeological heritage of each coast and development of future strategies for the sustainability of these environments and their contribution into integrated management policies, the coastal areas, which possess important examples of archaeological heritage, has to be studied. By this way, several coastal archaeological sites have to be documented and assessed accordingly. Such a large territorial segment will provide various examples, to define and evaluate similarities in values and problems, to compare the regional differences between the different sections of the same coastline. Geographical integration, integration across time scales, across sectors, political and institutional integration, integration among disciplines, integrating management, policy, education and research.



Fig. 5. Shore waste. (Photo Thu Lan Ho).

All this process will let us move from survey and analysis, to assessments, and help in the final decisions process. Complementary top-down and bottom-up approaches for the relevance of decisions established for site level with regional strategies and national policies as well as local conditions are necessary and support of site-specific attempts with higher level policies. Also to structure different and wide strategies according to the real necessity of local and territorial characteristics and identification of resources, analysis and evaluation, development of management strategies has to be done.

5. Conclusions

It is necessary a diagnosis of the coastal system focus in aspect like fresh water resources, uncontrolled development tourism with lacking of previous planning, possible coastal erosion, the threat of the sea level rise due to the climate change to be consider when building, coastal dunes protection, possible degradation of marine and terrestrial ecosystems, solid waste disposal and discharge, the lack of solid waste management and waste water treatment plants, endangered and endemic species and their properly protection, to explore fisheries and aquaculture possibilities, agriculture and fishery products processing industry, medical plants, handicrafts, ecotourism respectful with the local cultural and natural heritage the creation of natural protected areas.



Fig. 6. A fishing village in Cu Lao Cham, Vietnam. (Photo Thu Lan Ho).

It is also convenient evaluate aspect like land ownership, conflicts of competences and investors, the role of public participation related with land ownership problem, international tourism: acceptance by local population, unaware of consequences. Collaboration of all actors involved in management of coastal including the NGOs and public participation into the decision-making process must be achieved.

To summarize the following activities are considered necessary to carried out during the future: Define one set of indicators to measure and detected problems, proposal for zoning the coastal stretch as a detail of the future Master Plan, evaluate the carrying capacity of different development scenarios, based on zoning, study Pilot sites for the design of alternatives for development, focusing in hydrodynamics and technical studies, the regional and national inventory systems of the coastal archaeological environments, ecotourism and waterfront development like base for prepare a

Integrated Coastal Zone Management operational Plan and guidelines for its implementation, and finally improve education, training and capacity building.

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