Framework for Sustainable Tourism Development on Coastal and Marine Zone Environment

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ABSTRACT

Tourism in marine and coastal areas is a complex phenomenon. Tourism in coastal areas brings along both positive and negative effects on the environment as a result of activities exerted upon such areas by proponents and tourists. While tourism development results in the modification of coastal environments, it can also flourish where such environments are left unmodified as the pristine nature of the environments attract visitors. Alternatively, in order for marine and coastal tourism to develop and continue to attract tourists, there is the need for an integrated approach that can be translated into a sustainable coastal tourism development. The aim of this paper therefore, is to postulate and develop a framework and guideline to be addressed by decision-makers for coastal areas. Frameworks for sustainable coastal tourism development and coastal zone management (CZM) are suggested taking into account the multifaceted nature of the coastal environment.

Keywords: Coastal Zone Management; Frameworks; Hong Kong; Marine Tourism; Sustainable Coastal Tourism Development

INTRODUCTION

For long, tourism has been associated with sea, sand and sun, often referred to as the 3S. The 3S’s are attributable to the coastal and marine environment. As a result of this, tourism is also significantly associated with the coastal environment. It has been established that tourism is environmentally dependent (Wong, 1993). Indeed, the unique character of coastal environment gives to various types of tourism development. While tourism is a component of integrated approaches towards coastal and marine management, the natural environment and tourism are inextricably linked (Mason, 2003).

Although the rise in travel and the trend of tourism development particularly the notion of the 3S has given rise to mass tourism, the growing dissatisfaction with this trend has resulted in tourists seeking for alternative tourism. It was the recognition of the problems caused by conventional mass tourism activities that increased the interest of researchers, planners and decision makers in alternative forms of tourism. However, the concept of alternative tourism is broad and vague. But alternative
tourism pays special attention to the environment and the needs of people coming to enjoy such environments. Furthermore, alternative tourism is said to be considerate, value conscious, qualitative, defensive, planned, locally controlled etc. (Jarviluoma, 1992).

The onset and promotion of alternative tourism has increasingly made the coastal environment attractive. The coastal area, particularly the interface of land and water is endowed with numerous aspects and opportunities for alternative tourism, specifically adventure, marine and ecotourism. Given the significance of coastal areas and the opportunities that they provide, their continuous use will hinge upon sustainable use as many coastal communities depend on healthy coastal ecosystems for sustenance, livelihood and quality of life. For this environment to be continuously maintained, researchers and decision makers should ensure that there is no over exploitation, no excessive pollution and that there is no irreversible damage resulting from over exploitation, overdevelopment as well as tourism activities.

Globally, coastal areas are densely populated making the environment (both core and peripheral) increasingly vulnerable. The vulnerability of such environments is a result of many sources of activities of which tourism is a key player. For these areas to continue to be useful and support such numerous activities, sustainable tourism and its derivatives need to be encouraged and promoted. Sustainable coastal tourism development and indeed numerous measures that will seek to integrate and manage the coastal areas may help resolve the imminent conflict of societal demands. Sustainable development and particularly sustainable tourism development when properly implemented can help create long-term opportunities for coastal tourism to prosper while enacting effective environmental protection policies. Indeed for tourism and livelihood to continue to flourish in the coastal areas, there has to be a continuous provision of good quality coastal ecosystems particularly coastal waters. Although as in sustainable development there is also a number of views on sustainable tourism (Mason, 2003), Swarbrooke (1999) suggested a number of perspectives in which it is clear that the environment is more, or less central in the concept of sustainable tourism.

In Hong Kong as in other coastal cities, tourism constitutes a significant factor in the transformation of the coastal environment. In fact, the transformation experienced by coastal cities of Asia (of which Hong Kong plays a leading role) centres in the coastal environmental areas themselves (Yeung, 2001). Top on the list of coastal resource is that they harbour beaches and backshore areas which provide amenity for recreation and tourism (Beatly et al., 1994). Others include coastal scenery, habitats for flora and fauna, geological exposures and coastal landforms. Furthermore, the coastal environment provides a multifold of resources for water sports and a plethora of coastal habitats some of which are important components for the viable promotion of alternative tourism.

As most coastal areas are home to over 50% of the world population, the additional millions of tourists visiting these areas add to the growing environmental concern. The rapidly growing population in coastal areas and the increasing number of visitors deserves further attention than it currently receives. Coastal environments are under increasing pressure and their problems can no longer be avoided or deferred. For long, coastal tourism represents the interaction of human systems (tourism and relevant
infrastructure development) and environmental systems (coastal and other processes) whose interactions result in a wide array of human and environmental aspects often resulting in many repercussions.

While there is increasing recognition of the (coastal) environment as a tourism resource, there is also the need to consider the sustainability of that environment as it continues to open up to the full gamut of tourism activities. This paper intends to focus attention on sustainable tourism development in coastal areas with Hong Kong as an example. The objective is to highlight the increasing vulnerability of coastal environment to tourism and attempt to recommend regulatory frameworks akin to the integrated coastal planning and management (ICPM) and integrated coastal zone planning (ICZP) models for possible adaptation as tools for sustainable coastal zone management with tourism as a backbone. The paper will categorize coastal resources and identify prospects for adopting them for ecotourism, alternative tourism and marine tourism.

SUSTAINABLE TOURISM AND COASTAL TOURISM DEVELOPMENT

Although there are many studies on coastal tourism, they tend to emphasize on the tourism system rather than on the interaction of the tourism and environmental systems (Wong, 1993). As tourism is growing and diversifying into various forms of alternative tourism, there is the need to incorporate the concept of sustainable tourism in order to allow the tourist to enjoy the coastal environments that attracted them in the first place.

However, the coastal environment is complex and where tourism (in any form) constitutes a key player of the economy it fosters uncertain interactions between environmental and socio-economic processes. The complexity in interactions and the need for sustainability have increasingly become significant elements in the formulation and development frameworks all over the world (Gheorghe, 2001). Indeed complexity and uncertainty play important roles in the development of coastal tourism and its management. The integration of environmental and socio-economic processes where tourism flourishes will help “develop and maintain an area in such a manner and at such a scale that it remains viable over an indefinite period, and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well-being of other activities and processes” (Butler, 1993, p. 29). It is thus clear that like sustainable development, sustainable tourism indeed evolved specifically as a result of concern for the environment.

Earlier, Timmerman and White (1997) had indicated that coastal cities consists of two separate and co-evolving ecosystems, one artificial and built centred on the part lived by people and the other natural that comes with its elements and resources. While tourism generates considerable socio-economic benefits, it can also be a source of irreversible damage to the environment. For tourism to continue to flourish in a coastal area, environment and tourism research need to be integrated in order to maintain environmental integrity leading to continuous benefits as a result of from tourism development.
Already, a framework for sustainable tourism development is seen as leading to the management of all resources in such a way that it can fulfill economic, social and aesthetic, essential ecological processes, biological diversity and life support systems (Swarbrooke, 1999; Ross and Wall, 2001). But sustainable tourism and its other derivatives need to be understood in the context of conceptualization, promotion and implementation especially in coastal areas.

Sustainable coastal development implies new respect for environmental and ecological limits, a goal of living off the ecological interest while protecting the principal, a new orientation toward the future and toward adopting a long-term planning and management timeframe. Indeed, sustainable coastal development implies an attempt to promote greater livability and an equitable and just distribution of resources and opportunities in the coastal zone (Beatley, et al., 1994). As tourism plays an important role in most communities, it needs to be refocused. Current trends need to be revisited, potentials need to be unraveled and alternatives need to be created and promoted. The onus is on academics, researchers, policy and decision makers as well as participants to make sustainable coastal tourism development adaptable and implementable.

Furthermore, for the successful implementation of tourism in the coastal and marine environment, the challenges are cross-sectoral and indeed multifaceted. For a prudent resource management, approaches have to be multidisciplinary. The bottom line of the policy that can enhance sustainability of coastal and marine resources for tourism activities is the need to ensure socio-economic values to the people, preservation of rich marine biodiversity and the enhancement of quality of life.

### COASTAL AND MARINE ENVIRONMENT IN HONG KONG: PARKS AND RESERVES

Hong Kong is situated between latitudes 22° 09' and 22° 37'N, and longitudes 113° 52' and 114° 30'E, on the southern coast of China. The total area of Hong Kong is about 1100 sq Km and it accommodates over 260 Islands adding up to more than 800 km of coastline with its territorial waters extending over 1827 sq Km (Liu and Hills, 1997). Some of the islands found within Hong Kong waters, particularly where there is evidence of human habitation, can provide a wide array of attractions that can be based on their characteristic history which is tied to the coastal area or seaward activities and scenic coastal environments.

In addition to the numerous structures that provide convenience for tourism, Hong Kong is endowed with natural coastal and marine resources that could be used for provision and development of alternative tourism including marine tourism and ecotourism. In addition to the availability of natural resources, the government had designed and developed marine parks and created reserves for the purposes of protection and conservation. Generally, protected coastal areas and by analogy marine protected areas are continuously used as mechanisms for conservation of habitats and ecosystems, research and education and increasingly for tourism and recreation. (Orams, 1999) While all these are applicable to the context of the Hong Kong coastal environment, in-depth studies on these resources and their contribution for sustainable tourism has not been adequately documented.
Sustainable tourism in its purest sense is an industry which attempts to exert low impact on the environment and culture of the hosting community, while helping them to generate income, employment, and conserve the local ecosystems and cultural heritage (Wall, 1997; Swarbrooke, 1999; UNEP, 2003) that constitutes attractions to visitors. While Hong Kong stands out as a modern megalopolis, it similarly has the necessary resource upon which alternative tourism can be developed that will function on the aegis of sustainable tourism. In addition, there are about four marine parks and one marine reserve. Although these resources are now open to the public and attract ecotourists, nature adventurists and those seeking different experiences, it is clear that a growing number of visitors are environmentally and ecologically conscious (Marafa, 2003).

More and more people are now able to access more and more of the marine world (Orams, 1997). As Orams indicated, increasing access mean increasing use which in turn implies increasing pressure on the quality of marine resources. Although this is the case, where marine environment falls within the ambit of protected area system, it might provoke curiosity and generate interest in visitation making such areas similarly vulnerable to degradation. Indeed it is this issue of deterioration of coastal and marine ecosystem that called for the designation of such areas as natural, protected and resource areas in Hong Kong. While bucolic rural marine environments are receiving attention, areas that are within the built environment are subjected to development of infrastructure for coastal and marine tourism. Projects that specifically target the occupied coastal areas include revitalization of water fronts (Figures 1a and b), seasonal festivals and the concentration of water based activities leading to the enhancement of quality of life and increase in visitor numbers.

The Marine Parks Ordinance in Hong Kong was enacted in 1995 paving the way for the establishment of the marine protected areas. It was meant to protect and manage ecologically important parts of the marine environment for the purposes of conservation, education and recreation (Figure 2). Up till now, four marine parks and one marine reserve have been designated, covering areas ranging from 20 to over 1200 ha. The first batch of the marine parks and marine reserve were designated in July 1996 and include Hoi Ha Wan Marine Park, Yan Chau Tong Marine Park, Sha Chau and Lung Kwu Chau Marine Park and the Cape D'Aguilar Marine Reserve (Table 1). In addition, 32 coastal SSSIs have since been identified (Liu and Hills 1997).

Although the primary reason for the creation of marine parks and reserves in Hong Kong was to enhance protection and conservation of biodiversity, growing interest and visitation has exposed them to marine and ecotourism activities. Indeed the establishment of the marine parks was needed to enhance the protection of marine habitats, maintain biodiversity and help increase the population of endangered plants and animals. In order for the marine parks to be sustainably managed and to continue to provide the various functions that they were designated to serve, a framework for multiple use approach can be adopted.
Table 1: The protected marine environment in Hong Kong

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Effective date</th>
<th>Location</th>
<th>Area (ha)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoi Ha Wan</td>
<td>Marine Park</td>
<td>July 1996</td>
<td>Northeast</td>
<td>260</td>
<td>Mangrove; Coral communities;</td>
</tr>
<tr>
<td>Yan Chau Tong</td>
<td>Marine Park</td>
<td>July 1996</td>
<td>Northeast</td>
<td>680</td>
<td>Seagrass bed; Mangrove; Coral communities; bays; rock cliffs; sand pits; beaches</td>
</tr>
<tr>
<td>Sha Chau and Lung Kwu Chau</td>
<td>Marine Park</td>
<td>November 1996</td>
<td>Western</td>
<td>1200</td>
<td>Rich fisheries resources; Chinese White Dolphins</td>
</tr>
<tr>
<td>Tung Ping Chau</td>
<td>Marine Park</td>
<td>November 2001</td>
<td>Northeast</td>
<td>270</td>
<td>Hard corals; Reef-associated fishes; Marine invertebrates; Brown, red and green algae; geological landforms</td>
</tr>
<tr>
<td>Cape D’Aguilar</td>
<td>Marine Reserve</td>
<td>July 1996</td>
<td>Southeast</td>
<td>20</td>
<td>Tuffs with volcanic bombs; granodiorites; porphyritic rhyolites; basaltic dykes; Hard and soft corals; gorgonian and marine invertebrates</td>
</tr>
</tbody>
</table>
The marine parks are located in various areas of the territory with different geological structures. They cover areas that harbour marine life made up of coral communities that are distinct from tropical reef species. The coastal habitats in Hong Kong range from rocky shores, sandy beaches, mangrove-covered coastlines, coral-fringed islands and Chinese white dolphins among others. Indeed, more than 150 commercially important species of fish, crustaceans and mollusks, and some 50 species of corals have been recorded in Hong Kong territorial waters.

The variations and differences in hydrography, extensive and deeply incised coastline and a subtropical climate have all acted together and created an environment in which there exists a great diversity of marine flora and fauna (Liu and Hills, 1999). This is what is making these destinations attractive to visitors.

**INTEGRATED FRAMEWORKS FOR DEVELOPMENT AND MANAGEMENT**

Although there is no universally accepted model for sustainable coastal tourism development, it is clear that there is the need for adaptable frameworks to be put in place. While the coastal area is spatially variable and complex, it is these traits that signify the importance of designing and adopting a coastal zone management (CZM) framework. As most tourism development initiatives are economic in nature, they may push the coastal system beyond its resilience threshold as a result of interactions between environmental and socio-economic processes resulting from tourism activities. In fact where tourism has been a major issue in coastal areas and despite differences in locale and levels of economic development, there are strikingly similar evidences of environmental changes, mostly negative (Johnston et. al., 1991).

For tourism to continue to prosper in the context of coastal environments there has to be a framework for symbiosis between tourism and conservation that will basically help strike a balance between conservation and economic development both of which can be promoted by sustainable tourism development.

**Framework for sustainable coastal tourism development**

The concept of sustainable tourism came out as a result of debates surrounding issues on sustainable development. Since the debate on sustainable development became a global issue after the Earth Summit in Rio de Janeiro in 1992, it has gradually infiltrated the policy framework of many governments, organizations and agencies. While governments and agencies are seeking alternative frameworks for the maximum protection and utilization of coastal environment for tourism, it might have to be based on a framework that could embrace the concept of the 4C's first postulated by Owen et al., (1993).

When slightly modified and suggested for implementation as is presented here, the four Cs will reflect the extent to which a government can 1) compromise (by striking a balance between tourism development and environmental conservation); 2) commitment (by recognizing that sustainable development and indeed sustainable tourism development requires action and less rhetoric); 3) control (by establishing a

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framework or plan for effective regulation of the scale and pattern of development), and 4) cooperation (by recognizing the need for partnership with both local and international dimension).

Along the same vein, sustainable tourism borrows heavily from the theme of sustainable development. Sustainable tourism if accepted and implemented should be along the premise that:

- Tourism is firstly an economic activity which is desirable to most economies;
- Whether tourism is implemented or not, the physical and cultural environments have intrinsic values which outweigh their values as tourism assets particularly where such environments support a population on coastal areas;
- The scale and character of tourism development should respect the character of the area;
- Tourism development should be sensitive to the needs and aspirations of the host community, etc.

Framework for Coastal Zone Management (CZM)

Accepting the notion of sustainable tourism and with a growing need for success, researchers have been suggesting the need for further applying the integrated coastal planning and management (ICPM) and integrated coastal zone planning (ICZP) frameworks as ways of planning and managing coastal environments (Sorensen, 1993; Capobianco and Otter, 2000). As tourism is an environmental phenomenon, it stands to be boosted and sustained by adhering to the tenets of ICPM and ICZP, which together are referred to as coastal zone management (CZM) initiative in this paper.

Indeed, coastal management is highly complex straddling human and environmental systems resulting into conflicts in development as indicated earlier. The concept of CZM has developed from the struggle to find a mechanism to balance the demands on coastal resources, promote their sustainable use and manage individual activities including those associated with tourism. CZM is an embracing concept which encompasses aspects of resource management and the management of user enterprises and services especially when tourism plays an important aspect of the area. As there is increasing awareness of the wide range of issues facing the environment of the coastal areas, the elements of CZM are rooted in environmental concerns and have grown in parallel to calls for sustainable development.

As sustainable development is currently seen as a dynamic process and not a destination, management practices under the CZM are especially important for ensuing sustainable tourism development. They have the potential to succeed as they are based on a multifaceted integration of numerous frameworks capable of addressing various spheres of concern. Integrative practices and sustainable coastal tourism will include 1) provisions for the management of coastal development; 2) provisions to improve public access to the shoreline; and 3) provisions to protect (and where necessary, to restore/recreate) coastal environments. The need to work in harmony with the numerous agencies involved with the coast is therefore an important
element of the task of coastal tourism managers which this framework explicitly unravels.

In order to resolve the growing conflicts in this zone, an integrated approach to coastal and marine management is needed to consider both current and future interests. Although many people have formulated and adapted various versions of CZM (Wong, 1998; Kohn and Gowdy, 1999; Shi et al., 2001), an adoptable framework could be courted as follows:

a) All levels of government must be involved in coastal management plan (although the Hong Kong government has maintained a policy that recognizes the importance of the coastal environment, the Civic Exchange, a non governmental organization has recommended the formulation of an ICPM (Willmott, 2000).

b) The nature-synchronous approach to development is especially appropriate for the coastal environment (the recognition of protected areas along the wetland areas and indeed the construction of the wetland park in Hong Kong are good examples of this approach).

c) Conservation for sustainable use is a major goal of coastal resources management

d) Multiple-use management is appropriate for most coastal resource systems

e) Multi-sector involvement is essential to sustainable use of coastal resources where civil societies, NGOs, academics and government could all work as partners.

CONCLUSION

This paper has highlighted the importance of the coastal area in developing sustainable tourism. Although these coastal and marine resources clearly provide amenities for tourism activities, there is the need to focus on practical concerns of environmental protection if the area will continue to serve as a viable resource for alternative tourism. Locally, although efforts have been made in designating pristine coastal areas as parks, reserves and sites of specific scientific interests (SSSIs), there has to be an enhanced framework for monitoring and management as suggested by highlighting the need for sustainable tourism development and CZM plan (Wong, 1998; Liu and Hills, 1999; Willmott, 2000).

The frameworks for sustainable coastal tourism development and CZM articulated and presented in this paper can be a starting point. Where this is not effective, negative environmental consequences could occur as a result of uncontrolled visitation and activities reminiscent of mass tourism. It is pertinent to note that simply getting "protected" status for an environmentally sensitive area without proper management offers little assurance of success (Johnston, et. al., 1991).

As many countries saw tourism as a panacea for development, many governments embraces tourism plans based simply on economic logic. Where this was done, it quickly produced negative long-term environmental impacts, destroying the resources that have attracted tourists. Although tourism is undeniably on of the pillars of Hong Kong economy, recent strategies have identified the environment as a core factor in
strategic plans. As a component of alternative tourism, it is indeed the diversity of habitats and life forms especially endemic species that make Hong Kong coastal area unique. But the ecological richness is under threat from a combination of factors of which marine tourism and ecotourism are part of.

In Hong Kong, the designation of protected areas under the aegis of marine parks, country parks and reserves reflected a political clout with governments backing. Consequently conservation themes and management responses have similarly been initiated, albeit on site specific areas. But there is need for further research as enumerated by the integration of coastal zone management plans and sustainable development themes. While this trend is set to continue to grow, people are now focusing more and more on ecotourism with sustainable development and sustainable tourism as ideal frameworks. But there is difficulty in finding a formula for sustainable tourism. The framework suggested here, when implemented and adhered to, could be a starting example.

REFERENCES


