

An Assessment of Hong Kong Marine Parks for the Development and Marketing of Ecotourism

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Abstract: There are four marine parks in Hong Kong that are managed for the purposes of conservation, education, and recreation. As the demand for nature-based tourism is increasing worldwide, marine parks provide an opportunity to meet such a demand. In this research, an exploratory and qualitative approach is adopted to explore the potential development of ecotourism with Hong Kong's marine parks. In order to obtain an objective assessment, this study uses a holistic approach that examines the topic from the aspects of both supply and demand by using three criteria for assessment criteria: tourism attractiveness; current management practices, and the activity preferences of ecotourists. This study shows that Hong Kong marine parks have generally good potential to be developed as ecotourism attractions.

Keywords: Ecotourism; Hong Kong marine parks; tourism attractiveness; management and marketing practices; activity preferences.

Introduction

International tourism is an important source of foreign exchange and economic growth. To remain competitive, major world-class destinations are diversifying to attract environmentally tourist-oriented segments since these segments are growing at a very high rate (Weaver, 2001). For example, interest in ecotourism experiences is growing by 25% annually compared to an overall average of 4% to 5% for the tourism industry in general (Hassan, 2000).

Despite the rapid growth rate in ecotourism, there have been disputes over its definition. An analysis of some of the most popular definitions of ecotourism indicates that three dimensions can represent the essence of the concept: 1) nature-based, 2) environmentally educated, and 3) sustainably managed. The last dimension includes both the natural and cultural environments involved in supplying the ecotourism experience (Blamey, 2001). Ecotourism is regarded as a subset of nature-based tourism (Orams, 2001). Nature-based tourism involves activities that make use of the resources of nature. For reference and ease of understanding, this study adopts ecotourism for marine park development.

Although ecotourism is generally regarded as bringing benefits for local communities, encouraging tourism and biological diversity, this does not

guarantee its practicability. To explore ecotourism at the operational level, marine parks have been chosen as the focus of this paper for the following reasons. First, protected areas are ideal venues for ecotourism. They contain relatively unspoiled natural environments and the fact that some areas merit protection is usually due to the outstanding character of their natural landscapes, which makes them especially attractive to ecotourists (Weaver, 2001). Second, it is believed that the management objectives of marine parks are consistent with ecotourism, which can contribute to the sustainability of, and education about, the marine environment (Klee, 1999; Orams, 1999). Third, marine parks have a well-established management plan for their purposes. Regulations are in place to ensure that these areas are maintained in pristine condition (Weaver, 2001). They thus offer a foundation for the development of ecotourism. Fourth, it is suggested that a proactive management plan for the purpose of ecotourism be in place so that controls can be taken before problems get out of hand (Gubbay, 1995). At the moment, marine parks are not yet being widely promoted for purposes of tourism. Therefore, conducting proactive research on this topic will provide insights for better development in the future.

While the opportunity for developing ecotourism in marine parks is acknowledged, the following steps should include an assessment of a specific site's strengths, weaknesses, opportunities, and threats from the development of ecotourism, which will have great implications for its success. Therefore, the purpose of this paper is to establish criteria for assessing the potential for ecotourism and to demonstrate its utility as applied in four marine parks in Hong Kong. Specifically, the objectives of the study are (1) to develop a set of assessment procedure and criteria for the development of ecotourism in marine parks, (2) to generate a checklist for measuring the development potential of marine parks, and (3) to identify the development and management needs of marine parks in Hong Kong.

Criteria for Evaluating Ecotourism Potential

Many authors have argued about the impact of ecotourism. However, most studies usually focus on a single aspect, such as environmental impact. This is not a fair approach to assessing the potential impact of ecotourism. Therefore, in this research, the potential impact on Hong Kong of developing ecotourism in marine parks will be considered from different angles to avoid the incompleteness of previous studies.

The development of tourism comprises the dimensions of both demand and supply. On the supply side, the attractiveness of marine parks for tourism

needs to be assessed by certain tourist criteria such as accessibility. On the demand side, it would be the best to identify the needs and wants of ecotourists who come to Hong Kong. However, since ecotourism in Hong Kong is not well developed, it is very difficult, if not impossible, to identify who the ecotourists are and/or who the potential visitors of marine parks might be. Therefore, the focus of this study is on what the majority of ecotourists like to do during their trips.

Although the management objectives of marine parks seem to be compatible with ecotourism, this is merely an assumption at the conceptual level. More evidence needs to be found to verify this symbiotic relationship at the functional level. Modifications may be required when taking the development of ecotourism into consideration.

While many research studies simply concentrate on one of the above dimensions, this study adopts a holistic approach in evaluating the potential for the development of ecotourism in Hong Kong from the aspects of both supply and demand by using three criteria for assessment: the attractiveness of the marine parks to tourists - the inventories and assessments of marine park assets; the preferred activities of ecotourists, and current management practices at marine parks.

One of the key objectives in the development of ecotourism is to ensure the sustainability of our fragile natural environment. The impact of such development must therefore be taken into consideration. Next, an inventory of the assets of marine parks can help to identify what is available and what is not for a tourism product. On the other hand, tourists are the customers of tourism products. How well a tourism product satisfies their needs and wants are critical to its success. Finally, one of the essential components of ecotourism is that it is sustainably managed. Therefore, management is an inevitable aspect in any evaluation of ecotourism potential.

Impact of Ecotourism

Ecotourism has several kinds of impact, either positive or negative, on a destination. These are often divided into three categories: economic, environmental, and socio-cultural.

Economic Impact

Regarding the economic impact, most attention thus far has been paid to the jobs, revenue, and profit that ecotourism generates (Lindberg, 2001; Ross and Wall, 1999a; Weaver, 2001).

Ecotourism may bring in employment opportunities through such

activities as the hiring of guides, the provision of transportation, the need to construct structures, and the demand for employees in protected areas and to fill positions in restaurants, motels, shops, and so forth. The creation of local jobs is very important in ecotourism because the extractive pressure on natural resources is lessened when residents receive benefits. They are more likely to support tourism and conservation, even to the point of protecting the site against poaching or other types of encroachment. Conversely, they may turn against tourism and conservation, and may intentionally or unintentionally damage the site (Lindberg, 2001).

Ecotourism also brings in revenues for the conservation of protected areas (Ross and Wall, 1999a; Weaver, 2001). Tourism revenues can make a substantial contribution to the costs of managing protected areas. For example, at Saba Marine Park in the Netherlands, royalties and low entrance fees of \$1.00 allowed the park to become financially self-sufficient. A surplus from tourism revenues at Galapagos National Park, Ecuador, allows some funds to be redistributed to other protected areas in Ecuador. At some ecotourism destinations, residents can also benefit from revenue-sharing programme that either provide cash payments or, more commonly, funding for community projects such as wells or schools (Lindberg, 2001).

Environmental Impact

The impact of ecotourism on the natural environment depends on the nature of ecosystem and tourist activities. The ecological significance of the impact also varies greatly among different ecosystems (Buckley, 2001). Impact can be broadly classified into two categories: direct and indirect. Direct impact is caused by the presence of tourists, while indirect impact is caused by the infrastructure created in connection with tourism activities (Ceballos-Lascuráin, 1996).

The direct environmental impact from ecotourism activities include impact on the soil (erosion and compaction), vegetation, habitat, water resources, animal life (by tourists disturbing birds and mammals) and sanitation (Buckley, 2001; Ceballos-Lascuráin, 1996).

Many authors are cautious of the negative impact resulting from nature-based tourism (Butler, 1990; Wheeler, 1991; Zell, 1992). "There are significant numbers of cases which illustrate negative impacts associated with tourist-nature interaction" (Orams, 1999). It appears that environmental degradation is inevitable when tourism becomes established. However, there are cases where the development of tourism has actually improved the local environment. For example, the value of endangered species alive as tourist attractions, rather than dead for commercial products, has provided

justification for protecting marine animals such as dolphins. Also, ecotourism encourages tourists to become more environmentally responsible and sometimes to actively support the improvement of natural environments (Orams, 1999).

Socio-cultural Impact

Socio-cultural impact refers to the impact of the development of tourism on local communities. A "host community" is a group of people who share a common identity, such as geographical location, class, and/or ethnic background. They may also share a special interest, such as concern about the destruction of native flora and fauna.

Ecotourism can, in ideal circumstances, provide the following benefits to the socio-cultural environment: increase demand for accommodation and food and beverage outlets; provide additional revenue to local retail businesses and other services; increase the market for local products, thereby sustaining traditional customs and practices; use local labour and expertise; provide a source of funding for the protection and maintenance of natural attractions and symbols of cultural heritage; provide funding and/or volunteers for field work associated with wildlife research and archaeological studies; and create a heightened awareness among the community of the value of local/indigenous culture and the natural environment (Ross and Wall, 1999a; Wearing, 2001).

However, as a result of tourism, local people may lose access to land and resources they previously enjoyed. Ecotourism can lead to a change in resource ownership and management that, while being beneficial to the tourism industry, is detrimental to the local people. Subsequent local resentment toward national parks and designated conservation and protected areas can arise when the area is viewed to be of principal benefit to tourists rather than locals (Wearing, 2001). When evaluating the impact of ecotourism, is not possible to determine whether ecotourism is a sustainable option for a destination simply by considering a single aspect because every aspect is of equal importance. Therefore, in this study, all three categories of impact are considered so that a balancing of various aspects can be achieved.

Attractiveness of Marine Parks to Tourists

Attractions, which include activities, are the pull factors that draw visitors to a destination. Ceballos-Lascuráin (1996) divided attractions into two categories: core attractions and supporting attractions. Core attractions are the principal assets that a region offers to tourists including natural attractions such as lakes, geological formations, wildlife, or cultural attractions that provide tourists with the opportunity to learn about local customs. Supporting

attractions are minor, but they supplement the main attractions. They may be man-made such as a visitor centre, or services such as guided tours. Some authors (Gartner, 1996; Reynolds and Braithwaite, 2001) have suggested that the criteria for evaluating attractions that can apply to all forms of tourism include: 1) authenticity - the honesty of the attraction, for example, the degree of natural behaviors exhibited by the fauna and the environment in which it is viewed; 2) uniqueness - a sense of the experience being special and unusual; 3) expansion of activities - many options for activities that tourists can engage in; 4) intensity - the excitement generated by an experience; 5) duration - the length of exposure to stimuli. In addition, Reynolds and Braithwaite (2001) identified two more attributes specific to wildlife tourism: 1) the popularity of a species - representing the physical attractiveness, size, danger, and drama associated with the species, and the publicity that the species has enjoyed in the public media; and 2) status of the species - referring to the rarity of the animal. Species on rare and endangered lists appear to hold a special attraction to tourists. In the context of protected areas, MacKinnon et al. (1986) proposed a checklist of factors that make a protected area attractive to visitors (See Table 1). For the purpose of this study, some are selected and classified into a number of categories that serve as indicators of the degree of attractiveness of marine parks:

- § Accessibility - means of transportation, easy to get there?
- § Cultural attraction - does the area have additional cultural attractions?
- § Infrastructure - tourist facilities
- § Natural scenery
- § Recreational activities
- § Tourist circuit - any other sites of tourist interest near the area?
- § Wildlife - popularity and status of the species

Activities Preferred by Ecotourists

A considerable amount of past research on ecotourists has been devoted to developing a profile of the ecotourist. It was found that the characteristics and travel motives of ecotourists are different from those of mass tourists. Ecotourists themselves are not one homogenous group, for example, soft versus hard ecotourists (Fennell, 1999; Wight, 2001). Beyond socio-demographics of ecotourists, and since ecotourists are generally portrayed as recreationists engaging in various activities, attention has been directed to the participation or interest of ecotourists in certain tourist activities. Knowledge about their preferences in terms of activities helps managers of

Table 1 Checklist on the tourist potential of protected areas

(A) •	Is the protected area	2-1. Close to an international airport or major tourist centre? 2-2. Moderately close? 2-3. Remote?
(B) •	Does the area have	2-4. High cultural interest? 2-5. Some cultural attractions? 2-6. Few cultural attractions?
(X) •	Is the journey to the area	2-7. Easy and comfortable? 2-8. A bit of an effort? 2-9. Arduous or dangerous?
(A) •	Is the area	2-10. Unique in its appeal? 2-11. A little bit different? 2-12. Similar to other visitor reserves?
(E) •	Does the area offer	2-13. "Star" species attractions? 2-14. Other interesting wildlife? 2-15. Representative wildlife? 2-16. Distinctive wildlife viewing, e.g. on foot, by boat, from hideouts?
(Φ) •	Does the area have	2-17. A beach or lakeside recreation facilities? 2-18. Rivers, falls or swimming pools? 2-19. No other recreation?
(I) •	Is successful wildlife viewing	2-20. Guaranteed? 2-21. Usual? 2-22. With luck or highly seasonal?
(H) •	Is the area close enough to other sites of tourist interest to be part of a tourist circuit? Does it have	2-23. Outstanding potential, other attractive sites? 2-24. Moderate potential? 2-25. Low or no such potential?
(I) •	Does the area offer	2-26. Several distinct features of interest? 2-27. More than one feature of interest? 2-28. One main feature of interest?
(S) •	Is the surrounding area	2-29. Of high scenic beauty or intrinsic interest? 2-30. Quite attractive? 2-31. Rather ordinary?
(K) •	Are the standards of food and accommodation being offered	2-32. High? 2-33. Adequate? 2-34. Rough?

Source: (MacKinnon *et al.*, 1986)

protected areas provide facilities that are appropriate to the area but attractive to the tourists at the same time. It also helps in designing effective promotional campaigns through the selection of appropriate message themes (Palacio and McCool, 1997). However, it has been found that preferences in activities may vary by the type of site, and by the origin, age or gender of the ecotourists (Wight, 2001). There may also be differences between groups of frequent

ecotourists and occasional ecotourists (Diamantis, 1998). The diverse number and terms of the activities that were examined in past studies makes it difficult to provide a full picture of the types of activities ecotourists generally prefer, thereby limiting the use of preferences in activities as a criterion for assessing the development of ecotourism. This study eliminates the above limitation by combining the activities examined in previous studies about the preferences in activities of ecotourists on a quantitative basis.

Management of Ecotourism

Theory of ecotourism has often not been successfully put into practice. It is suggested that appropriate management strategies can facilitate the development of synergistic relationships between tourism, biodiversity, and local communities (Ross and Wall, 1999a). There are a wide variety of strategies that can be used, and they are divided into four categories: host community, economic, regulatory, and educational.

Managing the Host Community

A strong base of public support is one of the first prerequisites for good ecotourism management. Host communities resist the development of tourism mostly because they believe tourism brings them nothing except disturbances.

Creating supportive communities can be achieved by communicating and sharing the benefits of the development of tourism with the host community, and ensuring the highest level of local participation. This can lead to the avoidance of decisions that may have a negative impact on local residents, and encourage people to have control over the making of decisions that affect them (Ross and Wall, 1999a). Local involvement can be achieved through a range of formal and informal means, including informal conversations, group discussions, questionnaires, and regular meetings. If communities can be involved in the planning process from the beginning, this can reduce the likelihood of conflict and misinformation in the future (Wearing, 2001).

Economic Management Approach

Many cases of ecotourism face difficulty with funding, largely due to the fact that many areas still charge little or nothing because of the legislative obligation to provide recreational opportunities at a minimal cost to the public (McKercher, 2001). As in the case of Bunaken, Indonesia, there is nothing to spend money on at the sites, nor is there an opportunity for visitors to make voluntary donations (Ross and Wall, 1999b). In order to make ecotourism financially viable, some authors (Dharmaratne, 2000; Middleton, 1998) suggest self-financing as the solution. The price charged can cover costs,

provide an acceptable profit, and reflect the value of the product (McKercher, 2001). Money can also be used as an incentive or disincentive to modify the behaviour of people, such as imposing financial penalties for inappropriate or damaging behaviour, or offering a financial reward for reporting inappropriate behaviour (Orams, 1999). Examples of options for collecting revenue include entrance fees, admission fees for the use of facilities, users fee for renting gear, camping spots, licenses/permits (e.g. hunting, fishing), and on-site donations (Lindberg and Huber, 1993).

Regulatory Management Approach

The purposes behind the imposition of regulatory practices are to protect the safety of tourists, reduce conflicts among tourists, and protect the environment from the negative impact of inappropriate tourist behaviour (Orams, 1999).

A common regulatory practice is use limitation, which refers to the setting of maximum levels for a site and closing it to additional use after the limit has been reached, in order to control the impact of visitors. Use limitation can also be achieved by controlling the size and number of tour operations acting within natural areas (Orams, 1999; Wearing and Neil, 1999).

Other common practices include regulations to prohibit certain activities that are harmful to the environment, and zoning for different uses in different parts of the region to ensure efficient site protection (Orams, 1999; Wearing and Neil, 1999).

Educational Management Approach

Education serves three essential purposes: to direct visitors to behave in an environmentally sensitive manner while enjoying nature; to enhance appreciation for natural surroundings by providing opportunities to learn about natural features; to promote an ethic of conservation and environmental stewardship both for visitors and local communities (Orams, 1999; Ross and Wall, 1999b).

Environmental education can be passive and/or active. Passive techniques of interpretation include environmental guidelines, best-practice handbooks, reading materials, maps, signs, visitor/education centres, displays and exhibits, publications, and self-guided trails; whereas active interpretation includes guided tours, talk groups, and theatre (Buckley, 2001; Ross and Wall, 1999a; Wearing and Neil, 1999).

An issue relating to education is the quality of the staff who are responsible for teaching. Many authors have suggested that staff play a crucial part on an effective education programme (Middleton, 1998; Saleh and

Karwacki, 1996; Victurine, 2000). Therefore, effective training should be given so as to develop knowledgeable and professional staff (Middleton, 1998).

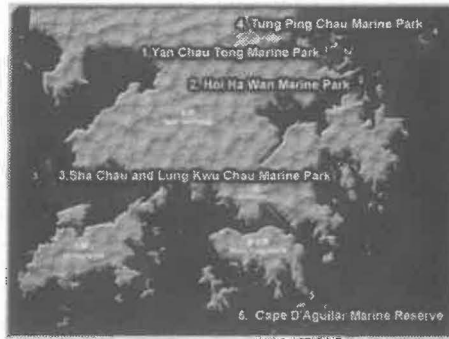
The ultimate goal of a variety of management strategies is to keep the detrimental impact of ecotourism to a minimum and to make the most benefit out of tourists. The approaches mentioned above serve as yardsticks of good ecotourism practices. In this study, they are used for comparison with the current management practices of marine parks.

Tourism in Hong Kong and its Marine Environment

For years, Hong Kong has been the most frequented destination in Asia. In 2000, 13.06 million visitor arrivals were recorded. Tourism receipts totalled \$61.5 billion, contributing 5% of the Gross Domestic Product (Tourism Commission, 2001). While Hong Kong has always been regarded as a modern, culturally rich city, attention has been given to the potential for developing ecotourism because it can create a fresh and positive image of Hong Kong, and also enhances the city's competitiveness to allow it to maintain its leading position as a tourist destination in Asia.

Hong Kong is surrounded by sea and has a sea surface area of about 1 800 km². It lies within the sub-tropical area of the southern coast of China at the estuary of the Pearl River. Although primarily tropical, Hong Kong is also affected by the seasonal fluctuations of warm, cold water and monsoon weather conditions, therefore there is an admixture of tropical and temperate forms such as corals, sea grasses, fishes, and dolphins. With reclamation, sewage disposal, and many large coastal infrastructure developments, many people regard Hong Kong's marine waters as grossly polluted. Fortunately, much of Hong Kong's coastline and diverse marine life still remain. In 1995, the Marine Parks Ordinance (Cap.476) was enacted for the designation, control, and management of marine parks and marine reserves. The Marine Parks and Marine Reserves Regulation was enacted in July 1996 for the prohibition and control of certain activities in marine parks or marine reserves. The marine parks in Hong Kong are a relatively large area of sea that can be set aside for purposes of conservation and recreation. By comparison, a marine reserve is a smaller area of sea but with a high conservation value, which is reserved for scientific and educational study (<http://parks.afcd.gov.hk/newmarine/eng/Service/index.htm>). At present, there are four marine parks in Hong Kong: Hoi Ha Wan Marine Park, Yan Chau Tong Marine Park, Sha Chau and Lung Kwu Chau Marine Park, and Tung Ping Chau Marine Park (see Figure 1). All of the the marine parks are managed by the government (Country and Marine Parks Authority, 1999).

Figure 1. The four marine parks in Hong Kong



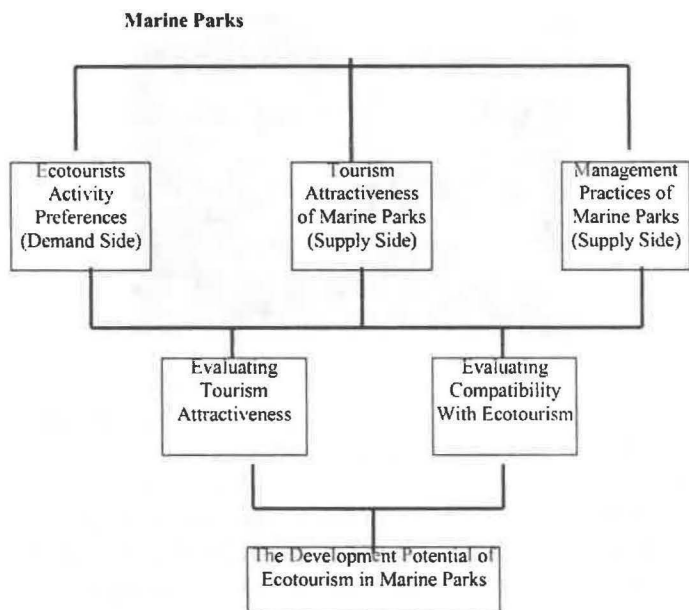
Visitors go to these marine parks for recreation, conservation, and education with regard to marine resources, given that over 90% of the area of the parks are sea. There are no specific official figures on the demand for ecotourism and marine parks. By observation, through a physical count and estimation of those who go to the seashore for recreation, education, and relaxation, the overall potential demand is about 1.2 million visitors per annum, which is quite substantial given that the population of Hong Kong is about 7 million.

Under the Marine Parks Ordinance (Hong Kong Government 1995), marine parks are protected by designation, control, and management: the designation of special zones inside the marine parks; the monitoring of the ecology, water quality, and environment; the controlling of activities inside the marine parks; the maintenance of park facilities and the promotion of public awareness on marine conservation in Hong Kong. Since the land to water ratio of the parks is very small, the main task is preserve the resources in water areas. Some activities with the marine parks are prohibited by legislation, such as unauthorized fishing, the possession of trawl nets used for fishing, and the damaging of any shoreline features on a beach.

Methodology

Although ecotourism has been regarded as an emerging trend in tourism, its development in Hong Kong is still at the stage of infancy. There has begun to be more awareness of the development of marine parks as ecotourism attractions, but the industry still has little knowledge about the feasibility of such an endeavour. Therefore, this study adopts an exploratory and qualitative approach to exploring this issue in a comprehensive manner. The study looks at both the supply and demand sides of ecotourism by analysing secondary data. Figure 2 shows the assessment procedure adopted for this study.

Figure 2. The Assessment Procedure for the Development of Ecotourism in



With regard to the issue of the potential of marine parks to be attractive to tourists, an inventory of assets is built up using secondary data and grouped into seven categories set up in the literature review. These seven categories are: accessibility, cultural attraction, infrastructure, natural scenery, recreational activities, tourist circuit, and wildlife. The sources of secondary data include websites and printed materials about marine parks (Appendix 1).

As mentioned earlier, ecotourism in Hong Kong is not well developed. Thus, it is very difficult to identify who the ecotourists are and/or who the potential visitors of marine parks might be. Therefore, the focus shifts to what the majority of ecotourists like to do during their trip. Data from seven different journal articles (Appendix 2) that have examined the activity preferences of ecotourists from four different countries (Australia, Belize, the US, and the UK) were selected to represent the activity preferences of the majority of ecotourists. All of the activities mentioned in each article were listed through content analysis. Similar activities were grouped together, resulting in twenty-two categories of activities: hiking, wildlife viewing, photography, local cultures, scuba diving, bush walking, bird watching, camping, touring, white water rafting, admiring nature, swimming, viewing

flora, visiting national parks, horse riding, biking, fishing, skiing, canoeing, sailing, going on guided trail walks, and sunbathing. HLA/ARA (1994) divided ecotourists into the two categories of general and experienced ecotourists, while Diamantis (1998) divided them into frequent and occasional ecotourists. As a result, nine cases were identified from the seven journal articles and were numbered from one to nine (Appendix 2). Finally, the occurrence of activities in each of the nine cases, as well as their respective availability in the four marine parks, were recorded in Table 3.

Based on an extensive literature review, it was concluded that there are basically four approaches to the ideal management of ecotourism. The last part of the paper presents the key concepts of the different approaches and compares those with the current management practices of marine parks in Hong Kong. Such an evaluation provides insights on whether the current situation is in alignment with the ideal management direction, thereby implying the future success of the development of ecotourism.

Due regard should be given to the limitations of the assessment criteria, which have been based purely on a literature review. In addition, the results of the assessment merely reveal their presence rather than their quality. However, the criteria do provide insights on the demand-supply situation on ecotourism in marine parks and on the direction of future advances.

Results

Tourism Attractiveness of Marine Parks - Supply Side

Table 2 Supply side - Evaluation of the Tourism Potential of Marine Parks

	Hoi Ha Wan Marine Park	Sha Chau and Lung Kwo Chau Marine Park	Tung Ping Chau Marine Park	Yan Chau Tong Marine Park
Area and Location	<ul style="list-style-type: none"> Sea area: 260 hectares Sai Kung Peninsula Remote 	<ul style="list-style-type: none"> Sea area: 1,200 hectares Western part of Hong Kong Remote 	<ul style="list-style-type: none"> Sea area: 270 hectares Crescent-shaped island in the north-eastern part of Hong Kong Remote 	<ul style="list-style-type: none"> Sea area: 680 hectares North-eastern part of Hong Kong Remote
Accessibility	<ul style="list-style-type: none"> Through public transportation: bus and/or mini-van Only on weekends/public holidays Relatively easy to access 	<ul style="list-style-type: none"> By ship on a dolphin-watching tour Weekends and some weekdays depending on different tour companies Accessible 	<ul style="list-style-type: none"> By ship Very limited ferry schedule only on weekends/public holidays Relatively easy to access 	<ul style="list-style-type: none"> By hiking or renting a ship Difficult to access
Cultural Attractions	<ul style="list-style-type: none"> Historical lime kilns that were built more than a hundred years ago for burning pieces of coral and shells; abandoned in the 1970s 	<ul style="list-style-type: none"> No information 	<ul style="list-style-type: none"> Temples such as Tin Hau Temple Village relics 	<ul style="list-style-type: none"> No information
Infrastructure	<ul style="list-style-type: none"> Restaurants and grocery stores Warden post, camping grounds, notice boards, signs, hiking trails, restrooms WWF HK Hoi Ha Marine Life Center (under construction) 	<ul style="list-style-type: none"> Pier 	<ul style="list-style-type: none"> Pedestrian paths, camping grounds, barbecue sites, notice boards, road signs, hiking trails, kiosks, restrooms Vacation lodges Pier 	<ul style="list-style-type: none"> Pier

Natural scenery	<ul style="list-style-type: none"> • Natural coastline • Sandy beach with a small mangrove community 	<ul style="list-style-type: none"> • Natural coastline 	<ul style="list-style-type: none"> • Unique landscape • Variety of rock formations • Magnificent coastal landforms 	<ul style="list-style-type: none"> • Natural coastline • A wide variety of landforms such as bays, projecting headlands, peninsulas, rock cliffs, sand pits, and beaches • Various types of beaches ranging from mudflats to rocky shores
Recreational activities	<ul style="list-style-type: none"> • Swimming, sailing, canoeing, scuba diving, and yachting • Wildlife viewing • Hiking, camping, sunbathing, and guided visits 	<ul style="list-style-type: none"> • Wildlife viewing 	<ul style="list-style-type: none"> • Wildlife viewing • Swimming, diving, boating, and canoeing • Hiking and camping 	<ul style="list-style-type: none"> • Swimming, diving, sailing, canoeing, and yachting
Tourist Circuit	<ul style="list-style-type: none"> • Sai Kung West Country Park (Wan Tsai Extension) 	<ul style="list-style-type: none"> • No other sites of tourist interest 	<ul style="list-style-type: none"> • Plover Cove Country Park (Extension) 	<ul style="list-style-type: none"> • Pat Sin Leng Country Park and Plover Cove Country Park
Wildlife	<ul style="list-style-type: none"> • A rich coral community that is different from a tropical reef • 39 out of 50 recorded local stony coral species can be found • A wide variety of animal species of scientific interest 	<ul style="list-style-type: none"> • Chinese White Dolphin- first-class protected animal, 'star' species • Finless porpoises (dolphin) • A variety of marine resources including fish and shrimps • 250 cormorants (bird) roosting in this park 	<ul style="list-style-type: none"> • Ample opportunities for watching birds, butterflies and dragonflies • Over 30 hard and soft coral species • Over 130 species of fish • Over 40 species of seaweed • Over 100 species of marine invertebrates • Rocky shore animals 	<ul style="list-style-type: none"> • A diversity of stony corals and marine eel grass, which is rare in the tropics

Table 2 shows the tourism attractiveness of the four marine parks. The assessment was based on secondary data (Appendix 1). Some of them are simple facts and some are discussed in detail as follows.

Accessibility

As shown in Table 2, the locations of the four marine parks are rather remote. However, it is precisely their remoteness that keeps their environment in a pristine condition. With regard to Hoi Ha Wan, although the park is relatively easy to reach through public transportation, connections are required and it takes an average of two hours to get there. Also, the vessels currently used/allowed to go to Tung Ping Chau and Yan Chau Tong are very slow and small. This increases the time required to travel to the parks, particularly for groups over a hundred, which limits the number of people visiting the parks at a time. As for Sha Chau and Lung Kwu Chau, it is accessible by joining a dolphin-watching tour. This is the most convenient way for tourists to go to a marine park. Therefore, effective water transportation is very important. Largely because of its accessibility, dolphin-watching in Sha Chau and Lung Kwu Chau is going to develop at a faster rate than in the other three marine parks. Nevertheless, accessibility remains a great challenge for the development of ecotourism or the promotion of the marine parks.

Table 3 Comparison of Ecotourist Activity Preferences and Availability in Hong Kong Marine Parks

ACTIVITY PREFERE NCES ¹	CASE NUMBER ²									AVAILABILITY IN MARINE PARKS ³			
	1	2	3	4	5	6	7	8	9	Hoi Ha Wan	Sha Chau & Lung Kwu Chau	Tung Ping Chau	Yan Chau Tong
Hiking	✓	✓	✓	✓	✓	✓				✓	x	✓	✓
Wildlife viewing	✓	✓	✓			✓		✓	✓	✓	✓	✓	✓
Photography	✓	✓	✓					✓	✓	✓	✓	✓	✓
Local cultures	✓		✓		✓	✓	✓			✓	✓	✓	✓
Scuba diving			✓	✓			✓	✓	✓	✓	✓	✓	✓
Bush walking	✓						✓	✓	✓	x	x	x	x
Bird watching	✓	✓						✓	✓	x	✓	✓	x
Camping				✓	✓	✓			✓	✓	x	✓	x
Touring		✓			✓			✓	✓	✓ ⁴	✓	Not for public	Not for public
White-water rafting				✓		✓		✓	✓	x	x	x	x
Admiring nature					✓	✓		✓	✓	✓	✓	✓	✓
Swimming	✓		✓		✓					✓	✓	✓	✓
Viewing flora		✓						✓	✓	✓	✓	✓	✓
National park visits	✓						✓			Sai Kung West Country Park	x	Plover Cove Country Park	Pat Sin Leng Country Park
Horse riding								✓	✓	x	x	x	x
Biking				✓		✓				Permit	x	x	x
Fishing					✓	✓				Bona fide fishermen through permit system			
Skiing				✓		✓				x	x	x	x
Canoeing				✓		✓				✓	✓	✓	✓
Sailing				✓	✓					✓	✓	✓	✓
Guided trail walks	✓									✓	x	✓	✓
Sunbathing			✓							✓	x	✓	x

Keys: ✓ Available; x Unavailable

¹ Variables ranked by frequency of response

² Source: ¹ Weaver and Lawton, 2002; ² Saleh and Karwacki, 1996; ³ Palacio and McCool, 1997; ⁴ TIAA, 1994; ⁵ HLA/ARA, 1994 (general ecotourist); ⁶ HLA/ARA, 1994 (experienced ecotourist); ⁷ Blamey and Hatch, 1998; ⁸ Diamantis, 1998 (frequent ecotourist); ⁹ Diamantis, 1998 (occasional ecotourist)

³ Assessment based on websites and printed materials

⁴ Available in the coming summer

Cultural Attractions

In Hoi Ha Wan, there are historical lime kilns that show the lives of Hakka villagers more than a hundred years ago while in Tung Ping Chau, visitors can find relics of local villages and learn about Chinese religion (Appendix 1: No.1). These cultural attractions are unique and have great appeal to western tourists who would like to learn about the history and culture of the Chinese.

Infrastructure

As shown in Table 2, the available infrastructure is mostly commonplace, but some are worth highlighting. The Hoi Ha Wan Marine Park Warden Post is situated adjacent to the entrance of Hoi Ha Village. The warden post serves as a management office as well as a visitor centre. In the warden post, a small exhibition and video programme on the marine park are provided. In addition, there is a marine park warden on duty who will give an introduction to the marine park, address enquiries, and distribute leaflets, posters, and information on activities in the park (Appendix 1: No.7). The Jockey Club HSBC WWF HK Hoi Ha Marine Life Center, which is currently under construction, is a marine education center that will provide an exhibition panel, interactive display auditorium, and thematic guided study tour for the public. These facilities encourage ecotourism, with an emphasis on the educational component. Being the most recently established marine park, the infrastructure at Tung Ping Chau is quite comprehensive. However, tourist facilities in the remaining two marine parks are extremely inadequate. Infrastructure is a prerequisite for tourism. It should be in place before visitors are invited to come.

Natural Scenery

All four marine parks have beautiful natural coastlines. In addition, Tung Ping Chau is famous for its sedimentary rock formations, which have given rise to many magnificent and unique coastal landforms (Country and Marine Parks Authority, 2000). Ten different scenic spots can be found along the island's coastline (Appendix 1: No.7).

Recreational Activities

A wide variety of activities including water sports and terrestrial activities are available in Hoi Ha Wan, Tung Ping Chau, and Yan Chau Tong (see also Appendix 1: No.7/9). Currently, in Hoi Ha Wan, guided tours are available for school and organizations only. Public guided visits will also be available in the coming summer. This is a great advancement that is beneficial for the development of ecotourism. On the other hand, the availability of scuba diving in Hong Kong marine parks is very attractive to ecotourism as scuba diving is very popular in Western countries especially in the Great Barrier Reef of

Australia, although Hong Kong marine parks will not be able to reach the same scale of popularity.

Tourist Circuit

With the exception of Sha Chau and Lung Kwu Chau, the other three marine parks all have country parks nearby. Hong Kong's country parks comprise scenic hills, woodlands, reservoirs, and coastlines, and offer activities ranging from leisure walking, fitness exercises, hiking, and barbecuing to family picnics and camping (Appendix 1: No.1). These are additional attractions that can enrich a tourist's experience. Following this same approach, the Agricultural, Fisheries, and Conservation Department is promoting the 'Tung Ping Chau Eco-Exploration' programme. The idea is to combine country and marine parks in Tung Ping Chau as a total ecotourism experience that will allow for a more complete educational experience and greater enjoyment.

Wildlife

Regarding wildlife viewing, all four marine parks have their distinct features. For example, Hoi Ha Wan is known for its rich coral community; Sha Chau and Lung Kwu Chau is where the Chinese White Dolphin can be found; Tung Ping Chau possesses a variety of plants and animals such as birds, butterflies, and dragonflies; and Yan Chau Tong features its marine eel grass, which is rare in the tropics (Appendix 1: No.1/7/9/10/12). All of these are of high ecological value.

Ecotourist Activity Preferences - Demand Side

As shown in Table 3, the left-most column lists the twenty-two most popular activities for ecotourists in the nine cases cited. The middle column shows their actual occurrence in the nine cases. The activities are ranked by frequency of count, with the highest frequency listed first. Therefore, the five activities most preferred by ecotourists are hiking, wildlife viewing, photography, encountering local cultures, and scuba diving.

The right-most column of the same table (Table 3) indicates the availability of those activities in each of the four marine parks in Hong Kong. The top five activities - hiking, wildlife viewing, photography, encountering local cultures, and scuba diving, can be pursued in all four marine parks. Also, of the twenty-two preferred activities, only bushwalking, white water rafting, horse riding, biking, fishing, and skiing are not available for visitors in any of the marine parks. Of the four marine parks, Hoi Ha Wan has the greatest potential to attract ecotourists, as fifteen out of the twenty-two activities can be found there. Tung Ping Chau has fourteen activities.

Therefore, as shown by the results, marine parks offer a variety of activities that can satisfy ecotourists from different countries.

Current Management Practices in Marine Parks - Supply Side

In Table 4, the first two columns show the ecotourism practices and their purposes as suggested in the literature review; and the last two columns show the current management practices in marine parks (Appendix 1: No.9/11/12). It was found that current practices in marine parks are very much aligned with ecotourism management techniques. However, admission fees are not applicable in the case of Hong Kong. All four marine parks are only small-scale parks that are wholly controlled and financed by the government. The expenses incurred do not reach the level of some national parks like the Yellow Mountains in Anhui, China. Therefore, the no-charge policy works well here, as this can also encourage visits. Because of the regulatory management approach and in order to monitor the number and size of tour groups, tour operators are advised to notify the Marine Parks Division of their arrangement. The management of marine parks may then consider scheduling groups at different times if there are a number of tours planning to go there at the same time. Other than that, the purpose of having a fishing permit system is to maintain a balance among the marine environment, local livelihoods, and fishing rights. This can protect marine biodiversity as the fish in the area will have enough time to reproduce and replenish themselves if fishing is limited. This will also help to protect dolphins, which reside in the area of Sha Chau and Lung Kwu Chau, by reducing the disturbance from fishing boats and fish nets. Although fishing is restricted in marine parks, local fishermen actually benefit from this regulation because their fish yield can be sustained and their fishing rights are exclusive.

Implications for Marketing and Management

While demand for ecotourism is increasing around the globe, many challenges for its development at an operational level involve an assessment of the real attractiveness of natural resources and the development of appropriate marketing strategies. This requires an understanding of both the demand and supply sides of ecotourism, or ecotourism will continue to exist on paper only. The assessment criteria presented in this paper are important for signalling the true value of resources. The careful application of such criteria will identify the strengths, weaknesses, opportunities, and threats to a site, thereby increasing the possibility that the development of ecotourism will pay off.

Although there is still a very long way to go before marine parks can be established in the ecotourism sector, the outlook is positive. This case study of Hong Kong shows that marine parks have generally good potential to be developed as ecotourism attraction. Their most important strength lies in the

Table 4 Comparison of Marine Park Management Practices with Ecotourism Management Techniques

ECOTOURISM MANAGEMENT TECHNIQUES	PURPOSE	CURRENT PRACTICES IN HONG KONG MARINE PARKS	COMMENT
Source: Literature review		Source: marine park printed materials	
Managing host community			
<ul style="list-style-type: none"> Communication with host community Local participation 	<p>2.1 To gain local support</p> <p>2.2 To understand the attitudes of the local community</p>	Marine Park Visitor Liaison Group-regular meeting every few months	To let local people and the public to express their opinions regarding management and monitoring of marine parks
Economic			
Entrance fee	To cover the costs of managing certain activities and to make a profit for research and environmental protection	No entrance fee is required	<ul style="list-style-type: none"> Encourage visitors to go to marine parks Cater for visitors who simply want relaxation and sight-seeing Not suitable in Hong Kong as marine parks are non-profit making and completely financed by government
Fines	To modify people's behaviour	Penalty for destructive and unauthorized behaviour	Contravention may lead to a fine of HK\$25,000
Regulatory			
Controlling the number of visitors	To control the impact of visitor behavior/behaviour	Monitor the total number of visitors per year	Number of visitors has been acceptable and thus no restriction on number of visitors at this stage
Prohibiting certain activities	To reduce the harm done to the environment	Monitor the number and size of tour groups	Arrange tours at different times if necessary to avoid overcrowding, which affects tourist satisfaction, and protect environment from high concentration of use
		Marine Parks Ordinance (Cap.476) (see Appendix 6 for prohibited activities)	<ul style="list-style-type: none"> Park wardens patrol and check whether anyone breaks the rules; they are empowered to give warnings and take law enforcement action whenever necessary Contravention may lead to convictions, fines, and one year of imprisonment
		Fishing permit system	Permits are issued to local villagers and bona fide fishermen only
Zoning	To allow for efficient site protection	Designated area for mooring, anchoring and recreational activities	
Educational			
Passive interpretation	<ul style="list-style-type: none"> To encourage appropriate behaviour to reduce visitor impacts/conflicts To enhance appreciation for nature through education To promote an ethic of conservation 	<ol style="list-style-type: none"> Code of conduct Public seminars Printed material such as leaflets and postcards WWF Marine Life Centre Exhibitions Signs 	<ul style="list-style-type: none"> Guidelines for visitors to minimize impacts Introduce marine parks' ecology, value and educate visitors about appropriate behaviour
Active interpretation		<ul style="list-style-type: none"> Educational visits Beach clean-ups Seashore field studies 	Organized for schools and organizations
		<ul style="list-style-type: none"> Public lecture series Public guided visits (available in summer 2002) 	To enhance public awareness of marine environment and marine conservation

natural resources that they possess. Currently, Sha Chau and Lung Kwu Chau Marine Park, is the fastest growing, mainly because of the presence of the Chinese White Dolphin, which is regarded as a 'star' species. However, Hoi Ha Wan and Tung Ping Chau should not be overlooked because they offer diverse activities and sight-seeing opportunities, and relatively better accessibility and infrastructure. Although accessibility and infrastructure are only supporting functions, the development of tourism would be impossible without them. These are the greatest weaknesses of Hong Kong's marine parks. A great deal of advancement in these two areas will be required if ecotourism is to be widely promoted. The four marine parks have designated sea areas, representing over 90% of the area of the parks. The remaining area consists of coastal areas surrounding the sea fronts. These marine parks are typical

parks as they are sheltered by land and located near the sea fronts. Therefore, the proposed assessment procedures could also be applied to other countries where the marine parks have similar features.

The evaluation of the preferences of ecotourists in terms of activities indicates that Hong Kong marine parks do have the opportunity to be promoted in the international market in the long term. But the first step for now is to gain awareness and support from the domestic market. Also, more research on ecotourists will be required in order to design a good marketing plan for both domestic and international visitors.

Referring back to Table 4, the current management practices at the marine parks actually follow the same practices of good ecotourism techniques. Although the primary objective of marine parks is marine conservation, as people become more aware of this pristine environment through the on-going promotion of marine parks, the demand for tourism will increase. The impact of visitors on the fragile environment will become the greatest challenge. It is important for management to develop a vision of tourism planning and to stay tuned to changes in the tourism market. Several techniques that can be used prior to implementing a tourism development project to ensure the sustainability of the environment; e.g. conducting an environmental impact assessment, commonly known as EIA; and assessing the carrying capacity as well as limits of acceptable change of the park (Ceballos-Lascuráin, 1996; Wearing, 1999).

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Appendix 1 List of secondary data (supply side)

	Websites
1	Country and Marine Parks Authority: http://www.info.gov.hk/afcd/parks/e/ehome.htm
2	Hong Kong Dolphinwatch Ltd.: http://www.zianet.com/dolphins/
3	Hong Kong Ecotourism Association: http://www.ecotourismhongkong.org/
4	Hong Kong Marine Conservation Society: http://www.hkmcs.org
5	HKNature: http://www.hknature.net/index1.htm
6	Hong Kong Tourism Board PartnerNet: http://partnernet.hktourismboard.com/dev/
7	Marine Parks: http://parks.afcd.gov.hk/marine/newmp/index.htm
8	Tourism Commission: http://www.info.gov.hk/tc/content/content2.htm
	Title of leaflets published by Agricultural, Fisheries & Conservation Department
9	"Help protect our marine environment: Marine parks and marine reserve" (July 1999)
10	"Hong Kong's Chinese White Dolphin and Finless Porpoise"
11	"Marine Parks: Educational activities" (August 2001)
12	"Tung Ping Chau Eco-exploration" (November 2001)
13	"Understanding the threats to coral communities in Hong Kong and contribute your efforts to conserve it" (2001)

Appendix 2 List of journal articles of ecotourists (demand side)

Case No.	Author	Year	Target	Journal Title
1	Weaver & Lawton	2002	Australian ecolodge overnight ecotourist	Overnight ecotourist market segmentation in the Gold Coast Hinterland of Australia
2	Saleh & Karwacki	1996	Australian ecotourist	Revisiting the Ecotourists: The Case of Grasslands National Park
3	Palacio & McCool	1997	Belize ecotourist	Identifying ecotourists in Belize through benefit segmentation: A preliminary analysis
4	TIAA	1994	US adventure & outdoor travellers	Adventure Travel: Profile of a growing market
5	HLA/ARA	1994	North American general ecotourist (next trip)	Ecotourism-nature/adventure/culture: Alberta and British Columbia market demand assessment
6	HLA/ARA	1994	North American experienced ecotourist (next trip)	
7	Blamey & Hatch	1998	Australia nature-based tourists	Profiles and motivations of nature-based tourists visiting Australia
8	Diamantis	1998	UK group frequent ecotourists	Ecotourism: characteristics and involvement patterns of its consumers in the United Kingdom
9	Diamantis	1998	UK occasional ecotourists	

