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Tourism in the APEC Region and its Promotion in an Ecologically Sound Way Through Regional Co-operation

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The tourism sector is more dependent on suitable environments for its economic prosperity than most industries. While different types of tourism depend on varied factors, natural environments, built and cultural environments appear to be of overriding importance. Furthermore, connections between tourism and the state of these environments are ones of interdependence - tourism is influenced by them and affects them. Currently there is much interest in ecotourism (a form of tourism which relies on living environments) and many APEC countries wish to promote it for economic gain and to provide an economic basis for nature conservation.

The environment is likely to assume mounting importance in relation to tourism in the Asia-Pacific region for a number of reasons:

(1) Tourism in the Asian-Pacific region is growing at the fastest rate of any region in the world and in line with this, tourism facilities, investments and tourism loads are increasing and placing strains on natural environments.

(2) Natural environments suitable for tourism are under threat from the rapid rate of economic growth being experienced in many East Asian economies and in some countries from continuing population growth.

(3) In some cases too, growing tourism is being hampered by deterioration in water and air quality and by urban congestion due to economic growth.

The paper discusses the growing economic importance of tourism in the APEC region, environmental trends of significance for it, and the impact of tourism in the region on natural environments. Problems and issues involved in ecotourism in the Asian-Pacific region are briefly considered and some examples given. This is followed by a discussion of international dimension of the problems involved in developing tourism and conserving ecological resources and the scope for regional co-operation in dealing with those issues. Suggestions for future research and regional policy are put forward.

TOURISM IN THE APEC REGION AND ITS PROMOTION IN AN ECOLOGICALLY SOUND WAY THROUGH REGIONAL CO-OPERATION

1. Introduction

Although tourism depends on many factors, this major industry is heavily dependent on suitable environments for its economic prosperity. Natural environments, built, cultural and social environments are of overriding importance for the tourism industry as a whole. Asset theories of the generation of tourism (Bull, 1991, Ch. 9) point to the significance of such factors and tourism texts often devote considerable space to dealing with these elements (e.g. Hudnan, 1989). Furthermore, most tourism texts emphasize that tourist development and the state of these environments are interdependent, that is, levels and types of tourism are influenced by the state of these environments and tourism can alter these states. Apart from tourism's influence on these environments, economic growth and change, population increases and the development of other industries affect tourist environments.

Of course tourism does not depend only upon the environmental assets available in a country. The relative costs of tourist services such as transport, hotel services and so on, make a difference as may the price of commodities which some travellers purchase abroad to bring back to their own country.

In relation to environments attractive to tourists, it is useful to distinguish between those that are (1) not reproducible and relatively unique and (2) those that are reproducible. Category (2) may be further subdivided into those environments (2a) that are basically reproducible almost anywhere, e.g., gambling casinos and (2b) those that are only reproducible within a particular locality or region, e.g., wildlife which is a tourist attraction but ecologically confined to a particular region. Type (2a) tourist assets are often man-made and are 'footloose'.

A country may earn long-term (Ricardian) rents from tourists if it conserves type (1) and type (2b) tourist assets. (See Tisdell et al., 1992). Rents from type (2a) assets tend to be relatively short-lived. The loss of non-reproducible tourist assets by a country can result in irreversible economic loss because these assets provide it with a natural competitive advantage over other countries as far as its attractiveness to tourists is concerned. Note that type (2b) assets may become non-reproducible when they are reduced below some threshold level. Examples include populations of a species depressed below levels where the chances of the survival of the species is low. Another example might be loss of skills necessary to maintain historical buildings and cultural objects because of low-levels of demand for these skills, e.g., demand for stonemasons.

Figure 1 provides a stylised representation of interrelationships between tourism, environments and the rest of the economy mentioned above. It indicates that the rest of the economy (other than the tourist sector) impinges on environments attractive to tourists and that two-way effect exists between tourism and environments attractive to tourists.

Insert Figure 1

Currently many APEC countries are interested in ecotourism and wish to promote it for economic gain and to provide an economic basis for nature conservation. In general, conservationists welcome this new attitude. However, views about what constitutes ecotourism differ to some extent. One view is that it is a form of nature-based tourism relying on natural living environments and the maintenance of their natural ecosystems. Another is that it is a form of tourism which makes use of living things, but not necessarily in their natural state. Basically, the stress in ecotourism is on the dependence of such tourism on living things as an asset, that is, on the downward arrow pointing to 'tourism' in Figure 1. A second approach to delineating ecotourism stresses the upward arrow, namely minimising the adverse impact of (or spillovers from) tourism on natural living things. Duff (1993) suggests for example, that ecotourism caters for a niche market and what tour operators involved in ecotourism 'have in common is a genuine respect for the natural resources on which their businesses depend, a strong conservation ethic, a commitment to minimise the impact of their activities, and direct provision of environmental education for their guests' (Duff, 1993, p. 18). The emphasis in this view of ecotourism is on care for the natural environment and the provision of environmental education. For some proponents of ecotourism, environmental education is an essential ingredients for ecologically sustainable tourism.

In practice, only limited agreement exists about what constitutes nature-based tourism and ecotourism (Lindberg, 1991, p. 3). A study by the World Resources Institute suggests that nature-based tourism is much more than a niche industry and in 1989 it accounted for up to 20 per cent or more of the tourism foreign exchange earnings of developing countries (Lindberg, 1991, p. 5). Repetto (1991, p. ix) says: 'Nature tourism is booming, as more and more travellers set out in search of the unspoiled natural wonders and exotic cultural experiences the developing world has to offer... The axiom that good ecology is good economics applies clearly in this industry, which generates some \$30 billion in revenues every year.'

It is not possible to explore further definitional and measurement aspects of ecotourism and nature-based tourism here, even though important issues are involved which are discussed by Valentine (1992). There is little doubt that this type of tourism is of growing economic importance in the APEC region.

Environmental conservation is likely to assume mounting importance in relation to tourism in the Asia-Pacific region for a number of reasons:

(1) Tourism in the Asian-Pacific region is growing at the fastest rate of any region in the world and in line with this, tourism facilities, investments and tourism loads are increasing and placing considerable strains on natural environments.

(2) Natural environments suitable for tourism are under threat from the rapid rate of economic growth being experienced in many East Asian economies and in some countries from continuing population growth. (3) In some cases too, growing tourism is being hampered by deterioration in water and air quality and by urban congestion due to economic growth.

The paper discusses the growing economic importance of tourism in the APEC region, environmental trends of significance for it, and the impact of tourism in the region on natural environments. Problems and issues involved in ecotourism in the Asian-Pacific region are briefly considered and some examples given. This is followed by a discussion of international problems involved in developing tourism and simultaneously conserving ecological resources. The scope for regional co-operation in dealing with those problems is considered and suggestions for future research and regional policy are put forward.

2. The Growing International Economic Importance of Tourism in the APEC Region

Both international tourism and domestic tourism have been expanding rapidly in the APEC region, particularly in its East Asian/Australasian component. To large extent this can be attributed to rapid rates of economic growth in East Asia and the adoption of more liberal international tourism policies

by many of its governments, e.g., Japan and South Korea. Because APEC is a mixed grouping of countries in terms of their stages of economic development and cultural background, not all members have shared equally in international tourism growth in the APEC region. Oceania (especially Australia) and Eastern Asia including Southeast Asia, have made the larger comparative gains from international tourism with North America making smaller gains, but nevertheless expanding its tourist arrivals at a faster rate than the rest of the world due largely to its links with Asia.

Recent global statistics on tourism are always difficult to obtain but tourism statistics for 1985 and 1990 (see Table 1) highlight the main trends. For the world as a whole, tourist arrivals increased by almost one-third between 1985 and 1990 but the actual increases for Oceania, East Asia and North America were well in excess of this figure. Those for South Asia (not a part of the APEC region) were below the world average.

As for international tourism receipts (see Table 1) for the world as a whole, these increased by 153 per cent between 1985 and 1990. The rate of increase for Oceania was markedly above this level and that for East Asia was above it. That for North America was below the world average increase but the rate of increase towards the end of the period for North America was similar to the world average. Without its receipts from Asian tourists the foreign exchange earnings of North America from tourism would have been substantially reduced, especially in the western US and for its territories in the Pacific. In 1990, East Asian and Pacific tourist arrivals accounted for over 10 per cent of North American foreign tourist arrivals, about two-thirds of the European figure, and the Asian-Pacific share is rising. While the figure of 10 per cent may seem low it is not insignificant, when one considers that the norm is for most international tourist arrivals to be from the region in which a country is located or a nearby one (see World Tourism Organisation, 1992). In the case of North America, most international visitors are from the Americas.

Insert Table 1

The relative growth in foreign tourist arrivals and growth in receipts from such tourism for selected areas within the APEC region are shown in Figures 2 and 3.

Insert Figure 2

Insert Figure 3

From Table 1, it can be seen that the number of foreign tourist arrivals in East Asia and Oceania have almost doubled in a five-year period. They would have more than double in a 10-year period. For countries such as Australia, this has had a substantial impact in altering the structure of its economy and foreign exchange earnings. In Australia, tourism and associated travel is now one of its major industries and a major earner of foreign exchange. While Eastern (including South Eastern) Asia has gone from a situation where it had a surplus on its international tourism account to a

deficit, the reverse trend is apparent in Oceania (especially Australia) and North America has reduced its deficit to the stage in 1991 where it almost broke even on its international tourism account. By contrast, Japan has developed a very large deficit on its tourism international account, partly as a result of changed Japanese policy and South Korea seems also to be developing a deficit on this account (Ritchie and Hawkins, 1992, p. 7).

Since 1987, Japan has adopted a policy of encouraging Japanese tourists to go abroad (e.g. the Ministry of Transport's 'Ten Million Plan'), so as to create deliberately a deficit in its international tourism account to help Japan offset its very large trade surplus from its merchandise account (Mackie, 1992, p. 77). A considerable amount of increased tourism in the Asian-Pacific region is coming from Japan, with the 'little dragons' such as Taiwan, South Korea, Hong Kong and Singapore making a substantial contribution. At the same time as Japan adopted its outward tourism policy, it also increased its investment in the foreign tourism industry in the Asia-Pacific area. It has for example become the major foreign investor in tourism development in Australia, and investment in this area has replaced that in mining as its main line of direct investment in Australia (Toyama, 1992, esp. p. 43; Tisdell, 1992). Growth of tourism in the Asia-Pacific area has stimulated investment in tourism development and associated services both by domestic and foreign investors (see for example Wen and Tisdell, 1991a,b). This growth has been associated with greater liberalisation of trade in tourism services both by countries sending tourists to the region and by recipients, e.g., Australia has widened the landing rights which it afford to foreign airlines. This is not to say that no scope exists for further liberalisation, e.g., tourists from China still find it difficult to go abroad.

Mak and White (1992, p. 22) in a useful review of comparative tourism development in Asia and the Pacific conclude:

'Since the 1960s, international tourism in the Asia-Pacific region has grown rapidly. Most of the increase can be traced to the increase in intraregional travel among residents of the Asia-Pacific countries. High rates of economic growth in the region, reduced costs brought about by the use of jet aircraft, and the increase in leisure time have combined to spur travel abroad. Faced with strong demand for travel and healthy trade surpluses, a number of countries have eased exit travel and currency restrictions imposed on their own residents. The most notable case is Japan, which is the largest tourism generator in the regions, although bottlenecks remain.'

In line with most studies, they estimate that income per capita is an important explanatory variable for outward tourist departures for Asia-Pacific countries and find that for every 1 per cent increase in income per capita, outward tourist departures rise by almost 0.5 per cent.

Although Korea and Taiwan, like Japan, have liberalised overseas travel by their nationals, Mak and White (1992, p. 22) are of the view that significant restrictions still exist on free travel abroad, e.g., monetary and other restrictions. Nevertheless, it is likely that these will continue to be eased. This together with rising per capita incomes in the region will lead to further considerable growth of foreign tourism in the region. In some areas, this tourism development is already imposing

environmental costs. In addition, the rapid growth of most East Asia economies is damaging many of their environmental assets which attract tourists. Let us consider the economic growth of the countries involved and the impact of this growth on environmental assets of value for tourism.

3. Economic Growth in APEC Countries, Changing Industrial Structure and their Impacts on Environmental Assets of Value for Tourism

The economies of many East Asian countries have grown rapidly but there are exceptions, such as The Philippines which has fared poorly. Table 2 provides information for selected countries in the APEC region on their growth rates of GDP and growth rates of population since 1980 and the extent of deforestation. All Asian countries in this group (except The Philippines), have had higher growth rates of GDP than the world average, substantially higher rates in most cases, e.g., China. At the same time, the rates of population growth for less developed countries in the region (with the exception of Indonesia), while declining in most cases are above the world average. Thus natural environments in East Asian countries are being put under pressure by the twin elements of economic growth and population growth.

Insert Table 2

Note that for all Asian countries in Table 2, (except The Philippines) their GDP rose at a much faster rate than their rate of population growth. Consequently their GDP per head increased. As indicated by Mak and White (1992), rising per capita incomes are positively correlated with rising departures for overseas travel by residents of East Asian countries.

One consequence of economic growth and rising population (and attempts to achieve even higher levels of economic growth) has been considerable deforestation in the lower income economies in East Asia. (Countries in Table 2 are arranged in order of increasing levels of per capita income according to the ranking of the World Bank, 1993). While levels of deforestation are of concern for all lower income countries from Malaysia downward, the extent of the loss in The Philippines and Thailand is the most striking. As a result, there can be little doubt that the extent of forest ecosystems suitable for ecotourism has declined sharply.

As for nationally protected areas in East Asia countries, these are proportionally less for low and middle income countries in the region than for high income countries. Comparative percentages are China (3.0), Indonesia (10.2), The Philippines (1.9), Thailand (11.0), Malaysia (4.5), Australia (10.6) and United States (10.5), (World Bank, 1993, Table 3). While Indonesia and Thailand have on the basis of those figures quoted, large relative protected areas, in practice, these figures may be deceptive because of actual encroachment on and human use of such areas. This is a common feature in most developing countries

In addition, most lower income developing countries in Asia appear to have suffered rising levels of air pollution and of water pollution even though higher income countries in Asia have improved their situation in that respect. World Bank (1992) data suggests that there may be an inverted U-shaped relationship between per capita levels of income of countries and local air and water quality. Furthermore, many lower income countries in Asia have experienced rapid urbanisation, increased urban sprawl and slums, severe traffic congestion and urban pollution from traffic. Examples of cities that have become extremely congested in this way include Bangkok, Manila, Jakarta and even Taipei. They lack rapid mass transport systems such as a good network of metropolitan or subway trains. However, Taipei is now having an electric (subway) train system constructed according to French designs. Traffic problems and associated air pollution in many of these cities are already a deterrent to international tourists and are partially a consequence of economic growth. At the same time, economic growth has led to an upgrading of some transport systems, e.g., improved air communications in China and improved interprovincial roads and so on (Lian and Tisdell, 1993). Thailand's main country roads have also improved considerably and so has its air network but the problem in Bangkok as far as transport is concerned is a major one.

There are particular economic situations where economic activity other than tourism, has an adverse impact on tourism in Asia. In Phuket in Thailand, for example, local tin-mining based on sluicing leads to the discharge of sediments into the sea which increases the turbidity of the water, blocks out sunlight, and results in the death of corals (Tisdell, et al., 1992). Corals are a drawcard for marine-based tourism in the area. In addition, the discoloured seawater is not attractive to tourists. Similarly, deforestation on Palawan in The Philippines has been implicated in the loss of corals due to raised turbidity of the seawater because of soil erosion and periodic 'freshes' in the sea due to rapid rates of water discharge during the wet season. The local tourism industry and fisheries have suffered. There is a possibility that industrial development and smelting activities in Yunnan, China, could lead to acid rains, air and water pollution destroying areas of natural vegetation. Economic growth in Hainan Island in China is said to be causing considerable environmental degradation and this could affect adversely the beach and related tourism industry which China is trying to develop there. Furthermore, in some cases acid rains and levels of air pollution damage historic monuments, relics and buildings (Jihan and Dowling, 1992, p. 153) as well as natural vegetation.

4. Tourism's Influence on Environments in the Asia-Pacific Region

Not only is tourism influenced by available environments, but it also affects them. The influence of tourism on environments is sometimes claimed to be positive but often it is negative. Let us consider positive and negative possibilities taking examples from the Asian-Pacific area.

It has been argued that tourism can provide positive economic incentives for conservation of environments if these form the basis for a tourist industry (IUCN, 1980). While economic incentives can be a powerful force for conservation, whether or not they lead to conservation of environments valuable for the support of tourism depends on the way these economic forces are harnessed by institutions. The nature of property-rights and mechanism of social choice in communities. In some cases, including these involving tourism, market and related failures occur, for example because of the existence of economic and environmental spillovers or externalities, inappropriate forms of

property rights and defects in political and other social mechanisms for social choice. Given defects of this type, environmental assets of value for tourism may be destroyed rather than conserved when levels of tourism and the value of such assets rises. In such cases, conflicts between personal or individual gains and social benefits are liable to emerge and in fact the destruction of environmental assets important for the maintenance of tourism may become more rapid as tourism grows and the economic value of conserving such assets rises. So without appropriate institutional mechanisms in society, an economic and environmental tragedy occurs. The possibility for such tragic events in the APEC region are rising as tourism and economic gains from it are growing rapidly.

As for positive links between tourism and conservation of environments, it is sometimes argued that tourism may have positive impact on the preservation of cultural environments and historical ones. For instance, demand for tribal cultural performances, traditional arts and man-produced objects may provide economic incentive for their continued production. On the other hand, commercialisation often 'cheapens' these products which becomes curiosities rather than remaining an integral part of local culture. In fact, contact with foreign tourists may hasten the demise of local culture. Where there is payment for access to historical and natural environments of value for tourism and the authority responsible for their maintenance obtains the receipts, this may provide both incentives and means for their conservation. Often, however, there is limited payment for access to such environments or no payment at all. When payment occurs, it frequently does not stay at the local level but is siphoned off to the central level of government thereby eroding local economic incentives for conservation.

While in economic and social terms, the conservation of valuable tourism environments makes sense, this is very often not translated into practice because of defects in socio-economic mechanisms. In such circumstances, it may happen that 'tourism destroys tourism'.

In order to be more concrete, consider examples in which the development of tourism in the Asia-Pacific region has been destructive of natural environments or caused environmental problems. The following are some examples:

1) Collection of souvenirs such as coral pieces, damage to corals from diving and tourist boat anchors has been identified as a problem in Phuket (Tisdell et al., 1992).

2) The building of golf courses, often associated with the expansion of Japanese tourism, constitutes a problem in some areas. In Hong Kong, for example, one of the more pristine areas (Sha Lo Tung), which also happens to be in an important water catchment area for a dam which supplies domestic water, is threatened by a proposed golf course to cater mainly for international tourists (Carlin, 1994). Not only would the pristine area be lost, but there is a water pollution possibility given the high rate of fertilizer and pesticide use on golf courses. In some areas, also golf courses constructed to cater for tourism have been implicated in the loss of corals. This appears to be the case in Okinawa where water run off from golf courses adds to sediments in nearby seawater causes nutrient enrichment and thereby promotes algal blooms blocking out sunlight and killing corals.

3) Sewage disposal from hotels and urban development (associated with the growth of the tourism industry) into the nearby ocean leads to water pollution and again adds sediment and may encourage algal bloom thereby destroying corals. This is reported to have occurred in Bali (Tisdell, 1984) and may have also occurred on a number of the Pacific Islands.

4) Where the number of tourists to a tourist area fluctuates throughout the year, local sewage and water supply systems are frequently unable to cope with peak loads. This for example has been a problem in Guilin in China (Tisdell and Jie, 1992b).

5) In addition, tourism can add considerably to water demands in an area not only to meet the direct requirements of tourist but to maintain the gardens and swimming pools which often accompany tourism. This can add to demands to construct additional dams, thereby flooding natural areas. Furthermore, demands of tourists for electricity, transport and so on have to be met and the expansion of these industries is not without environmental impacts, e.g., both add to greenhouse gases.

6) The infrastructure built to cope with increased tourism often has adverse impacts. The construction and extension of airstrips is frequently at the expense of natural vegetation or seascapes. Strong environmental opposition to the extension of the airport at Ishigaki Island in Southern Japan into the sea provides a good example. In addition, increased tourism brings with it greater noise pollution, e.g., from aircraft. Tourist development often requires new roads which can dissect natural areas and may reduce their ecological viability.

7) Increased tourist traffic may add to hazards for local wildlife. This has for example occurred in parts of Northern Queensland. For instance around Mission Beach, cassowaries (Australia's second largest flightless bird and a dweller of rainforests) have become increasingly victims of car accidents as the tourism in this area has grown.

8) Roads and other constructions associated with growing tourism may reduce visual amenity and ruin the holistic aspect of nature desired by some conservationists. For example, the construction of the cable car facilities from near Cairns through the Barron Falls National Park to Kuranda on the Atherton Tablelands to service increasing numbers of tourists to this area most of whom are from overseas has been contentious. The same can be said of growing foreshore building associated with tourism which destroys mangroves and very productive ecosystems in their localities. Proposed developments of this type in Cairns have caused concerns.

9) In some parts of the Asia-Pacific area, construction of buildings up to or near the ocean foreshore has been a significant factor leading to beach erosion, as for example in Australia at the Gold Coast and at Noosa Heads on the Sunshine Coast. Furthermore, beach areas are very much subject to

erosion from human trampling (which destroys vegetation) as does the movement of transport vehicles (such as four- wheel drive vehicles) along them.

10) Natural riverine and similar areas may be partially destroyed by the building of local jetties, marinas, hire-boat pontoons and so on to cater for tourists. In some cases, the wake of tourist boats adds to bank erosion as does that from ski-craft and water- skiing. Furthermore, to cater for tourist craft, dredging of water channels may occur. In some cases, this appears to have led to the destruction of seagrasses, e.g., in the Broadwater of the Gold Coast area of Queensland.

11) Tourist and amateur fishermen can place great pressure on fishing stocks. They have, for example, been implicated in a large reduction in fishing stocks in the Great Barrier Reef region.

12) Another serious possible impact of tourism is the temptation of politicians to allow public goods to be appropriated for essentially private purposes associated with tourism. An example is the proposal of the Queensland Government to allow a gambling casino to be built in the Esplanade public park area of Cairns, a central open park of considerable attractiveness. Other examples include proposals to allow some commercial-type development in Noosa National Park and to allow a tourist resort development in Hichinbrook Island National Park.

13) Not only do many tourist developments tend to destroy the natural foreshore, but they often lead to nearby urban growth, thereby destroying natural areas at a considerable distance from the foci of tourists. This for example, appears to have occurred in Guam. Furthermore, the development of such areas frequently results in their becoming important retirement location as has happened for most of Queensland's beach resorts. This causes considerable destruction of local ecosystems especially when combined with canal development. Coastal wetlands in particular have suffered in Australia from such developments. Large conurbations have grown up and are expanding at a rapid rate in such areas. Some of this 'development' is also spilling over to nearby elevated areas eroding their natural character and adversely impinging on areas of rainforest.

One could easily add to the list of examples. However, Table 3 summarises most of the possible adverse effects of tourism on the environment. Furthermore, the above does not take account of possible social and cultural environmental costs. For example, locals may be offended by the crowding of natural areas which occurs with greater tourism, by the customs of foreign tourists and the transmission of 'unwanted' customs and tastes to locals from foreign tourists.

Insert Table 3

Various attempts have been made in Asia to contain the environmental, social and cultural impacts of foreign tourism, but not always with success. Indonesia provides one of the earliest examples of

this. Indonesian policy was originally to concentrate foreign tourism on a limited number of geographical destinations and thereby it was hoped to limit spillovers to the rest of the country. With French advice, this was tried for tourism development on Bali. The original intention was to try to limit tourism development to the Denpasar Peninsula of Bali with tourists being involved at the most in day trips to other parts of the island. However, it proved to be impossible to sustain this policy (Tisdell, 1984). Other areas of Bali wanted a larger share of the international tourism cake after seeing the 'success' of the Denpasar Peninsula and this led to extension of tourism to highland areas on the island, e.g., golf resorts, and to elsewhere on the island. Other provinces such as Sumatra began demanding a greater amount of the international tourist trade to Indonesia (Tisdell, 1984). For economic and political reasons, the containment of foreign tourists to relatively limited geographical areas in Indonesia could not be maintained. In the Maldives, however, a separationist policy has been sustained except in relation to the capital Male (Sathiendrakumar and Tisdell, 1989). In some other countries in Asia, there are also restrictions on foreign tourists visiting particular areas or states, e.g., India's northeast frontier.

Another environmental aspect worthy of comment is the relative neglect of public assets required to support tourism compared to private facilities such as hotels from which private commercial gains can be made. For example, China has had a boom in the building of hotels and much increased foreign tourism but there does not appear to have been a concomitant increase in public spending on the maintenance of tourist attractions open to the general public. In Suchou, for example, the public gardens of great historical interest and beauty have been relatively neglected as far as their maintenance is concerned (Tisdell and Jie, 1992b). In fact, as pointed out above, the development of tourism has sometimes led to the appropriation of public assets to enable them to be converted to private uses in relation to tourism, often financially benefiting particular individuals or small groups in the countries concerned at the expense of the wider community.

5. Ecotourism in the Asian-Pacific Region: Examples and Issues

As pointed out earlier, the term 'ecotourism' is used in different senses and sometimes loosely as is the term 'ecological' although it is clear from normal English usage that all meanings have relevance to living things. Here I shall assume that ecotourism is tourism which is primarily nature-based and involves experiences in which natural living things play a major role. Much tourism relying on the use of natural parks and protected areas is of this type but it may also combine other elements such as an adventure element. Areas extensively used in the Asia-Pacific for ecotourism include coral reef areas, areas of rainforest and savannah type landscapes.

Within the region the largest marine park is the Great Barrier Reef Marine Park which is managed by the Great Barrier Reef Marine Park Authority (GBRMPA). The Park is zoned for different purposes and managed on a multiple purpose basis with sustainability of the natural resource base being a major goal. It is an area which is attracting a rapidly rising number of tourists, particularly in the Cairns region. With increasing tourist loads, management problems are growing. To help meet its costs of managing the Park, GBRMPA has imposed a small fee on tourists visiting the Reef on tourist boats. However, this fee will not appropriate substantial rents for GBRMPA or the region involved. Nevertheless the Park is an important asset in attracting tourists to the region and thereby

an important source of income for nearby communities.

The northern Queensland area provides a good example of ecologically based tourism in the APEC region, even though 'sun-and-surf' use and some non-ecological attractions form part of most tourist experiences in the area. Experiences based on ecological interactions by tourists are not limited to marine-areas but also include land-based since the area still contains stands of tropical rainforest. Inspection of brochures produced by local tourist operators and distributed to hotels and similar outlets in Cairns indicate that a high proportion of tour operators provide tours in which wildlife is a significant feature (Personal observations, October 1993). While a large amount of tourist experience in the area seems to involve interaction with natural landscapes and wildlife in its natural environment, much involves indirect experiences, e.g., the aquarium at Green Island, the large aquarium/interpretative marine museum dealing with the Great Barrier Reef located at Townsville operated by GBRMPA. Whether these constitute a part of ecotourism could be debated. However, they are educational, do illustrate interactions between the components of natural systems and although to some extent, they are necessarily synthetic, they appear to obtain greater authenticity by their location in or near zones where the living animals or species occur. In fact, the vicarious experience obtained by tourists in this way is often their only substantial contact with a wide range of wildlife during their tourist visit.

The issue of how a country can best appropriate economic gains from its ecological resources used by foreign tourists for tourism is a difficult one. It is widely argued that there will be greater incentive to conserve such resources, if economic gains can be appropriated by the managers of these. In the case of national parks, for instance, economic

rents might be appropriated to some extent by the charging of entry fees or by appropriately marketing concessions to use such a park commercially, e.g., provision of accommodation facilities in the park, operation of tours within the park, operation of souvenir shops within the park, but such concessions should not be such as to jeopardise the natural integrity of the park. Mechanisms for allocating concessions need to be adopted which result in a substantial portion of the rents from the park being appropriated by the authority. Such a system has not yet been widely adopted in Australia, although concessions to private industry are made in some cases e.g., at Kosciuszko National Park. However, there is a need to show care in providing visitor facilities in national parks.

In some developing countries, these facilities are provided at subsidised prices for members of the ,lite. Griffin (1994, p. 19) has observed in relation to Khao Yai National Park in Thailand that:

'Current facilities.....are not used primarily for improving nature experiences. The majority of visitors desire a luxurious cabin-style 'hill station' retreat atmosphere with numerous recreational facilities (i.e. tennis courts, pool tables and party rooms). These types of developments are inappropriate for a park and demand for these can be adequately met by increasing the number of resorts near the park entrance'. Without delving into details, this case does help to illustrate a problem. Furthermore, it seems appropriate to observe that the location of facilities just outside parks would make it difficult

(if not impossible) for park authorities to appropriate maximise rent from the existence of a park.

At least in terms of advertising by the Thai Tourist Authority and Thai Airlines, Thailand has made an effort recently to promote nature-based tourism to Thailand. This is partially to counter the sex-based tourism reputation of Thailand which may deter some foreign tourists. However, it seems that Thailand still has a long way to go in effectively protecting its assets for ecotourism, such as national parks, which to a large extent may still remain paper parks (Griffin, 1994).

China has recently taken greater interest in protecting biodiversity and in harnessing ecotourism to help it finance or justify this conservation activity from an economic viewpoint. In line with this, it has obtained concessional loans through the Global Environmental Facility of UNDP. These funds will be used in part to protect and help with conservation Xishuangbanna National Park in southern Yunnan (Zhu and Tisdell, 1994), an area which has been identified as a biological megadiversity area (Mittermaier and Werner, 1990; Myers, 1990). It is planned to further develop ecotourism in the area to help justify the loan. Planning in relation to this Park is proceeding on the basis that its viability requires its operations to be integrated with the local economy. Particular attention needs to be given to ways in which conservation in the Park can be harnessed, e.g. through tourism, to enhance local incomes.

China has nearly completed a biodiversity conservation action plan (Zhenhua, 1994). As a result it has drawn up a number of research projects and 'experiments' for future implementation. One of the proposed projects is intended to assist with integration of conservation and development in the buffer zones of reserves. Tourism will be one of the aspects considered. Activities for this particular project will include:

'Development of a variety of conservation-development plans for selected local communities near the nature reserve. These may involve proposals such as new crops or rural industries, income from tourism or from employment in the reserve, or straight compensation for the villagers' role in conserving the biodiversity value of the reserve in the form of tax rebates, for instance' (Zhenhua, 1994, p. 84).

Many other examples of nature-based tourism in Asia could be considered e.g., the use of the Sunderbans in West Bengal (India) and Bangladesh for tourism. The nature-protection problems faced by most developing countries are similar. The encroachment of local people on to 'protected' areas, their poaching in and extraction of natural resources from such areas is a continuing problem. Furthermore, protected areas are often inhabited by tribal groups or minority groups many of whom have traditionally utilised these. There is sometimes social conflict between them and the ruling dominant group in the countries concerned. The latter may wish to conserve or use the resources in the 'protected' area in a way not accepted by resident-locals.

It is tempting to believe that if a country has ecological resources which are attractive to tourists,

that this provides a recipe for an economically viable tourist industry. However, the presence of such resources is not sufficient to ensure that an economically successful ecotourism industry can be developed. In many locations where ecotourism exists or could be developed in the Asian-Pacific, it is difficult to manage tourism enterprises economically. Many such areas are in remote locations and the travel costs, inconvenience and time involved in reaching these is considerable. This reduces the demand for visits and limits the knowledge of potential travellers about the location. Furthermore, in many countries in the Asia-Pacific, nature-based tourism is seasonal. Due to the occurrence of monsoons (or wet seasons) often combined with hot humid conditions and associated transport problems, nature-based tourism in many localities grinds to a halt or almost so for a significant part of the year. This may also occur for other reasons, e.g., the risk of typhoons or cyclones at particular times of the year, and in some areas as in northern China, cold winter weather can lead to the suspension of tourism. Such seasonality of demand adds to the costs of providing and maintaining tourism facilities relative to the number of tourists received. Furthermore, there may be difficulties in obtaining and retaining staff on a seasonal basis and attracting staff to remote locations to staff tourist operations. In addition, local people may find it difficult to advertise their tourist attractions or make them known and they can become heavily dependent on external travel agents for business who can take a high commission. Also in remote locations the proportion of expenditure by tourists flowing into and remaining in the local economy tends to be low because even if tourist expenditure is made in the locality, economic leakages from it tend to be high (Hohl and Tisdell, 1994). So apart from the need to conserve the ecological base in order to sustain tourism, ecotourism enterprises have to cope with many economic difficulties; difficulties which are less marked for urban-based tourism. The above difficulties for ecotourism in a remote location have been studied by Hohl and Tisdell, (1994) for Cape York Peninsula in northern Queensland, Australia.

6. The Need for Regional Co-operation in Managing Environments for Tourism

The main reason for co-operation is mutual advantage. There is scope for regional co-operation for environmental management and tourism development. One obvious area in which co-operation would be worthwhile is in the sharing of information and productive knowledge as far as the relationships between environments and tourism are concerned. The extra cost of such sharing is small but since many problems in the region are similar the knowledge will be of mutual benefit.

The second area for possible regional co-operation is in relation to the maintenance of environmental and ecological 'standards' or 'acceptable' practices. Competition between countries and localities in the APEC region for tourism investment, especially foreign tourism investment, may result in environmental and ecological standards being compromised across the board with all countries and localities being eventually worse off than they could be by co-operation because competition leads all to degrade their environments. A so called prisoner's dilemma problem is involved (Luce and Raiffa, 1957). The process of anti-social environmental concessions may be started by the self-interested action of individual countries or localities, or by misinformed or dishonest politicians. It constitutes one of the most serious threats to environments in the Asia-Pacific region. It is useful to illustrate specifically the processes involved.

Take the self-interested competitive case first in which for simplicity, we assume two parties

(countries or players) who are assumed to be well informed about their possible strategies and payoffs. Imagine that both want to benefit from foreign investment in the development of their tourist industries. Suppose further that each country has two strategies available, namely (1) to make no environmental concessions to foreign investors for tourism development or (2) to make such concessions. The payoffs of each country depends on the action of the other in making environmental concessions. If both countries do not co-operate, both may make environmental concessions to their mutual disadvantage in order to attract foreign investment. This for instance is the case when the game-matrix for this problem has the form shown in Table 4. For each cell in this matrix, the first figure shows the payoff to country one and the second figure the payoff to country two for the alternative strategies indicated. No matter what strategy the other country adopts, it always pays the remaining country to make environmental concessions. Consequently both end up by making environmental concessions and both are worse off than they would have been by refusing to make such concessions. In economic terms, they are driven to a Paretian inferior situation by their lack of co-operation.

Insert Table 4

Another possibility is for countries in the region to be forced into making environmental concessions because of the presence of dishonest or corrupt politicians in one or more of the countries. These politicians may become involved in striking secret deals with foreign investors. As a result 'honest' countries are forced into environmental concessions to reduce their perceived economic loss, and the communities as a whole of all the countries are made worse off than they need be. This can be seen from Table 5. The figures in the body of this table are the payoffs to the citizens as a whole in each of the two countries indicated and correspond to adoption of the alternative possible strategies specified. Clearly, the citizens of each country get their maximum payoff if each country makes no environmental concessions to encourage foreign investment in tourism. Suppose that despite this, the politicians of country 2 make environmental concessions to foreign investors in tourism development for private gain e.g., to obtain bribes. In order to cut its losses, country 1 is forced to retaliate and also make environmental concessions to foreign investors in tourism. Consequently, as can be seen from Table 5, the citizens of both countries are worse off than they need be.

Insert Table 5

There is a need for regional cooperation to avert the above inferior social results from environmental concessions being made to obtain (foreign) investment in tourism development. APEC bodies might consider setting up a code of conduct to cover such concessions and set up a watchdog body to operate in a somewhat similar manner to GATT to provide surveillance. Another possibility is for regional industry- based tourism associations to establish and attempt to enforce appropriate environmental standards. This is an industry self-regulation approach. While it may be better than no social control at all, such group controls often 'lack teeth' because of insufficient means for enforcement and policing their codes of conduct. Membership is voluntary and members always have the option to leave an association at any time. In general, a formal body is able to bring more social pressure to bear and is liable to be better resourced for policing and so on.

Even where policing by a regional body is not its main function, it can provide a useful function by transmitting and generating information in a region. The reason why inappropriate environmental concessions are made for development may not always be the dishonest doings of politicians and government officials but because of ignorance of the consequences of such concessions. By regional cooperation, sharing and generation of information through a body such as APEC, the occurrence of some unfavourable environmental results of tourism or similar developments might be avoided.

However, one should not minimise the difficulties involved in enforcing minimum environmental standards in relation to tourism. The environments involved are very heterogeneous, judgement is required about whether standards have been violated and social conflict may be present. Therefore, the situation is likely to be less transparent than when there is a restriction on international trade. Furthermore, different environmental standards may be appropriate in different countries and the appropriate standards may vary with income levels in the countries concerned. For example, it is sometimes argued that it is appropriate for poor countries to be more prepared than rich ones to sacrifice environmental conservation for economic growth. Nevertheless even poor countries must be careful not to sacrifice their environments for unsustainable economic growth.

APEC has a Working Group on Tourism which aims to 'foster economic development in the Asia-Pacific region through sustainable tourism growth that is consistent with the enhancement of the natural, social and cultural environments' (APEC Working Group on Tourism, 1994, p. 1). It suggests that in the light of the Seoul Declaration, 'the promotion of tourism development should be undertaken in a sensitive and sustainable manner in respect of the natural, cultural and social environment of the region' (APEC Working Group on Tourism, 1994, p. 2).

APEC is proceeding in a voluntary manner and so is its Working Group on Tourism. This group aims to undertake and commission research, provide encouragement to APEC members where appropriate, and assist in the exchange of information and ideas relating to tourism. Specifically, it states that it aims to achieve its objective through:

- '- exploring the linkages between tourism and the economic development of the region;
 - encouraging adequate infrastructure development consistent with sustainable growth of the industry;
 - addressing issues to facilitate the flow of visitors
 - investigating the successful management strategies for the sustainable development of tourism in environmentally sensitive areas;
 - fostering collaborative initiatives amongst the APEC economies and other international bodies, related industries and the business/private sector;
 - exchanging information, including tourism data and statistics; and
 - facilitating human resources development and training in tourism, and
 - cooperating to ensure the safety of visitors and quality of tourism'
- (APEC Working Group on Tourism, 1994, p. 1).

The aims and policy objectives of the APEC Working Group on Tourism were approved in November 1993 by APEC Ministers in Seattle in a 'Vision Statement and Policy Objectives' document (APEC Working Group on Tourism, 1994).

In the light of these objectives, the APEC Tourism Working Group has commissioned a study of 'the interface between tourism and the environment where there is a potential for clash between the demands of tourism growth and the protection of environmentally sensitive areas (APEC Tourism Working Group, 1993). The project has been contracted to the US consultant APOGEE Ltd. The consultant is required:

1. to identify the major ecosystems of importance to tourism in APEC member economies;
2. to identify a range of management strategies available to manage tourism in relation to environments and;
3. to hold a symposium of experts and APEC members to discuss the results and their implications for environmentally sustainable tourism in APEC member countries.

It is anticipated that the research project will be completed this year and that the Tourism and Environment Symposium will be held in New Zealand in the first half of 1995 (M. Wickes, 15 August, 1994, pers. comm.)

The second objective of the study is of particular interest to economists because in considering management strategies and techniques for tourism, the consultant is required to take account of the following:

' marketplace approaches to access control (pricing, lotteries, quotas, user pays, tradeable rights, etc.); regulatory instruments to control actions by tourists, operators and others (used alone or in combination with financial incentives or markets); incentive approaches (subsidy, cross compliance, graduated and targeted funding programs); means of self-regulation for the industry and its components (including sectoral and regional codes of practice, voluntary compliance, caveats and institutionalization of common property rights); international cooperative approaches for transboundary management of ecosystems or natural areas' (APEC Working Group on Tourism, 1993, p. 1).

In summary, the task for the consultant has been said to be one of 'identifying funding and

management strategies and techniques [for tourism], such as government regulations, government funding, private sector funding and management, industry self-regulation and codes of conduct, market instruments including pricing, "user pays" and tradeable rights, and international cooperation, especially where ecosystem or natural area straddles a national boundary' (APEC Working Group on Tourism, 1993, p. 3). It might be noted that the type of environmental prisoner-dilemma problems mentioned above do not appear to be addressed. Issues involved in relation to this problem would warrant future investigation. It also seems a little unfortunate that while a number of major ecosystems are listed in the Environment Project document of APEC no specific reference is made to urban environments or built ones. Furthermore, it seems that the study will be limited to the environmental impacts of tourism itself and will not take account of the impacts of other industries on tourist environments. These other aspects would also warrant future study.

7. Concluding Comments

The Environment Ministers of APEC met in Vancouver in March 1994 and issued an 'APEC Environmental Vision Statement' which provides a first framework of principles for integrating economy and environment in APEC with a view to promoting sustainable development in the region. If these principles are adopted they will go far towards promoting sustainable tourism. The APEC Ministers for the Environment state in this vision statement (1994, p. 1):

'Members recognize that the market can be an efficient and flexible means of allocating resources but market outcomes do not always take full account of relevant environmental concerns. The challenge is to achieve sustainable development while taking advantage of the dynamism that market economies provide.' This means that market-determined outcomes (investment, trade and exchange) may have to be modified in the light of environmental considerations.

As Zarsky (1993, 1994) points out, the likely major challenge in the 1990s and into the 21st century is to determine how and to what extent the above can be done without losing the advantages of the dynamism and allocative merits of markets. She says, 'Much of the intellectual and political focus of the coming decade will be on whether and how to condition trade on environmental grounds - and whether borders should be more open or closed' (Zarsky, 1993, p. 2). She appears to favour 'open, regulated trade'. One problem in taking environmental factors into account in international trade, including trade in services, is that national governments may use the cloak of environmental protection as a means to restrict trade or international investment for their own selfish ends. For this reason, a cooperative or collective approach by nations to restrictions on trade for environmental reasons is desirable. However, it is unclear whether the restrictions can be uniform amongst APEC countries taking into account their differing stages of development and socio-economic systems, e.g. the less developed nations are less likely to want to tolerate major restrictions on their trade for environmental reasons.

The question of international trade and environmental product standards and environmental standards regulating processes and production methods is being given increasing attention by GATT

and by the OECD (Environment Directorate and the Trade Directorate, OECD, 1993). So far, however, GATT has had little impact on the control of international trade in services. Its main impact has been on trade in products. It is more difficult to monitor trade in services. Furthermore, the international tourist trade is of an unusual type because the consumer must be transported to the commodity within the borders of another country whereas in the product trade, the product is transported to the consumer. This is likely to make it more difficult to regulate the international tourist trade and investment in it so that appropriate account is taken of environmental considerations. Nevertheless some progress can be made by international cooperation. In this respect, it is interesting to note that the OECD has a vetting procedure for soft loans made to developing countries by its members. Terms and conditions of such loans are not supposed to be more favourable than those for commercial ones, unless there is some form of market failure. The social rate of return must be positive but the private rate of return must be less than the commercial rate of interest, if an interest subsidy is to be justified. Mostly these loans have a tied- component and the aim of the OECD procedure is to prevent OECD countries from undercutting one another in other sales by means of subsidised loans. Any OECD member can challenge a soft-tied-loan made or proposed by another member within this framework. A procedure akin to this might be developed eventually for sustainable tourism development in APEC.

Environments of suitable types are important assets for the development and sustainability of tourism. However, these environments can be destroyed by the development of tourism itself as well as by general economic growth. This has become a serious issue in the APEC region because the rate of growth of tourism in the Asia-Pacific region is much greater than elsewhere in the world and the economic growth of many countries in this region, especially those in East Asia such as China, are amongst the highest in the world. Natural environments are being rapidly transformed in the region as economic growth occurs and as additional environmental pressures from tourism development are being generated. It seems likely that these trends will continue for some time yet and that growth of tourism could further accelerate as incomes in East Asian countries rise. The environmental and ecological strains of such developments are already apparent and a number of examples have been given of these. Ecotourism is particularly sensitive to changes in the natural environment and the future prospects for ecotourism and its management in the Asia-Pacific, as discussed, are matters requiring particular attention from an environmental point of view.

Using formulations borrowed from game theory, it has been shown how environmental concessions by individual countries to obtain investment in tourism development (the argument could also apply to other types of investment) can disadvantage all. Regional cooperation e.g., through APEC, may help reduce the likelihood of inappropriate environmental concessions being made in the Asia-Pacific region. International cooperation is not however the complete answer because some of the environmental problems mentioned above and others arise from the internal mechanisms of social choice of individual countries in the Asia-Pacific region; their social structures and forms of governance. Although these mechanisms change slowly, they appear to be in a state of transition in many countries in this region.

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