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Working Paper No. 9

Ecotourism, Economics and the Environment

by

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Ecotourism, Economics and the Environment[1]

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Clem Tisdell[2]

October 1994

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Rural nature reserves can have negative as well as positive spillovers to the local region and policies need to be implemented to maximise the net economic benefits obtained locally. Thus an 'open' approach to the management and development of nature conservation (biodiversity) programmes is needed. The purpose of this study is to concentrate on these economic interconnections for Xishuangbanna National Nature Reserve and their implications for its management, and for rural economic development in the Xishuangbanna Dai Prefecture but with some comparative analysis for other parts of Yunnan

The Project will involve the following:

1. A relevant review relating to China and developing countries generally.
2. Cost-benefit evaluation of protection of the Reserve and/or assessment by other social evaluation techniques.
3. An examination of the growth and characteristics of tourism in and nearby the Reserve and economic opportunities generated by this will be examined.
4. The economics of pest control involving the Reserve will be considered. This involves the problem of pests straying from and into the Reserve, e.g., elephants.
5. The possibilities for limited commercial or subsistence use of the Reserve will be researched.
6. Financing the management of the Reserve will be examined. This will involve considering current sources of finance and patterns of outlays, by management of the Reserve, economic methods for increasing income from the Reserve and financial problems and issues such as degree of dependence on central funding.
7. Pressure to use the resources of the Reserve comes from nearby populations, and from villagers settled in the Reserve. Ways of coping with this problem will be considered.
8. The political economy of decision-making affecting the Reserve will be outlined.

Commissioned Organization: University of Queensland

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ECOTOURISM, ECONOMICS AND THE ENVIRONMENT

ABSTRACT

With growing interest in conservation and growing incomes, nature-based tourism has grown rapidly. However, there are some differences in views about what constitutes nature-based tourism or ecotourism and these are briefly discussed. Then some estimates of the economic value of ecotourism are given and possible socio-economic benefits of it are listed. But these benefits are not certain, e.g., in some cases, there are considerable economic 'leakages' from expenditure by tourists and the local community gains little; self-financing of protected areas relying on proceeds from ecotourism is not always possible. Furthermore ecotourism business enterprises often have to operate under severe economic constraints (some are specified) which may prevent them from being economically viable. Again ecotourism is not without environmental impacts and management of it in protected areas is needed to limit these impacts. In addition, · it is noted that other industries can have adverse impacts on environments used for ecotourism. Because of the above issues, there is a need to plan tourism development systematically in protected areas and steps which may be taken in that regard are outlined. While some natural or protected areas are very suitable for the development of ecotourism, other areas are .not at all suitable and a checklist is provided to enable park managers to decide. the suitability of a particular area for ecotourism.

ECOTOURISM, ECONOMICS AND THE ENVIRONMENT

1. Introduction

With growing interest in nature conservation, interest in the economic possibilities of ecotourism has increased. The appeal .Of ecotourism is that it may allow nature conservation and economic gain to be combined thereby providing an economic incentive for nature conservation. The original World Conservation Strategy (IUCN, 1980) pointed out that nature-based tourism may provide a means for developing countries· to at least recoup some of the costs of conservation of biodiversity. Now that the Convention for Biological Diversity has come into effect, the issues of how to finance conservation of biodiversity and to compensate local communities for reduced access to nature resources have assumed increasing importance. These are important issues for China which was one of the first signatories to the Convention.

Their importance is recognised in *China: Biodiversity Conservation Action Plan* (Xie Zhenhua *et al.,* 1994). The prospects are to explored for using nature-based tourism to provide income and employment to local communities located near or in protected areas such as those in Xishuangbanna (Cf. Zhenhua *et al.,* 1994, p. 84).

Tourism is one of the largest industries in the world and continues to grow strongly. It is in fact growing at the fastest rate in the Asia-Pacific region (Tisdell, 1994). Nature tourism, also known as ecotourism, is an expanding segment of the tourism market. Lindberg (1991) estimated that developing countries earned US$12 billion from nature tourism in 1988. McNeely *et al*. (1992, p. 6) point out that "Tourism to natural areas is economically important in many developing countries. In virtually all tropical areas, the attractions of nature are used in tourism promotion irrespective of whether national parks are appropriately developed for tourism. In the countries with particularly outstanding natural attractions, tourism is often used as the primary justification for the creation of national parks".

One of the problems in determining the economic value of ecotourism is to know exactly what is meant by the term. As Valentine (1992) points out, many writers have used the term in different ways. McNeely *et al*. (1992) use the term nature-tourism and ecotourism interchangeably and say that 'it is defined as tourism that involves travelling to relatively

undisturbed natural areas with the specific object of studying, admiring and enjoying the scenery and its wild plants and animals as well as any existing cultural aspects (both of the past and present) found in those areas' (p. 2). Given this definition many parts of Yunnan, especially Xishuangbanna Nature Reserve, have considerable potential for development for ecotourism purposes both because of the extent of biodiversity present and because of varied cultural aspects. However, some definitions of ecotourism limit it to tourism based primarily on living natural things. A third definition is based upon the view that any type of tourism that is careful of its impact on the natural environment is ecotourism. This is in effect what one may call environmental **sensitive** tourism whereas the first set of definitions relate to environmentally **dependent** tourism. Tourism which is both dependent on the natural living environment and which takes particular care of it would satisfy both definitions. Some individuals restrict ecotourism to this set of circumstances.

The conceptual relationship can be seen from Venn diagram shown in Figure 1. Set A represents tourism which is dependent on natural environments and set B covers tourism (including non-nature based tourism) which is sensitive to environmental considerations. The overlapping set or intersection of the sets ($C = A \cap B$) Shown as a hatched area represents tourism that both depends on natural environments and which involves environmental care. It should be noted that environmentally-based tourism which fails to take care of its environment is doomed in the long-run. Because such tourism destroys its prime attraction, it becomes unsustainable.

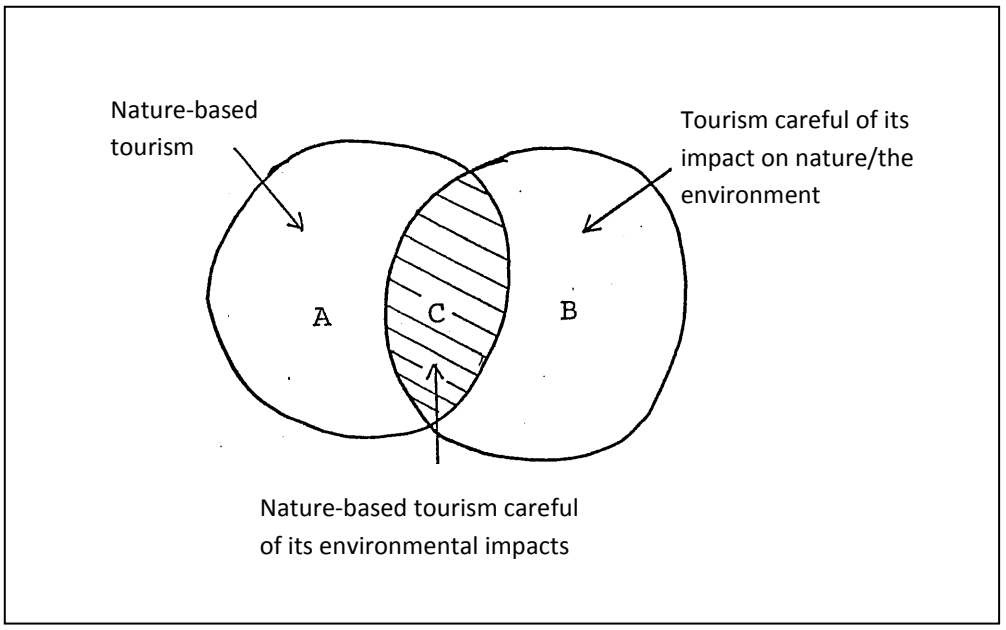

Figure 1: Illustration of some different approaches to the delineation of ecotourism

One may also consider whether there is a difference between ecotourism and nature- based tourism. It can be argued that ecotourism is tourism which depends primarily on living things in natural systems. If so it would exclude tourism that is primarily geologically based or based on natural geographical physical features, e.g., visit o volcanoes and some types of adventure tourism which primarily use natural physical features, e.g., mountaineering, rafting. In practice, it is difficult to draw a hard-and-fast line because many natural areas can be used for multiple purposes and often an individual visitor uses such areas for multiple purposes.

Some writers on ecotourism suggest that environmental education is an essential part of it. However, this seems to be too prescriptive. On the other hand, it is of course true that environmental education can enhance ecotourism experiences and can be important in convincing tourists to act in a more favourable environmental way. In general, environmental education would appear to' be a desirable adjunct to ecotourism.

2. Ecotourism and Economics

One of the appeals of ecotourism is its potential to provide economic gains in terms of incomes and employment while conserving nature. In order to provide specific evidence

about the economic value of nature tourism several writers have produced monetary estimates of its value. For example Lindberg (1991) estimated the gross earnings from nature tourism developing countries in 1988 to be US$12 billion with -potential earnings not yet being nearly reached. It was estimated that over a 1 million US citizens went abroad primarily for nature-based tourism in 1985 and this group remained more than 8 million days abroad spending about US$800 million abroad (McNeely *et al*., 1992, pp. 7-8). In Kenya, tourism is the largest earner of foreign exchange and Kenya's tourism is primarily based on its national parks and its beaches. In an interesting study of Kenya's Amboseli National Park, Western (1982) showed that 'total park returns (due mainly to tourism) amount to $40 per hectare a year compared to 80 cents per hectare under the most optimistic agricultural returns' (McNeely, *et al*., 1992). Thus in some circumstances, nature-based tourism is by far the most profitable use of the land. McNeely *et al.* (1992) provide several examples to illustrate the economic importance of nature-based tourism, which covers not only living features but physical features. Frequently, conservation of physical features of nature and the conservation of natural biota go hand in hand.

Naturally estimates of the economic value and the potential economic value of ecotourism will depend upon how it is defined. Furthermore, when a tour is partially nature-based and partially non-nature based, one has to decide how to allocate it between the categories. So a considerable amount of subjectivity or discretion may be involved in determining the economic value of ecotourism.

Those who favour ecotourism tend to emphasise its socio-economic value. Some of the **possible** socio-economic benefits of ecotourism include:

1. Employment generation directly in tourism and in the management of ecotourist assets. Both on-site and off-site employment may be generated by a protected area used for tourism.

2. It can lead to the economic growth locally of profitable tourism related activities, e.g., hotels, restaurants, souvenirs, travel services, supporting this .tourist industry.

3. It can help to earn foreign exchange which may be in short-supply in a developing country.

4. "It diversifies the local economy particularly in such areas where agricultural

employment may be sporadic or insufficient" (McNeely *et al.*, 1992, p. 8). Such a situation may be present in Xishuangbanna for example.

5. It may result in improved transport and communication systems, e.g., improved transport infrastructure such as airports which assist local people.

6. It may result in increased· demand for local produce, e.g., agricultural produce, to service the local tourist trade.

7. "It encourages productive use of l ands which are marginal for agriculture enabling large tracts of land to remain covered in natural vegetation", (McNeely *et al.*, 1992, p 8).

8. "If adequately conducted, it can provide a self-financing mechanism for the park authorities and consequently serve as a tool for conservation of the natural heritage", (McNeely *et al.*, 1992 p. 9).

9. Ecotourism may also become a vehicle for providing economic support for the ·preservation of local culture through the sale of culturally-inspired handicrafts by the local community and other means.

10. "Such tourism can also do mu ch to improve intercultural understanding and global communication", (McNeely *et al.*, 1992, p. 8).

This list of possible socio:-economic benefits (to which one can add) gives a favourable impression of ecotourism. The reality, however, from a socio-economic point of view is that every case must be assessed on its merits. Ecotourism can have all the benefits listed above, but in some cases it may bring little or no socio-economic gains to local communities.

In each particular case, questions or issues such as the following need to be considered.

1. Is there sufficient demand for the tourist services to be provided (such as hotels or guest houses) to make the investment profitable? If not, there is an economic drain.

2. To what extent will ecotourism development generate local employment (and employment within the nation) either directly or indirectly? In some cases, for example, few local people are employed in the local tourism industry because they lack the necessary skills.

3. Even though significant expenditure may occur in the. local region as a result of ecotourism, the regional leakage from these expenditures may be high because many of the goods and services required by tourist may be supplied from outside the region. For example, many of the requirements of hotels or guest houses, may be sourced from outside the region especially when they are catering for foreign visitors. Consequently, the secondary impact of tourism on local employment generation may be low because much of the local expenditure by tourists leaks away to other regions to pay for 'imports' of commodities demanded by tourists in the local region. Some of the relevant issues are discussed in Tisdell (1993, Ch. 11)

4. One of the supposed advantages of ecotourism is that it could enable protected areas to become self-financing. While this is so, one must be careful in pursuing this as an advantage for the following reasons:

    a. It is not always .socially optimal to charge fees which maximise income or profit from protected areas (Tisdell, 1972)

    b. When the costs and difficulties of collecting fees are taken into account, it may not be economically worthwhile to impose charges for the use of a protected area.

    c. The economic value of a protected area ·cannot be judged solely from the income which it can earn from fees and sales of economic concessions. Income can usually only be earned from on-site uses· but many protected areas also have off-site benefits. So income earned from on-site visits is liable to underestimate the economic value of the protected area·.

    d. The fact that a protected area can now earn little income now may not be very important if in the future it is expected to be a big income earner. The area must be protected now so as to keep open the possibility of earning high levels of income from the protected area in the future. The upshot of this point is that if too much emphasis is placed on the achievement of self-financing of protected areas, the incorrect conclusion may be drawn that a protected area which cannot finance itself should not be protected from an economic point of view

Despite the above comments, it is clear that there is a lot of pressure at the moment for governments to apply the user-pays principle, that is to make sure that those who benefit from a commodity pay for is use. Partly, this is an outcome of pressures from bodies such as the Intentional Monetary Fund (IMF) and the World Bank for countries to adopt structural adjustment policies. These policies favour maximum use of market mechanisms and a small government or state sector.

An· additional risk if strong requirements for self-financing of protected areas applies is that those administering protected areas may sacrifice conservation for economic gain, e.g., provide economic concessions for activities in protected area that are environmentally destructive and so seriously compromise the conservation function of the area.

In determining the economic benefits obtained by local communities from tourism, account must be taken of the amount spent locally by tourists and the extent of leakages from this. In Kenya for example, although tourism is Kenya's largest foreign exchange earner, the foreign exchange leakages from it are very high. Sinclair (1991) estimates leakages of 62 - 78 per cent .on beach-only package holidays and 34 - 45 per cent on safari/beach holidays. Leakages are highest for package tourism and higher in Kenya for beach -type -international tourism than for tourism which relies mainly on protected areas (Sinclair, 1991, p. 200). Sinclair (1991, P. 200) explains that 'the greater expenditure' on ground transport and national park and reserve entry fees are an important cause ·of the high Kenyan share for holidays · including a safari component, and the mean expenditure for such holidays is considerably higher than for beach holidays. In addition to considering national economic leakages, attention needs to be given to ways of ensuring that not too high a share of tourist expenditure in a local area is lost to the area and consideration needs to be given to ways to encourage tourists to spend in or near an ecotourism area.

One economic aspect of ecotourism which is usually given little attention is the economics of operating·ecotourism enterprises, stich as tours and guide businesses and accommodation facilities catering for particular ecotourist attractions. Economic problems which may be encountered in operating such enterprises include the ·following.

1. Seasonality of demand can result in tourist facilities being underutilized for a significant part of the year thereby raising average cost per user.

2. Such variability may also lead to fluctuations in employment in the enterprise making

it difficult to retain staff and build up their skills.

3. If the ecotourism is relatively remote, this will make it difficult to attract well qualified staff.

4. Remoteness may also add to costs and problems of management. Transport costs may be high and the range of products available low. Furthermore, spare parts for equipment may be difficult to obtain and available skills for repairing equipment used in the tourist industry, e.g., air conditioning, may be inadequate compared to the situation in or near large cities.

5. Communication costs and problems in remote ecotourism areas may add to management problems and medical and other facilities for treating foreign tourists should they become ill may be inadequate.

For the above reasons, ecotourism often faces greater -economic difficulties than city-based tourism. That is not to say that ecotourism cannot be profitable but to point out that it is not a sure means of making money. There are significant hurdles to overcome in order to make an ecotourism enterprise viable.

3. Ecotourism and Environmental Issues

While ecotourism has the potential to encourage conservation of the natural environment, it is also true that tourism which utilises the natural environment can result in its deterioration. For example, expansion of man-made facilities to cater for tourists is normally to some extent at the expense of the natural environment, e.g., buildings to accommodate tourists and catering staff, access roads and tracks, buildings for businesses selling curios, souvenirs and provisions for tourists. Tourism and tourists also generate wastes so waste and rubbish disposal can become a problem. Furthermore, in some situations movement of tourists leads to physical damage to natural landscapes and plants and can have adverse impacts on the breeding and activities of wild animals. Some of the environmental problems which may •arise from tourism in protected areas are listed in Table 1.

Table 1: Potential environmental effects of tourism in protected areas of negative visitor impacts that must be controlled

FACTOR INVOLVED	IMPACT ON NATURAL QUALITY	COMMENT
Overcrowding	Environmental stress, animals show changes in behaviour	Irritation, reduction in quality, need for carrying-capacity limits or better regulation
Overdevelopment	Development of rural slums, excessive manmade structures	Unsightly urban-like development
Recreation		
Powerboats	Disturbance of wildlife	Vulnerability during nesting seasons, noise pollution
Fishing	None	Competition with natural predators
Foot safaris	Disturbance of wildlife	Overuse and trial erosion
Pollution		
Noise (radios, etc)	Disturbance of natural sounds	Irritation to wildlife and other visitors
Litter	Impairment of natural scene, habitation of wildlife to garbage	Aesthetic and health hazard
Vandalism destruction	Mutilation and facility damage	Removal of natural features
Feeding of wildlife	Behavioural changes danger to tourists	Removal of habituated animals
Vehicles		
Speeding	Wildlife mortality	Ecological changes, dust
Off-road driving	Soil and vegetation damage	Disturbance to wildlife
Miscellaneous		
Souvenir collection	Removal of natural attractions, disruptions of natural processes	Shells, coral, horns, trophies, rare plants
Firewood	Small wildlife mortality habitat destruction	Interference with natural energy flow
Roads and excavations	Habitat loss, drainage	Aesthetic scars
Power lines	Destruction of vegetation	Aesthetic impacts
Artificial water holes and salt provision	Unnatural wildlife concentrations, vegetation damage	
Introduction of exotic plants and animals	Competition with wild species	Public confusion

Source: McNeely *et al.* (1992, p.14)

The fact that there can be some negative environmental impacts from tourism in natural areas does not mean that natural areas should not be used for tourism. However it does mean that if tourism and conservation are to be combined effectively than tourism in natural areas must be managed or planned. By appropriate management and planning, the adverse impacts of tourism on the natural environment can be minimised.

Approaches which can help to achieve this in relation to a protected area are:

1. Zoning of the permitted uses of the protected area.

2. Ensuring that constructions to cater for tourism are of a type which ·have minimal adverse- impacts on the natural environment. Often a choice of constructions is available. Privately the external environmental impacts of these will not be taken into account but those responsible for the management of protected areas must see that businesses granted concessions do take these impacts into account.

3. In some cases, it may be necessary to limit tourist visits to a protected area for environmental reasons. This may be done in a number of different ways, e.g., by varying charges for entry for instance, limiting the issue of permits, by making permits available on a lottery basis, by not reducing the travel costs and time needed to obtain access. The advantages and disadvantages of the various alternatives can be considered.

4. Appropriate education on-site may reduce environmental damage by tourists.

5. It must be realised that not all ecotourists are of the same nature and searching for the same experiences. It may for example, be that a facility located near or concentrated in a very small portion of protected area may cater for the needs of a large proportion of ecotourists. These facilities may involve museums, captive animal displays, aquariums and so on with short walks or excursions into natural settings also being available. The need from a tourist point of view for such vicarious substitutes for the 'real thing' is likely to be greater in areas··where it is more difficult to come into contact .with wildlife in natural settings. ·This is often the case in tropical rainforests and in countries such as Australia where much· of the wildlife 1s nocturnal. When facilities such as the above ones are located in or near protected areas, they appear to result in greater 'authenticity', can serve a useful educational role, help mitigate

disappointment of tourists at not experiencing in a natural ·situation many of the features which attracted them to the area, provide revenue from entry fees to the facility and serve as an outlet for sales of tourist items. Several examples of this type are available, e.g., in Australia, the aquarium at Green Island near Cairns, the Great Barrier Reef aquarium at Townsville.

While ecotourism itself can create problems for the natural environment, in some circumstances; ecotourism is threatened by the development of other industries, population growth and economic growth generally. Population growth and economic pressures in developing countries often result in human encroachment on protected areas. The water, energy and mineral requirements to sustain growing economies often puts protected areas under pressure as they become targeted for the construction of dams and reservoirs and for mining. Furthermore, pollution from industrial, mining and agricultural expansion can have adverse impacts on natural areas. Their waterways may becop1e polluted to the detriment of wildlife, acid rain may develop thereby altering the composition of flora and subsequently fauna populations and pesticides may directly or indirectly harm wildlife such as birds. Many other adverse impacts on wildlife from economic growth are possible, e.g., from loss of wetlands, dams which reduce variability of waterflows and so on. This is not to· say that economic growth should be halted, but to point out the importance of taking account of any environmental costs and adjusting development projects accordingly.

It is deaf that most conservationists are ambivalent about ecotourism in protected areas. This is apparent for example from the report on Workshop 1.12 'The role of tourism in expanding support for protected areas' of the IVth World Congress on National Parks and Protected Areas. Consider for instance the following extract:

“A few of the dangers of tourism identified were: inadequate local benefits lack of management and planning leading to resource damage; insufficient funds being channelled into protection of the resource; little , availability of training for local guides and managers; lack of international institutional· support when compared to· other assistance programmes; and lack of standardized, widely-applied evaluation procedures. On the other hand, the potential benefits that tourism can produce, if handled correctly, were also reviewed: contribution to conservation goals; stimulating ·employment and socioeconomic development; and promoting training, research -and education in environmental matters.” (IUCN, 1992, p. 101).

4. Aspects of Planning for Tourism in National Parks and other Protected Areas

McNeely et al., (1992, Ch. 4) provide useful advice about bow to plan the development of tourism in national parks. They suggest seven steps:

- **Step 1** Collect and analyse data
- **Step 2** Identify resource conflicts
- **Step 3** Determine objectives
- **Step 4** Set tourism into the regional context
- **Step 5** Prepare management plan
- **Step·6** Guide construction procedures
- **Step 7** Monitor progress

In relation to step 1, McNeely *et al.*, (1992, p. 21) says:

"Tourism means managing people and it is thus necessary to be familiar with the human side of the equation.- It is important to gather information on an area's visitors, just as it is important to monitor natural resources. Visitor information is required for (a) budgeting and setting fees, (b) allocating personnel, (c) scheduling maintenance, (d) understanding the users, (e) detecting trends in use, and (f) planning."

As for step 2, McNeely *et al.*, (1992, p. 22) recommend that:

"On the basis of resource inventories and other data collected under Guideline 1, the management authority should identify resource conflicts and define options for solving such conflicts.(including costs and benefits· of each option)".

As for the objectives of tourism development in a national park McNeely et al., (1992) believe that it is important to consider (1) who should be the beneficiaries, e.g.", should local people have the highest priority, (2) to what extent should the local community become

dependent on tourism for its livelihood, (3) what scale of tourism should be aimed for and (4) where should tourists be attracted from? They point out (p. 24)·that:

“International tourism, by definition, draws persons from diverse cultures. Regional resource inventories and evaluations for the development of tourism should therefore attempt to take into account diverse recreational preferences. The travel preferences of tourists from different cultures (or groups within cultures) should also be considered in the layout and design tourist facilities. For large tourist zones, a wide range of different interest can be met by different sorts of lodging and other facilities. For long-term security the bottom line is the development of local support and therefore benefits to the immediate region of all tourism projects should be maximized”.

Appropriate zoning of park use should be a part of the plan as should be marketing. Marketing of course means advertising and providing information. The extent to which park authorities can engage in this will depend on their funding, and this will depend in part, on what income they can .earn from ecotourism, e.g., through rental of concessions, scale of permits, etc. Although FAO (1988) and McNeely *et al*., (1992) recommend that where possible hotels, restaurants and other facilities should be located outside park boundaries to reduce human impact on protected areas, this will reduce the ability of the park to earn income from tourism, e.g., by rental of rights to cater for tourists and the park authorities will have no control over development outside its boundaries. Ideally, of course, those businesses (located outside the park) which benefit commercially or economically from a park should contribute towards the financing of the park. Otherwise, they receive a rent or bonus for the presence of the park without payment from its existence.

From a marketing point of view even the name of the protected area may be important, especially if the area is to attract foreign tourists. As mentioned in UNDP-WTO (1990) review of tourist development in Uganda native names of gorilla reserves there do not appeal to foreign tourists since they do not easily understand or relate to them. It is probably true in the case of. Xishuangbanna protected area in Yunnan that the name would not come easily to most foreigners.

It is also important in planning ecotourism to make predictions about future demand for such tourism and to consider how best to cater for different segments of the ecotourism market. While a national park may cater for different segments of the ecotourism market, a particular

park may not cater for all segments either by intent or because of its natural features. As McNeely *et al*., (1992, pp. 27-28) point out:

"For national parks, the travel market may be segmented along a scale from those seeking back-to-nature trekking to those satisfied with short, even vicarious, contact with a national park. Today, even though the former segment is growing, the great majority of travellers are satisfied with short- term contact and a well-interpreted description of the park features. Therefore, there is merit in concentration tourists where they can be managed".

At least one segment of the ecotourism market can be concentrated and this may make use of the display-type facilities, including museums and captive animals mentioned earlier.

5. Concluding Comments

From the above it can be seen that there are many issues to consider as far as the development of ecotourism is concerned, particularly in relation to national parks and other protected areas. It is clear that the economic value of such tourism can be high and that many protected areas may be suitable for ecotourism management. That is not to say that all parts of all protected areas should be available for tourism. Some areas may need to be protected strictly for scientific purposes and others may be ecologically too fragile to allow any significant tourism. Furthermore, not all protected areas have a high potential for tourism or for economic gain from it. This is for example apparent from Table 2. Those protected areas to which the third characteristic applies in each all sets have very little tourist potential.

Table 2: Checklist on tourism potential of protected areas

Is the protected area: - Close to an international airport or major tourist centre? - Moderately close? - Remote?	**Does the area have additional:** - High cultural interest? - Some cultural attractions? - Few cultural attractions?
Is the journey to the area: - Easy and comfortable? - A bit or an effort? - Arduous or dangerous?	**Is the area:** - Unique in its appeal? - A little bit different? - Similar to other visitor reserves?
Does the area offer the following: - 'star'species attractions? - Other interesting wildlife? - Representative wildlife? - Distinctive wildlife viewing, e.g. on foot, by boat, from hides?	**Does the area have:** - A beach or lakeside recreation facilities? - River, falls or swimming pools? - no other recreation?
Is successful wildlife viewing: - Guaranteed - Usual? - With luck or high seasonal?	**Is the area close enough to other sites of tourist interest to be part of a tourist circuit?** - Yes, other attractive sites - Moderate potential - Low or no such potential
Does the area offer: - Several distinct features of interest? - More than one feature of interest? - One main feature of interest	**Is the surrounding area:** - Of high scenic beauty or intrinsic interest? - Quite attractive? - Rather ordinary
What standards of food and accommodation are offered? - High standards - Adequate standards - Rough standards	

Source: McNeely *et al.* (1992, p. 17).

While some of the disadvantages indicated in Table 2 could be overcome with effort, e.g. accessibility could be improved by airport construction in some cases, others are a part of the natural characteristics and are not amenable to change, e.g., scenic beauty may be quite ordinary. Furthermore, standards of food and accommodation can be improved if sufficient demand exists. Methods may also be available for enhancing the chances of tourists seeing wildlife but still smile areas may not be favourable for the viewing of wild animals.

Pressures to use protected areas for ecotourism are likely to increase. Tourism is one of the world's major industries and is still growing. The growth of international tourism is the Asia-Pacific Region is now by far the fastest of all the major regions of the world. This growth is primarily a function of rising incomes in the region. Furthermore, education levels are rising throughout the region, and the demand for nature-based tourism is positively correlated both with levels of education and income. In addition, many natural areas in Asia are becoming

more easily accessible. As China, for example has developed, its communication and transport systems have improved. It is now for instance much easier for international visitors to visit Xishuangbanna than it used to be because of improved air links. So demand to visit protected areas in China is likely to increase. On the other side, as the protected area of China increases, there will also be financial pressure in China to make economic use of these areas in ways compatible with the preservation of biodiversity and conservation of natural features. This will provide a further impetus to the expansion of tourism in protected areas.

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