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BIODIVERSITY CONSERVATION: STUDIES IN ITS ECONOMICS AND MANAGEMENT, MAINLY IN YUNNAN, CHINA

Working Paper No. 11

Ecotourism: Its Boundaries and its Economics with Examples from China

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Ecotourism: Its Boundaries and its Economics with Examples from China[1]

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Research for ACIAR project 40, *Economic impact and rural adjustments to nature conservation (biodiversity) programmes: A case study of Xishuangbanna Dai Autonomous Prefecture, Yunnan, China* is sponsored by the Australian Centre for International Agricultural Research (ACIAR), GPO Box 1571, Canberra, *ACT,* 2601, Australia. The following is a brief outline of the Project

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

Collaborator: Southwest Forestry College, Kunming, Yunnan, China

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ECOTOURISM: ITS BOUNDARIES AND ITS ECONOMICS WITH EXAMPLES FROM CHINA

Abstract

Various definitions of ecotourism exist in the literature. The definition of ecotourism is important for determining the boundary of the ecotourism industry and its economic value. However, the extent to which ecotourism can be separated from tourism generally or the extent to which a separate tourism industry can be identified is uncertain. Considerable fuzziness exists at the boundaries. Some authors use the term nature-tourism and ecotourism interchangeably, while some limit it to tourism based primarily on living natural things. In principle, the size of the ecotourism industry might be determined from the supply-side e.g. from the specialisation of tourist organisations the extent to which they perceive they are involved in ecotourism, or from the demand-side e.g. the extent to which tourists are involved in or demand ecotourism experiences. These alternative .approaches and the difficulties to be overcome are discussed. ·

For the purpose of this article, we propose to define ecotourism as a kind of tourism which is based on relatively undisturbed living natural areas and at the same time takes particular care of and contributes to the protection of the resources used. Some special features of ecotourism make it a distinctive subset of tourism.

The framework for ecotourism study covers the interrelationship between ecotourism and its resources, which are comprised of natural, social, cultural and economic systems. The coexistence of ecotourism and the resources is rooted in the fact that ecotourism depends heavily on the well-protected environment while provides incentives for the continuous conservation of its resource basis. But the natural conflicts must be taken seriously in that the natural condition and variations in the resources have crucial effects on ecotourism, and ecotourism undoubtedly performs as a powerful factor to bring about both favourable and unfavourable changes to its resources. Outlines for a careful cost-benefit analysis of ecotourism are discussed.

Planning plays a crucial role to bridge the natural gap between .ecotourism and its resources. Three levels of planning - normative, strategic and operational are best achieved by multi-channel communication among the clients, decision makers, planners and other interested parties. The goal of planning is to ensure the harmonious balance and a sustained ecotourism.

Monetary gain from ecotourism can be a misleading criterion for measuring the economic benefit of ecotourism, and could furthermore lead to deprivation of its resources. It is important to make ecotourism financially viable but not at the price of damaging the background on which it depends.

As the immediate beneficiary or victim of ecotourism, local communities are closely affected by the long term development of ecotourism. Successes and failures are analysed, and a checklist for community involvement included.

Some of the economic problems involved in developing an ecotourism industry are discussed along with the economics of operating ecotourism enterprises. The latter issue has been relatively neglected. Examples of the issues involved are given mainly from China.

ECOTOURISM: ITS BOUNDARIES AND SOME IMPORTANT ECONOMIC ·ISSUES WITH EXAMPLES FROM CHINA

1. The Boundaries of Ecotourism

i. Ecology and Ecological systems

Ecotourism, or ecological tourism, is a term that has been applied in different ways often without a clear definition. In many cases ecotourism is used as an excuse for allowing development of natural environments whereas other types of industry are perceived as threatening the long-term existence of the resource-base. Can ecotourism truly be tailored in a fashion that proves to be both environmentally protective and economically viable? Is ecotourism favourable to the conservation of tourist resources or just another way to invade pristine areas? To answer these questions, the first step is to as its domain of application.

Before defining ecotourism itself, one needs to look first into the terms "ecology" and "ecological system" because they give a hint to where ecotourism is performed and the concept's outer limits. There are basically two groups of definitions for these two terms in the literature - one set is broad and the other is narrow. The broad definition for ecology is: "A science to study the relationship between the distribution of human groups with reference to material resources and the consequent social and cultural patterns" (Webster's New 20th Century Dictionary of the English Language, Second Edition 1962). An ecological system has been defined as "A community of -organisms, interacting with one another, plus the environment in which they live and with which they also interact" (The Macquarie Dictionary, 1981).

These two descriptions relate ecology and ecological systems to the environment include both physical and non-physical factors which interact with one another. There nothing external to this system, and there is no way of viewing any type of tourism except as a part of an ecosystem. There is no difference between ecotourism and other forms of tourism if it is positioned in this broad ecological system because the entire cosmos is covered and the boundary of ecotourism overlaps that of tourism completely.

Some people are of the opinion that ecotourism is a subset of tourism which takes care of environment while the other types of tourism do not. However, ecotourism itself cannot survive indefinitely in a situation where non-ecotourism activities keep on depleting resources as a result of the interchanges of material and energy between and among ecotourism, non-ecotourism activities and the ecological system. This indicates that there is inherent interdependence between the broad ecological system and tourism (including ecotourism) and suggests that it is not only ecotourism's responsibility to protect the environment but also the entire tourism industry's mission to promote a better resource situation for a sustained development. There is no way to isolate ecotourism from other tourist activities with which it shares the same ecological resources and interacts.

Hopefully placing ecotourism in its broadest context will help to encourage ecological consciousness within the total tourism industry and will counteract the misunderstanding that it is just ecotourism's duty to conserve environment.

We shall now base our further discussions on narrow ·definitions of ecotourism and we propose to adopt the following set of definitions: Ecology is "the scientific study of the interrelationships between living organisms and the environment (including the other living organisms present) in which they live. Without qualification, the term tends to be confined to plant ecology" (Clark, A.N.: Longman Dictionary of ·Geography, Human and Physical, 1985). The narrow meaning of "ecological system" is: "A system made up of a community of animals, plants and bacteria and its inter-related physical and chemical environment" (Webster's New 20th Century Dictionary of the English Language, second edition, 1962).

In this set of definitions, ecology and ecological system are confined to living· things and their environments. However, in practice ecotourism is often used to refer to tourism practised in natural areas little disturbed by human activities, this distinguishes ecotourism from urban-based or heavily anthropologically moulded tourism.

Nevertheless, we also need to remember that the natural environment is not the only factor involved in ecotourism. Some non-natural elements like social, cultural, economic and political factors interweave with the natural setting and cannot be separated from the closely·related living environment, and so are also a part of the ecotourism system. It is therefore appropriate to expand our discussion beyond the territory of narrowly defined ecological systems even though these are the major arena of this paper.

ii. Definitions of ecotourism

There is no standard overall definition of ecotourism. But from as early as the 1980s, a few scholars have been trying to distil the basic elements of ecotourism. One of the earliest and most quoted definitions is that put forward by Caballos-Lascurain in 1987: "Tourism that involves travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas" (Boo, 1990).

While it is self-evident that in this definition ecotourism can only exist in well- preserved areas, it does not mention the responsibility of the ecotourism industry for environmental ·conservation. As a matter of fact it is just a good definition for nature tourism but not satisfactory for ecotourism because the function of conservation is not addressed here. Many authors use the terms nature tourism and ecotourism interchangeably such as Lindberg (1991) and McNeely (1992). The common ground between ecotourism and nature tourism lies in the fact that they both rely on natural areas. However, ecotourism differs from nature tourism in its role of minimizing negative effect on environment and providing economic and educational incentives to maintain or improve the resource basis, while nature tourism is just a branch of tourism activity that makes use of natural areas but not necessarily in an environmentally sensitive way.

It is imperative for ecotourism to encourage non-consumptive use of environment and to promote ecological consciousness among tourists, tour operators and other parties involved, otherwise it may become another way to accelerate resource deterioration in fragile natural areas, such as is happening due to some improper nature-tourism activities. Hence most recent studies emphasize the role of ecotourism in ecological conservation as a way to differentiate ecotourism from normal nature tourism. The IVth Congress on National Parks and Protected Areas, held in Venezuela,1992, defined ecotourism as "responsible travel to natural areas that sustains the well-being of local people and conserves the environment". Zell (1991) wrote in his paper that "I define ecotourism as ecologically responsible tourism". Valentine (1991) also proposed ecotourism as "a direct contributor to the continued protection and management of the protected areas used". Ziffer (1989) gave a relatively complete definition as follows: "Ecotourism is a form of tourism inspired primarily by the

natural history of an area, including indigenous cultures, the ecotourist visits relatively undeveloped areas in the spirit of appreciation, participation, and sensitivity. The ecotourist practices a non-consumptive use of wildlife and natural resources and contributes to the visited area through labour or financial means aimed at directly benefiting the conservation of the sites and the economic well-being of the local residents. The visit should strengthen the ecotourist’s appreciation and dedication to conservation issues in general, and to the managed approach by any country or regions which commit itself to establishing and maintaining the sites with the participation of local residents, marketing them appropriately, enforcing regulations, and using the proceeds of the enterprise to fund the area's land management as well as community development."

Tisdell uses Venn diagram to demonstrate. the conceptual relationship of four groups of tourism:

A: Entire Tourism

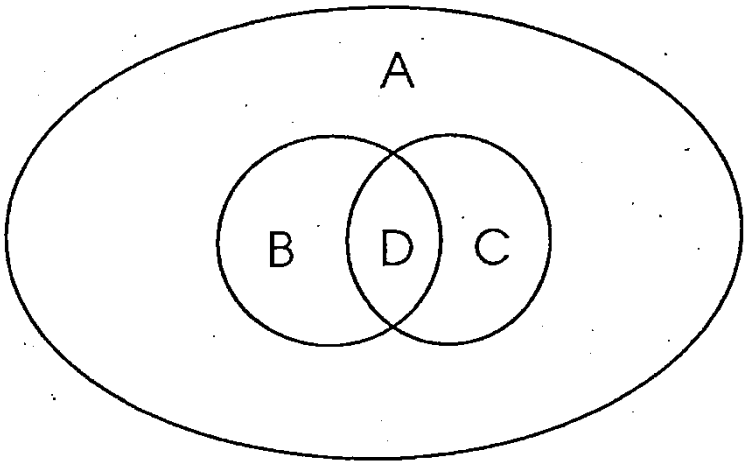
B: Nature-Based Tourism

C: Tourism Taking Care of the Environment

D: Ecotourism ·

A modified form of this Venn diagram is shown as Figure. 1.

Figure 1: Boundaries of Ecotourism Modified from Tisdell (1994)



A: Entire Tourism
B: Nature-Based Tourism
C: Tourism Taking Care of the Environment
D: Ecotourism

From what has been argued above, we may conclude that three basic characters are found in ecotourism:

(a) ecotourism involves travel to relatively well-conserved natural areas.

(b) It takes particular care of the environment and promotes conservation.

(c) Its purpose is to provide non-consumptive experience and to educate participants.

It is sometimes difficult to draw a clear-cut line between ecotourism and nature tourism because of the fuzziness in judging whether a tourism activity is environmentally consumptive or not. But if we keep in mind ecotourism's mission·of preservation, the potential danger of environment damage from ecotourism will be reduced.

iii. Ecotourism industry and ecotourist

From an economics point of view it may be possible to measure the size of the industry by considering either the supply side or the demand side. The supply side approach might be based on survey of businesses involved in ecotourism designed to measure the economic involvement of each in ecotourism. Such an approach may however be costly and since many

tourist organizations tend to be involved in ecotourism as well as other tourist activities, the boundaries between the two may be difficult to delineate. This is apart from the difficulty posed by businesses that engage both in tourism and non-tourism activities. The demand-side approach involves surveys of tourists or potential tourists to determine their involvement in ecotourism or their demand for it.

It helps us to understand ecotourism better if we look into the phenomenon from both supply and demand sides. In principle, the scale of ecotourism industry may be determined from the supply-side from whether tourist organizations perceive themselves to be involved in ecotourism; or from the demand-side in that tourists demand ecotourism experiences. However, it is hard to measure the number of ecotourism agencies or ecotourists due to limited resources and the fact that tourism is usually a mixed experience. Despite the difficulties in estimating the market share of ecotourism, we can make use of some proxies to get an idea of the increasing importance of ecotourism.

Smith and Jenner(1991) estimated the value of ecotourism world-wide from 1980 to 1989 to be as set out in Table 1.

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Estimated Value	4.0	4.0	4.0	4.0	4.5	5.0	6.0	7.5	9.0	10.0

WWF estimates that $12 billion out of the $55 billion earned from tourism by developing countries in 1988 was due to ecotourism. The U.S. National Park Service found a one-third increase in the number of visitors to its national parks in the last decade, and there were 96.5 million visits to the National Park Service cultural areas in 1989 (Statistical Abstract,1989). Almost all the 1420 national parks in the tropics, covering 175 million hectares, promote tourism (McNeely and Thorsell, 1987).

It is also difficult to define an "ecotourist" because people go to natural areas for a variety of purposes and their interaction with the natural resource varies from careless observation to responsible study. Gunn(1994, p.93) cites Colvin. (1991) as saying an ecotourist "wants an in-depth, authentic experience; considers the experience worthwhile, personally and socially; abhors large tour groups on strict itinerary; seeks physical and mental challenge; wishes interaction with locals; cultural learning; adaptable; .often prefers rustic accommodations;

tolerates discomfort; seeks involvement but not passive behaviour; prefers to pay for experience rather than for comfort."

In the WWF airport survey of the 436 tourists in 5 South American countries, almost half reported that the presence of protected areas was the "main reason" or "very important" in their decision to visit the country, arid more than half went to at least one park on their trip. A survey in the United States in 1982 indicated- that 29 million Americans were interested in "non-consumptive wildlife use" and participated in approximately 310 million nature trips away from homes in 1980 (Boo, 1990;·p3).

There are usually alternative uses for ecotourism resources. Hence economic returns from different uses decide to a large extent whether an area is used for ecotourism or used for other industries. Studies have been completed to compare monetary gains from alternative possible uses of natural areas. One was conducted comparing the net value of Amboseli National Park, Kenya, for viewing of wildlife and for agriculture. It turned out to be US$40 per hectare for wildlife viewing, but only $0.8 per hectare·for potential agriculture (Western, 1982). A cost-benefit study on the Virgin Islands National Park calculated the total benefit/cost ratio to be 11.1 to l(Boo, 1990, p17).

Although it is encouraging to see that ecotourism is potentially profitable in itself, the monetary gain from ecotourism could become a misleading criterion for the total benefit of ecotourism. On top of economic considerations, ecotourism is also valuable for conserving biodiversity and natural scenery, protecting other non-tourism benefits from natural areas, educating people and so on. All the benefits from ecotourism, including its positive externalities, cannot be captured by the mere financial income from it. The optimal scale of ecotourism could be under-estimated if monetary profit were taken as the only consideration. Excessive emphasis on the ability of ecotourism ·to be an income- earner could lead to the belief that ecotourism and protected areas exist primarily for profit. If ecotourism cannot make a profit, this view may discourage the establishment of nature reserves or it may result in ecotourism being replaced by other economic activities often less advantageous for conservation, such as agriculture or grazing, and thus degradation of natural resources could occur.

If ecotourism can currently earn little income, this does not mean that this will ways remain so. Future demand for ecotourism in an area .may rise due to rise in income levels and it may

be wise to conserve the area to cater for these future demands.

In many developing countries there are pressures to obtain .income from natural and ecotourism is expected to make profit from its environmentally acceptable operation. It is important to make· ecotourism financially viable to ward off threats to protected areas from other industries, but not at the price of damaging the environment on which ecotourism depends.

2. Can Ecotourism Grow Sustainably?

Ecotourism depends intrinsically on "good" natural environments. This implies that changes in environments are likely to have more serious effects on ecotourism than on other industries or other types of tourism. This fragility of ecotourism makes its sustainable development risky when the following factors are taken into account.

i. Global environment deterioration

There has world-wide concern about the large-scale environmental degradation and depletion of natural resources. One can understand that once the general environment on which ecotourism depends is under attack, ecotourism itself will undoubtedly be negatively affected in terms of the quality of its product and in the amount of resource available to it. Such environmental changes as increasing solid waste, air and water pollution, climate change, deforestation, wildlife extinction and so forth have reduced the scope for ecotourism to develop and will have further implications if the present trend continues. Take coral reefs, an important tropical ecotourism resource, for example. Two thirds of 632 reefs surveyed in 1982 have been degraded in the Philippines, and only 2 of 8 reefs in Tanzania recommended for national park status in 1968 were of acceptable quality for· this status in 1983 (Jenner and Smith, 1992) as a result of sediment accumulation, fertiliser use and habitat damage.

ii. Resource encroachment from other industries

Several industries compete with ecotourism for limited resources, and in general damage and deplete the natural environment at a faster rate and in more harmful manner. Mining, forestry,

agriculture, to name a few, are among the competitors for the same slice of resources. Illegal collection in the protected areas, logging and wildlife poaching threaten the future of ecotourism in some areas. In Thailand, around 50 per cent of the mangrove forests have disappeared since 1960 due to charc9al processing and due to the conversion of mangrove areas to shrimp ponds. An annual reduction of 100,000 to 200,000 square kilometres in the tropical rain forest habitat is occurring worldwide (McNeely and Dobias, 1991).

Other industries may rely on their ·well-established lobbying system and usually stronger economic power to gain access to natural resources. In contrast, it takes longer for ecotourism to earn a profit, or profit may not the goal, and the total benefit is not completely reflected in the market price for ecotourism. Therefore the possibility of encroachment from competing resource-users is an ever present threat to ecotourism.

iii. Inappropriate tourism development

A feature of this century is that tourism has been amongst the fastest growing industries. In 1990 the annual international flow of tourists was 450 million and receipts from international tourism exceeded US$250 billion (WTO, 1992). Nevertheless, in this process of fast growth, mass tourism has been sending tourists to environmentally sensitive areas without enough consideration for the resource bases. Cases like the closure of polluted tourist beach in the Great Britain and deterioration in China's most popular tourist areas (Tisdell and Wen, 1991) are not rare in literature. Ecotourism itself is one of the causes of environment degradation when it is not properly planned. Adventure expeditions and mountaineering in the Himalayas have produced deforestation, environmental deterioration, social fragmentation and cultural change (Goering, 1990; Puntenney, 1990). In some places, ecotourism operators do not contribute to the maintenance of national parks but take it for granted that national parks are provided for their business, and this has led to overcrowding and deterioration in some parks (Boo, 1990). Tourists with insufficient education in protecting natural areas can also pose danger to the places they visit by engaging in improper activities such as collecting, feeding and disturbing wildlife.

iv. Economic expectations for ecotourism

Ecotourism is seen as an income-earner for some protected areas arid as a means to provide

·financial support for conservation and a contributor to income for everyday operations. But if ecotourism is targeted to maximize its monetary benefit, conservation may become of educed importance and natural resources may be sacrificed for financial benefit. When ecotourism becomes income-oriented and conservation loses its priority, there is a danger that there will be little difference between ecotourism and other types of tourism which are environmentally consumptive. This unfortunately, can be the fastest way to bring ecotourism to its end.

Obviously ecotourism resources are under attack from both external and internal factors, and the future of ecotourism is bleak if no positive actions are taken at this stage to conserve such resources for future generations. Global cooperation, appropriate national policies and careful planning are required to make sure that a sustainable resource-base for ecotourism is preserved

3. Components of Ecotourism Systems

Ecotourism involves basically a combination of environmental, social and economic factors, which cannot all be categorised as business attributes. Many of today's tourism problems can be attributed to the business-only outlook of tourism enterprises. The better it is understood that ecotourism is a compound system involving both marketable and non-marketable components, the more successful ecotourism development will be. Broadly speaking, those who participate in ecotourism and influence its scale as well as direction can be divided into four groups:

i. *Business sector*

This is the backbone of ecotourism in the sense that it provides economic incentive and links resources with consumers. It includes travel agencies, accommodation, transportation and other sections which cater for ecotourism arrangements. The market mechanism directs this section and price adjustment influences this system.

ii. Government sector

The government has been actively involved in the administration, legislation and financing of national parks, nature reserves and so on. Public ownership is prevalent in land, forest and water bodies. The U.S. Federal government owns 20 per cent of all land and 25 per cent of all forests with a total market value of between $0.5 and $1.5- trillion, and one-quarter to one-third of the property in North America is· owned by the public (Borcherding, 1991). The power of government to direct ecotourism is difficult to exaggerate. However, government is also influenced by voters, parties, bureaucracies and interest groups, each of which may be assumed to be a maximizing agent, trying to seek benefits over its rivals. The extent to which government promotes ecotourism depends on the competition between pressure groups whose income comes from ecotourism and opposing groups such as on occasions conservationists striving to protect the environment.

iii. Non-profit groups

With increasing concern about environmental conservation, many recreational, historic, professional, ethnic, health and religious organizations are getting involved in resource management, ecotourism research, policy-making and safeguarding of the environment. They often champion the interests of local communities and the long-term development of ecotourism, sometimes working jointly with policy-makers and communities to deal with ecotourism problems arising from business operations or from visitors. In the U.S. for example, the National Parks and Conservation Association developed public education workshops on ecotourism and corridor· issues with the National Park Service Cooperative. The Lackawana River Corridor Association and the Rails-to- Trails Conservancy also worked to improve ecotourism facilities (Guim, 1994, p92).

iv. Ecotourists

With their special features as discussed above, ecotourists are a new challenge to both tour operators and policy-makers. They demand experiences different from mass- tourists and have more interest in participation and self-improvement in unspoiled areas. How to arrange programs which both satisfies ecotourists and conservation and how to educate them are questions that have to be answered.

In such a complex system as ecotourism where different sectors interact and sometimes react violently with even a small input, coordination and communication between them are crucial to the balanced development of the whole system.

4. Market and Government Failure in Ecotourism

It is necessary to observe how two systems, namely markets and the government, interact within ecotourism. The resources used for ecotourism are to a large extent public goods to which people have theoretically common ·access, and which involves systems based on collective interest and group rights that are guaranteed by tradition, morality or dictatorship. At the other extreme is the individual tourist or tour-operator who tries to maximize his/her own benefits from the resources to achieve a higher level of satisfaction. The aims of the individual tourist or tour operator often conflict with the purpose of environmental conservation. ·When both market failure and government failure exist in ecotourism, and the total cost or benefit of ecotourism cannot be fully reflected in the marketplace, how to evaluate ecotourism projects and to overcome these failures need to be discussed**.**

i. Market failure in ecotourism

If preference of every individual affected by the provision of goods were accurately reflected in the market-place, there would be no need for any non-market power to intervene, except possibly to improve the distribution of income. However, we know that for the use of natural resources, for example by ecotourism, that the price mechanism fails to achieve a social optimum due to the existence of externalities and other factors. The "invisible hand" cannot function well for ecotourism because property rights are incomplete and the market does not reflect all the costs and benefits arising from public goods or common access. Factors relating to ecotourism which cause market failure are outlined below:

(a) Externalities

Marshall (1890) and Pigou (1920) were among the first economists to bring attention to externalities. Kapp (1950) anticipated the immense consequences of economic growth on the environment via externalities. Tisdell (1993) gives detailed analysis on this issue.

Externalities, or spillover effects, or external economies/diseconomies, arise when “activities of economic units (firms and consumers) affect the production or consumption of other units and where the benefits or costs which accrue to these units do not normally enter into the gain and loss calculations” (Kula, 1993). Adverse externalities on ecotourism could include acid rain which destroys ecotourism resources and positive externalities might include better-educated participants and consequently more conservation-minded individuals after ecotourism trips.

(b) Public goods

When the provision of a good to one person does not reduce its availability to and exclusion is impossible, a public good is identified. Individual will not be willing to pay for public goods if he/she is automatically provided whenever-it is supplied. There is a free-rider problem as occurs for example in the maintenance of fresh air or the preservation of a gene reservoir. Conservation of ecotourism resources sometimes suffers because of this problem.

(c) Common property and free access

An ecotourism resource is a communal property if it is managed by communities of individuals on the basis of rules and regulations which are enforced by tradition, morality and legality. When such common property arrangements or enforcement break down, the situation reverts to open-access, a situation where access to the resource is open to all without restriction. Open-access can be a source of destruction of ecotourism resources.

(d) Non-monetisation of benefits

Many social and cultural aspects of ecotourism cannot satisfactorily be expressed in monetary form but nevertheless have social value. They include such factors such as ethnic tradition, traditional festivals, artistic heritage and so on. They might either become commercialised or be ignored if left to market forces. In either case this could result in the of valuable ecotourism resource.

(e) Justice

While economic efficiency is the guiding principle in market-place, justice is also a fundamental issue which needs to be addressed in relation to local communities and future generations in developing ecotourism.

ii. Government failure in ecotourism

Believers in free markets doubt the efficiency of government as a substitute for market mechanisms in dealing with environment. Some even blame political mechanism for the failure of market forces because the government fails to organise suitable systems for the operation of markets. Even .worse, inappropriate governmental interference causes market to perform less well than if they were left alone. The libertarian school of environmental economics holds the view that no government intervention is necessary except in establishing and enforcing property rights, and individual economic incentives are reliable as means to settle other issues (Bennett, 1991). While it is possible that these liberals exaggerate market power, political mechanisms do have their own shortcomings in ensuring the stewardship of the environment. Major possible sources of government failure in ecotourism are listed below:

(a) Costs of bureaucracy

Short-sightedness or special interests of some public officials and managers of public property, together with insufficient information and lack of incentive, can increase the cost of running public enterprise by up to 20 to 100. per cent (Borcherding, 1982). Separate government departments are often involved in· the management of natural resources, national parks and related industries, and there is often a delay in handling problems, resulting in lack of efficiency and in economic loss. Borcherding (1991, p102) reports that absolute return on the marketable rights of land and forest resources owned by US Federal Government was negative one billion us· Dollars. However, this is not surprising given that these resources supply many non-marketable benefits.

(b) Interest groups

Many participants, including local villagers, developers, tour operators, researchers,·policy-makers, are involved in ecotourism, with diverse goals and different degrees of bargaining powers. They form pressure groups to maximize their specific benefits. Very often the interests of influential groups, who are not necessarily the biggest portion of the affected population, prevail over those of others, so sometimes sacrificing the majority's interest.

(c) Interests of officials

Government politicians are usually seeking re-election and political funding, and can be easily influenced by lobbyists who represent the interests of voters or fund-donors, and so their ability to make socially appropriate judgements is sometimes compromised. Hardin (1968) and Buchanan (1980) analysed possible misallocation and misconduct involved in the management of publicly owned property.

5. Planning – Bridging Ecotourism Development and Resource-use

There is no universal single means for managing ecotourism resources that is bound to avoid market failure, government failure or administrative· failure. We need a "blending of market, political and administrative mechanisms" (Tisdell, 1993) for management purposes and must examine the alternatives in each circumstance. Planning can play a major role in mitigating these two kinds of failure and in enabling sustainability to be achieved in the use of ecotourism resources.

The ideological premise that no type· of development in natural areas can be compatible with conservation is dubious. With proper planning and management, ecotourism and resource conservation· can be mutually supportive. This requires existing piecemeal approaches to tourism expansion to be replaced by large-scale co-ordination and integration far in advance of actual ecotourism developments and much more awareness of ecotourism's dependency as well as influence upon its ·resource-base.

Ecotourism systems are complex and the planning of ecotourism demands inter-sectoral cooperation and consideration of multiple goals. A possible aim for ecotourism planning is to achieve sustainable development while satisfying a combination of economic, social, cultural, environmental and political goals. Ecotourism planning involves two groups of factors. Group· one involves three vertical levels of ecotourism planning, namely normative, strategic and operational planning; group two covers the four major participants in ecotourism planning - clients, decision-makers, planners and other interested parties, which together form the horizontal dimension of ecotourism planning.

i. A three tiered planning process for ecotourism - a systems approach

A. plan is a complex system and can be considered as a three tiered process.

The top level is normative planning, which identifies contradictions in present values and which may try to develop appropriate norms to overcome these contradictions. It sets "norms" or considers what "ought to be" for the entire ecotourism system, anticipates changes in values and norms, and invents new norms as well as new rules to promote the evolution of the present system. Norms are defined ·as "rules or standards which, in relation to specific values (or general ends), permit us to determine the legitimate value content of alternative valuations"(Ozbekhan, 1968). Here policy-making is the process of norm-seeking but not decisions that precede or transcend any planning; planning, on the other hand, is a larger framework of which policy making itself is an intrinsic phase. Some people believe that political activity defines objectives and goals, while planning is the handmaiden of policy-making to regulate the implementation of given policies. In many places such as China, it is still the general practice to begin planning after policies have been set up. Policy-making about ecotourism determines what ought to· be done within the normative planning context. At this level, norms for ecotourism are selected or invented to promote policies which are consonant with the considered problematic situation and values are considered to overcome existing or ·forthcoming contradictions.

The middle level-strategic planning, sets goals in accordance with the objectives from the normative planning, examines inconsistencies in present practice and ensures the actualisation of the norms articulated in policy-making. It answers "What can be done" by dynamically evolving goal patterns, compares implications and effectiveness of alternative options, and chooses an optimal combination of interrelated goals. On the whole, it is at this level that executive decision-making proceeds and ·the problem of resource inadequacy is tackled. Organizations play instrumental roles in devising strategies which maximize the values from resource allocation and trade-off clarification.

Operational planning is the third level. It involves deciding "what will be done" by setting targets and specific methods to achieve these targets. It identifies the available resource structures and corresponding necessary operations to attain strategic goals. Administrative functions minister to the continuity and stability of existing relationships between roles. Recognising the dynamic patterns of target-evolution, planning at this level identifies the

feasibility of and requirements for attaining these targets, compares alternative ways to minimize the cost of operations, and motivates individuals involved in planning System to play their specific roles by means of resource allocation (both material and non-material) to them. Most of what has been commonly referred to as 'planning' in the past, or even as referred to today occurs at this level.

ii. Difference between a systems approach and traditional planning

Traditional planning theory proposes that planning is carried· out at different administrative levels, usually ranging from the macro-international or national levels to the micro-regional and local levels. Many scholars have applied this theory to tourism planning (Mcintyre, 1993; Gunn, 1994). Three major aspects distinguish the systems approach from traditional planning:

First of all, the systems planning is not confined to geographical or administrative boundaries, each tier covers the entire territory to which certain ecotourism program is connected instead. Its vertical levels are determined according to their functions and the objectives they deal with, which are different from simple physical borderlines. This approach remains holistic at each level, incorporating all the macro- and micro- factors involved in the planning process. Only in operational planning do administrative institutions set action plans involving geographical segmentation.

Secondly, the factor of change over time within this dynamic planning system is also reflected in the planning process. Time and causality (across various time ranges) are regarded as endogenous variables in this approach. Not only actions across the full process from creation of the planning ideas to realisation of plans, but also how the planning system responds to changes incurred by these actions are monitored through self-organising mechanisms within this system. Planning here is no longer a passive reaction to reality but a creative mechanism to control the direction and speed of the change.

Thirdly, instead of going from top to bottom or in the opposite direction as in a single-way exchange and making projections on the prediction that factors develop on a linear basis as happens in traditional planning, this approach recognises the capacity of both nature and human society to change their internal organization dramatically due to small change in input. This may lead to chaos or create order out of chaos. There are generally three types of systems (Jantsch, 1972): (a) mechanic systems, which do not change their internal

organization; (b) adaptive or organic systems, which usually occur in natural environments, adapt to change in their environment by using pre-programmed information and changes their internal organization; (c) inventive systems, such as human society. They "invent" information internally according to their purpose, may change their environment and may also change their internal organization. Ecotourism planning connects the natural environment with human society, both of which are self-organising complex systems, captures the possibility of their cybernetic interaction with a changing environment in ways that are not necessarily predetermined by aspects of the past or present, and allows multi-channelled exchanges between and among three tiers by being an open planning system where forecasting , planning and feedback are interwoven.

iii. Horizontal dimensions of ecotourism planning

Individuals involved in ecotourism planning can be generally divided into four groups. They are affected to various degrees by ecotourism and have different roles in the planning system. They form the horizontal force which interacts with ·the three-tier vertical approach to planning.

The first group - the "clients" of planning, are those individuals directly involved in ecotourism programs as purchasers, suppliers, and hosts, who initiate ecotourism programs and promote ecotourism planning to develop over time in order to better satisfy their needs Demand from ecotourists is the original impetus for ecotourism planning and the source of business opportunities; while suppliers, or ecotourism-related business operators, organise ecotourism resources to provide tourist with competitive ecotourism "products" and earn profit from non-consumptive use of ecotourism resources to finance conservation. Local residents are usually owners of ecotourism resources or heavily dependent upon such resources for their livelihood. Furthermore, their tradition and culture are also a part of ecotourism resources to which ecotourists are attracted and with which they have close contact. Planning needs to coordinate demand and supply in ecotourism, to integrate the host society with ecotourists who mostly come from outside, and to motivate active community participation in ecotourism operation to develop local economy and at the same time protect local culture from commercialisation or corruption.

Decision-makers coordinate ecotourism with the development of other industries and ensure the smooth operation of ecotourism planning through supporting legislation, fiscal and

financial instruments and administration. They make projections, provide statistical data, and set codes for ecotourism.

Planners deal with the technical side of ecotourism planning by collecting information about the target area and its environment, set procedures for development at different stages, monitor zoning of the resources and construction of facilities, and analyse feedbacks from ecotourism management as well as community to ·update the plan. They include land planners, architects, economists, statisticians, engineers, biologists, tour operators and so on. Their duty is to establish an action plan to set steps for an ecotourism project which satisfy other factors in the planning system for ecotourism.

Interested parties are composed of scientists, non-profit organizations, environmentalists, and representatives from other industries. They are not usually directly involved in certain ecotourism projects but are concerned .with these or in some cases, their benefits are influenced by ecotourism. As witnesses of ecotourism, they also take part in the planning process to direct ecotourism's sustainability.

iv. Goals for ecotourism planning

In order to achieve sustainability, there are at least five basic goals for planning, which provide framework for the formation of policies and accomplishment of specific targets at the operational level for ecotourism.

(a) To provide tourist experience of high quality .

Visitor satisfaction is the ultimate purpose of ecotourism as far as the intrinsic value of travel for the individual and society is concerned. Mere volumes of mass participation do not necessarily mean success because ecotourists have special requirements which must be taken into account in ecotourism planning.

(b) ·To promote economic development

Ecotourism is expected to contribute to· economic development mainly by increasing incomes, creating employment, earning foreign exchange and promoting regional development. But in ecotourism planning, such factors as the attractiveness of resources, geographical and social-psychological distance between tourists and the destinations, as

well as cost and· benefit for ecotourism development need to be examined carefully to determine the potential of ecotourism project to earn profit and to conserve the environment. As mentioned above, monetary gain is not the only parameter in measuring the benefit of ecotourism, Nevertheless, investment on fixed assets should show a positive return.

(c) To integrate local community with ecotourism

Ecotourism is dependent of positive acceptance and active participation of the local community. The local community is influenced by ecotourism and has impact on ecotourism at the same time. It is almost impossible to sustain ecotourism projects and channel benefits effectively to the local community without the commitment and support of this community. Ecotourism can never become a· separate layer that is simply pasted onto a community

(d) To conserve ecotourism resources

In the past tourism planning concentrated on market promotion and facility development, but in today's ecotourism planning commitment to resource protection is essential for both visitor satisfaction and continued industry existence.

(e) To ensure long-term viability of ecotourism

Ecotourism is supposed to be a way to make use of resources in a non-consumptive manner and to be a sustainable form of tourism. Ecotourism planning is responsible for setting up a framework within which expectations from ecotourism participants can be satisfied and effective communication · continues to ensure the sustainability of ecotourism.

6. OBSERVATIONS ON THE DEVELOPMENT OF ECOTOURISM IN CHI A

The development of ecotourism in China needs to be seen in the context of the development of its tourist industry and its recent economic development generally. In the period 1949-1978, China did not encourage the· development of a tourism industry. It was not a priority industry and it was considered along Maoist lines to be an unproductive industry because it was a service industry. Any tourism that was permitted was mostly for political purposes. However, China's attitude towards the development of ·a tourism industry began to change

with its opening up to the outside world commencing in 1978.

Visits by foreign tourists to China mostly for business purposes started to be encouraged and within a short period of time foreign investment in hotels was encouraged. The growth of the tourist industry to cater for foreigners was seen as an important means for China to increase its foreign exchange earnings which in turn could be used to purchase imports for its modernisation program and economic development. Furthermore, visits by foreign businessmen and experts were essential for the purpose of facilitating exports, ensuring technology transfer, and encouraging foreign investment and the development of joint business ventures involving foreigners, that is to the success of China' new open-door policy.

Emphasis on the relationship between tourism development and the natural environment has for the most part been lacking in China although as mentioned below this attitude is now changing. Indeed, until recently the tourist industry was portrayed by most Chinese as a "smokeless" industry, an industry benign to the environment. This view, however, involved many blind spots. While at the point of delivery e.g. hotels and entertainment, the tourist industry may appear to be "smokeless", this ignores the environmental impacts of items like· energy, transportation and water required for tourists as well as waste products, such as sewage, produced by tourists. These have created environmental problems in a number of areas in China (Tisdell and Wen, 1991).

Although the Chinese government gave no encouragement to the development of domestic tourism, it grew considerably with China's economic development and with rising incomes. China's National Tourism Administration (1993, p22) estimated that there were 330 million domestic tourists in 1992 in China. This compares with 38.1 million from outside the mainland. In terms of numbers, domestic tourism is therefore a big business in China and this is so even taking account of the fact that domestic tourists spend much less :per head than do foreign tourists.

In 1992, the Central Committee of the .Chinese Communist Party (CCP) and the State Council made the important decision to increase the relative size of tertiary industry in the Chinese economy. In line with this, a positive attitude is being adopted towards the development of domestic tourism. A number of positive policy measures have been adopted to encourage domestic tourism, and tourism is now regarded as a leading industry for the economic development of a number of regions, including several non-coastal regions.

As is well-known, China has experienced uneven development since commencing its economic reforms with income in the coastal provinces rising considerably above those in the interior. Tourism development is now being pursued as a means to encourage economic growth in a number of the interior regions and promotion .of ecotourism is a part of this strategy. The Xishuangbanna Dai Autonomous Prefecture of Yunnan is for example, one region being targeted in this way. In the past, China's tourism has mostly been concentrated in urban areas and there is evidence that foreign tourism to China has increased China's uneven development rather than reduced it (Tisdell, 1995).

At the same time as China has developed a new attitude to the growth of its tourism industry, a more realistic assessment of the relationship between tourism and the natural environment has started to prevail. The tourism industry is no longer regarded as being necessarily environmentally friendly and the importance of conservation of resources for the purpose of sustaining tourism is being increasingly recognized. This is evident for example from *China's Agenda. 21: White Paper on China's Population. Environment and Development in the 21st Century* (State Council, 1994, p.58), an important document which will influence China's planning and policies to achieve sustainable development in the 21st century.·It recommends that "New routes for tourist attractions should be opened up and ·tourism resources should be protected to promote pollution-free and environmentally-sound tourism. Tourist-oriented road transportation facilities, airports and related services (including catering establishments) should be constructed. Appropriate ways should be found to solve problems in sewage disposal, refuse collection, goods transportation, waste disposal and to strictly control sources of hazardous pollution at scenic spots".

In addition, ecotourism is to be promoted in China as a means to conserve biodiversity and nature generally and pilot projects are to be developed for this purpose (State Council, 1994, p.l77). This direction is not only indicated in *China's Agenda 21* but it is followed up in *China: Biodiversity Action Plan* (Xie Zhenhua, 1994). Xishuangbanna Prefecture in Yunnan, an area internationally recognized as being very rich in biodiversity, has been targeted as one of the areas for ecotourism development. Nature-based tourism is to be promoted using the ecological resources of the Xishuangbanna State Nature Reserve.

Administrators of this Reserve see ecotourism as a means of boosting their relatively meagre level of receipts, helping to give financial support for their conservation programs and to some extent providing economic benefits to local communities. Ecotourism development has

occurred at three sites: at Bubong, at a site near Menglun and at San-Ca-He. Entrance fees must be paid at all sites. The Bubong site has been established for some time and contains a tree-top walk which was originally constructed for scientific research. It receives day visitors and is a joint venture of the Reserve and the Chinese Academy of Science. The site near Menglun is in a forested limestone cliff area. This site has recently been developed by a joint business venture between a local farming co-operative and the Reserve.

A large -development is occurring at the San-Ca-He site near Mengyang. The Bureau has invested heavily in the provision of tourism infrastructure e.g. roads and walking paths, and is constructing a hotel/lodge at this site. At the present time this site is really equipped only to cater for day visitors. The hotel will enable longer-staying tourists to be· accommodated. However, the amount of demand to use this facility is under question at this time. It may not appeal to Chinese tourists who seem to prefer large towns such as Jinghong and to use these as a base rather than live in "remoter" locations. Whether or not the facilities will be of sufficient standard, the attractions of the site sufficient and promotion adequate to attract foreign tourists to stay at the hotel remains to be seen. The hotel is of a relatively small size. While on the one hand, this means that it will be easier to achieve full capacity of the hotel, there may be diseconomies from its small scale of operations. Although the Bureau for the Nature Reserve has sought joint business partners, these -have not yet been forthcoming. It is possible that a loss may be - made on the capital investment at the San-Ca-He site in which case this ecotourism development rather than adding to the finances of the Nature Reserve will be a drain on it.

This illustrates that if ecotourism ventures are to be used to provide effective support for conservation care must be taken to ensure that they do not make losses on the amounts invested by conservation authorities. This is not to say that a profit has to be made on every site open for ecotourism. However, where capital with alternative uses is employed to provide man-made assets for ecotourism, there seems little or no case for providing such assets if a loss is made on these or if the cost of their provision is higher than the value which ecotourists place on them. There is· still a long way to go in China, as in most countries including Australia, in soundly evaluating the economic value (both private and social) of ecotourism projects.

7. CONCLUDING COMMENTS

· Although a variety of definitions of ecotourism exist which set different boundaries to the coverage of the term, all closely link tourism with the conservation of the environment, especially the natural environment, but also in some cases the conservation of cultures and cultural artifacts. All definitions stress the need for sustaining assets on which tourism depends. Sustainability is central to most discussions involving ecotourism.

The development of ecotourism is influenced ·by the business sector, the government, non-profit groups and ecotourists themselves. All are important sectors. It is noted that the development of ecotourism cannot be safely left to markets because of market failure and that market failures in other parts of the economy can influence the development of tourism. Some government intervention, planning and co-ordination are required to help correct .some of these failures. However we have to be aware that government (political) failure and bureaucratic failure can also occur.

The development of ecotourism in China is reviewed briefly in the context of tourism development in China. China has progressed from a situation where tourism was regarded as environmental benign to one in which both possibilities for environmental deterioration or for conservation from tourism growth are recognised. The need for appropriate planning and associated government measures to protect the environment as far as tourism development is concerned is increasingly recognised in China. China has recently started to develop nature-based tourism as a way to assist conservation of biodiversity. While ecotourism can bolster conservation of biodiversity, it is as pointed out also possible for uneconomic ecotourism to hamper conservation of .nature.

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