Ecotourism Management in China’s Nature Reserves

The number of nature reserves in China has increased rapidly, from 34 in 1978 (0.13% of total area) to 1146 in 1999 (8.8% of total area).

Since the 1990s, more and more governments, including China, have recognized that nature reserves should exist and that they should develop in a sustainable way (1). Both protection and development should occur simultaneously in order for nature reserves to survive, and to ensure conservation of natural resources.

Ecotourism, which has received a great deal of attention in recent years, is an effective way to ensure sustainable development in nature reserves. In China, ecotourism has been developed in about 80% of the nature reserves since the early 1990s. Of the reserves that have developed tourism, 15.9% have more than 100,000 visits annually. It is estimated that the total number of visits was about 2.5 million in 1995, and the annual income generated was about USD 63 million (2). In the past 5 years, the number of reserve visitors has increased rapidly as a result of national economic growth. Our questionnaire survey showed that in some nature reserves the average increase of visitors from 1995 to 1998 was 87.8%, while during the same period the increase in tourists nationwide was 37.0% for foreign tourists and 10.3% for domestic tourists, respectively. Nature reserve tourism is then developing more rapidly than other types of tourism.

There is no question that ecotourism represents one of the most environmentally friendly alternatives for the economic use of natural resources. However, ecotourism can lead to degradation of the natural resources on which it depends, especially if management is poor. Thus, ecotourism not only is an opportunity, but also a challenge for reserves.

ISSUES IN ECOTOURISM DEVELOPMENT

Although tourism in China’s nature reserves is still in the initial stages, several problems are threatening some reserves. Visual negative effects include landscape degradation, water pollution, waste litter, species loss, etc. However, we need to determine the real reasons for these problems.

In order to clarify the issues involved, a structure chart of reserve ecotourism management in China has been constructed (Fig. 1). Reserve ecotourism covers many aspects of development, with many interrelated actors inside and outside of the whole system. Within the system (Fig. 1), there are 3 levels that make up the management system for nature reserve ecotourism. Level 1 has 4 interrelated actors: i) the eco-environment, which is the key ecotourism resource; ii) visitors who are the main body of ecotourism; iii) practitioners who gain economic benefit from ecotourism including tour companies, hotels, restaurants, etc; and iv) local communities that are involved in and gain benefit from ecotourism. Only when all 4 actors benefit, is ecotourism possible.

These 4 actors should be managed and coordinated under the reserve management administration (Level 2: Fig. 1). The main departments of management for the reserves include the State Environmental Protection Administration; State Forestry Agency; State Oceanic Administration; Ministry of Agriculture; and Ministry of Land and Natural Resources. The actor outside the main system is scientific research, which includes ecotourism planning; carrying capacity determination; environmental impact assessment; etc. Scientific research is necessary to ensure sustainable development of ecotourism. Ecotourism issues are analyzed from the point of view of the different actors and their relationships (Fig. 1).

Management Department Issues

No national strategy on reserve ecotourism: Since there is no national strategy for nature reserve ecotourism, many concepts are confused and tourism in nature reserves can become uncontrolled. What is ecotourism for reserves? What are the main aims for nature reserve ecotourism? Which reserves are suitable for ecotourism, and which are not? How should tourism operations be managed? All these questions need to be answered in the national strategy.

Difficulty in controlling tourism extent by actual reserve category system: In contrast to the IUCN 6-category system (3), China’s reserves are classified into 3 categories: Natural Ecosystem Reserves; Wildlife Reserves; and Natural Monument Reserves. The reserves are categorized by ecological definition and not management objectives. This category system does not include the level of human utilization allowed. This category system results in some difficulties in practical management. The direct consequence, reflected in the growing reserve tourism is that most of the reserves are developing or are about to develop tourism. This is the case even for those which should be strictly protected because of their importance for biodiversity conservation. In the 100 reserves sampled for a questionnaire survey in 1997, 82 have developed tourism. Some of these are very important for biodiversity conservation and should therefore be prohibited to visitors.

Poor communication and coordination between management departments: There are different management departments for nature reserves in China as mentioned above. However, occasionally, communication and coordination is very poor between these departments. As a result, the same area may be designated as a nature reserve by one department as well as designated as a scenic area or forest park by another department. The management goals and functions are different for reserves, scenic areas, and forest parks, thus, the levels of human utilization allowed differ. Theoretically, reserves should receive more conservation than the others. If an area is designated both as a reserve and forest park or scenic area, how can tourism be controlled?

Nature Reserves Issues

Reserves involved in operation of tour business: The fundamental responsibility of a nature reserve administration should be to focus on the efficient management of natural resources. However, almost all the reserves that have developed tourism are now involved in the operation of tour businesses, such as hotels, restaurants, souvenir shops, etc. This may cause nature resources to be overutilized by tourists.

The main reason for this problem is that most reserves have fi-