

## ADVANTAGEOUS AND DISADVANTAGEOUS IMPACTS OF TOURISM DEVELOPMENT ON THE LIVING OF LI ETHNIC MINORITY VILLAGERS IN HAINAN ISLAND, CHINA

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Around the Mt. Wuzhishan in Hainan Island, China, tourism development has been rapidly progressed by the government and private companies since the 1980s, especially since the late 1990s, and consequently the living conditions of the Li ethnic minority people in Shuiman village, located in its center, have been drastically changing. As expected by the government, the villagers' income has increased by means of wage labors, selling the local products to the tourists, and compensatory payments for crops grown in the customary land when its use right was transferred to the company. Various changes in their lifestyle have contributed to the release from poverty and the overall improvement in basic human needs and primary health care. The villagers' flexible decision-makings on their living and environment use, with application of their traditional knowledge for resource uses, have been effective for sustainable human-environment relations, though further changes due to orders and requests of the government and companies may lead to environmental deterioration. Furthermore, inter-household differentiation in income and the perception on tourism development and agricultural development has been enlarged. These situations are discussed from the viewpoint of community-based sustainable development.

**Key Words:** tourism development; bottom-up decision-making; environmental justice; sustainable development; Li ethnic minority

### INTRODUCTION

Since the 1980s when the transition from planned economy to market economy took place in China, various development projects have been launched by not only the government but also private enterprises. The targets of these projects were mostly the eastern coastal areas in the early stage but have been extended to the inland areas, which include the habitats of various ethnic minority groups.

Hainan Island, which has been an independent province since 1988, is unique in rich "exotic" flora and fauna in the tropical and subtropical environment and in traditional culture of the Li and Miao ethnic minorities who have inhabited mostly the inland. In particular, the Mt. Wuzhishan with a peak of 1,867 m above sea level and its surroundings, which administratively belong to Wuzhishan city (renamed from Tongzha city in 2001) and Quongzhong county, are well known for beautiful landscape (Fig. 1). In 1986, the Wuzhishan Nature Reserve, with 13,435 ha of land area, was established (Li et al., 2001). Under the Chinese government's policy on development of Wuzhishan area, represented by the slogan, "to develop national parks of tropical forest and tourism resorts as the demonstration sites for release of the inhabitants from poverty," the Wuzhishan (Tongzha) city government has progressed tourism development projects since the 1980s. Due to the remote location,

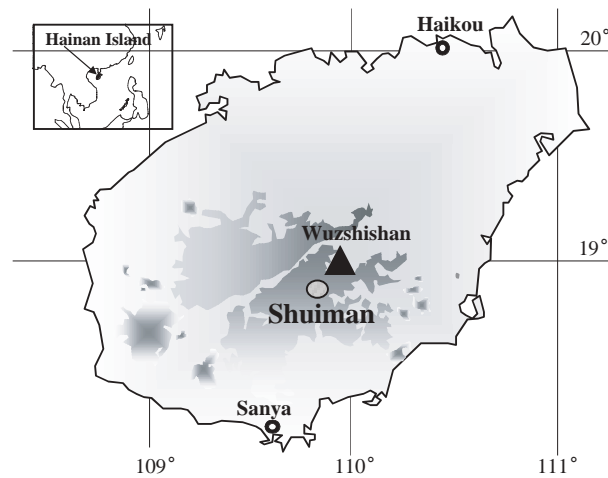


Fig. 1. The location of Shuiman village and the Mt. Wuzhishan in Hainan Island.

however, it was in the late 1990s that the Mt. Wuzhishan and its vicinity were involved in the direct targets of such projects. It is noted here that the geographical boundary of Wuzhishan area has been changed according to the administrative reforms. In the recent years, particularly since 2001, it refers, in general, to Wuzhishan City, which consists of four towns and five townships; the primary organizations of these nine towns/townships are subdivided into 59 administrative villages or 328 natural villages. In 2001, the population amounted to 106,578 (48,214 for non-agricultural sector and 58,364 for agricultural sector) in the Wuzhishan City; of those, 54,018 lived in the rural primary organizations (Statistic Bureau of Hainan Province, 2002).

Rural development for release from poverty among the inhabitants in developing countries has been considered to agree with “sustainable development,” which was especially emphasized in the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 (Munasinghe, 1993). Since then, discussion has focused on the importance of coexistence of various “sustainabilities,” including not only environmental and economic aspects but also social and cultural aspects (e.g. Munasinghe and McNeely, 1995; Uitto, 1995; Stocking, 1996; Ohtsuka et al., 1998, 2002). Keeping these notions in mind, this paper aims to elucidate the changing living conditions and environment uses of the people in a Li-speaking village situated in the center of tourism development.

## SUBJECTS AND METHODS

The study village, called Shuiman, is located in the closest position to the Mt. Wuzhishan (about 10 km away) and in the highest elevation (about 600 m above sea level) in Hainan Island (Fig. 1). This village consists of two settlements, i.e. the up-village and the down-village, both of which have been inhabited by the Li ethnic minority group but the inhabitants differ in the residential history (Umezaki, 2001; Liang, 2001). Due to the government’s order in 1958, people who had lived in the up-village and other people who had lived in two settlements in higher altitude joined to settle in the down-village. After a few decades, however, the former group returned to their old place, i.e. the up-village.

The lifestyle of Shuiman villagers has been drastically changing since the 1980s, especially in the last several years. Before that, they basically subsisted on paddy field cultivation, upland field

cultivation, animal raising, gathering and hunting. Major marketed items, though small in quantity, included tea leaves, bamboo shoots and honey as the natural resources and bananas, tea leaves and bamboo shoots (cultigens for the latter two) as the agricultural products. Due to the government's policy, called "closing hillsides to facilitate afforestation," all over China and the managing policy of the Wuzhishan Nature Reserve, however, the villagers' exploitation of natural resources has been gradually restricted.

In 2000, there were 32 households in the whole Shuiman village and the *de facto* population was 190 (95 males and 95 females); for the up-village only, the households numbered 13 and the population was 73. Due to short longevity of the aged persons and prevailed family planning practices in recent years, the proportions of aged population ( $\geq 65$  years) and child population ( $< 15$  years) were 10.0% and 23.2%. Of the 146 villagers aged 15 or more, 30 (20.5%) had no education, 34 (23.3%) had 1-6 years education, and 82 (56.2%) had more than 6 years education, with large variations by their ages (Liang, 2001). Of the 127 working-age (15-64 years) villagers in 2000, 37 (29.1%) were engaged in six-month contract labors outside the village, owing to the policy called "the contract responsibility system for remuneration linked with output," which started in 1982 (Liang et al., 1995), suggesting that Shuiman villagers had not been isolated from the outer world, though such workers' contributions to the household economy were not large.

The fieldwork, on which this paper is based, was conducted four times from 2000 to 2002: September to November 2000, February to March 2001, February to April 2002 and August 2002. Major data used in this paper were collected in the up-village by means of observation and interview.

## RESULTS

### *The effects of the government-led development*

The authors' interview survey revealed that various supports of the Chinese government to Shuiman villagers through the Wuzhishan (Tongzha) city government and the local government began in the 1980s and have been accelerated since 2000, when a 3-km-long pavement road between Shuiman village and the local administrative center was opened. Newly constructed by the government were, for instance, water supply and drainage systems, electricity and telecommunication lines and pavement road in the village for public use, and newly facilitated in all or some households with financial support of the government were concrete-made dwellings, latrines and methane-generating pits. The government also constructed various facilities for tourists, such as a car parking area, an entrance gate to the resort, a pavilion, an ancient-style bridge and imitations of some traditional farming facilities such as shelves for drying rice stalks.

For the villagers' subsistence activities, the government's support in the recent years has focused on cash cropping; for instance, saplings of rattan (*Calamus margaritae* or *Daemonorops margaritae*), a kind of bamboo and a kind of ginger (*Alpinia oxyphylla*) were donated to the villagers. The shift of the villagers' cash earnings from natural resources to these cash crops was requested by the government to accord with the "closing hillsides to facilitate afforestation" policy and preservation of natural ecosystem in the nature reserve. In addition, the villager's traditional subsistence activities have also been changed with support of the government. In particular, the productivity of paddy cultivation markedly increased owing to the introduction of hybrid strains, in association with the use of agricultural chemicals (Table 1). It is noted, however, that the villagers have developed various subsistence activities, while utilizing their traditional knowledge, to cope with reduced use of natural resources; for instance, they have grown a variety of semi-domesticated grasses along paddy fields to consume as nutritious foods (Umezaki, 2001).

Table 1. Historical change of paddy field cultivation in Wuzhishan area and Shuiman village.

Year	Strains	Fertilizers and pesticides	Productivity (kg/ha)#
1952	Local only	Manure	1130
1965	Local only	Manure	1390
1980	Local and hybrid	Chemical fertilizers/pesticides	2040
2000-2001	Local and hybrid	Chemical fertilizers/pesticides	3000-4500

# The productivity for the years 1952, 1965 and 1980 was derived from the unpublished local government reports for the whole Li and Miao ethnic minorities in Wuzhishan area, and that for the years 2000-2001 was based on the authors' survey in the Shuiman up-village; there was no other available information in the past.

Note: The total area of paddy fields in the Shuiman up-village was 5.7 ha in 2000-2001, according to the authors' measurements.

#### *The effects of company-led development*

The preparatory works for tourism development in Wuzhishan area were undertaken by private enterprises with support of the government. In early 2002, a joint venture, named Wuzhishan Tourism Limited (called WTL for short), was formed with share of investments by the Wuzhishan local government, a tourism company in Beijing and a company in Hainan Island. On 1 May 2002, this joint venture opened the resort, at the front of which Shuiman village is located. For three and a half months up to the middle August, 1,200 tourists entered the resort by paying the fee (¥ 10 per person; ¥ 1 was approximately US\$ 0.12); in addition, there were many other visitors who spent in Shuiman village to enjoy the view of the Mt. Wuzhishan, without payment of the entrance fee to the resort.

The relations between the private companies or the WTL and Shuiman villagers have been based on mutual aids or cooperation. The companies employed many villagers for various works while the villagers' collective use right of their customary lands was transferred, portion by portion, to the companies, with compensatory payments for valuables such as crops and trees grown in them.

Many kinds of works, mostly construction works, have been needed for making the resort and other facilities for tourists, and the allowances for such works have risen up. For instance, the allowance for construction labor in March to April 2002, just prior to the opening day of the resort, was more than ¥ 20 per day. In addition, the villagers gained money by selling building materials such as naturally growing trees and bamboos.

It was in 1997 that the first transfer of the land-use right occurred for making an 80-ha pasture field for viewing butterflies. Since then, the private companies and the WTL have needed more lands for constructing attractive centers such as an orchid garden and a bird sanctuary. When the land-use right was transferred, the company paid the compensation fee to the village collective association and individual villagers who possessed valuable crops, bamboos and/or trees; the amount for the former was fixed at ¥ 100 per mu (a unit of land area, corresponding to 0.0667 ha) while that for the latter depended on the quantity and quality of the plants grown in the customary land concerned; the highest amount was ¥ 10,700 for the crops, including 600 banana trunks, which were grown in the area of 3.5 mu and were owned by one villager.

In addition, the villagers have had opportunities of selling the local products to the visitors. These incomes have markedly increased not only by the increased number of customers (i.e. visitors) but also by the increased prices to slightly exceed those in urban areas: for instance, ¥ 4 for 1 kg plums, ¥ 2 for 1 kg bananas and ¥ 4 for one papaya fruit. On 3 March 2002, the national holiday for the Li and Miao ethnic groups' traditional festival, when many tourists visited Shuiman village, one female villager earned ¥ 100 by selling agricultural products at a small stall.

There was limited information about the Shuiman villagers' income before the authors' survey. According to the unpublished village records, the average annual income in 1996 was ¥ 640 per

person or ¥ 3,755 per household. It is thus obvious that the recent income level was much higher than that in a half decade ago.

*The villagers' properties and attitudes*

The observation and interview about the major properties possessed by all households in the Shuiman up-village in October 2000 and in August 2002 revealed that the number of valuable live-stock, i.e. buffalos and pigs, did not change whereas various living facilities and utensils were purchased by many households in this duration (Table 2); in particular, latrine, methane-generating pit and telephone were owned by no household in the former but by almost half of them in the latter. The household expenditure for these facilities/utensils mostly derived from the wages in addition to the incomes from selling farm products to the tourists and building material to the companies, though the government's projects for fundamental consolidation were indispensable. Another interview survey for 12 male household heads in 2002 demonstrated two major observations (Table 3). First, a half or more of them favored tourism development, liked its further development and agreed to cease agriculture for the sake of tourism development. It is noted, however, that they were diversified in these

Table 2. Changes of major properties in the Shuiman up-village.

	October 2000 (13 households)	August 2002 (16 households)
For subsistence#		
Buffalos	21	23
Pigs	24	20
For living‡		
Latrine	0	8
Methane-generator	0	8
Rice mill	0	2
Gas cooker	6	9
Telephone	0	6
Television	4	6
Auto bike	2	2

# Total number owned by all households.

‡ The number of owing households.

Table 3. The responses by the household heads in the Shuiman up-village (N = 12).

Questions	Answers	No. of respondents
Do you favor tourism development and/or agricultural development?	Tourism	7
	Agriculture	2
	Both	3
How do you feel tourism development in the future?	Good	6
	Intermediate	5
	Not good	1
Do you agree to cease agriculture for the sake of tourism development?	Agree	7
	Disagree	5
Do you agree to discontinue customary land-use for the sake of tourism development?	Agree	1
	Disagree	11

responses. Second, almost all household heads did not agree to completely lose the collective use right of their customary lands due to its transfer to the company.

## DISCUSSION

This study revealed that tourism development in Wuzhishan area, including the nature reserve, has rapidly progressed mostly because the joint venture, in which the government is involved, has taken the initiative (Ouyang et al., 2001). In this course, the lifestyle of Shuiman villagers has been drastically modernizing to release from poverty, as expected by the government. Many changes are advantageous for the inhabitants' health and welfare. In particular, construction of the water supply and drainage systems, making latrines, and easy access to the nearby local center (in which the clinic and other health-related facilities exist) are widely recognized as the key indicators for basic human needs (World Bank, 1997; Yamauchi and Ohtsuka, 2000) and primary health care (Moji et al., 1998).

However, there are two possible disadvantages for community-based sustainable development. The first is concerned with environmental deterioration. Recent human ecological studies at the community and county levels in China pointed out that the local communities have played significant roles in environmental sustainability because the local culture and knowledge, which have functioned with the bottom-up decision-makings, are environmentally sound (e.g. Wang and Ouyang, 1996; Wang et al., 1998). According to Gao (1995), such community functions have been manifest among ethnic minority groups in China. In recent years when tourism development has become a central concern of Shuiman villagers, their decision-makings on the environment use and lifestyle, with application of their traditional knowledge and skills, have been so flexible as to satisfy environmental conservation, as mentioned previously. However, there is a possibility that their further dependence on tourism development, or changes in decision-makings to meet with requests and orders of the government and companies, may lead to uselessness of their traditional and environmentally sound knowledge and behavioral norms.

The second point is concerned with increasing inter-household differentiation not only in income and the facilities and equipments possessed but also in perception on the development and lifestyle. The chances of wage labors and the received amounts of the company's compensatory payments due to transfer of the customary land-use right varied from person to person and from household to household. These situations have markedly differed from those in their traditional life, in which all households survived without large variations simply because their cash incomes were very limited and all customary lands around the village were freely utilized by any villagers. In this connection, many studies alarmed that the inter-individual and inter-household differentiations in accessibility to the common lands/resources tend to aggravate environmental justice, represented by equality in their use and the benefit obtained from them (e.g. Ostrom, 1990; Taylor, 2000). Based on a comparative analysis for many communities in the Asia-Oceania region, including Shuiman village, Ohtsuka (2003) emphasized that inter-household diversification in accessibility to the common lands/resources is one of the most important factors which tend to devalue their mutual aid and reciprocal relations and to weaken their social solidarity. Thus, there is a possibility that further diversification among the households of Shuiman village may damage their social and cultural sustainability.

Finally, it is worthy to consider the above-mentioned points in relation to the findings that more than half of the household heads favored tourism development but almost all of them wanted to keep the collective use right of their customary lands. Their perceptions are inconsistent; the villagers are inclined to enjoy modernized life in the short term but dislike to lose their collective land-use right as the most basic component of their cultural heritage. To guarantee their long-term survival with harmonized relation with their environment, it is necessary for Shuiman villagers to maintain and/or develop their social solidarity and self-determining abilities and for the government and companies to make efforts for agreements with the villagers for future development.

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