

## Research paper

# Agriculture/Forestry-based Community Developing Leisure Business Management: the Interests, Employment, and Strategy —A Survey of Se-Juo in National Alishan Scenic Area<sup>1</sup>

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**【Abstract】** For the sake of globalization, Taiwanese authority actively guides leisure-related business development in rural area in order to efficiently allocate surplus agriculture/forestry production inputs and mitigate declining economic growth. This is special true for the enlargement of domestic demand as well as the recreation opportunities to citizen. In this paper, we investigated the interests of the private landowners of 143 sample landowners who reside at Se-Juo of National Alishan Scenic Area (ANSA) by using questionnaire survey and applied SWOT analysis to develop appropriately strategy for this area. The results of this paper shown the current main managed agriculture/forestry production in Se-Juo area are Tea (77.6%) and Thill Bamboo Shoot (62.9%), leisure-related business are minor, but 60% of landowners expect to engage leisure-related business in the future. Bring leisure-related business can ameliorate unemployment in rural/forest area by increase the demand of local extra employment. The total, adult, and nonage number (especially male) of a household have positive correlation with the landowners' interest to engage leisure-related business. Most landowner's (92%) express that family members will help when they managing the leisure-related business, it means they will deal leisure-related business as supplement and admit of current agriculture/forestry operations. Hence, the nature of job combination is an important factor to influence the interest of landowners. By using SWOT analysis to evaluate the feasibility and strategy of bringing in the leisure-related business into Se-Juo area, we suggested that the Se-Juo area should head the theme for nature or eco-tourism, and the current subsidy programs should consider focusing on founding the organizations of local landowners to facilitate agriculture/forestry production change to leisure-related business effectively.

**【Key words】** Leisure-related Business, Private Forest, Rural Employment, SWOT Analysis.

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## 研究報告

# 農林業社區發展休閒事業經營之地主意願、地區就業及產業發展策略—阿里山國家風景區內石桌地區之調查<sup>1</sup>

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**【摘要】**為因應日趨全球化及加入世界貿易組織之後，有效利用既有鄉村農林業生產因素（土地、勞力、資本、經營能力），避免其閒置與不當利用，並提供國民更多休閒或遊憩機會，增加鄉村社區就業機會，紓緩經濟成長停滯的壓力，在特定有發展休閒遊憩潛力的鄉村地區，將原有農林業生產的功能轉變為休閒事業之經營，是一種當地資源經營者可能選擇的作法。本研究探討傳統上以農林業生產為主，2001年劃入阿里山國家風景區之石桌地區為例，藉由現場調查分析資源現況，以及問卷訪問私有地主（143位）、各級管理機關意見等方法，瞭解目前對於此作法之地主意願，並經由分析之結果，對地區就業及未來發展策略提出建議。主要發現與建議如下：石桌地區（奮起湖、光華、頂湖）目前之主要農林業生產種類為茶（77.6%）及石竹〔轎篙竹〕筍（62.9%），由於休閒遊憩需求持續增加，目前經營與休閒有關之事業雖仍佔少數，但有60%的受訪者表示未來有興趣朝此發展，其中最想從事為民宿（67.1）與餐飲業（24.7%）；地主之現住家庭內之總人數、成年人數、未成年人數，其中特別是男性的人數（與農林土地繼承有關），與經營休閒有關事業之意願有正向之關係，有經營休閒業意願之地主92%表示會自行經營，顯示農林業與休閒業在時間之安排上存在相當之互補性，即家庭勞力充足與否與事業間之互補性會影響其經營興趣；自行經營休閒業者中有28.4%仍需家庭成員以外之額外勞力，顯示當地發展休閒相關事業，應有增加當地就業機會之效果；經分析評估此地區發展休閒產業之內部條件（優、劣勢）及外部條件（機會威脅），建議在未來發展策略上，以永續發展為前提，保留既有之優美森林為背景，朝享受自然、人文（鐵道文化）探尋之生態旅遊為主題的健康、渡假勝地的方向發展，休閒相關事業與農林業經營者應組織化，聯盟合作、共同行銷休閒服務與特有品牌農特產，降低休閒業經營成本與增加農林業生產之附加價值。

**【關鍵字】**休閒相關事業、私有林、鄉村就業、優劣勢機會威脅分析

## I. Introduction

Taiwan is a mountainous country. The average rainfall is 250cm per year. Forest coverage is 2.1 million ha or 58.5% of total land area in this island. Although most forest area (71.1%) is held by national ownership (Taiwan Forest Bureau, TFB, 1995), privately holding [including private (general and aboriginal)

ownership and leased from the nation] forest areas mostly locate on slope land, hence they play an important role in forest/agriculture production, rural livelihood, and environment conservation (soil and water especially).

From World War II to 1990, wood production still generates profit, but later from 1990, the profit no longer maintained due to higher wage



and cheaper log price. The weights of forest management objectives to authority had changed ever since the Forest Management Reform Measure proposed in 1990. Forest management objective is no longer to obtain the revenue from wood production. Recently, the vision of new government (Democracy Progress Party in power since 2000) is to reconstruct Taiwan to be "the Green Silicon Island", it means livelihood quality and science technology are the ultimate ends that Taiwan should pursue. Besides, for the sake of globalization and competition of knowledge-base economies, surplus agriculture/forestry production inputs of rural area must be allocated efficiently.

According to the former policy guidelines, objectives of forest management have turned to the conservation, developing recreational or leisure-related activities instead of wood production in forest areas, there are thought as a good way that both to capture the non-consumption benefit from forest and to mitigate declining economic growth and improve livelihood quality via stimulate the domestic demand and provide many recreation opportunities to citizen. Thus, Many researches have focused on agriculture how it changes to leisure-related business management (Chiang, 1993; Gian, 1997; Chu, 1997) rather on forestry (Lo, 1998). It means the resources of agriculture/forestry have to change processes of production, from goods to services.

Therefore, the Council of Agriculture (COA), Executive Yuan, has subsidized the private landowners preliminary to encourage their attitude of original land use toward leisure-related business management in specific zone. However, these leisure-related businesses have diversity form in a rural community, including agriculture tourism area, forest recreation area, pension

[B&B (bed and breakfast)](Gian, 1997; Lin, 1998), restaurant (foods and drinks), ecotourism guide, etc. Hence, rural development usually concerns multidiscipline comprehensive technologies (Macmillan, 1999; Force, 2000). In this paper, we try to investigate the current situation and the interests of private landowners about engage leisure-related business and applied SWOT analysis to clarify the management strategies while developing the leisure-related industry in a rural/forest area.

## II. Methods and study area

### (I) The study framework

Developing tourism or leisure-related business would revenue private sectors, but also cause negative impacts to a rural/forest area (Pigram, 1999; Broadhurst, 2001). However, the assurance of sustainable development is that we should concern. The principle of sustainability can assure that a new industry would fulfill multiple interests of diversity stakeholders and different needs among generations. Hence, the guidelines of leisure-related business management toward sustainability must satisfy three preconditions simultaneously, namely economically viable, environmentally sound, and socially acceptable which matches with the three directions of what the COA proposed: progress of production, confirmation of ecology, and improvement of livelihood.

Because environmental, economic, and social conditions in a rural/forest area were influenced by the current leisure-related resources, statutes/regulations, assistance and control programs. Therefore, there are inevitable components to the SWOT analysis when we intend to bring leisure-related business into rural/forest area (Fig.1). SWOT (an acronym standing for strengths, weaknesses, opportunities

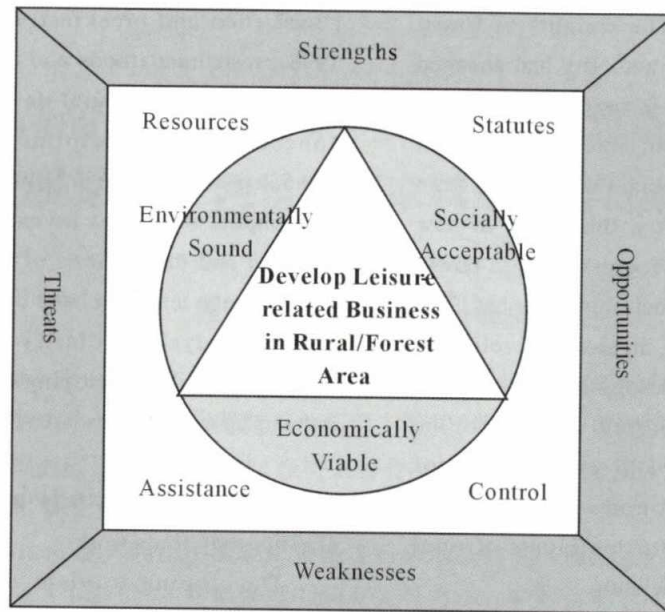


Fig. 1. The framework of developing leisure-related business in rural/forest area.

and threats) analysis is a commonly used tool for analyzing internal and external environments in order to attain a systematic approach and support for a decision situation. The internal (the strengths and weaknesses of the industry own qualities or characteristics) and external factors (the opportunities and threats of the industry faced) most important to the industry's future are referred to as strategic factors and there are summarized within SWOT analysis (Pesonen *et al.*).

#### (II) Study area and survey

Alishan (Shan in Chinese means "Mountain") is located in the northeastern part of the Chia-Yi County. It is one of the most renowned scenic areas in Taiwan. Alishan is famous for alpine forests, sacred trees of old growth (*Chamaecyparis* Spp.), diversity topographies and biological resources, old history (developed in 1913), ethnic culture and people, and high elevation forestry railway [71.4 km in

total length, 762mm-gauge in width. It was in order to transport logs from the forestry areas, even now it is still running for passengers from Chia-Yi (30 m) to Alishan (2,216 m)], and picturesque scene of the variable meteorological phenomena. About 700,000 visitors visit the spot every year.

Alishan's abundant natural resources and culture led to its recognition by the Ministry of Transport and Communications (MOTC) in March of 2001 as a "national scenic area", with the Tourism Bureau (TB), establishing an Alishan National Scenic Area Administration (ANSAA) responsible for overseeing the tourism development of the area. With Se-Juo area included, ANSA (Alishan National Scenic Area) totaling 32,700 ha (Fig.2).

Se-Juo locates in ANSA, it is a central section among three highways (No. 18, County No.159, 169). Fortunately, Se-Juo area just enclose both the middle way between Alishan



forestry railway and highway (No. 18), it including three villages where the citizens depend on traditional agriculture/forestry production and part of leisure-related business.

The method of our survey, on one hand, we proceed a depth interview with local familiar people and collected socioeconomic, leisure-related resources data, and references of the study area. On the other hand, we assembled the sampling frame from the government of Chai-Yi County. Totally, we investigated 143 sample private landowners who reside in Se-Juo area by using questionnaire interview in 2002 summer. The content of questionnaire comprises the characteristics of landowners, employment of household, current status of management, and the interests of leisure-related business management. We analyzed all above data by realized and

synthesized them so as to apply SWOT analysis that can provide a good basis for successful strategy formulation.

### III. Results and discussion

#### (I) The characteristics of current management

Samples are equally selected from the three villages (table 1). Most landowners are male (89.5%), agriculturist (92.3), middle educated, half of them joined the COA subsidy program. The main current agriculture/forest productions of landowners are Tea (*Camellia sinensis* var.)(77.6%) and shoot of Thill Bamboo (*Phyllostachys lithophila*)(62.9%), main leisure-related business are minor, there are pension (7.7%), restaurant (3.5%). Meanwhile, their managed scales usually are small.

#### (II). The interests and prospect of engaging

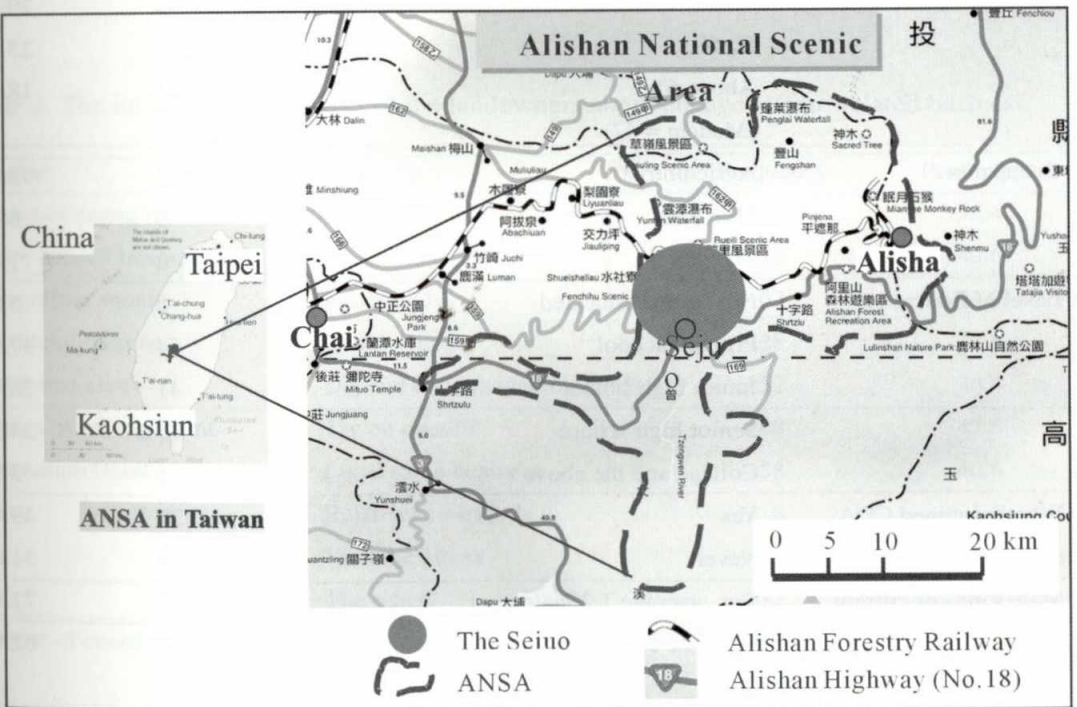


Fig. 2. Study area (The Se-Juo area).

leisure-related business

Table 2 shows the interest of landowners engage leisure-related business. The result indicates that although now only 15.4% of the landowners engaged in leisure business, 59.4% of the landowners plan to experiment in the future. Importantly, a few landowners (only 19.6%) consider it as disadvantage to develop leisure

business. It showed that most landowners recognize leisure-related business could bring positive effects to them.

Additionally, most management information of landowners comes from trying on themselves (47.6%) and local same business (40.6%). They usually manage their business independently and maybe coordinate through an informal

Table1. The characteristics of landowners and current status they managed.

Variable	Category	Frequency	Percentage
Village	Chung-Ho	52	36.4
	Kwang-Hwa	57	39.8
	Le-Ye	34	23.8
Gender	Male	128	89.5
	Female	15	10.5
Age	Under 30	10	7.0
	31-40	31	21.7
	40-50	42	29.3
	50-60	33	23.1
	Above 61	27	18.9
	(Median = 47)		
Occupation	Agriculturist	132	92.3
	Merchant	9	6.3
	The others	2	1.4
Level of Education	Not formal educated	8	5.6
	Primary school	54	37.7
	Junior high school	41	28.7
	Senior high school	35	24.5
	College and the above	5	3.5
Whether joined COA subsidy program	Yes	70	49.0
	Never	73	51.0
Main kinds of current agriculture/forest management*	Tea , average 1.23ha/percel	111	77.6
	Shoot of Thill Bamboo, average 3.69ha/percel	90	62.9
Main kinds of current leisure-related business*	Pension (B & B), average 3,000m <sup>2</sup>	11	7.7
	Restaurant (foods & drinks), average 1,200m <sup>2</sup>	5	3.5

organization. However, the necessities and mechanism of coordination among landowners need to explore in further research.

Table 3 shows the most interested leisure-related business of landowners' expectation in the future. They are pension (67.1%) and restaurant (foods and drinks) (24.7%). The main reason can be attributed to new nationwide work measure of "the two days off every week" which carried out in 1999. The landowner can sense this way eventually to increase the domestic demand of tourism/recreation.

### (III) Local employment enhancement

What we concern most is whether bring in leisure-related business can substantially decrease the unemployment rate of rural/forest area. According to surveyed data that we computed to show in table 4. Firstly, the number of total member in a household (T) is 5.2, adult (A) is 3.9, agriculture/forestry manpower (MA) is 2.8,

capable leisure-related work (ML) is 1.5. We use MA divided by A to get 72%, it means about 72% the manpower of landowners' household member engage agriculture/forestry works. Corresponding to  $ML/A (= 39\%)$  means 39% of the landowner's household manpower is capable of engaging leisure-related works. It indicates that the current manpower of agriculture/forestry is twice as amount as leisure-related work. Besides,  $MAM/MAF$  is bigger than  $MLM/MLF$ . It indicates that agriculture/forestry needs more male manpower. On the contrary, female are more suitable than male for leisure-related works.

Secondly, we test the means of different variables to compare between whether landowners interested in engage leisure-related business. The results are also shown in table 4. It indicates that all of them T, TM, A, N, NM, MLM, MLF, and ML have positive correlation with the landowners' interest to engage leisure-related

Table 2. The interests and prospect of the landowners about engage leisure-related business.

Variable	Category	Frequency	Percentage
Interest of engaging leisure-related business	Yes	85	59.4
	No	58	40.6
Recognition about introducing leisure rural/forest area	Beneficial	63	44.0
	Disadvantage	28	19.6
	Depend on managed methods	52	36.4
Sources of management Information (multi-response)	Try on oneself	68	47.6
	Local same business	58	40.6
	Relatives or friends	8	5.6
	Visit the others	9	6.3
	The others	37	25.9
Attitude of cooperation	Coordination	69	48.2
	Independence	63	44.1
	Competition	9	6.3
	The others	2	1.4



Table 3. The most interested leisure-related business of landowners' expectation.

Kind	Frequency	Percentage
Pension (bed and breakfast, B&B)	57	67.1
Restaurant (food & drink)	21	24.7
Farm resort	14	16.5
Lodge	3	3.5
Local guide	3	3.5
The others	4	4.7
Total	85	59.4

business. Hence, it reveals that bring leisure-related business can ameliorate unemployment in rural/forest area.

Finally, according to table 4 that we discussed above, we separate two household groups (whether interested in engaging leisure-related business: Interested Household, n=85; Not Interested Household, n=58) to explore further about their manpower arrangements. There are several differences between the two groups (Fig.3). a.The number of total member, nonage, and leisure-related manpower of interested households are bigger than not interested household. b.The proportion of Agriculture/forestry manpower of not interested household is bigger than interested households. c.The interested households have flexible manpower, reversely, not interested households have invariable manpower. "The flexible manpower" express these people are more flexible change between agriculture/forestry and leisure-related works. However, "the invariable manpower" may be caused by two reasons: those people are elder or they have another constant jobs already. Therefore, the nature of job combination is an important factor to influence the interest of landowners who will engage leisure-related business in the future.

Table 5 shows the answers under

contingency questions. Although most landowner's household (92%) will manage by themselves, it would increase the demand of local extra employment (28.4%). Furthermore, it reveals leisure-related business may be sideline and it can be compromised with current agriculture/forestry job in management schedule. This is same as we discussed above.

#### (IV) Developing strategies

According to the current leisure-related resources, statutes/regulations, assistance and control programs data that we collected, as well as depth interview with local familiar people, also compare it with the adjacent tourism zone system, we analyze the internal environment (Strengths, Weaknesses) and the external environment (Opportunities, Threatens) of developing leisure-related business into Se-Juo area. The aspects of each category are shown as table 6 respectively.

By using SWOT analysis to evaluate the feasibility and strategy of bringing in the leisure business into Se-Juo, the most strength is Se-Juo situated at both the midway in famous Alishan railway and highway, the worst weakness is majority of management scale is small and the tenures of the private holding land are restricted because of most of them leased from nation, the most opportunity is good planning/restructure



Table 4. The number of member and different available manpower in a household and compare there means between whether landowners interested in engage leisure-related business.

Variable	Category, Notation	Number of population in a household (mean)	Correlated with whether landowner interested in engage leisure-related business		
			Yes	No	Significance
Number of Total member	Male, TM	2.7	2.9	2.3	*
	Female, TF	2.4	2.7	2.1	ns
	Sum, T	5.2	5.7	4.4	*
Number of Adults	Male, AM	2.1	2.2	1.9	*
	Female, AF	1.8	2.0	1.6	ns
	Sum, A	3.9	4.2	3.5	*
Number of Nonage	Male, NM	0.6	0.8	0.5	*
	Female, NF	0.6	0.7	0.5	ns
	Sum, N	1.3	1.6	0.9	*
Manpower number of agriculture/forestry production	Male, MAM	1.6	1.7	1.6	ns
	Female, MAF	1.2	1.2	1.0	ns
	Sum, MA	2.8	2.9	2.7	ns
Manpower number of Capable to work on leisure-related businesses	Male, MLM	0.8	1.2	0.1	**
	Female, MLF	0.7	1.1	0.1	**
	Sum, ML	1.5	2.4	0.2	**

Notation: \* : 5% 2-tailed significant level by t-test.

\*\* : 1% 2-tailed significant level by t-test.

ns : Not significant.

and promotion through media because of ANSA was established, the worst threat is that traffic may be interrupted when there comes a severe rainstorm or typhoon.

Thus, we suggest the Se-Juo area should head the theme for nature or eco-tourism, as well as the residents in Se-Juo should base on the consensus and design an integral plan that can minimize the impacts of tourism. Additionally, the current subsidy programs should consider focusing on founding the organizations of local

landowners to facilitate agriculture/forestry production change to leisure-related business effectively.

#### IV. Conclusions

In our investigation of Se-Juo area in ANSA, we have several findings are as following:

(I) Currently, the main managed agriculture/forestry production in Se-Juo are Tea (77.6%) and Thill Bamboo Shoot (62.9%), leisure-related business are minor, there are pension

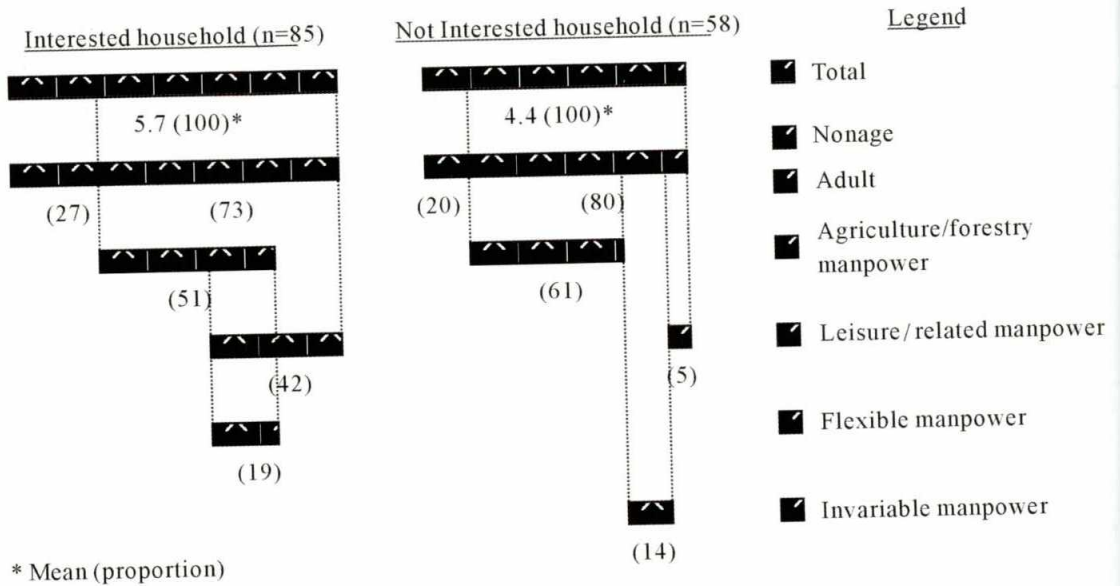


Fig. 3. Comparison of the number of member and manpower between landowners who whether or not interested in engaging leisure-related business.

Table 5. The manpower sources of landowners want to engage in leisure-related business.

Contingency question	Category	Frequency	Percentage
Whether manage by themselves?	Manage by themselves	82	92.1
	Not by themselves	7	7.9
	Sum	89	100.0
Whether enough manpower while manages by themselves?	Enough	58	71.6
	Need extra manpower	23	28.4
	Sum	81	100.0
The sources of extra manpower	Relatives or friends	11	50.0
	Hire the others	11	50.0
	Sum	22	100.0

(B&B)(7.7%), restaurant (foods and drinks)(3.5%), but 60% of landowners expect to engage leisure-related business in the future, the most interested business including pension (67.1%) and restaurant (foods and

drinks) (24.7%).  
 (II)Bring leisure-related business can ameliorate unemployment in rural/forest area by increase the demand of local extra employment (28.4%), especially in female employment.

Table 6. The SWOT analysis of developing leisure-related business in Se-Juo area.

Environment	Category	Aspect
Internal	Strengths	1. Locate on middle way in Alishan highway and forestry railway.
		2. Old memory and unique high elevation forestry railway culture.
		3. The adjacent and well-protected national forest provides a nice scenery, trail and comfortable atmosphere.
		4. Plenty insect resources, increase demand of accommodation by developing night eco-observations.
		5. Local products (tea, jelly-fig, Asitaba) have low substitute, due to local technology and microenvironment.
	Weaknesses	1. The leisure service quality enhance slowly, due to most land ownership held by nation and zoning control on slope land.
		2. The carrying capacity is limited and visitors stay short time, tourism may cause the physical impacts.
		3. Leisure-related infrastructures must plan and restructure integrally.
External	Opportunities	1. Accessibility increase once Taiwanese Second Freeway starts to open.
		2. ANSAA will continue to improve service quality by providing leisure-related infrastructures and joint marketing.
		3. Demand of Ecotourism increase continuously from domestic visitors and Mainland China tourists.
	Threats	1. Domestic economic growth decelerated, because government budget shrinkage and reduce expenditures of domestic tourists.
		2. Traffic may be interrupted when rainstorm or typhoon coming.
		3. Globalization of trade will impact some agriculture/forestry outputs of this area.

Total, adult, and nonage number (especially male) of a household have positive correlation with the landowners' interest to engage leisure-related business. Most landowner;s household (92%) will manage by themselves, it means leisure-related business may be sideline and it can be compromised with current agriculture/forestry job in management schedule.

(III)The interested households have flexible manpower, it can express these people are more flexible change between agriculture/forestry and leisure-related works. Those not interested households have invariable manpower, it may be caused by those people are elder to work or they have other constant jobs already. Therefore, the nature of job combination is an important factor to influence



the interest of landowners who will engage leisure-related business in the future.

(IV) By using SWOT analysis whether the leisure business into Se-Juo, the most Strength is Se-Juo locates on midway in famous Alishan railway and highway, the worst Weakness is majority of management scale is small and the tenures of the private holding land are restricted in zoning control, the most Opportunity is good planning/restructure and promotion through medium because of Se-Juo locates in ANSA, the worst Threat is that traffic may be interrupted if rainstorm or typhoon is coming.

(V) We suggest the Se-Juo area should head the theme for nature or ecotourism, as well as the residents in Se-Juo should base on the consensus and design an integral plan that can minimize impacts of changing agriculture/forestry production to leisure-related business.

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