

## **Classification and Preparation of checklist of ecological and cultural resources of rural area in point of Green tourism**

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This study was carried out to present rural functional resources through classification and preparation of checklist for ecological and cultural resources which considered various aspect of agriculture and rural area.

In this study the function of ecological and cultural resources classified 6 functions such as natural environment, free environmentally agricultural products, experience of agricultural products, recreational places, rural life experience, and Interchanges of human resources.

Prepared evaluation list through this study can explain a local characteristics based on 6 functions of agricultural and mountain village.

This evaluation list was focused on the magnitude of the resources which motivate the visiting of city-dweller as a consumer, for an actual regional plan, investigation of the inhabitant consciousness survey should be needed, simultaneously.

Key words : Ecological and cultural resources, Green tourism, Evaluation list, Activation of rural area, Interchanging business

### 1. Introduction

#### 1.1 Background and object of this study

Green tourism is an idea that keeps the general traditional environment and connect these natural environmental resources with local cultural and industrial resources, it will be the forwarding plan through the interchange between a rural community and city conjugating environmental and cultural resources of rural area<sup>1)</sup>. Conjugating environmental resources will be the center of plan for reorganization and activation of rural industrial structure in Korea from now on.

Conjugating cultural and ecological resources in rural means not the aspect of existing tourist recreational attractions, its for the development of tourist resources to activate rural society

using Green tourism, interchanging environmental, social and industrial factors between rural and city.

From these point of view, conjugating unnoticed ecological cultural resources in rural area to develop activation plan needed establish of resources by analyzing cultural resources and quantitative evaluation.

However, studies about classification and quantitative evaluation of environmental and cultural resources have not been reported in Korea yet. This study was carried out to present rural functional resources through classification and preparation of checklist for ecological and cultural resources which considered various aspect of agriculture and rural area.

#### 1.2 Tendency of domestic and foreign study

Classification in general tourism, and recreational resources about existing various sight-seeing resources can offer several classification system, such as classification along with geo-

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graphical condition, utilization aspect, character of resources, and land utilization unit, thinking system by common sense of view, artificial system of classification etc<sup>2)</sup>. Classification of resources in tourism, is focused on comprehensive resources<sup>3,4)</sup>, or natural ecology and tourism of resort area, recreational resources<sup>5-8)</sup>. These classification system are helpful to confirm which position does rural ecological, cultural resources take in system of tourist resources analysis. However in ecological and cultural resources in rural area, the concept isn't concrete enough to distinguish with general tourism resources, and there is very little study relate to classification system or presentation of type.

In the recent studies and results relate to green tourism offering a utilization model of ecological and cultural resources than classifying rural resources. IRRJ<sup>9)</sup> present a utilization model relate to individual function and experimental activities, in 4 fields, like natural environment (characteristics of location), production and sales, recreational service, and traditional life. Miyazaki<sup>10)</sup> proposed 4 types of various rural resources and its facilities according to an object of agriculture and rural promotion, such as the agriculture and forestry business park, eating culture, rural scenery, home settlement, education of life.

Kim<sup>11)</sup> divide activities of interchanges in rural area according to the character of events or utilization resources, into 5 groups such as green tourism which used natural environment, tradition and its speciality, it's scenery, green tourism used agricultural product, and through interchanges.

Kim<sup>12)</sup> is offering mountain community activation model based on accessibility, connection with other sightseeing resources in agricultural and forestry business and characteristics of location. These 4 types are full-time business in suburban areas, part-time business in suburban areas, full-time business in up country, part time business in up country.

It is necessary to approach with new aspect by functional evaluation and classification of environmental and cultural resources based on functional value of green tourism such as interchanges of human resources, familiar atmosphere, custom, leisurely time, environmental

friendly agricultural products, agricultural village experiences.

## 2. Methods

### 2.1 Classification of ecological and cultural resources

The aim of green tourism is for activation of rural area through the interchanging business like tourism. Classification of various ecological and cultural resources must be approached by aspect of accomplish purpose of tourist in rural community. The purpose of green tourism can be summarized next 5 category (1) Interchanges of human (2) Conservation and Utilization of agricultural environment (culture and custom) that is familiar and unsophisticated (3) leeway vacation (4) free environmental products (5) country life experience.

When we definite a agricultural community, as a place nature and a human being live together, it is necessary that factor of existence in green tourism and green agricultural village experience will be the function and all resources related in this function will be the ecological and cultural resources<sup>11,12)</sup>. In this study classified the function of environmental and cultural resources to 6 functions of agricultural and mountain village through the result by consideration of literature. Six functions are natural environment, free environmentally agricultural products, experience of agricultural products, recreational places, rural life experience, and Interchanges of human resources.

#### 2.1.1 Construction of ecological and cultural resources in rural

Based on the preference resources inquiry about each inventory at environmental and cultural resources which have been selected in 6 functional criterion, evaluate the ecological and cultural resources in rural and mountain village. Make out checklist and evaluation methods of agricultural village with that list are as follows.

An importance ratio of the 6 functions by residence of city.

- Evaluate the importance of function in agricultural and mountain village when interchanging with a city visitor, and activating rural area. (give each functions on a maxi-

mum scale of 10 points)

- Set up the functional weight in an average score calculated in functional importance evaluation.
- Among the 6 functions, convert the highest score into weight with 10 points. and calculate other points of functions by percentage. So, when the mean value of importance of 6 functions is  $\alpha i$ , mean value of highest points is  $\beta$ , each functional importance weight are calculate as following.

$$\frac{\alpha i}{\beta} \times 10 \quad (1)$$

From the list of each functional resources evaluate the preference of resources influencing decision making of visit.

- Calculate the preference rate by frequency analysis from occupation rate. From 6 functions, specific functions which preference resources of city residence were calculate by ratio, and set up an answer rate of individual resources item as weight here. That is the price that, divides j resources preference frequency by total resources preference frequency of an i function and multiplied by 100.

Evaluation of importance rate of agricultural and mountain village.

- Final preference rate of ecological and cultural resources were multiplied functional

weight by resources weight ( $\gamma ij$ ) in special function (i) as calculated by step 2 calculated.

- The fomula of importance rate of resources are as following

$$\frac{\alpha_i \times \gamma_{ij}}{\beta} \times 10 \quad (2)$$

Investigate the characteristics of target area by comprehensive evaluation

$$E = \sum(F_i) \quad F : 6 \text{ functions}$$

- Since the list of rural ecological and cultural resources are reached great number, and there wasn't any case study for this, so examined the existing literature. As a result ultimate goal of activation of agricultural area is the development for the healthy and rich area, so check list were made by next 4 basic standard national, regional, exist of village, and without village.
- Execute resources evaluation about ecological and cultural resources, give 3 points if distinguished. Two points for commonly give 1 point for insufficient, if it doesn't exit quantitate with 0, and multiplied the number in formula 2. Here is the example of the standard of quantification Table 1.
- Finally classify the evaluated scores of ultimate object area, consider a functional evaluation.

### 2.1.2 Evaluation of functional and item by item importance rate

Based on factors of existence in green

Table 1. Quantification of natural environment resource

Check list	standard of quantification (score)
mountain, highland	national park (3), prefectua and county park (inclusion of high mountain (<800m level) (2), existence (1), non existence (0)
ochard	certification of products quality; national (3), county (2), existence (1), non existence (0)
river	national (3), county (2), existence (1), non existence (0)
waterfill	30 m< (3), 20 m< (2), 10 m< (1), 10 m> (0)
habitat of fauna and flora	natural monument (3), reserved (2), existence (1), non existence (0)
reserved tree	national (3), county (2), existence (1), non existence (0)
natural park	national park (3), prefecture park (2), county park (1), non existence (0)
recreational forest	national (3), prefecture (2), county/privait (1), non existence (0)
natural monument	large scale (3), small scale (2), point (1), non existence (0)
fishing area	national (3), county (2), existence (1), non existence (0)

tourism, evaluate the functional importance rate of rural area, survey were conducted. In order to check the various sex rate and age group convenience sampling were applied. Total 578 valid samples are collected.

Result of these survey are as shown in Table 2. The high score of "friendly and unsophisticated natural environment in rural area" 7.43 was converted with 10 points to make comparative score. These results were definite with a price of functional importance.

In order to evaluate the importance of detailed item about each function, survey were made to select 5 item in preference resources of functions, and check the Frequency of responder about an individual item. Combine a functional converted points in Table 2, to this frequency, importance rate of resources of each functions were calculated. Table 3 offered an example of the results.

### 3. Results and Discussion

Classified a cultural and environmental resources based on purpose of green tourism, to evaluate environmental and cultural resources quantitatively so that utilize this data for evaluation material.

In this study classified the function of environmental and cultural resources to 6 functions of agricultural and mountain village trough the result by consideration of literature,

Table 2. Functional importance rate of rural area

function	functional importance rate (N=578)		
	average (SD)		converted points (maxium scale of 10 points)*
natural environment	7.43	1.84	10.0
recreational places	7.36	2.04	9.9
free environmentally agricultural products	7.22	2.03	9.7
rural life experience	6.98	2.05	9.4
Interchanges of human resources	6.57	2.13	8.8
experience of agricultural products	6.27	2.20	8.4

\*(functional importance rate × 10) / 7.43

such as natural environment, free environmentally agricultural products, experience of agricultural products, recreational places, rural life experience, and interchanges of human resources.

Basic standard of each resources is very important. Since the list of rural ecological and cultural resources are reached great number, and there wasn't any case study for this, so examined the existing literature. As a result ultimate goal of activation of agricultural area is the development for the healthy and rich area, so check list were made by next 4 basic standard national, regional, exist of village, and without village.

It is firm that prepared evaluation list through this study can explain a local characteristics based on 6 functions of agricultural and mountain village.

When it applied to large quantities of area, it is possible to grade or classify a example area by quantification analysis or applying weight in each category of resources. However, this evaluation was focused on the magnitude of the resources which motivate the visiting of city-dweller as a consumer, for an actual regional plan, investigation of the inhabitant consciousness survey should be needed, simultaneously.

Table 3. Importance rate evaluation of each functions

(ex. natural environmental resources)

resources (individual item)	FCP (A)	NR (N)	F(%) (B)	IRR (A×B)
forest	10.0	261	9.1	91.2
hot spring	10.0	216	7.5	75.5
waterfall	10.0	184	6.4	64.3
park	10.0	164	5.7	57.3
lake	10.0	147	5.1	51.4
ochard	10.0	130	4.5	45.4
river	10.0	66	2.3	23.1
natural monument	10.0	64	2.2	22.4
dam	10.0	61	2.1	21.3
sum		2,861	100.0	1,000.0

FCP : founctional converted points

NR : number of responder

F : Frequency

IRR : importance rate of resources

## References

- 1) Kim, B. S. *et al.*, 2001, Comparative Study on Green Tourism between Korea and Japan, Korean Journal of Tourism Research, 16(1), 83-103.
- 2) Park, S. H., 1997, New Tourism Resource, Ilshinsa.
- 3) NTA, 1976, Tourism Development Technology, Nippon Tourist Association.
- 4) Gunn, C. A., 1979, Tourism Planning, New York, Russak & Company, Inc.
- 5) Clawson, M. R. and H. C. Storrdard, 1960, Land for the Future, George Washington Univ.
- 6) Gumagai, Y., 1989, Study for Recreational Function and Evaluation of Residents, Japanese Institute of Landscape Architects, 52(5), 175-180.
- 7) Kim, B. S., 1993, Evaluation of Recreational Space in the Park, Osaka Prefecture Univ.
- 8) Gold, S. M., 1980, Recreation Planning and Design, McGraw-Hill Book Co.
- 9) IRRJ, 1996, Regional Planning and Environmental Renewing, 21 Seiki Murazukuri zyuku (IRRJ).
- 10) Miyazaki, T., 1997, Green Tourism And Rural in Japan, Norinsyuppan.
- 11) Kim, B. S., 2001, A study on Korean Green Tourism, Korea J. Tour. Agri., 8(2), 156-178.
- 12) Kim, B. S., 1999, Study on Green Tourism in Japan, J. of Forest Recreation, 3(1, 2), 1-11.