

A paper presented at the 4th Annual Common Property Conference organized by the International Association for the Study of Common Property, June 16 - 19, 1993, Manila, the Philippines

12-813
WORKSHOP IN POLITICAL THEORY
AND POLICY ANALYSIS
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BLOOMINGTON, INDIANA 47408-3188
Reprint Files - CPR - Forestry

Conflicts Between Traditional and the General Public Uses
for the Forest Common Property in the Republic of Korea

by

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Introduction

The two thirds of land of South Korea is covered by forests. However, forestry does not contribute to the national economy since the forest stands are still young as of 1991. Only 0.3 percent of the gross national product comes from the forestry sector. Among the forestry products, non-wood products such as forage, nuts, wild vegetables, and mushrooms are important. These are also important to the income of residents in the forest areas.

Traditionally in Korea, the collection of forest products other than timber by the villagers has been allowed, and this is especially true for the public forest land. Historically, the public ownership of forest land was formed on the basis of non-exclusive property right. Since many forests under common use were designated as public or national forest, the use right for non-timber products were acknowledged to the village residents. In this regards, the non-timber products from the public forest of South Korea are, in effect, common property.

Recently a significant portion of public forests in South Korea has been designated as National Parks or protected area for ecosystem conservation, reflecting the rising concerns for the environmental value of forest. In this study, the conflicts between the traditional common property right and newly emerging environmental concerns in a national forest area, which was recently designated as ecosystem conservation reserve by the national government, are investigated.

The Objective of Study

The study first aims to test a null hypothesis that the residents would have the same opinion on the property right of non-timber forest products from the general public. The second objective of this study is to assess the impact on the residents' income of the environmental policy designating an ecosystem conservation area.

The Study Area and Method

The study area is the Baek-un Mountain area which is located in the southern part of the Korea. The area, for the most part, belongs to the Experimental Forest of Seoul National University, and the forest land of private forest owners is very limited. A major part of the residents' income comes from harvesting

chestnuts while the income based on other forest resources is becoming important. As the demand for maple sap as a health food is increasing recently, the residents who have been collecting for their own use for a long period are considering the commercialization of maple sap drinking as an option of regional development. They have been very cooperative to the management and protection of forest by the Seoul National University for the benefits of utilizing the maple trees in the University forest (Park 1977).

On the other hand, a part of the University forest has been designated as a natural ecosystem reserve ' by the central Government for the protection of undisturbed natural forest vegetation. The natural vegetation is highly valued by ecological scientists since there are not many natural areas undisturbed in South Korea. The area is protected against any kind of activities disturbing the natural forest by the Natural Environment Conservation Act enacted in 1992. This change of status in the use of forest from the scientific research forest to protected ecosystem preservation area means that the residents will not be able to capitalize the maple sap from the protected area, thus their income will be reduced.

To test the null hypothesis on the right of common property and to measure the income distribution effect by the change in the property right, the authors surveyed heads of 82 households collecting maple sap nearby the protected area and 119 maple sap consumers. For the sap collectors, personal interviews were made in their homes and questionnaires were collected by mail from the maple sap consumers who had visited the Back-un Mt this spring to drink maple sap.

Results

1. Income Composition of Sap Collectors

In South Korea, forest resources contribute a relatively large part to income of residents in the mountainous region (Park, 1983; Youn et al. 1992). This was also true in the area studied as seen in Table 1. Thirty nine percent of residents' income comes from forest-related activities and most of families are engaged in forestry production (Table 2). Those households who collect sap from maple trees not only sell the maple sap, but also provide the visiting sap consumers with accommodation services.

2. Attitude of Maple Sap Consumers

A major part of sap consumers visiting the Back-un Mt. area come from nearby cities while their origins are well distributed throughout the country. They usually stay a night in the farmer's vacant room consuming maple sap. The age of visiting sap

consumers is fairly well distributed as seen in Table 3. The attitude of sap consumers on the health effect of maple sap is biased to the positive side while there is no difference in attitude among them by age and education level (Table 3).

Table 4 shows the their preference of sap consumers on the continued availability of maple sap after the designation of the Back-un Mt. area as natural ecosystem reserve. Those who believe the health effect of maple sap would like to continue consuming maple sap regardless of the nature conservation while those who do not believe in the health effect of maple sap do not care about the continuing availability of maple sap. Among the maple sap consumers, the latter group outnumbers the former one.

3. Response to the Designation of Natural Ecosystem Reserve

The responses to the designation of Back-un Mt. as a natural ecosystem reserve are sharply different depending on the origin of residence. Most of maple sap consumers agree with the Government's policy protecting the Back-un Mt. area as an ecosystem reserve while two thirds of sap-collectors are against (Table 5). Similarly, the sap consumers place more weight on the preservation of environmental resources in the Back-un Mt. while the local residents exploiting the maple trees value the forest as income source (Table 7). However, most of people, regardless of their residency, think that the priority of property right on the use of forest resources owned by the Government should be given to the local residents (Table 6).

From the survey result above revealing a sharp separation of opinion, we can see the conflict of interest around the designation of a forest as nature reserve. That is, the local residents collecting maple sap are not willing to accept the change in the property right arrangement concerning the use of a forest publicly owned while the general public, represented by the maple sap consumers, wants to preserve the natural forest for the environmental benefit of all.

Conclusion

In recent years in South Korea, the general public's interest is increasingly moving toward environmental quality, which leads to interest in forest resources (Korea Gallup 1991). Therefore, it is hard to express one's opinion against the environmental protection policy of the Government. This is well demonstrated by the respondents from the maple sap consumers surveyed in this study, who positively evaluate the Government's policy designating the Back-un Mt. as a natural ecosystem reserve. But it is no wonder that the local residents depending a large part of their income on the nearby forest resources oppose to the Government policy.

The designation of an area as nature reserve is based on the presumption that the area is a common property. The area studied here is a sort of common property managed by the University but has been used by the local residents as common property by customs. There is a problem of defining the concept of common property: whose common property ? of local residents for the traditional use and of the unknown general public for the new demand for biodiversity. In reality, the strict enforcement of the Natural Environment conservation Law by the Central Government without due consideration given to the interest of local residents will create many other problems such as equity among the people affected.

Literature Cited

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Table 1. Total income and forest-based income of household collecting maple-sap
(unit : no. of households)

| Total income (million won) | Percentage of forest-based income | | | | Row |
|-------------------------------|-----------------------------------|--------|---------|-------|---------|
| | 0-25% | 25-50% | 50-100% | Total | Percent |
| less than 5 | 3 | 5 | 4 | 12 | 14.6 |
| 5-10 | 10 | 12 | 20 | 42 | 51.2 |
| more than 10 | 8 | 6 | 8 | 22 | 26.8 |
| no response | 6 | 0 | 0 | 6 | 7.3 |
| Total | 27 | 23 | 32 | 82 | 100 |
| Column, percent | 32.9 | 28.1 | 39.0 | 100 | |

Table 2. Estimated income reduction of households affected by the designation of nature ecosystem reserve

(unit : no. of households)

| Total income (million won) | Estimated income reduction | | | | Row |
|-------------------------------|----------------------------|--------|---------|-------|---------|
| | 0-25% | 25-50% | 50-100% | Total | Percent |
| less than 5 | 2 | 5 | 5 | 5 | 14.6 |
| 5-10 | 18 | 17 | 17 | 7 | 51.2 |
| more than 10 | 14 | 5 | 5 | 3 | 26.8 |
| no response | 0 | 0 | 0 | 6 | 7.3 |
| Total | 34 | 27 | 27 | 21 | 100 |
| Column percent | 41.5 | 32.9 | 32.9 | 100 | |

Table 3. Responses by maple-sap consumers to the question on the effect drinking of maple-sap to the health

(unit : no. of respondent)

| | | Good for health | | Total | Row |
|----------------|-----------------|-----------------|----------|-------|---------|
| | | Yes | Not sure | | Percent |
| A G E | Younger than 30 | 4 | 2 | 6 | 5.0 |
| | 30-39 | 8 | 12 | 20 | 16.8 |
| | 40-49 | 22 | 15 | 37 | 31.1 |
| | 50-59 | 23 | 11 | 34 | 28.6 |
| | 60 or older | 12 | 10 | 22 | 18.5 |
| Total | | 69 | 50 | 119 | 100 |
| Column percent | | 58.0 | 42.0 | 100 | |

Chi-Square = 4.284 (p=0.369)

Table 4. Responses by maple-sap consumers to the question on the preference on the maple-sap drinking after the degignation of nature ecosystem reserve

(unit : no. of respondent)

| | | Preference | | Total | Row |
|----------------------------|-----------------|-------------|---------------|-------|---------|
| | | Indifferent | Wish to drink | | Percent |
| Health effect of maple-sap | Good for health | 28 | 40 | 68 | 61.3 |
| | Not sure | 32 | 11 | 43 | 38.7 |
| Total | | 60 | 51 | 111 | 100 |
| Column percent | | 54.1 | 45.9 | 100 | |

Chi-Square = 11.271 (p=0.001)

Table 5. Pros and cons for the designation of nature ecosystem reserve
(unit : no. of respondent)

| Respondent | Pros | Cons | Not determined | Total |
|----------------|------|------|----------------|-------|
| Sap Consumers | 78 | 14 | 27 | 119 |
| Sap Collectors | 23 | 46 | 13 | 82 |
| Total | 101 | 60 | 40 | 201 |

Chi-Square = 46.688 (p=0.000)

Table 6. Response to the question on the use right of public forest managed by the University

(unit : no. of respondent)

| Respondent | Residents | Government (University) | Not determined | Not response | Total |
|----------------|-----------|-------------------------|----------------|--------------|-------|
| Sap Consumers | 78 | 21 | 18 | 1 | 119 |
| Sap Collectors | 70 | 5 | 8 | 1 | 82 |
| Total | 148 | 26 | 25 | 2 | 201 |

Chi-Square = 10.586 (p=0.014)

Table 7. Response to the question on the importance of forest as income source or environmental reserve

(unit : no. of respondent)

| Respondent | Income Source | Environmental reserve | Not determined | Total |
|----------------|---------------|-----------------------|----------------|-------|
| Sap Consumers | 45 | 59 | 15 | 119 |
| Sap Collectors | 73 | 5 | 4 | 82 |
| Total | 118 | 64 | 19 | 201 |

Chi-Square = 53.580 (p=0.000)