FUTURE SCENARIOS OF KOREA NATIONAL PARKS: DELPHI SURVEY OF KOREAN PARKS OF EXPERTS

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Abstract: A three-wave Delphi survey of a panel of 40 key experts very knowledgeable of Korean national parks was conducted between February 2001 and March in 2002. In Wave 1, park professionals, environmental Non-governmental Organizations (NGOs) managers, and a retiree identified the issues the Korean park system is facing. Findings from Wave 1 of the survey were analyzed and provided the baseline for the subsequent Waves 2 and 3. In Wave 3, four major issues -- Park philosophy not clearly articulated; Inadequate emphasis of ecosystem protection; Widespread deficiency of management tools; and Visitor services needed -- were asked to get the panel's opinions regarding "importance" (1 = most important; 4 = least important) and "possibilities" of resolving (1= resolved in 5 years; 4 = not resolved in 5 years) of these four issues. In terms of "importance," it seems that Issue 1 ("Park philosophy not clearly articulated"), with its mean rank of 1.9, is considered more important than the other three issues (mean ranks are 2.5 or 2.6). Meanwhile, in terms of the "likelihood" of being resolved, Issue 1 (mean rank = 3.2) would be harder to be resolved than the other 3 issues (mean ranks are between 2.2 and 3.0). It implies that although the management objectives and legislative changes are needed to make the park idea articulated, due to a long-term need to get legislative support, the likelihood of resolving this issue is lower than the others. It implies, in Wave 3, that unclear park philosophy leads to the lack of recognition of national park roles toward ecosystem protection, which in turn results in a deficiency of management tools with little congressional support such as budget and staff. Finally, three options for the Korea park system are introduced to help the Korea National Parks Authority (KNPA) management to make a balance between preservation and recreational use in national park areas.

Introduction

Benefits for future generations and for current use are always challenging goals for park professionals, including those in Korea. Over the three decades of national park history, the state of the Korean national park system has not been studied in terms of whole perspectives -- threats and opportunities to the parks. Rather, more natural science-oriented disciplines in parks such as forestry and landscape architecture have dominated park research (Korea National Parks Authority, 1999).

Since established in 1987, the Korea National Parks Authority (KNPA) has operated the Korean national parks. However, since the first national park was designated in 1967, management control over the Korean parks has been fairly unstable, although it had suggested that future national parks should be administered by a state agency with authority and means to achieve its standards and goals (Ruhle, 1968). The authority for national parks changed from the Ministry of Construction (1967 - 1991) to the Ministries of Home Affairs (late Interior, 1991 - 1998), and finally to the Environment (1998 - present). In addition, the management for national parks changed from the local governments (1967 -1986) to the KNPA (1987 to present) (Oh, 1998). These changes may imply that the park system has been unstable and not fully effective in pursuing its objectives. Therefore, it is necessary to conduct a thorough investigation on the overall Korean national park system: what had been suggested in the past, what has been done so far, and what would be achieved in the future.

Economically and politically, earlier Korean national parks (during the 1970s) were established to promote tourism (Korea Ministry of Environment, 2000), while economic benefits of tourism related to recreational use on parks were emphasized to meet both preservation and recreation benefits (International Park Planning Institute et al., 1972). With the resumption of autonomy of local government in 1992, this economic penetration might have led park policy to be use-oriented for economic benefits, resulting in park management being fragmented, unclearly defined, ill-organized and malfunctioned. Threats of over-development by commercial developers, local governments, and even park management itself would be potential causes of national park degradation. Although overall responsibility of the degradation lies with the central government and its administering agency, the central government often gives away parklands to the developers of golf courses, condominiums, ski resorts, hydraulic power plants, and roads, to stimulate local economies. Such problems are even more threatening with a fragmented structure of park administration, shown in Taiwanese national parks (Sung, 1990), and national parks suffering from overuse, and underbudget. Still, visitors must be fairly satisfied with their recreation experiences in order for the overuse to continue -- this seems to be true with Korean national parklands (Kim, 1998b). The Korean National Parks Authority (KNPA), a non-governmental agency of the Ministry of Environment, may have a strong mandate but weak authority to both protect and provide for current use (Kim, 1998a). To protect parks' natural resources and increase the quality of visitor experiences, the first steps must be taken by park management. Although relevant laws are somewhat ambiguous and overlapped, the laws imply resource protection and benefits for the future generations in parks. But, the on-going problems of under-budgeting and understaffing are chronic (Korea National Parks Authority, 2001). These disparities have likely caused the KNPA to have a limited law

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enforcement ability to protect natural resources and prevented the KNPA from better educating its visitors about norms of good park visitation.

The results of this research would be used for park managers, the legislative body, park-related academics including forestry and ecology, environmental horticulture, tourism industry, environmental NGOs, Korea Ministries of Environment, Agriculture, and Tourism, local governments, locals near the parks, resident in park boundaries, private owners having properties in the park areas, local tourism industry, Buddhist temples located within and beside the park lands, and teachers, students and their parents. It is also possible to attract North Korean national park management. Actually, a part of a North Korean park becomes a major tourism destination as both South and North Korean governments have had an open discussion of steady Korean reunification (Gumgangsan Tour Co. LTD website, http://www.tourgold.net/).

Method

This study has used the Delphi technique, a method used to systematically combine expert knowledge and opinion to reach an informed group consensus about the likely occurrence of future events (Moeller and Shafer, 1987). The assumption of this method is that although the future is uncertain, individuals able to make informed judgments about future contingencies can approximate its probabilities. The method is intended to provide a general perspective on the future rather than a sharp picture. That is, after each survey questionnaire was done, there would be a convergence or a divergence between panelists and, even in the latter, the polarized opinions can be crystallized. In this study, it is assumed that leading park professionals would suggest how to identify/resolve those threats to parks, what opportunities there are, and what should be done, because one way to get a holistic picture of future options, although it is not a sharp but a rough one, will be helpful to understand those problems. Hence, the unit of analysis is individual park professionals who are knowledgeable to Korean parks.

Delphi technique replaces direct open debate with an iterative series of questionnaires, with each subsequent series of questionnaires containing information gathered from those preceding it. Indeed, the Delphi technique has an advantage during administering the survey questionnaires: The panelists of this study can freely describe their opinions without any intervention by others such as their superiors who are also in the same panel (Gordon, 1994). Gordon also points out that due to the number of respondents is usually small, a Delphi study does not necessarily produce statistically significant results. Hence, the results provided by a panel on a Delphi study varies and the panel's synthesized opinions represent that particular group, neither a larger population nor even a different panel. Mainly, Delphis in the 1950s and the 1960s stressed making quantitative assessments such as forecasting dates of future events. However, from the 1970s qualitative-oriented Delphi became frequently used (Woudenberg, 1991).

Meanwhile, threats to validity as potential limitations to this study would be a rapid park policy change during the study (history) that affects the study results in ways that cannot be assessed. Examples of this "history" problem are "Natural Parks Law" amended in September 2001 (Korea Ministry of Environment, 2001) and some parklands were re-designated in January, 2002: i.e., some adjacent lands were added to the existing parklands and sizes of some park areas were reduced (Korea Ministry of Environment, 2002). More currently establishing a new marine-based national park in 2004 was proposed.

As a panel study with the same set of sample was studied in each wave, this study did not use a probability sample. Rather, as a nonprobability sampling method, a snowball sample in which panelists were asked to suggest supplementary list of park professionals for survey was chosen. In this case, some of the respondents in the first wave of the survey did not participate in later waves. To prevent it, the dropouts also received the subsequent wave after the wave they had missed. Unless they were not responding, they remained in the Delphi panel to give their opinions. This concerns the problem of "panel attrition." When some of the respondents studied in the first wave of the survey did not participate in later waves, it was needed to check that whether those who dropout of the study may not be typical in the panel.

Although reliability would be a clearer matter than validity, the aspect of this study requires a special caution about an extra duty the moderator was facing, i.e., translation. The moderator had to double-check between bilingual translation and transcripts.

Other limitations would be the problems associated with the formation of a panel. These "virtual" problems would occur when a Delphi design makes too restrictive a definition for Delphi and/or when an exposure of misrepresentation in a summary is more likely to happen. Although these problems themselves would neither affect the use of Delphi Technique nor be unique to this technique, they should be minimized to balance the communication goals in the context of the objective of the particular Delphi study and the nature of the panel (Linstone and Turoff, 1975).

Formation and Profiles of Panel

A panel of 40 Korean park experts were selected by three different procedures: first, 27 panel members were chosen through a literature review, a list consisting of 90 park professionals provided by the Korea National Parks Authority (KNPA), an expert's recommendation on the KNPA list and supplementary list, a Ministry of Environment's recommended list, and two NGO groups' supplementary lists. In addition, on Wave 1, these 27 panelists were asked to provide a supplement list of possible panelists. 13 more members were added to the panel after the first 27 members recommended them as panelists. Among these added members, 9 members received the Wave 1 questionnaire, while the other 4 did

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not have a chance to receive it due to the cut-off date for Wave 1. On Waves 2 and 3, there are 2 non-deliverables. The remaining 38-member contacts consist of 2 environmental NGO managers, 7 park employees, 11 government employees and staff in research institutes, 17 academics, and 1 former park employee. However, their professional backgrounds are not limited to these 5 categories. For example, some panelists were former park employees or NGO managers and some academia are involved in top-level management in NGOs. Among remaining 38 panelists, 16 have responded to the final, Wave 3 questionnaire. However, 2 out of 16 are not valid. Thus, 14 panel members remain in the panel.

Findings

From Wave 1, the panel identified 47 major issues the KNPA faced. On Wave 2, they were organized into 3 clusters: park philosophy/policy, park organization/management, and park visitation/visitor needs. The resulting data of Wave 2 was extracted to the problem statements below, which are the basic framework for Wave 3 questionnaire (Table 1):

- It seems that there is no clear philosophy of what the Korean national park system should be, as evidenced by the panel's high priority concerns for (a) lack of a national park idea of the Korea National Parks Authority (KNPA) and central government, and (b) the general public's low awareness of Korean national parks and the park purpose as a pleasure ground.

- Because of the lack of a clear philosophy, there also appears to be a lack of recognition of national park role(s) in environmental protection. This is borne out by (a) a paradigm shift considering national parks as preservation/educational places (b) lack of standards in conservation and lack of public relations/education on ecosystem (c) reclassification of national parks on the basis of preservation/ecosystem values involved, and (d) conflict between preservation and use including landownership.

- As a consequence, the role of national parks in Korea does not seem to be getting a level of attention in the national agenda that it deserves. It is evidenced that: (a) lack of long-term views/goals in management (b) lack of expertise in KNPA and its budget/staff problems including lack of control of budget (c) need to have a state-run national park agency (d) central government's active role in natural resources and need to amend the organic act, "Natural Parks Law," for conservation of parks (e) avoiding inconsistently relevant laws, and (f) lack of character distinction between parks.

- Finally, because of the low priority national parks have in Korea, their management seems to reveal a number of serious deficiencies reflected in the following: (a) management inconsistency of KNPA due to rapid turnover of supervising officials in the Environment Ministry (b) KNPA and central government's lack of understanding national park management (c) organizational inflexibility of

Table 1: Summary of Responses from Waves 1 and 2

ISSUE--Park Philosophy Not Clearly Articulated

Korea National Parks Authority (KNPA) & the central government's lack of national park idea
KNPA and central government's lack of understanding national park management
General public's low awareness of national parks
Need to establish state-run "national park bureau"
Development pressure/ attempts in park area
Lack of central government active role on natural resources
Inconsistency/overlap of relevant laws
Attempt of building cable car system in park area

ISSUE--Inadequate Emphasis of Ecosystem Protection

Paradigm shift (need to consider National Parks as preservation/educational places)
Lack of public relations/education on ecosystem
Inconsistent management of ecosystem
Conflict between preservation and use
Lack of standards in conservation
Need to provide more environmental education programs
In order to emphasize conservation, need of amending "Natural Parks Law"
Insufficient protection for ecosystem
Increased degradation of resources in park area/visitor impacts on natural environment.
Need to reclassify national parks on the basis of preservation/ ecosystem involved

ISSUE--Widespread Deficiency of Management Tools

Lack of adequate KNPA expertise, budget, staffing, and control
Problem of political appointment of KNPA chairman
Problem of zoning
Organizational inflexibility of KNPA
Indiscriminative development and facility deterioration in "mass facility zone" of park
Lack of inventory (ecosystem, infrastructure, etc)
Inconsistent management system in KNPA (due to rapid turn-over of officials in Ministry of Environment)
Unlawful facilities in park area
Poaching and illegal picking of herbs (due to lack of law enforcement)
Financial difficulty of business in "mass facility zone"
Land ownership mixed
Infringement on private property rights in park area which cause civil appeal
Lack of policy regarding cultural resources (such as eco-villages & Buddhist temples)
Management control over parks (possibility of conflict between central & local governments)
Conflict with Buddhist temples, which are located in major park areas
On-going construction/renovation in Buddhist temples in park areas

ISSUE--Visitor Services Needed

Lack of visitor management for non-disturbing behavior

General public's awareness/views of park purpose (as pleasure ground)
Lack of character distinction between parks
Need to provide good quality of recreation experience
Insufficient service/educational facilities for visitors
Inappropriate/insufficient interpretation programs
Lack of providing tourism opportunity (on-hand educational experiences in nature/culture)
Entrance fee including separate admission fee for cultural assets (i.e., Buddhist temples)

KNPA and its chairman as a political appointee (d) lack of inventory, inconsistently managed ecosystem, and zoning problems, and (e) property rights, local governments' interests, and entrance fee issues. Also, deficiencies regarding visitor management include: (f) lack of visitor management including disturbing behavior of visitors (g) need to provide both good quality of recreation experiences and service/education facilities, and (h) insufficient environmental education and interpretation programs.

In Wave 3, four major issues -- Park philosophy not clearly articulated; Inadequate emphasis of ecosystem protection; Widespread deficiency of management tools; and Visitor service needed -- were asked to get the panel's opinions regarding "importance" (1 = most important; 4 = least important) and "possibilities" of resolving (1= resolved in 5 years; 4 = not resolved in 5 years) of these issues. In terms of "importance," it seems like that Issue 1 ("Park philosophy not clearly articulated"), with its mean rank of 1.9, is considered more important than other three issues (mean ranks are 2.5 or 2.6). Meanwhile, in terms of the "likelihood" of being resolved of Issue 1 (mean rank = 3.2), it would be harder than the other 3 issues (mean ranks are between 2.2 and 3.0). It implies that although the management objectives and legislative changes are needed to make the park idea articulated, due to a long-term needed to get legislative support, the likelihood of resolving this issue is lower than others. (Table 2)

Table 2: Mean Ranks of Importance vs. Likelihood of Four Major Issues

Issue	Importance	Likelihood
I: Park philosophy not clearly articulated	1.9	3.2
II: Inadequate emphasis of Ecosystem protection	2.5	2.7
III: Widespread deficiency of management tools	2.5	3.0
IV: Visitor services needed	2.6	2.2

N=14

From the Waves 1 and 2, it is assumed that the issues identified flow from park philosophy/idea to more detailed management tools and visitor needs. Following this flow, it implies, in Wave 3, that a clear park philosophy is needed to resolve other issues, due to the hierarchical levels among issues. In other words, an unclear park philosophy leads to the lack of recognition of national park roles toward ecosystem protection, which in turn results in a deficiency of management tools with little congressional support such as budget and staff.

On the other hand, the "likelihood" of Issue 4 ("Visitor service needed") is more feasible than others: Actually, since 2001, some parks have launched ranger-or volunteer-led interpretation/guide programs, providing more services to visitors, as most panelists pointed out.

As a panel, their opinions would represent peoples' opinions, and the panel's idea would help management and the future directions of parks. Examples are: what the park missions are and how to achieve it, how to discharge mandate of park system, how to deal with severe constraint of staff and budget in park management, how to deal with relationships between use and resource protection, how to compete/ cooperate with other natural resource agencies, and how to deal with meeting visitor needs.

Side Flows

Delbecq et al (1975) point out that the lack of opportunities for social-emotional rewards in problem solving, and for verbal comments on the feedback reports are major characteristics to reduce the decision-making performance in a Delphi study. In our study, the panel has had opportunities to freely provide any concerns on every wave. Interestingly, some panelists added unofficial comments via personal email or letters.

Conclusions and Recommendations

Based on the panel's rough views that emphasize park philosophy/idea, but consider seeing the advent of improved/increased visitor service needed, besides status quo, there would be 3 options for the Korea national park system:

Option I: state-owned park agency
▶ would be a non-core sector agency in the Ministry of Environment.
▶ should have solid mandates/missions and its own budget control.
▶ should get support by the National Congress and the general public.
▶ should cooperate with / use of every possible resource.
▶ should be flexible with time (long-term management-oriented).

Option II: state-owned, fully-subsidized agency
▶ would be a non-core sector agency under the Offices of the President or the Prime Minister.
▶ would be solely mission-oriented.
▶ should provide the general public with no fee entry to the parks.
▶ should cooperate with / use of every possible resource.

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▶ should be flexible with time (long-term management-oriented).

Option III: state-owned, partially-privatized agency
▶ would be a mixed legal entity of partial public, partial private under the Ministry of Culture
and Tourism.
▶ *would have more tourism-oriented dimensions in implementing its mission*
▶ would prefer meeting visitor needs
▶ should cooperate with / use of every possible resource.
▶ would be non-flexible with time (short-/mid-term management-oriented)

The policy makers might prefer the status quo, whereas the panel of this study tends to prefer the Option I. In the current situation, Option III would be the most feasible to provide quality experience of visitor needs and protect the resources in park area. The Ministry of Culture & Tourism oversees the Cultural Properties Administration.

Although Option II would have less legislative support, this option would appeal, inviting the high awareness of the general public. It would cover the transition period from Option III to Option I. This option might be the most popular among the three options proposed here, if sufficient budget and staff are provided.

One of the advantages of a public organization is the flexibility of pursuing the general public's needs with accomplishing its mission. That is, a public organization is corporation-attributive to do business for central or local governments. In particular, a public organization would be derived from the condition that lacks private investments, meets national self-defense/strategies and monopoly/political reasons. For the sake of the general public, the public organization's budget proposal and appropriation are subject to Congress review and approval. However, due to its corporation-attributive, it needs its budget flexibly proposed and appropriated.

In particular, in *Motivation-hygiene Theory* (Herzberg et al, 1959), any maintenance factors such as salary, work condition, interpersonal relationships with other employees, and company policy/administration could not motivate an employee in a company. Rather, these factors ("dissatisfiers") would be prime negatives, if they were lacking.

Motivation factors ("satisfiers") are the things that could really bring about worker dedication to a job. These satisfiers -- achievement, recognition, advancement, the work itself, the possibility of growth, responsibility -- encourage a worker to do a job worth doing, which produces high-level morale and productivity. Therefore, the first option "state-owned park agency" is preferred. (Figure1) Further study such as NGOs-initiated study for the general public's and locals' opinions regarding parks would meet the needs of Korean parks, enhancing the quality of Koreans' park experiences.
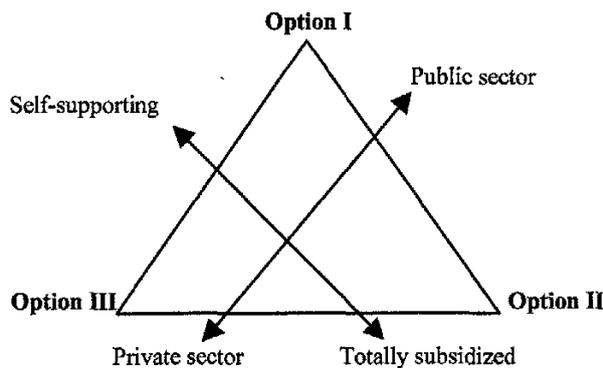

Figure 1: Three Options for Korea National Park System Associated with
Organizational Type and Degree of Subsidy

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