


2003

Future of South Korean National Parks -- A Delphi Study

Byung-kyu Lee

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FUTURE OF SOUTH KOREAN NATIONAL PARKS

-- A DELPHI STUDY

By

Byung-kyu Lee

B.A. Chung-Ang University, 1989

M.B.A. University of Maine, 1995

M.S.F. University of Maine, 1998

A THESIS

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

(in Forest Resources)

The Graduate School

The University of Maine

August, 2003

Advisory Committee:

Wilbur F. LaPage, Associate Professor of Forest Recreation Management,
Advisor

John J. Daigle, Assistant Professor of Forest Recreation Management,
Program Leader, Parks, Recreation and Tourism

Kenneth L. Nichols, Associate Professor of Public Administration

Michael A. Robbins, Associate Professor of Psychology

Gregory K. White, Associate Professor of Resource Economics and Policy

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By Byung-kyu Lee

Thesis Advisor: Dr. Wilbur F. LaPage

An Abstract of the Thesis Presented
in Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy
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August, 2003

In a three-wave Delphi survey of a panel of 40 key experts of Korean National Parks conducted between February 2001 and March in 2002, four major issues -- (A) Park philosophy not clearly articulated; (B) Inadequate emphasis on ecosystem protection; (C) Widespread deficiency of management tools; and (D) Visitor services needed -- were asked to get the panel's opinions regarding 'importance' (1 = most important; 4 = least important) and 'likelihood' of being resolved (1 = resolved in 5 years; 4 = not resolved in 5 years) of these four issues in Wave 3. In terms of 'importance,' Issue A (Park philosophy not clearly articulated) (mean rank = 1.9) was 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 A (mean rank = 3.2) was less likely to be resolved than the other 3 issues (mean ranks are between 2.2 and 2.9). Issue D (Visitor services needed) was most likely to be resolved in the next 5 years. 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 unarticulated park philosophy is lower than the others. This 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, several suggestions 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. Recommendations include (1) formation of a 'Blue Ribbon Panel' of experts to comprehensively study the National Park conditions and trends, and to look at alternative styles of management from other models that exist around the world, (2) use parks as 'classrooms' and co-optation of legislators, (3) get support from volunteers, Friends groups, and partners, and (4) get corporate sponsorship and develop 'Sister Park' program with other countries.

DEDICATION

To my father

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Dr. Wilbur LaPage, major advisor, for his support, interest, and suggestions to my academic life. He also provided guidance to my personal life, helping enlarge my vision.

I would like to thank Dr. John Daigle, who provided counseling as co-mentor of my program in Parks, Recreation, and Tourism.

My gratitude goes to Dr. Kenneth Nichols, whose in-depth comments on my dissertation draft, even while on sabbatical leave, provided encouragement and made my academic life more valuable.

I would like to express appreciation to Dr. Michael Robbins and to Dr. Gregory White, who not only gave me insights from their disciplines but also provided valuable guidance during my doctoral study.

In brief, for all of my academic advisory committee, I am reminded by Mencius, who says 'to have and teach bright students is one of three pleasures of man of noble character.' Conversely, it reflects those students who have such great teachers in their learning process as well as in their personal life, who are fortunate to have such opportunities. Luckily, as a steady learner with less talent, I had such an opportunity.

I owe my thanks to many people in Korea including staff members in the Korea National Parks Authority and the Ministry of Environment for their providing information; and to all of my panel members for patiently sharing their wisdom with me over a period of 24 months.

Sincere thanks to my family, especially to my mother, should never be missed. Only words to my wife, Seongkyung, is 'no words' since I have engaged in my doctoral study, it could not have been made without her patience and loving support.

Final words of appreciation go to my daughters, Grace (Soo-Young) and Iris, who brought me their smiles in full blossom.

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Chapter 1

INTRODUCTION

Koreans traditionally have shown an intense love of their land, an emotion felt so strongly that it is reflected in their beliefs, philosophy, and religion. In fact, much of their love is very spiritual. An example that reveals the Koreans' love of their land is the different names one mountain has in a given year: The Mt. Diamond (Keum-ghang-san) has four names that change following each season. In the spring, a wide variety of flowers are sparkling like diamonds (thus, Mt. Keum-ghang), which is foliated with green in the summer (Mt. Bong-rae) and is turning colors in the autumn (Mt. Poong-ak). Then, its magnificent rocks covered with snow appear in the winter (Mt. Kae-gohl).

1.1. Objectives of This Study

For this study, the Delphi method was used to develop and predict a likely array of future directions for the Korean National Park system. It suggests a more effective model of Korean National Park management. To do this, a panel of knowledgeable experts on the Korean National Park system was asked for forecasts based on current and past trends in park management, philosophy, legislation, public attitudes, and funding.

First, the evolution of the Korean National Park system is discussed, including an appraisal of the current state of Korean National Parks, in terms of organizational structure, staffing, management effectiveness, relevant legislative laws and mandates, and local governments' involvement in National Parks.

Second, relevant policy issues to National Parks and their administrative functions, including their counterparts in selected countries such as the U.S., are discussed.

Third, current problems Korean Parks face are identified by the Delphi panel knowledgeable of Korean National Parks.

Fourth, a future strategy for resolving such problems based on the opinions from the panel of experts is developed.

Ultimately, the research has led to developing a model for Korean National Park management, comparing Korean National Park structure and management with its counterparts, in order to suggest relationships between strengths and effectiveness. The model would help the Korea National Parks Authority (KNPA) to achieve a balance between 'preservation' and 'recreational use' in National Park areas.

1.2. Background

Acronyms used in this study are in Table 1, covering both those unique to Korea and those with broader usage.

Table 1: Acronyms used in this study

Acronyms	Full Lists
DOI	Department of Interior (U.S.)
IUCN	International Union for Conservation of Nature and Natural Resources
KNPA	Korea National Parks Authority
KFS	Korea Forest Service
MOE	Korea Ministry of Environment
NGO	Nongovernmental Organization
NPL	Natural Parks Law (of Korea)
NPS	National Park Service (U.S.)
USFS	United States Forest Service

The Korean Peninsula extends southward from the northeastern section of the vast Asian continent and is 222,459 square kilometers (about 85,563 sq. miles), almost the same size as the U.K. The administrative area of the Republic of Korea (hereafter called Korea) is 99,697 square kilometers (about 38,825 sq. miles), a little larger than that of Portugal. Meanwhile, the Democratic People's Republic of Korea governs in the north. The peninsula and all of its associated islands lie between 124° 11' 00'' E and 131° 52' 42'' E and between 33° 06' 40'' N and 43° 00' 39'' N, approximately, the range between Virginia and North Carolina. The mountain ranges of the Korean Peninsula run in two major directions, north-to-south and northeast to southwest. Many summits renowned for their scenic beauty such as Mt. Keum-gang (5,460 ft) and Mt. Sorak (5,933 ft) are located along the dividing ridge of these two mountain ranges (Korean Overseas Information Service, 1993).

Since about 70 percent of the landscape of Korea is mountainous (Korean Overseas Culture and Information Service, c. 1999), forests cover nearly 65 percent of Korea's total land area, or about 6,468,000 hectares (about 16.2 million acre). Administrative measures taken by the Government in regard to forest management are frequently recorded in Korea, as early as in the late 10th century to protect forestlands (Lee, 1969).

However, forestland per capita is only 0.2 hectare, a bare ¼ of the world average. Forestland in Korea is classified into national, public (i.e., local governments), and private forests, which make 21 percent, 8 percent, and 71 percent of the total forest area,

respectively. The total timber stock volume stands at 257.3 million cubic meters and the average stock volume per hectare is estimated at 40 cubic meters. The coniferous forest is typical in Korea, constituting about 46 percent of the total forest. Other types of forests are deciduous (21 percent), mixed forest (30 percent), and other forest (3 percent). The major tree species in Korean forests are red pine, Korean white pine, larch, and oak. (Korean Overseas Information Service, 1993).

In its over 5,000 years of history, from the first Korean nation, Ko-Chosun (Ancient Chosun) to Koryo Dynasty to the last kingdom, Chosun Dynasty, Korea witnessed Japan forcibly annexing Korea and instituting colonial rule. During this colonial period (1910 - 1945) Japanese rulers engaged in economic exploitation of Korea and its people (Korean Information Service, 2000). Table 2 (page 5) compares the history of Korea with that of the West.

Table 2: Chronological table of the Korea and the West

Period	Korea	The West
Before Christ (B.C.)		
	Paleolithic Age	
5,000 - 1,000	Neolithic Age (c. 5,000 – 1,000 B.C.)	Early Mesopotamia Egyptian Kingdoms
1,000 - 200	Bronze Age (c. 1,000 – 300 B.C.) Iron Age	Greek Civilization Founding of Rome (735) Socrates (469 – 399)
200 -100	Confederated Kingdoms of three Han States	Julius Caesar (101 – 44)
100 - AD	Era of three Kingdoms (57 B.C. – 668 A.D.)	Birth of Jesus Christ
anno Domini (AD)		
- 900	Era of two Kingdoms: United Silla Kingdom (668 - 935) Parhae Kingdom (698 - 926)	Anglo-Saxon established in Britain (449) Mohammed (570-632)
- 1400	Koryo Dynasty (918-1392)	Magna Carta (1215)
- 1900	Chosun Dynasty (1392-1897) Taehan Empire (1897 - 1910)	American Independence (1776) French Revolution (1789 –1793) American Civil War (1861-1865)
- present	Colonial period by Japan (1910 - 1945) Split of Korean Peninsular into two separate states: south and north Korea (1945) Establishment of Republic of Korea (1948) Korean Civil War (1950 - 1953) Designation of the first National Park (1967) Establishment of KNPA (1987)	Establishment of Yellowstone NP (1872) World War I (1914 - 1918) Establishment of the US NPS (1916) World War II (1939 - 1945)

Partly adapted from Korean Information Service (2000) and Korean Overseas Culture and Information Service (c. 1999).

Table 3 presents various facts regarding Korea, its high population density, concentrated dwelling in metropolitan areas, and number of foreign arrivals.

Table 3: Brief facts about Korea

Year	1990	1999
Population	43.7 million	47.0 million
Density (persons per square km)	463.1	471
Population of Major Metropolitan Area:		
Seoul	10.23 million (yr 1997)	10.3 million
Busan	3.81 million (yr 1997)	3.8 million
Taegu		2.5 million
Incheon		2.5 million
GDP	442.6 billion US\$ (yr 1997)	407.6 billion US\$
Per capita	9,511 US\$ (yr 1997)	8,698 US\$
Number of foreign arrivals	2.35 million	4.37 million (yr 2000)
Travel credit	3.16 billion US\$	6.84 billion US\$ (yr 2000)

Adapted from Korean Overseas Culture and Information Service (c. 1999); Organisation for Economic Co-operation and Development (2000); Korea National Statistics Office website (<http://www.nso.go.kr/>).

Considering the Koreans' love of nature and that about 70 percent of the Korean territory is covered with mountains, the nationwide enthusiasm for hiking and climbing is understandable (Korean Information Service, 2000). Additionally, the number of inbound international visitors increased from 84,216 in 1967 to 239,000 in 1970 (Americans formed the largest group, accounting for 32 percent of inbound tourists). Tourists rose from 3.2 million in 1992 to 4.2 million in 1998 (Japanese inbound tourists accounted for

45% while visitors from North and South America comprised 11%, mostly from the US). Inbound international tourist receipts in 1992 totaled 3,529 million US\$, up from 31 million US\$ in 1971 and 264 million US\$ in 1973 (Hasan, 1974). This rapid development of Korea's tourist industry parallels Korea's dramatic economic growth. The increased number of tourists has outstripped that of other groups of visitors. In 1969, tourists accounted for 30.2 percent of the total, business people 12 percent, people visiting relatives and friends 21% and official visitors 21.3 percent. However, in 1992, 57.6 percent of foreign arrivals were tourists, 10.9 percent were visiting relatives or friends, 11.2 percent were on business and 0.7 percent were official visitors (Korean Overseas Information Service, 1993). Looking to a continuing expansion of tourism, the country has undertaken a number of plans and programs to explore, develop, and enlarge tourist resources and facilities in such areas as hotel accommodations, tourists services, National Parks, museums, golf courses, and casinos.

1.3. Natural Environment of Korea

Eder (1996) states that the responsibility for conservation is fragmented across several agencies and ministries including Ministries of the Construction and Transportation, the Agriculture, Forestry and Fishery, and the Environment (MOE). Although some of the MOE's responsibility for the overall management of nature conservation programs is carried throughout its ecosystem survey, consistent management is difficult due to administrative fragmentation. At worst, the issues of land-use planning, conservation and preservation fall victim to these competitive

responsibilities in the central and local governments. For example, the Construction and Transportation Ministry has most of the significant land-use planning responsibilities, while the Environment Ministry has none (Eder, 1996; Korea Ministry of Environment, 2000). Thus, a 1994 reevaluation of land-use planning by the Construction and Transportation Ministry did not have checks over its implementation after being approved by the legislative body. The 1994 plan led to reducing the number of defined land-use zones from 10 to 5, which are areas of urban, semi-urban, agriculture/forestry, semi-agriculture/forestry, and natural environment conservation. The sub-zones of natural environment conservation consist of natural parks including National Parks, green belts, cultural properties protection, and drinking water protection. It also identified 41 percent of the land in Korea as open for development. Reflecting that nearly 70 percent of the land is mountainous, this kind of situation lacks the idea of inter-linkage between land-use, water/air quality, and many other aspects of environmental concern. In 2001, two related laws, the Land Use Management Act and the Urban Planning Act were merged into the 'Act Pertaining to Land-planning and Use,' which was planned to be enacted in January 1, 2003, but has not yet been enacted. The new Act reduces the number of zones from 5 to 4, combining semi-agriculture/forestry and semi-urban areas into the single category of 'management' zone, to avoid an indiscriminate development of land and to build an environmentally sound land-use system. Figure 1 (page 10) shows Natural Parks Law and its relevant laws associated with various agencies of natural resources management.

However, as shown in Figure 1, the Environment Ministry has no land-use planning responsibilities at all. Thus, the Korean National Park system and marine preserves are under increasing human pressure as urbanized Koreans seek the solitude of their remaining environment. The national treasures such as historic sites, Buddhist monasteries, and relatively undisturbed natural habitats in National Parks and preserves are not immune to development and are at risk from nearby industrial or commercial activity.

1.4. Definition of National Park by the International Union for Conservation of Nature and Natural Resources (IUCN)

Early international conventions, the 'Convention Relative to the Flora and Fauna in Their Natural State' (1933) and the 'Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere' (1942), provided guidelines for applying the park idea. However, as national parks have evolved, the term 'National Park' has taken on a wide variety of meanings. Some countries have adopted the suggested requirements, while others made adjustments that reduced the integrity of their National Parks. Some areas were designated as National Parks simply because of misunderstandings or misinterpretation of the term, or because their park administration fell to a particular governmental department.

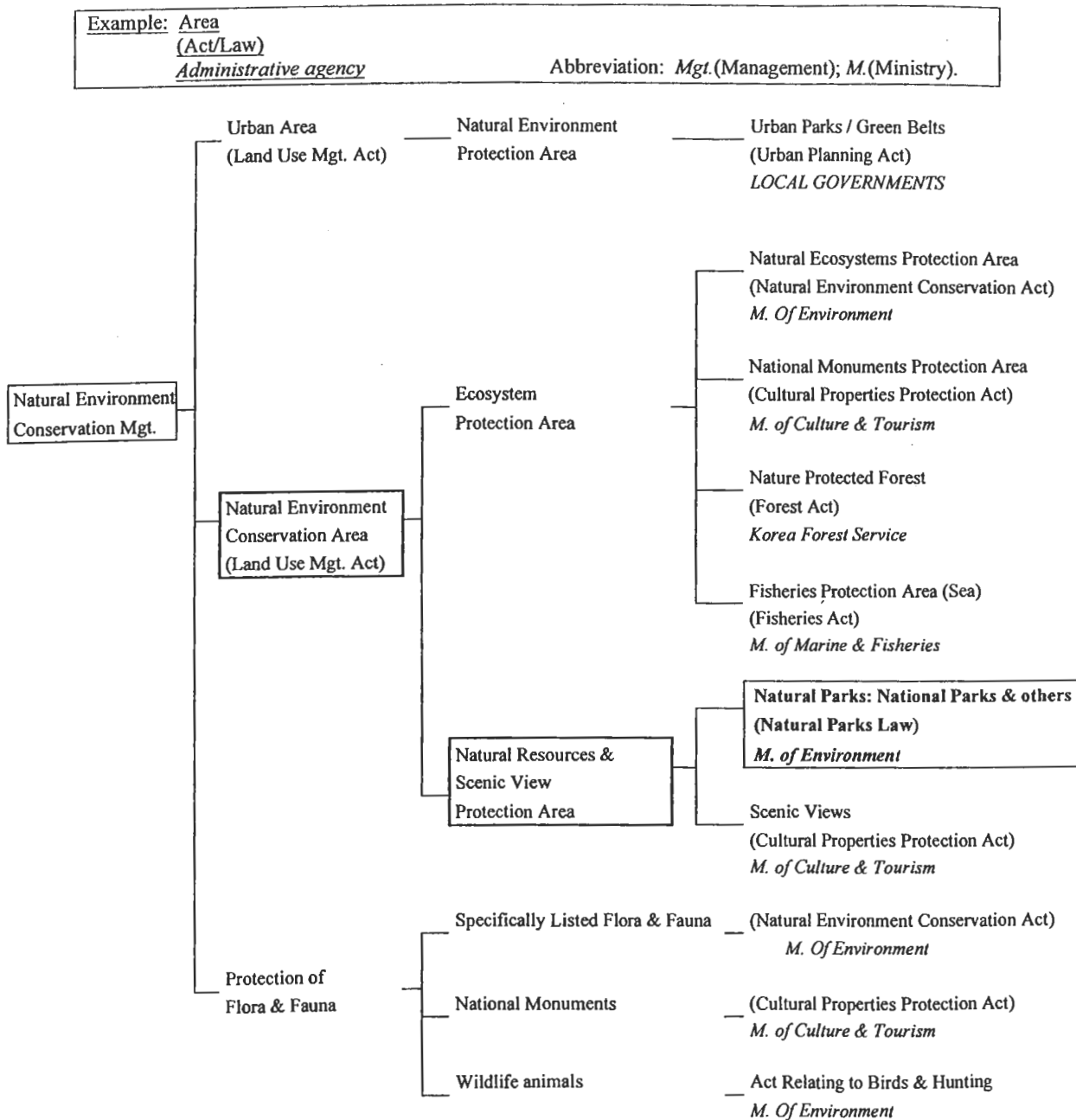


Figure 1: Acts relevant to environment conservation in Korea

In the First World Conference on National Parks in 1962, this need for uniformity of meanings and scopes in preserving genuine National Parks had been raised. Following this, the International Union for Conservation of Nature and Natural Resources (IUCN, now World Conservation Union) clarified the concept of National Parks and its definition of parks was adopted by the 10th General Assembly of IUCN of 1969 in New Delhi. Reflecting the earlier standards, three basic values or criteria were emphasized at New Delhi. Although varied and a matter of judgment, the application of these criteria were: (1) a legal basis for sufficiently strict protection, (2) a reasonable minimum size, and (3) a basis for adequate staff and budget to provide effective management (Brockman, 1962; Brockman and Curry-Lindhal, 1962; Constantino and Gonzalez, 1974; Harroy 1974).

Finally, the New Delhi Assembly made recommendations on National Park designation that pertain to the areas not designated as National Parks: (1) low authority-managed natural reserves without the highest competent authority's recognition and control over these areas, and (2) inhabited and exploited areas where landscape planning and measures taken for the development of tourism have led to the setting up of recreation areas, where industrialization and urbanization are controlled, and where public outdoor recreation takes priority over the ecosystem conservation (IUCN, 1990).

The 'United Nations (UN) List of Protected Areas,' through the IUCN, provides the definitive list of the world's National Parks and preserves in terms of Management Objective. The criteria for inclusion of sites for the next list, '2003 UN List' are: (1) designated or recognized sites by international agreements and programs and (2)

nationally established protected areas meeting the IUCN's definition of a protected area.

The IUCN definition is:

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (UNEP-WCMC website, http://www.unep-wcmc.org/protected_areas/UN_list/index.htm).

In reality, only those nationally established protected areas of over 1,000 hectares **are included. Also included** are offshore or oceanic islands of at least 100 hectares where a whole island is protected. According to the 'Guidelines for Protected Areas Management Categories' (IUCN, 1994), all naturally protected areas on the list are categorized into six types following the primary management objective (Table 4, p.13). No Korean National Parks fall in Category II, which is mainly for ecosystem protection and recreation. This fact would imply the indifference to ecosystem protection from both the government level and the public for all 36 years of Korean National Parks.

These issues are closely related to the dilemma the Korean park system has in terms of the internationally agreed definition of National Park and other protected areas. 'National Park' belongs to Category II, the 'management' objective of which is 'Protected area managed for ecosystem protection and recreation.' This category emphasizes three things in a designated natural area of land and/or sea: (1) protection of the ecological integrity of ecosystem(s) for present and future generations, (2) exclusion

of exploitation or occupation inimical to the purposes of designation of the area and (3) providing a foundation for environmentally- and culturally-compatible spiritual, scientific, educational, recreational and visitor opportunities (IUCN, 1994).

Table 4: IUCN definition of Protected Area management categories
(bold added)

Category	Management objective
Ia Strict Nature Reserve	Protected area managed mainly for science
Ib Wilderness Area	Mainly for wilderness protection
II National Park	Mainly for ecosystem protection and recreation
III Natural Monument	Mainly for conservation of specific natural features
IV Habitat/Species Management Area	Mainly for conservation through management intervention
V Protected Landscape/Seascape Area	Mainly for landscape/seascape conservation and recreation
VI Managed Resource Protect Area	Mainly for the sustainable use of natural ecosystems

For category II, existing villages, towns, communication networks and other on-going activities connected with them could be within the boundaries of National Parks. This exception occurs when these areas do not occupy a significant part of the land and are de facto zoned. Meanwhile, a system of zoning plays an important role in the availability of National Parks for public visitation. That is, special tourism/administrative zones can be established for access roads, tourist and park function accommodation structures, and appropriate recreation facilities. These special zones are located in park areas with minimal interference from the nature conservation functions (IUCN, 1990).

On the other hand, a broad scope of areas falls within category V due to the wide variety of semi-natural and cultural landscapes occurring in many countries. This broad scope is reflected in two types: landscapes possessing special aesthetic qualities and natural areas that are intensively managed for recreation/tourism use. The former type demonstrates cultural manifestations such as customs, beliefs, or material traits in the special landscapes. Thus, traditional land use practices associated with agriculture, grazing, and fishing would be possible in these landscapes when they are characterized by scenic attractions or aesthetically unique patterns of human settlement. In the latter type, natural or scenic areas such as coastline, shore lines, mountainous terrain, rivers adjacent to tourist highway/population hubs are included and many of these, potentially, will be developed for outdoor recreation uses with national significance (IUCN, 1990).

1.5. National Parks of Korea

In 1998, Korean park professionals tried to set a new orientation for a Korean National Park policy at The 21st Century Korean National Park Policy Forum, which suggested conflict resolution between over-use/development and preservation of Korean National Parks. One noticeable movement was reviewing the 'National Park concept.' Like some areas of U.S. National Parks such as Yosemite and Grand Canyon, some Korean National Parks are saturated with use within the intensive use zone. Suffering from materialized urban life, visitors regard the Korean National Parks rather as places of relative solitude (Youn, 1998). In reality, visitors, concessions, and a lack of National Park philosophy result in ~~abuse~~ of Korean National Parks. The parks are very congested

due to rapid growth of visitation, low level of management, and an insufficient number of park personnel. High usage of private automobiles and commercial bus trips into the parks makes it worse. Yet, visitors do not perceive the congestion as crowding (Kim, 1998a).

Among twenty Korean National Parks, fifteen are mountain parks (Table 5). Another is a United Nations Education, Scientific, and Cultural Organization (UNESCO) designated cultural city park, Kyongju, which has rich cultural assets including many Buddhist legacies. The other four parks are marine-based (see Table A.1, p.213, for designations of Korean parks and Figure A.1, p.214, for the map).

Table 5: Park classification in Korea in 1995
(Percentages do not equal 100 due to rounding)

Classification*	Number of parks	Area (sq. km)	% of national land	By IUCN definition
Total	66	7,445	7.5	
National Parks	20	6,473	6.5	Category V
(In-land) **	(16)	(3,825)	(3.8)	
(Marine)	(4)	(2,648)	(2.6)	
Provincial Parks	20	732	0.7	If evaluated, would be in Category V
County Parks	26	239	0.2	

* Defined by Natural Parks Law

** Inland Parks include fifteen mountain-based parks and one historical National Park, Kyongju.

As of 1999, the Korea National Parks Authority (KNPA) managed 20 National Parks. In 1965, the public law establishing 'National Parks' was passed, and in 1967 the first Korean National Park, Chirisan National Park, was designated. Local governments controlled National Parks until 1987, when the KNPA was formed under the Ministry of

Construction. The Authority took over management of all National Parks, except three. With the Authority's need to protect and manage National Parks effectively, its main activities include preserving and protecting natural resources in the parks, maintaining facilities, controlling litter, managing concessionaires, and collecting entrance and facility fees (KNPA website: www/knpa.or.kr). In 1991, the authority was transferred to the Ministry of Interior, and in 1998, to the Ministry of Environment. In page 17, Figure 2 shows the KNPA organizational chart and Table 6 shows the park acreage change with land ownerships. Huge private lands were designated as parklands.

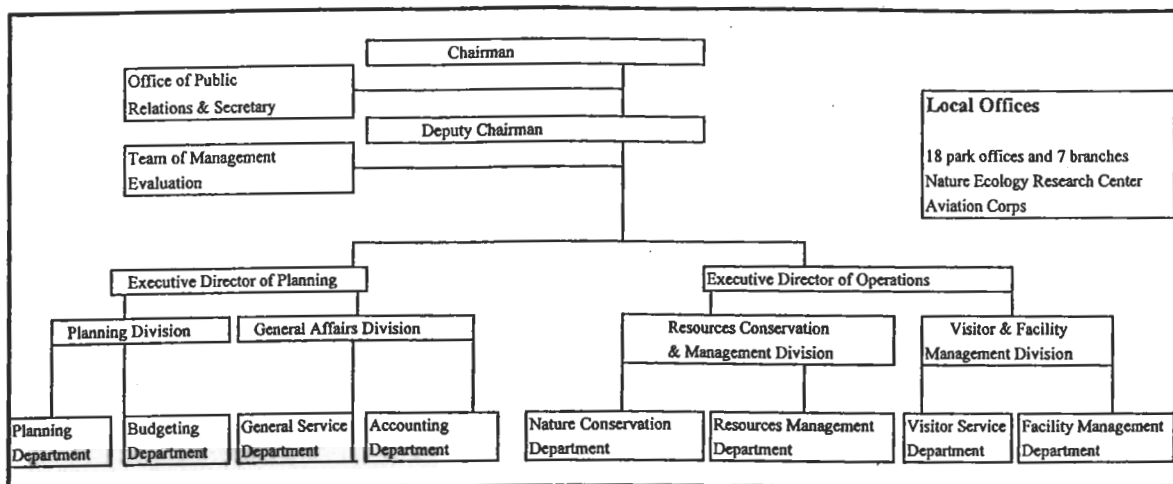


Figure 2: KNPA organizational chart

Table 6: National Park acreage change with landownership (Unit: sq. km)

Year	1977	1998
Number of National Parks	9	20
Total area	1,854 sq. km	6,440
Land terrain (%)	1,492 (100%)	3,825 (100%)
Nationally or Public owned (%)	895 (60.0%)	2,185 (57.1%) national: 2,158, public: 27
Buddhist temple-owned	183 (12.3 %)	317 (8.3%)
Privately-owned	414 (27.7 %)	1,323 (34.6%)
(Sea terrain)	(362)	(2,615)

Adapted from Oh (1998) and Konsulbu (1977)

In addition, Appendix A includes facts about Korean National Park system.

1.6. Review of Social, Economic, and Political Changes Related to Parks in Korea

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

Economically and politically, earlier Korean National Parks (during the 1970s) were established to promote tourism (Korea Ministry of Environment, 2000), though economic benefits of tourism were moderated to meet both preservation and recreation benefits (International Park Planning Institute, 1972). With resumption of autonomous local governments in 1992, these priorities might have led park policy to be oriented toward economic benefits, making park management fragmented, unclearly defined, ill-organized, and dysfunctional. These threats of over-development by commercial developers, local governments, and even park management itself would be potential causes of National Park degradation. Overall responsibility for 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 because of a fragmented structure of park administration, as is true of the Taiwanese National Parks (Sung, 1990), and because National Parks are suffering from

overuse and underbudget. Still, visitors must be fairly satisfied with their recreation experiences in order for the overuse to continue -- and this seems to be true with Korean National Parklands (Kim, 1998b). The Korean National Parks Authority (KNPA), a non-governmental organization of the Ministry of Environment, may have a strong mandate, but it also has a weak authority to both protect and provide for recreational use (Kim, 1998a). To protect natural resources of parks and increase the quality of visitor experiences, the first steps must be taken by park management. Although relevant laws are somewhat ambiguous and overlapping, resource protection and benefits for future generations are implicit. But, the on-going problems of under-budgeting and understaffing are chronic (Korea National Parks Authority, 2001) and these disparities have likely caused KNPA to have both limited law enforcement ability to protect natural resources and limited staff to better educate its visitors about norms of appropriate park visitation.

1.7. Stakeholders in This Study

The results of this research can be used by park managers, the legislative body, park-related academics including forestry, ecology, landscape, and environmental horticulture. The results can also be useful to central and local governments and locals -- Ministries of Environment, Agriculture and Forestry, Culture and Tourism, Marine and Fisheries Affairs, and Construction and Transportation, as well as locals near the parks, residents in park boundaries, private owners having properties in the park areas, the local tourism industry, and Buddhist temples located within and adjacent to the parklands. In

addition, the tourism industry, environmental NGOs, the press, teachers, students, and activists can use the findings from this research.

Chapter 2

LITERATURE REVIEW

Various human views regarding Nature have been reflected, following paradigms of societies. Western cultures seem to be more oriented to dominance of Nature, while many eastern cultures are more oriented to harmony with Nature.

From the U.S. invention of National Parks to currently wide adoption of National Parks in the world, parks proved the consciousness of human paradigms intertwined with values and sustainable use of them. The American experience of park system, development cycle of parks, and sustainable development concept and application to park are reviewed. Especially, a review of American experience in terms of argument and counter-argument on preservation- or service-oriented policies provides the mirror aspects of today's park issues. Also, because parks are situated in designated areas, overuse is expected in many park systems. Applying the concept of carrying capacity, immersed in several management frameworks, is one of the efforts of park management to relieve visitor pressures on parks.

2.1. Nature Reflected in Human Minds

The Western cultures see nature as subordinate to humans while people in the Eastern cultures including those of Korea and China see themselves as part of nature

(Coolidge, 1972; Korean Overseas Information Service, 1993). White (1967) explained that a marriage of science and technology is a unique attribute of western culture.

Human views regarding natural resources vary, based on worldviews or paradigms of societies. However, defining paradigms is difficult, especially in social sciences (Bernstein, 1976; Kuhn, 1996; Redfield, 1963). Some beliefs, such as Buddhism, Taoism, and Judeo-Christian religion, have had a profound effect on attitudes toward nature and the national park concept (Coolidge, 1972).

The Judeo-Christian belief that God is outside the world led to a view of Nature as being godless and evil, or just the absence of goodness (Rosenstand, 1994). In addition, past Christian interpretations of the Bible, especially Genesis, led people to develop a worldview that emphasized man as separated from Nature ('dualism') and that there is no intrinsic value in nature because human beings were created in God's image ('anthropocentrism') (White, 1967).

In Table 7 (page 23), views from four environmental paradigms with respect to human nature, social causation, the context of human society, and constraints on human progresses are presented. These views, in many ways, have influenced the relationship between parks and people.

2.2. Meaning of the Term 'National Park'

The words 'national' and 'park' are commonly used in many languages. In Spanish and English, for example, the word 'national' simply means something or someone 'of a nation.' However, the word 'park' is not as precise. It is used to describe

hunting reserves, ball playing areas, gardens, public squares, wild or natural areas, enclosures, and meadows (Wetterberg, 1974). 'Park' is even used to describe industrial areas, residential sites, and spaces set aside for leaving vehicles. Major dictionaries define National Park as 'a tract of land declared public property by a national government with a view to its preservation and development for purposes of recreation and culture' (American Heritage Dictionary, 1992).

Table 7: Four environmental paradigms competing worldviews

Topic	Dominant Worldview (Catton and Dunlap, 1980; White, 1967; Linzey, 1990)	Environmentalism (O'Leary et al., 1999; Rosenbaum, 1998)	Social Ecology (Bookchin, 1990)	Deep Ecology (Devall and Sessions, 1985; Naess, 1988)
Nature of human beings	Fundamentally different from all other creatures on Earth, based on Bible (Genesis 1:26ff).	Humans have an obligation to protect the natural environment (stewardship).	Human species only as valuable as its contribution to the larger ecosystem.	
Social causation	The natural environment is a resource for humans and it is abundant.	Environmental problems are defined in terms of public health, recreation, and aesthetics.	Social and economic injustice cause humans to exploit ecosystems.	Humans have no rights to reduce the richness and diversity of life forms except to satisfy vital needs.
Context of human society	Hierarchical, i.e., man is created by God to dominate nature and woman is associated with Nature.	Environmental costs and benefits are incorporated into the market by governmental regulations, tax incentives/ disincentives, and pollution rights.	Human beings as social beings must act politically to represent the interests of ecosystems.	Flourishing of human life and culture is compatible with a substantial decrease in human population.
Constraints on human society	Environmental problems and resource scarcity will be solved by science, technology, and free market. Thus, progress need never end.	Environmental protection is compatible with sustainable material and economic development.	Environmental protection is compatible with 'sustainable community development.'	Environmental protection is compatible with sustainable bio-regionalism.

Meanwhile, some languages do not have comparable words for 'national' and 'park' with these specific meanings, and have difficulty finding appropriate terms for 'National Park.' Some cultures, due to their long history of monarchical systems, had the words 'royal' instead of 'national' and 'preserves' for the kings and nobles instead of 'park.' For instance, in Korea's feudal age, all lands were considered to belong to a monarch, and no concept or idea for 'of nation' existed. Because the early Korean national park legislation and administration were believed to be after Japan's model (Lee, 1995), Koreans' adoption of the term 'National Park,' etymologically, might have been affected by Japanese interpretation. In this vein, the term 'National Park' in Korean ('Kung-nip Kong-won'), supplemented by Chinese letters, has led the general public to a misunderstanding of the National Park idea. 'National' somehow means 'central government-supporting,' often misinterpreted as 'nominal' or even 'free' of charge. 'National' also implies 'the most prestigious,' thus parks with less recognition in Korea would make the public confused of the usage of the term.

Youn (1998) even suggested that no translation of the term 'National Park' to Korean is needed: but rather that using the English term itself would be better if it helps disseminate the idea of a National Park more effectively.

Origin of the National Park Idea could be credited to artist and explorer George Catlin. In 1832, he stated, 'a nation's park' would be 'for Americans to preserve and hold up to the view of her refined citizens and the world, in future ages.' More importantly, far ahead of his time, he also stated 'a nation's park' would contain 'man and beast, in all the wild and freshness of their nature's beauty!' In 1872, this idea of 'National Park' as a

modern concept was first realized in Yellowstone National Park (Dickenson, 1984; Machlis and Tichnell 1985; Runte 1987; Zinser, 1995). However, this early modern-day National Park idea has evolved since Americans felt the lack of national, cultural legacy, in contrast with those of Europeans: Nationalism and monumentalism were main factors when deciding on the establishment of new National Parks. For example, dismissing European culture, Nathaniel Langford expressed the discoveries in Yellowstone as 'pillars of basalt' and 'a miniature model of the Coliseum.' In fact, the intention of designating more than 3,300 square miles in Yellowstone lacked the concepts of protecting wilderness or the advantages of protecting an integrated ecosystem. Rather, with the concern for preserving undiscovered wonders, this designation affirmed the monumentalism catalyst for establishing National Parks (Runte, 1987).

2.3. American Experience of the National Park System

Except monuments designated by the president under provisions of the Antiquities Act of 1906, establishment of each unit of the National Park Service (NPS) requires a separate act of Congress (Nichols, 1981). In this regard, Ise (1961), on a park-by-park basis, detailed the addition of units to the NPS from the reservation of Yellowstone (1872) to the authorization of Virgin Island National Park (1956).

In the earlier park policies, the park management emphasized tourism-oriented development. However, preservationists believed National Parks had primitive conditions from the outset. They were indeed coherent in 'total preservation,' but not in park-generated potential economic benefits such as revenue generated from the park

visitors. Before the advent of the National Park system in 1916, this coherency retreated only when preservationists were aroused to the need for strengthening their proposition of National Parks in terms of the country's economy. For instance, the Hetch Hetchy incident of 1913 accelerated the establishment of the bureau of National Parks (Albright and Cahn, 1985; Foresta, 1984; Runte, 1987).

By the passage of the National Park Service Act of 1916 (also known as 'National Parks Organic Act'), the titles of all existing and future National Parks were passed to the newly established agency -- the National Park Service (NPS). The NPS also took over all national monuments directly controlled by the Department of Interior (DOI), thus the NPS could coordinate the administration of National Parks and monuments previously reserved under the jurisdiction of the DOI. Moreover, in 1933, the monuments under the jurisdiction of the US Forest Service (USFS) and the War Department were also transferred. These new additions to the NPS were significant, because the consequent reorganization of the Park Service made it the sole agency for managing all federally owned public parks, monuments, and memorials (The Conservation Foundation, 1985; Rettie, 1995; Sung, 1990).

These 'founding years,' however, were a struggle for the survival of the NPS. Also, from then on, the ever-lasting legacy of the 'dual mandate' for both 'preservation and use' started. Actually, several public land management agencies and departments, including the USFS, already entered into rivalry with the proposed National Park system well before 1916. In reaction, in 1912, preservationists renamed their proposed organization -- from the National Park 'Bureau' to 'Service.' It implied the new agency

would not have as much political power as the 'Bureau' would (Albright and Cahn, 1985; Runte, 1987; Sellars, 1997).

The survival of the NPS depended on the general public's support and their legitimate use of parks for recreational benefits. Thus, the NPS had practiced 'selectively preserving natural resources,' while promoting recreational tourism. This management practice was implemented in two ways. First, because the areas of scenic beauty in parks were the main appeal to the visiting public, forest management at this time well reflected the NPS policy, which applied full suppression of fire regardless of natural or human causes and control of insects. Second, excepting favored elements of nature, other natural conditions were altered to serve the public's enjoyment of the parks (Sellars, 1997). Although this 'aesthetic conservation' was contrasted to the utilitarian consideration of the USFS, i.e, sustained consumptive use of natural resources (Nash, 1967) with the intention of meeting public enjoyment, the consequent practices of the NPS had an ironically utilitarian aura. For example, 'fish management' was enacted to assure an abundance of fish for the visiting public's fishing. Relying on precedents of traditional forest, game, and fish management transformed the farsighted mandate for keeping the parks 'being unimpaired' to 'carefully and properly developed' parks (Chase, 1987; Runte, 1987; Sellars, 1997).

The National Park Service Act of 1916 leaves room for interpreting of 'unimpaired' as:

To conserve the scenery and natural and historical objects and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (16

U.S.C. 1)

With little concern for ecology and science, the NPS and its first directors, Mather and Albright, envisioned National Parks as 'scenic pleasuring grounds,' with no fires and predators at all. This policy ultimately caught the attention of biologists with ecological awareness. They questioned the dominating recreational tourism focus and the utilitarian aura in the NPS. The 1933 expansion of the NPS embedded three perspectives. On one hand, the idea that National Parks must be made accessible for public use for securing public support was legitimate. But, for the NPS, its systematic expansion in 1933 drew expanded responsibilities to matters other than just preserving nature. On the other hand, for the preservationists, the expansion of managing various types of federally owned public parks, monuments, and memorials made them uneasy. They felt higher standards were needed for National Parks than those of other park categories such as state and city parks, because they believed National Parks had been pristine from the outset. Furthermore, biologists with ecological concerns were not well noticed by park administration. Since the late 1920s, this new perspective was reflected in the NPS management policy of 'development for preservation,' which means developing some portion of the park areas for recreational use, leaving other park areas unimpaired (Chase, 1987; Ise, 1961; Runte, 1987; Sellars, 1997). In 1940, many of the NPS-employed

biologists in administrative level were transferred to the DOI Bureau of Biological Survey and the biologists' influence diminished significantly.

In terms of economic growth and development, North American interests for conservation became less prevalent during the post World War II era. The US NPS had new opportunities for its expansion with a ten-year program, 'Mission 66,' which began in 1956 to restore and improve the National Park system. Mission 66 was based on widespread concern for the deterioration of visitor facilities and accommodations, and assumed the 1950s' trend of increased mechanization of recreation and increased park visitation would continue. Thus, the program involved new construction and the rehabilitation of older facilities. Also, the Outdoor Recreation Resources Review Commission suggested the establishment of a zoning system to allocate land to different use-classes according to the nature and intensity of demand and land character (Clawson, 1959; Outdoor Recreation Resources Review Commission, 1962; Rettie, 1995; Wirth 1981). Much of the sensitivity to environmental and aesthetic consequences of park development has evolved since Mission 66. For example, extinction of predators and suppression of natural fire were no longer encouraged, although implementation of the park system policies on these matters were de facto inconsistent and complex (Chase, 1987; Rettie, 1995).

As Mission 66 approached its zenith, it was re-affirmed that wildlife biologists should focus on ecological integrity. Unlike the earlier advent of ecological concerns in the 1930s, their re-emergence at this time heavily influenced park policy (Boyd, 1995). Considerable studies in the 1960s mentioned the impact of never-ending resource

exploitation and the overuse of specific environments. They included warning against the dangers of chemicals that eventually cause harm to humans in the environmental web (Carson, 1962) and the need for husbandry of limited natural resources for future use (Boulding, 1966; Hardin, 1968). Responding to these opinions, the National Environmental Policy Act of 1970 required federal agencies to report environmental impacts on all development projects.

An outside NPS study, the Leopold Report, was one of the most influential studies in policy context. The report received tremendous attention from high political level and the NPS, although the committee chair, Leopold, stated the report was 'not statistical, but conceptual,' with emphasis on the philosophy of park management and the involved ecological principles (Leopold et al., 1963). The report challenged the tourism-oriented NPS policy, recommending that the NPS recognize the complexity of ecological communities and the management diversity needed in preserving them. For example, the report insisted that NPS should encourage native plants and animals and minimize human intrusions in the parks, while controlled use of fire was recommended and the extensive use of chemical pesticides against forest insects and diseases was questioned. This recommendation was not initially welcomed by the NPS because of its entrenched resistance to substantive change (Chase, 1987).

2.4. Motivation to Establish National Parks

Without clearly articulated reasons for having National Parks, consistent management decisions are extremely difficult to make. Based on Brockman's proposal

(Brockman et al., 1973), Wetterberg (1974) delineated 7 basic 'motivation poles' drawn from the delegates attending the Second World Conference on National Parks in 1972, by asking the question, 'Why does your country have National Parks?' The 7 motivation poles, or clustered patterns, have one or more reasons for establishing National Parks, although some overlap may exist among the poles that were roughly developed in order of importance. They are:

- (1) recognition of natural oddities such as areas of great scenic attractions,
- (2) promotion of foreign exchange and tourism,
- (3) provision of educational study areas that are biologically, geologically, or historically/culturally important,
- (4) projection of an image of political maturity,
- (5) environmental preservation,
- (6) satisfaction of Humans' acquired needs, and
- (7) preservation of areas of significant world interest.

Early Korean parks were covered by (1) through (4), and current trend seems to emphasize 'environmental preservation' and 'preservation of areas of significant world interest.' One motivation lacking in establishing National Parks in Korea is 'humans' needs to higher levels of satisfaction' (Maslow, 1968).

2.5. Life Cycles of Parks

Clawson (1974) outlined the National Park life cycle in 5 stages (Reservation; Early Management; Rising Public Interest; Park Use Approaches, Reaches, or Exceeds Carrying Capacity; and National Parks as Crown Jewels) and Eidsvik (1984) outlined four appropriate management techniques (Preservation, Protection, Management, and Integrated Planning). Although their models are more suitable for US parks, applying them helps to understand the life cycle of parks because the length of each stage may differ from park to park and from country to country (Clawson, 1974). Each technique is appropriate in certain places at certain times (Eidsvik, 1984). Actually, their stages or techniques are continual, separated by stages evolved or techniques for certain conditions. These models imply the relationship between human and nature that has influenced the evolution of park ideas. In the same vein, Machlis and Tichnell (1985) proposed that human-caused negative impacts would be more threatening than those that are nature-caused, despite both causes having an influence on the state of the parks. Their four major assumptions are:

- (1) *Homo sapiens* is a biological species constrained by Nature, and its social behavior is biologically determined;
- (2) *Homo sapiens* is unique in its cultural variations;
- (3) *Homo sapiens* is ecologically interdependent with Nature; and
- (4) the complicated relations between humans and Nature can best be understood by using a general systems approach.

These give a clue to the complex human-nature relationship in terms of human ecology, the study of the relationship between humans and their environment (Theodorson and Theodorson, 1969). Truly, National Parks are a reflection of natural processes and a creation of political process. No stable parks exist without stable societies (Machlis and Tichnell, 1985).

The following sections have described a park's life based on Clawson's model, which have no sharp distinction between them. In initial stage (Reservation), some natural wonder or unusual natural feature is reserved, per se. Normally, a government responds advocacy from a fairly small number of people to preserve this feature and the general public's support is very limited. Also, there is likely to be minimal opposition to reserving the land as National Parks due to their likely low profiles for economic or other purposes (Clawson, 1974; Harroy, 1972; Ise, 1961).

In American experience, the concept of a 'Reservation' stage is paralleled with:

- (1) the search for a distinct national identity, i.e., the presence of natural wonders since the creation of Yosemite and Yellowstone in 1864 and 1872, respectively (Runte, 1987).
- (2) the influence by the early 19th century of the 'Romantic Movement,' which considered National Parks as untamed, mysterious, wild country (Nicholson, 1972).

Furthermore the Romantic Movement acted as a precedent to promote conservation rather than designating specific areas to be set aside as National Parks (Chubb and Chubb, 1981). Also paralleled is the era of perception of the first national parks as 'worthless lands.' Hence, fulfilling the cultural needs was the dynamic initiation for

scenic preservation, and the singling out of areas to be **included** in the National Parks was based on economic considerations (Runte 1987).

This stage is also interpreted, in terms of management techniques, as ‘preservation,’ although reservation was not necessarily preservation. Preservation as a management technique was appropriate to Yellowstone National Park in 1872, where there were few people, and pressures on natural resources did not exist (Eidsvik, 1984).

Common characteristics of second stage (Early management) would be the governmental approach toward operating the National Parks on a limited budget, highly insufficient appropriations for caring for visitors, and low public usage. In addition, this ‘early management’ of newly created parks would be lacking, or have minimal ability, to fight off the threats of commercial exploitation. In developing countries, where tourism is a major earner of foreign exchange, over-commercialization would occur, ‘which would kill the goose that laid the golden eggs’ (Clawson, 1974). When human populations grow in areas surrounding National Parks, the ‘protection’ technique is needed and the establishment of warden or ranger services becomes necessary. For example, the need for protection led to the establishment of the Canadian NPS in 1911 and that of the US in 1916, to enforce hunting and poaching regulations, and to provide visitor safety (Eidsvik, 1984).

Between Clawson’s second and third stages, the US National Parks witnessed the efforts of the first directors and co-founders of the US NPS, Stephen Mather and Horace Albright, gaining broader national support for the existence and expansion of the NPS through becoming allied with railroads, hotels, and tourism industries (Foresta, 1984;

Rettie, 1995), America's first, in what would become an unending list, of park partnerships.

In contrast to the previous 'Early management' stage, park visits at third stage ('Rising Public Interest') would be easier and facilitated with such expanded economic and social conditions in a country as an increase of real income, days of paid vacation, number of cars, and quality of highways and roads. In turn, the increased number of park visitors demands greater investments in public facilities and larger appropriations for management staff, from an often reluctant government.

At this stage, the general public accumulates its knowledge of parks through visiting parks, reading various writings and mass media about parks, and increased word-of-mouth. With this increased understanding of parks, the general public's political support for the parks lessen the threats of commercial exploitation to parks, increase appropriations, and begin to politicize parks.

Although total usage is still within a park's carrying capacity, National Park management should be cautious when park attendance increases year after year and decade after decade. To avoid such high usage in possible excess of carrying capacity, some positive steps such as making investments in research, taking actions, and building attitudes among park users, begin to emerge as the high usage continues, i.e., as the crowding becomes extreme and/or the psychological benefits of the park experience begins to decline.

Increased park attendance will bring many management problems. Nevertheless, National Park administrators are familiar with those problems and can solve them without

extreme difficulty as long as adequate funds are available (Clawson, 1974). When parks are on the threshold of reaching or exceeding their optimum usage, the ensuing threats of overuse should be resolved by a zoning system. Although the carrying capacity can be increased within some limits, zoning is an effective conservation tool that evolved in the late 1950s. The Outdoor Recreation Resources Review Commission (ORRRC) developed a comprehensive zoning system for public lands during the early 1960s. Zoning as a management tool recognized that different parts of a large natural area required different management techniques (Eidsvik, 1984).

Prior to the 1960s, the primary aim of establishing parks had been to preserve specific species, special natural phenomena, and other curiosities rather than ecological systems. In the 1960s, however, preservation of diversity and natural change became major objectives of the protected areas movement in contrast to the earlier preservation of disparate and static features (Harrison et al., 1984). 'Integrating planning' would be better emphasized in terms of management technique by the 1980s. That is, the contribution of National Parks to Sustainable Development (SD), which will be discussed in Section 2.6, p.38, lies in their protection of natural resources such as watersheds, forests, and ecosystems. In addition, National Parks can play a vital role in regional and local employment and regional, national, and international tourism. Integrated planning would be the best long-term solution to ensure the protection of natural heritage because what is happening outside the parks has such a great influence on what happens inside the parks. Similarly, the parks have tremendous influences on the social and economic circumstances of nearby communities (Eidsvik, 1984; Machlis and Tichnell, 1985).

Most National Parks will come to fourth stage of 'park use exceeding carrying capacity,' unless measures are taken to limit use. Restriction on park usage may be more difficult for park managers and administrators than it is for the public, especially in those countries promoting park visitation. As the services of National Parks in the stage of 'Rising public interest' need not be free to visitors, the public is more willing to pay reasonable charges than park management may realize (Clawson, 1974). Subsidized use of National Parks, i.e., fee-free, or below cost, is actually discriminatory against poor people, because it favors park visitors who can afford to visit while doing little for those who cannot.

There should not be, and probably cannot be, sole reliance on higher charges as a device to limit park attendance to carrying capacity; that carrying capacity can be increased in various ways with the removal of overnight accommodations to outside the park. Also, banning or removing recreational activities such as golf courses and nightclubs not requiring the unique natural resources of National Parks, or reducing or eliminating the use of private cars within the park, increases carrying capacity. In fact, providing free public transportation that replaces the private vehicle, mandatory reservation systems, and more emphasis on each park's character-based interpretive program services would be encouraged.

Provocative stage, 'National Parks as crown jewels,' is an ideal finale of park evolution and needs intergovernmental cooperation. No country has yet attained this stage, although some may be approaching it. This stage strictly limits carrying capacity, tries to make the psychological experience of visiting parks as rich and rewarding as

possible, and get increased investments and staff. Such National Parks would be 'elitist,' but an elitism of taste and interest, rather than an elitism of wealth and privilege (Clawson, 1974).

2.6. Parks in Sustaining Society

The past four decades witnessed a new environmental concept that stressed the need for preserving, protecting, and sustaining resources for future use and promoting 'environmentally sound economic development.' Such development, unlike utilitarianism, implies preserving ecological integrity and compatibility with available resources. Sustainable Development (SD), originated from the 1980 World Conservation Strategy, mainly represents such breakthrough concept. It was defined by the 1987 Brundtland report, 'Our Common Future,' as a process 'that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Boyd, 1995; IUCN 1980; WCED, 1987). However, it is not yet fully refined, as stated it is 'an oxymoron ... believing that you can have the cake and eat it too. But however illogical SD may seem, the idea is ...very powerful' (Gibson, 1989).

From an economic perspective, SD is perceived as the continued emphasis on economic growth (Barbier, 1987), while an environmentalist views SD to mean the preservation of essential ecological processes, the protection of biological diversity, and the sustaining of productivity (IUCN, 1980). Traditionally, economists regard the environment as a scarce resource, contributing to human welfare and the economy. Without evidence of economic values, i.e., some species are considered outside of such

values, no linkage between human and non-human species exists (Freeman, 1983). However, there are other non-economic values such as intrinsic and spiritual values, role of community, and socio-cultural values distinguishing themselves from anthropocentric views. Value is a conception, measure, or expression of the preferences or ideals of an individual or group, particularly with respect to human behavior or choices among alternatives (Smith, 1990). However, unlike 'the assignment of value by beliefs and preferences based on instrumental utility of an object in the satisfaction of human desires,' intrinsic value is derived from the belief that value is an intrinsic property of the object, independent of its usefulness to humans. Still, valuation of environmental impacts often mixes anthropocentric values with intrinsic justifications. For example, under this mingled value, unique and delicate ecosystems/endangered species are affected as a result of the various contexts and sources for defining intrinsic values such as philosophical maxims and environmental beliefs.

The Brundtland report noted these concerns in holistic terms: 'the Earth is Oneness.' The aspects of over-development, environmental degradation, lack of management of both renewable and nonrenewable resources, and social inequity imply the need for changes, which will lead the common future shared by the next generation (WCED, 1987). Tourism research is not well described in the Brundtland report, yet tourism research is one area of inquiry, necessary in attempting to embrace the term SD (Boyd, 1995).

Proponents of SD consist of two groups whose positions are almost identical, while diverging on the point of 'how much economic growth' is 'substantial.' One

group, including the WCED (i.e., Brundtland Committee), emphasizes on-going, environmentally sensitive economic growth, and pursues improvement of global living standards. For example, the Committee argues that high rates of ecologically responsible economic growth help reduce poverty in the low-income world and help to make environmental improvements more affordable worldwide. The other group holds that even the current levels of economic growth are problematic, leaving the only options as reduction of economic growth, change of lifestyles to less consumption of industrial products and fossil fuel energy in the Northern hemisphere, and redistribution of resources more fairly on a global basis.

These two thoughts inspired Thring (c. 1993) to propose a 'societal over-engineering,' the relationship between income and the quality of life in Figure 3 (page 41), where the upward curve describes non-industrial sustainable societies such as the Brazilian rainforest. Between points S and D depicts the industrial, sustainable societies that benefit from high quality life in a sound environment, based on the advantages of modern science, education, and medicine. However, the downward slope from point D describes unsustainable societies, where quality of life decreases despite rising income. Although it is unclear when point D is reached before getting into the over-development zone, 'the point D is the core of the political debate about SD' (Carley and Christie, 1993).

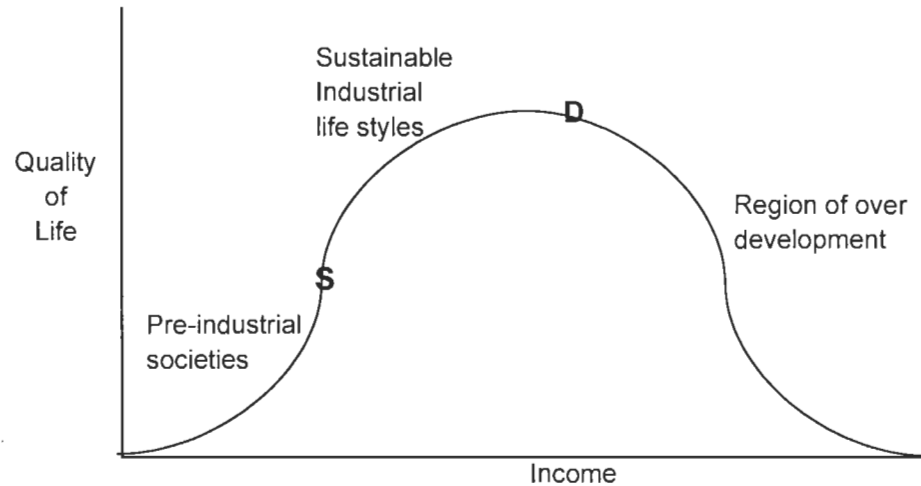


Figure 3: Income and quality of life (Carley and Christie, 1993)

The establishment of biosphere reserves by the intergovernmental Man and Biosphere (MAB) program reflected a changing economic, social, and political climate which emerged in the 1970s and early 1980s. After the dominant role of humans in shaping the biosphere was recognized, ecology became a truly holistic science of humans and nature, a prerequisite for solving problems of sustainable use of natural resources. Defined as being 'protected areas where an integrated approach to conservation was to be developed,' biosphere reserves combine the preservation of genetic and ecological diversity with scientific research, environmental monitoring, education, and training. Unfortunately, the term 'reserve' misleads people, even though MAB emphasizes human partnership with nature. A biosphere reserve is open and interacts with its region: Truly, the locals can be its guardians (Batisse, 1972; di Castri and Robertson, 1982; von Droste zu Hülshoff, 1984), and many biosphere reserves around the world are National Parks.

2.7. Carrying Capacity Management Frameworks

Underbudget and overuse of park resources are ubiquitous problems of park management worldwide. In Table 8, Machlis and Tichnell (1985) reported the top ten threats to National Parks in the world by a survey of park managers that suggested that humans are the main cause of threat to parks, although nature does play an important role as well.

Table 8: Ten most threatening factors to world National Parks (N = 98)

SUBSYSTEM	THREATENING FACTORS	N
Wildlife	Illegal removal of animal life	74
Management	Lack of personnel	72
Vegetation	Removal of vegetation	60
Soil	Erosion	57
Management	Local attitudes	52
Management	Conflicting demands	52
Vegetation	Fire	50
Wildlife	Human Harassment	49
Wildlife	Loss of habitat	47
Vegetation	Trampling	46

The term 'carrying capacity' has been applied to visitor management and various management frameworks have been developed to resolve or diminish the level of overuse. In other words, for managers, including park management, understanding and actively managing for quality resource conditions and visitor experiences is important.

The majority of researchers agree that there is no universal magic number that constitutes the carrying capacity for a setting, but that the carrying capacity will vary according to the type of setting and the nature of the capacity being measured, and that change will occur as a result of both natural and human-induced changes. Therefore, it is best to view carrying capacity, not as a quantitative measure, but from the perspective of how the area can be best managed to avoid exceeding capacity, however defined. Several frameworks, such as the Recreation Opportunity Spectrum (Clark and Stankey, 1979), Limits of Acceptable Change (Stankey et al., 1985), Visitor Activities Management Planning (Graham et al., 1988), Visitor Impact Management (Kuss et al. 1990), and Visitor Experience and Resource Protection (VERP) (National Park Service, 1997; Jacobi and Manning, 1998) address this issue. When managers noticed that use-levels at specific sites were very high, they began to set use-limits of carrying capacity (Stankey and Manning, 1986). The purpose of determining carrying capacity is not just to provide a capacity limit, but to produce the highest quality recreation experience at an acceptable cost. When the behavioral aspects of the recreation experience are not incorporated into capacity limits, application of the concept becomes even more unreliable (Jubenville and Becker, 1983; Wagar, 1964; 1974).

Besides the biophysical aspects of carrying capacity, social carrying capacity has been used to explain other antecedent variables such as crowding, types of encounters, and social environment. The majority of social carrying capacity research has been based on determining the appropriate number of visitors in an area to avoid a perception of crowding (Stankey and Manning, 1986). In essence, if recreationists feel crowded in a

situation, they will probably not be satisfied and will demand other opportunities (Hammit et al., 1984). Many antecedent conditions can help define whether a situation is considered crowded. It is not only the amount of use or number of others that one encounters which determines a feeling of crowding but also the type of use and the actions of other people. In fact, the social aspect of carrying capacity may be more important in determining a satisfying experience than the other components of recreation engagement (Yuan, 1990).

Recreation opportunity has been defined as, 'the availability of a real choice for users to participate in preferred settings, in order to realize those satisfying experiences that are desired from such an engagement' (Recreation Opportunity Spectrum, 1982). Thus recreationists only have opportunities available based on perceived constraints. Due to many people's different definitions of the same experiences, what may be an important opportunity for one person, may not be to another (Hautaluoma and Brown, 1978). Managers cannot provide the experience. Rather, they can provide the setting where certain experiences are facilitated. Thus, managers have to translate these ideas into facilities that are easily manipulated and supplied; facilities and type of settings have become the focal point for determining recreation opportunity. Methodologically, it is easier to measure the number of existing campgrounds than to determine the experiences that can occur there. While the quantity of an opportunity can be determined, its perceived quality is much more difficult to assess (Yuan, 1990).

Generally, 3 most widely applied frameworks are Limits of Acceptable Change (LAC), Visitor Impact Management (VIM), and Visitor Experience and Resource Protection (VERP).

LAC, a combination of social and environmental carrying capacity and an elaboration of the ROS concept, emphasizes the desired conditions in the area rather than how much use an area tolerate. Partially derived from a management-by-objects (MBO) concept to planning, actually the LAC concept seeks to establish acceptable and appropriate resources and social conditions in recreation settings (Stankey et al. 1985). VIM is a comprehensive and systematic management process that involves the physical, environmental, and social aspects of recreational carrying capacity (Kuss et al. 1990). The NPS developed VERP, a hybrid of the VIM and the LAC, to focus on the rapidly increasing number of visitors at its 'front country' and high use areas. The major premise of the VERP process is that the NPS should manage visitor use continuously, the same way it manages its resource (NPS, 1997).

In summary, these three frameworks share a common underlying logic, though terminology, sequencing, and other aspects of each framework vary. Core elements which they share include management prescriptions of: (1) providing the definition of the types of recreation opportunities, as specifically and quantitatively as possible through indicators and standards of quality; (2) monitoring indicator variables to determine whether existing conditions meet standards of quality; and (3) taking management action when and where monitoring suggests standards of quality have been violated (Manning, 1999).

Table 9 (page 47) shows the basic steps of the three carrying capacity frameworks.

2.8. Chapter Conclusion

Various topics have been reviewed in terms of human relations to park, in broader scopes. In a narrow scope, park idea and park systems have been heavily influenced by philosophical trends regarding that parks are a part of human societal context.

Meanwhile, the review of parks as natural resources for human use reveals a dilemma of how they can be dealt with.

In Korean parks, evolution of them is intermingled with all of the concern in this chapter: Parks have evolved with human context. Thus, Korean parks need to be examined in that context to better survive. Knowing the state of a park system will lead to providing the baseline to resolve its problems.

Table 9: Processes of three management frameworks

LAC	VIM	VERP
Step 1: Identify area concerns and issues	Step 1: Pre-assessment database reviews (Product: Summary of existing situation)	Element 1: Assemble an interdisciplinary project team
Step 2: Define and describe opportunity classes	Step 2: Review of management objectives (Product: Clear statement of specific area objectives)	Element 2: develop a public involvement strategy
Step 3: Select indicators of resource and social conditions	Step 3: Selection of key impact indicators (Product: List of indicators and units of measurement)	Element 3: Develop statements of primary park purpose, significance, and primary interpretive themes
Step 4: Inventory resource and social conditions	Step 4: Selection of standards for key impact indicators (Product: Quantitative statements of desired conditions)	Element 4: Analyze park resources and existing visitor use
Step 5: Specify standards for resource and social indicators	Step 5: Comparison of standards and existing conditions (Product: Determination of consistency or discrepancy with selected standards)	Element 5: Describe a potential range of visitor experiences and resource conditions
Step 6: Identify alternative opportunity class allocations	Step 6: Identify probable causes of impacts (Product: Description of causal factors for management attentions)	Element 6: Allocate special zones to specific locations
Step 7: Identify management actions for each alternative	Step 7: Identify management strategies (Product: Matrix of management strategies)	Element 7: Select indicators and specify standards for each zone; develop a monitoring plan
Step 8: Evaluation and selection of an alternative	Step 8: Implementation	Element 8: Monitor resource and social indicators
Step 9: Implement actions and monitor conditions		Element 9: Take management action

(adapted from Manning, 1999)

Chapter 3

PROBLEMS AND METHODOLOGY

3.1. Problems: Performance Difficulties within Korean National Park System

This study suggests a model to help park professionals carry out the objectives of the Korean National Parks Authority (KNPA). Ruhle (1968) suggested a future Korean National Park system should have clear master plans stating the significance of each area and listing its outstanding features. Such plans should specify the policy to be followed, the objectives to be pursued, and an outline for orderly development. Each potential National Park area should be considered and plotted as an individual unit, thus avoiding a monotonous repetition, which might threaten Koreans' feelings of uniqueness. However, his most critical recommendation was that the National Parks should be administered on a national level. For instance, if a forestry bureau were to be charged with the administration of such areas, it might include the desire to harvest timber, regardless of the degree of care and skill. Thus, the care of the National Parks should be vested in a ministerial or other high government rank that would have the greatest understanding and sympathy for park standards and goals. The agency should have the authority and means for sound administration (Ruhle, 1968). Although Ruhle emphasized that Koreans must decide the best assignment of this responsibility after thorough consideration, the authority for National Parks changed from the Ministry of Construction (1987 - 1991) to the Ministries of Home Affairs (late Interior, 1991 - 1998), and finally Environment, as seen in Chapter 1. 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 useful to conduct** a thorough investigation on the overall Korean National Park system: what has been suggested in the past, what has been done so far, and what would be achieved in the future. The results of this study would be potentially valuable in developing a model for KNPA management.

In the forward of Ruhle's Advisory Report on National Parks and Reserves for the Republic of Korea in 1966, Coolidge (1968) stated the importance of sound and extensive Korean National Parks to fulfill the on-going needs of a rapidly increasing population and developing economy. He emphasized Ruhle's attention to selected conservation problems with special reference to National Parks and natural areas, wildlife, scenic highways, recreation, and education. Ruhle argued when properly conceived, conservation does not mean locking up resources. Instead, it is considered with optimum usage. For instance, wildlife conservation will promote tourism. Ruhle's preliminary report explained what had been seen in 1966 and what action could follow in Korea after that. Unfortunately, these possible problems still exist in Korea today, because of the chronically limited budget and staff in the Korean National Park system. The problems include encroachment of commercial development into park areas, lack of adequate legislative actions and law enforcement, lack of coordination among resource management agencies, and inadequate management of wildlife and other recreation services including interpretive services and tourism.

Indeed, the threats of over-development by commercial developers, local governments, and even park management itself, are potential causes of National Park degradation in every country, including Korea. Although, in part, illegal activities such as poaching and inappropriate behavior by park users are blamed on the public, the overall responsibility for 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, considering that National Parks, while suffering from overuse and under-budgeting, are presumed to be safe from losses to development.

A significant problem may be a fragmented structure of park administration, as the Taiwanese National Park system experienced (Sung, 1990). Among twenty Korean National Parks, two of them are fully managed by local governments, and one is managed partially by a local government. Other relevant legislation is ambiguous enough to make park administration ineffective. Unlike the U.S. National Park Service (NPS), originated by the 1916 National Parks Act, the KNPA does not have a clear mandate. Rather, the Korean authority was derived from several pieces of relevant legislation and different ministries and agencies such as the Ministry of Environment, the Korea Forest Service, and the Ministry of Culture and Tourism enforce these laws (Kim, 1998b). Among these, the Natural Parks Law is the major one covering every type of park system: local, provincial, and national.

The threats to National Parks and the potential resolution of these threats are intertwined. Thus, identifying the threats to the National Parks and what can be done about them are critical questions (Machlis and Tichnell, 1985). Every park system in the world evolves in its own way regardless of the different status of each park system's legislation/administration. The parks reflect and build people's pride and love for their national heritage. The National Park idea is one of the United States' most successful exports. Yet, policies vary in achieving an effective park administration because parks are the creation of a political process. How policies affect National Park administration is important because policies are intended to interpret and apply laws.

3.2. Research Questions

Two questions drive the research for this study. First, what caused the fragmented structure of the managing agency for Korean National Parks and how does this structure influence KNPA management? Specifically, 'what is the National Park philosophy in Korea?' and 'does that philosophy influence park management and planning for the future?' Answers to those questions are imbedded in:

- Ineffective organizational structure, including staffing
- Lack of a specific 'National Park' law, and rather having ambiguous relevant laws such as 'Natural Parks Law' that covers all types of parks in Korea
- Jurisdiction issues including local governments' attempts to take park jurisdiction from KNPA

- Under-budget/understaffing
- Lack of park law enforcement
- Infringement of private landowners' property rights in park areas
- Threats to natural resources by commercial developers, and complaints, particularly Buddhist temple-owned lands within parks.

Second, are there alternative management models that could more effectively cope with the rapidly increasing number of visitors? That is, what are the similarities and differences between Korean park management and that of other countries in coping with congestion in parks and under-funding. Can an improved management model be drawn for Korean parks from its own management experience and its U.S. counterpart's experience? Is it possible for Korean parks to implement another model under current KNPA structure? What are some other National Park models, including Great Britain and Jamaica -- elements of which might be adapted to Korea's situation?

3.3. Methodology

The primary exploratory technique for this research is a Delphi process to probe the views of a panel of experts in the field. This section will explain the Delphi approach, its strengths and limitations, and panel assembly and maintenance for this study.

The Delphi technique is 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; Shafer et al, 1977). It attempts to replicate

the successes of forecasting by the famed Oracle of Delphi, by substituting a group of experts for a single oracle.

Although **early literature** on the Delphi method showed its hard science-oriented application to forecasting future events, the method is applicable to policy analysis. Ament (1970) reported a relative consistency of forecasts made by using the Delphi process between 1964 and 1969 that scientific and technological forecasts were likely to be more accurate than forecasts in politics or social behavior. While the primary goal of early Delphi studies was to establish probable dates of occurrence for potential scientific and technological breakthroughs, the Delphi technique also can draw out opinions regarding the social value of the predicted consequences of technological events. Simply put, study participants who ponder their roles in creating the future are the beneficiaries of this opinion-seeking method (Ament, 1970).

The Delphi technique is defined as a method 'for structuring a group communication process so that the process is effective in allowing a group of individuals . . . to deal with a complex problem' (Linstone and Turoff, 1975) and 'for the systematic solicitation and collation of informed judgments on a particular topic' (Turoff, 1970). The Delphi process is 'a set of carefully designed sequential questions interpreted with summarized information and feedback derived from earlier responses' (Turoff, 1970). A Delphi might involve two separate groups of individuals and four roles for these groups: First, a design and monitor group prepares the initial questionnaire, summarizes the returns, and redesigns the follow-up questionnaires. Second, a group is chosen to respond to the questionnaires. The members of this group can be the same as the

individuals of the user body who are expecting some sort of product from the exercise, which is useful to their purposes.

There are two approaches, i.e., delivery methods in Delphi: conventional pencil-and paper based process and computer-based real-time process (Linstone and Turoff, 1975). Young and Jamieson (2001) conducted a comparison study of paper-and-pencil based and the electronic (i.e., computer-based) survey approach that uses the Internet and World Wide Web as its delivery method. In this study, primarily the traditional paper-and-pencil method has been used, although Electronic Mail was substituted for panelists who preferred email.

The assumption of the Delphi 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 could be crystallized. The 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. Borrowing from Moeller' and Shafer's explanation (1987), the steps of the method consist of (1) identifying the relevant event -- in this study, problems of park management in Korea, (2) preparing clear and precise statements, (3) selecting panelists from the area of expertise suggested by the problem, and (4) mailing questionnaires in at least two waves. Other waves may be necessary until a consensus begins to emerge. Through this study, leading

park professionals in Korea identified threats to parks and suggested how to resolve them, what opportunities there are, and what should be done. A holistic picture of future options, although it is not a sharp one, will be helpful to understand those problems (Moeller and Shafer, 1987).

There are strengths and weaknesses of the Delphi Technique. Moeller and Shaffer (1987) stated that advancing technology would influence future states of tourism and travel activities. However, assessing future events and their impact on travel and tourism is subject to the trade-off between time and detail: the more distant the planning horizon, the more indistinct the details.

The Delphi technique has an advantage during administering the survey questionnaires: the panelists can freely describe their opinions without any intervention by others, such as their superiors, who may also be in the same panel (Gordon, 1994). Gordon points out that due to the usually small number of respondents, a Delphi study does not necessarily produce statistically significant results. Hence, the results provided by a panel on a Delphi study vary, and the panel's synthesized opinions represent that particular group only. 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 more frequently used (Woudenberg, 1991).

The Delphi technique can be used if it meets some feedback of individual contributions of information or knowledge, some assessment of group judgment or view, some opportunity for individuals to revise views, and some degree of anonymity for the individual responses (Linstone and Turoff, 1975). However, the moderator of the Delphi

study can have a strong effect on study results. The events chosen and the phrasing of statements about the events can easily lead to misinterpretation (Salanick et al. 1971). Moderators can also influence results by editing panel responses -- feedback information. Gordon (1994) pointed out how questions can be addressed to the persons most likely to answer the questions well. In other words, an expert ought to be believed more than a non-expert. However, identifying the experts a priori is not an easy job. Turoff (1970) explained how to evaluate the respondent group in a study. That is, do they evaluate themselves? Also, experts are usually busy people, so it is difficult to get their participation in a Delphi panel for an extended period of time. Therefore, to identify experts, Gordon and Glenn (1993) suggested two approaches: first, various self-rating questions such as expertise in a field and work time are considered. Second, in the Lock-and-Key approach, administrators attempt to match the capabilities of participants with the requirements of the questions. Each question and each respondent is profiled and questions are addressed only to those respondents whose profiles match. One of the strengths of Delphi is its ability to explore issues that require judgment. It is a powerful technique when used to seek answers to appropriate questions.

In general, Turoff (1970) raised some concerns as to whether the respondent group is completely anonymous among its own members, whether the design team must be knowledgeable or rely on the respondents to fill out the subject materials, and how much freedom should be given in the respondent group to change the nature of the issues presented. Moreover, how many waves are needed and why, how consensus is determined, and do the respondents really use the same definitions of terms and

concepts? Also, how to coherently distinguish between emotion, speculations, opinion, experience, judgment, knowledge, and fact; and whether emotional arguments convey content that should be retained. Turoff suggested that hard and fast rules do not exist to guide the design of a particular Delphi. The Delphi requires a degree of quantification to be imposed on subjective judgmental factors and the definition of this quantification is a matter of principal concern to the design team. Success of the Delphi depends on the ingenuity of the design team and the background of the respondent group.

To develop a likely array of future directions for Korean National Parks over the next decade, a panel of knowledgeable experts on the system was asked for forecasts based on current and past trends in park management, philosophy, legislation, public attitudes, and funding. The experts chosen in this Delphi are individual park professionals who are knowledgeable about Korean parks.

For this research, a panel study with the same sample set was studied in each wave: This study did not use a probability sample. Rather, as a nonprobability sampling method, a snowball sample was chosen in which panelists were asked to suggest a supplementary list of park professionals for the survey. In this case, some of the respondents in the first wave of the survey did not participate in later waves. 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 necessary to check whether those who

dropped out were somehow different from the panel. The effect of dropouts on the study could not be adequately evaluated.

Lack of pretest in this study resulted in a typo in the Wave 1 questionnaire and difficulties in making rankings reported by some panelists in Wave 2. It seems that, in waves 2 and 3, some panelists were concerned with ranking prioritization of issues they had identified in Wave 1. That is, some panelists made ratings rather than rankings on the issues, feeling an interval between ranks is not the same as another interval. In other words, they sub-consciously thought over the possibly meaningless rank order among sub-issues, for example, in Cluster 1 in Wave 2.

However, the survey questionnaires they received asked only the prioritized ranking orders, already well assumed that we cannot distinguish any distance between two rankings: for example, we cannot say the distance between rank '1' and '2' is the same as the distance between rank '2' and '3.' If a pretest had been done, this concern would have been clarified.

Although reliability was a clearer matter than validity, this study required 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 exposure to misrepresentation in a summary is more likely to happen. Although these problems themselves would neither affect the use of the Delphi technique nor be unique to this technique, they should be minimized to balance the

communication goals of the particular Delphi study and the nature of the panel (Linstone and Turoff, 1975).

Threats to validity as potential limitations to this study include rapid park policy change during the study (history) that affects the study results in ways that cannot be assessed. Some examples of this 'history' problem include 'Natural Parks Law' amended and enacted in September 2001 (Korea Ministry of Environment, 2001) as well as parkland re-designation in January, 2002: That is, some adjacent lands were added to the existing parklands and sizes of some park areas were reduced (Korea Ministry of Environment, 2002). More currently, the establishment of a new marine-based National Park in 2004 was proposed.

Chapter 4

PROCEDURES AND DATA COLLECTION

This chapter, basically in chronological base, states the in-depth procedures as well as data collection of three waves done in this study. This chapter also includes attributes and limitations of the first two waves and written comments from Wave 2.

4.1. Formation of Panel

A letter, in English, to the chairman of the Korean National Parks Authority (KNPA) was sent in October, 1999, requesting a list of park experts and information of Korean parks. No response to this contact resulted in a second letter to the chairman (both in Korean and English) in March, 2000. Eventually, a couple of emails sent to the Office of Public Relations and Secretary of the KNPA in April, 2000 and follow-up phone calls resulted in a reply from a senior researcher at the Policy Team in KNPA in July, 2000. This yielded a list of 83 Korean park professionals; and this became the initial basis for the present study.

A panel of 40 Korean park experts was selected by three different procedures. An initial panel of 28 members were chosen through a literature review, the list consisting of 83 park professionals provided by the KNPA, an expert's recommendation on the KNPA list and his supplementary list, a Ministry of Environment's recommended list of 2 experts, and two Non-Governmental Organization (NGO) groups' supplementary lists.

These 28 panelists (Wave 1 of the Delphi Survey) were asked to provide names of possible additional panelists. Twelve more members were added to the panel based on Wave 1 recommendations. On these references from the initial 28 panelists, many of the supplemented panelists were mentioned more than once. Among these added members, eight received the Wave 1 questionnaire, while the other 4 did not have a chance to receive it due to a cut-off date for Wave 1.

In Wave 2, there are 3 non-deliverables. One non-deliverable was made due to the panelist's transfer to another position, thus he was contacted between waves 2 and 3 for ensuring the delivery of the Wave 3 questionnaire. In Wave 3, among 38 panelists, two panelists who did not participate in the previous waves and one more panelist asked to drop-out. The remaining 35-member contacts consisted of 2 environmental NGO managers, 7 park employees, 10 government employees and staff in research institutes, 15 academics, and 1 former park employee. Their professional backgrounds are not limited to these 5 categories, but are, in fact, heavily overlapping. For example, some panelists were former park employees or NGO managers and some academics are involved in top-level management in NGOs. Among the remaining 35 panelists, 16 have responded to the final, Wave 3 questionnaire. However, 2 out of 16 are not used because of their invalidity of making rankings. Thus, 14 panel members remained in the panel in Wave 3 (Table 10, page 62). The response rate of each wave questionnaire is also shown in the Table. To help with the response rate of each wave, an Electronic Mail (email) reminder was sent to every panel member. A follow-up postcard was sent to those who had not responded.

Table 10: Number of participants and response rate in each wave

	WAVE 1	WAVE 2	WAVE 3
Number of questionnaires sent	36*	40	38
Non-deliverable	0	3	0
Drop-out	0	0	3
Number of participants	19	24	16***
Response rate	52.8 % (19/36)	64.9 % (24/37)	45.7 % (16/35)
Invalid	1 (ID # missing)	0	2
Number of panel (N)	18	24**	14
Remark	* questionnaire initially sent to 28 panelists; 8 added after recommendation from the set of these 28 panelists	** 13 responded in Wave 1; 8 non-responded in Wave 1; 3 did not receive the questionnaire in Wave 1	*** 7 responded in all 3 waves; 6 responded in Wave 2 & 3; 1 responded in Wave 1 & 3; 2 responded in Wave 3 only.

4.2. Profiles of Panel

The 40 panelists included 3 environmental NGO managers, 7 researchers in governmental institutes, 1 private institute director, 3 government officials, 17 in academia, 7 employees of KNPA, 1 former KNPA employee, and 1 private business contractor (Table 11, page 63). An, 'X' in the table indicates panelists who have participated in each wave of the survey.

Table 11: Profiles of the 40 panelists in Delphi Survey

ID #	PROFILE	WAVE 1	WAVE 2	WAVE 3	REMARK (as of 1/30/2001)
Environmental NGOs (3)					
2	NGO manager	X			Green Korea United
3		X	X		National Parks Conservation Network
1			Non-deliverable	Not sent	Korea Federation of Environmental Movement
Governmental Research Institutes (7)					
4	Researcher	X			Korea Forest Research Institute
5		X	X		Korea Tourism Research Institute
6			X		Korea Forest Research Institute
8		X	X	X	Korea Research Institute for Human Settlements
11		X	X		Incheon Development Institute
7					Environmental Planning Institute
12					Korea Tourism Research Institute
Private Research Institute (1)					
14	Researcher	X	X	X	Member of <i>Advisory Committee on National Parks of Korea</i>
Governmental Officials (3)					
10	Official		X	Drop-out	Division of Natural Parks, Ministry of Environment
13			X	X	Division of National Forest, Korea Forest Service
15		X	Non-deliverable	X	Office of President; Former NGO director
Academia (17)					
17	Faculty	X	X	X	Department of Landscape Architecture; Member of <i>Advisory Committee on National Parks of Korea</i> ; Former NGO director
18		X	X	X	Forestry Department
19		X			Tourism Development Department
20		X	X	X	Member of <i>Advisory Committee on National Parks of Korea</i>
22				X	Department of Forest Resources
23			X	X	Landscape Department
24		X	X		Tourism Department
26			X		
27		X	X		Forestry Department
28		X	X	X	Landscape Department
30		X	X		Landscape Department
31			X		Landscape Department
16				Drop-out	Landscape Architecture Department
21					Environmental Studies
25					Department of Forest Resources

Table 11 continued

ID #	PROFILE	WAVE 1	WAVE 2	WAVE 3	
29	Faculty				Tourism Department
33				Drop-out	Forestry Department
KNPA Employees (7)					
9	Researcher	X			Policy management Team at Headquarters
32	Staff	X	X	X	Planning Office
34	Researcher			X	Ecology Research Center
35	Ranger		X	X	Chirisan NP
36	Staff		X		Facility & Maintenance Division
37	Staff	Not sent	X	X	Visitor Management Department
39	Superintendent	Not sent	X	X	
Retiree (1)					
40	Retiree	Not sent	X	X	Former manager at KNPA
Private Business Sector (1)					
38	CEO	Not sent	Non-deliverable	Not sent	Private construction company

4.3. Survey Period

The survey was done between 1/30/2001 and 3/31/2002. With a few exceptions such as a panelist's preference to receive the survey questionnaire package via email and using international express airmail when sending the survey to the later added panelists, all questionnaires were sent out by international airmail. In both types of exceptions, every material in the survey package is the same as the regular one. Thus, turnaround time between waves was a minimum of 2 weeks (Table 12).

Table 12: Survey period of the 3 waves

	Survey Period (In Days)
Days Wave 1	1/30/2001 – 4/08/2001 (68 days)
Turnaround time between waves 1 and 2	22 days
Days Wave 2	5/01/2001 – 9/05/2001 (127 days)
Turnaround time between waves 2 and 3	81 days
Days Wave 3	11/26/2001 – 3/31/2002 (125 days)

4.4. Limitations of Wave 1

Limitations of the panel selection in the first wave include many more natural science experts than social scientists -- majority of the park professionals being in the disciplines of forestry, landscape architecture, and horticulture. This parallels much of the research done on Korean National Parks before 1999 (Table 13). Similarly under-represented are the low numbers of NGOs and retirees. However, some researchers were former employees of the park system and many academics and researchers have been involved in NGOs. Last, from abroad, Korean experts and other experts knowledgeable about the Korean park system certainly exist, but there was no way that they could be included.

Table 13: Research trend on National Parks of Korea until 1998

	Proceedings from professional association	Unpublished Thesis and Dissertation	Journal	Monograph	College Collection	Total (%)
Resources/Ecology	76	107	13	68	67	331 (31.7%)
Management/Operation	27	82	88	84	27	308 (29.5%)
Visitor Needs	53	97	15	14	7	186 (17.8%)
Other	8	13	91	108	-	220 (21.0%)
Total	164	299	207	274	101	1045 (100%)

Excerpted from KNPA (1999)

4.5. Output of Wave 1

In Wave 1, panelists were asked what current major issues face the Korean park system, and how they thought those issues would be resolved over the next 10 years. Panelists were asked about their familiarity with park system policies and management practices, using a 5 point Likert Scale (1 = 'not familiar'; 2 = 'somewhat familiar'; 3 = 'familiar'; 4 = 'very familiar'; and 5 = 'extremely familiar'). Each panelist was asked to explain how their knowledge of the 20 Korean National Parks was obtained. Park employees, park volunteers, researchers, visitors, and/or coordinators, responded to a 4 point Likert Scale used to assess their knowledge of the park as 1= 'very knowledgeable' and 4 = 'not knowledgeable.' The original survey questionnaires are in Appendix B, on p.216 (in English) and Appendix E, on p.235 (in Korean).

Nineteen out of 36 members responded to Wave 1. One return was not used due to a missing identification number. The mean familiarity score of the group of 18 was 3.94, on the 5 point scale, where 5 indicates 'extremely familiar' with the Korean park system.

The earlier survey questionnaire of Wave 1 had an unintentional typo in Korean in the name of a National Park during translation from English. This could be used for a validity check of respondents' park familiarity. Among 18 responses, 16 had received the questionnaire with the typo, while the other two had a corrected one after the typo was identified. Nine out of 16 respondents questioned the typo with the corrected park name. Among the other 7 panelists who made no correction, 5 had a degree of

knowledge as 4 ('not knowledgeable') on that park and the other two had 1 ('very knowledgeable') and 3, respectively. Most likely, they did not notice the typo or were being polite.

4.6. Seven Basic Functions of Executives

Table 14 (page 69) lists the issues identified by the respondents in Wave 1. These 47 major issues were organized into 3 clusters: park philosophy/policy, park organization/management, and park visitation/visitor needs. This clustering was partly based on Gulick's POSDCoRB concept (1937). This acronym stands for planning (working out in broad outline those things that need to be done and the methods for doing them to accomplish the organizational purpose), organizing (establishing the formal structure of authority through which work is subdivided and defined), staffing (recruiting and training staff; maintaining favorable working conditions for them), directing (making decisions and embodying them in specific and general orders and instructions; thus, serving as the leader of the organization), coordinating (interrelating the various parts of the organizational work), reporting (informing those to whom the executive is responsible as to the work progress, by having the executive and his/her subordinates keep themselves informed by record keeping, research, and inspection), and budgeting (controlling the affairs of the organization through fiscal planning and accounting). In the view of top executives, this pioneering insight helped show how organizations might actually be structured and defined their roles in these organizations. Because this research concerns the future options of the Korean National Park system, Gulick's

concept provides a useful structural background for comparison. The Wave 2 survey questionnaire (Appendix B in English and Appendix E in Korean) is based on the 3 clusters.

4.7. Procedure for Wave 2

Wave 2 seemed to create a huge burden on the respondents who were asked to weight to each of the 47 issues in 3 clusters (Table 15, page 71). Five respondents used their own ranking systems. In particular, Cluster 1, 'Park Philosophy/Policy' with 22 issues, seemed to be the most difficult for them to make rankings. Many of these 22 issues were identified and mentioned by only a few panelists in Wave 1.

Table 14: Issues identified by the panel in Wave 1, grouped in three broad clusters

Park Philosophy and Policy (22)
the Korea National Parks Authority (KNPA) and the central government's lack of National Park idea
conflict between preservation and use
paradigm shift (need to consider National Parks as preservation/educational places)
land ownership (unlike the U.S. & Canadian park systems, 20% of Korean parks are private land)
management control over parks (possibility of conflict between central and local governments)
in order to emphasize conservation, the need of amending 'natural parks law'
inconsistent management system in KNPA (due to rapid turn-over of officials in Min. of Environment)
inconsistency/overlap of relevant laws
need to establish state-run 'National Park bureau'
organizational inflexibility of KNPA
need to reclassify National Parks on the basis of preservation/ecosystem values involved
lack of policy regarding cultural resources such as eco-villages and Buddhist temples
development pressure/attempts in park area
attempt of building cable car system in park area
lack of inventory (ecosystem, infrastructure, etc)
increased degradation of resources in park area/visitor impacts on natural environment
insufficient protection for ecosystem
lack of central government's active role on natural resources
infringement on private property rights in park area (which causes civil appeal)
entrance fees including separate admission fee for cultural assets (Buddhist temples)
conflict with Buddhist temples, which are located in major park areas
on-going construction/renovation in Buddhist temples in park areas
Park Organization and Management (14)
under-budgeting
lack of KNPA control over its budget
understaffing
lack of expertise in KNPA
problem of political appointment of KNPA chairman
lack of standards in conservation
inconsistent management of ecosystem
KNPA and central government's lack of understanding National Park management
lack of management direction/goals/objectives; lack of long-term view in management
unlawful facilities in park area
indiscriminate development and facility deterioration in 'mass facility zone' in park area
financial difficulty of business in 'mass facility zone'
problem of zoning
poaching and illegal picking (due to lack of law enforcement)

Table 14 continued

Park Visitation and Visitor Needs (11)
lack of public relations/education on ecosystem
the general public's awareness/views of park purpose (park as pleasuring ground)
inappropriate/insufficient interpretation programs
general public's low awareness of National Parks
need to provide more environmental education programs
lack of visitor management
need to provide good quality of recreation experience
need to guide visitors to non-disturbing behavior
insufficient service/educational facilities for visitors
lack of character distinction between parks
lack of providing tourism opportunity (on-hand educational experiences in nature and culture)

Table 15: Written comments about **ranking difficulties** of Wave 2
(Italics added)

Key terms	Sample Comments	Remark
Overlapped issues; Issues are too specific	'expect to see this study with more than just making rankings'	Overall process
	'The hierarchy in each cluster does not work; some contents are overlapped and higher and lower concepts coexist'	
	'I suspect some of the issues are overlapped' 'likely to make some rankings on issues that can be merged into fewer issues' 'major policy issues should be distinguished from minor issues such as <i>attempting of building a cable car system in park area</i> '	Regarding the issues in Cluster 1
Ranking the 3 clusters	'making an overall cluster ranking <i>on issues</i> would have no critical meaning.'	Overall cluster rankings
Adopt own scale system	'within each cluster, I have to make my priority ranking by using four-point scale (1 = important; 4 = not important)'	Overall process

Due to the ranking problems reported by some panelists in Wave 2, Tables 16, 17 and 18 (pages 73, 74, 75), mean rankings were not calculated each issue. Instead, the tables show the clustering of issues from Wave 1 with the modal ranks, the number of top 5 rankings, and the quartile of each issue in each cluster. Clusters 1, 2, and 3 contain 22, 14, and 11 issues, respectively. The measure of quartiles provides the minimum value, first quartile (i.e., top 25th), median (second quartile), third quartile (top 75th), and maximum value, which helps to show the variation of the data set. This also helps in spotting the extreme values (outliers) and roughly identifying the priority issues of the panel. Based on mode, median, and number of top 5 rankings, for example, in Cluster 1 (Table 16), the most prioritized are, in bold: 'the KNPA and the central government's

lack of National Park idea,' 'paradigm shift,' 'need to establish a state-run park system,' and 'conflict between preservation and use.'

In Cluster 2, the panel focused most strongly on the issues of (1) 'the lack of long-term view/management of park administration in the KNPA,' (2) 'KNPA and central government's lack of understanding National Park management,' and (3) insufficient budget/staff/expertise of the KNPA (Table 17). In Cluster 3, three issues -- 'lack of visitor management,' 'the general public's park purpose' and 'low awareness of National Parks' -- were the most prioritized (Table 18). For more detailed data, see Appendix D, p.231.

Table 16: Frequencies of sub-components of Cluster 1
 ('Park Philosophy and Policy'): rankings of importance

PROBLEMS DESCRIBED (22)	Mode	# of top 5 rankings	Quartile				
			Min	25th	Med	75th	Max
First-tier (4)							
KNPA & the central government's lack of National Park idea	1	19	1	1	1	3	16
paradigm shift (need to consider National Parks as preservation/educational places)	2	16	1	2	4	5	12
need to establish state-run "National Park bureau"	2	13	1	2	5	11	20
conflict between preservation and use	6	10	2	3	6	7	17
Second-tier (5)							
land ownership (unlike the U.S. & Canadian park systems, 20% of Korean parks are private land)	2	8	1	4	10	18	22
lack of inventory (ecosystem, infrastructure, etc)	4	8	1	4	9	15	18
inconsistency/overlap of relevant laws	4	5	1	6	10	15	19
in order to emphasize conservation, need of amending "natural parks law"	6	7	1	5	7	13	20
inconsistent management system in KNPA (due to rapid turn-over of officials in MOE)	7	8	2	4	7	16	22
Third-tier (13)							
development pressure/ attempts in park area	8	3	2	8	10	12	20
organizational inflexibility of KNPA	10	8	1	4	9	14	22
need to reclassify National Parks on the basis of preservation/ecosystem values involved	11	4	1	7	11	18	22
increased degradation of resources in park area/visitor impacts on natural environment	12	3	1	8	12	15	22
insufficient protection for ecosystem	14	6	1	5	10	14	19
lack of policy regarding cultural resources such as eco-villages and Buddhist temples	15	3	1	8	13	16	22
conflict with Buddhist temples, which are located in major park areas	15	3	3	9	15	17	22
lack of central government active role on natural resources	16	6	1	5	10	15	21
infringement on private property right in park area (which causes civil appeal)	19	5	1	5	10	19	20
on-going construction/renovation in Buddhist temples in park areas	20	4	3	12	19	20	22
entrance fee including separate admission fee for cultural assets (Buddhist temples)	21	4	2	6	13	19	22
management control over parks (possibility of conflict between central and local governments)	21	5	2	6	13	17	21
attempt of building cable car system in park area	22	3	2	11	17	21	22

Table 17: Frequencies of sub-components of Cluster 2
 ('Park Organization and Management'): rankings of importance

PROBLEMS DESCRIBED (14)	Mode	# of top 5 rankings	Quartile				
			Min	25th	Med	75th	Max
First-tier (5)							
lack of management direction/goals/objectives; lack of long-term view in management	1	17	1	1	2	4	12
KNPA and central government's lack of understanding National Park management	1	16	1	1	2	7	11
under-budgeting	3	19	1	2	3	5	11
Understaffing	3	17	1	3	4	6	10
lack of expertise in KNPA	3	16	1	2	3	5	11
Second-tier (3)							
lack of KNPA control over its budget	6	9	1	4	6	9	12
inconsistent management of ecosystem	6	8	1	5	6	8	10
lack of standards in conservation	7	8	2	5	7	7	13
Third-tier (6)							
problem of political appointment of KNPA chairman	9	8	1	3	9	10	13
problem of zoning	10	7	1	4	10	11	13
unlawful facilities in park area	11	3	2	9	11	12	16
indiscriminate development and facility deterioration in "mass facility zone" in park area	13	3	1	7	11	13	13
financial difficulty of business in "mass facility zone"	14	2	3	11	14	14	14
poaching and illegal picking (due to lack of law enforcement)	14	2	1	10	12	13	14

Table 18: Frequencies of sub-components of Cluster 3
 ('Park Visitation and Visitor Needs'): rankings of importance

PROBLEMS DESCRIBED (11)	Mode	# of top 5 rankings	Quartile				
			Min	25th	Med	75th	Max
First-tier (3)							
lack of visitor management	1	19	1	1	1	3	9
the general public's awareness/views of park purpose	1	19	1	1	2	4	10
general public's low awareness of National Parks	3	16	1	2	3	6	11
Second Tier (4)							
insufficient service/educational facilities for visitors	4	10	2	4	6	9	11
lack of public relations/education on ecosystem	5	13	1	3	5	8	10
need to provide good quality of recreation experience	5	11	2	4	6	8	11
need to guide visitors to non-disturbing behavior	6	14	1	3	5	6	11
Third-tier (4)							
lack of character distinction between parks	6	8	1	4	6	8	10
need to provide more environmental education programs	8	9	2	4	7	9	11
inappropriate/insufficient interpretation programs	11	5	1	6	8	10	11
lack of providing tourism opportunity (on-hand educational experiences in nature and culture)	11	3	3	6	8	11	11

4.8. Wave 2 Written Responses

Review of the written comments provided by the panel in Wave 2 showed more in-depth opinions for the issues they prioritized. Their comments on issues were mostly negative, because the issues (problems) identified in Wave 1 connote the resolutions suggested by the panel. For example, although most comments were on the side of the establishment or reformation of the current park system into a 'state-run' park agency, some argued status quo as the better option. The 19 out of 24 respondents' written comments on the overall process and each wave were summarized with 5 key terms (Table 19, page 77). The key terms were categorized based on park philosophy, park as a nature protection site, operationalizing park idea, managing the parks, and overall perspectives. In terms of clear philosophy of National Park, for instance, the central government and MOE were criticized as indifferent to or, as lacking of park idea. Panel comments are discussed in detail with the Wave 3 outputs and analysis in the next chapter.

Table 19: Synopsis of written comments in Wave 2
(Italics added by investigator)

Key term: Clear philosophy of National Parks		
Sub-keys	Sample Comments	Remark
Roles of the central government, the Ministry of Environment, and the KNPA	'Improvements on the Korean park system depend on the central government and KNPA; Their explicit policy on National Park is the starting point. If this solid policy that focuses on preservation is set, park management and visitor service (<i>needs</i>) will follow this policy.'	Overall comment
	'Without the central government's <i>solid</i> faith and support, policy implementation of protecting parks is limited.'	Cluster 1
	'The central government's (<i>including</i> MOE) more articulated idea and keen feeling of <i>needs</i> on park management will raise the number of staff and the amount of budget to increase the quality of field supervision (<i>on-site management</i>).'	
	'As a park employee, central government's positive interests and efforts... should be initiated.'	
	'Without administrative and congressional support... hard to resolve the problems, in <i>the political landscape of Korea</i> .'	
	'rethinking of park policies, <i>e.g.</i> , role of park, function of park, and so on.'	
	'lack of central government's implementing National Park policy -- not the lack of KNPA.'	
	'issues on park organization and management will eventually be merged into the central government's operating policy on National Park'	Cluster 2
Low awareness/ purpose of National Parks	'The most immediate problem... is to protect park resources from the overpressure to use. However, park visitors (the general public) have little understanding of park idea, concept... Guiding the general public by using public broadcasting such as TV media... and visitor management programs developed by the KNPA and the central government.'	Cluster 3
	'There is a too deep gap between academic theoretical explanation and the on-site practical thoughts. That is, <i>in reality</i> , Korean National Parks include many scenic views. Thus, a park visitation plan should follow this unique attribute of Korean parks. 90 % of visitors at entrance stations in Soraksan and Odaesan National Parks feel as though these parks are not national due to their similar surrounding areas.'	

Table 19 continued

Key term: Recognition of National Parks as nature protection sites		
Sub-keys	Sample Comments	Remark
Paradigm shift	'They tend to judge the costs of running the parks by a <i>solely</i> economic viewpoint. This tendency is directly related to the issues of Cluster 1.'	Cluster 2
	'Korean National Parks include so many areas not good for preservation and education purposes. Many of the parklands should be rezoned and <i>excluded</i> .'	Cluster 1
Preservation and use	'Striking the balance between conservation as park philosophy and the level of sustainable use should be realized, following the current situations of Korean parks.'	Cluster 1 * and ** : from the same panelist
	**'Development pressure has been much relieved so that it is not a problem. Some development has been done in parklands that is not appropriate.'	
	* 'there is no increased degradation of parks' natural resources'	
	* 'It stops constructing/renovating buildings of in-park Buddhist temples. <i>If it happens it matters</i> that which zone includes the Buddhist temples.'	
	** 'Ecosystems are protected to provide human beings with better quality of life and sustainable <i>use</i> . It should be <i>not bio-centric but</i> anthropocentric. Neglecting the preservation of ecosystem is <i>ancien regime</i> , but neglecting human beings is against god's will.'	Overall **Utilitarian view
Key term: Operationalizing "National Park" idea		
Sub-keys	Sample Comments	Remark
Status of park system	'Need policy-making for management of *** parks of nation.'	Cluster 1
	'Establish master plans for both parks of nation and natural/cultural resources.'	*** parks of nation (National Parks) **** non-governmental, not private
	'Establishing relevant laws and systems after initiating the concept of management system of parks of nation.'	
	'Establish appropriate status of National Parks of Korea.'	
	'Revise the polices on park system.'	
	'The status of KNPA should be raised to a governmental-level agency, National Park service, with more staff and budget.'	
'In terms of management practices, there is no difference between the state-run and the ****KNPA. Privatization is the more advanced system: Although the US National Park Service is a federal agency overseeing the park management, the US park system originated in civilian business. <i>The status quo, non-governmental sector like KNPA should keep managing the Korean parks.</i>		

Table 19 continued

	<p>'Establish an advisory commission for management of ***parks of nation'</p> <p>'Establishing National Park bureau.'</p> <p>'Unification of management of resources, visitors, and facilities in National Parks.'</p> <p>'The judging point of KNPA chairmen as political appointees (<i>under spoils system</i>) is whether the appointees are professionally competitive in park management. It does not necessary to consider political appointment bad. <i>For example</i>, about 2600 positions in governmental organizations in the US are replaced whenever a new administration comes up and most of those political appointments find the right men in right places.'</p> <p>'Private-owned and Buddhist temple-owned lands within parks should be nationalized to minimize the civil petition regarding private rights infringement'</p> <p>'Explicit role distinction between central government (that supports parks) and local governments (that <i>should</i> manage parks).'</p>	Cluster 2
	<p>'Considering the fact that private lands make up 60 % of National Parklands, most of which are forests, a division of Korea Forest Service should manage National Parks by annexing the park management system (KNPA).'</p>	Cluster 3
	<p>'The transformation of KNPA into a state-run park agency is not the <i>right</i> answer for various on-site problems that need a lot of field work: for example, provincial officials charge of National Parks before the advent of KNPA did not take care of the parks well. However, in terms of expertise and need of field supervision, rather than one division of Environment Ministry (<i>Department of Natural Parks</i>) overseeing the National Park policy, establishing a new agency, 'Bureau of Natural Resources,' would be a better idea. The new agency under the MOE will include National Parks, Protected Areas of ecosystem, and Biosphere Reserves, dealing with policy issues of <i>these areas</i>. On-site management will be status quo.'</p>	Overall
Relevant laws	<p>'Unless the current "Natural Parks Law" changes, any agency responsible for park management will yield the same inflexibility as the KNPA has. <i>To make matters worse</i>, the inflexible structure of KNPA is due to implementing conservation-oriented management on cities and towns with <i>more than</i> 1,000 residents <i>within National Parks</i>.'</p> <p>'Need to revise Natural Parks Law and park-relevant laws.'</p>	Cluster 1
Different views between park management and outsiders	<p>'in terms of viewpoints and content of problems in parks... outsiders (<i>compared to park employees</i>), including many academics interested in park management/policy, see the problems superficially. Thus, in many cases, these academics play less important roles in petitioning government support and alternative policy-making.'</p>	
Budget/staff	<p>'Need for enough receipts of budget <i>for National Park system</i>.'</p> <p>'Compared to 17 National Parks with 850 employees in 1987, the KNPA oversees 18 National Parks with 620 employees in 2001. It's understaffed.'</p>	Cluster 2

Table 19 continued

	<p>'In 1987, operating costs were covered by the budget appropriation of the central and the local governments... Current park system requires all parks to cover their operating costs, ranging from 80 to 85 %, by collecting entry fees and other user fees. The KNPA has suffered from the year-round obsession to develop financial resources.'</p> <p>'Without improvements on understaffing and under-budget, we can see no progress in National Parks, although the employees of KNPA are filled with willingness and morale to execute its mission.'</p> <p>'The attribute of the KNPA as merely a fee collector should be changed.'</p> <p>'Number of staff should be increased to raise the level of quality of park management.'</p> <p>'Whether <i>most of</i> park operating costs depending on collecting fees is appropriate.'</p> <p>'The KNPA was established in 1987 without solid park philosophy and firm preparation -- <i>with minimum budget/staff</i>. With 14 years of KNPA experience, Zero-Based Budget (ZBB) should be adopted.'</p>	
Lack of expertise	<p>'The lack of expertise of KNPA and MOE prevents solving (management) problems in National Parks.'</p> <p>'Adopting a system to recruit experts on park management.'</p> <p>'Because most of the KNPA employees are non-experts, restructuring of human resources system is needed.'</p> <p>'It is important to understand what expertise means in park management: Expertise is implementing park policy. The role of the traffic police is traffic control. Park expertise is effective discharge of park planning while the job of traffic police is to make traffic flow unblocked, rather than to understand the mechanism of automobile structure. Several professional organizations have dealt with flora, fauna, and ecosystems of Korea.'</p>	Cluster 2
	'Lack of expertise of KNPA prevents running environmental interpretation programs.'	Cluster 3
Long-term planning	<p>'KNPA should set a consistent policy that will implement long-term policy.'</p> <p>'Lack of farsighted national policies on National Parks. Like conservation of environment, protection of cultural properties, and public education, the people concerned are dealing with park issues politically and nonprofessionally. If this factor is fixed, <i>i.e., park issues are coped with on a non-political and professional basis</i>, other problems will be resolved easily.'</p>	Cluster 1
	'Lack of mid-/long-term planning is due to officials' concerns not to have any problems during their tenure of office, that usually run two to three years.'	Cluster 2

Table 19 continued

Key term: Managing the parks		
Sub-keys	Sample Comments	Remark
Zoning	<p>'Living and property rights of park residents should be protected because compensation for these residents in confiscation of their lands within park is unrealistic.'</p> <p>'Admitting about 30 million visitors in parks <i>annually</i>, rather than forcing to implement exclusive preservation policies, the rezoning of management zones to use and preservation zones should be studied, following the each park's use pattern.'</p> <p>'Park-related natural resources should be managed in terms of their distinction.'</p>	Cluster 1
	<p>'Need to have plans for redevelopment/revitalization of 'mass facility zone' in park area.'</p> <p>'reconsidering the 'mass facility area' in the zoning system of natural parks.'</p> <p>'The National Parks should be redesignated and subsequently rezoned, because some park areas are not appropriate as National Parklands and the current zones were based on <u>tourism promotion</u>. Neglecting this fact, preservation and environmental <i>protection</i> do not hold water. Is there any primitive forestry in Korea?'</p>	
Planning/ Research needed on visitor management	<p>'Master plan and General Management Plan (GMP) should include visitor management plan.'</p> <p>'Each park unit should establish GMP that includes facility service and use guidelines and regulations.'</p>	Cluster 3
	<p>'Because National Parks are 'mass tourism' destinations, operating park-led visitor services and interpretation programs are beyond parks' capabilities. The advantage and disadvantage of European and American approaches should be reviewed to compare.'</p> <p>'Need data worksheets about surveys of visitor management.'</p>	
	<p>'Build various information-providing systems.'</p> <p>'Focus on environmental interpretation programs.'</p> <p>'Emphasis on Indirect Management.'</p> <p>'Barriers caused by the current policy make staff and organizational structure of parks inflexible. Due to these barriers... <u>the issues of visitor services (needs)</u> has been less prioritized.'</p> <p>'Although visiting parks would provide educational experiences on nature, visitors do not come to parks to get only those experiences. National Parks should be scenically beautiful <i>for recreation purposes</i>.'</p>	

Table 19 continued

Quality of visitor management	'The quality of visitor and resource management should be raised.'	
Management practice	'Considering the size of <i>each park unit</i> , the character of natural resources in parks, and <i>limited</i> spaces for leisure for the general public in Korea, it is not reasonable for Korean parks, in terms of the park purpose and use pattern, to adopt management practices based on those of the US, Australia, and Canada.'	
Environmental education	' Informing and educating <i>the general public</i> on environmental conservation and minimum use of <i>parks</i> should be implemented on a national level, not limited only to the level of National Parks. In addition, home education from an early age is critical. Mass media is so influential that using it will be the most effective. However, huge budget is required to do this.'	
Key term: Overall perspectives		
Sub-keys	Sub-keys	
Other	<p>'There are many differences between National Parks of the US and those of Korea. Sublimity and primitivism in National Parks are the most widely told. However... the differences are from the beginning -- the Korean parks were established in already overused and degraded areas. Thus, it is hard to consider these parks as theoretical National Park. Also, few people and policy decision-makers consider Korean National Parks as valuable spaces in various meanings. Many still consider them for human-use.</p> <p><i>Despite this unfavorable condition</i>, the KNPA has resolved as many problems as it could since its advent in 1987: trash problem was resolved; play-ground oriented visitation decreased rapidly; visitor facilities were provided; and illegal facilities were removed.</p> <p>The next stage of KNPA is to implement conservation of ecosystem, visitor management, and environmental interpretation programs. However, such policy decision-makers as the Office of Budget and the Ministry of Environment are not interested in <i>these mandates of park</i>. Without their support (paradigm shift), KNPA itself cannot do anything.'</p> <p>'By analyzing total acreage, population density, environment of natural resources, and recreation areas of Korea, three major issues -- long-/short-term planning, range of conservation and the limitation of use, and desired legal status of the park system -- should be studied.'</p> <p>'How is it about to shift your study focus to being more positive on realities in Korean Parks? Also, other considerations are: the concept of Korean parks are different from those of the US and Canada; ecosystem protection is not considered the most prioritized issue in Korean parks; locals and local governments are not solely development-minded; the KNPA is professional and appropriate in park management; some researchers conducting externally-funded park projects are not recognized in their academia and universities.'</p> <p>National Parks should consist of nationally renowned scenic views and ecosystems. Besides over-crowding atop mountains in parks, can it be compatible between Yellowstone National Park and Korean parks including 250 to 400 acres of agricultural land and 100 to 200 houses?"</p> <p>Designated by nationally renowned scenic view, zoned by scenic beauty, and regulated by the degree of permissible visitor behavior for resource conservation, is it a reasonable definition of National Park?"</p>	Overall

4.9. Preparation of Wave 3 Questionnaire

As mentioned in the written comments from Wave 2, ranking of the issues seemed a tedious job for some. Some respondents did not follow the instructions and even adopted their own ranking scale system, thus, the priority frequencies (mode) was applied to select main issues. This suggested that, in preparing the Wave 3 questionnaire, the ranking of each issue would be avoided in order to reduce drop-out and loss of the quality of further responses. Considering this trade-off between the response quality and the possibly discouraged overall response rate in Wave 3, the issues in Wave 2 were converted to 4 major issues with 43 sub-issues (i.e., sub-components) in the Wave 3 questionnaire. In this final phase, two variables -- 'importance' and 'likelihood' were addressed. While a ten-year forecasting period was used in Wave 1, 'likelihood' of the issues being resolved in the next 5 years was asked in Wave 3, because the shorter period would help to force more carefully considered predictions. In addition, most national economic plans have a five-year period. The resulting data from Wave 2 were synopsized into the problem statements below, which were the basic framework for the Wave 3 questionnaire (Table 20 on page 86).

Problem statements for preparing the Wave 3 Questionnaire

- (1) It seemed that there is no clear philosophy of what the Korean National Park system should be, as shown by the panel's high priority concerns for (a) lack of 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 park purpose as pleasure ground.

- (2) Because of the lack of clear philosophy, there also appeared to be a lack of recognition of National Park role(s) in environmental protection. This was brought out by (a) paradigm shift of considering National Parks as preservation/educational places and (b) lack of standards in conservation and lack of public relations/education on ecosystem appreciation. Also borne out were (c) reclassification of National Parks on the basis of preservation/ecosystem values involved, and (d) conflict between preservation and use including landownership.
- (3) The role of National Parks in Korea does not seem to be getting the level of attention it merits in the national agenda. There is evidence of the: (a) lack of long-term views/goals in management, (b) lack of expertise and budget/staff problems in KNPA 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.
- (4) Finally, because of the apparently 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 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 recreation experiences and service/education facilities, and (h) insufficient environmental education and interpretation programs.

Therefore, 47 sub-issues are summarized as 4 major issues with 43 sub-issues in Table 20 (p.86).

Table 20: Summary of responses from Waves 1 and 2

ISSUE -- Park Philosophy Not Clearly Articulated.	<i>Sample comments (9):</i>
<p>Korea National Parks Authority (KNPA) and the central government's lack of National Park idea Lack of management direction/goals/objectives; lack of long-term view in management 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</p>	
ISSUE – Inadequate Emphasis on Ecosystem Protection.	<i>Sample comments (10):</i>
<p>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</p>	
ISSUE – Widespread Deficiency of Management Tools.	<i>Sample comments (16):</i>
<p>Lack of adequate KNPA expertise, budget, staffing, and control Problem of political appointment of KNPA chairman Problem of zoning Organizational inflexibility of KNPA Indiscriminate 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 MOE) Unlawful facilities in park area Poaching and illegal removal 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</p>	
ISSUE -- Visitor Services Needed.	<i>Sample comments (8):</i>
<p>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)</p>	

Chapter 5

ANALYSIS AND INTERPRETATION OF WAVE THREE

The output of Wave 3 was separated from the previous two waves to draw the final opinions from the panel. Four major issues are discussed, based on the panel's brainstorming regarding their rankings of 'importance,' issue resolution, and time frame ('likelihood of being resolved within the next 5 years'). In other words, what was crystallized by the panel -- either consensus or even dissensus -- is discussed.

5.1. Four Major Issues: Importance vs. Likelihood of Being Resolved Within the Next 5 Years

In terms of the importance and likelihood of being resolved in the next 5 years, four major issues -- (A) Park philosophy not clearly articulated, (B) Inadequate emphasis on ecosystem protection, (C) Widespread deficiency of management tools, and (D) Visitor service needed -- the panel's opinions were asked regarding the 'importance' of each (1 = most important; 4 = least important), and the 'possibilities of their being resolved' (1= resolved in 5 years; 4 = not resolved in the next 5 years). In terms of 'importance,' it seems that Issue A ('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). More details of the Wave 3 questionnaires are in Appendix B, p.224, in English and Appendix E, p.242, in Korean. However, in terms of the 'likelihood' of

being resolved within the next 5 years, Issue A (mean rank = 3.2) would be less likely than the other 3 issues (mean ranks are between 2.2 and 2.9) (Table 21).

Table 21: Four Major Issues: Importance vs. Likelihood of being resolved within the next 5 years (N=14)

Issue	Mean Ranks of Importance	Mean Ranks of Likelihood of being resolved in next 5 years
A: Park philosophy not clearly articulated	1.9	3.2
B: Inadequate emphasis on ecosystem protection	2.5	2.8
C: Widespread deficiency of management tools	2.5	2.9
D: Visitor services needed	2.6	2.2

Although management objectives and legislative changes are needed to articulate the park idea, the likelihood of being resolved in the next 5 years is lower than others, due to the long time that is needed to get legislative support. From waves 1 and 2, the identified issues flow from park philosophy/idea to more detailed management tools and visitor needs. Following this flow, Wave 3 implies that clear park philosophy is needed to resolve other issues, due to the hierarchical levels among issues. In other words, unclear park philosophy leads to the lack of recognition of National Park roles toward ecosystem protection, which in turn results in deficiency of management tools with little congressional support such as budget and staff.

On the other hand, the 'likelihood' of Issue D becoming resolved ('Visitor services needed') is higher than others: Actually, since 2001, some parks have launched

ranger- or volunteer-led interpretation/guide programs, providing more services to visitors, a need that many panelists mentioned (KNPA, 2001).

5.2. Mode and Median of the Subcomponents of the Four Major Issues

In Wave 2, there were three clusters (park philosophy/policy, park organization/management, and park visitation/visitor needs) with 47 components (see Table 14, p.69 in Chapter 4). In Wave 3, these 47 components were reorganized into 4 major issues (park philosophy, ecosystem protection, management tools, and visitor services) with 43 components (see Table 20 in Chapter 4, p. 86).

In Wave 2, the panel reported ranking difficulties, especially in Cluster 1 (see Table 16-18 in Chapter 4, pp. 73-75). What the panel made is actually 'ratings' rather than 'rankings.' Thus, unlike Wave 2, Wave 3 did not ask sub-components rankings. Rather, the first- and second-tiers of each of 3 clusters in Wave 2 were retained in Wave 3. That is, top two tiers of each of 3 clusters in Wave 2 were reorganized, in terms of mode and median, into four issues with 20 sub-components in Wave 3 (Table 22, page 90).

Table 22: Four major issues with modal frequencies and median scores
(Shaded Areas: First-tiers; the other areas: second-tiers)

ISSUE A -- Park Philosophy Not Clearly Articulated (6 comments)	Mode	Median
Korea National Parks Authority (KNPA) and the central government's lack of National Park idea	1	1
Lack of management direction/goals/objectives; lack of long-term view in management	1	2
KNPA and central government's lack of understanding National Park management	1	2
Need to establish state-run "National Park bureau"	2	5
General public's low awareness of National Parks	3	3
Inconsistency/overlap of relevant laws	4	10
ISSUE B – Inadequate Emphasis on Ecosystem Protection (6 comments)	Mode	Median
Paradigm shift (need to consider National Parks as preservation/educational places)	2	4
Lack of public relations/education on ecosystem	5	5
Inconsistent management of ecosystem	6	6
Conflict between preservation and use	6	6
In order to emphasize conservation, need of amending "Natural Parks Law"	6	7
Lack of standards in conservation	7	7
ISSUE C -- Widespread Deficiency of Management Tools (4 comments)	Mode	Median
Land ownership (unlike the U.S. & Canadian park systems, 20% of Korean National Parks are private lands)	2	10
Lack of adequate KNPA expertise, budget, staffing, and control		
Under-budgeting	3	3
Understaffing	3	4
Lack of expertise in KNPA	3	3
Lack of KNPA control over its budget	6	6
Lack of inventory (ecosystem, infrastructure, etc)	4	9
Inconsistent management system in KNPA (due to rapid turn-over of officials in Ministry of Environment)	7	7
ISSUE D -- Visitor Services Needed (4 comments)	Mode	Median
Lack of visitor management for non-disturbing behavior		
Lack of visitor management	1	1
Need to guide visitors to non-disturbing behavior	6	5
The general public's awareness/views of park purpose (as pleasure ground)	1	2
Insufficient service/educational facilities for visitors	4	6
Need to provide good quality of recreation experience	5	6

5.3. Panel's Written Comments

The panel's written comments reaffirmed the concerns of the prioritized components (i.e., sub-issues). From Table 11 in Chapter 4, p.63, the profiles of respondents who contributed written comments in wave 3 were reorganized with new key categories for their anonymity (Table 23).

Table 23: Profile key of Wave 3 contributors in written comments

Number of panelists (14)*	New Key	PROFILE	Remarks
4	GR	Researchers and officials	Governmental Institutions or Research Institutes
6	AC	Faculty at universities	Academia
4	PE	Park Staff	KNPA former and current employees

* 16 responded in Wave 3, but comments of two panelists, both in KNPA, were excluded due to their invalidity of making rankings.

The following sections examine each of the 4 major issues in terms of 'importance,' 'issue resolution,' and 'likelihood of being resolved in 5 years.'

5.4. Issue A: Park Philosophy Not Clearly Articulated

In this issue of park philosophy, two main categories emerged: (1) the 'central government's and the Korea National Parks Authority (KNPA)'s lack of National Park

idea,' (2) 'general public's low awareness of National Parks,' and 'state-run National Park system.'

First, the 'central government' would be equivalent to the Ministry of Environment (MOE), the supervising agency for National Parks. But, some respondents who are park employees argued that it was unreasonable to not distinguish the MOE and the KNPA, because the KNPA, a non-governmental organization in park management, has no rights to generate its own budget proposal. Yet, as some panelists addressed, the MOE and the KNPA connote the central government due to their bondage in administrative structure.

The comments -- lack of central government and KNPA's National Park idea, lack of their understanding National Park management, and lack of management direction/goals/objectives and long-term planning -- can be consolidated into 'the unclearly articulated park idea of the central government.' In the same vein, inconsistent and overlapping laws also reflect the lack of park philosophy of a central government. In particular, 'Natural Parks Law,' that includes sections pertaining to the KNPA for Korean National Parks, still leaves a lot of room for ambiguities for interpreting the Law. A synopsis of the Natural Parks Law is provided in Appendix C. The comment of 'need to establish a state-run National Park bureau' would reflect this philosophical problem, again indicating that the central government lacks a park philosophy.

Second, 'the general public's low awareness of National Parks' would partially result from the central government's lack of a National Park idea. In this context, Issue A as the top priority of 'importance' measure (mean rank = 1.9) among 4 issues is not new

at all: the panel indicated the wrong direction of the evolution of the park system due to the lack of central government's park idea and implied a need for the transformation of the KNPA to a state-run bureau. This change of status in the KNPA would likely get wide support from the general public concerning what National Parks are for.

Based on the panel's priority ranking, these 2 categories with 5 components tend to converge into the need of a state-run National Park system (Figure 4).

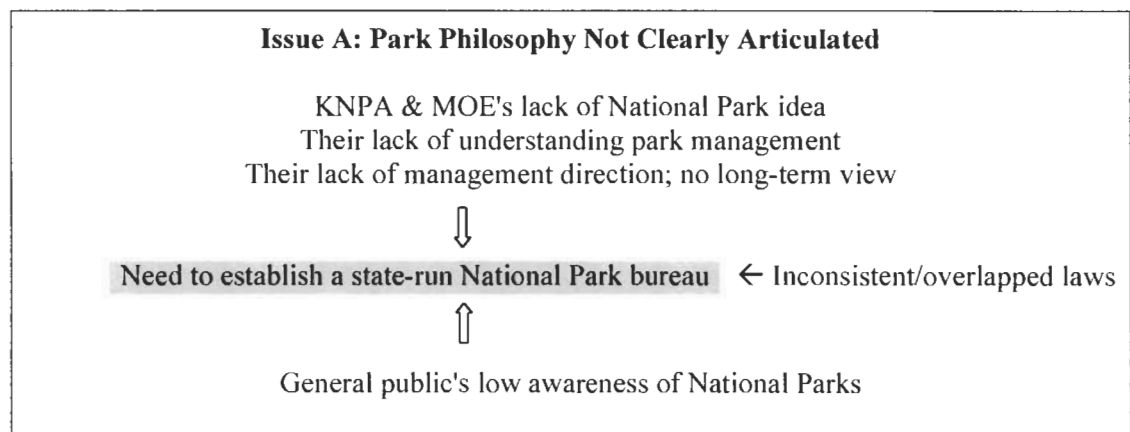


Figure 4: Convergence into need to establish a state-run National Park system

Issues A through D appear to descend from the general to the particular. Mere differences in mean ranks in 'importance' rankings among Issues B,C, and D (between 2.5 and 2.6) reflect this descending importance. Italics, parentheses, and brackets were added.

Panel's discussion on their ranking of 'Importance' for park philosophy (mean rank =1.9)

'This issue is the most basic and critical' (AC).

Those panelists who agreed that this issue is the most, or second most, urgent issue contributed their comments by focusing on (1) the 'central government's and the Korea National Parks Authority (KNPA)'s lack of National Park idea,' (2) the 'general public's low awareness of National Parks,' and (3) the 'need to establish a state-run 'National Park bureau.'

Several comments pointed to the concern of the 'central government's and the Korea National Parks Authority (KNPA)'s lack of National Park idea,' as follows:

'National Parks are nationally designated, so the central government has to clarify its standpoint. Currently discussed park problems resulted from the government's lack of park philosophy. If the government has an articulated park philosophy, the other 3 issues below will be easily resolved. Thus, this issue -- park philosophy -- is the most critical.'

(AC)

'If both the central government and the KNPA have a clear park philosophy, most issues of park management can be resolved.' (AC)

General public's low awareness of National Park was commented as:

‘the general public's low awareness of park value and its future’ (PE)

State-run park system

Simply put, the need to build a state-run system of National Parks seems to be associated with park philosophy, particularly, park designation, commented as:

‘The function of National Parks can be on the right track by establishing a management system that supports the purpose of park designation.’ (AC)

Overall comments were also made:

‘Central government's and the general public's low awareness of park value and its future. That is, economic concerns are preferred when policy is implemented (and budget appropriated), although environment is considered.’ (PE)

Simultaneously, comments also pointed toward what National Park idea is appropriate in Korean parks. That is, considering attributes of Korean park system such as:

‘Considering the facts in Korean National Parks -- attributes of nature in parks, visitor behavior toward excursion, the general public's desire to have more recreation areas -- we

can decide the range of conservation and limitation of visitor use in parks. Based on this, management policy should be made and implemented.’ (PE)

‘Korean National Parks need their own identity, which reflects management orientation (harmony between use and preservation), domestic condition, and international condition -- maybe Korea is the only country to fully adopt the U.S. National Park system.’ (GR)

One panelist expressed different opinions of why this issue is the most important:

‘National Parks should consist of natural beauty/scenic views. Non-natural beauty such as agricultural farms and urbanite towns cannot be included in parks.

Should ecosystem protection (flora and fauna protection) be foremost? That is, we do protect the ecosystem in order to protect national scenic views, don't we? If a plain scenery is surrounded by an important ecosystem, then a separate system can be used to protect the ecosystem. The reclassification of zoning and designation of parks should be based on the above concept. Plain scenery in an ecosystem-protected area should not be designated as NP.’ (GR)

There is a flip side of the consensus, i.e., why disagree? Thus, it is worthwhile to go over some of the comments disagreeing on the top importance of this issue, which were from some KNPA employees (PE) as:

‘This issue would not be a major problem in park management. Parks can be managed by instructions and laws.’

‘Park philosophy goes with social trends. But, park management is not directly immersed with [realized in] park philosophy.’

Also, one panelist disagreed, arguing that visitor management concerns (overuse, etc) are seen to be more important:

‘The central government's lack of understanding of National Parks and KNPA's lack of park idea are the main problems in park management. Nevertheless, the current situation in parks such as overuse and lack of management lead this issue to be put aside.’ (AC)

Panel’s discussion on issue resolution

In order to resolve the unarticulated park philosophy, the panel suggested the need to clarify park philosophy and enhance the expertise of managers.

‘With unclear park philosophy, no resolution can be made. Therefore, government-led, expert-discussed principles regarding park philosophy should be made first.’ (PE)

‘If experts who have a clear park philosophy that weighs heavy on their minds and at least 10 year experience in park management are recruited for both Ministry of Environment and KNPA, this issue would be resolved. (AC)’

Establishing National Park system was another main emphasis by the panel.

‘To solve this problem, the current system of park management should fully change. That is, establishing a system such as a state-run National Park bureau or *other type of* state-run agency is needed, in order to manage the parks by the central government only.’ (AC)

‘Forming a ‘committee for park management’ to do research, hold public hearings, and improve *management policy and practices.*’ (AC)

‘Needs central government's reformed will and national movement by the general public.’ (PE)

‘Refiguring status of ‘Protected Areas’ including National Parks, ecosystem conservation areas, and framing system for these areas is necessary. Also, implementing management policy based on the different types of Protected Areas.’(GR)

‘Recognition of park idea and awareness of parks will take a long time: if park management implements new management practices to heighten the general public’s awareness, it would take more time for the general public to adopt new practices.’ (AC)

However, comments from panelists who disagreed appeared. Several comments indicate satisfaction with the status quo in the park system:

‘In terms of effectiveness, the status and role of an organization are important. Rather than focusing on KNPA status, resolving facing issues is more important and needs a lot of time. I think it is not necessary to establish a state-run park agency or to get the central government’s understanding of National Park management. Rather, giving more self-control to the KNPA would result in more creative and active management. It is hard to imagine this paradigm shift among government officials.’ (PE)

‘(Current situations in parks such as overuse and lack of management lead this issue to be put aside), because decisions can be made after goal setting in policy-making.’ (AC)

‘There needs to be a clearly articulated standard of park designation. (Because there has been some confusion of distinction between National Parks and other parks/areas).’ (GR)

‘The understanding and awareness of the central government and the general public are so superficial. Thus, it is doubtful they will do what they have said.’ (PE)

Panel's discussion on time frame: likelihood of being resolved within the next 5 years
(mean rank = 3.2)

Only one panelist expected unarticulated park philosophy would be resolved in the near future, making the ranking as 2. The others made it either 3 or 4 ('not resolved in 5 years'). These very pessimistic views were expressed as:

'It is not likely to happen.' (AC)

'Currently no system is implemented for recruit *of park experts in the KNPA*. Thus, it can't be resolved in 5 years.' (AC)

'This issue can be resolved by education, but needs to be long-term because the effect of education cannot be seen soon.' (AC)

'It can't be predicted because the government's support toward parks is a prerequisite.'
(PE)

'This issue should be resolved in 2-3 years.' (GR)

'This issue should be foremost implemented and if there is a will, there is a way.' (GR)

‘Resolution of this issue could not be made in 5 years. For **example**, at this point, the park problems are taken care of by the non-governmental rather than governmental.’

(AC)

‘Without a paradigm shift in 5 years, a lot of park resources will be degraded.’ (PE)

5.5. Issue B: Inadequate Emphasis on Ecosystem Protection

In this issue of ecosystem protection, as with Issue A, two main concerns are the role of central government and the awareness of the general public regarding ecosystem protection. The solution for these concerns would be converged into a paradigm shift, which is emphasized as a resolution for inadequate emphasis on ecosystem protection. Shifting a park paradigm to ‘parks as preservation/education places’ is delineated in a balance between preservation and use, proper management of ecosystem, solid conservation standards, and a new law of National Parks (or amending the existing ‘Natural Parks Law’). It seems that effective public relations/education on the ecosystem, including environmental education programs, would not be demarcated from the paradigm shift. Other comments such as the reclassification of parks toward preservation-oriented, minimization of park resources being degraded, and associated visitor impact would also be covered by the paradigm shift in terms of revising the Natural Parks Law or creating a new organic act, and activating education on ecosystems.

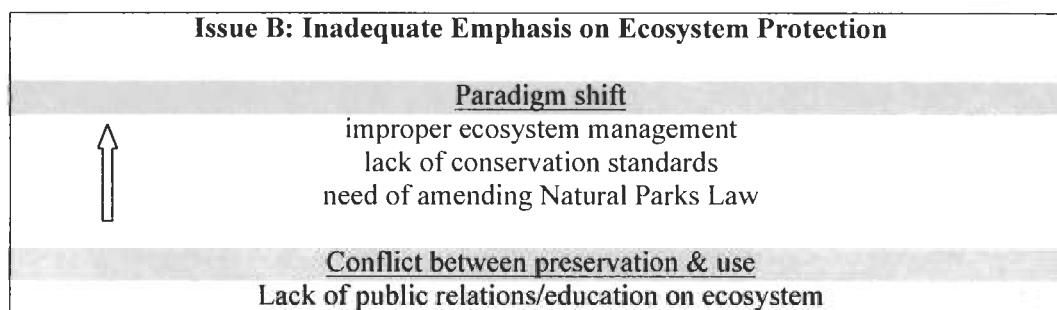


Figure 5: Convergence into the need of Paradigm Shift

Panel's discussion on the ranking of 'Importance' (Mean rank = 2.5)

Those panelists who agreed this issue (ecosystem protection inadequately emphasized) is the most or second most important issue emphasized the close linkage between Issue A (park philosophy) and ecosystem protection. Some comments are:

'This issue is closely related to *Issue A* -- absence of park philosophy.' (AC)

'Lack of understanding ecosystem in National Park area. It relates to park philosophy.'

(GR)

'National Park idea is the basis of park management.' (PE)

'In National Park idea, preservation/conservation are discussed first and sustainable use follows. This means they are the concepts in order in their importance. However, there is

a tendency to consider conservation and use equally. This lack of concepts would damage ecosystem protection.' (AC)

'Lack of standards/objectives in conservation.' (AC)

Some disagreement mainly concerned other issues are more important.

'Ecosystem protection has been discussed but not implemented. Thus, it is desirable to have a holistic ecosystem management that includes National Parks, neighbor areas, and mountains.' (PE)

'Paradigm shift (need to consider National Parks as preservation/educational places).'
(GR)

'To protect the ecosystem, some areas should be designated as ecosystem conservation areas. However, unless nature is disturbed, visitor use should be encouraged in the park area.' (AC)

'After the other 3 issues -- 'park philosophy not clearly articulated,' 'widespread deficiency of management tools,' and 'visitor service needed' are resolved, it can be resolved easily. The ecosystem should be protected. However, unlike US, Canada, and Australian park systems, it is not realistic to emphasize parks as places for education,

because of available lands that are limited and the general public's park purpose as pleasuring grounds.' (PE)

'The title of this issue is too sensitive. Ninety-nine percent of park visitors stay on trails.... Double-checking whether recovery of atop Hallasan (Mt. National Park) is *appropriate* for ecosystem protection. Rethinking operating surgery on a several-hundred year old tree (that is almost wilted) is part of ecosystem protection. Ecosystem protection is important, but, it should be known that 'too much (of a thing) is as bad as too little.' Although this issue is very important, park idea and park area would not be matched. (For example), everybody agrees that Chunwangbong in Chiri NP and Chunbuldong in Sorak NP should be preserved. However, nobody agrees Sorakdong and Boogok (in Chiak NP) should be preserved.' (GR)

Panel's discussion on issue resolution: how to resolve the problem of inadequate emphasis on ecosystem protection

Again, state-run park system, agency autonomy in terms of budget, and park idea were commented on:

'*Need* a system-wide reorganization and state-run management system.' (AC)

‘Build a new system, which provides variety of [park-related] information that encourage visitors' interest in interpretation programs.’ (GR)

‘Need to secure an agency/staff/budget to protect the ecosystem. Flora and fauna protection from illegal removal/poaching, education, law enforcement/system reform is needed.’ (AC)

‘There is a tendency to consider conservation and use equally. This lack of concepts would damage ecosystem protection. Therefore, considering the current situation, adequate ecosystem protection would require a clearly defined zoning system.’ (AC)

‘I would say the ecosystem management is neglected, i.e., they leave the matter of ecosystem protection unsettled.’ (GR)

‘If "Widespread Deficiency of Management Tools" (*Issue C*) is resolved, ecosystem protection can be done simultaneously.’ (PE)

‘Although park management has put stress on conservation, so far, actually the management has put stress on visitor service.’ (PE)

Comments from panelists who made rankings of ‘importance’ as 3 or 4 implied an ecosystem cannot be protected without cooperation from the government and the public.

‘Solid status of National Parks will lead to emphasis on ecosystem protection. In other words, we need a paradigm shift, which can hardly be done with issue of ‘Park Philosophy Not Clearly Articulated.’ (AC)

‘Need cooperated management implementation with the Ministry of Environment, the Forest Service, and the Ministry of Construction and Transportation.’ (PE)

‘Lack of public relations/education on ecosystem --> Ecosystem protection will be good business resources: for example, ecosystem related souvenirs such as calendars, postage stamps, photo-albums, T-shirts, etc. Also, ‘Eco-guide,’ NGOs for wildlife protection, and bird watchers club are needed to provide more environmental education programs.’ (GR)

‘After conducting a survey regarding ecosystems in all parks, protected areas and the other areas possibly used for visitors should be separated. Visitor management plans should be carried in terms of not degrading those protected areas.’ (AC)

‘If more strictly regulated visitor management tools are enforced, *an ecosystem would be better protected*’ (PE)

Panel's discussion on time frame: likelihood of being resolved within the next 5 years
(mean rank = 2.8)

The panelists who believed ecosystem protection can be made in the next 5 years or so (i.e., rank '1' or '2') expressed as follows:

'The possibility of resolution of this issue is very high.' (PE)

'Consistent management policy for the ecosystem can be made and implemented by a research unit in KNPA. However, research functions [in KNPA] are not independent.'
(PE)

'Within 2-3 years, *we need a* paradigm shift and an increased level of management skills.' (GR)

Meanwhile, two panelists commented not positively, although they believed the likelihood of being resolved of inadequate ecosystem protection in the next 5 years, as they made rank as '2'.

'Ecosystem protection cannot be made in the short-term: it needs 10 years or longer of planning and expertise in park management.' (AC)

'This issue can hardly be resolved.' (AC)

Some panelists reasoned why improper ecosystem protection could not be resolved in the near future as they made rank '3' or '4'.

'Consistent efforts for new programs/systems are needed.' (GR)

'(There is a tendency to consider conservation and use equally. This lack of concepts would damage ecosystem protection). Therefore, considering the current situation, adequate ecosystem protection would require clearly defined zoning system. So, hard to resolve.' (AC)

'It would require a longer term.' (PE)

'Due to an insufficient number of ecologists in the KNPA, inventory of ecosystem seems nonrealistic. Therefore, short-term resolution is not likely to happen.' (AC)

'In the long-term this issue can be resolved. 'Ecosystem management' can be effective if more strictly regulated visitor management tools are enforced.' (PE)

5.6. Issue C: Widespread Deficiency of Management Tools

In Issue C, the panel speaks of management tools in deficiency, as mainly due to the weak status of the KNPA. The panel states system-wide budget-related problems (underbudget/under-staff /lack of budget control) and undesirable conditions of other

problems such as the organizational inflexibility of KNPA, problems of a zoning system, and infringement on private property rights in park area caused by mixed land-ownership. In case of 'lack of expertise in park management,' it would belong to both budget-related and other problems because recruiting and maintaining staff depends on a KNPA chairman who would not be distant from the political influences or have a positive level of park experience. Consequently, these concerns would be directly related to the need for a state-run 'National Park bureau,' in Issue A.

In Issue D, the general public's park purpose as pleasure ground would be due to Issue A – park philosophy.

Issue C: Widespread deficiency of management Tools

Budget-related system-wide problems ← 'park system'
Other management practices conditions

Figure 6: Problems associated with inadequate budget

Panel's discussion on the ranking of 'Importance' for deficient management tools (mean rank = 2.5)

Parks need to be armed with park philosophy and solid system. Panelists, who rank this problem as a 1 or 2, mentioned park philosophy, under-budgeting, and lack of expertise.

'If park philosophy is articulated, most parts of this issue can be resolved. So, I made a rank of 2 on importance.' (AC)

‘To manage parks effectively, this issue should be resolved first.’ (AC)

‘In short- and mid-term, there are so many problems that need immediate resolution. With discussions to resolve these problems, we can draw the management orientation and become ecologically minded even without having principles about park management.’ (PE)

‘Under-budget of KNPA; Policy for ‘Mass Facility Zone’ is distorted; Unlawful facilities in park area; Infringement on private property rights in park area. Construction/ renovation in Buddhist temples in park area.’ (GR)

‘Widespread deficiency of management tools resulted from lack of KNPA expertise and the weak status of the KNPA with under-budget.’ (AC)

‘Ineffectiveness of expertise, under-budget and budget control, organizational structure in KNPA.’ (PE)

‘Mostly, laws ensure the liberty and benefits of civilians. However, with regard to park related laws, they have to be more regulation-oriented.’ (PE)

Meanwhile, those panelists who put less importance on this issue (rank ‘3’ or ‘4’) expressed resolution of the problem in terms of under-budget.

‘The park management will be more effective and updated if the other 3 issues are resolved. First of all, problems of under-budget and understaffing should be resolved. However, congressional and administrative supports such as budget proposal/appropriation are rare.’ (AC)

‘This issue has been already well known.’ (GR)

‘Lack of KNPA expertise, budget, staffing, and control; problem of zoning; organizational inflexibility of KNPA; Indiscriminate development and facility deterioration in ‘mass facility zone’ of park; lack of inventory (ecosystem, infrastructure); inconsistent management system in KNPA due to rapid turnover of officials in Ministry of Environment; land ownership mixed; lack of policy regarding cultural resources.’
(GR)

One respondent expressed the expertise of the KNPA is underestimated, as

‘KNPA expertise is in park management. But, in reality, some believe that *management of* landscape, flora, and fauna should be the expertise of KNPA. Zoning and management standards made by ecologists should be adopted and managed. Hotel managers are neither architects nor interior design experts. A dietitian is not a meat and vegetables

producer, but manages to cook **them**. Lack of understanding of manual results in management deficiency.’ (GR)

Panel’s discussion on issue resolution: how to resolve the wide-spread deficiency of management tools

Recruiting and securing experienced employees of KNPA were commonly mentioned.

‘Change management system; recruit park experts; guarantee the job security of park employees; refigure concept of park management.’ (GR)

‘The (core) clue to resolving this issue is the level of how to secure park expertise in the KNPA. Although several efforts have been made, such as recruiting professionals and developing off-KNPA services, it is insufficient. The KNPA has to have a more solid will to make efforts to secure expertise.’ (AC)

‘There is a tendency not to try to resolve these problems. A special committee would resolve these problems.’ (PE)

System -wide problems in KNPA seem to be caused by inadequate external support, i.e., support from central government.

‘If government officials see the system, KNPA, they would recognize the difficulty of KNPA and the need of more support to it. It is important to have improved management conditions such as park area, manual, budget, etc.’ (GR)

‘Accountable management systems can be made by management policies, master plan, and GMP. (Also), need a committee consisting of government officials, Buddhist temple representatives, local NGOs, and park professionals.’ (AC)

‘KNPA has had system-wide problems of management deficiency. Deficiency of management would stop, if central government-wide support were made. On-going problems are resolved if fee collecting and trash removal are separated from park management.’ (AC)

‘Central government should appropriate the 100% budget; Need policy for protecting local living rights in Mass Facility Zone; In relation to remove illegal facilities, locals' living rights should be concerned, too; In order to prevent degradation of park resources, use of nature-friendly construction/renovation methods and anti-pollution water sewage system is encouraged.’ (GR)

‘Current park management's major duties include collecting entrance fees, parking fees, and removing trash. These duties should be privatized. The KNPA, instead, should focus

management on natural resources, visitors, and facilities. For successful management, human resources are critical. Hence, the KNPA Chairman and the Chair of Conservation Department in the Ministry of Environment should be selected from park experts.’ (AC)

‘(Mostly, laws ensure the liberty and benefits of civilians. However, with regard to park related laws, they have to be more regulation-oriented). Thus, a National Parks agency should have legal/administrative authority and responsibility. Rather, the KNPA became a scarecrow under political and economic concerns. In Korea's situation, the president's clear understanding of National Parks would initiate the problem's resolution.

With an example of infringement on private property rights in park areas, besides park residents, Green Belt residents would have the same infringement on private property rights in Green Belt areas. We need to figure out whether park residents have benefited from or have disadvantages due to park existence. However, in reality, is this fact an example of political limitation? As we keep National Parks, it would not be difficult to resolve the issues of management control over parks (possibility of conflict between central and local governments) and conflict with Buddhist temples, which are located in major park areas as places for education, because available lands are limited.’ (PE)

Partnership with NGOs and protecting locals' property rights are also mentioned.

‘Resolution of insufficient budget would depend on NGOs and opinion leaders' activities. KNPA itself cannot do this.’ (PE)

‘This issue includes many problems, which require political intervention [resolution]. Compensation for private landowners in park area is the most important consideration. Without this consideration, management improvement cannot be made.’ (GR)

‘The major conflicting issues that park management and the locals/Buddhist temples are involved in, are locals' *illegal* commercial transactions and Buddhist temple's religious activities in park area. To resolve these conflicts, purchasing private lands and compensation for living rights are needed and a huge budget is required.’ (PE)

Panel’s discussion on time frame: likelihood of being resolved within the next 5 years
(mean rank = 2.9)

Written comments showed the possibility of this issue (‘Widespread deficiency of management tools’) being resolved in 5 years depends on recruiting expert personnel, and one comment positively expressed the likelihood of resolution.

‘(If *the central government* has a more solid will to make efforts to secure expertise in KNPA), it is possible that the KNPA management will be improved a lot within 5 years.’
(AC)

Other comments are:

‘However, this issue is the hardest to be resolved. Thus, if needed, it should be resolved following a long-term plan.’ (AC)

‘Hard to implement in the near future.’ (GR)

‘Short-term resolution of this issue is not likely under current recruitment based on political interests.’ (AC)

‘It could be done so soon if problem solving would be introduced.’ (PE)

‘(The major conflicting issues that park management and the locals/Buddhist temples are involved in, are locals' *illegal* commercial transactions and Buddhist temple's religious activities in park area. To resolve these conflicts, purchasing private lands and compensation for living rights are needed and a huge budget is required.) Hence, the longer term is likely.’ (PE)

5.7. Issue D: Visitor Services Needed

Issue D, ‘Visitor Services Needed’ is most likely to be resolved in the next 5 years (mean rank = 2.2). However, for it to happen, the panel requires effective visitor management, change of general public’s park purpose, and more varied opportunities for visitors in terms of park facilities, character distinction between parks, and interpretive

programs. This requirement implies the likelihood of change in the central government's attitude: A paradigm shift and the KNPA's inherent problems would not be solved in the near future. Thus, the panel suggests, rather than holistic change in the Korean park system, change in each unit basis of Korean park system could be feasible. This bottom-up approach would take longer time in getting attention from legislative bodies than a top-down approach that would facilitate the park system. This user-side change over other issues would help the general public understand that what National Parks are and would lead the legislative and the executive bodies to rethink value of a park agenda.

Issue D: Visitor Services Needed

Lack of visitor management for non-disturbing behavior
General public's view of park purpose as pleasure ground
<p>Providing good quality of recreation experience</p> <p>visitor facilities</p> <p>Need to provide good quality of recreation experiences</p>

Figure 7: Prioritized subissues of visitor services needed

Panel's discussion on the ranking of 'Importance' for Visitor Services Needed (mean rank = 2.6)

Those panelists who made rank '1' or '2' addressed that Park philosophy and emphasis on preservation/conservation. Also, non-disturbing behavior for environment and other visitors seemed to be a major concern among panelists' written comments.

‘The most important things in park management are the supplier’s (KNPA’s) well-defined management policy and behavior management based on this policy, and demanders’ (users’) understanding of parks and their purposes.’ (AC)

‘Nature-friendly visitor management will ultimately help resource conservation.’ (PE)

‘Park management should focus on preservation to achieve this and overuse should be avoided by encouraging non-disturbing behavior.’ (PE)

‘The management of visitor behavior and visitor services is not adequate.’ (AC)

‘Lack of visitor management; Lack of character distinction between parks; Insufficient service/educational facilities for visitors; Problem of collecting entrance fee including separate admission fee for cultural assets (i.e., Buddhist temples).’ (GR)

One other view was mentioned as:

‘It is rare to visit parks for a study. (Visitors) would study when they are at attracted tourist destinations. A history novel would attract readers to study further in history, for example. However, reading a history novel is not the same as the studying history.’ (GR)

Meanwhile, some panelists who made rank '3' or '4,' expressing they did not mean this was not important. Simply other issues were more urgent in terms of the four-point scale used in 'importance.'

'Most parts of 'Visitor Services Needed' will be resolved by decent park philosophy and management. It does not mean that this issue -- Visitor Services Needed -- is not important. In the four-point scale, this issue fits on rank 3.' (AC)

'Issues 1,2, and 3 should be deal with before this issue is concerned.' (PE)

'Lack of visitor management for non-disturbing behavior; general public's awareness of park purpose (parks as pleasuring ground); need to provide good quality of recreation; inappropriate/insufficient interpretation programs' (GR)

'Because mass tourism is pervasive in National Parks, it is hard to make a policy to lead non-disturbing behavior.' (GR)

One mentioned this issue was the least important because:

'The quality of visitor service has been improved by the KNPA.' (AC)

Panel's discussion on issue resolution: how to resolve it

Written comments showed resolution of other issues will resolve the problem of visitor services needed: Such other issues as park philosophy of central government and the general public's awareness were linked to the resolution of this issue.

'Clear park management can lead non-disturbing visitor behavior. KNPA and the Ministry of Environment's clear park purpose will resolve these issues.' (AC)

'If issues of "park philosophy not clearly articulated" and "widespread deficiency of management tools" are resolved, this issue can be easily resolved.' (PE)

'For visitor services, macro and micro approaches are needed. The macro-approach includes relationships to the general public regarding park purposes and park idea, and provides visitor services. Meanwhile, the micro-approach includes each park's own programs and service facilities suitable for character distinction. Currently, both government and non-government sectors have significantly approached, by macro- and micro-levels, visitor needs will be met in the near future.' (AC)

'Set solid management strategies that reflect park idea.' (GR)

With regard to lack of visitor management for non-disturbing behavior, providing education and information services would effectively lead visitors to non-disturbing behavior and protection of park resources. In their comments, the panel expressed their positive expectation of resolving this issue.

‘Provide various kinds of information about National Parks; provide computerized reservation system for visitors.’ (GR)

‘It can be improved through consistently provided information/education. It is noticeable that, in particular, the importance of forests and their functions are rapidly spreading the general public's knowledge of the ecosystem. The awareness of leisure life is going to reach a peak.’ (AC)

‘This issue will be resolved after the other 3 issues are resolved. Current trends show visitor services are given more weight in management.’ (PE)

‘Realizing visitors as a factor in park abuse, education/information sessions and nature-friendly/on-hand experience type services should be emphasized and provided. Through this, degradation and pollution can be eased.’ (AC)

‘It would require not only stricter regulation and law enforcement, but also a high quality of interpretation and education sessions.’ (PE)

‘Need to provide on-hand experience in nature and culture [Visitor characters can be distinct by visitors' voluntary participation].’ (GR)

More visitor facilities for quality of visitor experiences are also emphasized.

‘Need to increase quality and quantity of visitor centers; need to inventory flora and fauna in each park. Display them and educate visitors; Admission fee for Buddhist temples should be collected at the entrances of forestry of those temples rather than the entrances of temples.’ (GR)

‘Each park's character distinction can be accomplished by visitor centers and experts that satisfy various types of user characteristics with service programs.’ (AC)

‘Nature-friendly use of National Parks depends on the quality of visitor management and (visitors') non-disturbing behavior.’ (PE)

‘Good quality guide (services) for visitors are needed. Trails should be maintained and a signboard should be built. The proportion of trails in parks is less than 1 %. Thus, the possibility of the general public's degradation of park resources is exaggerated. The total land size of South Korea is small enough to figure out the land profile(s). Too many visitor services would lead to visitors' overuse in park area.’ (GR)

Panel's discussion on time frame: likelihood of being resolved within the next 5 years

Panelists (who made rank '1' or '2') stated that the 'Visitor Services Needed' could be resolved in the near future.

'This issue can be resolved in a short period. Still it needs consistent endeavor to implement.' (AC)

'It can be resolved in 5 years due to policy orientation of park management, the general public's demand for clear environment, and the adoption of 5 workday system per week.' (PE)

'I do not know the basis of the 5-year time frame. It is hard for me to predict. The 2002 presidential election and new KNPA chairman (who is supposed to be appointed in the second half of the year 2002) may make some change. (PE)

Some believed that the issue is not likely to be resolved in the near future (rank '3' or '4'). To facilitate interpretation services, those panelists' negative comments were based on the visitor facilities, especially building more visitor centers.

‘Currently, some parks introduce interpretation and park guide programs. In 10 years, all parks will have visitor centers and visitor behavior may change.’ (PE)

‘Short-term resolution of this issue is not likely, because building visitor centers depend on wholly commercial consultants, not on park employees due to park employees’ lack of expertise.’ (AC)

‘Hard to implement in the near future.’ (AC)

5.8. Other Comments and Side Flows

Besides the officially written responses, two respondents made additional comments. Unofficial comments were also made (Side flows).

‘Mostly locals and local governments do the degrading and destroying of National Parks. Thus, reclassification of 120,000 residents and their facilities in park areas is needed for their gradual move to out of park boundaries. This requires a long-term vision and a huge budget. It also requires that relevant laws be revised to prevent local governments and (central) governmental agencies from development in park areas. Currently, a lot of authorities of central government have been transferred to local governments (However), central government should more actively oversee park management and environmental policies.’ (PE)

‘We cannot count on US/Canadian standards of park systems: Both US and Canada are 100 times larger than Korea in total land size, but five and a half time in population, respectively. Rather, we need our own professional insight.’ (GR)

Side flows can be explained by Delbecq. Delbecq et al. (1975) pointed out that the lack of opportunities for social-emotional rewards in problem solving, and written comments on feedback reports are major characteristics to reduce the decision-making performance in a Delphi study. In this study, the panel has had opportunities to freely provide any concerns on every wave. Some panelists added unofficial comments via personal email or letters, which were, in many cases, with returned survey questionnaires. For example, instead of written comments, a park employee in Wave 3 sent an official report submitted to the Congress. He argued that the lack of park philosophy and ecosystem protection was not caused by the KNPA.

Another example came even from a non-participant with a polite excuse of his squeezed time conflict to answer the survey questionnaires. He unofficially stated ‘if a research can extract experts’ priority rankings *on issues* ... the result would help set a policy. However, those rankings cannot be made so easily and if the rankings could be made, the results are likely to be meaningless. In particular, park philosophy and policy mesh with (*are closely related with*) each other and even their contents are the almost same: they should be considered as a whole.’

5.9. Chapter Summary

From the waves 1 and 2, the identified issues flow from park philosophy to more detailed management tools and visitor needs. Thus, Wave 3 implies that an articulated park philosophy is needed to resolve the other 3 issues, as the panel made the importance rankings on the 4 major issues as 1.9 for park philosophy and 2.5 or 2.6 for ecosystem protection, management tools, and visitor services. However, issue D ('Visitor services needed') is the most likely to be resolved in the next 5 years while the issue of park philosophy is least likely to be resolved in the next 5 years. Simply put, the panel did not believe there was a likelihood of change in central government's attitude. Rather, they believed change in each unit basis of Korean park system could be feasible. Figure 8 (page 127) summarizes the interconnected relationships between components of the 4 major issues. It consists of Figures 4 (p. 93), 5 (p.102), 6 (p.109), and 7 (p.117), respectively. It illustrates that a bottom-up change would be better to resolve the issues, by enhancing services for visitors. Four points are prominent in these associated flows of four major issues: need to establish a state-run park system, public's low awareness of parks, under-expertise, and visitor pressure. The next chapter discusses these 4 points and develops future strategies for the Korean park system.

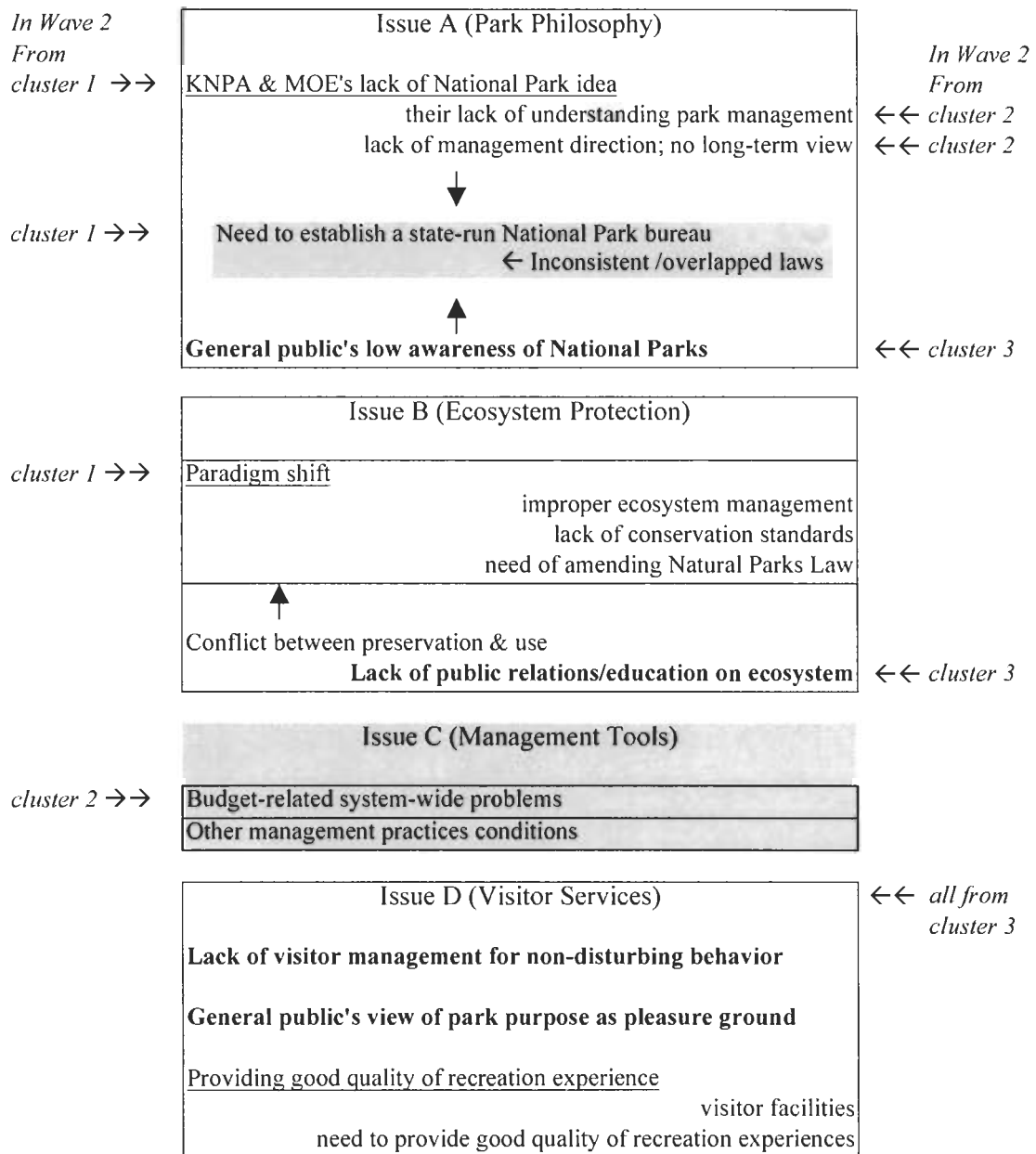


Figure 8: Interconnections between components of 4 issues

(footnote) **Bold: interconnections between issues A, B, and D (based on issue D)**
 interconnection between issues A and C
 Wave 2 clusters are (1) park philosophy (2) park mgmt/organization (3) visitor needs

Chapter 6

FUTURE SCENARIOS: STRATEGIES FOR KOREAN NATIONAL PARK SYSTEM

Not surprisingly, the issues of concern to the panel are not new. Still, the panelists' comments imply a park system under-siege from these problems: Resolution of issues is unclear and there is a lack of consensus. One panelist (Wave 2) commented: 'seeing the fact that resolving the problems everyone knows is fairly difficult.'

6.1. The KNPA: Sisyphean Labor?

From the findings of Wave 3, the prerequisite for establishing a state-run park agency seems to be enacting or creating a solid 'park system organic act.' The current status of Korean National Parks is covered in a portion of the 'Natural Parks Law,' which was last amended and enacted in 2001. From the outset, park idea and philosophy can be better realized by having an organic act. Without it, 'park protection' and 'benefit for the general public' will be merely catch-all words, becoming more confused in their meanings and interpretations. In other words, a park system with no organic act is a kind of 'pseudo-park' system, which causes various images, at least misleading, in the general public's minds, and a distracted understanding of governments, including both central- and local-level, ranging from 'unawareness of parks' to 'parks as pleasuring grounds' to 'parks as profit-generating entities.' An organic act provides a baseline for interpreting the park idea, regardless of whether it would be more preservation-oriented

or service-oriented. More importantly, an organic act can set a precedent for the future direction of the parks in terms of who are the stakeholders. If there were no organic act, it would be highly likely that the fate of parks would rely on changing political climate, not on participating citizens.

In addition, an organic act provides park management with legal authority of adequate management resources to serve the general public and protect natural, cultural, and historical diversities. In Korea, an extreme example of default leverage of park management is looking for some financial resources to cover the operating costs of parks. This idea resulted from the organizational attributes of the non-governmental KNPA, and thus the organization is struggling for its existence. The KNPA is really a quasi-private, profit-making oriented organization with minimum staff and budget. Under these circumstances, the KNPA cannot avoid seeking profits, rather than meeting public benefits (Yoo, 1995). Although KNPA employees made laudable efforts for Koreans' parks, improper direction of the endeavors likely tends to make a 'vicious circle.'

In particular, developing revenue-generated enterprises in parks, although it should not be underestimated, seems to be derailed from the park idea and confuses the question of why we should have National Parks. Trying to develop revenue-generated enterprises such as the KNPA's directly-managed souvenir shops, selling T-shirts, books, and managing concessions in parks (personal communications, 2002; 2003), seems to be derived from the KNPA's considering that kind of revenue as the last resort to sustaining park operation. These efforts in wrong direction are more likely to make the park system as a Sisyphus who is blamed for improperly managing the parks, or an alchemist who

focuses on collecting park-related fees. At best, the system is drifting in the sea of heavy visitor pressures.

In the following sections, first, the various options of the major issues mentioned in previous chapters are explored in terms of four prominent points -- need to establish a state-run park system (section 6.2), public's low awareness of parks (section 6.3), under-expertise (section 6.4), and visitor pressure (section 6.5). Then, in the final section, a revised version of 'Natural Parks Law,' in synopsis, is proposed after reviewing the current content of that law. This section also contains a discussion of the role of environmental NGOs and parks, and future models of Korean park system are suggested.

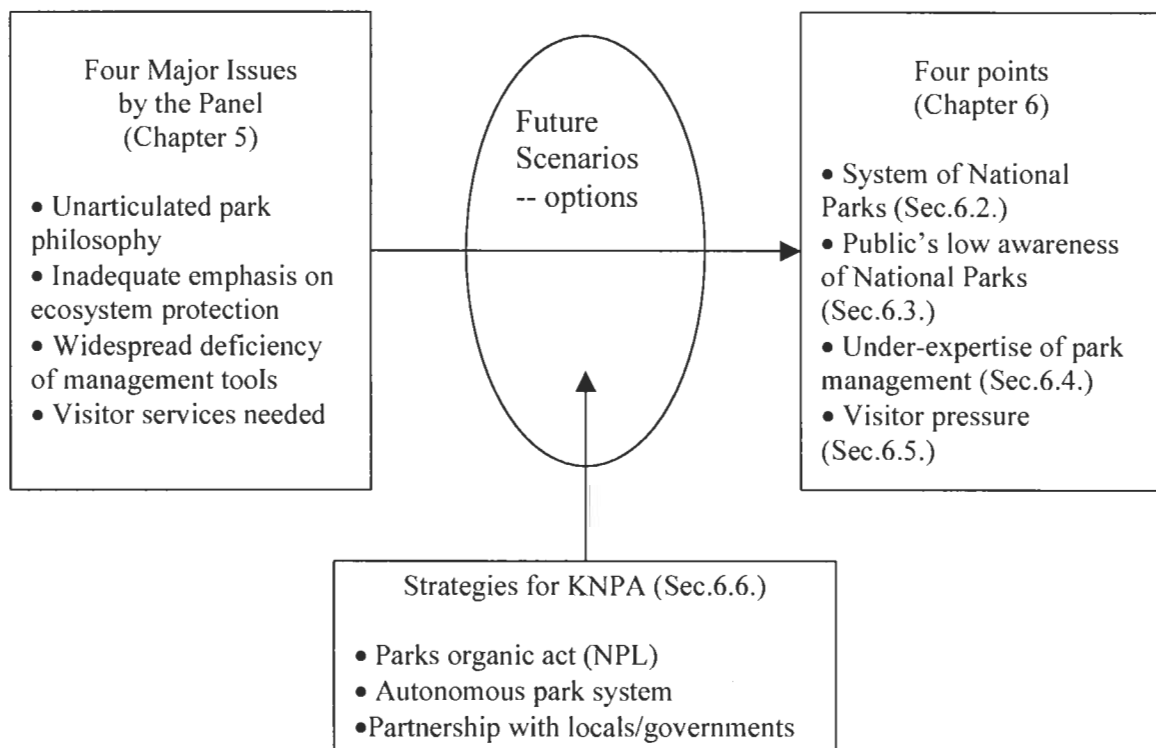


Figure 9: Overall associations of Chapter 6

6.2. System of National Parks

The panel in this study prioritized the urgent need for establishing a state-run, nation-wide system of National Parks. Although general patterns can be distinguished, the administrative organizations or authorities that manage National Parks vary from country to country and time to time. Creating a National Park is itself a historical landmark interwoven with political, social, economic, and cultural dynamics among people and their societies (Hummel, 1987; IUCN, 1993; Ise, 1961). Moreover, establishing a park system is not a matter of simply piling up a number of National Parks. The system, after being established, uses its authority and power to solve large scale problems, as well.

There are various aspects of park systems: Some nations have remained with the same basic pattern of park administration for a long period of time, some change patterns frequently, and some have not yet established any although their expanding development of parks may require one in the near future. Accordingly, this concern was reflected in the suggestion of the IUCN (1990) that a National Park should be managed by a 'highest competent authority' who recognizes and controls the park. However, realizing the different status and societal contexts, the IUCN left room for a more flexible managing system.

Clawson(1974) regarded that the nonexistence of park systems would be an era of 'reserving land for National Parks.' Before the NPS was established in 1916, the US had 8 National Parks. Before the establishment of the KNPA, Korea had 17 National Parks.

The Kingdom of Bhutan has 4 National Parks, established between 1988-1993 (<http://www.unep-wcmc.org/cgi-bin/padb.p>), and no National Park board. Nations with few parks may not need to establish a special park administrative system. No monetary expenditure would be spent on a new system. In Singapore, the National Parks Act of 1990, which created the National Parks Board, statutory board within the Ministry of National Development, began an era of 'reserving land for National Parks.'

Without an administrative park system, parks would be left as 'paper parks,' although they were officially declared. The objectives of parks-on-paper would be achieved, but it would be unlikely that the parks would provide any public benefit (IUCN, 1993).

The following nine options -- (1) Parks under the auspices of forestry division, (2) Parks under tourism ministry or the like, (3) Parks under Construction related ministry, (4) Statewide, Autonomous park system, (5) Locally administrated park system, (6) Parks under auspices of a ministry of environment, (7) Mixed administrated system, (8) Cross-border park system, and (9) Joint park system, which are supported by Environmental NGOs -- are not necessarily in order. Discussions of them are, to some extent, overlapping.

Parks under the Auspices of Forestry Division (Option 1)

National Parks in the world, including those of Korea, are often forested. In many cases, forested parks are under the auspices of a forestry division, usually under the Ministry of Agriculture or the Ministry of Natural Resources. Furthermore, a panelist (GR) in this study said (*italics added*):

‘Considering the fact that private lands make up 60 % of National Parklands (*private lands in parklands are 40 % in 1977, and 42.9 % in 1998, respectively*), most of which are forested, a division of the Korea Forest Service should manage National Parks by annexing the park management system (KNPA)’

The Korea Forest Service has no history of managing National Parks. Yet, this example shows that forested National Parks would be highly exposed to an invitation for a forestry agency’s taking over attempt.

As an example, ninety percent of Surinames territory is covered by forest and the Suriname Forestry Service (LBB) of the Ministry of Natural Resources is entrusted with the development and management of the country’s protected areas. The LBB is assisted by the Foundation for Nature Preservation in Suriname (STINASU), established in 1969, which is also under the Ministry of Natural Resources, to support the LBB in its nature conservation activities.

An advantage of this system is, at least, parks under a forestry agency would not be isolated as the ‘paper parks’ would be. Thus, a park system of this kind would better provide benefits for the general public. With regard to the evolution of National Park system, a park system of mainly forested lands with a low level of complexity would benefit from its residing in the auspices of a forestry division. As part of the official executive body, a park system is theoretically in line for a portion of the national budget (Wetterberg, 1974).

Forestry is one of the traditional land **management fields** in many nations and in case of designating parks with few or no professionals for managing them, foresters who graduated from academic institutes would offer professional leadership. Although the Korean National Parks Authority (KNPA) was established under the Ministry of Construction in 1987, many foresters were transferred from the Korea Forest Service to the Authority due to lack of professionals (PE, in Wave 2).

As represented in the 'multiple use' concept of the USFS and the 'single use' concept of the US NPS, the philosophy of maximizing timber production often prevails within forestry divisions of many nations. For example, if Korean National Parks were under the forestry division, it would harvest timber in National Parks, possibly regardless of degree of care and skill (Ruhle, 1968). This pattern is one of the controversial issues in the proposed 'Maine North Woods National Park.' That is why the proposed area should be a National Park rather than national forest because of the different management concepts between the two agencies, although the 'multiple use' concept solely does not mean destructive harvesting and the proposed park could allow existing land management of multiple use practices.

Therefore, budgets for parks under forestry divisions would be weaker based on intra-ministry competition due to the parks' different philosophical backgrounds. In this case, if it happened, the parks would be a mere component of the supervising division.

Parks under Ministry of Tourism or the like (Option 2)

A country may be better positioned to place parks under Tourism-related ministries, if that nation has huge cultural assets and is densely populated. Some

countries, such as Singapore, dominantly have urban-based parks such as national gardens. By reflecting the world-wide spread of awareness of environmentally sound tourism for natural resources, earning revenues from the tourists could be re-circulated back to maintaining the tourist attraction -- the park.

Rather than having separate divisions under several ministries, authority of park management consolidated into a tourism ministry or division could strengthen the integrity of natural and cultural resources. Cultural resources tend to be inseparable from environmental nature. Lack of understanding of cultural heritages equates to an undifferentiated view of natural heritages. Congressional members would be more interested in taking care of parks, due to their income generation from main themes equally interests among tourists.

In countries with a need for economic development for their quality of living, this pattern is likely to promote non-sustainable park use. More importantly, it might cause the public's being confused about the park idea. Lack of staff members with natural resource background would be a likely consequence as well.

Parks under Construction-related Ministry (Option 3)

The mechanism of managing parks under a branch of the Construction Ministry would be intertwined with a developing infrastructure. Park roads, facilities, and transportation to and within parks may be easily prompted. The first 4 years of the KNPA were within a branch in the Ministry of Construction. Taiwanese parks are under the Construction and Planning Administration of the Interior Ministry.

This pattern may facilitate building infrastructure and more legislative support for park development. Parks as tourism destinations would be encouraged for economic development in regions with parks.

This could prove to be a worse situation, with too much of a development focus and park standards decreasing, as pork-barrel developments are imposed. The prevailing philosophy for a park system is very different from that of construction ministry. Inter-ministry conflicts on an issues regarding natural resources in parks would tend to be resolved on the side of development. In both cases, protection of park resources is likely less concerned and could hardly be guaranteed. The disadvantages of 'parks under tourism ministry' would be exacerbated.

Statewide, Autonomous Park System (Option 4)

IUCN recommends that Protected Areas, including National Parks, should be managed by the highest competent authority, with controls over those areas (IUCN, 1990). An autonomous, state-run park system is the closest one to fit this recommendation and, if not at least, a worthwhile model. Autonomous, state-run park systems exist in many countries, dealing solely with the administration of National Parks and related areas.

Because parks are managed by sovereign nations with histories of unique political, economic, cultural, and environmental contexts, their strategies and policies reflect their cultures. In some cases, the widely accepted goal of autonomy for National Park agencies may not always be beneficial due to interagency rivalry and communication problems (Machlis and Tichnell, 1985).

Organizational culture of an autonomous park system would be made and affected mainly by the within-system personnel, not by people outside system. Thus, such a system tends to articulate and perpetuate its own philosophy. The concerns for allocation of budget for an autonomous park administrative system are not questionable, regardless of support or discouragement of that idea. For example, one Korean expert, emphasizing the need of a statewide system for parks, said ‘The status of the KNPA should be raised *to a governmental-level agency*, National Park service, with more staff and budget’ (PE in Wave 2; italics added). Meanwhile a park employee preferred the status quo of the KNPA, saying ‘giving more self-control *including budget* to the KNPA would result in more creative and active management in KNPA’ (in Wave 3; italics added). This comment, in terms of funds available, connotes the need of the KNPA’s being autonomous, although it is based on preferring the status quo.

Competing for budget in intra-department (or division) level would not exist as it would in Option 1 (Parks under forestry division), although an inter-park system competition for funds for the system would exist, because some funding from the legislative body to the system is guaranteed.

Furthermore, an autonomous park system would tend to support most park objectives, discharge its mandate effectively, and emphasize the distinction of National Parks. When approaching more mature stages of park system evolution, an autonomous park administrative system needs more expertise. Consequently, it would tend to recruit future employees with park management backgrounds and/or primarily being interested in National Parks.

There are disadvantages of this system. In a park system with small workloads, existing executive departments may manage more economically. Problems would be exacerbated if an authoritarian government projected an image of political maturity by establishing an autonomous National Park system.

In some countries, agricultural and developmental policies often supersede conservation objectives, integrating park management into related land-use departments. Such integration of systems to include agriculture may improve the status and governmental awareness of National Parks (Machlis and Tichnell, 1985). The split in land use concerns among various departments may be intensified in countries with a high population density. A comment from a respondent in Wave 3 would present such intention:

‘National Parks should consist of natural beauty/scenic views ... we do protect the ecosystem in order to protect national scenic views ... If a plain scenery is surrounded by an important ecosystem, then a separate system can be used to protect the ecosystem.’

Thus, when an autonomous park system promotes the establishment of parks with its staff tendency of narrow-minded philosophy, it may have a public benefit problem at a larger scale than that of ‘parks-on-paper.’ That is, on the one extreme, individual paper parks may provide little public benefits. However, on the other extreme, an autonomous system’s philosophy would not allow for the fact that parks are only part of the total environment and total government.

Other thoughts in this autonomous system is the US National Park Service (NPS), which has various arms to deal with many types of parks including National Parks, recreation areas, and historic sites (Figure F.1 in Appendix F). Some panelists in this study believed the applying the concept of US National Park system to the Korean park system should be considered while some did not believe.

However, US NPS is not autonomous. Only before the NPS expansion in 1933, the NPS partly fit the term that Ise (1961) used -- 'central park bureau or service.' Such system illustrates the general pattern of an autonomous, nation-wide park organization. Currently, the NPS is one of the 13 agencies in the Department of Interior (DOI). Compared to its managing units of 335, including 48 National Parks, in 1983 (Foresta, 1984), the NPS manages 385 units, including 56 units formally entitled 'National Parks' and a host of other destinations. Its acreage is more than 84 million acres, including an estimated 4.3 million acres of private land. The system has an appropriation of roughly \$2.38 billion in the fiscal year (FY) of 2002, employs about 21,000 permanent and seasonal employees, and has more than 285 million visitors yearly. In addition, 90,000 volunteers are involved in park works (National Park Service, 2002). The organizational structure of the NPS, in FY 2004, presents that its director has two deputy directors, each in charge of one of the major divisions. The everyday park operations and management are carried out with 7 regional offices and the superintendents and staff of the individual National Parks and cultural heritage sites.

Locally Administrated Park System (Option 5)

In contrast to a statewide, autonomous system and a park system under forestry division, tourism ministry, or construction-related ministry, local administration tends to emphasize local citizens' involvement in planning, administration, and management of parks near their residences. While countries may have their own adaptations, park experience from the England, Wales, and Scotland is the most apparent in this type of locally managed park system. The Scottish witnessed their first National Park, the Loch Lomond and the Trossachs National Park in 2002 (The National Trust for Scotland, 2002)

It is worthwhile to review the British experience of National Parks. The British National Park movement took hold in the 1920s and 1930s, when urban sprawl and industrial developments threatened the countryside. Responding to many environmental groups' concerns, especially of degraded natural beauty and destructed wildlife, the Addison Committee examined the feasibility of establishing National Parks. However, it was the '1947 Town and Country Planning Act' that founded the present basis for National Parks. Two noticeable mechanisms of this act were nationalizing 'development rights,' resulting in all development under the nation's control, and 'zoning land use' (Woo, 1992).

Finally, the '1949 National Parks and Access to the Countryside Act' made the British National Park idea come true. This act, in particular, concerned itself with scenic beauty, wildlife, and public access to the countryside, setting up two statutory conservation bodies: (1) The Countryside Commission (then National Parks

Commission) for landscape conservation and providing recreation, and (2) The Nature Conservancy Council (then Nature Conservancy) for nature conservation and scientific research (Woo, 1992). In this act, to administer National Parks, National Parks Authorities (NPAs) were established. They are local government authorities in the form of either special boards or committees, that is, a type of committee depending both on political circumstances at the time of park's establishment, and on whether or not the park extends over one or more counties. A National Park situated in a single county (e.g., Dartmoor National Park) is planned, administered, and managed as a unit by a Park Committee. If a park extends over more than one county, it may be administered by a Joint Board as one unit (e.g., Peak District and Lake District National Parks), or, in parts, by Park Committees of the separate county councils, with a coordinating Joint Advisory Committee (e.g., Brecon Beacons National Park) (Wetterberg, 1974; Woo, 1992).

Both the Boards and Committees operate warden (ranger) services, negotiate agreements for public access to privately owned land, and provide facilities for recreation such as picnic sites, trails, campgrounds, parking lots, and information centers. One third of the members of the Boards and Committees are appointed by the Secretary of State of Wales. Two thirds are locally appointed by county councils from the councils' own members. Thus, the British Boards and Committees have local majorities, but also national representation.

The Countryside Commission, which is an independent national authority established by the 1968 Countryside Act, provides advice and guidance to the Boards and Committees. Members of the Countryside Commission are appointed by the Secretary of

State for Wales and the Secretary of State for the Environment. The staff of the Commissions is drawn from the Department of the Environment.

The cost of administering the National Parks is primarily met out of the funds of the county councils. The funds are raised by local property tax, but may be supplemented by grants from the national government. On the recommendation of the Countryside Commission, up to 75 percent of the capital cost of park facilities such as picnic sites and parking lots may be met from central government appropriations (Wetterberg, 1974; Woo, 1992).

Some advantages of a Locally Administrated Park System include a local administrative system that would encourage local input into the management of parks. Such a system also helps assure that the parks provide the benefits desired by local representatives of the public, not just the benefits that professional park planners believe the parks ought to provide. When the administration and management of each National Park is practically autonomous from the rest of the areas, the parks should truly evolve to meet local needs.

A pattern of local administrative organization of parks may be suitable both where parks have extensive private lands and where the parks are publicly owned. In England, where the parks are established regardless of private ownership and the government does not intend to relocate the owners or otherwise attain the land, a local pattern of park administrative systems may be the only realistic option.

In Korea, private landownership is culturally significant and even symbolic. Moreover, about 20 percent of National Park lands are under Buddhist temples'

ownership. Thus, private landowners would tend to support this pattern of park administration, especially where it meant that private landowners would have a choice in deciding what activities would be appropriate on their lands in the parks.

A dominance of local control, which could lessen the national significance of parks and sense of a coherent integrated system, is one of the disadvantages of a Locally Administrated Park System. IUCN's suggestion that park systems should have the 'highest competent authority' reflects such significance. Appointing a majority of local citizens to park committees could result in policies which reflect mainly local interests and could hinder objectives of preserving nationally or internationally important examples of natural, cultural, and/or scenic assets.

Where funds for park administrative duties directly come out of local taxes, Park Boards or Park Committees may wish to minimize these local tax burdens, to the detriment of park values.

Under a system of locally administrated park organization, the experiences gained in one park may not be communicated to the individuals managing other parks. Without a national administrative structure, new parks would be established as a result of local people's efforts and might not represent areas of truly national significance. Under a system of local administrative organization, members of Park Committees or Park Boards frequently are not trained professionally in park management and the positions are not full time jobs. While it is appropriate for citizens to define objectives for the parks, professionals are trained to define the range of possible objectives and the means of achieving them.

A second thought emerges from this pattern. In terms of local level management of National Parks, some Korean local governments insist that National Parks should be under their control. It is not clear whether that means that local citizen participation in park management would be inappropriate in Korea under the circumstances of low financial independency of the local governments. They tend to even like to transfer their managing authority, as the mayor of Kyungju City once expressed his concern for getting out of management of Kyungju National Park. However, the local citizens may not interpret, for the sake of their local governments, what they intend; it would be similar to the concept of this option presented in this section.

Parks under Auspices of a Ministry of Environment (Option 6)

Viewing National Parks as only one part of total resources in a country instead of as entities themselves has been developing for several decades. This trend, ranging from considering park systems from a holistic point, to applying Sustainable Development to Protected Areas, results in placing some National Park administrations under ministries broadly in charge of the protection and management of all of a nation's resources.

The Japanese National Park system, first introduced in 1931, is currently under the charge of the Bureau of Nature Conservation, Ministry of Environment (then, Environmental Agency), which was established in connection with the Nature Conservation Law (1972). In 1970s, the MOE emphasized preservation rather than dual goals of National Parks (Oyadomari, 1985).

The Ministry of the Environment manages the National Parks system in Japan in close cooperation with prefectural governments, municipal authorities, landowners, and

the private sector. There are 67 Ranger Offices under 11 National Park and Wildlife Offices (<http://www.env.go.jp/en/jeg/nps/np.html>). Japan, under the Natural Parks Law of 1957 (last amended in 1990) has 3 basic types of natural parks: 28 National Parks, 55 quasi-National Parks, and prefectural parks. The natural parks are administered through offices of the national Nature Conservation Bureau. Quasi-National Parks are designated by the Minister of the Environment after reviewing recommendations of the prefectural governments. Local governments administer these areas and the prefectural natural parks. A Nature Parks Council, composed of interested citizens, makes recommendations to the Minister on designation of new areas, zoning plans, and park facility developments by private enterprise or local government.

Both Korea and Japan have few lands for use and are highly populated. After several reorganizations, the KNPA was placed under the Korea Ministry of Environment in 1998.

In Venezuela, with the creation of the Ministry of Environment and Renewable Natural Resources (MARNR) in 1977, the administration of National Parks and natural monuments was transferred to the National Institute of Parks (INPARQUES), which is attached to the MARNR. Within the INPARQUES, the Office of National Parks has 3 departments: Planning (park evaluation and monitoring), Management (protection and maintenance), and Public Outreach (interpretation of Nature and training courses).

Parks under an umbrella agency that is generally concerned with environmental matters would tend to be more evenly balanced with other environmental demands. A park system under the environment ministry would be the most appropriate place for

protected areas and biologically diverse ecosystems. That is, parks would be placed in a context of a total environmental system. Those park objectives dealing with the conservation of natural resources would tend to be furthered. Since similar objectives are now under the mandate of several different bureaus, duplication of efforts may be eliminated. Parks under a general environment agency (ministry or department) might be more assured of appropriate fund allocation. However, where parks receive little or no funds, such an administrative pattern might elevate the chronic budget shortfall for parks.

Unless parks had 'favorable places in the sun' (Sellars, 1997), placing parks within a broad agency concerned with the total environment might make parks a subordinate consideration in a relatively large organization.

Elements within a park system itself such as wilderness areas, recreation sites, and educational study areas, may not receive the attention and coordinated management possible under other park administrative organizational patterns. Major recognition of a nation's bureaucracies may take years to achieve. All of these happen in Korea.

Mixed Administrated System (Option 7)

Sweden's park system shows the hybrid of the previous two options: locally administrated park system and parks under MOE. Under the MOE, the Environmental Protection Agency (EPA) is an independent authority whose Director-General is answerable to the Government. The government controls its agencies, including the EPA, by means of ordinances, commissioning of reports, the budget, and appointment of Director-General and board. However, individual ministries, including MOE, are unauthorized to interfere in the work of agencies. The EPA decides on the management

of National Parks and suggests new parks. Parliament makes a decision to designate a National Park (Swedish EPA website: www.internat.environ.se). The EPA assumed formal responsibility for the administration of National Parks in 1976. In the late 1980s and early 1990s, in the wake of the movement for decentralization, the day-to-day management of the parks passed to the regional level of government. For example, a foundation for Tyresta National Park is mainly funded by the EPA and partly from local municipalities. The foundation's governing board consists of 2 representatives from the EPA, 2 from the Stockholm regional administration, 2 from the Stockholm city administration, and 3 from municipalities bordering the park (Tilton, 1998).

Cross-border Park System (Option 8)

In the case of two different sovereign countries' agreement on establishing a special area as a tourist destination, shown in the case of South and North Korea, Mt Diamond (Keum-ghang-san) NP in North Korea, is better off with a special joint arm to manage the parks. A cross-border park agency will be created due to the opening of Mt. Diamond. For foreign exchange purposes of North Korea, it is better to serve the visitors without creating any political conflicts. Cross-border parks (inter-National Parks) exist in the other parts of the world, for example, in the US and Canada, and South Africa and Mozambique.

Generally speaking, this pattern is highly likely to be complicated. At least, different philosophies and missions among involved agencies from different nations can be confusing, conflicting, and counter-productive.

Joint Park System Supported by Environmental NGOs (Option 9)

Unlike the decentralized park authority to locals, a partnership with environmental NGOs is one of the most evolved patterns. In particular, delegated NGOs for park management means that the parks are 'fully financed' but not 'fully funded' by those NGOs. Jamaican experience shows this system, separating management from central authority. It is well executed, for example, in the Montego Bay Marine Park (MBMP) in Jamaica. The MBMP, founded in 1991, is recognized as a Category II park by the IUCN.

Founded by Friends of the Marine Park in Montego Bay, the Montego Bay Marine Park Trust took over the responsibility for the management of the Park in 1996. The Trust, a not-for-profit, NGO, finances the programs in MBMP through donations, merchandising, fundraising and event-planning. Its mission says,

'to conserve, restore and manage marine coastal resources in Montego Bay for the maximum sustainable benefit of traditional users, the community and the nation, and the enjoyment of all mankind, by providing effective programs for public education, technical support, monitoring and interpretive enforcement.'

Another example is the first Jamaican NP: The Nature Conservancy and the Jamaican Conservation and Development Trust (JCDDT) worked together to establish the Blue and John Crow Mountains National Park (BJCMNP). The JCDDT is a NGO and a

registered charity founded in 1987. It has over 300 members and is governed by a Board of Directors and was given full management authority over the BJCMNP in 1996. There is a full-time staff of 27, fifteen of whom work in the BJCMNP.

Overall, NGOs and nonprofit corporations locally run the National Parks of Jamaica. Thus, the benefits from the Jamaican system shows no tax-supported employees, local decision-making, and a strong sense of local ownership. These benefits provide improved quality of life, revenues from tourists, and biodiversity protection (LaPage, 2002).

No costs for park operating will ease the burden on the government and taxpayers. This park management system helps sustain existing parks, supplements park system jobs, and increases citizen involvement in their parks. Local economy would be enhanced and recruiting volunteers would be easier than it is for government agencies.

Disadvantages also exist: under this kind of ‘skeleton system’ without a nationally administrated structure, the experiences gained in one park may not be communicated to the management of other parks. Also, new parks would be established as a result of local people’s efforts and might not represent areas of truly national significance.

Overall, the nine options are summarized in Table 24 (p.150) and Figure 10 (p.151), where ‘ → ’ presents advantage(s) of an option, while ‘ ↔ ’ shows disadvantage(s).

Table 24: Summary of nine options of National Park system

	Options								
	1	2	3	4	5	6	7	8	9
Benefits from Foresters	#								
Budget and Authority									
Budget proposal in ministry	#	#	#			#			
Own budget proposal				#					
Park infrastructure			#						
Highest authority				#	x				
Social and Natural Environment									
Cultural resources as tourism potential		#							
Lack of natural resources background		x	x						
Ecosystem protection						#			
Park Philosophy									
Philosophy conflicts	x		x						
Intra-ministry competition	x					x			
Public's confusion about park idea	x	x	x						
Park idea/philosophy				#	x				x
Land Use									
Park with extensive private lands					#				
Land use conflicts				x					x
Self-financing									#
Local Involvement					#		#		#

Key:

- 1 Parks under forestry division
- 2 Parks under tourism ministry
- 3 Parks under construction ministry
- 4 Statewide, autonomous park system
- 5 Locally administrated park system
- 6 Parks under auspices of a ministry of environment
- 7 Mixed administrated system
- 8 Cross-border park system
- 9 Joint park system, which are supported by Environmental NGOs

- Advantage

x - Disadvantage

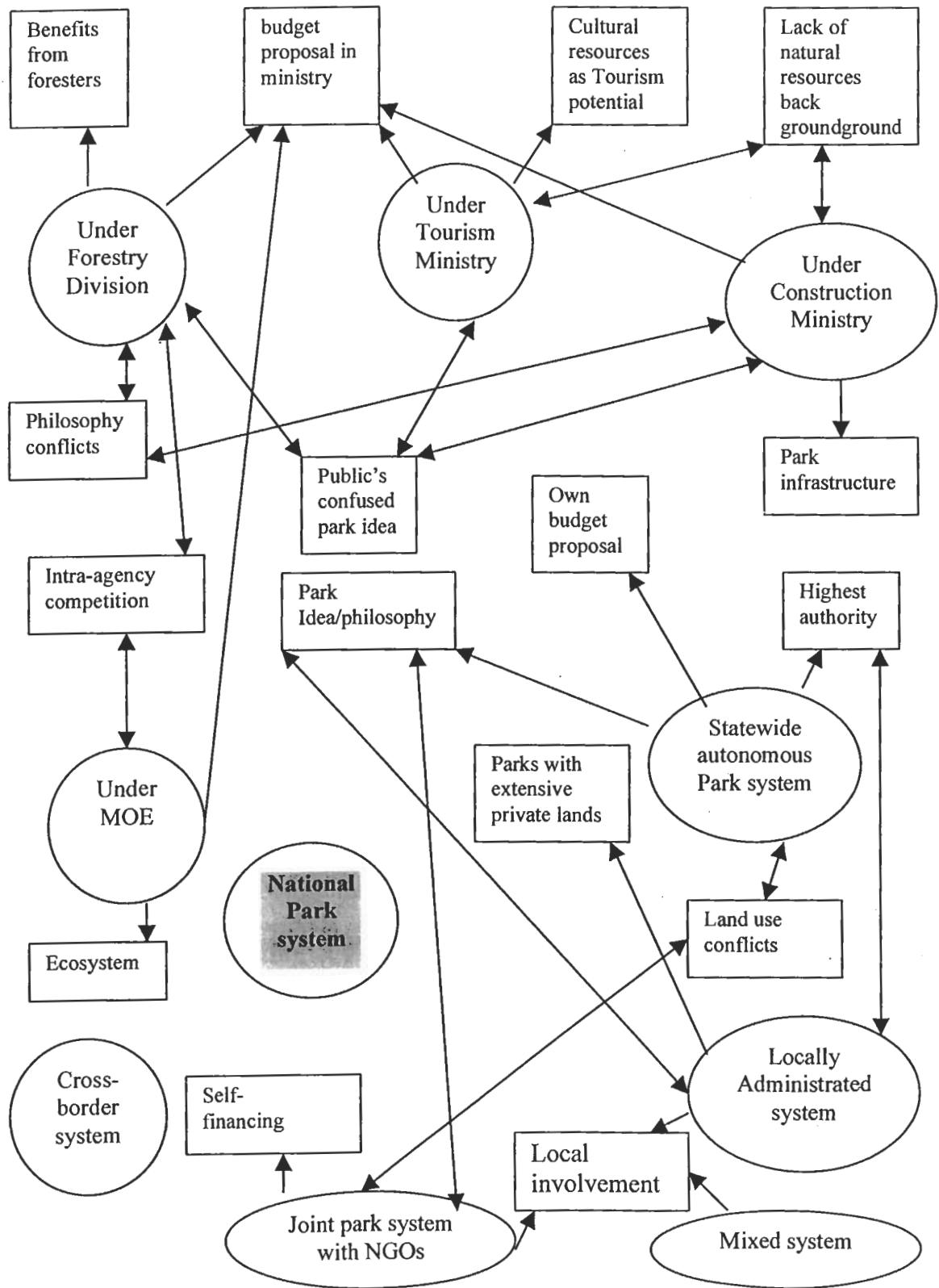


Figure 10: Relevant flows among nine options in 'System of National Parks'

6.3. General Public's Low Awareness of National Parks

Five options -- (1) Create Interpretive Programs and Promote Environmental Education, (2) Encourage Environmental NGOs, including Conservation Organizations and Friends Groups, (3) Partner with Mass Media, (4) Encourage Public Participation in Park Planning and Management, and (5) Promote Volunteer Programs and Honorary Ranger Programs -- will be discussed to increase the general public's awareness.

Taking no action for gaining public awareness would require no cash expenses or effort by park administrators. In some Korean National Parks where visitation has declined, this option could postpone what may ultimately be a problem of high visitation pressure. Broad park policy changes, following governmental power shifts, could also favor this option. If the policy changes were frequent and dramatic, attempts to gain public knowledge and support may only result in public confusion about the parks (Wetterberg, 1974)

Public knowledge and support directly affects the financial support for the parks. In doing nothing, a chance for public appreciation of the park values is lost and the legislative and executive bodies would not recognize a park system.

A park system doing nothing to promote its values will face threats such as development pressures for other land use purposes, including resorts and heavily commercialized recreation areas. Such a system would lose its bases for discharging its mandate, for carrying out its objectives, and for providing public benefits, if not protected. For example, a park employee said that national movement by the general

public is needed to articulate a National Park idea and the resolution of the under-budget problem will depend on the NGOs activities (in Wave 3).

Create Interpretive Programs and Promote Environmental Education (Option 1)

Interpretation plays an important role in park management. Interpretive programs help park management's efforts to reduce non-conforming behavior by visitors. Generally speaking, informative, educational attributes of interpretive programs will increase the general public's awareness of National Parks. That is, interpretation is management. Interpretive programs could help achieve all park objectives. Such programs help visitors to understand parks and to appreciate park values. Thus, interpretation could get visitors' voluntarily cooperative behavior toward the protection of park resources, rather than using law enforcement. In this case, costs for running such programs could be vastly reduced.

Through training, selected locals living near/within parks may be good candidates as interpreters. They can excel in park interpretive programs by using their knowledge of cultural, natural park resources. Locals are not only related to protection of park resources but also politically potential to influence lawmakers (Nepal, 2000).

Overall, it is well described by Mather's words, 'the parks are vast schoolrooms of Americanism, where people could learn to love more deeply the land where they live' (quoted in Sellars, 1997).

However, although park interpretive programs can be started on a low budget, even those costs may be a burden in newly started park systems. The costs to run such programs would be increased, if the new system becomes more recognized.

Without widespread park support, park interpretive programs would receive little use, so would not likely be justified. Whenever interpretation is viewed by management as an 'extra' rather than as an essential tool of managing parks, the interpretive function will fail to achieve its potential.

In broader scope, promoting Environmental Education (EE) will benefit for parks, because goals of EE are to maintain and improve quality and to prevent future environmental problems. Environmental quality is directly relevant to the lives of people. The public learn about the consequences of environmental degradation as well as the importance of 'ecology' and how the world works. Thus, the public learn about its role in preventing environmental problems. In Tbilisi, Republic of Georgia, delegates from more than 60 nations ratified the definition of EE in 1977, which is 'a process aimed at developing a world population that is aware of, and concerned about, the total environment and its association problems, and which has the knowledge, attitudes, skills, motivation, and commitment ... toward solutions of current problems and the prevention of new ones' (Braus and Wood, 1993, underlines added). Partly, EE is information education, increasing public knowledge about environment.

Encourage Environmental NGOs, including Conservation Organizations and Friends Groups (Option 2)

Objectives of environmental organizations often coincide with those of National Parks. Korean environmental organizations include the National Parks Conservation Network, Green Korea United, Korea Environmental Federation, and professional

societies such as the Korea Ecology Society. These organizations are counterparts of those of other countries -- the Sierra Club, or the Friends of Acadia, in the U.S.

Encouraging formation of flagship conservation organizations and Friends groups can help achieve many National Park objectives. Depending solely on governmental management, whose budgets and personnel to support parks are often limited, would need such organizations that can provide viable alternatives. Such organizations have members with enthusiasm, skills, and time dedicated to parks. They often are competent interpreters and can do various volunteer jobs. Furthermore, they can raise funds for parks in ways that public agencies cannot. Also, as watch groups, such organizations can critic park policy in lieu of governmental officials, as well as can make a petition for improvement of park policy. Based on stewardship, these organizations are at front-line to influence on park policy and public opinion. One Korean park employee in Wave 1 expressed the importance of such action.

Often times, highly motivated environmental groups may want park policy to follow their opinions. They may tend to be zero-sum and leave little room for political compromise (Arnold, 1993).

Partner with Mass Media (Option 3)

The mass media includes TV, radio, movies, newspapers, books, magazines, internet, and other publications. Basically, a partnership with mass media is better than paid advertising in mass media, reducing money spent by parks. With no doubt, mass media has influenced every corner of people's lives, including parks.

Boosting public awareness by using mass media is not new. In the American park experience, park-related article essays, paintings, photographs, newsletters and folklore helped the general public acquire knowledge to understand, and to support parks (Heacox, 2001). In Japan, between 1948 and 1964, more than 250 articles and notes appeared in *National Park* magazine with regard to recreational design, planning, and tourism, and these publications were responding to the public's seeking knowledge of National Parks (Oyadomari, 1985). Current trend in park management of Korea also promotes park values by encouraging writers and artists (KNPA website).

Literally, thousands of incidents parallel that of a box-office movie shot in a National Park in New Zealand unintentionally drew record numbers of domestic and international tourists to that park.

It is not uncommon that commercial firm's advertising strategies stress National Parks. For example, when Costa Rican National Parks were being included subtly in some commercial advertising, it promoted the idea that the parks are essential symbols of Costa Rica, although the parks had no connection with the product advertised (Boza, 1974). Other examples are so abundant that a series of automobile makers' advertising their products routinely use National Parks and monuments in the US. In terms of new media, the use of the internet has a high potential for increasing park awareness by the general public. Key aspects of this media are timely update information and the degree of accessibility into the virtual parks and real parks.

It would be advantageous to park management using the mass media even if no widespread support for parks existed. Using mass media to promote National Parks and

publicize park objectives has a long history. Parks must be relevant to people's lives if they are to survive -- the internet is the relevancy of the 21st century.

The media of Korea, with high rates of literacy and accessibility to the internet, has reached everywhere in Korea.

As two Korean park employees pointed out, the non-feasibility of using mass media, is one major disadvantage of using various media. Although some governments subsidize educational or public interest programs or even broadcasting studios, unsubsidized radio or TV time is normally expensive.

Encourage Public Participation in the Park Planning and Management (Option 4)

Public participants include park users, private owners of lands within parks, environmental organization members, and local people. This can take a form of 'team,' consisting of such participants as well as park employees, researchers, local governments, and concession contractors. All of the input from such team would identify and suggest alternatives to resolve them. Through this, some valuable ideas, which otherwise had not been considered in park professionals, would be suggested from the team.

Meanwhile, public involvement in planning and management are not favored in some countries that have initiated park policy from the top-down, rather than from bottom-up. Like other volunteers, only people with time and economic stability can participate.

Promote Volunteer Programs and Honorary Ranger Programs (Option 5)

Although overlapped with discussion in 6.4. ('Obtain Volunteers' Support'), p.159, derived impacts of volunteer programs yield positive impacts on awareness of

parks, because the volunteer's experiences with parks would be widespread. This 'word-of-mouth' will prompt parents to allow their children's participation in such honorary ranger programs as Junior Ranger Programs.

6.4. Under-expertise of Park Management

Park systems in their early stages frequently lack expertise -- diverse park skills including planning, interpretation, administration, and protection of biodiversity, ecosystems, and cultural heritage. This deficiency may take several years or longer to be resolved, because it is perceived abruptly when parks surpass the 'reservation stage' of 'paper parks', and advance to the 'early management' and 'rising public interest' stages, described by Clawson (1974).

At least partially, the lack of park expertise is related to underbudget (Machlis and Tichnell 1985), which prevents a park system from recruiting needed staff. A Korean academic faculty panel member said 'experts who have clear park philosophy ... and at least 10 years of park management experience must be recruited for both the MOE and the KNPA.' Several panelists pointed out the need for recruiting system changes and securing experts for the KNPA to discharge its mandate with proper management tools, and under-budgeting is the main barrier to do that (Wave 3, p.112 in Chapter 5). Some options to resolve under-expertise include: (1) obtain volunteers' support (2) provide staff opportunity in re-training, and (3) incorporate park skills into the educational institutions.

Under-expertise to operate and maintain the National Parks prevents achieving park objectives such as protection of park resources and provision of public benefits.

Obtain Volunteers' Support (Option 1)

As a work force, volunteers can supplement under-expertise of park personnel or under-staffing. Tasks become more than staff can handle can be volunteered, especially during the peak seasons and in favored sites.

In the US, a Volunteer in Parks Program (VIP), initiated in 1970, is a good example. The volunteers have acted as guides, have done some trail and other maintenance works, and have helped in environmental education programs.

Instead of mandated army duties, alternative military service is likely to be possible, in the form of work in parks. In Korean parks, this pattern of alternative military service as quasi-ranger began in 1999.

Supplementing both adequate staffs and inadequate staffs, volunteers programs virtually costs nothing, compared to operate regular park programs. Because volunteer programs are often well publicized, they help to increase public awareness about parks, and may promote political recognition for parks. Volunteers in educating visitors and locals about park values and regulations would relieve workloads of park employees, due to reduced law enforcement related tasks.

However, volunteers cannot replace regular staff work: they supplement it. Volunteers are not free, i.e., recruiting and supervising volunteers and maintaining volunteer programs costs money and time. For example, training those under-skilled volunteers who might unintentionally jeopardize park resources needs extra park staff to

deal with it. Even, volunteer programs become to need large budget, as they grow. Also, it is difficult to start volunteer programs in some countries where people could not afford enough time and money to participate.

Provide Park Employees with Opportunities to Develop Themselves (Option 2)

Using technical centers and specialized workshops would enhance park expertise. Training centers provide park employees with intensive training programs regarding day-to-day management. In length, such programs vary. The centers sometimes serve multinational clientele and provide a chance to exchange ideas among the clientele. These multinational clientele also provide a source of revenue to help pay for the program. The US NPS has 3 training centers: The Albright Training Center at Grand Canyon National Park is the starting point for new permanent employees. Its courses are mainly an orientation to the diverse functions of the US NPS. The Mather Training Center at Harpers Ferry emphasizes the development of environmental interpretation skills, while the National Capital Training Center deals specifically with law enforcement and training of the US Park Police.

Establishing and operating training centers requires large budgets, which would be likely less funded in case that public's support for National Parks are not popular.

In the short-term, specialized workshops and courses help park staff to achieve most of park objectives: such short courses help solve the short-term aspects of under-expertise. Also, they can provide in-service training for an already adequate staff. An example in the interpretation field is National Association of Interpretation (NAI) annual workshops.

Sometimes, new policies and trends would be timely exposed to park staff in specialized workshops. Costs to participate in workshops are less than to be involved in training centers. However, specialized courses and workshops offer limited training, although they are intensive.

Incorporate Park Management Skills into the Educational Institutions (Option 3)

Formal education is a long-term investment. Survival of parks is influenced by professionally trained park staff with vision, skills, and professional ethics.

However, incorporating park management skills to universities and colleges, in both undergraduate and graduate levels, would be difficult, because university/college programs often slow to adopt new curricular. More often, forestry schools offering park management courses may be reluctant to recognize park management as a co-equal field of study.

6.5. Visitor Pressure

Visitor pressure causes impacts on trail, campsite, wildlife, vegetation, and overuse of park facilities. Visitor pressure degrades park resources and quality of park visitor experiences, as a whole. Such pressure also impacts local communities within or adjacent to parks, causing conflicts or even resentment from locals. Generally speaking, the public's lack of awareness leads to little use of parks, while increased awareness increases visitation.

Although some parks with high awareness by the public are not yet saturated with visitor use, such parks still have a high potential for over-use. However, in Korea's case,

the problem is that most of the parks are at the saturation point, although the general public still has a low awareness of parks. Considering the virtual lack of alternative recreation areas in Korea other than parks, due to limited available public lands for recreation, and the public's perception of 'parks as pleasure grounds' purposes for parks, such overuse in Korean parks does not clearly fit in Clawson's model (1974). Hence, if the US and Canadian park systems mostly fit the model, Korea should look at other alternatives and modified versions of US and Canadian systems.

Nevertheless, any park with a high potential for overuse should prepare by applying management techniques in advance. Yet, in Clawson's model, what constitutes 'overuse' and when is a park reaching 'carrying capacity' are not easily defined. Recreation carrying capacity is essentially a subjective term. Wagar (1964) defined it as 'the level of use at which quality remains constant.' Human judgment is required to decide the acceptable quality for recreational experiences. 'In every statement of carrying capacity there must be, at least implicitly, a statement of some management objective' (Wager, 1964). Management objectives also generally require subjective human judgment.

To diminish visitor pressure, park management could use the 'indirect' or 'direct' method (Gilbert et al., 1972). The indirect management techniques emphasize influencing or modifying visitor behavior, so visitors can retain the freedom to choose their course of action. Examples are (1) site manipulation such as building new facilities to attract visitors, or leaving an area trailless to discourage visitor use, (2) information dispersal such as educating users to basic concepts of ecology and care of ecosystems, and (3)

persuasion, such as park management's asking visitors to only use certain areas. The 'direct' method, attacks human behavior directly, so free choice of visitors is extremely limited by regulation of behavior. Examples are zoning, use of more law enforcement, rationing use intensity (use rotation, obligatory reservation, limit size of groups), physical barriers, and restrictions on such activities as building campfires (Hammit and Cole, 1998; Hendee et al., 1990).

An example of applying the direct method is the 'Rest-Years Program,' in Korea. The KNPA has begun restricting public access on certain trails for a certain period of time, usually 3 years with possibly indefinite extension of the period. Some critics, however, point out that implementing this zoning program was just administrative red-tape, with park management blaming overuse on the visitors, along with major deterioration of park resources (Lee, 2002).

In terms of these indirect and direct techniques, the following discussions will explore the 10 management options to reduce visitor pressure on parks. Options 1 through 4 apply to indirect management, while options 5 through 8 apply to direct management methods. Option 9 (Public transportation) and Option 10 (Alternative recreation areas other than National Parks) fall in the 'other' category.

In the case of an early development period of a very young park system, limiting visitor pressure may be inappropriate or even unnecessary. In that period, tourism promotion for National Parks as tourism destinations intends to get public knowledge about the parks and public appreciation for the benefits of parks. In turn, the increased

public visits and awareness of parks would provide increased budget allocations to parks to secure the public benefits derived from the parks.

Without limiting visitor pressures, it is hard to guarantee park objectives such as protection of ecosystem and biodiversity and quality of visitor experience. Consequently, the general public's support could diminish due to visitors' National Park experience becoming unpleasantly over-regulated. Also, some prominent recreation planning frameworks such as LAC, VIM, and VERP can be applied to cope with increasing visitor pressures (Manning, 1999).

Information and Education Programs (Option 1)

Information and education programs are designed to persuade recreation visitors to adopt behaviors compatible with management objectives (Manning, 1999). Based on visitors' awareness and motivation for behavior, such programs have the potential to reduce visitor impacts on resources effectively. In Table 25, p.165, problems caused by visitors are classified into 5 types along with effective management responses in terms of applying such programs. 'Uninformed' actions can be avoided by such programs with high potential of effectiveness, while 'illegal' or 'unavoidable' actions may have little or no effectiveness.

Interpretive programs as a part of informative and educational techniques were reviewed in an option in section 6.3 ('Create Interpretive Programs and Promote EE').

Table 25: Recreation management problems

Type of Visitor problem	Example	Possibly effective management responses	Potential effectiveness of applying Information and Education programs
Illegal actions	Invasion of wilderness by motorized off-road vehicles	Law enforcement	Low
Careless actions	Littering; Nuisance activity such as shouting	Persuasion, education about impact, rule enforcement	Moderate
Unskilled actions	Selecting improper camping spot	Primarily education about low-impact use practices, some rule enforcement	High
Uninformed actions	Concentrated use	Education-information	Very high
Unavoidable actions	Loss of ground cover vegetation in the campsite; Human body waste	Reduction of use levels to limit unavoidable impacts; Relocation of use to more durable site	Low

(Adapted from Hendee *et al.*, 1990 and Manning, 1999)

Site Manipulation (Option 2)

As park management can provide visitors with recreation opportunities, manipulating access roads, campsites, trails, and managing fish or wildlife populations is one way to disperse visitor use and increase quality of visitor experiences. In some cases, the total phase-out of park facilities would be necessary. The next option will cover the facility phase-out.

In this option, visitors have free choice of their actions. Due to the variety of manipulations of a site, visitors could physically choose a site fit for them. Some

facilities, such as visitor (information) centers, help people to understand, and enjoy the park resources.

If site modification is improperly done, visitors would be misled, and misunderstanding parks purpose. For example, a modernized visitor center in a pristine area would not be coordinated with surrounding features. Also a lump-sum of money would be needed to erect and follow-up maintenance costs. Some areas already highly impacted would need a 'direct' method such as selective zoning.

Facility Phase-out (Option 3)

Some facilities -- such as elaborate lodgings, concessions, swimming pools, and golf courses -- do not conform to park resources and can be removed or relocated outside parks. Some of such facilities have been built in parks as a result of visitor needs. For example, that early park development in the US was huge and lacked visitor accessibility prompted the establishment of major overnight accommodations in parks. However, while appropriate at one time, such facilities may no longer be needed due to improved transportation to access parks and development of areas adjacent to parks to these uses. Meanwhile, large National Parks still might need service areas such as gas stations and restaurants for popular park features that can be accessed only by car.

Park use by people not specially interested in the benefits a park offers would be discouraged. Eliminating or relocating facilities which do not specifically benefit visitor experience and protect resources would confirm the idea of the uniqueness of National Parks. It has already been shown that heavy-commercialized facilities in Niagara Falls (State Park) disseminate artificial aura in that area. Moreover, such removal or relocation

of hotels, dining services, and souvenir shops to an adjacent community would vitalize the local economy. Also, park management would use the portion of budget for other purposes, if park facilities and concessions are partly or fully subsidized.

Regardless of its appropriateness, some park facilities become part of the image (icons) of a park. That is, those facilities became cultural heritages. Thus, removal of those facilities and services traditionally associated with parks can decrease public support.

In case of the nonexistence of alternative facilities outside the park, phasing out park facilities is not applicable and even hinders park objectives. If facilities phased out of parks are transferred to distant communities, the local economy would not benefit. In a few cases, park-run facilities and services are lucrative, so phasing out them would reduce financial resources.

Charging Entrance and User Fees (Option 4)

Fees for park use invite a hot debate as to whether those charges were appropriate. Leaving that issue, to reduce visitor pressures, differential fees could be charged in terms of time of use, status of resources in each park, and group size.

Higher fees for peak-seasons and heavily visited areas would redistribute visitation to shoulder-seasons or to other areas. In addition, fee income could help support other less popular parks in a park system.

Moreover, system-wide, the funds raised by the higher fees could resolve, at least partially, the maintenance backlog of parks. Current implementation of the 'Fee Demo'

program in the US public lands management agencies is a good example, although it is not usually based on differential fees.

The KNPA has standard fee system (Table A.2, p.215) for park entrance and the use of park facilities. Under existing circumstances of under-budget and overuse, a move to differential fees would help current management backlogs and perhaps redistribute visitations.

If parks are less recognized by the general public, as in Korea, differential fees might confuse people. The current charge in Korea is about 1 US\$ per adult visitor per visit. Although such fees are relatively low compared to other countries, differential charges might bring public resistance. Because both park entrance fees and cultural fees for Buddhist temples in parklands are collected at the same time, regardless of whether visiting those temples, selectively differential fees based solely on park use would be hard to implement. A cultural fee for Buddhist temples, varying in each temple and often charging more than National Park entrance fees, is collected by the KNPA. The temple fees collected do not belong to parks.

Obligatory Reservation (Option 5)

Potential park visitors can reserve a place in the park prior to arriving there. This scheme was tried in six US National Parks in 1973, for overnight camping, but failed due to lack of experience of the contracted private company that had a close connection with then NPS director. In Korea, a reservation system started in 2001, for overnight campsites and accommodations.

This scheme can help park management to control the distribution of use in space and time by varying the number of permits available at different sites and times (Manning, 1999). That is, a reservation system can help distribute the flow of park visitors evenly throughout the peak season without causing 'bottle-necks,' frustrating to both visitors and administrators, at park entrance points. Those who plan ahead to visit parks would favor this alternative.

A complete or partial reservation system would cost much more to set up and maintain than queuing (discussed next), although such systems have been improved drastically thanks to computer-based technical support. Spur-of-the moment or serendipitous people would not benefit. It would adversely affect people who pass through or have no prior knowledge of parks they want to visit.

If a park system lacks a solid control over activities in parks, effectiveness of reservation scheme is questionable. In many cases, inter-agency cooperation is needed to effectively implement such system, thus costs more.

Queuing (First-come, First-served) (Option 6)

Queuing means setting a maximum number of allowable park visitors, permitting people to enter a park until that number is reached and then only letting additional people into the area as others leave. Some facilities need to be developed to support visitors waiting in line (Manning, 1999).

Queuing would be likely to provide more solitude and aesthetic enjoyment in parks. Sensitive park resources would be better protected due to limited number of

visitors. For park managers, queuing would be a cheap management option and favored by 'early birds' and those people who live nearby parks.

Compared to unemployed or retired, people living some distance from the park could not afford the time necessary to go to a park and wait to be admitted after someone else left the area. Large social groups such as tour groups and extended families could be broken up by this option.

Law Enforcement (Option 7)

Although the indirect method is recommended in most cases, in some cases law enforcement is the last resort to avoid extreme disturbing behaviors such as off-road vehicle driving or water-crafting in restricted areas.

Generally, it is assumed that the direct method would cost more than indirect method. Some countries including Korea have no park police. Thus, newly established law enforcement would be a burden on a park system.

Rezoning (selective zoning) (Option 8)

'Zoning' can separate conflicting uses by assigning them to different zones and help disperse the overall visitor impact -- but usually requires enforcement.

In highly populated countries having less alternative recreation areas other than parks, selective zoning could help to restore the already degraded areas -- but may reduce popular park support.

It would be management's perception to adopt zoning, bringing disagreement from the visitors. Also, without research, management would not know how long it takes

degraded areas to be restored under blocking the public access to those areas. Such sub-zoning is, for example, Korea's 'Rest-Years Program.'

Public Transportation (Option 9)

Impacts caused by dominant vehicle use include congestion, parking lot problems, and resource degradation (Miller and Wright, 1999). Such impacts are prevailed in heavily used area of some National Parks. Crowding could be perceived more to the total number of automobiles, than that of people in a park and is exacerbated when large private cars with a few passengers. Safe, convenient, and environmentally sound public transportation systems provide visitors with an alternative to private vehicles in park. The US has experimented with one-way traffic and with shuttle buses in some parks such as Acadia (Daigle and Lee, 2000), Arches, and Yosemite National Parks.

Ise (1961) stated that restriction of private cars would not invite some people who drive into parks because parks are places to go. Such people can find other places than parks for their driving-fun. Park duties relating to automobiles would also be lessened.

Restricting private autos would protect natural, cultural resources as well as wildlife animals whose migration patterns often interrupted by roads. Locals experiencing congestion in their communities within/nearby parklands will benefit from such public transportation systems.

People briefly visiting to parks would feel inconvenient, if adequate transportation systems replacing use of their own cars are not available. In some cases, disabled visitors would feel this as a barrier. Public transportation system needs a timely schedule and availability of routes that cover major areas. Costs involved in operating such system

would be huge. Because some parks were established to promote local development and tourism, such transit system would make such promotion to go slow pace. Overall, a future attempt for developing park-crossing roads will lose its support, if restriction of private autos fails to get visitor cooperation.

Alternative Recreation Sites (Option 10)

Earlier reports indicated the Korean parks should be supported by linked recreation sites and tourism destinations (International Park Planning Institute, 1972; Ruhle, 1968). Any park can be reached in 5- to 6-hour driving from any town in Korea, except Hallasan NP and some parts of marine-based parks.

This pattern would relocate those who visit parks due to lack of alternatives. The range from highly commercialized areas to natural setting environments would benefit the local economy, park resource protection, and visitors in less crowded parks.

The local governments with low financial independency may look for ways to get local finance revenue increased by developing recreation facilities surrounding parks. Thus, there would be no buffer zones between parks and those commercial recreation areas. It makes it worse that park purposes of the general public would be coerced or ignored, at best.

6.6. Strategies for KNPA

The National Parks (Category II) under the presence and impacts of inhabitants and prevailing private lands would take Category V (Protected Landscape or Seascape) as an alternative (Lucas, 1992). All 20 Korean National Parks and all 11 British National

Parks belong to IUCN Management Category V. Differences in these two categories are shown in Table 26.

Table 26: Differences of National Parks and Protected Landscapes

	IUCN Category II: National Parks	IUCN Category V: Protected Landscape
Suggested area for being designated	Extensive natural areas	Outstanding semi-natural landscapes
Conservation	Protected from exploitation	In productive use
Human presence	Protected from occupation	Inhabited
Authority	Responsibility of central government	Mainly responsibility of local government
Land-ownership	Publicly-owned	Mainly privately-owned

(Excerpted from Lucas, 1992)

Korean parks, from the outset, have mixed stages 2, 3, and 4 in terms of Clawson's park development cycle -- need for protecting resources, getting public's awareness, and decreasing visitor pressure (1974). Because the Yellowstone model does not fit any Korean parks, the KNPA should look for other alternatives to resolve under-budget and overuse.

Those models can be accomplished by both the top-down (Legislative body's action) and bottom-up (citizen participation) approaches. These two approaches are not mutually exclusive. From the bottom-up, environmental NGOs, grassroots organizations including Friends and Watch groups, and locals can initiate the changes. For example, citizens' petitions for amending park-related laws influence Congressional action. In the top-down approach, because the 'Standing Committee of Environment and Labor'

oversees legal aspects of the KNPA, it plays an important role in initiating the changes in the park system.

However, the change from the top-down, in general, is less likely to be successful. Only leaders of newly independent nations, with support from few conservationists, would be interested in establishing and maintaining parks as maturity symbols of their countries (Brockman and Merriam, 1973). Hence, the bottom-up approach is likely to be the only realistic alternative. In this vein, various comments were made by the panel. For instance, park staff mentioned 'NGOs initiation is needed. The KNPA itself cannot do that' (Wave 3) and 'Petition to the legislative body is needed' (Wave 1). Their comments are reasonable because the recognition that the central government places on National Parks can strongly affect public awareness of them. In turn, this public awareness likewise may affect the governmental emphasis on the parks.

The current budget history of the KNPA reveals the central government's de-emphasis on National Parks (Table 27, page 176). There are two kinds of government subsidy: central government subsidy (Column B) that is mainly allocated for park maintenance and that of the Ministry of Environment (Column C).

Budget allocations among various arms in the MOE imply that the KNPA has a merely subordinate role in an umbrella ministry, the MOE, which is generally concerned with environmental matters. The KNPA is evenly balanced with other environmental demands, as MOE states in Article 6 of the Natural Environment Conservation Act (Korea MOE website: www.me.go.kr):

‘The objective of basic public policy for nature conservation is to realize the principles for nature conservation articulated in the Natural Environment Conservation Act.’

‘Preserving biodiversity, conserving ecosystems, and sustainable using land and natural resources.’

Unfortunately, this objective is not dominant in practice for the KNPA.

Table 27: Budget proposal and appropriation *

Unit: million US Dollar (1 US\$ = 1,300 Korean Won, as of Jan. 2002)

FY**		KNPA budget				Budget from Div. of Natural Parks, MOE	Total budget for NPs	Total Subsidy		
		amount (A)	revenue generated by KNPA	% of total KNPA budget	Gov. Subsidy (B)	% of total KNPA budget	amount (C)	Amount (A + C)	Amount (B + C)	% of total budget
2001	P	36.6	26.4	72.1%	10.2	27.9%	32.3	68.9	42.5	61.7%
	A									
2000	P	35.4	24.8	70.2%	10.5	29.8%				
	A									
1999	P	31.2	21.4	68.6%	9.8	31.4%	22.4	53.5	32.2	60.1%
	A	41.8								
1998	P	33.7	27.4	81.3%	6.3	18.7%				
	A	40.8								
1997	P	30.9	25.7	83.1%	5.2	16.9%	34.4	65.3	39.6	60.7%
	A	38.1								
1996	P	30.1	24.4	81.1%	5.7	18.9%	27.2	57.2	32.8	57.4%
	A	40.1								
1993	P	15.7	12.8	81.4%	2.9	18.6%	31.4	47.1	34.3	72.9%
	A									
1991	P	11.0	8.7	79.0%	2.3	21.0%	20.2	31.2	22.5	72.2%
	A									
1988	P	73.8	41.5	56.3%	32.3	43.8%	15.7	89.5	48.0	53.6%
	A									

P (Proposed); A (Appropriated)

*by Ministry of Environment (MOE) in lieu of the KNPA that is a trustee organization with no legal background for its own budget proposal and appropriation.

**the KNPA transferred to the MOE in 1998.

Organic Act of Korean National Parks System

The genesis of National Park law in Korea was the ‘Parks Law of 1967,’ the purposes of which were ‘preservation of natural scenic views/landscapes’ and for public health, recreation, and refinement of emotional life ‘through promoting use of the parks.’ This law was amended in 1973, deleting the words ‘promoting use of the parks.’

The ‘Natural Parks Law of 1980’ replaced ‘Parks Law,’ adding ‘promotion of proper use,’ and amended in 1995, rewording from ‘proper use’ to ‘sustainable use.’ These modifications emphasized the need of conservation with the concept of sustainability, especially articulated in the 1995 amendment. The recent amendment of this law in 2001 evolved into more emphasis on environmentally sound use of parks, describing its purpose as following (Korea MOE, 2001):

‘intends to conserve Korea’s ecosystems and natural and cultural scenic beauty, and intends to ‘promote’ sustainable use for public benefits’ (Article 1 of the Natural Parks Law, 2001).

Interestingly, in describing its mandate, the KNPA places Article 1 of the 1995 Natural Parks Law as (*italics added*):

‘The objective behind the establishment of *National Parks* is the preservation of our natural environment (*ecosystem*) and Korea's natural beauty, and the promotion of sustainable use by the public, enabling them to contribute to the enhancement of public health, leisure, and recreation.’ (KNPA website *in English*: www.npa.or.kr)

In the original text, however, it says ‘natural parks,’ not National Parks. This misuse might be just an error or typo, but as subsequent articles of the law define three kinds of ‘natural parks’ (national, provincial, and county parks), the law has embedded in it an ambiguity in defining National Parks.

Ambiguities in the context of Natural Parks Law (NPL)

The first chapters of the NPL are very similar to those of the Japanese natural parks law, which define the 3 categories of natural parks as national, quasi-national, and prefectural parks.

A synopsis of NPL, in part, is in Appendix C, p.227. Overall, the NPL lacks who manages and how exactly they manage the National Parks (NP). Although the KNPA is entrusted with the management of the NP, the NPL fails to guarantee financial support for the KNPA. For example, it states ‘the central government bears the expenses for NP’ (Section 39), but simultaneously says the possibility of non-compensation use of national and local government’s properties to the KNPA, which in turn can sublease them to others under the Environment Minister’s permission unless those subleases cause conflicts in managing park facilities (Sections 58-60).

Therefore, the NPL should be amended, at least, to separate NP from two other categories with specifying financial resources to manage NP. Because the KNPA is corporate and considered as a foundation in civil law and applied to that civil law, creating a new organic act solely pertaining to NP would be better. Also, zoning (Section 18) should be amended, creating a 'cultural zone' to deal with Buddhist temples in 'Nature Conservation' and 'Natural Environmental' zones. In terms of staff recruiting (Section 54), rather than the KNPA chairman's appointment, it would be effective under the system of publicly open recruiting.

The new organic act would say its purpose is 'to preserve ecosystems and biodiversity, to conserve natural and cultural scenic beauty, to protect historic heritage, cultural property and wildlife in order to leave them for the recreational and educational benefit of future generations who have the same rights as the present general public.' To meet these objectives, the new act should specify an organization (under a ministry) as a 'state-run, autonomous agency and manages those tangible and intangible resources with financial support from the central government.'

Components of Future Park System

Based on this study panel's opinions, which help to get a rough image of the future system, the system should have some components to manage parks effectively and promote the park idea.

(1) Autonomy of Park System

The IUCN does not pinpoint a centralized park system as absolutely better than a decentralized system, recommending the former type as more competent in authority, but exceptions exist. Although international recognition of Korean parks as Category II (National Parks) is critical for national pride, considering the limited land available for public use in Korea, current IUCN recognition of Korean National Parks as Category V (Protected Landscape or Seascape) would not be unreasonable. Such countries with National Parks inhabited before being designated as British and Korea, have no Category II type parks (IUCN, 1990). More evolutions of these parks would allow them to be in Category II, if possible.

However, unlike the British system, a park system in Korea should have autonomy, in terms of legal administration and its budget proposal. First, if a new organic act were created, all resources, including cultural heritage in parklands, should be transferred and integrated to the park system. At some extreme, some comments may imply inadequate/unstable structure of the current park management and suggest creating a new system in different ways:

‘Creating a new agency deals on solely natural resources managed by separating natural resources management from the KNPA and other agencies such as forest Service.’

(Comment in Wave 3, PE)

‘Annexing the KNPA into the Forest Service that has major national forests in parkland.’
(Wave 2, GR)

Inter-rivalry has been overriding when a new agency emerges. Blending different agencies with their own paradigms, competence decreases the synergy of effectiveness (Clarke and McCool, 1996; Downs, 1967).

Instead of this kind of newly created park system, reformation of current KNPA to a ‘non-core sector’ in MOE would be better. This type is a hybrid of two options described in 6.2: Statewide, autonomous park system (Option 4) and Parks under MOE (Option 6). The benefits of this non-core sector system are emphasizing on ecosystem and biodiversity protection for the general public’s benefit. Protection of natural areas in parklands such as portion of Taean-haean National Park was abolished, even after the revision of the 2001 NPL and the review of Park Committee. If the KNPA becomes a non-core sector of MOE, with its own budget proposal, no other ministry can afford to deliver the idea of National Parks. Moreover, the current in-holdings of parklands of the KNPA should be kept, because of possible interruption of the park idea and little availability of public lands as alternative sites for National Parks.

Although some maintenance factors such as salary, work conditions, and company policy/administration, could not motivate an employee in an organization, if they were lacking, they would become major negatives (Herzberg et al, 1959). The autonomy of an organization largely depends on financial independence. However, a fully subsidized park system is likely to be unfeasible or unfavorable in governments who

seek smaller executive bodies. On one hand, full subsidy for park systems does not mean it makes the system more effective. Parks are intertwined with people's support who are inspired by those parks. This support helps such parks to be recognized as something different, maybe somehow superior to other entities that are managed by a similar concept. On the other hand, fully subsidizing park expenditure cannot solve the dual mission of National Parks. If promoting tourism needed funds to meet public benefits, park management's next expenditure would be maintenance costs for facilities resulting from promotion or maintaining of the resources impacted by such facilities.

Meanwhile, a self-financing park would not mean a total privatization of the park, nor would it be business-oriented, non-conforming, or revenue-generating. The term does not imply the reversed order of objectives (park mission) and means (funds). Reflecting its private corporation-attribute, the KNPA seems to be forced into full-fledged efforts to collect park fees and develop park-based revenue sources. This coerced order of objectives and means of the KNPA seems natural -- having no status for proposing a budget brings the idea of privatization and business development. It is not park-minded but business-minded. Basic legal statutes for parks, generally speaking, would support the self-supporting concept of parks. Currently implemented 'Fee Demo' program is an example: All participating federal land management agencies in this program were created by the legal statutes.

Therefore, revision of the National Parks Law or the new organic act for the National Parks should be a priority.

(2) Partnership with Local Communities and Governments

For parks partially subsidized, strong partnership with locals including residents and Buddhist temples who own lands in park areas, is needed. Under the current NPL, with regard to cultural resources, including ‘National Treasures’ managed by the Cultural Properties Protection Agency (CPPA) under the Ministry of Culture and Tourism and local-level heritages, this partnership will effectively protect those resources, regardless of what agency oversees parks. Moreover, Buddhist temples in parklands play a key role in sustainable tourism. A good example is the ‘Temple-stay’ program and the ecotourism components of Korean National Parks are impressive.

Although local government’s taking over managing parks would be ‘like trusting a cat with milk,’ due to the weak financial status of local governments, their roles should not be under-estimated. Especially, under the circumstances of prevailing private landownership in Korean parks, land swaps, conservation easements, developing alternative recreation sites, and constructing infrastructures such as access roads to parks will not be implemented without local governments’ cooperation. Also intensified, is the need for collaboration among the KNPA and provinces, for parks such as Chisan National Park, cross-bordering 4 provinces.

Local communities are directly affected by the park visitors in their areas. Their economic benefits are derived from the visitors spending in their communities, but congestion and pollution would happen at the same time. Thus, partnership with locals and non-locals, with a strong environmental ethics, is a main key to cope with both positive and negative impacts of tourism in these areas.

Chapter 7

CONCLUSION AND RECOMMENDATIONS

The idea of National Parks varies in each nation. In this study, paradigm shifts from parks as pleasuring grounds to education and for scientific purposes is one of the boldly mentioned sub-issues of the panel of experts. However, park evolution takes longer than such paradigm shifts. From minor issues to major ones, threats to parks have been recurring. For example, a Korean delegation to the Second World Conference on National Parks in 1972 said, 'environmental education should extend to the whole country, beyond the boundaries of National Parks, which are only a minimal goal' (Koh, 1974). Three decades later, park professionals still have this concern (see Waves 2 and 3).

As human beings have densely inhabited the Earth for only a small portion of its history, understanding and appreciating nature in terms of 'National Parks' is a recent development. Nevertheless, the National Park idea implies perpetuity, interprets the past and present, and needs people's cooperation, because National Parks are inalienable legacies we inherited and must pass on undiminished to future generations. A National Park system is necessary to effectively manage the parks. This study, by using the Delphi technique, explored the relationship between the National Park idea and the system-wide problems of the Korea National Parks Authority (KNPA), a non-

governmental, quasi-private organization, examining its various management/policy options.

The issues identified and the resolutions suggested revealed no surprises: an unstable park system with no solid organic statute, low public awareness of parks, underbudget/under-staff/under-expertise, and increasing visitor pressures. The panel delivered an oracle, which confirmed what every one knew. However, when a researcher queries a panel of experts regarding a specific topic, in turn, the experts simultaneously face the challenge of brainstorming the topic by contrasting other panelists' opinions with their own.

Recommendations based on the panel's findings in Wave 3 are as follows. The KNPA need to consider several options to address the circumstances of overuse and underbudget it is faced with.

7.1. Issue A: Park Philosophy Not Clearly Articulated

Finding: Changing park philosophy is seen to be most needed if Korea's National Parks are to remain viable in the face of intense future demands. However, the panel believed that this issue seems least likely to be resolved in the next 5 years.

Recommendation: Establish a Blue Ribbon Panel

Korean NGOs and park professionals should encourage the formation of a distinguished 'Blue Ribbon' Panel of experts to comprehensively study the National Park

conditions and trends, and to look at alternative styles of management from other models that exist around the world.

To deal with the urgent problems in Korean parks, the panel should set up a 'State of Korean National Parks,' study which should consider the following topics: (1) inventory of park resources, (2) role of the National Parks in Korea in terms of the Korean economy, (3) protection of biodiversity, (4) role of Buddhism legacies and their tangible/intangible properties, (5) potential of socially responsible tourism, (6) role of the parks in environmental education, (7) need for interdisciplinary research and exchange of information, (8) role of the central government in National Park administration and oversight, (9) need to amend relevant laws and acts, (10) monitoring and maintenance of park resources, and (11) study of management of other National Park systems. Each of these topics will now be discussed in detail.

(1) Inventory of park resources

The flora and fauna in parks should be regularly documented. The lack of periodic and system-wide documentation of these resources leads to missing the fact that the parks represent the major ecosystems in Korea. Although the lack of inventory of natural resources has been gradually addressed, a comprehensive inventory is a vital first step. Thus, the Blue Ribbon Panel should be supported by such professional academic organizations as entomology, ornithology, wildlife, fisheries, botany, and ecology. In addition, inter-ministry cooperation should be sought, to include the Ministries of Marine and Fisheries Affairs, Agriculture and Forestry, and Environment.

Cultural resources should also be comprehensively inventoried. For this, Culture and Tourism Ministry and its Cultural Properties Protection Agency should be involve, as should local governments with responsibility for the cultural resources located in parks.

Park facilities should be recorded into a database in order to better monitor them. Staff members should be categorized in their expertise for further recruiting of future employees.

Due to the large acreage of privately owned parklands, status of communities in or nearby parks should be addressed, especially for those National Parks fully or partially managed by local governments.

(2) The role of the National Parks in Korea in terms of Korean economy

Geographically, most Korean parks are within several hours driving from the domestic population hubs. Local communities surrounding or within parklands should benefit from the revenues generated by park visitors. Supporting these communities, the national and local NGOs can play key roles in building economic benefits for local communities.

Fees charged for park entrance and use should be based on a sliding scale system, thus currently nominal \$1 entrance fee per adult should be increased. To do this, fees charged by commercial resorts nearby parks should be studied.

Internationally, South Korea is located as a hub for major air routes between North America and China, Japan, and Southeast Asia. To increase tourism receipts, infrastructure should be developed from major airports to parks and promotion of park

visitation should be increased. An example of an infrastructure development that could be useful is a shuttle bus system from the tourists' lodgings and airports to parks, in conjunction with more extensive information centers or kiosks at airports. With regard to park promoting, there should be close cooperation between the Korean National Tourism Office (KNTO), the tourism industry, and the KNPA and its supervising ministry, Environment. A broad multi-media campaign that each park as a unique thematic destination will maximize the synergy of these organizations and industry cooperation. For example, the aura of Buddhist temples is ubiquitous in parks. Eventually, these park themes could be marketed more in package tours to encourage visitors in staying parks longer. Potential international tourists to parks should be identified by their country of residence rather than nationalities.

More importantly, besides the revenues from the foreign arrivals to parks, protected resources in parks should be emphasized: Recovering costs for degraded natural areas will exceed the revenue generated by the use of those areas as commercially oriented recreation facilities that are built within or adjacent to park areas.

(3) Protection of biodiversity

Because the parks are not islands in ecosystems, thoroughly inventoried natural resources should be protected in larger scope rather than limited in National Parks. Hence, the central government should recognize, not in myopia, the short-term needs (tourism function in parks for visitors) require biodiversity protection through wholehearted support from the government.

A more elaborated zoning system should be adopted to promote biodiversity protection. Defining unambiguous zoning purposes and effectively enforcing them should be foremost.

(4) Role of Buddhism legacies and their tangible/intangible properties

When a Korean master monk released his short message to commemorate the birthday of Buddha, the message, 'mountain is mountain, water is water,' was in everybody's mouth. Not only was the message very timely in Korea's political landscape in 1981, it also revealed the close connection between Koreans and their nature, immersed with traditional Buddhist thoughts. It is not a coincidence that Buddhism is ecology-minded, although some facilities in Buddhist temples, and their operation, have become less ecologically sound as they are modernized.

The legacies from Buddhism contribute to the potential tourism resources, which can appeal to international visitors and serve as the classrooms for Buddhism philosophy, architecture, paintings, music, and Zen studies. Therefore, a partnership with Chogyejong, the umbrella sect for Buddhist temples in parklands, should be initiated. Moreover, pertinent universities and colleges should be encouraged to participate in developing and maintaining these unique potentials. A new zone for Buddhism legacies and Buddhist temple-owned parklands should be designated.

(5) Potential of socially responsible tourism

Due to limited areas for recreation and tourism destinations in Korea, especially for outdoor recreation, park tourism should be carried out by socially agreed stewardship for the use of natural resources. Social trends should be monitored to identify recreation and tourism preferences and to enhance the general public support for responsible tourism, sustainable tourism, eco-tourism, green tourism, etc.

(6) Role of environmental education

It cannot be overemphasized to do environmental education for all levels of schools and age groups. Hands-on experiences by field trips suitable for each age group should be encouraged. Not only parks and other protected areas but also degraded environments are good places for such field trips.

(7) Need for interdisciplinary research and exchange of information

Natural sciences as well as social sciences should be involved in the form of conducting interdisciplinary research. Special attention to be paid to 'Liberal Arts' academia: Linguistics, Folklore, and (marine) archeology are the blind spots of park research in Korea.

Information exchange and dissemination of the results from conducted research should be encouraged. Overall, the KNPA, the Ministry of Environment, academia, and environmental NGOs should establish, at least, a 'Virtual Library' to make user-friendly access, facilitating research and the release of information.

(8) Role of the central government in National Parks administration and oversight

Although both concerns in ecosystems and the popularity of the Ministry of Environment (MOE) are growing, the MOE seems to keep focusing on non-park duties under its jurisdiction as the parks continue to deteriorate. Both executive and legislative branches should provide the basis of running parks: park designation is just one step toward recognizing parks as the crown jewels of Korea.

(9) Need to amend relevant laws and acts

The 'Natural Parks Law (NPL)' should be amended. In order to make it for the KNPA to become an autonomous organization, pertaining laws and acts for natural, cultural, and land usage should be simultaneously revised, in accordance with new NPL.

Ideally, to create a new law, 'Law of National Parks Authority,' would be better to replace the current 'Natural Parks Law,' rather than to amend it.

(10) Monitoring and maintenance of park resources

To build the baseline for conservation, regular monitoring should be conducted. It can be done by NGOs and local communities. There are a number of international organizations to be contacted to get suggestions for monitoring methods. Maintaining park resources should be accomplished first to avoid further huge expenditure and damage to valuable resources.

(11) Study of management of other National Park systems

Similarities and differences of the park systems in the world should be studied, for the purpose of finding better ways to manage parks. First, Second, and Third World countries should be included. It is also necessary to look at park systems whose social, economic, and landscape structures are similar to those of the KNPA, because historical contexts are often the distinguishing role in establishing and operating parks.

7.2. Issue B: Inadequate Emphasis on Ecosystem Protection

Finding: This issue is neither considered most important nor likely to be resolved in the next 5 years. Education for the general public seems critical in inducing a key shift in the current paradigm.

Recommendation 1: Use parks as 'classrooms'

A paradigm shift to emphasize ecosystem protection can be done by education. Director Mather and his staff already initiated parks as vast classrooms in the first phase of the US park development in 1916 - 1920.

Every level of education -- Kindergarten to 12th grade, universities and colleges, and other educational institutions such as life-long and continuing education programs -- can be involved in park experiences. Education is a farsighted policy and takes a long time to yield results. Thus, efforts should be implemented soon. Examples are various interpretative training, field trips to Visitor Centers, bird watch trips, calligraphy contest,

art/photo/sketch/journal writing contest, outdoor concert, art exhibition, and story telling sessions. There are currently such activities available in Korea, but there is much room for improvement.

Subjects that relate to environmental education (EE) should be promoted. Such subjects range from writing courses to natural sciences to social ethics. Frugality of resource use and recycling of resources should be encouraged. Textbook authors, school teachers, college professors, researchers on education, publishers, and park professionals should work cooperatively in developing textbooks and reference books.

The levels of EE and interpretive sessions should follow the level of each age group. The folklore, traditional songs and paintings, art, and photographs should be used.

Separate non-academic environmental schools are needed. Fellowships and awards for those who dedicate themselves, as stewards/ees should be established.

Recommendation 2: Co-opt legislators

In the short-term, co-optation of legislative members should be encouraged. Providing them with opportunities to visit parks and other protected areas will increase understanding of what the parks are for and how they have evolved. Because the average term of serving a standing committee is about one year, such a frequent turn-over rate of members in a standing committee will require virtually all legislators to be invited to parks.

Members of the following committees should merit particular attention:

Environment and Labor, Construction and Transportation, Culture and Tourism, and Agriculture, Forestry, and Fisheries.

7.3. Issue C: Widespread Deficiency of Management Tools

Finding: Like Issue B, this issue is neither most important nor likely to be resolved in the next 5 years. Under-expertise, under-budgeting, and understaffing of the KNPA need to be tackled as long-term needs.

Recommendation: Get support from volunteers, Friends groups, and partners.

Encourage NGOs to build networks consisting of every possible resource from volunteers, Friends' groups, and partnership. Members of these 3 groups are not mutually exclusive. Such members may help to reduce the workloads of park staff which can then re-allocate efforts to meet other urgent needs.

(1) Voluntary sources cost virtually nothing.

Volunteers can supplement the staff members' work in parks. People can volunteer if they have enough time, money, and physical ability. In Korea, due to the improved standard of living, the chances to get involved in volunteer work are likely to be greater than in past decades. Maintaining trails, guiding visitors in visitor centers, leading interpretive sessions, monitoring natural and cultural resources, and protecting wildlife can be assigned to volunteers.

Reflecting double peak seasons in summer and fall in most parks, interns' involvement will range from operating campsites, concessions, and parking lots, collecting fees, guiding trails, field research, to various interpretive sessions.

The Army Corps of engineers can build park facilities and access roads. Due to local governments' reluctance to build infrastructure for National Parks by their own budget, both parks and local governments will welcome this involvement.

The alternative system of military service as quasi-rangers (law enforcement), instead of mandated army duties, should be expanded. This expansion needs further cooperation from the Defense Ministry. The alternative was established in 1999, and a few people have served as quasi-rangers. The fact that it costs nominal wages for the Defense Ministry (each soldier in the army is paid the equivalent of US \$6 per month) and some poachers are armed will make this option attractive to defense. The land is what they are defending.

7.4. Issue D: Visitor Services Needed

Finding: This issue was seen by the panel as least important, but most likely to be resolved in the next 5 years. Managing park resources and visitors are inseparable and meeting the short-term demands seems to help park purposes change.

Recommendation 1: Get Corporate sponsors

Initiate 'adoption programs' for each park, using corporate sponsors for interpretive, information, and educational materials/programs.

Sisterhood between corporate sponsors and each park should be established. Corporate sponsorship is sporadic in Korean parks. Corporate sponsors will benefit by themselves as being green entrepreneurs. This could apply to such companies as manufacturers of cameras, recreation/camping equipment, sports gears, school supplies, apparel, and maps. Also, printing service providers, book publishers, store chains of fancy items, and animation companies will be good candidates. The costs of those companies who adopt the parks should be tax-credited or tax-exempted.

The companies, sponsoring interpretive and information programs, can provide materials such as workbooks, textbooks, posters, videos, facts sheets, outdoor lab equipment, color papers/boards, and other school supplies, making every park vast classroom. The materials and programs should be arranged by age groups. Particularly, coordinating programs and materials for K-12 groups should be based on grade-level.

In turn, the materials can generate revenues for parks. Other items such as cartoons, animations, video and cassette tapes, books, maps, and souvenir items regarding each park can be developed by these sponsors. It will be a win-win strategy when pertinent sponsor companies' 'good-will' can guarantee the quality of these items.

Corporate sponsors can also establish and/or subsidize training centers or short-term training programs for park employees.

Recommendation 2: Develop 'Sister Park' program with other countries.

Exchanging ideas and management skills/practices will benefit both parks involved. A park's counterpart will consult on the urgent issues forcing the park. Among

the topics are volunteer programs, EE, NGOs involvement, park planning, park development by community-based organizations, and recruiting financial resources.

7.5. Perpetuity, Parks, and People

The National Park idea is visionary. But, when designated parks are not well-maintained, the vision loses its luster. Stewardship is a prerequisite for the park idea. Ill-maintained parks not only abuse the park idea, but also abuse nature, as they become places of human exploitation.

What makes the park idea perpetual depends on how and for what people cooperate. Perpetuity for parks depends on stewardship as former US President Jimmy Carter pointedly asserted: 'America's "best idea" as still an unfinished one. ... We must continue to defend the parks against those who neglect or despoil them' (Heacox, 2001).

Only people with a solid stewardship commitment deserve to keep the benefits and wonders that parks provide. Volunteerism and a partnership ethic should be the core components of such stewardship.

Without people's support, no parks can survive. The park idea and related philosophy has been challenged whenever ineffective management is implemented. We are obliged to fight for this idea against indifference and neglect of parks. Contemplating park issues and endeavoring to find resolutions for them are an everlasting process that must not be limited to park professionals.

Korean parks are reflections of Korean minds -- clearly reflected in giving one mountain 4 different names that change with the seasons. A moonlit river our forebears

saw is the same seen by contemporary Koreans. It is the time to be more decisive and dedicated to parks: Letting the current management of Korean Parks continue to be dysfunctional would lose the visionary privileges of today's Koreans and their following generations.

Mr. Carter summarizes this point: 'nothing would please me more than to know that my youngest grandson ... will have the privilege of experiencing these places [parks] just as they are today. That is a legacy of which we all can be proud.'

If he were a Korean, he would miss the 4 names of mountains and moonlit rivers with a thousand lunar figures reflecting from those rivers. He would lament that the people of Korea lost the chance to protect parks, by not having the courage of the Brave New World to match the vision of their grandfathers.

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APPENDIX A: FACTS ABOUT KOREAN NATIONAL PARKS

History of Korean National Park System

pre-KNPA

- ▶ in 1910: Korean peninsular annexed to Japan.
- ▶ in 1930s: three mountains were surveyed by Japanese government attempting to national park designation (Keum-ghang-san ["Mt. Diamond," currently North Korean National Park]; Chirisan [first South Korean National Park in 1967; Soraksan [designates as National Park in 1970]).
- ▶ in 1945: Independence of Korea.
- ▶ in 1966: Drs. Ruhle (US) and Kim (Ewha W. University in Korea) recommended establishing National Parks after surveying the major Korean mountains
- ▶ in 1967: "Parks Law" established.
- ▶ in 1967: First designation of Korean NP (Chirisan National Park.)
- ▶ in 1980: "Parks Law" divided in to "Natural Parks Law" and "Urban Parks Law."

Chronicles of KNPA

- ▶ on July 1, 1987: Establishment of the Korea National Parks Authority (KNPA) under the administration of the Ministry of Construction (at Division of Parks, Bureau of Land Planning).
 - Among 17 national parks, 14 parks are fully managed & 1 park is partially managed by the KNPA.
- ▶ in 1987: Designation of Sobaeksan National Park.
- ▶ in 1988: Designation of Wolchulsan National Park & Pyonsan-bando National Park.
 - Among total number of 20 national parks, 17 are fully managed & 1 is partially managed by the KNPA.
- ▶ in 1991: Transfer of administration to the Ministry of Interior (at Division of Natural Parks, Bureau of Nature Conservation; Later, Division of Local Development, Bureau of Local Economics and Finances).
- ▶ in 1992 : autonomy of local governments resumed.
- ▶ in 1997: Establishment of Internet homepage services (<http://www.npa.or.kr>).
- ▶ January 26, 1998: Transfer of administration to the Ministry of Environment (at Division of Natural Parks, Bureau of Nature Conservation).
 - KNPA is a trust organization under auspices of Ministry of Environment.
- ▶ in 2001, Natural Parks Law revised and enacted, following the ten-year review process required by the MOE.
- ▶ in 2002, possible designation of Dohk-doh ('Island of Being Alone') as the 21st National Park discussed.

Table A.1: Designation of Korean National Parks

Unit : km²

Order of Designation	Name of Park (Shaded: mountain park)	Location (Province)	Park Area		Park Protection Area	Remarks
			Designation	Total Area 6,473.113		
					122.207	Land Terrain: 3,824.57 (3.8% of total land); Sea Terrain: 2,648.54
1	Chirisan	Chollanam-do, Chollabuk-do, Kyongsangnam-do	67.12.29	440.485	35.225	
2	Kyongju	Kyongsangbuk-do	68.12.31	138.16	-	Managed by local government
3	Kyeryongsan	Chungchongnam-do, Taejon	68.12.31	61.148	2.160	
4	Hallyo-haesang	Chollanam-do, Kyongsangnam-do	68.12.31	510.323	34.700	Sea Terrain: 344.763; Partially Managed by local government
5	Soraksan	Kangson-do	70.2.34	373.0	4.70	
6	Songnisan	Chungchongbuk-do, Kyongsangbuk-do	70.3.24	283.4	1.02	
7	Hallasan	Cheju-do	70.3.24	149.0	2.35	Managed by local government
8	Naejangsan	Chollanam-do, Chollabuk-do	71.11.17	76.032	12.561	
9	Kayasan	Kyongsangnam-do, Kyongsangbuk-do	72.10.13	80.163	4.393	
10	Togyusan	Chollabuk-do, Kyongsangnam-do	75.2.1	219.0	-	
11	Odaesan	Kangwon-do	75.2.1	298.5	1.98	
12	Chuwangsan	Kyongsangbuk-do	76.3.30	105.582	0.698	
13	Tae-an-hae-an	Chungchongnam-do	78.10.20	328.99	0.09	Marine Terrain: 290.3
14	Tadohae-haesang	Chollanam-do	81.12.23	2,344.91	-	Sea Terrain: 2,004.48
15	Pukansan	Seoul, Kyonggi-do	83.4.2	78.45	-	
16	Chiaksan	Kangwon-do	84.12.31	182.09	2.34	
17	Woraksan	Chungchongbuk-do, Kyongsangbuk-do	84.12.31	284.5	3.172	
18	Sobaeksan	Chungchongbuk-do, Kyongsangbuk-do	87.12.14	320.5	-	
19	Wolchulsan	Chollanam-do	88.6.11	41.88	16.818	
20	Pyonsan-bando	Chollabuk-do	88.6.11	157.0	-	Sea Terrain: 9.00

Korean (English): san (mountain); hae (sea); haean (seashore); -do (province); -bando (peninsular)
Examples: Chirisan; Tadohae-haesang

► Other park types under the Natural Parks Law

- Number of provincial parks : 22 sites/ 748 km² (0.7% of total land)
- Number of county parks : 29 sites/ 308 km² (0.2% of total land)



Figure A.1: Map of National Parks of Korea

Table A.2: Entrance and park facilities fees of Korean National Parks

(unit: US\$)

1 US. Dollar = 1,300 Korean Won (as of 1.31. '02)

1. Entrance Fees					
	Adult	Teenagers/Students/ Military Personnel		Children	
Individual/Single	\$1.0	0.46		0.23	
Group	1.0	0.40		0.20	
2. Parking Fees					
Name of Facility	Type of Vehicle	Fees		Others	
		For one day	For stay		
Parking Lot	1. 2-wheel Vehicle	\$0.7	1.4		
	2. Automobile				
	Commercial	.46	0.9		
	Non-commercial	3.1	6.2		
	3. Bus				
	Microbus	3.5	7.0		
	Regular Bus	Free	1.6		
	Non-regular Bus	4.6	9.2		
	4. Truck				
	Less than 4 tons	2.3	4.6		
More than 4 tons	4.6	9.2			
3. Camping Ground					
Type of Facility		Fee			Fee per day
		Small Tent (Less than 3 people)	Medium Tent (4-10 people)	Large Tent (More than 10 people)	
Camping Ground	1 Day	\$2.3	3.5	4.6	
4. Evacuation Shelters					
Type of Facility		Fee			Others
		Single Room	Group Room		
		1 person basis	3 persons basis	10 persons basis	
Evacuation Shelters	One time use	4.0	23.0	46.0	Estimated fee per day. An addition of 3.8 US\$ per increase of one user.

APPENDIX B: SURVEY QUESTIONNAIRES

Cover Letter for Delphi Questionnaire #1 (English Version)

Dear _____:

I am conducting a study of the short-term future for Korean national parks, which is described in the attached abstract. For this survey, you have been identified as someone who is very knowledgeable about the park system and individual parks. I would be very interested in knowing your ideas about how the park system is likely to change over the next ten years. Your completed response indicates your willingness to be contacted by mail, one or two more times during the next twelve (12) months.

If you wish to volunteer to participate in this study, please let me hear from you by **February 7th**. You may cease to participate in the study at any time; and it is not necessary for you to answer every question. Your signature on the attached questionnaire serves as your authorization for me to contact you again.

Any comments you provide will be held in strict confidence. Should I desire to quote any of your comments, I will first seek your written approval for each quote. To protect your confidentiality, your name will be removed from the returned questionnaire and replaced with a code designation. The list of designator codes is kept locked in Professor LaPage's office and that will be destroyed, when the study is complete.

We have estimated that this questionnaire should take no more than ½ hour of your time to complete. Because this research may be of enormous value to planning for the future of Korea's national parks, we have made every effort to eliminate any risk that might accompany your participation.

Thank you very much for your interest in the national parks and for your willingness to help with this research. Should you choose to participate, a copy of the completed research will be provided to you.

Sincerely,

Byung-kyu Lee
Ph.D. Candidate

Phone) 1-207-581-2882
Email) Byung-kyu_Lee@umit.maine.edu
Mailing address) 5769 South Annex B
Parks, Recreation, and Tourism
University of Maine
Orono, Maine 04469-5769
U.S.A.

attachment: abstract

Wave 1 attachment

ABSTRACT

Study Title: Views of the Future of Korean National Parks

Principal Investigator: Byung-kyu Lee, PhD candidate, University of Maine, Orono, ME

Objective: To assess the future roles of the Korean National Park system in protecting biodiversity and promoting tourism.

Background: Every national park system faces the dilemma of managing for long-term preservation of its assets and the short-term economic benefits of park use and tourism. Both the long- and short-term needs are vital for the nation; and yet park systems are expected to resolve these national priorities with severely limited staffs and budgets. Each national park system incrementally resolves these issues, evolving in its own way, and planning as best as it can for a future of even greater demands and more limited resources. In Korean national park system, the facts of insufficient money and time related to park management reflect current threats including over-development to the system. In order to develop a likely array of future directions for Korean National Parks over the next decade, a panel of knowledgeable experts on the system will be asked for their forecasts based on current and past trends in park management, philosophy, legislation, public attitudes, and funding. Follow-ups on their converging and diverging opinions will be used in an attempt to develop consensus on what is likely to happen, what should happen, and what facilitating measures need to be taken to ensure a viable park system during the first decade of the new millennium.

Approach: A panel of up to 10 Korean park professionals, retirees, interested citizens, and environmental NGO directors will be established and requested to provide their views on current park conditions, philosophies, problems, and future directions. Their responses will be summarized and shared with all panel members with a bold emphasis on all statements where obvious disagreement exists. The panel will be asked to consider each point of disagreement and react to it in an attempt to find consensus (Delphi Technique). Further follow-up with the panel will identify specific needs, opportunities, and issues facing the Korean national park system, and recommendations for addressing those issues. Finally, the panel's recommendations will be compared with the evolution of other national parks systems from selected nations in Asia and North and Central America.

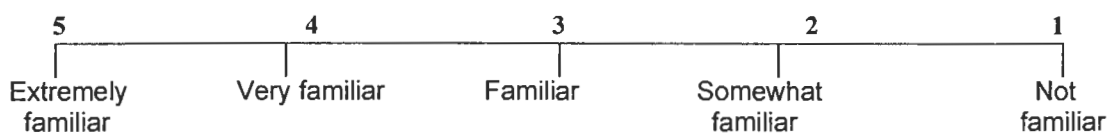
ID #: _____

May I please have your comments to the following questions about Korean national parks:

1. What major issues face the park system today? (please be specific and use the back of this page, if you need a more space)

2. How would you think those issues will be resolved over the next ten years? (please be specific and use the back of this page, if you need a more space)

3. Please indicate, on the scale below, your familiarity with park system policies and management practices (circle the number that best describe your familiarity):



4. Please indicate your knowledge of each of the following national parks, specifying how you obtained that knowledge. (Example: as a park employee; park volunteer; researcher; visitor; or cooperater.)
 In column 2, circle the number, which most nearly reflects your knowledge of that park: 1 = very knowledge; 4 = not knowledgeable.

Park	Knowledge	
Example	1 2 3 4	<i>Visitor, 8years; Volunteer, 1 year; Managers 2 years.</i>
Chirisan NP	1 2 3 4	
Kyongju NP	1 2 3 4	
Kyeryongsan NP	1 2 3 4	
Hallyo-haesang Sea NP	1 2 3 4	
Soraksan NP	1 2 3 4	
Songnisan NP	1 2 3 4	
Hallasan NP	1 2 3 4	
Naejangsan NP	1 2 3 4	
Kayasan NP	1 2 3 4	
Tokyusan NP	1 2 3 4	
Odaesan NP	1 2 3 4	
Chuwangsan NP	1 2 3 4	
Taeon-Haeon Seashore NP	1 2 3 4	
Tadohae-haesang Sea NP	1 2 3 4	
Pukansan NP	1 2 3 4	
Chiaksan NP	1 2 3 4	
Woraksan NP	1 2 3 4	
Sobaeksan NP	1 2 3 4	
Wolchulsan NP	1 2 3 4	
Pyonsan-bando Peninsular NP	1 2 3 4	

Wave 2 Cover Letter

Dear _____:

Thank you for your participation in this study of Korean national parks.

From wave one, 47 major issues/problems facing the Korean park system were identified. I have organized these issues into 3 clusters: park philosophy/policy, park organization/management, and park visitation/visitor needs, as shown on the attached pages. I hope I interpreted your comments correctly. If not, please let me know.

Would you now please look at each of these clusters to see if you generally agree with them? Then, I would like you to rank each of the issues within each cluster according to its importance. You may feel free to add/delete elements in any cluster. Finally, please rank the 3 clusters according to where you believe early emphasis must be placed in order to move the Korean national park system to where you believe it should be in the next ten years.

Please take as much time as you wish to complete each question. However, this questionnaire can probably be completed in less than one hour.

Thank you very much for your continued interest in the national parks and for your willingness to help with this research.

Sincerely,

Byung-kyu Lee
Ph.D. Candidate
Phone) 1-207-581-2882
Email) OURPARKS@HANMAIL.NET
Mailing address) 5769 South Annex B
Parks, Recreation, and Tourism
University of Maine
Orono, Maine 04469-5769
U.S.A.

Wave 2 Questionnaire

Clustering of issues from Question 1 in Wave 1

Cluster 1: Park Philosophy/Policy

PROBLEMS DESCRIBED	Rank
the Korea National Parks Authority and the central government's lack of national park idea	
conflict between preservation and use	
paradigm shift (need to consider national parks as preservation/educational places)	
land ownership (unlike the U.S. & Canadian park systems, 20% of Korean parks are private land)	
management control over parks (possibility of conflict between central and local governments)	
in order to emphasize conservation, need of amending "natural parks law"	
inconsistent management system in KNPA (due to rapid turn-over of officials in Min.of Environment)	
inconsistency/overlap of relevant laws	
need to establish state-run "national park bureau"	
organizational inflexibility of KNPA	
need to reclassify national parks on the basis of preservation/ecosystem values involved	
lack of policy regarding cultural resources such as eco-villages and Buddhist temples	
development pressure/ attempts in park area	
attempt of building cable car system in park area	
lack of inventory (ecosystem, infrastructure, etc)	
increased degradation of resources in park area/visitor impacts on natural environment	
insufficient protection for ecosystem	
lack of central government active role on natural resources	
infringement on private property right in park area (which causes civil appeal)	
entrance fee including separate admission fee for cultural assets (Buddhist temples)	
conflict with Buddhist temples, which are located in major park areas	
on-going construction/renovation in Buddhist temples in park areas	

Wave 2 Questionnaire

Clustering of issues from Question 1 in Wave 1

Cluster 2: Park Organization/Management

PROBLEMS DESCRIBED	Rank
under-budgeting	
lack of KNPA control over its budget	
understaffing	
lack of expertise in KNPA	
problem of political appointment of KNPA chairman	
lack of standards in conservation	
inconsistent management of ecosystem	
KNPA and central government's lack of understanding national park management	
lack of management direction/goals/objectives; lack of long-term view in management	
unlawful facilities in park area	
indiscriminate development and facility deterioration in "mass facility zone" in park area	
financial difficulty of business in "mass facility zone"	
problem of zoning	
poaching and illegal picking (due to lack of law enforcement)	

Wave 2 Questionnaire

Clustering of issues from Question 1 in Wave 1

Cluster 3: Park Visitation/Visitor Needs

PROBLEMS DESCRIBED
lack of public relations/education on ecosystem
the general public's awareness/views of park purpose
inappropriate/insufficient interpretation programs
general public's low awareness of national parks
need to provide more environmental education programs
lack of visitor management
need to provide good quality of recreation experience
need to guide visitors to non-disturbing behavior
insufficient service/educational facilities for visitors
lack of character distinction between parks
lack of providing tourism opportunity (on-hand educational experiences in nature and culture)

Please rank the 3 clusters according to where you believe early emphasis must be placed in order to move the Korean national park system to where you believe it should be in the next ten years. (Circle one)

	Rank
CLUSTER 1: PARK PHILOSOPHY/POLICY	
CLUSTER 2: PARK ORGANIZATION/MANAGEMENT	
CLUSTER 3: PARK VISITATION/VISITOR NEEDS	

Comments (use reverse, if needed)

CLUSTER 1:

CLUSTER 2:

CLUSTER 3:

November, 2001

Wave 3 Cover Letter

Cover Letter

Dear _____:

Thank you for your continuing participation in this study of Korean national parks.

Based on your previous responses, the attached summary shows four major issues: "Park philosophy not clearly articulated," "Inadequate emphasis of ecosystem protection," "Widespread deficiency of management tools," and "Visitor Services Needed."

Now, (1) would you rank the four issues as to their importance? (2) Then, would you explain why you made each ranking and how it might be resolved? Please, include your desired timeline for your suggestions if you have one. (3) Finally, would you rank the likelihood of resolution of each issue, within the next five years?

Please take as much time as you wish to complete each question. However, this questionnaire can probably be completed in less than one hour. I would appreciate your returning your response within the next two weeks.

Thank you very much for your continued interest in the national parks and for your willingness to help with this research. I will send you a copy of my findings within the next 6 months.

Sincerely,

Byung-kyu Lee
Ph.D. Candidate
Phone) 1-207-581-2882
Email) ourparks@hanmail.net
Mailing address) 5769 South Annex B
Parks, Recreation, and Tourism
University of Maine
Orono, Maine 04469-5769
U.S.A.

SUMMARY OF RESPONSES TO WAVES 1 & 2

ISSUE – Park Philosophy Not Clearly Articulated (please see sample comments next page).		
(1) IMPORTANCE?	(2) Please Discuss Your Ranking, Issue resolution, and Time frame	(3) LIKELIHOOD?
Please Rank circle one 1 2 3 4 1 = most important; 4 = least important		Please Rank circle one 1 2 3 4 1 = resolved in five years; 4 = not resolved in five years
(please continue on reverse side, if needed)		

ISSUE -- Inadequate Emphasis of Ecosystem Protection (please see sample comments next page).		
(1) IMPORTANCE?	(2) Please Discuss Your Ranking, Issue resolution, and Time frame	(3) LIKELIHOOD?
Please Rank circle one 1 2 3 4 1 = most important; 4 = least important		Please Rank circle one 1 2 3 4 1 = resolved in five years; 4 = not resolved in five years
(please continue on reverse side, if needed)		

ISSUE-- Widespread Deficiency of Management Tools (please see sample comments next page).		
(1) IMPORTANCE?	(2) Please Discuss Your Ranking, Issue resolution, and Time frame	(3) LIKELIHOOD?
Please Rank circle one 1 2 3 4 1 = most important; 4 = least important		Please Rank circle one 1 2 3 4 1 = resolved in five years; 4 = not resolved in five years
(please continue on reverse side, if needed)		

ISSUE -- Visitor Service Needed (please see sample comments next page).		
(1) IMPORTANCE?	(2) Please Discuss Your Ranking, Issue resolution, and Time frame	(3) LIKELIHOOD?
Please Rank circle one 1 2 3 4 1 = most important; 4 = least important		Please Rank circle one 1 2 3 4 1 = resolved in five years; 4 = not resolved in five years
(please continue on reverse side, if needed)		

ISSUE -- Park Philosophy Not Clearly Articulated.*Sample comments:*

KNPA & the central government's lack of national park idea
 Lack of mgt direction/goals/objectives; lack of long-term view in mgt
 KNPA and central government's lack of understanding national park mgt
 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.*Sample comments:*

Paradigm shift (need to consider NPs 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 environ.
 Need to reclassify national parks on the basis of preservation/ ecosystem involved

ISSUE -- Widespread Deficiency of Management Tools.*Sample comments:*

Lack of adequate KNPA expertise, budget, staffing, and control
 Problem of political appointment of KNPA chairman
 Problem of zoning
 Organizational inflexibility of KNPA
 Indiscriminate development and facility deterioration in "mass facility zone" of park
 Lack of inventory (ecosystem, infrastructure, etc)
 Inconsistent mgt system in KNPA (due to rapid turn-over of officials in M.of Env.)
 Unlawful facilities in park area
 Poaching and illegal picking (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 gov.s)
 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.*Sample comments:*

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 edu.al experiences in nature/culture)
 Entrance fee including separate admission fee for cultural assets (Buddhist temples)

APPENDIX C: NATURAL PARKS LAW OF KOREA (SYNOPSIS)

(Unofficial version: no official version in English as of Dec, 2002)

Law #6450 (amended on 3/28/2001; enacted on 9/29/2001)

[Parts regarding “National Parks” are extracted. Some components apply to all three categories of natural parks -- national, provincial, and county parks. Therefore, the term “**National Parks**” is bolded to avoid being confused with “natural parks.” In general, “parks” mean “natural parks” in this law. Also are underlines and *italics* added.]

Chapter 1

Section 1 (Purpose): The Natural Parks Law (NPL) intends to conserve Korea’s ecosystems and natural and cultural scenic beauty, and intends to promote sustainable use for the public.

Section 2

1. “Natural Parks” are referred to as **national**, provincial, and county parks.
2. “**National Parks**” are referred to as the areas of Korea’s characteristic ecosystem and natural, cultural beauty.
3. “Master Plan” is a comprehensive plan for conservation, use, and management of parks, directing the long-term (development) planning.
4. “General Management Plan (GMP),” directs development of zoning system, erection of park facilities, removal or movement of existing buildings, and restriction of activities and land use in order to conserve, manage, properly use of parks.
5. “Park Project” is referred to as a business on parks that is accordance with a GMP.
6. “Park Facilities” are built in parks, in accordance with GMP, for conservation, use, and management of parks. These facilities are designated by Presidential Decree and include approach roads/parking lots outside parks.

Section 3 (Duty for protection of parks)

1. The central and local governments, park business operators, park facilities managers, users/occupants, entrants, and residents of natural parks, should protect natural parks, sparing no pains to maintain/recover the natural system.
2. The central and local governments should designate outstanding ecosystems or areas of natural, cultural beauty as natural parks and protect/maintain them to promote sustainable use.

Chapter 2

Section 4 (Designation of Parks and Park Committee)

1. **National Parks** are designated and managed by the Minister of Environment after conferring with pertinent local governors (or mayors) and with the top officials of related agencies in central government, and after consulting with the **National Park Committee** (see Sec. 10) and the *Committee for Act of Comprehensive Plans for Construction in the National Territory*.

Section 10 (Role of Park Committee)

Park Committee reviews designation, removal of parks, or change of the parklands; Master Plan for **National Parks** (limited to National Park Committee); determination and change of GMP; impact of business on park environment; other issues critically related to park management.

2. Provincial Parks are designated by the local governors... consulting with the *Provincial Park*

- Committee...* upon approval from the Minister of Environment.
3. County Parks are designated by the county chairs of those counties... consulting with the *County Park Committee...* upon approval from local governors or mayors.

Section 6 (Announcement of designation)

1. In accordance with Section 4, "**Office of Park Management (OPM)**" (the Minister of Environment, local governors or mayors, or county chairs) who designate and manage the established parks should announce the name, category, boundary, acreage, designation date, responsible Office of Park Management, and other requirements of a park that are outlined by the order of the Ministry of Environment when those parks are designated.

Section 7. (Standards for designation of natural parks)

The designation of a park is based on Presidential Decree, considering the natural ecosystem and natural and cultural beauty.

Section 8

1. Natural parks cannot be removed and their boundaries cannot be changed EXCEPT: in case of emergency, for military purposes, or for the use of public benefits that are set by Presidential Decree; in case of existing parks being unusable due to natural disasters or other reasons, or in case of existing parks being recognized inappropriate as parks any longer, based on the review of Sec. 15, subsection 2, if existing parks are out of designation standards of parks stated in Section 7.

Section 15:2

OPM gets opinions from locals, professionals, and other interested people in order to review the properness of the GMP and reflect that review on the GMP.

2. OPM, in accordance with Section 7, can add the adjacent areas to the existing parks if the adjacent areas meet park designation standards.

Section 10 (Role of Park Committee)

Park Committee reviews the following issues:

1. Designation, removal, boundary change of park
2. Master Plan (applied only to National Park Committee)
3. Decision or change of GMP
4. Business on parks which cause major impact on park environment
5. Other issues pertinent to park resources

Chapter 3 (Master Plan and General Management Plan (GMP))

Section 11

1. The Minister of Environment should make a Park Committee-reviewed Master Plan every ten years.
2. A Presidential Decree sets the contents, procedures, and other required issues of a Master Plan.

Section 12 (GMP for National Parks)

1. The Minister of Environment, conferring with pertinent local governors or mayors and with the top officials of related agencies in central government, and consulting with the National Park Committee, determines GMP for national park.

Section 15

The review standards of park planning are made by Presidential Decree who considers park resources, management conditions, and environmental impacts.

Section 17

1. GMP should include the plans on zoning, conservation, facility, and management.
2. When an OPM either makes a plan or makes changes over a plan made by Order of Environment Ministry, the OPM should, in accordance with Presidential Decree, review the environmental impact in advance and reflect the assessment of that impact.

Section 18 (Zoning)

1. With the intention of conserving natural parks and use of those natural parks effectively, an OPM sets park planning, establishing a zoning system as follows.
 - 1.1 Nature Conservation Zone: Area which has abundant biodiversity, where natural ecosystem is primitive, which has the habitat for plants or animals that require special protection, or which holds/displays a precious natural or cultural beauty.
 - 1.2 Natural Environmental Zone: Area as a buffer zone needed for nature conservation zone
 - 1.3 Natural Residential Zone: Area sparsely built-up, needed for local habitat
 - 1.4 Mass Residential Zone: Area of relatively dense build-up or local hub for locals' daily lives
 - 1.5 Collective Facilities Zone: Area where it is suitable for park facilities to both provide convenience to park visitors and protect and manage the park.

Section 19

Doing Business on Parks and managing park facilities are done by OPM unless other special regulations are specified.

Section 20

A non-OPM needs permission from OPM when intending to do Business on parks or managing OPM-built park facilities.

Chapter 4

Section 34 (Judicial Police Power)

Middle- and lower levels of public servants in central and local governments discharge their duties as judicial police.

Section 35

OPM should make and maintain park inventory.

Chapter 5

Section 37 (regarding collecting entrance fees)

Section 38 (regarding fees for occupancy or use of park)

Section 39 (Expenses)

Unless otherwise specified in this Natural Parks Law or other laws, the central government bears the expenses for **National Parks** and the local governments bear the expenses for provincial or county parks in their jurisdiction. However, in case local governors or mayors are delegated to manage **National Parks** (Section 80:1), those governors or mayors wholly bear or share the expenses.

Section 80:1 (Delegation)

Authority of Environment Minister can be delegated to an agency in the Ministry of Environment, to local governors or mayors, or to the National Parks Authority (see Section 44).

Chapter 6 (National Parks Authority (NPA))

Section 44 (Establishing NPA)

To conserve national parks and to implement effectively survey/study of park resources, building and maintaining park facilities, cleaning-up of trash in natural parks, providing information and educating for proper use of natural parks, and other President-ordered park management practices.

Section 44 and Section 69

National Parks Authority (NPA) is in corporate (*i.e. legal entity*). And NPA is considered as a foundation in civil law and applied to that civil law, except regulations stated in this law.

Section 47 (Articles)

...
...
...

In order to amend articles, NPA needs the permission from the Minister of Environment.

Section 50

Board of Trustees (BOT)

1. BOT consists of ten or so members including one Chairman, one Vice-chairman, two standing trustees, and one auditor. Terms are 3 years for each member.
2. The Chairman and the auditor are appointed by the Minister of Environment
3. The Vice-chairman and other standing trustees are appointed by the Chairman of NPA.
4. Appointments of the other trustees are defined in Articles.

Section 54 (Appointing Staff)

In accordance with Articles, Chairman appoints the park employees.

Section 58 (Contribution)

The central government or others can contribute financial resources to support establishment and operation of NPA.

Sections 59 - 60

1. The central government can lend or give a permission to use national property to NPA without compensation...
2. The Local government can have the NPA use without compensation, such as real estate land and buildings that are used for NPA.
3. The NPA can lend those financial resources contributed to it and can sublease those national/local properties it borrows without compensation, if such a loan or sublease does not cause conflicts in maintaining/managing park facilities.

Chapter 7 (Supplement)

Section 70 (Relationship to other laws and acts)

Section 81 (Association of Natural Parks)

In order to educate/publicize on the conservation and use of natural parks and to survey natural resources, the Association of Natural Parks was established. The Association is a legal entity and considered as a foundation in civil law and applied to that civil law, except regulations stated in this law.

Chapter 8 (penalty)

APPENDIX D: WAVE 2 DATA

Clustering of issues from Question 1 in Wave 1

Table D.1: Frequencies of Cluster 1 in Wave 2

Cluster 1: Park Philosophy/Policy	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #
PROBLEMS DESCRIBED	3	5	8	11	14	32	17	18	20	24	27	28	30	6	10	13	35	36	23	26	31	37	39	40
(number of top 5 rankings frequencies over 10)																								
KNPA & the central government's lack of national park idea	1	1	1	3	11		5	4	1	1	3	3	2	1	16	1	1	1	1	6		1	1	1
paradigm shift (need to consider nat'l parks as preservation/	5	6	1	2		4	4	1	12	2	7	5	2	2	4	2	2	8	2	1			11	5
need to establish state-run "national park bureau"	2	20	15	13		5	11	2	2	4	1	9	2	11	6	5	12	2	5	3	1		20	2
conflict between preservation and use	17	2	6	7	3		6	6	13	3	11	6	2	3	3	3	13	5	11	7		4	6	5
(number of top 5 rankings frequencies between 6 and 10)																								
land ownership (unlike the U.S. & Canadian park systems, 20% o	12	7	21	4	1		17	10	22	8	20	19	2	4	5	13	19	12	20	2	3	10	15	2
inconsistent management system in KNPA (due to rapid turn-over	3	18	11	16	4		2	13	3	7	5	16	2	5	22	14	7	7	22	19			7	2
organizational inflexibility of KNPA	18	22	3	1		10	3	14	5	12	4	10	1	7	20	16	4	9	14	10			9	5
lack of inventory (ecosystem, infrastructure, etc)	4	15	3	11	14	3	18	16	8	14	17	1	1	17	9	8	5	16	7	12			4	5
in order to emphasize conservation, need of amending "natural p	10	17	6	9	12			5	6	5	19	7	1	20	17	6	3	14	3	9	2		13	5
lack of central government active role on natural resources	11	8	16	6	16	2		8	11	10	2	13	1	16	21	10	10	18	4	17	5	9	3	2
infringement on private property right in park area (which causes	19	9	6	5	5	7	14	3	20	19	12	20	2	19	1	19	17	6	19	16		2	10	4
insufficient protection for ecosystem	14	19	6	10	15	1	8	18	10	13	16	2	1	13	14	9	8	17	6	4			2	5
(number of top 5 rankings frequencies under 5)																								
management control over parks (possibility of conflict between ce	7	21	17	19	2	11	12	21	14	9	15	18	3	6	13	4	21	13	13	15		2	16	3
inconsistency/overwlap of relevant laws	8	4	11	17	7	6	1	12	4	6	10	15	2	10	18	15	11	19	8	15			19	4
need to reclassify national parks on the basis of preservation/eco	6	10	11	21	8			7	16	17	9	4	1	18	19	7	20	22	21	11			5	2
entrance fee including separate admission fee for cultural assets (21	13	11	15	6	9	13	19	19	21	6	14	3	22	2	20	18	11	18	5		6	21	2
on-going construction/renovation in Buddhist temples in park area	20	12	19	20				20	21	20	3	21	4	14	12	22	14	4	16	20			22	3
development pressure/ attempts in park area	9	3	6	8		8	10	11	18	11	14	8	2	9	7	11	15	20	10	14			22	3
attempt of building cable car system in park area	22	5	19	18	13		15	22	17	22	21	17	2	21	11	12	22	21	9	8		8	12	5
increased degradation of resources in park area/visitor impacts o	16	14	3	12			7	17	9	15	22	11	1	12	15	18	9	10	12	13		7	8	4
lack of policy regarding cultural resources such as eco-villages an	13	16	20	22	9		9	15	7	18	18	12	1	8	10	17	6	15	15		4		14	3
conflict with Buddhist temples, which are located in major park ar	15	11	17	14	10		16	9	15	16	8	22	3	15	8	21	16	3	17	18			18	3
added by #37: whether appropriateness of collecting park entrance fees and managing parks by those fees																						3		

Clustering of issues from Question 1 in Wave 1

Table D.2: Frequencies of Cluster 2 in Wave 2

Cluster 2: Park Organization/Management		PROBLEMS DESCRIBED		ank																					
ID #	ID #	3	5	8	11	14	32	17	18	20	24	27	28	30	6	10	13	35	36	23	26	31	37	39	40
		(number of top 5 rankings frequencies over 10)																							
under-budgeting		3	4	1	11	3	1	11	2	10	3	4	5	2	8	2	5	5	3	7	1	3	2	4	1
understaffing		9	5	1	10	10	2	6	4	3	5	3	3	1	5	3	4	8	5	8	2		4	3	1
lack of management direction/goals/objectives; lack of long-ter		1	1	1	3	6		3	1	1	4	7	1	1	4	12	2	1	2	3	4	1		7	1
lack of expertise in KNP		4	3	1	4	11		2	3	5	1	6	2	3	2	5	3	7	6	6	3			5	1
KNP and central government's lack of understanding national park		2	8	8	2	1		4	5	8	2	1	9	2	1	11	1	2	1	1	10		1	1	1
(number of top 5 rankings frequencies between 6 and 10)																									
lack of KNP control over its budget		12	11	9	12	4	3		6	9	6	5	6	2	9	4	11	6	4	12	8	2	3	8	1
problem of political appointment of KNP chairman		8	13	10	1	12	1	7	4	9	2	4	2	3	10	9	9	12	11	9					
lack of standards in conservation		13	7	6	6	5	4	7	8	6	7	8	8	2	7	7	10	4	11	4	5	4	7	6	2
inconsistent management of ecosystem		5	6	6	5	7		8	9	7	8	9	7	1	6	8	6	3	10	5	6	5		2	3
problem of zoning		7	12	1	9	2		5	10	11	10	10	10	1	12	1	13	12	13	2	7		6	10	4
(number of top 5 rankings frequencies under 5)																									
unlawful facilities in park area		11	16	12		13		9	13	14	12	12	13	3	11	6	7	11	9	10	11		5	12	2
unplanned development and facility deterioration in "mass facility zo		6	2	11	7	8		10	11	12	11	13	11	1	13	9	8	13	7	13	13			13	3
financial difficulty of business in "mass facility zone"		14	9	14	13	9		12	13	14	14	14	4	14	14	14	12	14	8	14	14			14	3
poaching and illegal picking (due to lack of law enforcement)		10	14	12	8	14		12	14	2	13	11	12	3	10	13	14	10	14	9	12			11	1

Clustering of issues from Question 1 in Wave 1

Table D.3: Frequencies of Cluster 3 in Wave 2

Cluster 3: Park Visitation/Visitor Needs		ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #
PROBLEMS DESCRIBED		3	5	8	11	14	32	17	18	20	24	27	28	30	6	10	13	35	36	23	26	31	37	39	40
# of top5 rankings	(number of top 5 rankings frequencies over 10)																								
19	the general public's awareness/views of park p	3	8	1	6	5		1	3	4	4	1	10	1	2	1	3	4	1	1	2		1	1	1
19	lack of visitor management	1	1	3	1	6		4	1	1	1	3	2	1	1	9	1	1	3	2	1	1		3	1
16	general public's low awareness of national parks	5	11	6	7	1	2	3	4	3	3	6	1	3	3	2	10	5	2	3	10			2	1
14	need to guide visitors to non-disturbing behavior	2	6	9	3	3	1	10	6	7	5	5	4	1	10	11	2	6	4	7	6	3	3	4	5
13	lack of public relations/education on ecosystem	7	10	3	5	5	3	2	8	10	2	4	9	1	8	5	8	3	6	4	9		8	5	2
11	need to provide good quality of recreation experien	9	5	6	2	2	4	11	5	8	6	7	5	2	5	10		9	10	8	5		4	7	4
(number of top 5 rankings frequencies between 6 and 10)																									
10	insufficient service/educational facilities for visitors	4	2	11	4	4		7	7	5	11	10	3	2	6	6	4	8	9	9	7		5	9	5
9	need to provide more environmental education pro	11	7	3	10	8	5	6	10	11	9	9	8	2	9	4	6	2	8	5	3	2	6	8	4
8	lack of character distinction between parks	6	9	6	8	7		8	2	2	8	2	7	1	4	3	5	10	5	10	8		7	6	6
(number of top 5 rankings frequencies under 5)																									
5	inappropriate/insufficient interpretation programs	10	4	1	11	8		9	9	9	10	8	11	1	7	8	7	11	7	6	4		9	11	3
3	lack of providing tourism opportunity (on-hand edu	8	3	9	9	7	6	5	11	6	7	11	6	3	11	7	9	7	11	11	11		9	10	6
1	added by #37: ?heavy visitation in some period (uneven visit period)																						2		

Table D.4: Frequencies of overall cluster rankings in Wave 2

Overall Cluster Ranking

	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #	ID #
	3	5	8	11	32	17	18	20	24	27	28	30	6	10	13	35	36	23	31	37	39	40
	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran	Ran
CLUSTER 1: PARK PHILOSOPHY/POLICY	1	1	1	1	1	1	1	1	1	2	3	1	1	1	3	2	1	1	1	1	2	1
CLUSTER 2: PARK ORGANIZATION/MANAGEMENT	2	3	2	3	2	2	3	2	2	1	2	2	3	2	1	1	2	2	2	2	1	2
CLUSTER 3: PARK VISITATION/VISITOR NEEDS	3	2	2	2	3	3	2	3	3	3	1	3	2	3	2	3	3	3	3	3	3	3

	number of top rank	number of second rank	number of the third rank
CLUSTER 1: PARK PHILOSOPHY/POLICY	16	3	2
CLUSTER 2: PARK ORGANIZATION/MANAGEMENT	4	13	4
CLUSTER 3: PARK VISITATION/VISITOR NEEDS	1	6	14

APPENDIX E: SURVEY QUESTIONNAIRES (IN KOREAN)

_____님:

저는 한국 국립공원의 가까운 장래에 대해서 연구하고 있습니다. 본 연구방향에 대한 개요는 첨부된 영문 본을 참조해 주시기 바랍니다. 귀하는 국립공원 시스템 및 각각의 국립공원에 정통한, 본 연구를 위하여 선정된 몇 명 안 되는 전문가중의 한 분이십니다. 따라서, 향후 십 년 간의 한국국립공원에 대한 미래예측 및 변화 가능성에 대해서 귀하의 고견을 듣고자 합니다.

이번, 첫 번째 설문지의 마감 일은 2001년 3월 1일이며, 그 이후로 두 세 차례의 설문 이 더 시행될 것입니다. 귀하의 모든 응답은 철저히 비밀에 부쳐지며, 본 연구용으로만 쓰여질 것입니다. 또한, 인용이 필요할 시는 귀하의 동의 하에서만 인용될 것입니다.

매 질문에 답하실 필요는 없으나, 귀하의 사려 깊은 응답은 귀중한 자료로써 본 연구를 더 의미 있고 심도 있게 할 것입니다. 따라서 응답에 소요되는 시간은 한 시간 미만일 것이나, 편하신 대로 충분한 시간을 가지시면 좋겠습니다.

국립공원을 아끼시고 본 연구에 협조해 주신 귀하께 감사 드리며, 본연구가 완성되면 최종 보고서를 보내드리겠습니다.

감사합니다.

이병규 드림.

연락처: Byung-kyu Lee
Ph.D, Candidate

(전화) 1-207-581-2882

(email) ourparks@hanamil.net

(주소) 5769 South Annex B

Parks, Recreation, and Tourism

Department of Forest Management

University of Maine

Orono, Maine 04469-5769

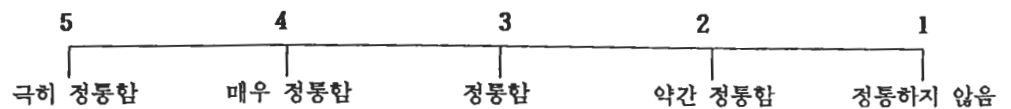
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국립공원에 관한 아래의 질문에 대해서 귀하의 고견을 말씀해 주십시오.

1. 현재, 한국국립공원이 직면한 주요 현안은 무엇이라고 생각하십니까? (상술해 주시고, 공란이 더 필요하시면 뒷면을 이용해 주십시오.)

2. 이러한 문제점들은 향후 10년 간 어떻게 해결될 수 있다고 생각하십니까? (상술해 주시고, 공란이 더 필요하시면 뒷면을 이용해 주십시오.)

3. 국립공원 시스템 정책 및 관리방안에 대하여, 귀하는 어느 정도로 정통하다고 생각하십니까? (하단의 스케일 상에서, 반영되는 숫자에 동그라미를 표시해 주시기 바랍니다.)



4. 하단 표상의 각각의 국립공원에 대한 귀하의 경험을 말씀해 주십시오. (예: 공원/공단직원; 공원자원 봉사자; 연구원; 탐방객; 기타(NGO, 다른 유관 정부/민간기관 등))

두 번째 열에서 귀하의 각 공원에 대한 경험의 심도를 반영하는 숫자에 동그라미를 표시해 주시기 바랍니다: 1 = 매우 경험이 많음 ; 4 = 경험이 없음.

공원이름	경험도	
예	1 2 3 4	탐방객, 8년; 자원봉사자, 1년; 공원직원, 2년
지리산 국립공원	1 2 3 4	
경주 국립공원	1 2 3 4	
계룡산 국립공원	1 2 3 4	
한려해상 국립공원	1 2 3 4	
설악산 국립공원	1 2 3 4	
속리산 국립공원	1 2 3 4	
한라산 국립공원	1 2 3 4	
내장산 국립공원	1 2 3 4	
가야산 국립공원	1 2 3 4	
덕유산 국립공원	1 2 3 4	
오대산 국립공원	1 2 3 4	
주왕산 국립공원	1 2 3 4	
태안 해안 국립공원	1 2 3 4	
다도해상 국립공원	1 2 3 4	
북한산 국립공원	1 2 3 4	
치악산 국립공원	1 2 3 4	
월악산 국립공원	1 2 3 4	
소백산 국립공원	1 2 3 4	
월출산 국립공원	1 2 3 4	
변산반도 국립공원	1 2 3 4	

THE UNIVERSITY OF MAINE

COLLEGE OF NATURAL SCIENCES, FORESTRY AND AGRICULTURE
DEPARTMENT OF FOREST MANAGEMENT

Parks, Recreation & Tourism Program
5755 Nutting Hall
Orono, Maine 04469-5755
Tel: 207-581-2850
Fax: 207-581-2875

님:

대한민국 국립공원에 관한 본 연구에 참여해주셔서 감사 드립니다.

지난 라운드 1에서 47개의 주요현안이 거론되었습니다. 제가 이 47개의 현안을 다음의 3개의 cluster로 대별하였습니다: 국립공원철학/정책, 공원조직/관리, 공원탐방/이용객 서비스 (뒤에 첨부된 페이지들을 참조하시기 바랍니다). 제가 귀하의 의견을 정확히 옮겼다고 생각하나, 부정확하게 된 것이 있다면 알려주시기 바랍니다.

귀하께서 이러한 분류에 동의하신다면 각 cluster를 보시고 그 안에 있는 항목 (현안)들을 중요도에 따라 순위를 정해주시기 바랍니다 (귀하의 자유로운 의견에 따라 각 cluster내의 항목 (들)을 삭제하거나 빠졌다고 생각되는 항목 (들)을 첨가하실 수 있습니다).

마지막으로, 앞으로 10년 동안에 한국국립공원시스템의 발전을 위하여, 먼저 강조되어야 한다고 생각되는 것부터 세 cluster의 順位를 매겨주시기 바랍니다.

비록 응답에 소요되는 시간은 한 시간 미만일 것이나, 편하신 대로 충분한 시간을 가지시면 좋겠습니다.

귀하의 국립공원에 대한 지속적 관심과 본 연구에 참여해 주셔서 감사 드리며, 맺습니다.

감사합니다.

이병규 드림.

연락처: Byung-kyu Lee
Ph. D. Candidate
(전화) 1-207-581-2882
(email) ourparks@hanmail.net
(주소) 5769 South Annex B
Parks, Recreation, and Tourism
University of Maine
Orono, Maine 04469-5769
U. S. A





College of Natural Sciences, Forestry and Agriculture
Department of Forest Management

Parks, Recreation & Tourism Program
5755 Nutting Hall
Orono, Maine 04469-5755
Tel# 207/581-2850
FAX# 207/581-2875

남:

대한민국 국립공원에 관한 본 연구에 계속 참여해주셔서 감사 드립니다.

귀하의 지난 응답들에 의거하여, 네 개의 主要論點 -- “불명확한 공원철학,” “생태계보존에 대한 미흡한 강조,” “관리방안의 만연된 결여,” 그리고 “탐방객서비스의 필요성” -- 으로 요약되었습니다.

첨부된 내용을 보시고 (1) 네 가지 주요논점을 중요도에 따라 順位를 정해주시겠습니까? 그 다음에, (2) 각 논점의 중요도 순위결정에 어떤 점들이 고려되었고, 어떤 해결책들이 있으며, 또한 귀하가 제안한 해결책(들)의 바람직한 시행기간을 명시해 주십시오. 마지막으로, (3) 각 논점이 앞으로 5년 이내에 해결될 가능성 여부에 대한 의견을 피력해 주시겠습니까?

비록 응답에 소요되는 시간은 한 시간 미만일 것이나, 편하신 대로 충분한 시간을 가지시면 좋겠습니다. 두 주일 이내에 설문지를 작성하셔서 보내주시면 감사하겠습니다.

귀하의 국립공원에 대한 지속적 관심과 본 연구에 참여해 주셔서 감사 드리며, 본 연구에 대한 최종보고서는 6개월 이내에 보내드리겠습니다.

감사합니다.

이병규 드림.

연락처: Byung-kyu Lee
Ph. D. Candidate
(전화) 1-207-581-2882
(email) ourparks@hanmail.net
(주소) 5769 South Annex B
Parks, Recreation, and Tourism
University of Maine
Orono, Maine 04469-5769
U. S. A



논점 -- "不明確한 公團哲學"

(1) 중요도? 위 논점의 중요도에 대한 귀하의 의견은? 1 2 3 4 (1 = 가장 높음 4 = 가장 낮음)	(2) 중요도 순위결정에 고려된 점, 논점 해결책, 그리고 그 해결책의 바람직한 시행기간에 대한 의견을 기술해 주십시오. (공란이 더 필요하시면 뒷면으로)	(3) 실현 가능성? 위 논점이 앞으로 5년 이내에 해결될 가능성은? 1 2 3 4 (1 = 가능함 4 = 불가능함)
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논점 -- "生態系 保存에 대한 未洽한 強調"

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논점 -- "管理 方案의 蔓延된 缺如"

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논점 -- "探訪 客서비스의 必要性"

(1) 중요도? 위 논점의 중요도에 대한 귀하의 의견은? 1 2 3 4 (1 = 가장 높음 4 = 가장 낮음)	(2) 중요도 순위결정에 고려된 점, 논점 해결책, 그리고 그 해결책의 바람직한 시행기간에 대한 의견을 기술해 주십시오. (공란이 더 필요하시면 뒷면으로)	(3) 실현 가능성? 위 논점이 앞으로 5년 이내에 해결될 가능성은? 1 2 3 4 (1 = 가능함 4 = 불가능함)
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논점 -- 不明確한 公園哲學

- 국립공원관리공단과 중앙정부의 국립공원이념 결여
- 관리방향/목표결여; 중장기적 관리방향결여
- 국립공원관리공단/중앙정부의 국립공원에 대한 이해부족
- 국립공원에 대한 일반대중의 낮은 인지도
- 역무대행기관이 아닌 국가가 직접관리하는 “국립공원청” 신설 필요
- 공원지역내의 개발압력/시도
- 자연자원에 대한 중앙정부의 능동적 역할 결여
- 非일관적이고 중복된 관련법들
- 공원에 케이블카 시스템 건설 시도

논점 -- 生態系 保存에 대한 未洽한 強調

- 패러다임 전환 (국립공원이 保存과 敎育의 場으로 고려되어야함)
- 생태계에 대한 (일반대중에의) 홍보부족
- 일관성있는 생태계 관리미흡
- 보존과 이용의 마찰
- 保存에 관한 기준 결여
- 더 많은 환경교육프로그램 제공의 필요성
- 保存을 위주로 한 “自然公園法” 개정
- 생태계 보호정책 미흡
- 자연훼손의 증가
- 保存/생태계가치에 따른 국립공원 재분류

논점 -- 管理方案의 蔓延된 缺如

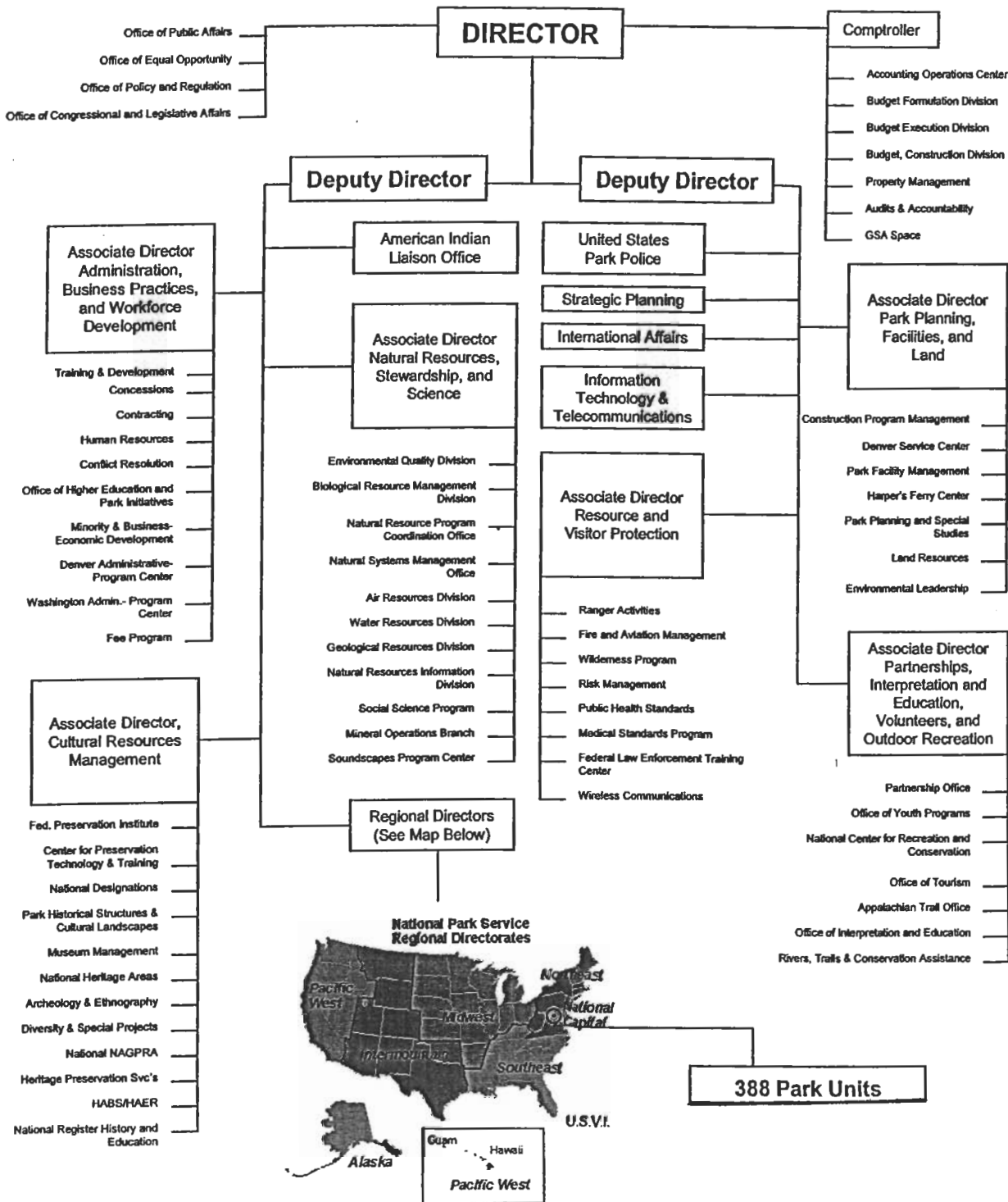
- 국립공원관리공단의 미흡한 전문성/예산/인력/예산집행권
- 국립공원관리공단 이사장의 정치적 임명 (낙하산 인사)
- 구획화 (zoning)의 문제점
- 국립공원관리공단의 경직된 조직
- “집단시설지구”내의 난개발 및 시설노후화
- 생태계 현황조사 및 기본시설조사 미흡
- (주무부서인 환경부 직원의 빈번한 교체에 따른) 정책의 非일관성
- 공원에 불법시설물
- 밀렵/불법채취에 대한 단속 미흡
- “집단시설지구”내의 업체들의 경영애로로 인한 경기 침체
- 공원에 국유지와 사유지가 혼재
- 공원에 사유재산권 침해 (각종 민원 유발)
- 생태촌이나 불교사찰등과 같은 문화 자원에 관한 정책부재
- 공원관리권에 대한 중앙과 지방정부간의 분쟁소지
- 공원에 주요지역에 위치한 불교사찰과의 마찰
- 공원에 위치한 불교사찰의 계속되는 중/개축

논점 -- 探訪客서비스의 必要性

- 올바른 이용유도를 위한 이용자 관리정책 부재
- 일반대중의 공원觀/이용목적 (예: 공원을 유흥지로 인식)
- 공원간 특성 차별화 결여
- 이용객들에게 양질의 휴양경험을 제공할 필요성
- 이용객을 위한 학습/편의시설 부족
- 친편일률적인 해설프로그램의 구성 (예: 연령별 차별화 미흡)
- 직접적 자연/문화체험을 통한 관광기회 제공의 결여
- 입장료 징수시 사찰입장료를 함께 징수하는데 따른 문제점

APPENDIX F: US NPS ORGANIZATION CHART

Figure F.1: USNPS organization chart (FY 2004)



BIOGRAPHY OF THE AUTHOR

Byung-kyu Lee was born in Seoul, Republic of Korea on November 14, 1963. He graduated from Seorabul High School in 1981. He attended the Chung-Ang University and graduated in 1989 with a Bachelor's degree in English Language and Literature. He also received degrees of Master of Business Administration, 1995, as well as Master of Science in Forestry, 1998, from the University of Maine.

He has been a member of National Association of Interpretation (NAI) since 1999 and published the following publications:

Lee, B. and LaPage, W. 2003. Future Scenarios of Korean National Parks. *In Proceedings of the 2002 Northeastern Recreation Research Symposium. (Forthcoming)*

Lee, B. and LaPage, W. 2002. Future of Korean National Parks: A preliminary Delphi study of key experts. *In Proceedings of the 2001 Northeastern Recreation Research Symposium. Pp.130-132.*

Daigle, J. and Lee, B. 2000. Passenger Characteristics and Experiences with the Island Explorer Bus -- Summer 1999. National Park Service New England System Support Office. Technical Report NPS/BSO-RNR/NRTR/00-15

Byung-kyu is a candidate for the Doctor of Philosophy degree in Forest Resources from The University of Maine in August, 2003.