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Meeting the Challenges of Urban Park Management: A Study of Two Sites

A thesis completed and submitted
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Abstract

There are key environmental and management issues relevant to protected areas and national parks apparent world-wide such as: management of environmental quality, biodiversity conservation, management of visitor use and impacts, allocation of access, law enforcement and monitoring, facility design, park financial viability, and community development.

Today, the trend has changed towards more specific and strategic management plans. Greater emphasis is put towards meeting targets and objectives and park managers are encouraged to have a direct hand in the preparation of management plans.

Visitor impact is also creating problems in park management that was unforeseen in the past. The management of visitors may be viewed as an integral part of the operational network of service tasks, service standards, and service delivery systems of recreation sites. Comprehensive planning and on-going monitoring underpin much of the success in visitor management. Whether park management decides to use tools such as hardening, hedging, or flexing, controlling numbers and type of visitor, interpretation/information education, or even a combination of these, the vital ingredient is to have a framework for visitor management.

Collaborative management is not a new approach and is the most recommended technique to achieve most management objectives within protected areas today. Collaborative management stands on the concept of “common good.” Because it is a process, collaborative management requires on-going review and improvement. Its most important result is not a management plan but a management partnership that is capable of effectively responding to various needs and addressing boundless problems.

In the Philippines where there is more uncertainty about protected areas management, the Department of Environment and Natural Resources has the primary responsibility for the establishment and management of protected areas. The Quezon Memorial National Park, classified as a strictly protected area and whose management objectives are categorized as a national park, is one example. Two urban parks that originally formed part of QMNP are the subjects of this study. This research compares and evaluates the management schemes of these parks based on: (a) park management, (b) visitor management, and (c) biodiversity conservation against the criteria set by international and local guidelines. It also makes recommendations on how to effect changes in the management of these urban parks to achieve environmental conservation goals.

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**To,
FOR,
BECAUSE OF**

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Definition of Terms

Activity-oriented, structured recreation areas - usually restricted to urban or suburban parks that depend on certain constructed features or facilities such as play fields with an organized formal structure imposed by the facility and shored up by rules.

Accountability - the clear and transparent assumption of responsibilities, the capacity and willingness to respond about one's own actions (or inactions) and the acceptance of relevant consequences.

Amenities - structures or services which are available to the public such as water system, waste disposal system, power supply, road and trail system, fences, boundaries, parking areas, camping grounds, entry/exit gate, look-out towers, administration buildings and sub-stations, comfort station, visitor station, visitor center, view deck and sheds among others

Area – refers to the total area applied/titled under one particular public land application

Biodiversity – (or biological diversity) an umbrella term for the degree of nature's variety and encompasses all species of plants, animals, micro-organisms and the ecosystems and ecological processes of which they are part

Buffer zones - identified areas outside the boundaries of and immediately adjacent to designated protected areas that need special development control in order to avoid or minimize harm to the protected area

Carrying capacity – that character of use that can be supported over a specified time by an area developed at a certain level without causing excessive damage to either the environment or the experience of the visitor; the ability of a recreation resource to sustain or support a user population at a measurable threshold based on upon specified goals and standards

Collaborative partnership - seeks to achieve mutually compatible objectives with the various groups

Collaborative management (also referred to as co-management, participatory management, joint management, shared-management, multi-stakeholder management or round-table agreement) - refers to a partnership by which various stakeholders agree on sharing among themselves the management functions, rights and responsibilities for a territory or set of resources under protected status

Consultative partnership - involves seeking advice by forming committees or councils from individuals, groups and other organizations outside of the resource management agency

Contributory partnership - involves the sponsorship or support of a public or private organization

Donation - refers to the act of liberality whereby a party gives a certain amount to another party or in other cases, disposes an animal or animals in favour of another party who accepts it

Entrance fee - a fee or an amount to be imposed upon entrance to any national park and other protected area

Facilities - structures available for rent such as kiosks, picnic tables, amphitheatre, cottages and the like

Fauna - refers to all species of animals found in a given area

Flora - refers to all species of plants found in a given area

Game refuge and bird sanctuary - refers to a forest land designated for the protection of game animals and fish, and closed to hunting and fishing in order that the excess population may flow and restock surrounding areas

General Park Management Plan - a short, comprehensive, and non-technical document for public information.

Hardening – a procedure that usually involves the surfacing of access routes (like walking tracks) and related facilities (like picnic areas) and increasing the number and range of facilities

Heritage - represents the things we want to keep; a network of interrelated elements – tangible and intangible, natural and cultural (human), personal and collective

Interpretation - an activity that aims to reveal meanings and relationships as an art, and revelations based upon information whose aim is not instruction but provocation

Legitimacy – refers to public confidence in and support for the governing agency.

Limits of Acceptable Change (LAC) - concerned with identifying opportunities for recreational activities by developing management objectives, indicators, and standards to define limits of change for a wide range of possible resource uses

Management Plan Detail - a detailed, technical document for management specialists.

Management plans - tools used to indicate how a resource is to be used, developed and managed

Monitoring - the periodic collection and evaluation of data relative to stated project goals, objectives and activities and is typically used as a technique for assessing long-term trends affecting the resource, the visitor experience, or the profile of the visitor, or as a method of assessing particular issues of management concern, such as visitor impact

National Integrated Protected Areas Systems (NIPAS) - the Philippine classification and administration of all designated protected areas to maintain essential ecological processes and life-support systems, to preserve genetic diversity, to ensure sustainable use of resources found therein, and to maintain their natural conditions to the greatest extent possible

National park - a relatively large area (a) where one of several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of specific scientific interest, educational and recreational interest or which contains a natural landscape of great beauty; (b) the highest competent authority of the country has taken steps to prevent or to eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; (c) visitors are allowed to enter, under special conditions, for inspirational, educational, cultural and recreational purposes

Natural biotic area/reserve - an area set aside to allow the way of life of societies living in harmony with the environment to adapt to modern technology at their own pace

Natural monument/landmark - a relatively small area focused on protection of small features to protect or preserve nationally significant natural features on account of their special interest or unique characteristics

Natural park - relatively large area not materially altered by human activity where extractive resource uses are not allowed and maintained to protect outstanding natural and scenic areas of national or international significance for scientific, educational and recreational use

Operational partnership - makes partners share roles in the actual undertaking to achieve a set goal

Parks - tracts of tax-supported land and water, established primarily for the benefit and enjoyment of the public and maintained essentially for outdoor recreation

Park manager - represents the person in charge of the park's management; can be a director, superintendent, supervisor, chief, warden or staff whose responsibility is overseeing the management of the park

Partnership - refers to a group of individuals and/or organizations working together to address land use, natural resource, or environmental issues at the local level

Plants - refers to all classes of species of the rare and flowering plants including orchids, ferns, lycopods or club moss and other wild plants in the Philippines as defined

Power – the acknowledged legal capacity to act.

Practical plan – produced to provide park personnel with a working document that can continually be consulted to provide day-to-day guidance in the management of park and recreation resources; usually short, succinct, and to the point with only those pictorials and graphics necessary to implement the plan; written to be easily understood and identifies specific implementation actions.

Prestige plan – a plan generated to impress someone; always extensively illustrated with many high quality photographs and graphic presentations.

Protected area - 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; identified portions of land and water set aside by reason of their unique physical and biological significance, managed to enhance biological diversity and protected against destructive human exploitation

Protected landscapes/seascapes - areas of national significance which are characterized by the harmonious interaction of man and land while providing opportunities for public enjoyment through recreation and tourism within the normal lifestyle and economic activity of these areas

Public plan – produced to present management data to the general public for comments and recommendations

Recreation - an activity that refreshes the body, spirit or mind undertaken during leisure time in an outdoor or natural setting

Recreation areas - forest land reservation which has been set aside for the protection, reservation, development and public enjoyment of natural scenery, primitive or natural landscape, wildlife, natural phenomena and other natural resources.

Recreation Opportunity Spectrum (ROS) - a conceptual framework for encouraging diversity in outdoor recreation opportunities that explicitly recognizes experiences derived from recreation are related to the settings in which they occur

Resource - an extensive and relatively isolated and uninhabited area normally with difficult access designated as such to protect natural resources of the area for future use and prevent or contain development activities that could affect the resources

Resources – consist of the physical means of acting – financial, economic, and natural resources for security and on-going development, skilled people, information, and the appropriate technology.

Resource-oriented, non-structured recreation areas - parks where there is dependence on a particular resource or a combination of natural (land and water) resources.

Resource reserve - an extensive and relatively isolated and uninhabited area normally with difficult access designated as such to protect natural resources of the area for future use and prevent or contain development activities that could affect the resource pending the establishment of objectives which are based upon appropriate

Revenues – any fees or charges that are collected for entry into and use of certain facilities inside national parks and other protected areas

Species – a group of organisms capable of interbreeding freely of each other but not with members of other species

Stakeholders - the various institutions, social groups and individuals who possess a direct, significant and specific stake in a protected area

Strict nature reserve - an area possessing some outstanding ecosystem, features and/or species of flora and fauna of national scientific importance maintained to protect nature and maintain processes in an undisturbed state in order to have ecologically representative examples of the natural environment available for scientific study, environmental monitoring, education, and for the maintenance of genetic resources in a dynamic and evolutionary state

Visitor - any local or foreign individual or parties interested to visit a national park and other protected areas

Visitor Activity Management Process (VAMP) - a framework developed by the Canadian Park Service (CPS) and a group of academic researchers meant to act in consonance with natural resource management which feed information into two decision- making structures: system planning and park management planning, in which management plans are developed to implement national park policy in established national parks.

Visitor Impact Management (VIM) - planning framework that incorporates resource and visitor management within a process aimed at reducing or controlling the impacts that threaten the quality of outdoor recreation areas and opportunities

Wildlife - shall include all wild flora and fauna either live, preserved or processed state

Wildlife sanctuary - an area that assures the natural conditions necessary to protect nationally significant species, groups of species, biotic communities or physical features of the environment where these may require specific human manipulation for its perpetuation

List of Abbreviations

AD	-	Assistant Director
ANZECC	-	Australia and New Zealand Environment and Conservation Council
DENR	-	Department of Environment and Natural Resources
DOT	-	Department of Tourism
EIA	-	Environmental Impact Assessment
EIS	-	Environmental Impact Statement
EMS	-	Environmental Management Specialist
EMB	-	Environmental Management Bureau
ENRAP	-	Environmental and Natural Resource Accounting Project
GPMP	-	General Park Management Plan
IPAF	-	Integrated Protected Areas Fund
IPAS	-	Integrated Protected Areas System
IUCN	-	International Union for the Conservation of Nature and Natural Resources
LAC	-	Limits of Acceptable Change
MPD	-	Management Detail Plan
NCR	-	National Capital Region
NEDA	-	National Economic Development Authority
NGO	-	Non-Government Organization
NHI	-	National Historical Institute
NAPWNC	-	Ninoy Aquino Parks and Wildlife Nature Center
NIPAS	-	National Integrated Protected Areas System
NRDC	-	Natural Resourced Development Corporation
PASA	-	Protected Area Suitability Assessment
PAWB	-	Protected Areas and Wildlife Bureau
PCMC	-	Philippine Children's Medical Center

PSHS	-	Philippine Science High School
PVO	-	Private Voluntary Organizations
QC	-	Quezon City
QCPDAD	-	Quezon City Parks Development and Administration Department
QCPDFI	-	Quezon City Parks Development Foundation, Incorporated
QMC	-	Quezon Memorial Circle
QMNP	-	Quezon Memorial National Park
ROS	-	Recreation Opportunity Spectrum
SAS	-	Statistical Analysis Software
VAMP	-	Visitor Activity Management Process
VIM	-	Visitor Impact Management
WRI	-	World Resources Institute
WRRC	-	Wildlife Rescue and Rehabilitation Center
WWF	-	World Wildlife Fund

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Disestablishing the Ninoy Aquino Parks and Wildlife Nature Center Situated in Quezon City, Metro Manila as Protected Area and shall be Known as DENR Wildlife Rehabilitation and Rescue Center
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Chapter I. Introduction

1. Background

1.1 Definitions of National Parks and Protected Areas

In Western society, experiencing nature is an old and well-accepted recreational activity. Starting in the United States in 1872 with Yellowstone Park, governments set aside natural areas for protection and recreation in the form of national parks and protected areas. These initial attempts started a worldwide trend.

Within all parts of the globe, there is now a worldwide system of thousands of protected areas and national parks. Since 1970, the number of protected areas increased by 15%, from 8,641 (McNeely et al, 1994) to 9,932 (Eagles, 1999).

Borrini-Feyerabend (2000) states that most protected areas are under common property regimes, i.e., they are state-property or communal property, the latter being an effective control exercised by the members of a specific community. When the state or community control is ineffective or breaks down, the territory becomes open access - the condition that inspired the coining of the expression "tragedy of the commons" by Hardin (1968). Besides common property, protected areas can also be found under private ownership or mixed ownership status.

The International Union for the Conservation of Nature and Natural Resources (IUCN) has adopted the following definition of a protected area and a national park, respectively:

A **protected area** 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.

A **national park** is a relatively large area where:

- *One of several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of specific scientific interest, educational and recreational interest or which contains a natural landscape of great beauty;*
- *The highest competent authority of the country has taken steps to prevent or to eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; and*
- *Visitors are allowed to enter, under special conditions, for inspirational, educational, cultural and recreational purposes.*

IUCN states that all protected areas need to meet the general purposes contained in this definition but in practice, the precise purposes for which protected areas are managed differ greatly. Apart from the protected area category, the management status of a protected area varies according to the political and socio-economic conditions of the host country. In some cases a protected area possesses its own management authority, with full autonomy, a large work force and extensive budget. In others, a protected area is protected only on paper - there is no demarcation, rule, or management practice to reflect a special status on the ground.

What many protected areas have in common, however, is that the responsibility for their management is fully assigned to a specific agency that is often a public body. At times the agency put in charge by the government is a non-governmental organization (NGO). In general, the agency has the mandate

of conserving the area for its own intrinsic value (such as habitat, species and genetic diversity) (Borrini-Feyerabend, 2000).

In a developing country like the Philippines, the main purpose for the establishment of protected areas has been to preserve important natural features and unique habitats.

Under Philippine Republic Act No. 7586 promulgated in 1992 (*An Act Providing for the Establishment and Management of National Integrated Protected Areas System* or IPAS), defining its scope and coverage, and for other purposes), a protected area and a national park are defined, respectively as follows:

*A **protected area** refers to identified portions of land and water set aside by reason of their unique physical and biological significance, managed to enhance biological diversity and protected against destructive human exploitation.*

*A **national park** refers to a forest reservation essentially of natural wilderness character which has been withdrawn from settlement, occupancy or any form of exploitation except in conformity with approved management plan and set aside as such exclusively to conserve the area or preserve the scenery, the natural and historic objects, wild animals and plants therein and to provide enjoyment of these features in such areas.*

1.2 Management Objectives of Protected Areas

Protected areas are of different categories and are often adjacent so that sometimes one category nests within another. Because of this, it is inevitable that the same designation may mean different things in different countries. In like manner, different designations in different countries may be used to describe the same category of protected area. As a consequence, there are significant

differences in how management is carried out within these areas. IUCN has developed a system of categories of protected areas according to management objectives that is shown in **Table 1**.

The following are the main management objectives for protected areas (Spellerberg, 1992; IUCN, 1994; McNeely et al, 1994):

1. Scientific research and education;
2. Wilderness protection;
3. Preserve species and genetic diversity;
4. Maintain environmental services;
5. Protect specific natural and cultural features;
6. Sustainable use of resources from natural ecosystems;
7. Maintain cultural and traditional attributes;
8. Produce protein from wildlife;
9. Produce timber, forage or extractive commodities;
10. Provide recreation and tourism services;
11. Maintain open options, management flexibility and multiple use;
12. Contribute to rural and integrated development;
13. Protect scenic beauty, and
14. Ensure options for the future.

In the Philippines, there are two types of protected areas: 1) strictly protected areas which are relatively free of exotic species, human settlements and cultivation, and 2) extractive protected areas that are areas where limited and regulated harvesting of resources are allowed (EMB, 1996). Protected areas are also categorized based on their management objectives into (PAWB, 1998) (a) strict nature reserve, (b) national park, (c) natural monument/landmark, (d) managed nature reserve/wildlife sanctuary, (e) protected landscape/seascape, (f) resource reserve, (g) natural biotic areas, and (h) other categories.

One example of a protected area in the Philippines is the Quezon Memorial National Park which is classified under the first type (strictly protected area) and whose management objectives are categorized as falling under (b). Two existing urban parks that were originally part of this national park will be the objects of study and the subjects of discussion as a major part of this research.

The establishment of protected areas in the Philippines serves five (5) significant purposes (EMB, 1996), namely:

1. Protection of the ecosystem and habitats from indiscriminate encroachment, exploitation and destruction by human beings;
2. Conservation of the habitat for the breeding of endangered/threatened wildlife and maintenance of biodiversity;
3. Achievement of compromise between preservation efforts, recreational needs and requirements of the local people;
4. Facilitation of controlled experiments and research on ecosystems, habitats and wildlife, and
5. Promotion of people's awareness of the role of ecological patterns and their inherent fragility.

In **Table 1** are shown the categories of protected areas and their management objectives as categorized by IUCN and several other authors, and the NIPAS Act of the Philippines. The author attempts to analyze how each category fulfills management objectives for protected areas in the present day context.

It can be seen from the analysis that although management objectives are explicitly stated for each category of protected area, this does not ensure that these objectives are strictly adhered to and met. Of course, management schemes utilized to meet the objectives are dependent on the site as well. IUCN

designated protected areas have consistent objectives for each category. However, there is more uncertainty about protected areas management within the Philippines.

1.3 Management Issues in Protected Areas

There are key environmental and management issues relevant to protected areas and national parks apparent world-wide such as: management of environmental quality, biodiversity conservation, limits of acceptable change, management of visitor use, allocation of access, management of recreational conflict, law enforcement and monitoring, facility design, park financial viability and community development.

These key management issues in national parks and protected areas can be summarized as (IUCN, 1997):

- 1.** Balancing the needs of conservation, recreation and sensitive economic development;
- 2.** Preserving cultural and historical value of intensively used areas;
- 3.** Dealing with an increasingly complex set of demands which is possibly best characterized by a diversifying set of recreational needs;
- 4.** Providing for such increase in recreational demands as dictated by demographic and temporal needs;
- 5.** Ensuring visitor satisfaction by providing services and facilities;
- 6.** Addressing historical and present day issues relating to ownership and management; and
- 7.** Improving productivity and conservation outcomes.

In the Philippine scenario, several obstacles must be overcome in the expansion of protected areas and the enhancement of their role in biodiversity conservation (EMB, 1996). These obstacles include:

1. Conflicts with local people in relation to the establishment or existence of a protected area;
2. Weak or unstable administration of policies and budgets by the agency responsible in managing the protected area;
3. Ineffective and poor management of the protected area;
4. Inadequate funding for the protected area, and
5. Weak public support for the protected area.

The Integrated Protected Areas System (IPAS – refer to **Appendix 1**) has been adopted to address the fragmented and sometimes unrealistic approaches to the management of protected areas in this country. IPAS recognizes that effective administration of these protected areas is possible only through cooperation among the national government, the local government and concerned private organizations. IPAS stresses that the use and enjoyment of these protected areas must be consistent with the principles of biological diversity and sustainable development.

Also, the National Integrated Protected Areas System (NIPAS) program which started in 1988 proposes to re-establish and strengthen the protected areas management in terms of: a) site establishment and management, b) institutional development through improved supervisory mechanisms, c) human resources development and training, d) policy reform, and e) financial support mechanisms (EMB, 1996).

Table 1 : Categories and Management Objectives of Protected Areas

A. IUCN designation of Protected Areas

Category	Name	Management Objectives													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
I.	Scientific Reserve/ Strict Nature Reserve	★	△	★	★	△	△						△		△
II.	National Park	★	★	★	△	★	△				★	△	★		★
III.	Natural Monument/ Natural Landmark	★	★	★	★	△	△				★	△	△		△
IV.	Managed Nature Reserve/ Wildlife Sanctuary	★	△	★	★	△	△		△		△	△	△		△
V.	Protected Landscapes	△	△	△	△	△	△	★	△	△	★	★	★	△	★
VI.	Resource Reserve	△	△	△	△	△	△	△	△	△			★		△
VII.	Natural Biotic Area/ Anthropological Reserve	★	★	★	△	△	△	★	△	△	△	★			△
VIII.	Multiple Use Management Area/ Managed Resource Area		△	△	△	△	△	△	★	★	★	△	△	★	★
IX.	Biosphere Reserve	★	△					★				★	★		
X.	World Heritage Sites	★	★									★	△		

References : IUCN (1994); Spellerberg (1992); Wright (1996)

Legend : Management Objectives

- | | | | | | |
|---|----------------------------------------------------------|----|------------------------------------------------------------------------------|---|------------|
| 1 | Maintain sample ecosystems in natural state | 8 | Produce protein from wildlife | ★ | Priority |
| 2 | Maintain ecological diversity and environment regulation | 9 | Produce timber, forage or extractive commodities | △ | Considered |
| 3 | Conserve genetic resources | 10 | Provide recreation and tourism services | | |
| 4 | Provide education, research and environmental monitoring | 11 | Project sites and objects of cultural, historical or archaeological heritage | | |
| 5 | Conserve watershed, flood control | 12 | Protect scenic beauty | | |
| 6 | Control erosion and sedimentation | 13 | Maintain open options, management and flexibility, multiple use | | |
| 7 | Maintain indigenous uses or habitation | 14 | Contribute to rural development | | |

Table 1 : Categories and Management Objectives of Protected Areas

B. The National Integrated Protected Areas System (NIPAS) of the Philippines (Republic Act No. 7586)

Category	Name	Management Objectives													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
A.	Strict Nature Reserve	★	★	★	★										
B.	Natural Park	★	★		★					★		★			
C.	Natural Monument	★	★												
D.	Wildlife Sanctuary	★	★	★	△								★		
E.	Protected Landscapes and Seascapes	△	△						△	★			★	△	
F.	Resource Reserve	★	★												
G.	Natural Biotic Areas		★		△								★	△	
H.	Other Categories (established by law, conventions or international agreements which the Philippine Government is signatory)														

Reference : PAWB, 1998a

Legend : Management Objectives

- | | | | | | |
|---|----------------------------------------------------------|----|------------------------------------------------------------------------------|---|------------|
| 1 | Maintain sample ecosystems in natural state | 8 | Produce protein from wildlife | ★ | Priority |
| 2 | Maintain ecological diversity and environment regulation | 9 | Produce timber, forage or extractive commodities | △ | Considered |
| 3 | Conserve genetic resources | 10 | Provide recreation and tourism services | | |
| 4 | Provide education, research and environmental monitoring | 11 | Project sites and objects of cultural, historical or archaeological heritage | | |
| 5 | Conserve watershed, flood control | 12 | Protect scenic beauty | | |
| 6 | Control erosion and sedimentation | 13 | Maintain open options, management and flexibility, multiple use | | |
| 7 | Maintain indigenous uses or habitation | 14 | Contribute to rural development | | |

Introduction