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Institutional Arrangements Study of the Recreation and Tourism Management in the Protected Natural Areas of New Zealand and Mexico

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A thesis
submitted in partial fulfilment
of the requirements for the Degree of
Master of Parks, Recreation and Tourism Management

at

Lincoln University

by

A.R. Rhodes

Lincoln University

2005

Abstract of a thesis submitted in partial fulfilment of the
requirements for the Degree of M.P.R. & T.M.

Institutional Arrangements Study of the Recreation and Tourism Management in the Protected Natural Areas of New Zealand and Mexico

by A.R. Rhodes

This thesis undertakes an institutional analysis of tourism and recreation management in the protected natural area systems of New Zealand and Mexico. The aim of the thesis is to compare the institutional arrangements of both countries and suggest from the New Zealand experience lessons that can be applied to the Mexican context. The institutional arrangements framework used in this research includes the following eight variables of analysis: historical and traditional customs and values, legislation and regulations, policies and guidelines, administrative structures, key participants and actors, economic and financial arrangements, political structures and processes, and management techniques. The agencies in charge of the protected natural areas are the Department of Conservation (DOC) for the New Zealand case and the National Commission for Protected Natural Areas (CONANP) for the Mexican case.

A qualitative approach was used throughout the research, because this research method looks at relationships within a system and has been used to study organisational functioning. The research design of this study is deductive, because the research has a bank of pertinent and well-delineated concepts (determined by the institutional arrangements framework), and takes a more explanatory position involving various, comparable cases. This institutional analysis adopts a thin perspective because most of the data collected comes from documents or peoples' descriptions of how things should be done according to laws, policies and regulations. Data was gathered through in-depth, semi-structured interviews and extensive archival research. More interviews were carried out for the Mexican case, due to the lack of written information available for analysis.

The institutional arrangements framework applied in this thesis has helped understand how tourism and recreation in protected natural areas works in the context of two different countries. An institutional arrangements framework gives a general picture of 'how things work' and 'why they work in a certain way'. The framework is useful to draw a holistic picture of the reality analysed, and also to strategically plan changes within the institutional arrangements by affecting one, or several, of the key variables of the framework.

The institutional arrangements around tourism and recreation in protected areas define the management strategies and practices applied to manage these issues. These management strategies and practices are not defined exclusively by the agency (the natural resource agency), but are also the result of the interaction, influence and public negotiation with other institutions (rules) and entities (players). To improve the management of tourism and recreation and to have a long-term effect, the agency must

influence changes in several of the variables of the institutional arrangements and not only the management techniques.

The New Zealand experience with regard to tourism and recreation management can provide valuable information that can assist in influencing the present institutional arrangements of Mexico. Lessons from New Zealand include issues related to indigenous values and customs, policies, administrative structures, key participants and management techniques. Mexico, by opening itself to international experiences, can improve its capability for better handling the growing development of tourism and recreation in its protected natural area system. Tourism and recreation are contemporary trends and therefore Mexico must now construct the basis for long-term institutional arrangements which will be able to balance the paradox of preservation and use, now and in the future.

***Key words**: Mexico, New Zealand, institutional arrangements, protected natural areas, recreation, tourism, management.*

Acknowledgements

This great opportunity of living, studying and travelling in New Zealand was made possible by the New Zealand Agency for International Development (NZAID). Throughout this 'New Zealand experience' I have met, been helped, and supported by many interesting people from NZ and around the world.

Therefore I would like to acknowledge first of all the help of the staff and lecturers at Lincoln University during my classes, research and thesis process. Also, I would like to thank the patience and support of Caitriona Cameron from the Student Learning Centre in my many essays and in my thesis. Above all, I would like to thank my thesis supervisors Kay Booth and Stephen Espiner for their help, trust, and guidance during this last stage of my master's degree.

I would also like to acknowledge the help, assistance and time of all the people who participated as interviewees for my research here in New Zealand and in Mexico. Specially to all the staff of CONANP (in the central offices and in the protected area offices) for their time, disposition, and helpful insights. Also thanks to all the other people involved and committed to the development of ecotourism and protected natural areas in Mexico for their time and guidance including: Hector Ceballos-Lascurain, Arturo Gomez-Pompa, Jorge Chavez, Lilia Rueda, Patricia Aguilar, Wendy Hesketh, Edna Aguiñaga, Angel Nieva, Silvia del Amo, Ana Paulina Vázquez, Yetlaneci Aguilar, Carlos Muñoz, and Gerardo Carreón.

Finally, I would like to thank for all their support, patience, encouragement and love to very special people in my life, and who were always present during the research and writing of this thesis. First, to my wife Mariana Díaz Amador for her unconditional love and tremendous patience in my many moments of despair. Second, to my family who always support me in every endeavour I start. Third, to my mother-in-law Consuelo Díaz and also to the Huc Orduña family for letting me stay at their homes during my research. Last, but not least, to my Latin American family (Maria Paz, Blai, Tane, Edu, Sole, Tommy, Ana, Nico, Mati, Denise, Mauricio, Valentina, Manena, Clau, Esteban, and Andres) who made my time in New Zealand so special.

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List of Acronyms

AMTAVE	Mexican Association of Adventure Tourism and Ecotourism (Asociación Mexicana de Turismo de Aventura y Ecoturismo) - Mexico
APFF	Flora and Fauna Protection Area (Área de Protección de Flora y Fauna) - Mexico
APRN	Natural Resources Protection Area (Área de Protección de Recursos Naturales) - Mexico
CECADESU	Education and Training Centre for Sustainable Development (Centro de Educación y Capacitación para el Desarrollo Sustentable) - Mexico
CDS	Conservation for Development Strategy - Mexico
CMP	Conservation Management Plan - New Zealand
CMS	Conservation Management Strategies - New Zealand
CNANP	National Council of Natural Protected Areas (Consejo Nacional de Áreas Naturales Protegidas) - Mexico
COFEMER	Federal Commission for Regulatory Improvement (Comisión Federal de Mejora Regulatoria) - Mexico
COMECO	Mexican Institute of Ecotourism (Colegio Mexicano de Ecoturismo) - Mexico
CONAFOR	Forest National Commission (Comisión Nacional Forestal) - Mexico
CONANP	National Commission of Protected Natural Areas (Comisión Nacional de Áreas Naturales Protegidas) - Mexico
CONAPO	National Commission of Population (Comisión Nacional de Población) - Mexico
CONACYT	National Council of Science and Technology (Consejo Nacional de Ciencia y Tecnología) - Mexico
CPR	Common-Pool Resources
DOC	Department of Conservation - New Zealand
FANP	Fund for Protected Natural Areas (Fondo de Áreas Naturales Protegidas) - Mexico
FMC	Federated Mountain Clubs - New Zealand

FMCN	Mexican Nature Conservation Fund (Fondo Mexicano para la Conservación de la Naturaleza) - Mexico
FONATUR	National Fund of Tourism Promotion (Fondo Nacional de Fomento al Turismo) - Mexico
GDP	Gross Domestic Product
GEF	Global Environment Facility
GNI	Gross National Income
INE	National Institute of Ecology (Instituto Nacional de Ecología) - Mexico
IUCN	World Conservation Union
IYE	International Ecotourism Year
LAC	Limits of Acceptable Change
LGEEPA	General Law of Ecological Equilibrium and Environment Protection (Ley General del Equilibrio Ecológico y Protección al Ambiente) - Mexico
MAB	Man and Biosphere
MP	Member of Parliament
NGO	Non Governmental Organisation
NOM	Official Mexican Norm (Normas Oficiales Mexicanas) - Mexico
NP	National Park
NZ	New Zealand
OECD	Organisation for Economic Co-operation and Development
ROS	Recreation Opportunity Spectrum
RPC	Conservation Priority Regions (Regiones Prioritarias para la Conservación) - Mexico
PAVIM	Protected Area Visitor Impact Management
PEMEX	Mexican Petroleum (Petróleos Mexicanos) - Mexico
PNA	Protected Natural Area
PRODERS	Programs of Regional Sustainable Development (Programas de Desarrollo Regional Sustentable) - Mexico
PROFEPA	Environment Protection Agency (Procuraduria Federal de Protección al Ambiente) - Mexico
SECTUR	Ministry of Tourism (Secretaria de Turismo) - Mexico
SEMARNAT	Secretariat of Environment and Natural Resources[1] (Secretaria del Ambiente y Recursos Naturales) – Mexico
SOP	Standard Operating Procedures - New Zealand
TIES	The International Ecotourism Society
TOMM	Tourism Optimisation Management Model
TOS	Tourism Opportunity Spectrum
UCANP	Coordinating Unit for PNAs (Unidad de Coordinadora de Áreas Naturales Protegidas) - Mexico

[1] Also referred to throughout the thesis as Ministry of Environment.

UNAM	National Autonomous University of Mexico (Universidad Autónoma de México) - Mexico
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
US	United States of America
VAMP	Visitor Activity Management Process
VAMS	Visitor Asset Management System - New Zealand
VERP	Visitor Experience Resource Protection
VIM	Visitor Impact Management
WCMC	World Conservation Monitoring Centre
WTO	World Tourism Organisation

1. Introduction

For more than 500 years Western society has created parks to be used by people (Eagles & McCool, 2002). Since the creation of the first national parks in the 'New World' (United States, Canada, New Zealand, and Australia) at the end of the 19th century, protected natural areas have become important tourist attractions in many countries (Butler & Boyd, 2000). This trend has increased in recent years with the development of nature-based tourism and a growing outdoor recreation industry.

The government agencies in charge of conserving the protected natural areas (PNAs) must manage increasing pressure from tourism and recreation. These agencies are faced with the challenge of balancing the paradox of preservation and use. The paradox is on one hand preserving the natural environment of a protected area, and on the other hand allowing tourism and recreation to take place. This thesis focuses on how tourism and recreation are managed in the protected natural area systems of New Zealand and Mexico.

The strategies used to manage tourism and recreation in protected natural areas differ between the agencies of different countries. The reasons for applying one or another strategy or technique depends on the national context of each country as well as the institutional arrangements around the agency and the protected area system. This thesis is about the institutional arrangements for PNA management in New Zealand and Mexico.

A holistic comprehension of the institutional arrangements of New Zealand and Mexico first allows for the understanding of how tourism and recreation are managed; second, it permits a comparison between both countries; and third, it provides the possibility of learning from each country's experience. An institutional arrangements study also helps comprehend why certain strategies and techniques are applied to manage tourism and recreation. It is important to clearly understand the institutional arrangements because this allows areas for improvement to be identified, and hence new or better laws, organisational structure, policies, strategies and/or techniques can be recommended.

The next section identifies the variables that can be considered part of the institutional arrangements of a system. Through this review of possible variables, a framework is developed to guide the analysis of the present study. The variables explored are derived from studies about natural resources in general and specifically from protected natural areas studies.

1.1 Institutional Arrangements Framework

Nelson (1978a, p.48), in proposing a structural framework for the study of national parks and other land use, includes as one of its four basic components 'institutional arrangements', which he defines as "forms of government, agencies, civil and criminal laws, legislation, and other means of influencing human

behaviour and effects on land use". It is important to note in this definition the relationship that Nelson has made between the institutions and the 'effects on land use'. Nelson underlines the importance of recognising that institutional arrangements are social phenomena that often have an "indirect and unappreciated effect on land use and landscape" (1978a, p. 48). Nelson (1978b) presents a general guide for preparing national or regional reviews of national parks in which 'institutional arrangements' are considered one of the components that can be divided into two elements:

I. Legislation, Organisation, Financing;
II. Major Management Techniques.

Another interesting exercise comparing protected natural area systems in the world was undertaken by the Commission on National Parks and Protected Areas (CNPPA) of the World Conservation Union (IUCN) (McNeely, Harrison, & Dingwall, 1994). The study reviewed regional protected areas including the following components:

- Historical perspective,
- Current protected area coverage,
- Additional protected areas required,
- Institutions in protected areas,
- Current levels of financial investment in protected areas,
- Human capacity in the management of protected areas,
- Priorities for future investment in protected areas,
- Major issues in protected areas in the region, and
- Priorities for action in the region.

The components included in regional reviews of McNeely et al. (1994) identify useful variables from which to develop an institutional arrangement framework. Such variables include the historical perspective, protected area institutions (organisations), financial resources, and human resources. Similarly, Mitchell (1989) comments that for institutional studies to make any worthwhile contributions they must evaluate the interactions of multiple variables: (1) legislation and regulation, (2) policies and guidelines, (3) administrative structures, (4) economic and financial arrangements, (5) political structures and processes, (6) historical and traditional customs and values, and (7) key participants and/or actors. Clearly the variables mentioned by Mitchell (1989) encompass the variables used by McNeely et al. (1994) in their regional review. For example, the financial resources component of the regional reviews are included in the economic and financial arrangements variable proposed by Mitchell (1989).

Through the revision of the work of Nelson (1978b), McNeely et al. (1994) and Mitchell (1989), a framework applicable to the institutional arrangement study of tourism and recreation management in protected natural areas can be constructed. Such a framework uses the variables presented by Mitchell (1989), which encompass the variables used by McNeely et al. (1994), and adds the variable of 'management techniques' suggested by Nelson (1978b). Table 1.1 presents the framework used throughout this research. The eight variables of the institutional arrangement framework for New Zealand and Mexico are described, compared and discussed in Chapters Five to Nine. The definition or what is understood by each variable is presented at the beginning of each chapter. These latter results chapters also explain the relationships between the variables as well as the overall effect that institutional arrangements have on the management of tourism and recreation in protected areas.

Table 1.1: Variables for 'Institutional Arrangements' Analysis

1. Historical and traditional customs and values
2. Legislation and regulations
3. Policies and guidelines
4. Administrative structures
5. Key participants and/or actors
6. Economic and financial arrangements
7. Political structures and processes
8. Management techniques.

Adapted from (Mitchell, 1989; Nelson, 1978b)

1.2 Aims and Objectives of Study

1.2.1 Aim

To compare the management of recreation and tourism in the protected natural areas (PNAs) of Mexico and New Zealand.

1.2.2. Objective

To analyse the institutional arrangements for managing tourism and recreation in the PNAs of New Zealand and Mexico.

Research Questions

1. What are the present institutional arrangements for the provision of recreation and tourism in PNAs in New Zealand and Mexico?

2. Are there differences and similarities between the institutional arrangements of Mexico and New Zealand?
3. How do the variables of the institutional arrangements relate to each other in both cases?
4. How do these variables affect the management of recreation and tourism in PNAs?
5. What lessons can be drawn from the New Zealand experience and applied to the Mexican situation?

1.3 Study Approach

A qualitative approach was used in this study to compare institutional arrangements between New Zealand and Mexico with respect to tourism and recreation in protected natural areas. Qualitative research was used because it looks at relationships within a system and is focused on understanding a given social setting (Janesick, 1994). In addition, qualitative research was chosen because it can be used to study organisational functioning (Strauss & Corbin, 1998), as well as understanding the relationship between variables of analysis.

The research design of this study is deductive. Deductive designs are used when the research has a bank of pertinent and well-delineated concepts, and takes a more explanatory position involving various, comparable cases (Huberman & Miles, 1994). In this case, an institutional arrangements framework helped define clear research questions based on a set of concepts and variables to carry out the data collection and analysis. This theoretical framework also helped explain the causation of variables and their importance to the management of recreation and tourism.

1.4 Thesis Outline

The thesis comprises ten chapters:

Chapter 2 presents the settings of the research. A general overview of New Zealand and Mexico is given by describing some characteristics of each country regarding location, population, ethnicity, economy, tourism industry and the protected natural area system.

Chapter 3 discusses the issues of institutions and institutional studies as well as the topics of tourism and recreation in protected areas in general and also literature specifically on New Zealand and Mexico. The main purposes of the chapter are to develop an institutional arrangements framework useful for this research and find gaps in the literature where this research can make a contribution.

Chapter 4 discusses the design of the study and the methods used to carry out the research. The methods of data collection (interviews and archival research), data management and analysis through the use of software (Nvivo) are presented. Ethical issues and considerations are discussed.

Chapters 5 to 9 present the different variables of the institutional arrangements framework. These chapters are the results chapters and address the first four research questions of the thesis. The results chapters are organised around the description of the variable for each country (first New Zealand and then Mexico), then a comparison between the countries, and finally, a discussion on how the variable (or variables) discussed in the chapter affects the other variables and, more importantly, how the variable affects the management of tourism and recreation in New Zealand and Mexico. The variables discussed according to each chapter are:

- Chapter 5: Historical and traditional customs and values
- Chapter 6: Legislation and regulations; Policies and guidelines
- Chapter 7: Administrative structures; Key participants and/or actors
- Chapter 8: Economic and financial arrangements; Political structures and processes
- Chapter 9: Management techniques.

Chapter 10 discusses the causality between the variables of the institutional arrangements framework and proposes a model of variable relationships. In addition, the chapter explores how the institutional arrangements affect the management of tourism and recreation in protected areas. The chapter also addresses the fifth research question, drawing from the New Zealand experience lessons that can be learnt to improve the capabilities of the Mexican institutional arrangements. Moreover, it recommends future opportunities for research and development in the field of institutional arrangements.

2. Research Setting

2.1. Introduction

The purpose of this chapter is to present a general overview of New Zealand and Mexico. To draw a picture of both countries, information about their location, population, ethnic composition, economy, land use, tourism industry and protected natural area system is presented. Then, with the use of a comparative table of the information described, a comparison is made between both countries to indicate similarities and differences.

2.2. New Zealand

New Zealand comprises three main islands: North Island, South Island and Stewart Island. The country has a total land area of 268,000 km^2, similar in size to the United Kingdom (241,000 km^2). As an island nation it is surrounded by the Tasman Sea to the west and the South Pacific Ocean to the north, east and south.

New Zealand has a small population, a cultural composition combining European and Maori values, a dominant agricultural industry, a growing tourism industry, and an extensive, protected natural area system. The mixture of these characteristics makes New Zealand a unique country located in Oceania at the bottom of the South Pacific and southeast of Australia. The following sections give further details about New Zealand's characteristics and represents the first research setting of the thesis.

2.2.1. Population: Size and ethnic composition

New Zealand has a small, but growing population of around 4 million people, three quarters living in the North Island and the rest in the South Island (World Bank, 2004b). The population of New Zealand is growing due to immigration rather than from the birth rate within the country.

The ethnic composition of New Zealand is divided mainly between European descendants (80 %), Maori indigenous people or descendants, and Pacific Islanders, with a recently growing Asian population. Europeans arrived in an organised manner after the Treaty of Waitangi was signed in 1840 between the British Crown and over 500 Maori chiefs. Most European immigrants were from England and Scotland, with a lesser percentage from Holland and Scandinavian countries. Maori arrived approximately 1000 years ago developing a unique Pacific culture (King, 2003). Most tribes and sub-tribes settled in the North Island, and there is one main tribe in the South Island called Ngai Tahu. Maori is considered the foundation human culture of the country and has become an integral part of modern New Zealand culture (King, 2003). Pacific Islanders have arrived in New Zealand due to the close political and economic ties this country has had throughout the years with the island nations of the Pacific Ocean. There has been

Asian presence, mainly Chinese, since the 1800s in New Zealand but this Asian presence has increased during the 1990s.

The ethnic composition mainly of Europeans and Maori has shaped the values, traditions and institutions of New Zealand throughout its modern history. For instance, New Zealand is a constitutional monarchy as it was a colony of Great Britain and remains a member of the Commonwealth, but it recognises and takes into account Maori because the Treaty of Waitangi was signed between the colonisers and Maori inhabitants. Another influence of the values and traditions of both the European settlers and Maori has been on the evolution of New Zealand's protected areas system, which is further discussed in Chapter Five. Furthermore, Maori culture, because of its uniqueness, has become a cultural product for the tourism industry. In addition, the agricultural practices of the Maori and the settlers' pioneering culture of opening the land for exploitation has made agriculture the largest economic activity in New Zealand.

2.2.2 Economy: The impact on land and people

New Zealand has been one of the fastest growing economies within the Organisation for Economic Co-operation and Development (OECD) during the past decade (1992 to 2002). Growing at an average annual rate of 3.6 per cent (OECD, 2003), New Zealand is considered by the World Bank as a 'high income' country with a reported $59 billion Gross Domestic Product (GDP) (World Bank, 2004b).

The two main economic activities of New Zealand are agriculture and tourism. Both activities have an impact on the protected natural areas, as further discussed below. Besides the impact on the conservation land, these economic activities impact on the economy generating wealth and economic gaps within the population.

A good national economy must generate wealth for the population of a country. Compared to other countries, New Zealand's economic wealth is evenly distributed across the population. A first indicator regarding wealth distribution is the Gross National Income (GNI) per capita, which divides the GNI by the number of people that live in a country. New Zealand's GNI per capita (when the population was 3.9 million) was $13,260 a year which is high compared to low income countries, but is almost half of the average GNI per capita of high income countries which is $26,490 (World Bank, 2004b). Another economic indicator measuring the income distribution is the Gini index. The Gini index is a numerical measure that ranges from zero to 100; higher numbers represent higher levels of income inequality (Yeager, 1999). In 1997 New Zealand reported a Gini index of 36.2 which represents a good distribution of the national wealth, similar to Australia which had a Gini index of 35.2 in 1994 (World Bank, 2004c). Other countries of comparison are Scandinavian countries, such as Sweden and Norway, which have one of the lowest Gini Index in the world with an average of 25.

The most important economic activity in New Zealand is agriculture (food crops, dairy, and stock production) using 64 per cent of the total land area of New Zealand (World Bank, 2004b, 2004c). The

rest of the territory is used by urban settlements and 30 per cent dedicated to some type of conservation status (World Bank, 2004b). Conservation land has historically been declared where agriculture cannot be practised (Dingwall, 1994). For example, mountainous areas in the North and South Island where livestock could not be raised or crops could not be grown by the European settlers include some of New Zealand's most important national parks, such as Tongariro National Park (NP), Arthur's Pass NP, Mount Cook NP, Mount Aspiring NP and Fiordland NP. This demonstrates the impact agriculture has had on the land uses in New Zealand.

The productivity and exports of agriculture further illustrate the importance of this economic activity to the overall economy of New Zealand. Even though only 14 per cent of the population lives in rural areas, New Zealand has high levels of productivity in the agricultural sector. Agricultural productivity in New Zealand almost doubled from 1980 to the year 2000. In 1979-1981, the agricultural value added by worker was $16,637 and in the period 2000-2002 it reached $28,740 (World Bank, 2004c). With regard to agricultural exports in 1999 New Zealand exported mainly meat (13%), dairy produce (16%), and wool (3%) (OECD, 2000b).

The second most important economic activity in New Zealand is the service industry. Tourism is one of the greatest service industries in New Zealand. Tourism has an impact on the land, because this industry in New Zealand is focused on nature and adventure tourism which relies heavily on the use of conservation land. In addition, tourism is a growing industry that provides employment to New Zealand residents and brings money into the country.

2.2.3 Tourism

International and domestic tourism are expected to increase both in visitation as well as in expenditure in the next five years (Tourism New Zealand, 2005). In 2003 New Zealand received 2.2 million international visitors who spent $6.4 billion (Tourism New Zealand, 2005). International tourism is expected to rise to 3 million visitors by 2010 (Tourism New Zealand, 2005). In addition, domestic overnight trips are forecasted to increase from $19.6 million in 2003 to $21.6 million in 2010, with an average expenditure per night forecasted to rise from $89 per night in 2003 to $121 per night in 2010 (Tourism Research Council New Zealand, 2005). These increases in visitation and expenditure are benefiting the tourism industry and its capability to provide employment for more New Zealanders.

Tourism supports nearly one job in ten in New Zealand, with around 90,000 full-time equivalent jobs provided directly through tourism and an estimated 60,000 indirectly (Ministry of Tourism, 2005). Not only does tourism create jobs, but it also opens opportunities for enterprise creation. The New Zealand tourism industry is made up of 10 major public-listed companies and between 13,500 and 18,000 small to medium enterprises mostly employing fewer than five people (Ministry of Tourism, 2005; Tourism New Zealand, 2003). This growing tourism industry uses the natural, clean and green image of New Zealand to promote its services and mostly relies on the protected areas of the country as its setting.

For years the protected areas and the 'clean green' image have been the major icon features of New Zealand that have attracted tourists from all around the world (Booth & Simmons, 2000). This has pressured the New Zealand government through the Department of Conservation (DOC) to balance the paradox of preserving the natural and historical heritage of the country and allowing visitors access to protected areas. To understand how DOC manages this paradox, an understanding of the institutional arrangements (IA) affecting the management of tourism and recreation is helpful. The following chapters discuss a framework (Chapter 3) and describe the present institutional arrangements of New Zealand (Chapters 5 to 9).

2.2.4 Protected Natural Area System

This section gives an overview of the protected natural area system of New Zealand. Diverse characteristics of the PNA system are discussed including the government administration agency, the categories of protection, the location and importance of national parks, the protection of terrestrial and marine biodiversity by the system, the international recognition of some areas and the relation between PNAs and people. This brief introduction about the protected natural area system of New Zealand will assist the understanding of the issues discussed in the following chapters.

The Department of Conservation (DOC) is the government agency responsible for protecting the natural heritage of New Zealand. Its mission is "to conserve New Zealand's natural and historic heritage for all to enjoy now and in the future" (DOC, 2005o). Its legislative mandate is defined by the Conservation Act 1987, the National Parks Act 1980, the Reserves Act 1977, and other legislation, further discussed in Chapter Six. To reach its goals, DOC has a robust administrative structure divided between national, regional, conservancy and area offices, further discussed in Chapter Seven. The Department employs approximately 1,500 permanent staff (full and part-time) and up to 500 temporary and seasonal workers. The Department's annual budget is approximately $243 million, about one third of this budget is spent on managing recreation on public conservation land (DOC, 2004b). DOC's use of funds for recreation and tourism management is further discussed in Chapter Eight.

With respect to tourism and recreation, DOC manages tourism concessions and an extensive network of visitor services and facilities. Concessions are permits to undertake a commercial activity on public conservation land (DOC, 2004b). DOC manages about 3,500 active concessions and monitors key concessions for significant environmental and social impacts. Concessions are further discussed in Chapters Six, Seven, Eight and Nine.

DOC maintains more than 12,500 kilometres of tracks and walkways, 2,300km of roads, 3,800 visitor sites, 26 visitor and information centres, 10 associate centres, 1,000 back country huts and shelters, and 240 campsites (DOC, 2004b). All this infrastructure is managed by a system called Visitor Assets Management System (VAMS), described and discussed in Chapter Nine.

The protected areas administered by DOC are divided into six main categories: reserves, national parks, protected private lands, wildlife areas, marine mammal sanctuaries, and conservation areas (DOC, 2005t). Table 2.1 shows the area covered by each of the protected natural areas category. The total extension of all protected areas administered by DOC represents 30 per cent of the total terrestrial area of New Zealand. Compared to the average 20 per cent of protected land in high income countries, New Zealand has an impressive record with regard to land conservation (World Bank, 2004b).

Table 2.1: Protected Areas Administered by DOC

Category	***Extension (hectares)***
Reserves	1,366,486
National Parks	2,694,036
National Parks Subcategories	390,929
Protected Private Lands	94,844
Wildlife Areas	275
Marine Mammal Sanctuaries	2,327,500
Conservation Areas	4,598,396
TOTAL	***11,442,466***

(DOC, 2005t)

In New Zealand, the most significant protected area category are the national parks which cover almost three million hectares. There are fourteen national parks in New Zealand, four in the North Island, nine in the South Island and one in Stewart Island (orange coloured areas in Figure 2.1). National parks are important not only because of their extent and number, but also the biodiversity and landscapes they protect as well as the recreational opportunities they provide to the general public.

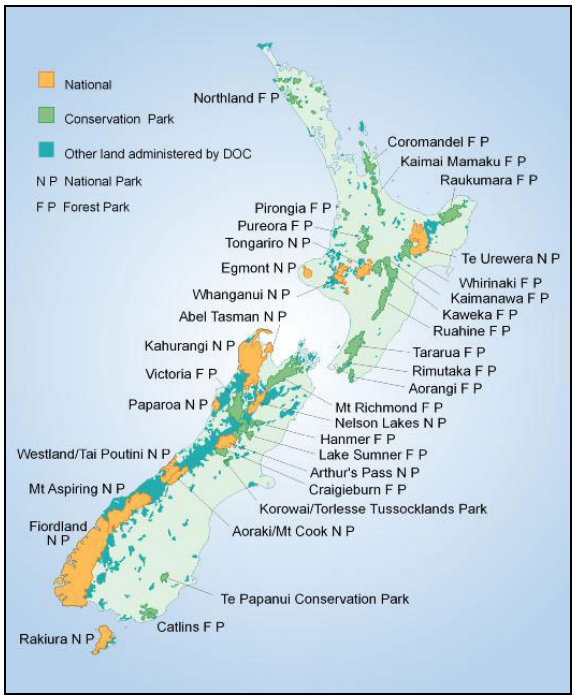


Figure 2.1: Land administered by DOC. (DOC, 2005i)



Figure 2.2: Marine Reserves administered by DOC. (DOC, 2005l)

The public have free access to national parks and to most other protected area categories, except private lands. This is an important characteristic of the protected area system of New Zealand and highly valued by New Zealanders. The only exceptions where public access is restricted are areas with high conservation values such as some nature reserves, scientific reserves and some protected zones within national parks. To access these areas a permit is granted (or not) by DOC for conservation reasons. Public access is also controlled (though not restricted) in some popular walking tracks like the Great Walks developed by DOC where camping is regulated. There are eight Great Walks, including the Milford Track in Fiordland National Park which attracts more than 14,000 walkers each year but as no freedom camping is allowed, visitors must stay in huts which have a booking system (DOC, 2005n).

Through its protected natural area system New Zealand preserves significant terrestrial and marine biodiversity. It is estimated that New Zealand has 70,000 native land-based species (DOC, 2005a). While the protected area system of New Zealand protects the terrestrial biodiversity through its extensive land conservation estate, work remains to be done for the marine biodiversity. Marine biodiversity include 8,000 marine species formally identified in New Zealand and almost one-third of the total number of described native species (DOC, 2005c). In 1994 New Zealand had a rudimentary marine reserve network compared to the extensive terrestrial protection system, with only four marine reserves in all of its 33,000km of coastline (Dingwall, 1994). Since then, the Department of Conservation has worked to increase this small marine conservation coverage. Marine conservation today includes 18 marine reserves (see Figure 2.2) protecting species in 7 per cent of New Zealand territorial waters (DOC, 2005m). Currently, there are ten marine reserve applications at different stages of the statutory process that have been formally notified under the Marine Reserves Act 1971.

Some of New Zealand's conservation land has acquired international recognition through the Convention on Wetlands and the World Heritage Convention. New Zealand became a party to the Convention on Wetlands (also referred to as Ramsar Convention) on 13th December 1976 and now has five sites, covering almost 40,000 hectares, designated under the Convention as Wetlands of International Importance (DOC, 2005d). The World Heritage Convention was adopted by the General Conference of UNESCO at its 17th session in Paris, on 16 November 1972. The Convention came into force in 1975 and was ratified by New Zealand on November 22, 1984. Since then three areas of New Zealand are inscribed on the World Heritage List: Tongariro National Park, Te Wahipounamu (South West New Zealand), and New Zealand's sub-Antarctic islands (Auckland, Campbell, Antipodes, and Bounty groups and the Snares islands) (DOC, 2005x).

The protected natural area system of New Zealand tries to separate nature protection from human settlements. In other words, there are few communities, and hence people living, within the borders of protected areas. In national parks there are, in general, no communities (some exceptions include, for example, Aoraki Mount Cook village in Aoraki/Mount Cook National Park, and Whakapapa village in Tongariro National Park) within the polygon of parks. In some of these settlements, only DOC staff and

tourism concessionaires staff live. Even with this exclusion of human dwellings, DOC tries to maintain a close contact and relation with neighbouring communities and local Maori.

2.3 Mexico

Mexico is the second research setting for this thesis. The following sections include an overview of the same variables presented for New Zealand so that a comparison can be undertaken at the end the chapter. Therefore, issues of population, ethnic composition, land use, economy, tourism and the protected natural area system are described and discussed.

Mexico is more than ten thousand kilometres away from New Zealand, located in the northern hemisphere of the American continent. Mexico borders in the north with the United States and in the south with Belize and Guatemala. It also borders to the east with the Gulf of Mexico and Caribbean Sea, and to the west with the Pacific Ocean giving the country a continental seashore of more than eleven thousand kilometres, the third largest in America, after the United States and Canada. The country's territorial area is 1,986,381 km^2; the fourteenth largest country in the world (APPCED, 2005).

2.3.1 Population: Size and ethnic composition

In 2004 Mexico reached a population of over 105 million people (CONAPO, 2005). Population growth in Mexico is a consequence of the birth rate within the country rather than immigration. Nevertheless, immigrants come from Central and South American countries permanently establishing residence in the country or in transit to cross illegally to the United States (CONAPO, 2004). This immigration is a result of constant economic crises and underdevelopment suffered by most Latin American nations.

Mexico's population is composed mainly by *mestizos* (the historical result of the mixture of the Spanish colonisers and indigenous population) and indigenous people. In 2000 people born in other countries and who had migrated to Mexico only accounted for 0.5 per cent of the total population (CONAPO, 2004). There are more than 12 million indigenous people in Mexico living mostly in the rural areas of the country (CONAPO, 2000). There are more than 60 indigenous languages and dialects spoken in Mexico which shows the richness of the cultural diversity of the country. Furthermore, many of the most important protected natural areas in Mexico are in land owned and municipalities inhabited by indigenous people. In contrast to this cultural and biodiversity wealth, indigenous people are the most marginalised and poor population sector of Mexico. It is estimated that one-third of the population living in poverty in Mexico is made up of indigenous people and up to 33 per cent live in extreme poverty conditions (Giugale, 2001).

2.3.2 Economy: Land use and distribution of wealth

Mexico is considered by the World Bank as an upper-middle income country. The Gross Domestic Product (GDP) of Mexico reached $484 billion dollars according to the Organisation for Economic Co-operation and Development (OECD) in 1999 (2000a). The economy is divided between agriculture (5.3%), industry (16.4%), and services (68.3%) activities (OECD, 2000a). These sectors of the economy have an impact on the land use and the distribution of the wealth in Mexico.

The agricultural sector uses 56 per cent of the total land area of Mexico under various land tenure regimes including private and communal (World Bank, 2004b). Private land dedicated to agriculture includes mainly big agro-industrial enterprises in the north of the country employing people on very low wages. Communal land which is called *ejido* in Mexico is a property regime created after the Mexican revolution of 1910 when *campesinos* (peasants) and indigenous people demanded their right to own land. The preponderate poverty of the rural areas, its dependence on rain for water, and the poor quality of the soil for extensive agriculture, as well as the overall financial abandonment from the government, means that most agriculture is only for subsistence. This means that *campesinos* can barely make a living from the land and tend to migrate to the cities or the United States (illegally). In 20 years from 1980 to 2000 there was practically no increase in the agricultural productivity. In the period 1979-1981 the agricultural value added by worker was $1,482 and in the period 2000-2002 it reached only $1,813 (World Bank, 2004c).

The communal land tenure in Mexico affects the efficacy of the government to undertake conservation through protected natural areas. As further discussed in Chapter Five, the Mexican government has not expropriated the land to create the protected areas of Mexico. Instead, through a presidential decree, the federal government in the past determined the borders of new protected areas imposing a set of rules and conditions on the land owners to preserve the natural assets of the area. Although this imposed procedure is not followed today, in the past the lack of institutional presence on the field meant that owners, private and communal, continued exploiting the natural resources of their lands even when they were 'protected areas'. To succeed in conserving the natural ecosystems of certain areas, the federal government must work closely with communal landowners.

Within the industry sector, manufacturing accounted for 20 per cent of the industry production (OECD, 2000a). The production of consumer goods is made mainly in sweatshops located in the northern border with the United States. These sweatshops do not contribute much to the overall economy, because almost all materials are imported into Mexico, assembled by low-paid workers (mainly women), and exported mostly to the United States. In 1999 Mexico's manufactured products accounted for 90 per cent of the total exports (OECD, 2000a).

Another example of the industry in Mexico is the oil industry controlled by a state-owned company called 'Petróleos Mexicanos' (PEMEX). The second biggest export of Mexico is comprised of petroleum products which accounted for 7 per cent of the total exports in 1999 (OECD, 2000a). The revenue

generated by this multi-billion company is used primarily to support a significant percentage of the government expenditure. This means that when oil prices decline in the world, the Mexican economy suffers, and government expenditure in social programs, education and conservation is reduced.

The national wealth of Mexico, though higher than the average of upper-middle income countries, is not evenly distributed between Mexicans. According to the World Bank, the Gross National Income (GNI) per capita of Mexico was $5,920, which is higher than the average $5,110 of upper-middle income countries (2004a). The Gini index of Mexico in 2000 was 54.6 indicating an unequal distribution of income (World Bank, 2004c). The distribution of wealth in Mexico is more even than in some African countries like Niger (50.5), Nigeria (50.6), and Burkina Faso (48.2); but lower than in some Latin American countries like Brazil (59.1), Chile (57.1), and Honduras (55) (World Bank, 2004c).

2.3.3 Tourism

Mexico's tourism strategy has been focused on creating mega-tourism resorts, such as Cancún in the Caribbean Sea which is known world-wide. These mega resorts cater to the sea-sand-sun mass tourism market creating important tourism hotspots for Mexico. For example, Cancún receives more than 3 million visitors a year from Mexico and all over the world bringing foreign exchange, generating employment and attracting international investment (SECTUR, 2004). The downside to this strategy has been that the jobs created for local people are generally low paid, the international conglomerates of hotels take the profits to their home countries, and the huge tourism infrastructure of these mega resorts has impacted negatively and sometimes irreversibly on the natural environment of the area.

This traditional tourism is the third largest source of foreign currency for Mexico. In the year 2000 tourism generated 8.3 billion dollars representing 9 per cent of the Gross Domestic Product (GDP) (SECTUR, 2001). Furthermore, the industry maintained around 1.9 million jobs in the same year, representing 4 per cent of the total employed people in the country (SECTUR, 2001). With respect to international arrivals in 2000, there were over 20 million international arrivals (20,643 million) mainly from the United States (87.2%) (SECTUR, 2001).

Presently, the Mexican government through the Ministry of Tourism (SECTUR) is changing its strategy to diversify its tourism supply and integrate new types of tourism. The new types of tourism promoted by SECTUR include cultural, rural, adventure and ecotourism. SECTUR and other government agencies are investing in infrastructure inside protected natural areas to supply ecotourism opportunities to national and international visitors, this is further discussed in Chapters Seven and Eight. This change of strategy has brought new challenges to the protected natural area system of Mexico and consequently to the agency in charge of managing such areas.

2.3.4 Protected Natural Areas System

The federal institution in charge of managing the protected natural areas of Mexico is the National Commission of Protected Natural Areas (CONANP). It is a de-concentrated agency under the Ministry of Environment (SEMARNAT). A de-concentrated government agency is a government body which is subordinated to a Ministry and has specific functions to solve certain issues. CONANP was created on June 5th 2000 and has the mission of "conserving the natural heritage of Mexico through Protected Natural Areas and Programs of Rural Sustainable Development in Conservation Priority Regions" (CONANP, 2001). Since 2004, CONANP has undergone a regionalisation process to strengthen the institutional capabilities of the administration offices of the protected areas. This regionalisation process has changed the administrative structure of CONANP, further discussed in Chapter Seven, by maintaining its central offices in Mexico City, creating seven regional offices and extending its PNA administration offices. The federal protected natural areas in Mexico are located all around the country as seen in Figure 2.3 (protected areas are coloured in orange and green).



Figure 2.3: Federal Protected Natural Areas of Mexico. **(Source: CONANP website)**

Mexico has 150 protected natural areas managed by the federal government (see Table 2.2). The categories used by the federal government to identify its protected areas include: biosphere reserves, national parks, natural monuments, natural resources protection areas (APRN by its name in Spanish), flora and fauna protection areas (APFF by its name in Spanish) and sanctuaries. According to CONANP, 7 per cent of the national territory is under some type of protection regime and 17 per cent of the territorial waters of Mexico are protected (CONANP, 2004d).

Table 2.2: Protected Natural Areas of Mexico		
Category	**Number**	**Hectares**
Biosphere Reserves	34	10,479,534
National Parks	65	1,397,163
Natural Monuments	4	14,093
APRN	2	39,724
APFF	26	5,371,930
Sanctuaries	17	689
Other Categories	2	553,094
TOTAL	*150*	*17,856,227*
		(CONANP, 2003a, p. 5; 2004d)

The most important category in the protected natural area system of Mexico is the biosphere reserve with the dual purpose of conservation and sustainable development. Biosphere reserves in the Mexican conservation strategy have the aim of covering representative areas of the rich biodiversity of the country which include around 65,000 species presently described and more than 200,000 believed to exist (Viva Natura, 2003). In addition, this category in Mexico also intends to incorporate the social development of the local communities either located inside and or in the areas of influence around the biosphere reserves. Therefore biosphere reserves are covered by the mission of CONANP by combining conservation and sustainable development of the local communities.

Like New Zealand, Mexico is a member of the World Heritage Convention and the RAMSAR Convention. Mexico ratified the World Heritage Convention in 1984 and presently has 21 cultural sites and two natural sites included in the heritage list. The two natural sites are the Biosphere Reserves of Sian Ka'an (in the state of Quintana Roo) and the Vizcaino (in Baja California Sur). With respect to the RAMSAR Convention, Mexico has included seven sites: Ría Lagartos, Cutrociénegas, Pantanos de Centla, Marismas Nacionales, La Encrucijada, Humedales del Delta del Río Colorado, and Dzilam (CONANP, 2003a).

Mexico is also an active member of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Programme on Man and the Biosphere (MAB). Since the creation of the International Network of Biosphere Reserves, in 1976, Mexico has included 14 sites. In 2003 MAB was evaluating three more sites for inclusion: Ría Lagartos, Ría Celestún and Selva El Ocote (CONANP, 2003a).

Tourism and recreation have been present since the establishment of the first national parks around Mexico City. Nowadays, the most visited protected areas are those located in the Yucatan Peninsula, above Belize and Guatemala (see Figure 2.3), due to the development of the tourism centre of Cancún as an international destination. Since 2002, CONANP has established an entrance fee system in marine and terrestrial protected areas to generate financial resources for the agency. Such systems are working in almost all marine areas, and in some terrestrial areas where the system can be implemented. This system of entrance fees is further discussed in Chapters Eight and –Nine. Presently, CONANP has no formal policy regarding tourism or recreation in protected areas, and the directors of protected areas are only

guided by their personal experiences and some guidelines developed in the management plans of the natural area, as discussed in Chapter Six.

In Mexico, there is a strong overlap between indigenous communities and *ejidos* and high biodiversity areas, including official protected areas. Also, due to the land tenure system there are people living in most protected areas in Mexico. Taking these two facts into account recent management initiatives include local communities and indigenous people in an increasingly integral role in the protected areas strategy. However, the balance of control and design choices still rests with the ecological specialists and not the indigenous communities (Giugale, 2001). This question of indigenous values in the protected natural area's management is discussed further in Chapter Five.

2.4 Comparing New Zealand and Mexico

This section develops a comparison between New Zealand and Mexico based on the information presented in this chapter. The variables included in this discussion are population, economy, tourism and protected natural areas (see Table 2.3). The purpose of the comparison is to emphasise the general similarities and differences between both countries. This comparison is important to contextualise the results and discussion presented in the following chapters.

Table 2.3: Comparative table of New Zealand and Mexico

	New Zealand	Mexico
Land Area	268,000 km^2	1,986,381 km^2
Population	4.1 million	106 million
Agriculture Land	64%	56%
Agricultural Productivity	$28,740 (2000-2002)	$1,813 (2000-2002)
GDP	NZ$59 billion dollars (2004)	US$637 billion dollars (1999)
GNI per capita	$13,260	$5,920
Gini index	36.2	54.6 (2000)
International Tourism Arrivals	2.1 million (2003)	21 million (2000)
International Tourism Expenditure	$6.6 billion NZ dollars (2004)	10.8 billion US dollars (2004)
Tourism Strategy	Nature Tourism	Sea-Sand-Sun Tourism
Protected Natural Area Extension	11.4 million hectares	18 million hectares
PNA Coverage of total land extension	30%	7%

Mexico is seven times larger than New Zealand in land area and is inhabited by a population 26 times bigger. An important similarity with regard to the ethnic composition of the countries is the existence of an indigenous population. In the case of New Zealand, the Maori, while in Mexico more than 60 indigenous groups are scattered around the country. A difference with regard to population growth is the significance of immigration to New Zealand, compared to the low immigration to Mexico. On the other hand, Mexicans migrate more to other countries, mainly the United States, than New Zealanders. This emigration from Mexico is caused by economic crises and poverty suffered in the country.

There are significant economic differences between New Zealand and Mexico. With almost the same percentage of land dedicated to agriculture in both countries, and fewer people in New Zealand working this land, the agricultural productivity is almost 16 times higher in New Zealand than in Mexico. This agricultural productivity and the quality of the agricultural products has made this economic activity the most important industry in New Zealand. Mexico has a primarily subsistence agricultural sector which generates just enough produce to feed the families of the producers.

There are also important differences in how the wealth generated by the economy is distributed among the population of these two nations. Although Mexico's population is 26 times greater than New Zealand, Mexico's GDP is just ten times bigger than New Zealand. The GNI per capita in New Zealand is more than double and is more evenly distributed than the wealth in Mexico.

In relation to tourism, both countries have exploited different images to promote the tourism they provide. In the case of New Zealand, the tourism strategy has focused on nature, adventure, and rural tourism. These types of tourism are nurtured by the clean and green image of New Zealand known throughout the world. Mexico's tourism strategy has concentrated on promoting its beaches and tropical weather. Since the 1950s various governments have created and promoted mega-resorts catering to the mass tourism national and international markets. Presently, Mexico's tourism strategy is to diversify its offerings and it is increasingly investing and promoting other types of tourism such as nature tourism. This new market niche is based on the use of protected natural areas and it is for this reason, in particular, that Mexico can learn from the experience in New Zealand.

Mexico receives ten times more international tourists than New Zealand, but only double the income generated by this tourism. This indicates that New Zealand is more effective in capturing income from tourists than Mexico. A possible reason of this is that most of the tourism enterprises in Mexico are owned by trans-national corporations that take their profits away from the country. In New Zealand, thousands of medium and small tourism enterprises are owned by New Zealanders. Another reason may be the low salaries and wages that the mega-resorts pay to the local people, compared to better wages paid in New Zealand. Other reasons can be the length of stay in the country, the type of tourist, and exchange rates.

Finally, with respect to protected natural areas, the total extension covered by both countries is very similar, but different when compared to the total area of the country. New Zealand has one of the highest coverage of protected areas in the world, while protected areas in Mexico cover only 7 per cent of its territory. While in New Zealand there are few communities living in protected areas, Mexico's land tenure system presents a complex reality of social, economical and political pressures conflicting with the protected natural area system. The land tenure in Mexico has meant that protected areas are not expropriated, or bought from their original owners, as is the case in New Zealand.

2.5 Summary

This chapter has presented relevant information about the countries of the study. Through a comparative table presenting the most significant facts, the similarities and differences of New Zealand and Mexico were discussed. With this contextual understanding of the research settings, the next chapters present the literature review that provides a theoretical background to the study and the methodology used to carry out the research. This is followed by the description and comparison of the institutional arrangements around tourism and recreation management in protected natural areas.

3. Literature Review: Exploring the concepts and finding gaps

3.1 Introduction

The following literature review provides a theoretical context to the present research. The chapter reviews the literature concerning the themes of the research, adapts theoretical frameworks, and identifies gaps in the literature. The structure of the chapter is divided between the discussions about institutional arrangements and the topic of tourism and recreation in protected natural areas. The section on institutional arrangements first defines the concept, then describes the historical evolution of institutional study, followed by a discussion of the procedures used to study institutions. A framework is then developed appropriate for the present research. The section on tourism and recreation in protected natural areas first discusses the concept of protected areas, and then reviews the literature on tourism and outdoor recreation in natural areas. As a result of the discussion in these two sections, the chapter identifies gaps in the literature reviewed which are addressed by the present study.

3.2 Institutional Arrangements

Institutional arrangements are the relationships between the rules and the organisations affected, concerned with the application and/or interested in these rules. Institutional arrangements vary depending on the issue they encompass. For example, the focus of the present research is on the institutional arrangements surrounding the management of tourism and recreation in protected natural areas. The following section clarifies the concept of institutional arrangements by presenting a brief history of institutional studies, the different research questions that academics pose with respect to institutions, and theoretical frameworks for the study of institutional arrangements. The review of theoretical frameworks allows the adaptation of a specific framework for the purpose of this research.

3.2.1 Institutional Study History

Interest in institutions has come from many disciplines of social study such as economics, politics, and sociology. In economics it goes back to the tradition of authors such as Veblen and Common who studied the mechanisms through which social and economic action occurred, and also the work of Parsons and Selznick who were interested in the connections between polity, economy and society (DiMaggio & Powell, 1991). The problem with these older institutional studies is that researchers provided answers that were descriptive and historically specific, or too abstract and lacked any explanatory result (DiMaggio & Powell, 1991). In other words, old economists “were anti-theoretical, and without a theory to bind together their collection of facts, they had very little that they could pass on” (Coase, 2000, p. 3).

The study of institutions is re-emerging as important field of study within the social sciences (DiMaggio & Powell, 1991). In the last two decades a movement known as 'New Institutionalism' has gained force in the social sciences (Young, 2002). This new institutionalism endeavours to understand how institutions affect the behaviour of organisations and individuals (Young, 2002). There are many different approaches to this new institutionalism including economics, organisation theory, political science and public choice, history and sociology. However, all these approaches are united by the ideas that social processes are important to study and must be researched from a holistic perspective (DiMaggio & Powell, 1991).

There are other disciplines besides economics, politics and sociology interested in the study of institutions. For example, in environmental studies, the concept of 'the commons' (their resources and institutions) is at the centre of the international research agenda on the human dimensions of global change (Dietz, 2002). Commons are a central theme in the study of resource management institutions, and because the study of institutional arrangements is important in improving the management of natural resources (Mitchell, 1989), it becomes imperative to understand the concept of the commons. Another example is the study of tourism public policy, where institutional arrangements are one of the important factors of the policy process (Hall & Jenkins, 1995). More recently the topic of ecotourism, which normally takes place in protected areas, has drawn some papers studying national and international institutional arrangements (Buckley, 2004; Hall, 2003).

3.2.2 Study of Institutional Arrangements

There are three main science questions that motivate researchers to undertake studies of institutional arrangements with respect to natural resources and environmental change: (1) causality, (2) performance, and (3) design (Young, 2002). Questions of causality focus on knowing how much environmental change can be attributed to institutions. The question of performance seeks to evaluate why certain institutions work better in different systems. The questions of design are interested in suggesting better institutions to protect or conserve ecosystems. The scope of the present thesis is only concerned with the question of causality.

Causality

Studies concerned with the question of causality want to understand how the different variables of the institutional arrangements relate to each other. Moreover, causality studies are interested in knowing how the variables and their interactions affect a certain issue or reality. For instance, this thesis wants to understand how institutional arrangements affect the management of tourism and recreation in protected natural areas. Therefore, the first task in undertaking a causality study is to define a set of variables to analyse. To define this set of variables, the literature on institutions provides relevant frameworks applicable to the requirements of this research. Since there are not many studies on the institutional

arrangements of tourism and recreation in protected areas, a framework is adapted to accomplish the objectives of this research. Finally, the question of relationships between variables is explored and discussed with the assistance of a schematic causal model showing typical relationships among variable types.

Institutions: The first variables

Institutions are viewed in the literature in two main ways: as the 'rules of the game' (DiMaggio & Powell, 1991; Hall, 2003; North, 1997, 2000; Vining, 1999; Young, 1982, 2002), or as the 'players of the game' (Taylor-Berardo, 1999). The most common approach to institutional study defines institutions as the rules of the game of a society (North, 1997). However, some authors use the term 'institutions' to encompass the rules and the players as further discussed below (Fox, 1976).

Some authors define institutions as a typification of rules. "Institutions are composed of formal rules (laws, constitutions, rules), informal constraints (conventions, codes of conduct, norms of behaviour), and the effectiveness of their enforcement" (North, 1997, p. 6). Hall and Jenkins (1995) think of institutions as a set of rules which may be explicit and formalised (e.g., constitutions, statutes and regulations) or implicit and informal (e.g., organisational culture, rules governing personal networks and family relationships). This categorisation is very similar to that of North (1997), although Hall and Jenkins (1995) do not include the element of enforcement. Other authors include more components to the concept of institution. These components include "decision-making procedures, and programs that define social practices, assign roles to the participants in these practices, and guide interactions among the occupants of individual roles" (Young, 2002, p. 5).

Institutions can also be understood as the 'players of the game' (Aoki, 2000; North, 1997; Young, 2002). In other words, organisations follow formal and informal rules and are enforcers and/or enforced by such rules. While formal rules can be changed by the political negotiation of the diverse organisations affected by them, "informal norms are socially transmitted information and thus constitute a part of the cultural heritage" (Aoki, 2000, p. 12). As a result, informal norms, such as the organisational culture, are much more difficult, if not impossible, to change by the players of the game.

The perspective of a study on institutions depends on the background of the researcher's discipline, be it economics, anthropology, sociology or even management. Young (2002) states that there are, in general, thin and thick perspectives to the study of institutions. The thin perspective includes the rules, procedures, and programmes present and defined by documents such as constitutions, contracts and treaties. The thick perspective encompasses social practices that originate not only from constitutive documents, but also from common discourse and understandings of how things should be done by the

participants of those institutions. The difference between the thin and thick perspectives are the 'rules in use' and the 'rules on paper' (Young, 2002).

The present study understands institutions as the 'rules of the game', but it is also interested in how the different organisations 'play' by following the formal rules. Hence, the thin perspective is adopted because most of the data collected comes from documents or people's description of the 'rules on paper' or how things should be done according to laws, policies and regulations.

The concept of 'resource regimes' helps narrow the abstraction of the concept of institutions to concentrate on institutions that relate to the management of natural resources, which is the focus of this thesis. "Resource regimes are social institutions that serve to order the actions of those interested in the use of various natural resources" (Young, 1982, pp. 15-16). Some examples of resource regimes include the harvesting of fish at sea, the exploitation of oil in international waters, and the emission of greenhouse gases into the atmosphere.

Resource regimes are interested in resources called 'common-pool resources'. "A common-pool resource is a valued natural or human-made resource or facility that is available to more than one person and subject to degradation as a result of overuse" (Dietz, Dolsak, Ostrom, & Stern, 2002, p. 18). Protected natural areas (PNAs) can be considered common-pool resources because they are used by local inhabitants living in or near the PNAs, but also, if entry is promoted, by tourists and recreationists who visit the area. The usefulness of using the concept of 'common-pool resources' is the rich academic knowledge generated about institutions that manage them (Stern et al., 2002).

The property rights regimes in these common-pool resources that assist regulation of use can be varied, including broad categories, such as government ownership, private ownership, and ownership by a community (Dietz et al., 2002). In the case of PNAs in New Zealand and Mexico, these three categories are present. In New Zealand, all land administered by DOC is government owned, and there are some private reserves. In the Mexican case, all federal PNAs have a combination of the three property rights regimes.

Institutional arrangements cannot be understood only by the analysis of the institutions around the management of a natural resource. Institutional arrangement frameworks include other variables to understand in more depth how things work and relate to each other to produce an outcome. Several frameworks are explored and discussed with the purpose of adapting a model that will facilitate the research aim of this study.

Other Variables in Institutional Arrangements

> 'Institutions' and 'institutional arrangements' refer to a definable system of public decision-making, one that includes specific organizational entities and governmental jurisdictions, but transforms conventional emphasis upon definition of agency structure per se. In addition to being concerned with component organizational entities, the term 'institutions' suggests special attention to the configuration of relationships
>
> 1) Established by the law between individuals and government;
>
> 2) Involved in economic transactions among individuals and groups;
>
> 3) Developed to articulate legal, financial and administrative relations among public agencies; and
>
> 4) Motivated by social-psychological stimuli among groups and individuals.
>
> Specific relationships falling in any or all of these four categories, constrained and shaped by the natural and social environment, weave a web that describes the institutional system for decision-making. Thus, institutional studies focus on the linkages that tie authority and action centres together into a public decision-making system which is responsive to the environment within which it must operate.
>
> (Craine, 1972, p. 522 cited in Mitchell, 1989, p. 243-244)

The above quote confirms that the important aspects of an institutional study are to identify the variables of analysis and then understand the relationships between them. In fact, the above definition of institutional arrangements starts to define the elements that constitute such arrangements. These elements include the law, economic transactions or financial resources, administrative relations, public agencies and even groups and individuals working in or outside those agencies. Fox (1976, p. 744) in his paper about the problem of developing appropriate institutions for water management presents the basic components of an institutional framework for water management (italics by author):

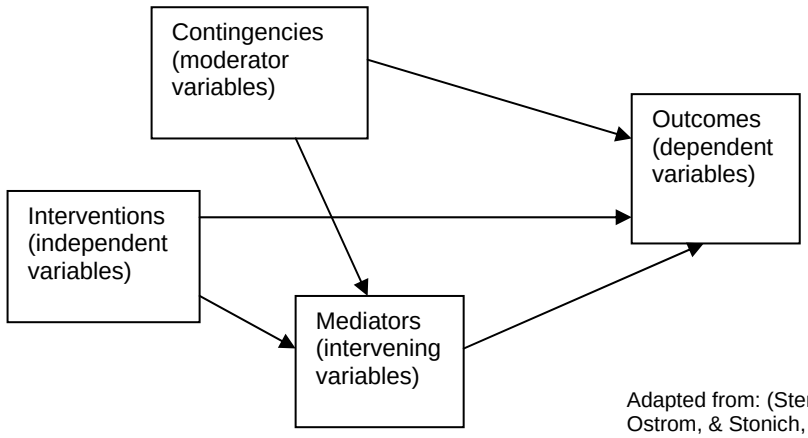
> The *entities that establish the rules* or laws about how water may be developed and used.
>
> The *rules or laws governing the development* and use of water.
>
> The *entities that participate in deciding* what water development and use programs will be undertaken.
>
> The *entities that implement* the development and use programs decided upon.

3.2.3 Relationships

Once the variables to be included in a study of institutional arrangements have been defined, it is important in a causality study to explore possible relationships between such variables. This idea of relationships is vital to the concept of institutional arrangements. Furthermore, Mitchell (1989) states that the attractiveness of the concept of 'institutional arrangements' is that it allows interacting variables to be studied.

The study of management institutions concerned with common-pool resources (CPR) has an increasing wealth of knowledge of complex empirical phenomena and the development of frameworks useful for the management of such phenomena (Stern et al., 2002). Part of this contribution has been to identify variables that may be relevant for "the understanding and controlling effects of resource management institutions" (Stern et al., 2002, p. 452). Stern et al. (2002) arranged the variables identified by various authors addressing CPR into four distinctive functional categories defined by their possible theoretical relationships: (1) possible interventions or independent variables (e.g., historical values), (2) outcomes or dependent variables (e.g., management techniques), (3) contingencies or moderator variables (e.g., political structures and processes), and (4) mediators or intervening variables (e.g., legislation). These categories of variables have possible relationships as shown in Figure 3.1. As discussed above, a study of institutional arrangements should not only identify the variables to analyse but also the relationships between the variables, hence the importance of this framework.

Figure 3.1: Schematic causal model showing typical relationships among variable types.



Adapted from: (Stern, Dietz, Dolsak, Ostrom, & Stonich, 2002, p. 454)

3.2.4 Understanding Institutional Arrangements

This section 3.2 has assisted in the understanding of the concept of institutional arrangements which is used as the conceptual framework for the study (presented in section 1.2, Chapter 1). Institutional study has been a common theme of study in various social science disciplines throughout time. The purpose of studying institutions has been to analyse causality, evaluate performance, and/or propose alternative designs. The present study undertakes a causality study to understand how the different variables of the institutional arrangements framework relate to each other and how they affect the overall management of tourism and recreation in protected areas in New Zealand and Mexico.

3.3 Recreation & Tourism in Protected Areas

The present study of institutional arrangements is concerned with the topic of tourism and recreation in protected natural areas. The following section defines what a protected area is, describes the growing international importance of tourism and recreation in protected areas, and what has been studied internationally and at national levels concerning New Zealand and Mexico with regard to this topic. As a result of this literature review, the lack of studies on institutional arrangements of tourism and recreation in protected areas is emphasised.

3.3.1 Protected Areas: Definition and categories

The World Conservation Union (IUCN) defines 'protected area' as:

> An area of land and/or sea specially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (IUCN, 1994, p. 7).

The 'protected area' concept has traditionally been related to national parks, nature reserves and protected landscapes, but now encompasses a whole set of categories and other approaches to the sustainable use of natural areas (Synge & Howe, 1999). In 1994 the IUCN published a protected area management category system to improve understanding and promote awareness of protected areas (Table 3.1). In 1978, prior to this categorisation of protected areas, the IUCN had published a previous report on categories, objectives and criteria for protected areas which included the categories of Biosphere Reserve and World Heritage Site (natural) that are still being used in some countries.

Table 3.1: IUCN Management Categories of Protected Areas

Category	Description
I	Strict Nature Reserve / Wilderness Area: Protected area managed mainly for science or wilderness protection.
Ia	Strict Nature Reserve: Protected area managed mainly for science.
Ib	Wilderness Area: Protected area managed mainly for wilderness protection.
II	National Park: Protected area managed mainly for ecosystem protection and recreation.
III	Natural Monument: Protected area managed mainly for conservation of specific natural features.
IV	Habitat / Species Management Area: Protected area managed mainly for conservation through management intervention.
V	Protected Landscape / Seascape: Protected area managed mainly for landscape/seascape conservation and recreation.
VI	Managed Resource Protected Area: Protected area managed mainly for the sustainable use of natural ecosystems.
	(IUCN, 1994)

The most relevant categories for the current study are the categories of national parks (for New Zealand) and biosphere reserves (for Mexico) as discussed in the Chapter Two. National parks are defined as a:

> natural area of land and-or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible. (IUCN, 1994, p. 19)

The Biosphere Reserve is a category of protected area promoted by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) through the Man and Biosphere (MAB) Programme. Biosphere Reserves have six special features: (1) the selection emphasises representative samples of ecosystems rather than exceptionality, (2) they form part of an international network to exchange information and personnel, (3) they provide for manipulative research in portions of the reserves, (4) they combine conservation, research education and training as major objectives, (5) they play an integrative role with local populations, and (6) they focus their efforts on the relationship between man and the biosphere (UNESCO & IUCN, 1979).

3.3.2 Management Categories and Tourism

Recreation and tourism in protected areas has existed since the creation of the first officially recognised national park in the United States. As seen in Table 3.2, the only categories mentioning recreation in their descriptions are national parks and protected landscape/seascape. Although neither tourism nor recreation are mentioned explicitly in the definitions of the categories, these activities are considered the primary, secondary or potentially applicable objectives to several categories, as seen in Table 3.2. This shows that tourism and recreation are seen as compatible activities to the conservation of natural areas.

Table 3.2: Matrix of Management Objectives and IUCN Protected Area Management Categories

Categories **Management Objective**	**Ia**	**Ib**	**II**	**III**	**IV**	**V**	**VI**
Tourism & Recreation	-	2	1	1	3	1	3
Key: 1 = Primary objective; 2 = Secondary objective, 3 = Potentially applicable objective; - not applicable.							
(derived from IUCN, 1994, p. 8)							

3.3.3 Tourism and Recreation in Protected Areas

People have always been drawn to natural areas and this interest is growing. There are several social, economic and technological trends that are increasing the presence of visitors to protected areas. For

example, modern travel, from cars to airlines, provides the possibility of being in a far-away natural area in a relatively short time and at a relatively low cost. Other trends attracting and affecting tourism to protected areas are demographic changes (population growth and ageing population), rising educational levels, demand for travel (interest in nature-based tourism and ecotourism), changing roles of women, changing lifestyles (changes in the distribution of leisure time and leisure patterns), technological advancements in communication, information and travel, proliferation of travel options, increasing social and environmental concerns, and the globalisation of the economy (Eagles & McCool, 2002; Eagles, McCool, & Haynes, 2002).

The consequences of these trends are very high levels of visitation that impose challenges and opportunities to the parks managers, local communities and tourism industry. For example, the USA National Park System catered to approximately 430 million visitors in the year 2000 making it the most visited park system in the world (Eagles & McCool, 2002). Another example is the visitation to the Galapagos Islands in Ecuador were nature tourism has grown steadily since the pioneering days of the 1970s, to the present level of over 60,000 visitors a year (Charles Darwin Research Station, 2001 cited in TIES, 2000).

As a result of this visitation trend, international organisations, academic institutions and researchers have increasingly paid more attention and interest in the phenomena. The IUCN raised the nature of the relationship between tourism and the environment when its Director General in 1976 posed the question in a paper entitled, 'Tourism and environmental conservation: conflict, coexistence, or symbiosis?' (Budowski, 1976). Furthermore, the topic of tourism in protected areas has been discussed since the first World Park Congress in Seattle, USA in 1962, continued throughout the following congresses in Yellowstone (1972), Bali (1982), Caracas (1992), and more recently in Durban (2003) (IUCN, 2005). In addition to these events, in July 1998 the United Nations Economic and Social Council (ECOSOC) proposed to members of the United Nations General Assembly to designate the year 2002 as the International Year of Ecotourism (IYE), and in December 1998 the proposal was accepted, recognising the growing importance of ecotourism around the world (UNEP, 2003).

Recent academic research from the disciplines of tourism, environmental management, economics, and sociology, among others, has focused on different aspects of the relation between tourism and protected natural areas. Recurring themes include the impacts of tourism in national parks and protected areas, management strategies and tools, the relation with local communities, the economics of tourism in parks, the opportunities and pitfalls of financing protected areas through tourism, the marketing and de-marketing of natural areas, and the need for policies and partnerships between tourism and protected areas (Buckley, 2004; Buckley, Pickering, & Weaver, 2003; Ceballos-Lascurain, 1996; Eagles & McCool, 2002; Eagles et al., 2002; IUCN, 1998, 2000; McNeely, Thorsell, Ceballos-Lascurain, WTO, & UNEP, 1992).

In essence, tourism management in protected areas addresses the paradox of preservation and use. "Visitor management is an administrative action oriented towards maintaining the quality of the park resources and visitor experiences" (Eagles & McCool, 2002, p. 111). The management systems developed to monitor and report on the impacts of visitors tend to focus on the negative human-induced impacts, but could be used to create positive impacts (Eagles & McCool, 2002). Such frameworks include the Recreation Opportunity Spectrum (ROS), Limits of Acceptable Change (LAC), Visitor Impact Management (VIM), Visitor Activity Management Process (VAMP), Visitor Experience Resource Protection (VERP) and the Protected Area Visitor Impact Management (PAVIM) (Farrell & Marion, 2002; Moore, Smith, & Newsome, 2003). There are also two that have been developed for tourism: the Tourism Opportunity Spectrum (TOS), and the Tourism Optimisation Management Model (TOMM) (Moore et al., 2003).

The Protected Area Visitor Impact Management (PAVIM) is an interesting visitor management framework because it was proposed specifically for the context of Mexico, Central and South America. PAVIM is an alternative framework "to assess visitor impact problems and identify management strategies, recognising the constraints affecting developing countries protected area management" (Farrell & Marion, 2002, p. 31). PAVIM has been proposed as an alternative to LAC, because of its simplicity, flexibility, cost effectiveness, timeliness and inclusion of input from stakeholders and local residents (Farrell & Marion, 2002). "PAVIM provides a professional impact identification and evaluation process, represents cost effective and timely means of managing visitor impacts, and may also better integrate local resource needs and management capabilities and constraints into decision-making" (Farrell & Marion, 2002p. 46).

Outdoor recreation has also been extensively researched and has great relevance to the management of protected areas. Manning (1999) did a thorough review, synthesis, and integration of literature from North America on the social science aspects of outdoor recreation. In particular, the review exposes the main areas of study of outdoor recreation such as the social aspects, the recreationist and his/her motivation, attitudes, preferences and perceptions, also the visitor management frameworks and concepts such as carrying capacity, recreation opportunity spectrum, and limits of acceptable change, indicators and standards of quality, and the concerns of crowding and conflict. Finally, through the integration of all the concepts reviewed, Manning (1999) proposed a set of principles to understand outdoor recreation and offer alternative management practices (see Table 3.3).

Table 3.3: Principles of Outdoor Recreation
1. Outdoor recreation should be considered within a three-fold framework of concerns: the natural environment, the social environment, and the management environment.
2. There is substantial diversity in outdoor recreation.
3. Diversity is needed in outdoor recreation opportunities.
4. Explicit objectives are needed to guide management of outdoor recreation.
5. Recreation management should be applied thoughtfully, but deliberately.
6. Outdoor recreation is most appropriately defined in terms of motivations and benefits rather than participation in activities.
7. Quality in outdoor recreation can be defined as the degree to which recreation opportunities provide the experiences for which they are designed and managed.
8. Satisfaction of visitors to outdoor recreation areas is a multifaceted concept.
9. There is a high degree of interrelationship among outdoor recreation issues and variables.
10. A concerted effort is needed to obtain systematic and objective information about and from visitors.
11. Outdoor recreation opportunities should be managed for identifiable segments of the visitor population.
12. A variety of practices are available for managing outdoor recreation.
(derived from Manning, 1999, pp. 278-281)

Outdoor recreation can be managed through the application of a series of management strategies and practices. "Management strategies are basic conceptual approaches to management that relate to achievement of desirable objective" (Manning, 1999, p. 238). There are four basic strategies for managing outdoor recreation. The first two deal with demand and supply: (1) supply of recreation opportunities may be increased to accommodate more use, (2) demand for recreation may be limited through restrictions or other approaches. The second two consider demand and supply as fixed: (3) modify the character of recreation to reduce its adverse impacts, (4) modify the resource base to increase its durability (Manning, 1999). Management practices can also be classified depending on whether they are direct or indirect. Direct management practices have a direct effect on visitor behaviour, while indirect management practices try to influence the decision factors of the visitor's behaviour as shown in Figure 3.2 (Manning, 1999).

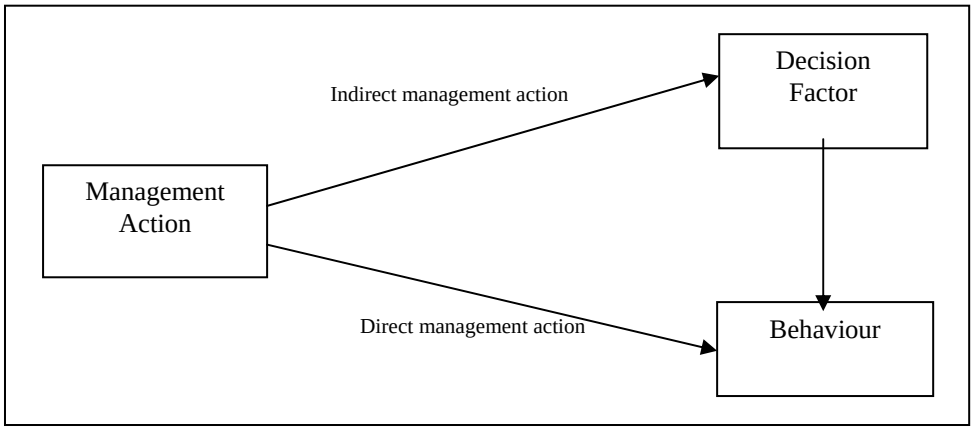


Figure 3.2: Diagram of direct versus indirect management practices. (Manning, 1999, p. 241)

With respect to outdoor recreation research in New Zealand a comprehensive compendium was published by the Department of Conservation and Lincoln University (Devlin, Corbett, & Peebles, 1995). This compendium introduces the Maori perspective on outdoor recreation, the first time this was done. The book describes the use and the users providing some insights into their activities and groups, to then understand the individual recreationist and his/her motivation and satisfactions. Once research about recreationists had been synthesised the authors identified the three major trends of outdoor recreation impacts in the research: social, environmental and economic. Due to the importance of economic impacts research is reviewed with regard to models of economic analysis to understand recreation values in New Zealand. Finally, the question of managing outdoor recreation is touched upon with a brief mention of institutions and legislation.

In the case of Mexico, recent research with regard to protected natural areas has been presented in three different national congresses of protected natural areas during the 1990s. Most of the papers presented in such events were related to biological or ecological themes about protected areas. In the first congress held in 1993, papers were presented about environmental educational and also the recreational and tourism potential of protected natural areas, with just one paper on visitor attitudes (Universidad Autónoma de Tlaxcala, 1993). The second congress in 1995 included the theme of ecotourism in protected areas. In 1997 the third congress took place with more papers being presented about ecotourism, tourism as a tool for conservation, ecotourism as an economic alternative for local communities, tourism impacts, and case studies of ecotourism projects in protected areas (Gobierno del Estado de Chiapas, 1997). Interestingly, in this last congress there was a series of roundtables and presentations on policy and regulations focusing on protected natural areas, but not on tourism or recreation in these areas.

This wealth of knowledge, accumulated since the 60s and 70s on outdoor recreation and tourism in protected areas, lacks any relevant studies on the institutional arrangements related specifically to tourism and recreation in protected natural areas. There is a mention of the importance of institutional arrangements in the management of tourism in protected areas by Corbett (1995), Buckley (2004), Eagles and McCool (2002) and Hall (2003), but these studies have a stronger emphasis on ecotourism rather than on protected areas. There is literature related to policy issues and tourism (Hall & Jenkins, 1995), as well as institutional arrangements and protected areas (Armitage, 1995; Mascia, 1999; Reed & Gill, 1997; Yanez-Arancibia et al., 1999). This latter literature comes mainly from researchers more interested in environmental management than in tourism.

It is surprising to find this lack of research about institutional arrangements, especially when most literature regarding tourism and recreation management in natural areas emphasises the presence of a government agency with the mandate of conserving the natural values of the landscape or seascape.

However, there is interest in the question of partnerships between the private sector (tourism enterprises) and the government in charge of managing the protected areas (Buckley, 2004; Eagles & McCool, 2002; Journal of Sustainable Tourism, 1999).

3.4 Conclusions: Finding gaps in the literature

The literature review has shown that, although there is a strong tradition to study institutional arrangements in the disciplines of economics and environmental studies, there is an incipient analysis with regard to tourism in general, as well as tourism in protected natural areas. Park tourism policy is an essential element of protected area management needed to balance the paradox of preservation and use (Eagles & McCool, 2002). The first step to gain "a realistic understanding of tourism policy is to take institutional arrangements seriously" (Hall & Jenkins, 1995, p. 31). Consequently, this study undertakes a comprehensive overview of the institutional arrangements of tourism and recreation management in the protected natural areas of Mexico and New Zealand.

This literature review has defined concepts important for the thesis such as institutions and institutional arrangements. It has also described frameworks adapted from the literature that will be used to analyse the institutional arrangements around the management of recreation and tourism in the protected areas of New Zealand and Mexico. The chapter has reviewed the available literature regarding tourism and recreation in protected natural areas. As a result of this literature review, a significant gap concerning institutional arrangement studies has been found in the literature. This gap will be addressed by the present research. The next chapter presents the design and methods used to reach the objective of the study.

4. Design and Methods

4.1 Introduction

This chapter presents the research approach of the study and the research design used in the thesis. Section 4.3 on research design details the research questions, the methods of data collection, management and analysis. Finally, the ethical considerations of the research design and methods are discussed in section 4.4.

4.2 Research Approach

A qualitative approach was used in this study to compare institutional arrangements between New Zealand and Mexico with respect to tourism and recreation in protected natural areas. Some of the intrinsic characteristics of qualitative research which are relevant and prove the usefulness of this approach for this thesis are that it looks at relationships within a system, is focused on understanding a given social setting, incorporates informed consent decisions and is responsive to ethical concerns (Janesick, 1994).

One of the research questions of this study is to understand the relationships between the variables of the institutional arrangements discussed in the previous chapter. Qualitative research was chosen because it can be used to study organisational functioning (Strauss & Corbin, 1998). In this approach, the subject of study, be it an organisation or an individual, is not reduced to an isolated variable or hypothesis, but viewed holistically as part of a whole in combination with other variables (Bogdan & Taylor, 1975).

Qualitative research endeavours to understand a social setting by being "multimethod in focus, involving an interpretative, naturalistic approach to its subject matter" (Denzin & Lincoln, 1994, p. 2). The use of multiple methods has the intention of gaining in-depth knowledge of its subject matter (Denzin & Lincoln, 1994). The interpretative approach comes from studying things in their natural settings and trying to understand them (Denzin & Lincoln, 1994). Qualitative research uses a naturalistic approach because the researcher does not attempt to manipulate the object or subject of study (Patton, 1987).

4.3 Research Design

The research design is the logic that associates the data to be collected to the original questions of study (Yin, 1994). A research design must include what questions are being asked in the study, what data to collect, and how to analyse the data collected to answer the initial questions.

4.3.1 Methods of Data Collection

This research used a combination of archival research and interviews to collect data from the settings to respond to the research questions and fulfil the objective of the study. The data required to achieve the first objective were defined by the variables of the conceptual framework of institutional arrangements: historical and traditional customs and values, legislation and regulations, policies and guidelines, administrative structures, key participants and/or actors, economic and financial arrangements, political structures and processes, and management techniques. All data which did not fall into any of these variables were excluded from the analysis.

To prepare for the archival research and the interviews, a 'working document' was created to define the variables of analysis, identify sub-variables (aspects that the researcher wanted to understand about the variables), the possible sources of the information and questions to be asked of the interviewees (see Appendix A). This document helped define the meaning of each variable used for the analysis. It also helped define a possible interview guide and an interviewee list.

Archival Research

The archival research included finding documents that contained information related to the variables of analysis. The defining criterion to analyse a document, or not, was its relation to the key concepts of this thesis such as protected natural areas, and recreation and tourism management.

In the case of Mexico, where there is an extreme lack of printed information, any source found relating to protected natural areas, nature conservation, tourism and recreation was deemed valuable to the study. These documents included legislation on environment and tourism, for example, the General Law of Ecological Equilibrium and Environment Protection (LGEEPA), and the Federal Law of Tourism. With respect to regulations, the documents analysed included the Regulation concerning Protected Natural Areas and decrees of protected areas. Documents presenting policies and guidelines used in the analysis included the management plans of protected areas, written statements of discussions and conclusions by Protected Area Directors with respect to tourism, and reports, documents and internal rules published by CONANP. Relevant sections and content of the website of CONANP (www.conanp.gob.mx) were also used. Academic articles, theses and books relating to protected areas, conservation and tourism in Mexico were also included in the analysis.

In the New Zealand case, documents concerning legislation, regulations, policies and guidelines were more easily identified as relevant to the study. In most cases these were produced by the Department of Conservation. With respect to legislation and regulations, the Conservation Act, the National Parks Act, and the Reserves Act were included in the analysis. Policies and guidelines included the General Policy National Parks Act, and the General Policy Conservation Act and Related Legislation, as well as the Visitor Strategy, the Statement of Intent 2004 – 2007, management plans of national parks, and conservation management strategies. Other documents, such as reports, newsletters and bulletins

produced by the Department of Conservation, were also used. Relevant sections and the content of the website of DOC (www.doc.govt.nz) were also valuable sources of data.

Interviews

Interviews had the aim of clarifying information recovered from the archival research and gave insights into the remaining variables of analysis, for example, political structures and processes, and key participants or actors. More interviews were carried out in Mexico than in New Zealand due to the lack of documented information available in Mexico. In the New Zealand case, where there is plenty of available information, interviews were used to confirm information and clarify doubts. In the Mexican case, interviews were the main source of data for this research. Table 4.1 describes the profile and the number of the interviewees in Mexico and New Zealand.

Table 4.1: Origin, profile and number of interviewees

Country	***Profile***	***Number***
Mexico	CONANP	17
	Ministry of Tourism	1
	Other Government Agencies	2
	NGO	2
	Consultant	2
	Academic	1
	Subtotal	*25*
New Zealand	DOC	2
	Subtotal	*2*
	TOTAL	**27**

Participant selection

Interviewees were recruited on the basis of their role in the relevant agency. The method of selection was 'positional', referring to individuals who occupy key positions having access to the resource and influence in the decision-making (Tait, Johnson, & Bokemeier, 1978).

Once identified, the participants were contacted via email. International communication was important since the researcher was based in New Zealand, and most of the interviews were held in Mexico during two months of fieldwork. The initial email included a brief presentation of the researcher, the purpose of the study, the reason it was considered important to carry out an interview with the potential participant, and suggested an interview date and time. All participants contacted agreed to take part in the research. Once the participant answered and expressed his/her interest, a date, time and place was defined for the interview. Interviews were confirmed via telephone while the researcher was in the field.

The general profile of the interviewees included people from the agencies responsible for managing the protected natural areas (CONANP in Mexico, DOC in New Zealand), tourism government officials, non-governmental organisations (NGOs), consultants (on tourism, ecotourism and protected natural areas), and academics (as seen in Table 4.1).

Semi-structured interviews

An interview guide was used so that the questions asked closely related the variables of analysis. The questions varied depending on the position of the interviewee inside the agency. The interviews were semi-structured so that interviewees could more freely answer questions, but the researcher used the guide to return to the topics of interest in case the interviewee got lost in unrelated subjects.

The length of the interviews varied from 45 to 90 minutes, depending on the interviewee's availability, predisposition, and interest. Almost all interviews were carried out at the participant's place of work. All interviews were recorded on audio-tape with permission from the interviewee. Interviews in New Zealand were conducted in English. In the Mexican case, all interviews were conducted in Spanish.

4.3.2 Data Management

How data is stored and retrieved is the heart of data management (Huberman & Miles, 1994). For this thesis all documents recovered from the archival research were separated by country (New Zealand and Mexico) and if possible by variable of analysis (e.g., legislation and regulations, policies and guidelines, etc.). All interviews were transcribed and imported into an analysis software (Nvivo). The analysis of the interviews (codification) was done in English, but the Spanish interviews were not translated. When quotes from the Mexican interviews were used in the thesis, a literal translation was done by the researcher. All data recovered for the study (documents, interviews, reports, etc.) were managed and used solely by the researcher to avoid loss and to protect anonymity. The filing system for documents and the use of software for interviews allowed easy access and retrieval of information, as well as data analysis.

4.3.3 Methods of Analysis

Data analysis contains three linked sub-processes: (1) data reduction, (2) data display, and (3) conclusions drawing (Huberman & Miles, 1994). Data reduction is done through the use of conceptual frameworks and research questions that limit the scope of the study. Once interviews, field notes and documents were available, summaries were made, coding and themes identified to further reduce the data. Data display is an organised and compressed assembly of information that permits conclusions to be drawn.

The conceptual frameworks used to analyse institutional arrangements define variables that help reduce the amount of data to be analysed. Due to the fact that the study starts with a set of concepts to analyse, the study has a deductive approach. Once the interviews were transcribed they were imported into an Nvivo project for coding using the variables of analysis of the framework.

The initial coding was done through Nvivo. This involved finding the variables of analysis in interviews and documents and creating 'nodes' with Nvivo. Nodes are containers of variables, ideas or concepts.

When coding documents to a node in Nvivo, a link is created from the node to the relevant text in the documents. When all the passages which relate to a certain concept need to be seen, a node is browsed to see all the relevant material in the project. In the case of the archival documents, coding was done by hand.

4.4 Ethical Issues

No ethical approval was required by the Lincoln University Human Ethics Committee because the interviewees were all professionals and the topics of the interviews were about the organisations and institutions rather than the viewpoints of individuals. Nevertheless, the researcher asked for verbal and written permission from participants to record the interviews, to cite their opinions using their name or an alias, and to re-contact via email for further questions if necessary (see Appendix B: Consent form). These measures were included to help ensure the interviews were conducted with the appropriate degree of professionalism and transparency. Of the 27 interviewees, 26 gave permission to cite them by name in the development of the thesis, therefore their contributions are paraphrased and referenced as a personal communication.

4.5 Summary

The researcher followed a qualitative approach to immerse himself in the institutional arrangements surrounding the management of tourism and recreation in the protected natural areas of Mexico and New Zealand. Through the use of a framework to analyse institutional arrangements, the research design links the research questions with the methods of data collection, management and analysis. The ethical stance of the research was to have a high level of professionalism and transparency all along the process.

5. Historical and Traditional Customs and Values

5.1 Introduction

The institutional arrangements framework is applied through the following five chapters, Chapters Five to Nine. The significance of this analytical framework is that it helps understand a whole system by analysing the different variables that compose such system. The first variable of the framework is the historical and traditional customs and values of the institutional arrangements.

Institutional arrangements influencing the management of protected natural areas are the result of historical processes. To understand the present institutions (rules and players) it is important to dissect the values and customs that shaped them. This chapter identifies the historical and traditional customs and values that have influenced the protected areas in Mexico and New Zealand. Through the discussion of the different development phases in the history of protected areas, the chapter identifies historical values and customs that were influential in the present institutional arrangements of both countries with regard to tourism and recreation management.

It must be noted that while the history of protected natural areas (PNAs) in New Zealand has been widely discussed in academic papers, and a phased conceptualisation of the history has been proposed, this does not occur in the Mexican case. For this reason it was necessary to rebuild the history of PNAs in Mexico from few sources as a first stage to then identifying some of the values and their causes to present in this chapter. In the New Zealand case, not only are the stages of Roche (1979; 1984) and Booth and Simmons (2000) accepted in the literature, but Roche (1979) in his master's thesis also discussed the issue of values. This made the presentation of New Zealand values regarding protected areas more straightforward. To homogenise the format of the chapter, development phases were proposed for the Mexican case and the values used in the New Zealand case were adopted. The systematisation and analysis of the information allows for comparisons to be made, as discussed at the end of the chapter.

Customs and values have affected or shaped the past and present institutional arrangements. The final discussion of this chapter illustrates the influence of these values on the other variables of institutional arrangements framework. Furthermore, this historical account of conservation and protected areas in New Zealand and Mexico helps understand the social and cultural context of both countries.

5.2 New Zealand

The historical and traditional customs and values relative to protected natural areas (PNAs) have evolved throughout the history of New Zealand. Maori customs and values shaped the environment for 1000 years before the arrival of the European settlers. Then in 1840, with the organised immigration of Europeans, new customs and value systems arrived drastically changing the landscape.

The following sections present the values of the Maori and Europeans that influenced the different stages of the development of protected natural areas. First, the Maori values that can be considered conservationist are discussed. Second, the European values of the Christian tradition that arrived with the new immigrants are explored. Third, these Maori and European values are identified in the historical development of protected areas.

5.2.1 Maori Culture

Traditions

Although Maori did have an impact on the environment of New Zealand, they also developed, through hundreds of years, traditions that can be considered conservationist. For example, in using and consuming natural resources such as fish, forest products and birds, Maori followed strict rituals. The disobedience of such rituals was unimaginable for the members of a tribe (Devlin, Dingwall, & Lucas, 1990). These rituals were the expression of a learning process on the cycles of nature; Maori understood that food resources, if exploited indiscriminately, would be depleted. Two examples of these traditions are the protective systems of *rahui* (temporary ban) and *tapu* (sacred sites) (Thom, 1987). For instance, the imposition of a rahui on a river bank would prohibit the harvest of eels, and would only be removed when the eels reached maturity (Thom, 1987). In the case of *tapu*, some areas, such as mountain peaks, were considered sacred to Maori forbidding entrance and therefore resource exploitation.

Spiritual Values

The 'conservationist' traditions of the Maori were an expression of their value system. "Within the value system of the Maori, nothing stands out more clearly than their veneration of the land, forests, and waters" (Devlin et al., 1990). For Maori, the land, forests and waters, and nature in general were not something separated from themselves (Thom, 1987). The material and spiritual were integrated, and hence the "physical form of the country embodied the gods and ancestors" (Thom, 1987, p. 51). This cultural integration with nature and spiritual relation to the land by Maori were expressed on their day-to-day 'conservation' traditions. These traditions and values contributed to the Maori gift of land to the nation which would then be created by parliament as the first national park of New Zealand and also influenced the present day management of tourism and recreation in protected areas, as discussed further below.

5.2.2 European Christian Tradition

The organised immigration of European colonists, mainly British, after the signing of the Treaty of Waitangi in 1840, brought not only new people into this land now called New Zealand, but also a new culture with a new set of values and traditions. These values and traditions were an expression of the Western Christian tradition. According to the Christian tradition, man is separated from nature and because of this his role is to be God's steward on Earth (Roche, 1979).

As a consequence of the Christian tradition, the conservation ethos of Western culture has been to enact this stewardship role in the world. The values assumed with this stewardship can vary in approach to nature conservation. The values can be categorised as utilitarian, aesthetic, and ecological (Roche, 1979). The utilitarian value perceives the environment as a reservoir of natural resources to be exploited through extractive activities (e.g., mining, forestry or agriculture), or non-extractive (e.g., tourism or recreation) (Roche, 1979). The aesthetic value of nature combines the 'scenery cult' and the 'wilderness ideal' (Roche, 1979). The scenery cult recognises the beauty of nature and therefore the appreciation of the natural landscape. The wilderness ideal involves "people directly in the physical existence of the landscape" and consequently its existence adds to the quality of life (Roche, 1979, p. 18). The ecological value in Western culture is a recent development of the 20th century. The ecological value views nature for its biological importance. These utilitarian, aesthetic and ecological values have evolved and also influenced the conservation movement in New Zealand.

5.2.3 Different Stages, Different Value Emphases

The Maori and European values discussed in sections 5.2.1 and 5.2.2 influenced the different stages of the history of protected natural areas in New Zealand. A classification is used to identify when these values were first present. Roche (1979) in his thesis on "The Origins and Evolution of Scenic Reserves" identified four development phases in scenery preservation in New Zealand. He conceptualised these stages by the terms of Initiation, Acquisition, Maintenance and Management. Due to the fact that Roche's work (1984) (a published version of his thesis) is frequently cited in the literature, his proposed phases are reproduced here. In addition, Booth and Simmons (2000) suggested a new phase after the management stage, called 'Business and Negotiation' which will also be discussed.

Initiation

According to Roche (1979), the initiation phase of protected areas in New Zealand covers the period from 1868 to 1902. In this first stage, the "task was to put forward a case for scenery preservation, that would overcome the dominant barriers of land settlement and exploitative resource use" (Roche, 1979, p. 160). The individuals who promoted the case for conservation mostly presented their arguments expressing the utilitarian values of the early pioneering New Zealand. Nevertheless aesthetic and ecological values were in the long run developed (Roche, 1979). To illustrate, William Fox in 1873 wrote a letter to Julius Vogel, Premier at that time, suggesting the protection of the thermal sites from Tokaanu to Rotorua because of their beauty, majestic importance, tourism potential and because the land was worthless for agricultural or pastoral purposes (Thom, 1987). As a result of Fox's request, the Thermal Springs District Act of 1881 was developed. In other words, Fox's letter clearly shows how aesthetic values, important for some people, had to be translated to a utilitarian perspective to be supported by the government of that time. In this case, the thermal sites justified their existence because of their potential for economic gain through tourism and because they were useless for other purposes like agriculture.

There were other reasons besides tourism that justified the creation of reserves, but they also expressed the utilitarian values of nature protection. These reasons included problems of overgrazing and repeated burning for land clearance, which were causing major shingle slides and flooding (Thom, 1987). Therefore preservation in these early years was also intended to protect areas from threat of destruction (Roche, 1979). As a result, in 1892 the Land Act promoted closer settlement providing land for the rapidly growing dairy industry, but it also advanced the cause of conservation giving the Governor the possibility of reserving "from sale temporarily Crown lands required for the growth and preservation of natural timber or the preservation of the natural fauna, or containing thermal springs or … natural curiosities or scenery may exist of a character to the national interest" (Thom, 1987, p. 105).

Maori cultural-spiritual values also shaped this 'initiation' stage and established the first national park in New Zealand. These values were expressed by the 'gifting' of the volcanic peaks of Tongariro, Ngauruhoe and Ruapehu in the North Island which were highly sacred (*tapu*) to the local tribe. In 1887 Te Heuheu Tukino, chief of the Ngati Tuwharetoa tribe, gifted the sacred mountains to Queen Victoria and the people of New Zealand to preserve them from possible exploitation (Devlin et al., 1990; Thom, 1987). The Tuwharetoa tribal territory was suffering great pressures and it was unthinkable for these sacred lands to be sub-divided and sold; so the Maori gifted the land to the Crown and hence protected their sacred lands. Devlin (1990, p. 276) illustrates how a "Maori belief in the life of the mountains with which they identified as a people joined with a Western concept of formally protecting a great natural area as a park for the nation [founded] the national park system of New Zealand".

Acquisition

The acquisition phase overlapped, as everything in history which has no linear clear-cut evolution, with the initiation phase between the 1890s and the 1920s. The emphasis of the utilitarian values in the initiation phase continued in the acquisition stage, but also gave place to the growing aesthetic values of the 1900s.

The establishment of Egmont National Park in 1900 expressed the continuation of the utilitarian values regarding protected areas. For example, there were concerns about the consequences to the lowlands of the removal of the mountain forests from Taranaki. Flooding from the various streams that came down from the mountain was seen as potentially damaging to the agricultural activities surrounding the mountain, and besides that land was considered unsuitable for settlement or development (Devlin et al., 1990).

In addition to flood control, there were other utilitarian uses of nature protection which influenced protected area history in New Zealand. The interest in the conservation of timber, soil and water resources, together with the view that mountains were 'wastelands' shaped the foundations of the protected natural area system of New Zealand that is concentrated mainly in the mountainous areas of the South and North Islands.

Nonetheless, the interest in mountainous areas for conservation responded also to a growing aesthetic value regarding nature. For instance, events in 1901 and 1905 "respectively, formed the basis of what eventually became Arthur's Pass and Fiordland National Parks and reflect an emerging interest in protection of lands of high scenic and wilderness value as tourist attractions" (Dingwall, 1994, p. 233).

The aesthetic values started to show their influence on conservation during this acquisition stage reaching its zenith with the Scenery Preservation Act 1903. Harry Ell was a politician and key conservationist in the creation of the Scenery Preservation Act, an expression of his persistent advocacy towards preserving native forest and scenery. Key individuals, such as Harry Ell, together with explorers, painters and other artists were among the group of people who influenced the aesthetic values of nature in New Zealand. Besides individuals, scenery preservation societies all around the country also influenced the establishment of scenic reserves (Thom, 1987).

The preservation of scenery in New Zealand has been intimately linked to the development of tourism in natural areas. Tourism as an alternative use of the protected area also proves the continuation of the utilitarian value regarding nature, but changing from an extractive to a non-extractive exploitation. Furthermore, the unclear role of national parks allowed tourism and economic viewpoints to "gain a strong hearing alongside preservation" (Booth & Simmons, 2000, p. 42). During 1903 the first huts for visitors were being erected in Tongariro National Park. Also, the Tourist and Health Resorts Department described that the new Egmont National Park as "one of the grandest pleasure-grounds of the colony" but it lacked services to receive visitors (Thom, 1987). Harry Ell believed that forests should be preserved for scenery, recreation and their tourism potential (Thom, 1987).

In conclusion, during this acquisition phase, utilitarian values gave some space to aesthetic values, but were still predominant as expressed by Thom (1987, p. 114):

> Although the base of understanding for the needs of conservation had widened, and the effects of forest destruction were becoming more obvious, reservation was spasmodic and fragmentary. The debates on scenic beauty, tourism, native-bird loss and forest destruction may have promoted some awareness, but public opinion appeared still to be against forest protection. The reserves that did exist were established during the 'utilitarian' period of concern about flooding and erosion, and lay at the headwaters of forested catchments.

The values mentioned above affected the acquisition phase between 1890 and 1920, and Roche (1984) asserts that this phase determined the character of the present day protected area system in terms of extent, location, size, and types of lands reserved. The extent of scenic reserve gazetted between 1892 and 1920 represented 44 percent of the total area of scenic reserves in 1980. Agricultural settlement was regarded as the primary land use according to the Liberal Government policies of the period 1891 to 1912, which made the location of protected areas mainly in mountainous land that was not deemed useful for settlement or for agriculture. The size of scenic reserves before the 1920s was generally small and elongated; small because of the agricultural pressures, and elongated because they were created along roads and railway lines to create a scenic corridor effect for tourism. The types of areas protected were

influenced by the "European alpine tourist tradition coupled with ideas of panoramic scenery pushed attention towards upland forested area", while lowland forests were exploited for sawmilling and converted to pasture (Roche, 1984, p. 10).

Maintenance

According to Roche (1979), the maintenance phase was from 1919 to 1947 coinciding with new attitudes towards preservation which emerged after World War I. This 'caretaking' phase focused on reserve maintenance reflected by the increase in funding for this purpose. However, the care was undertaken in a piecemeal and non-specialised fashion (Roche, 1979, 1984).

Aesthetic considerations towards scenery preservation were sacrificed for pragmatic motives suffering a lack of materials and funds and often neglected (Roche, 1979). The 1920s and 1930s saw a new rise of scenery preservation groups that shifted the focus from acquiring protected areas to a focus on maintaining them (Thom, 1987). New activist groups like the New Zealand Native Bird Protection Society and the Federated Mountain Clubs forged the participatory component in New Zealand reserves administration, a legacy that continues till today. Unfortunately, international events like the Great Depression of 1929 and the outbreak of World War II concentrated the efforts of the whole country on other issues.

With respect to outdoor recreation, this phase is possibly the starting point of the recreational value and use of natural resources of the country which is such an important part of present New Zealand culture. "The development of clubs, particularly subsequent to World War I (e.g., Federated Mountain Clubs, youth groups and health leagues), saw a rapid acceleration of outdoor recreation, but it was the post-World War II economic and social boom that saw it popularised in a widespread groundswell which matched the exuberance of a mobile and youthful population" (Devlin et al., 1995, p. 9). The Federated Mountain Clubs (FMC) played an active role in the track-making, hut-building and map-making of the national parks, as well as becoming an influential organisation that contributed to the shaping of policy and administration eventually expressed in the National Parks Act 1952 (Thom, 1987).

Besides recreational values, New Zealand protected areas were influenced by the emergence of organisations which were expressing their concern towards biological values of nature. The New Zealand Native Bird Protection Society, founded in 1923 (which became the Forest and Bird Protection Society of New Zealand in 1948), lobbied around three themes: the problems and dangers of introduced animals, erosion, and the chaotic state of wildlife management (Thom, 1987). Together with the Royal Society of New Zealand, formed in 1903, these were the organisations which promoted scientific investigation and discussion.

The maintenance stage witnessed the reduced emphasis on utilitarian values, the stronger emergence of aesthetic values and the starting point of ecological values. Although utilitarian values were present in the form of recreational uses of protected areas, these recreational values were also the result of aesthetic

appreciation of nature. The scenery preservation groups that existed around New Zealand and influenced the change from acquisition of protected areas to their maintenance were a clear expression of the strong presence of aesthetic values in society. The appearance of organisations like the New Zealand Native Bird Protection Society proved the surfacing of new ecological values towards nature, a value that would become the major emphasis in the next stage in protected area history.

Management

The management phase defined by Roche (1979) extended from 1947 until 1979 (when Roche wrote his master's thesis), but continued until the end of the 1980s (Booth & Simmons, 2000). The static maintenance stage was replaced by a dynamic management concept with a new emphasis on ecological science (Roche, 1979). During the late 1960s there was a notable increase in professionalism in parks and reserves management; where planning became the basis of the park establishment and management fundamental for solving conflict between competing uses (Dingwall, 1994). Ecological science provided the knowledge to support conservation initiatives and the increasing realisation of the need to document the scope and condition of the protected ecosystems. Hence, the ecological value grew in importance in the management phase.

While ecological values increased in importance in this management phase, tourism and recreation in parks grew significantly during the 1970s. "Park managers responded to these pressures by requiring each park to have a 'master plan', which was to set out strategies for managing the 'preservation versus use' dilemma inherent in the legislation" (Booth & Simmons, 2000, p. 43-44). New concepts and methods were being used to plan for tourism and recreation such as the Recreation Opportunity Spectrum (ROS) (further discussed in Chapter 9). As a result, during the management phase, "recreation and tourism were becoming major considerations in national park management" (Booth & Simmons, 2000, p. 44).

Business and Negotiation

The business and negotiation period suggested by Booth and Simmons (2000) began in the late 1980s and continued throughout the 1990s. This period showed "a new approach to park establishment and management in New Zealand focused upon business-like approaches and negotiation for new protected areas" (Booth & Simmons, 2000, p.44). This period started with the establishment of the Department of Conservation in 1987 which was one of the results of the environmental administration reforms happening in New Zealand.

Several processes and patterns emerged from these environmental reforms including: intense competition for limited financial and human resources; introduction of business-like approaches to conservation; relative increase in the contribution of funding and support for user charges; forging of partnerships and cooperative ventures between government and other stakeholders; and increasing recognition of, and respect for, the rights and traditions of Maori (Dingwall, 1994). The intense competition for limited

financial and human resources within the government apparatus pushed the Department of Conservation (DOC) to increase the contribution of funding through user charges, and forge partnerships with other stakeholders. User charges were applied for services and facilities such as camping grounds and back country huts, but also through the charging and business-like management of tourism concessions. Partnerships were forged with local and regional authorities, local communities, conservation interest and lobby groups, sector groups in the resource and service industries, and private citizens, especially landowners (Dingwall, 1994). These partnerships allowed DOC to spread and share some of the cost of conservation.

The introduction of more business-like approaches to conservation management included examples such as the Quality Conservation Management concept, the Visitor Assets Management System (VAMS), and Standard Operating Procedures (SOP). The Quality Conservation Management concept is a variant of the Total Quality Management idea (Booth & Simmons, 2000). VAMS was a response to the lack of departmental processes and procedures, a situation that led to the fatal accident of Cave Creek in 1995 (further discussed in Chapter 9). SOPs are manuals and guidelines introduced to obtain consistency (as described in Chapter 6) within DOC management which had been criticised for its inconsistency across regions (Booth & Simmons, 2000).

The cultural values of Maori are also present nowadays in the management of protected areas, as well as in the management of tourism and recreation. The Department of Conservation (DOC) works with *iwi* (tribes) and *hapu* (sub-tribes) in almost all aspects of its work. On one hand, the purpose of this is to allow the customary use of natural resources by Maori people while conserving nature. The customary use of New Zealand's biodiversity by Maori helps sustain culture, values and traditional knowledge, and is part of the relationship which Maori have with indigenous biodiversity. On the other hand, the respect of sacred sites (*waahi tapu*) is promoted and secured in the recreational and tourism planning in protected areas. The "increasing recognition of and respect for the rights and traditions of the Maori … [enrich] an emerging bi-cultural perspective on conservation, which in turns opens opportunities for innovative approaches in protected area management" (Dingwall, 1994, p. 234).

Although the ecological value has a stronger prominence today, the utilitarian and aesthetic values are still present in the protected natural area system of New Zealand. Utilitarian values are expressed towards protected areas mainly through the development of tourism enterprises using the parks and reserves. The aesthetic values of nature are articulated by the increasing visitation by domestic and international recreationists and tourists to the parks, and the 'clean and green' image marketed by the tourism authorities.

5.3 Mexico

The historical and traditional customs and values towards protected natural areas (PNAs) have evolved throughout the Mexican history. Since Pre-Hispanic times (before the Spanish conquest) the indigenous

cultures that lived in what is now called Mexico had customary practices that conserved nature. With the arrival of the Spanish conquerors, and 300 years of colonisation, came new values towards nature that modified the natural landscape of Mexico. The independence of Mexico in 1810 is the starting point of modern history regarding protected areas.

The following discussion on the historical and traditional customs and values related to nature conservation through protected natural areas divides Mexican history into three main historical times: Pre-Hispanic Mexico, Colonised Mexico and Independent Mexico. The idea of dividing Mexican history into three main historical times is to illustrate how these stages contributed to the customs and values of nature preservation. In the case of Independent Mexico, 'development phases' (initiation, declaration, maintenance and management) are proposed to conceptualise the evolution of protected areas in modern Mexico. The origin of these development phases is a result of analysing Mexico's conservation history and applying similar phases to those of New Zealand's historical analysis discussed in section 5.2.3. In this way, this thesis contributes to an understanding of the historical customs and values of protected areas in Mexico.

5.3.1 Indigenous Mexico

The indigenous cultures and civilisations of Pre-Hispanic Mexico practised traditional customs which balanced use and preservation of the natural resources. Furthermore, it can be said that today's indigenous cultures of Mexico maintain practices and knowledge that can be called conservationist (Gomez-Pompa, 1998). Some of the values and customary practices of Pre-Hispanic times include: the religious vision regarding nature, the balanced exploitation of natural resources, the idea of protecting natural areas and the recreational value of natural settings.

Religion had an effect on how indigenous people treated nature (Simonian, 1999). Indigenous religion perceives ambivalence in nature; on one hand, they feared the elements which threatened their existence (e.g., earthquakes, drought, hurricanes, big animals), and on the other hand, they gained pleasure from all the generosity, rhythms and scenery of nature (Simonian, 1999). This religious ambivalence created prohibitions to exploit certain resources, and promoted customary practices that balanced use and preservation. For example, cultures which were primarily based on hunting had strong taboos that controlled the killing of certain species. In general, the predominant attitude towards nature was of profound respect (Alcérreca Aguirre, 1988).

The religious vision of native people originated from customary practices that balanced exploitation and preservation of natural resources. These customary practices varied between cultures and civilisations. For instance, the agricultural-forestry system of the Mayas considered the strict protection of many natural areas and the temporary 'rest' of areas already exploited (Alcérreca Aguirre, 1988); the Nahuas of central Mexico used *chinampas* (mud beds and organic waste in decomposition built in the shallow areas of lakes) which assisted in the conservation of the soil and forests by reducing the pressures to burn steep

hills for agriculture (Simonian, 1999); and the Aztec rulers created parks and botanical gardens for gathering edible and medicinal plants (Alcérreca Aguirre, 1988; Simonian, 1999).

Customary practices also included the creation of 'protected natural areas'. These areas of the indigenous cultures were created for productive reasons (Alcérreca Aguirre, 1988). While these traditions existed in past times, they are also present in indigenous communities today. For example, by leaving some areas to 'rest', nature had time to recover and become productive for future crops. Today's indigenous people use a rotational agriculture system which permits the natural restoration of harvested land. The botanical garden tradition of gathering plants for food and medicine also continues to express itself in the family orchards of present day communities (Alcérreca Aguirre, 1988). The natural 'reserves' of the ancient Mayas were places to find medicinal plants, seeds, and multiple natural products for the communities (Gomez-Pompa & Dirzo, 1995). These traditional reserves have a modern expression in the *reservas campesinas* (peasant reserves) found all over Mexico in indigenous communities and *ejidos*. A notable example is found in Reserva Comunal de la Sierra Cojolita, a reserve declared by the general assembly of the Lacandon community and the only natural corridor between the Biosphere Reserve Montes Azules in Mexico and the protected areas of Guatemala (Gomez-Pompa & Dirzo, 1995).

The reserves of past indigenous cultures also had a recreational value. Reserves were related to the contemplative vision of nature. Such was the case of forest parks like Chapultepec (the oldest park of the New World) created between 1420-1430 by the Aztec governing elite (Simonian, 1999). These parks contained botanical gardens, aviaries, and fish ponds for people to enjoy the wild plants and animals.

5.3.2 Colonised Mexico

The conquest marked a drastic change and destruction of the indigenous values and traditions, as well as in the natural environment of Mexico (Alcérreca Aguirre, 1988). On one hand, the imposition of Catholicism on the indigenous communities deeply modified their world-view. If indigenous people resisted this religious imposition, they were persecuted. On the other hand, the influx of immigrants and the uncontrolled exploitation of natural resources (timber and minerals) by the Spanish Crown changed the landscape of the colony.

The Spanish colonisers and the Catholic missionaries demystified the natural world of the indigenous cultures and gave economic incentives for people to hunt the native fauna (Simonian, 1999). Through 300 years of colonisation, the Spanish vision of the world and nature was imbedded in the Mexican culture.

The Spanish cultural colonisation of the country had several consequences that would accompany the conceptualisation of nature and protected areas for many years to come. With the arrival of Catholicism, animals and plants lost their magical powers which before contributed to the taboos regarding hunting and exploitation. The respect for mother earth was changed for the veneration of a heavenly father which

destroyed the respectful relation to the land. Humans became separated from nature, and with this separation between man and nature, living beings and the land became resources to exploit and from which to profit. To increase profits people had to exploit as many resources as possible leaving no place for 'protected areas'.

The most significant and negative consequence of the conquest was the discrimination and even persecution of indigenous people and their culture. Indigenous people were not even considered human beings most of the time, and their customs were seen as obstacles to development. These ideas with regard to the native people and cultures of Mexico have persisted through the history of the country up until now. By the end of the 20th century conservation advocates had begun to voice the need to recover, recognise and learn from the indigenous heritage of Mexico. Such is the case of Gomez-Pompa (1998) who asserts that:

> the present challenge of biodiversity conservation in Mexico has to be understood inside [a] double context of nature and culture … where two conservationist cultures exist … the modern Mexico with its protected areas and the Mexico of indigenous people and campesinos … with their traditional management of nature.

5.3.3 Independent Mexico

This section underlines the values with regard to conservation and exemplifies them in historical events to see how the values affected the evolution of protected natural areas in Mexico. The section is divided using the same categorisation of values as used in the New Zealand case (utilitarian, aesthetic and ecological) because they are deemed appropriate for the Mexican case, and will also allow further comparisons.

These values are identified for each of the development phases proposed to understand the evolution of protected natural areas in post-independent Mexico: initiation, declaration, maintenance and management. It must be noted that these phases do not follow an ordered and clear-cut manner but rather are sequential in time and sometimes overlap as seen in the timeline of Figure 5.1.

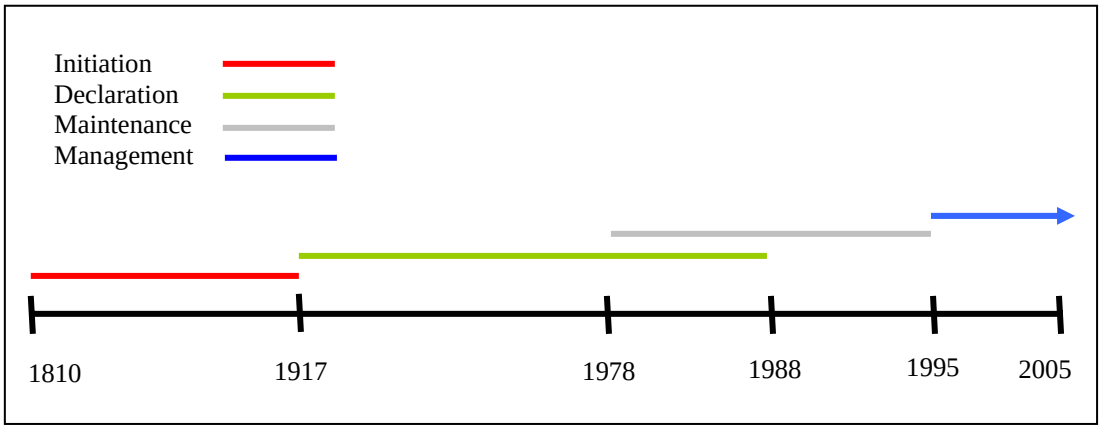


Figure 5.1: Development Phases of the Protected Natural Areas of Mexico.

Initiation

The initiation phase begins in 1810 with the first concerns voicing the question of nature conservation and ends in 1917 with the declaration of the first national park of Mexico. This phase includes the first forest law in 1861, the creation of forest reserves, the active conservation advocacy of Miguel Angel de Quevedo, resulting in the 1917 declaration of the first national park in Mexico called Desierto de los Leones. It is a phase were the interest in the governmental and academic spheres regarding conservation slowly increased.

At the beginning of independent Mexico, the governing elite was more concerned in bringing order and economic development to the nation, while conservation was an obstacle to these plans (Simonian, 1999). Nature was valued for the resources it provided for the economic development of the country. In fact, natural resources such as forests, minerals and the land were opened to exploitation by national and international capital (Alcérreca Aguirre, 1988). For example, the liberal government in 1856 passed a law obligating indigenous people to sell their lands if they were unused and to replace them with productive private farming operations (Simonian, 1999). Afterwards, during the dictatorship of Porfirio Diaz (1884-1911), indigenous communities' lands were expropriated by being forcibly sold to foreign capital for extensive agricultural enterprises and the construction of Mexico's railway system. The construction of the rail system and the parallel industrialisation significantly affected the natural resources of the country (Alcérreca Aguirre, 1988).

The value emphasised in the initiation stage was clearly utilitarian. For instance, the first forest law of 1861 and the subsequent creation of forest reserves during the 19th century were the expression of the value of protecting some forests for the future provision of timber for construction and fuel. In fact, the word 'reserve' implied that the Mexican government was keeping something for future use (F. J. Cantón, personal communication, September 14, 2004). It was not only the government that considered forests reserves for future exploitation. The 'conservationist academics' represented by the Mexican Society of Geography and Statistics (Sociedad Mexicana de Geografía y Estadística) concluded in a report that, for the good of the economic prosperity of Mexico, it was important to conserve its forests and plant new trees (Simonian, 1999).

Towards the end of the 19th century, the utilitarian value awarded forests changed them from being reservoirs of timber to protectors of the hydrological cycle also important for the economic development of the country and the growing urban population. Though the emphasis was still utilitarian, this change of perspective showed a more ecological value regarding nature. In relation to the utility of forests to preserve the hydrological cycle, during 1856, the Government of Mexico asked the *ayuntamiento* (city council) of Mexico City to separate the Desierto de las Carmelitas, afterwards called Desierto de los Leones, as a forest reserve. Then, in 1876, President Sebastian Lerdo de Tejada expropriated the Desierto de los Leones because of the importance of its water springs for the industrial, hydroelectrical and domestic use (Alcérreca Aguirre, 1988). The forests around Mexico City, in general, were protected

during the end of the 19th century and beginning of the 20th century to preserve the water resources (Milne & Waugh, 1994).

During the first half of the 20th century, Miguel Angel de Quevedo emerged as a key actor in the conservation movement and promoter of the first national parks of Mexico. Quevedo studied civil engineering with a specialisation in hydraulics in France and returned to Mexico in 1887. In 1901, during the Second National Congress on Climate and Meteorology, he presented the audience with the idea that the destruction of the forests was negatively affecting the provision of water in the country. He said that the protection of the forests could not only be achieved by education, but that it was also necessary to restore them and legislate for their conservation. Neither a utilitarian of natural resources nor a radical preservationist, Quevedo approved the use of the forest as long as they did not threaten the soil, weather and catchments. He promoted the protection of forests because of their importance in the hydrological cycle. Thanks to the advocacy of Quevedo, the government of President Díaz stopped the selling of national lands, restricted the concession of forest exploitation if the forests were deemed important for conservation, and also enforced its power to expropriate land for conservation. It was Quevedo, after the Mexican Revolution, who convinced the new President Venustiano Carranza to create the first officially recognised national park of Mexico in 1917: Desierto de los Leones. He also persuaded the delegates writing up the new constitution to include conservation issues in the document. As a result, article 27 of the 1917 Constitution of Mexico stipulates that the nation will have the right to impose conservation rules over the land and its resources in any property regime. From this constitutional article, the environmental legislation of Mexico would find its legal basis in the 1980s.

Declaration

The creation of Desierto de los Leones National Park in 1917 can be considered the starting point of the 'declaration' phase in the history of Mexican protected natural areas. This phase is called 'declaration', because all protected areas were being gazetted, or declared, but the necessary steps to manage the new protected areas were not taken, such as the appropriate land acquisition, as in the case of New Zealand. The declaration of national parks was not necessarily followed by the maintenance of the areas providing the necessary funds and personnel. In other words, the protected areas of Mexico, later known as 'paper parks', because they were parks on paper and not protected on the field, were just 'declared' protected areas. This stage continued for over 70 years until 1988 when the government of President De la Madrid declared the biggest biosphere reserve ever in Mexico, El Vizcaíno. The declaration phase saw its golden years in relation to national parks during the presidency of Lazaro Cárdenas between 1934 and 1940. The most important declaration years of biosphere reserves were in the decade from 1978 to 1988, which marked a transition stage between the declaration stage and the maintenance stage.

The reason why protected areas were just declared and not acquired, was that land is a political issue in Mexico; also according to the constitution of 1917 communal land could not be purchased. The Mexican revolution of 1910 brought land reforms demanded by the rural poor *campesinos* and indigenous people who fought in the revolution. In fact the 1917 Constitution created the *ejido* legal figure (communal land

owned by several people and unable to sell it, until the constitution reforms of the 1990s). The legal status of the *ejido* and the political sensitivity of the land issue inhibited the government's opportunity to expropriate land for protection having to resort to convincing communities to conserve the resources of their lands. In other words, the *ejido* influenced the limited effectiveness of national parks as a category to protect nature.

The administration of Lazaro Cárdenas (1934-1940) brought a populist government which saw the careful use of natural resources as an issue of public interest, as well as the belief that nature conservation was necessary to ensure the future richness of the nation (Simonian, 1999). During the presidency of Cárdenas, 75 protected areas were created (Alcérreca Aguirre, 1988) which included 40 national parks and 7 reserves (WCMC & IUCN, 1992). The Cárdenas administration selected areas for national parks based on three criteria: scenic beauty, recreational potential and ecological value (Simonian, 1999). The emergence of the recreational value of protected areas was a result of the adoption of the United States model of national parks, but also to satisfy the need of recreational opportunities by the growing urban population of Mexico City. The concept of national parks as imported from the United States inherited the idea that recreation and tourism were the main purpose of nature conservation. Most of the national parks declared by Cárdenas were around the capital of the country (Mexico City) which was a growing metropolis.

The main motivation for declaring national parks during the 20th century was for their historical, recreational, scenic and even political value from a urban society perspective. The biological or ecological perspectives did not influence their creation in any practical way (Gomez-Pompa & Dirzo, 1995). This lack of ecological perspective changed with the adoption of the new protected area category of Biosphere Reserves which was promoted by international and Mexican scientists, and embraced by the federal government. The utilitarian, aesthetic and recreational values represented in the creation of the national parks of Mexico evolved to ecological values represented in the biosphere reserve concept.

In the biosphere reserve concept, Mexico found a more suitable conservation tool than the category of national parks for the context of the country. Biosphere reserves were more suitable because the concept combined four important elements: scientific research, the need to have very well protected areas (core zones) surrounded by buffer and transition zones, local participation, and the continuation of a non-expropriation of land policy (Gomez-Pompa, 1998). The elements of local participation and continuation of the non-expropriation of land policy adapted well to the economic and political context of Mexico. The lack of government funds and the political sensitivity regarding land did not permit the expropriation of land for nature conservation. As a result of this non-expropriation of land the government had to work closely with the local communities and landowners to reach its conservation goals, while permitting sustainable economic activities. Therefore, the concept of biosphere reserves allowed the combination of conservation with a socially needed economic development.

Another great difference with other protected area categories was that biosphere reserves included the participation of scientists. Such was the case of Man and Biosphere (MAB) Mexico that was supported by the National Council of Science and Technology (CONACYT – Consejo Nacional de Ciencia y Tecnología). MAB Mexico adopted the concept and decided to create a system of biosphere reserves independent from the national parks system (Gomez-Pompa, 1998). The biosphere reserves of Mexico would have the objective of creating a protected area system which was representative of the biodiversity of the country based on scientific research.

The initial development of biosphere reserves changed from being in the control of scientists and passed slowly to the control of the governmental bureaucracy. Politicians saw that the creation of biosphere reserves did not cost anything, did not imply any serious commitment, there was no need to expropriate land, and most importantly it gave them international prestige (Gomez-Pompa, 1998). For example, President Lopez Portillo (1976 – 1982) declared as the first biosphere reserves the pristine areas of Mapimí and Michilía (1978) which had the support of the Durango state government and the Institute of Ecology. Conversely, the more heavily exploited Lacandona Jungle was declared a biosphere reserve one year later but was never provided with follow-up actions to preserve it (Challenger, 1998).

The declaration of the first biosphere reserves in 1978 marked a transition stage from the declaration phase to the maintenance stage with active participation of scientific institutes. Although some biosphere reserves managed by research institutes were properly maintained from 1978 (marking the start of the maintenance stage), some other reserves and national parks remained unattended (reflecting the continuation of the declaration stage). It was not until 1988 that the declaration stage can be said to be over. The declaration phase ended with the promulgation of the General Law of Ecological Equilibrium and Environment Protection (LGEEPA - Ley General del Equilibrio Ecológico y la Protección al Ambiente), which defined the proper procedure to declare new protected areas and how to maintain them.

Maintenance

The maintenance and declaration phases overlap because once the government found it was politically convenient to declare biosphere reserves, committing neither funds nor personnel, maintenance was not carried out. Although this was true for most biosphere reserves, there were some areas that were maintained by research institutes. Research institutes around the country maintaining biosphere reserves included cases such as the Institute of Ecology (Michilía and Mapimí Biosphere Reserves), University of Guadalajara (Manantlán Biosphere Reserve), the Institute of Natural History (El Triunfo Biosphere Reserve) and National Autonomous University of Mexico - UNAM (Montes Azules Biosphere Reserve) (INE, 1996). For this reason it can be said that the maintenance phase started in 1978 with the creation of Michilía and Mapimí Biosphere Reserves where the Institute of Ecology was actively involved in its maintenance. This stage continued until 1995 with the creation of the Secretariat of Environment, Natural Resources and Fisheries (SEMARNAP) also referred throughout this thesis as the Ministry of Environment.

The scientific community had an important role in this increased ecological value regarding protected areas. For example, Enrique Beltrán, considered the father of the modern conservation movement in Mexico, believed that the best policy was to stimulate a prudent use of the natural resources based on solid ecological principles (Simonian, 1999). Also, Gonzalo Halffter, a scientist and representative of Mexico in the biosphere reserves conferences, as well as director of the newly created Ecology Institute (Instituto de Ecología), believed that biosphere reserves responded more adequately to the different contexts and realities of Mexico (Gomez-Pompa & Dirzo, 1995).

Although ecological values emerged during this maintenance stage, the political value mentioned in the declaration stage continued during the 1980s. The creation of biosphere reserves gave the political prestige government officials desired in the international arena. It was not until the politicians were removed from the process of creating protected natural areas in 1988 that this political value ended. In 1988 the General Law of Ecological Equilibrium and Environment Protection (LGEEPA - Ley General del Equilibrio Ecológico y la Protección al Ambiente) was promulgated. The LGEEPA defines the procedure to establish new protected areas stating the ecological considerations as elemental, and hence ending future political considerations.

Management

The management phase began in 1996 when the responsibility of protected natural areas shifted from an area directorate with a low budget and a centralised-normative role to an active Coordinating Unit for PNAs (UCANP) within the National Institute of Ecology (INE), part of the newly created SEMARNAP. Finally, in the year 2000 the National Commission of Protected Natural Areas (CONANP) was created as a decentralised agency with the challenges of consolidating and managing the entire federal protected natural areas of Mexico. For the first time in Mexican history, a sole agency was responsible for all federal protected areas.

The ecological value that had been emerging during the maintenance phase became the major emphasis of this new phase. In fact, most of the personnel working in the central offices of CONANP and on the field administering the protected areas have a biological degree. The management plans consider, above all other concerns, the conservation of biodiversity. Another example is that the National Council of Natural Protected Areas (CNANP), a consultation body of CONANP, is composed by the most important academics, researchers and organisations regarding nature conservation and protected areas.

A social value of protected natural areas has emerged in the first 10 years of this management phase. This social value is concerned with the sustainable development and active participation of the local communities living inside protected areas. CONANP even has a directorate in its structure called ‘Development for Conservation’ which works in funding community-based projects to foster local development without harming the natural resources of the protected area. CONANP, supported by the Mexican Nature Conservation Fund (FMCN – Fondo Mexicano para la Conservación de la Naturaleza),

has created Advisory Councils (Consejos Asesores) for each protected area to promote local participation in the decision making processes of PNAs.

The recreational value, which gained relevance during the national parks 'golden ages' (in the presidency of Lazaro Cárdenas between 1934 and 1940), decreased in importance during the maintenance stage. The reason for this decrease was because there was no institutional presence that could service the needs of visitors. In the current management phase, the recreational value of national parks is changing to the tourism potential of all PNAs to provide alternative sources of income for local communities. For the moment, CONANP has increased its funding through the charge of entrance fees to marine areas, and some terrestrial areas. The first ten years of the management phase has concentrated efforts on re-gazetting of the protected areas, increasing infrastructure and staff in protected areas, and developing management plans that guide the work of each PNA administration (D. Gutiérrez, personal communication, September 13, 2004).

5.4 Comparing New Zealand and Mexico's Values

As explained in the introduction, to homogenise the format of the chapter the historical development phases of New Zealand's protected areas system were adopted as a framework to propose development phases to the history of Mexico's protected areas. The systematisation and analysis of the information of both countries allowed for comparisons presented as follows.

5.4.1 Indigenous Values

Mexico and New Zealand both have an indigenous culture which expresses a set of cultural and spiritual values towards nature. These cultural and spiritual values encompass an ecological traditional knowledge that balances the use and preservation of natural resources. These traditions include the prohibition on the use of certain resources or areas at particular times of the year. These prohibitions or reserves respect the natural cycles of certain species or the cycles of natural restoration of the land.

The difference with regard to indigenous values in these countries is the recognition of the usefulness of these values in managing PNAs, as well as the considerations needed to respect these values when managing recreation and tourism in natural areas. In the New Zealand case, the protected area system and the agency in charge of its conservation have integrated the indigenous values to the management of protected areas. The increasing recognition of and respect for the rights and traditions of Maori emerged from the 1987 reforms of the environmental administration and the creation of DOC. In contrast, although Mexico has legislated the need to promote the participation of indigenous people in the establishment, administration and management of protected areas, "a paradigm for a system of protected areas rooted in indigenous cultural roots remains a tantalizing, but unrealized, prospect for Mexico" (Milne & Waugh, 1994, p. 281).

5.4.2 Utilitarian, Aesthetic and Ecological Values

Mexico and New Zealand, throughout the evolution of protected natural areas, expressed utilitarian, aesthetic and ecological values. These values were always intertwined and present throughout history, but the emphasis varied depending on the stage in history as well as the individual or group advocating in favour or against nature conservation.

In both countries, the utilitarian value of exploiting nature through extractive activities existed (e.g., mining, forestry). The Western perspective of man separated from nature, meant that the inhabitants of Mexico and New Zealand saw nature as a reservoir of resources to exploit for profit. In the Mexican case, utilitarian value resulted from the need of a new nation to develop. In the case of New Zealand, the pioneering culture of the settlers arriving to this new land saw nature for its utilitarian value.

In both countries, the utilitarian value of exploiting nature through extractive activities decreased in the later stages of protected areas giving way to non-extractive uses of the areas, such as recreation and tourism. This gave way to a recreational value (which is still utilitarian) of protected areas in both countries. The difference between Mexico and New Zealand is that recreational value is stronger in New Zealand than in Mexico. Recreational groups and interest groups have an important relationship with the Department of Conservation and have significant political influence (as will be discussed in Chapter 7).

Aesthetic values were more significant in New Zealand than in Mexico for the creation of protected areas. During the initiation phase in New Zealand, the promoters of protected areas had to translate aesthetic values into a utilitarian perspective to be heard by the government. It was not until the acquisition stage, when aesthetic values grew in importance through the advocacy of key individuals and scenery preservation societies, that the creation of scenic reserves and legislation dedicated to this type of protected area resulted. In the Mexican case, scenic values were expressed in the establishment of its first national parks. In this category of protected areas, the aesthetic values are inherited by definition, but also resulted from the predominant values of the urban population which recreated national parks.

Ecological values were present in both countries throughout the evolution of PNAs. The importance of forests for the hydrological cycle and the prevention of floods were similar ecological perspectives in the early history of PNAs in Mexico and New Zealand. In both countries, the scientific perspective of ecology gathered strength almost at the same time around the late 1960s and the 1970s.

The difference is that environmentalism in New Zealand resulted in real and practical management of its PNAs by using scientific knowledge and methods. In the case of Mexico, during the 1970s the scientific community participated actively in the declaration and maintenance of new biosphere reserves, but lost its influence when politicians during the 1980s found international prestige in PNAs without having to commit funds or active management. It was not until the 1990s, with international funding and pressure,

complemented by a stronger concern regarding the environment, that the protected area system at last started to be consolidated in Mexico.

5.5 Evolution of Historical Values and Their Influence on the Institutional Arrangements

The institutional arrangements framework helps identify the variables that are important for the management of a resource. The 'historical and traditional customs and values' is the first variable of the institutional arrangement framework to be presented because these values are the origin of the protected areas in Mexico and New Zealand. Consequently, as the primary variable, 'historical and traditional customs and values' affect all the other variables in the framework.

As described earlier in this chapter, historical values influenced the creation of *legislation* related to the preservation of nature and land in New Zealand, such as the Thermal Springs District Act of 1881, the Land Act 1892, and the Scenery Preservation Act 1903. In the case of Mexico, historical values influenced the creation of the forest law in 1861, article 27 of the Constitution of 1917, and from there the promulgation of the LGEEPA. The values in the business and negotiation stage in New Zealand influenced the creation of *policies and guidelines*, such as the Visitor Strategy (DOC, 1996) and the standard operating procedures. The increasing ecological values which influenced the environmental reforms of the 1980s gave birth to the *administrative structure* of the Department of Conservation in New Zealand, and of CONANP in Mexico in the year 2000. Aesthetic and recreational values gave birth to *key participants* and groups like Federated Mountain Clubs and Forest and Bird Protection Society of New Zealand, and the Mexican Nature Conservation Fund in Mexico. The predominant values of the different stages also affected the *political and economic* support for conservation issues in general and for protected areas specifically.

Historical and traditional customs and values are the basis of human culture, and hence the values of a certain society. Customs and values are the ways in which humans relate and comprehend the world around them. As a result, customs and values are the pillars on which human institutions (rules and organisations) draw their origins and purpose. Institutions are the reflection of these values and customs. To change the overall institutional arrangements of a system one would have to change the paradigm of society's values. In conclusion, 'historical and traditional customs and values', becomes the most important variable of the institutional arrangements framework due to the direct influence it has on all other variables of the framework.

Another point of the discussion is to clarify the development phases in which the different values (indigenous, utilitarian, aesthetic and ecological) were more important and how these values affected the management of tourism and recreation in protected areas. Figures 5.2 and 5.3 are graphic presentations

of when the different values existed and their importance is represented by the thickness of the lines (thicker lines represent greater importance).

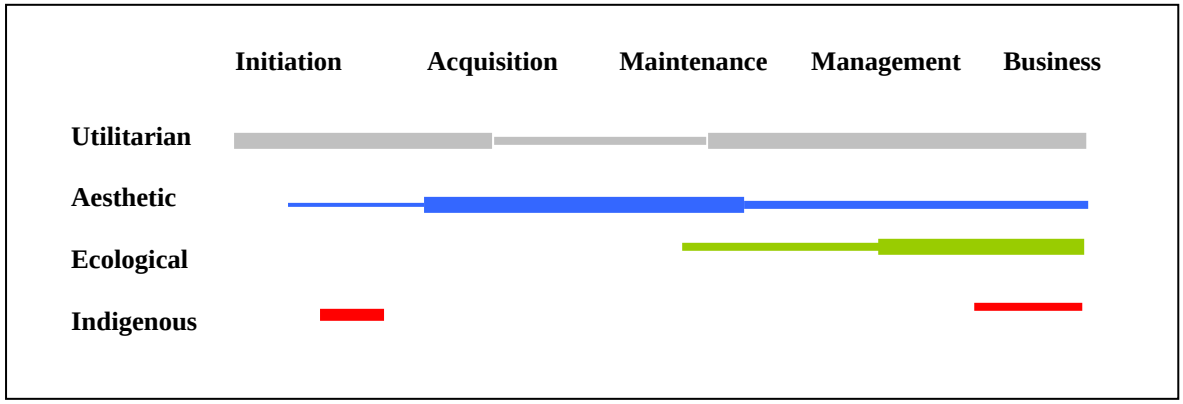


Figure 5.2: The importance of historical values during the development phases of New Zealand.

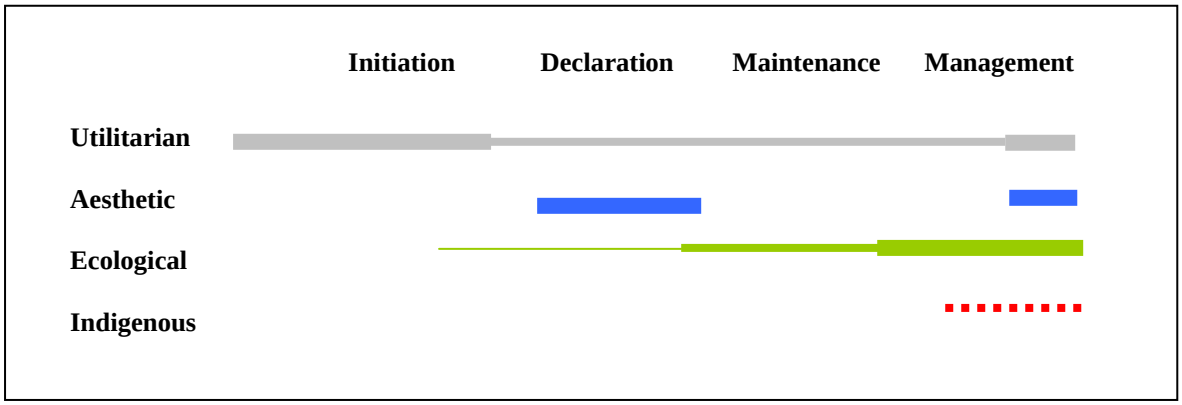


Figure 5.3: The importance of historical values during the development phases of Mexico.

Figure 5.2 shows the importance of historical values during the development phases of protected areas in New Zealand. As shown in Figure 5.2, the utilitarian value has been present in all phases with greater importance during the initiation and part of the acquisition phases, as well as from the maintenance phase onwards. The utilitarian values were the most important values in the first years of New Zealand as a new nation, when nature was seen as a resource to be exploited. This meant that conservationists had to talk in utilitarian terms to be successful in their environmental advocacy. During the acquisition phase, utilitarian values gave way to aesthetic values, but increased again in the maintenance phase when recreation values (a non-extractive use of protected areas) became important as well as tourism. Aesthetic values were predominant during the acquisition stage, but have always been present in the evolution of protected areas in New Zealand. The effect of aesthetic values was the creation of scenic reserves which were also used for recreation. Ecological values were important until the maintenance phase and increased in importance through the management phase to become the most important value, before the recreational value of protected areas in the business phase. The increased importance of the ecological values pushed the agency in charge of the PNAs (DOC) to manage the potential impacts of tourism and recreation. Indigenous values were considered important in the initiation stage, due to the gifting of the volcanic peaks of Tongariro, Ngauruhoe and Ruapehu in the North Island. Until the end of

the management phase, indigenous values had regained importance and during the business stage increased in importance for the management of protected areas. The significance of this increased relevance of indigenous values is still shown today when DOC's planning and management must consider Maori values.

The historical and traditional values affect the management of tourism and recreation in the protected areas of New Zealand. The aesthetic values of protected areas have attracted visitors since their creation. This has resulted in the growing recreational value of protected areas which comes into conflict with the ecological values. Therefore, management of tourism and recreation has to be able to balance the recreational and ecological values which have increased during the management and business phases. To reach this balance, DOC has implemented a series of policies (discussed in Chapter 6) and management techniques (discussed in Chapter 9). The indigenous value is also increasingly affecting the management of tourism and recreation, because the Department by legal mandate must take into account the indigenous values of Maori and must plan and manage recreation and tourism to avoid impact to these cultural values.

The importance of historical values during the development phases of protected areas in Mexico is shown in Figure 5.3. The utilitarian values have been present in all development stages. The initiation phase was influenced mainly by utilitarian values searching for the economic development of Mexico. Afterwards, utilitarian values decreased in importance until the management phase, when protected areas were being seen as useful for the sustainable development of the local communities, and tourism as a tool to reach this goal. The aesthetic values influenced the creation of protected areas in the declaration phase of national parks between 1934 and 1940, and gained importance in recent years as people have become more interested in visiting natural areas. Ecological values have been present in most phases, first with only minor importance, but increasing at the end of the declaration phase with the creation of biosphere reserves and gaining further importance in the management phase. Although indigenous values have great potential to contribute important elements to the protected natural area system of Mexico, Mexico has not yet adopted indigenous values in its PNA system.

These values affect the management of tourism and recreation in the protected areas of Mexico in two ways. First, ecological values are the most important values considered in the present management phase of Mexico. Second, any activity carried out in protected areas must benefit in some way the development of the local communities (communities inside the protected areas and in their influence areas). Although recreational value (tourism value) is seen as a potential use of protected areas, CONANP still does not have adequate regulations, policies, and administrative structures, as discussed in the following chapters, hindering its capability to properly manage tourism and recreation in protected areas.

5.6 Summary

This chapter has discussed the historical and traditional customs and values of nature conservation through protected areas in Mexico and New Zealand. Regarding both countries, it has presented the values related to protected areas and how these values have shaped their evolution and are still present in natural area management as well as in the management of recreation and tourism.

Finally, the chapter discussed and compared the values of both countries. These values can be summarised as indigenous, utilitarian, aesthetic and ecological, and have shaped and are imbedded in the legislation related to the protection of nature. The next chapter, Chapter Six, explores this legislation together with the regulations, policies and guidelines created to manage tourism and recreation in protected natural areas in Mexico and New Zealand.

6. Legislation, Regulations, Policies & Guidelines

6.1 Introduction

The purpose of this chapter is to understand the legislation, regulations, policies and guidelines that affect tourism and recreation management in the protected natural areas of New Zealand and Mexico, To achieve this aim, archival research of official documents was undertaken. The content related to tourism and/or recreation in protected areas in each document is first described, then the influence of one document on other documents, and finally the importance of the document with regard to tourism and recreation management is discussed. Once New Zealand and Mexico's documents are analysed, the chapter compares the legislation, regulations, policies and guidelines of each country and discusses the relation of these variables with the other variables of the institutional arrangements framework.

6.2 New Zealand

The governmental system of New Zealand determines how and who creates the legislation, regulations, policies and guidelines. The New Zealand government has three branches: the Legislature, the Executive and the Judiciary. The relevant branches of the New Zealand government for this thesis are the Legislature (Parliament), which creates and amends laws (legislation), and the Executive, which establishes the regulations, policies and guidelines to enact the laws defined by Parliament.

The Minister of Conservation, under the Executive branch, is in charge of the protected natural area system. The Department of Conservation (DOC) administers and implements a series of Acts as discussed in section 6.2.1. Based on the legal mandate set by the legislation, DOC has created a series of regulations, policies and guidelines to put into action the national laws.

Figure 6.1 presents the relationships between the statutory and non-statutory frameworks of New Zealand. As seen in Figure 6.1 the documents discussed in this chapter include legislation, general policy, conservation management strategies, management plans, DOC statement of intent, DOC national strategies (for example, Visitor Strategy), and DOC standard operating procedures. The following sections present and discuss the relevance of these documents in relation to the management of tourism and recreation in protected areas.

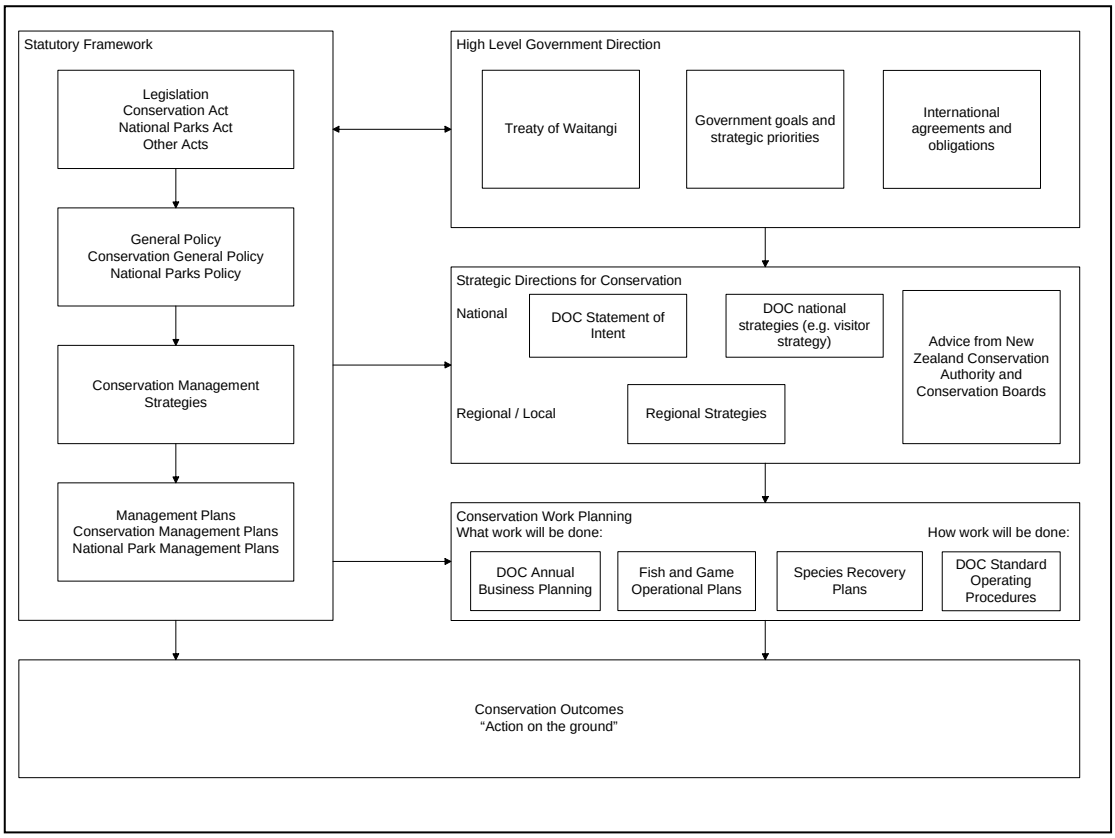


Figure 6.1: Relationship of Conservation Statutory and Non-Statutory Frameworks. (DOC, 2003b)

6.2.1 Legislation

Legislation is composed by the laws proposed, debated and approved in Parliament. Such laws are called Acts once they have been approved. The Department of Conservation administers numerous Acts of Parliament and has functions under several others (see Table 6.1). The legislation most pertinent to the issues of tourism and recreation management in protected natural areas includes: the Conservation Act 1987, National Parks Act 1980, Reserves Act 1977, and Wildlife Act 1953 (highlighted in bold letters in Table 6.1).

Table 6.1: Legislation Administered by DOC

- Canterbury Provincial Buildings Vesting Act 1928
- **Conservation Act 1987**
- Conservation Law Reform Act 1990
- Foreshore and Seabed Endowment Revesting Act 1991
- Hauraki Gulf Marine Park Act 2000
- Harbour Boards Dry Land Endowment Revesting Act 1991
- Kapiti Island Public Reserve Act 1897
- Lake Wanaka Preservation Act 1973
- Marine Mammals Protection Act 1978
- Marine Reserves Act 1971
- Mount Egmont Vesting Act 1978
- **National Parks Act 1980**
- Native Plants Protection Act 1934
- New Zealand Walkways Act 1990
- Queen Elizabeth II National Trust Act 1977

• Queenstown Reserves Vesting and Empowering Act 1971 • **Reserves Act 1977** • Stewart Island Reserves Empowering Act 1976 • Sugar Loaf Islands Marine Protected Area Act 1991 • Trade in Endangered Species Act 1989 • Waitangi Endowment Act 1932-33 • Waitangi National Trust Board Act 1932 • Wild Animal Control Act 1977 • **Wildlife Act 1953**
Source: (DOC, 2005j)

Conservation Act 1987

The Conservation Act established the Department of Conservation (DOC) and gave it the responsibility to manage New Zealand's natural and historic resources. The functions of DOC, defined by the Conservation Act, are further discussed in Chapter Seven. The Conservation Act states that as long as tourism and recreation are not inconsistent with conservation, recreation must be *fostered* and tourism *allowed*. To foster recreation the Conservation Act defines the need to prepare conservation management strategies (CMS) and conservation management plans (CMP) which include issues of recreation, further discussed in the section on policies 6.2.3.

The Conservation Act discusses the definition of concessions, which are authorisations in the form of a lease, licence, permit, or easement, to carry out a certain activity in conservation land. It must be noted that concessions do not refer only to tourism concessions, and this is reflected on the general explanation of concessions given in this Act (tourism concessions are further discussed in Chapter 9). The Conservation Act discusses the contents of an application for a concession (e.g., description of activity, identification of the places where the proposed activity will be carried out, a description of the possible effects of the proposed activity), the procedure of application (e.g., public notice before granting any concession), the evaluation of a concession (e.g., a concession shall not be granted unless the concession and its granting is consistent with the CMS or CMP of the area), and the payment of rents, fees and/or royalties.

The Conservation Act is the most important law regarding protected natural areas. This Act reflects the values of preservation (ecological values) and use (utilitarian values). At the same time, this Act states the legal mandate of conserving nature and permits certain uses. This is key to understanding the protected area system of New Zealand and it affects other variables of the institutional arrangements.

National Parks Act 1980

The purpose of the National Parks Act is to:

> [preserve] in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest. (Part 1, Section 4, Paragraph 1)

This law requires a balance between the dual requirements of "preservation in perpetuity" and "public access and enjoyment". However, greater emphasis is given by the Act to preservation aspects (DOC, 2005p). Nevertheless, the National Parks Act states that:

> the public shall have freedom of entry and access to the parks, so that they may receive in full measure the inspiration, enjoyment, recreation, and other benefits that may be derived from mountains, forests, sounds, seacoasts, lakes, rivers, and other natural features. (Part 1, Section 4, Paragraph 2(e))

The National Parks Act defines important documents and procedures to manage national parks in general, which influence the way tourism and recreation are managed. For example, the Act requires the mandatory preparation of management plans for national parks; and details the procedure for preparing, reviewing, and approving such management plans. Management plans are policies directly affecting the day-to-day management of tourism and recreation (further discussed in the policies section 6.2.3). Another important set of documents in the National Parks Act are the bylaws (further discussed in the regulations section 6.2.2). The bylaws are regulations specific to each national park and are directly concerned with tourism and recreation.

The National Parks Act reflects the importance given to this category of protected area in New Zealand. The first cohesive (prior to this each national park had its own Act) legislation on national parks was passed in 1952 and then amended in 1980. Even with the creation of the Conservation Act 1987, the National Parks Act remained important in giving legal status to parks. Furthermore, national parks also have their own general policy (discussed in the section on policies 6.2.3).

Reserves Act 1977

The relevance of the Reserves Act in relation to tourism and recreation management is the classification of reserves, and the possibility of enjoying recreation scenic reserves recreational purposes. The Reserves Act delineates the types of reserves: these include recreation reserves, historic reserves, scenic reserves, nature reserves, scientific reserves, government purpose reserves, and local purpose reserves (other categories of protected areas are defined in the Conservation Act, the National Parks Act, and the Marine Reserves Act). The Reserves Act states that recreation reserves have the purpose of providing areas for recreation and sporting activities and the physical welfare and enjoyment of the public, and for the protection of the natural environment and beauty of the countryside, with emphasis on the retention of open spaces and on outdoor recreational activities, including recreational tracks in the countryside. The Reserves Act affects policies regarding conservation through the requirement of Conservation Management Plans (CMP) for reserves.

Wildlife Act 1953

The Wildlife Act has the purpose of protecting and establishing the rules of wildlife use. For the protection of wildlife, the Act sets out a series of schedules, levels of protection for different wildlife, and lists birds and animals which fall into each category of protection. With regard to use, it has a section on

'game' that outlines provisions relating to the management of game hunting, such as setting open seasons, restrictions on take, licences, wildlife districts, and rangers and their powers (DOC, 2005w). Therefore, the Wildlife Act is relevant for the management of tourism and recreation because it regulates the hunting of animals in the conservation areas of New Zealand.

6.2.2 Regulations

Bylaws

"A bylaw is any rule or regulation which is made by any local authority by virtue of any Act now or hereafter to be in force, and which is termed a bylaw in the Act by virtue of which it is so made" (Bylaws Act 1910) (Parliamentary Counsel Office, 2005). The statutes relevant for bylaws are the National Parks Act 1980 and the Reserves Act 1977 which mention the possibility of creating bylaws for these protected areas. Bylaws can be made by the Minister of Conservation for the following purposes: (1) the safety and protection of the public using any park, (2) excluding the public from any specified part or parts of any park, (3) prescribing conditions for the use of camping sites, or picnic places in any park, and fixing charges for the use of any such camping sites, or picnic places, and (4) prescribing conditions on which persons may be permitted to enter or remain in any wilderness area within any park (Bylaws Act 1910).

Every national park has its own set of bylaws (regulations). It is important that bylaws are consistent with the management plans of a park. Bylaws in national park management plans associated with recreation and tourism include rules on pollution of parks, disposal of refuse, camping, camping site charges, use of park huts, fires, vehicles, parking of vehicles, aircraft, competitive sports, the use of spotlights for hunting prohibition, and conditions on access to certain places. Therefore, bylaws have a vital importance in the management and control of tourism and recreation.

6.2.3 Policies

General Policies

There are two General Policies in New Zealand regarding protected areas: the Conservation General Policy and the General Policy for National Parks. The General Policies are bridging documents between the legislation and the management strategies and plans (as shown in Figure 6.1).

The purpose of the Conservation General Policy is to implement the Conservation Act and associated Acts (for example, Reserves Act, Wildlife Act), and to provide consistent national direction for management planning for a wide range of areas and resources administered under conservation legislation, including the preparation of conservation management strategies and management plans.

The Conservation General Policy affects conservation management strategies, conservation management plans, and also policies such as the Visitor Strategy and the Statement of Intent. Due to these relationships with other documents, the policies regarding visitor benefit, use and enjoyment stated in this

general policy affect how tourism and recreation are managed in protected areas through Conservation Management Strategies and Conservation Management Plans.

Besides the Conservation Act General Policy, there is a General Policy National Parks Act. National parks are treated differently because of their special status. The general provisions of the National Parks Act were retained so that national parks would continue to have their own general policy statement and management plans. The purpose of this general policy is to implement the National Parks Act and to provide consistent national direction for national parks administration through conservation management strategies and individual national park management plans.

The content of the General Policy National Parks Act contains similar sections as the conservation policy. These sections are: Treaty of Waitangi responsibilities, public participation in National Parks, nature conservation, cultural and historic heritage, new national parks, natural hazards, visitor benefit, use and enjoyment, non-recreation uses, knowledge and information needs, national park management plans and international agreements. This general policy defines a number of policies regarding the sections mentioned and all sections include some type of policy which is related to recreation and tourism management. For example, in the cultural and historic heritage section a policy states that "tangata whenua (Maori) should be consulted whenever a proposed action affects their cultural heritage in national parks" (DOC, 2003c, p. 34).

The policies in the visitor benefit, use and enjoyment section are divided in the same way as in the General Policy Conservation Act: visitor management, visitor information and interpretation, visitor accommodation, facilities and services, sports fishing and game bird hunting, recreational hunting, vehicle and transport use, and domesticated animals. The policies enlisted are actually the same as the General Policy Conservation Act with some changes regarding management plans, and a more detailed list of policies for every type of vehicle or transport allowed or not allowed in the national parks.

Statement of Intent 2004-2007

The Statement of Intent 2004 - 2007 is a document that sets out the longer-term directions for DOC, as well as the management actions that will be undertaken in each year. The Statement of Intent is divided mainly between two departmental outcomes sought by DOC: protection and appreciation (tourism and recreation). The departmental outcome of appreciation is divided into intermediate outcomes and output classes, as shown in Figure 6.2. The output classes related to recreation include: the management of recreational opportunities, and recreational opportunities review (see Figure 6.2).

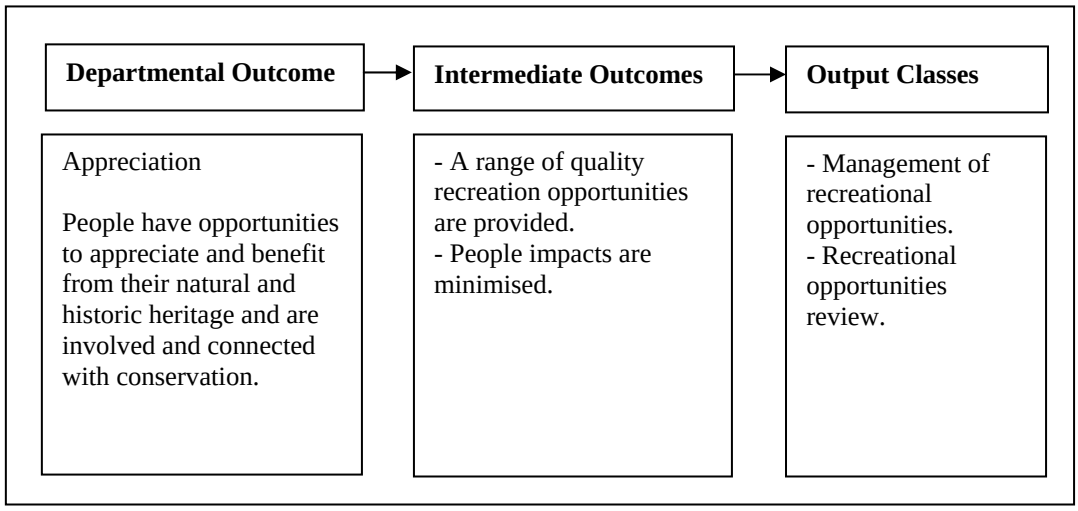


Figure 6.2: Connection between DOC's Appreciation Outcome and Recreational Output Classes. (DOC, 2004e)

The Statement of Intent is a national strategic direction for conservation document which derives from high government directives and legislation, regulations and policies (as seen in Figure 6.1). In essence, the Statement of Intent is important to the way tourism and recreation are managed, because it defines the directions of the Department of Conservation concerning appreciation of protected natural areas. This document is also important because finances are managed by the application the output classes, as further discussed in Chapter Eight.

Conservation Management Strategies

Conservation Management Strategies (CMS) are 10-year regional strategies that provide an overview of conservation issues and give direction for the management of conservation areas. The purpose of a CMS is to implement general policies and establish objectives for the integrated management of natural and historic resources, and for recreation, tourism, and any other conservation purposes. Conservation management strategies are required under the Conservation Act 1987 as discussed earlier. Conservation management strategies are a guide for both managers and the public about what DOC intends to do, how it will set priorities about what has to be done, and how it can respond to requests to use the natural and historic resources it manages.

An example of a CMS is the one prepared for the area of Canterbury in the South Island. The Canterbury CMS divides its goals and priorities between places and activities (see Figure 6.3). In the activities objectives, the CMS includes issues regarding recreation and tourism concessions. For instance, the Canterbury CMS includes objectives, implementation activities and prioritisation for the following activity issues: recreation opportunities, recreation facilities, visitor impacts and safety, visitor centres, interpretation, and concessions (DOC, 2000a).

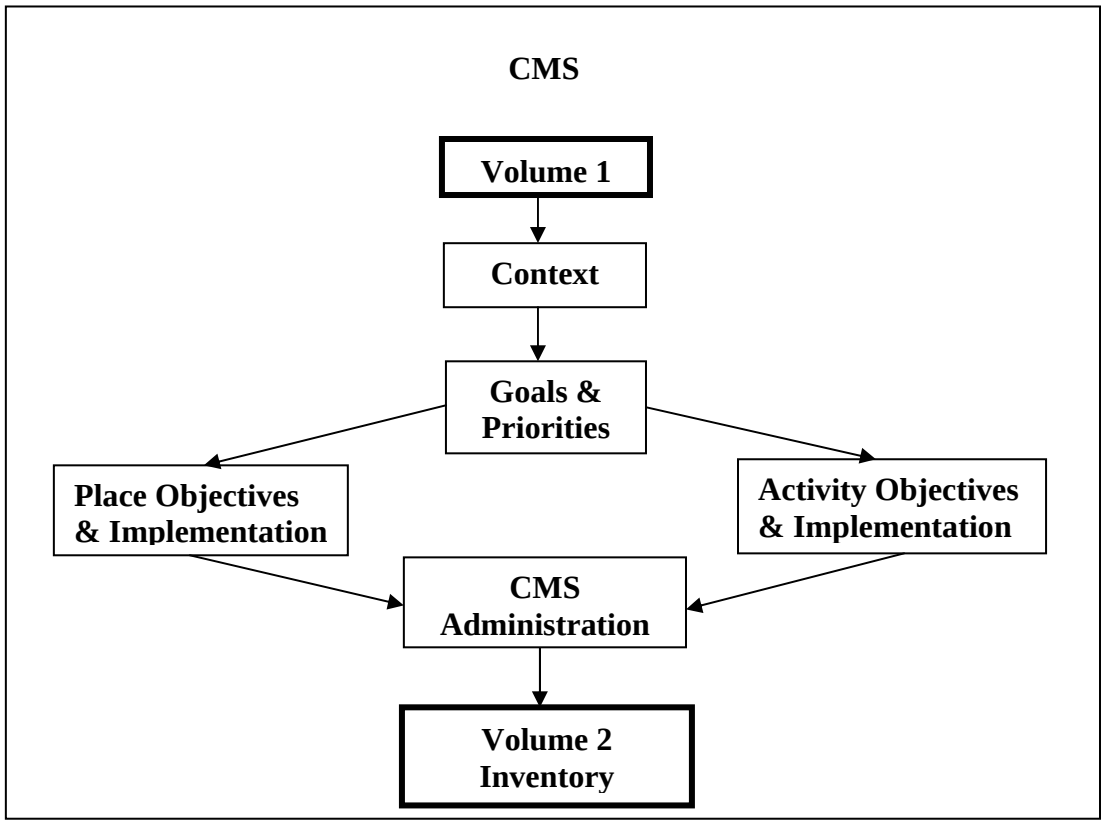


Figure 6.3: Conservation Management Strategy Format. **(DOC, 2000b)**

Conservation Management Plans

The purpose of a conservation management plan is to implement the conservation management strategies and to establish detailed objectives for the integrated management of natural and historic resources within a particular area, such as an individual national park or reserve. Conservation management plans are 10-year statutory plans. Conservation management plans are only developed for areas where there is a high level of activity or a complexity of issues which cannot be satisfactorily dealt with in the Conservation Management Strategy. However, a conservation management plan (or simply 'management plans') must be prepared for each national park, in accordance with the National Parks Act 1980.

The management plans of national parks have the objective of providing day-to-day guidance to park managers. Management plans contain objectives and the policies to reach such objectives. In some cases, the management plan includes the methods to reach the objectives, such as the case of Aoraki/Mount Cook National Park management plan. Management plans are prepared within two years after the constitution of a national park and are reviewed every 10 years.

All planning documents must be consistent with each other. A national park management plan is prepared through the process set out in section 47 of the National Parks Act 1980. Management plans find their legal origin in the National Parks Act 1980 and are influenced by the Conservation Management Strategy of its region and the General Policy for National Parks.

Visitor Strategy

The Visitor Strategy is the most important document guiding DOC's staff in their work regarding recreation and tourism in protected areas. The Visitor Strategy document discusses, in separate sections, the strategy to reach its goals. The Visitor Strategy has five inter-related goals: (1) protection of the intrinsic natural and historical values of the areas, (2) fostering visits and managing a range of recreational opportunities, (3) managing tourism concessions on protected lands to allow the private sector to provide visitor facilities and services, (4) informing and educating visitors about the natural and historic heritage of the protected areas, and (5) visitor safety through safe facilities located, designed, constructed and maintained according to legislation and safety standards.

The Visitor Strategy defines the difference between recreation and tourism. The strategy notes that visitors to DOC managed areas are travelling primarily for recreational purposes (independently). Recreational visits are characterised by independent access, small groups, varying degrees of self-reliance and flexible timetables. If, in the process, they use and pay for facilities and services provided by the private sector (a concessionaire) during their visit, then tourism can be said to be taking place. Recreational visits organised by the private tourism sector are characterised by the concessionaire facilitating access to larger groups, seasonal peaks, structured timetables, and the concessionaires making key decisions.

One of the most interesting parts of the strategy is the goal of 'fostering visits and managing a range of recreational opportunities'. Within this goal, the Visitor Strategy reinforces the use of the Recreational Opportunity Spectrum (ROS) as the planning tool (ROS is further discussed in the guidelines section 6.2.4). ROS identifies seven recreation 'zones' including: urban, urban fringe, rural, backcountry, remote, wilderness areas and coastal areas.

The Visitor Strategy also defines seven types of visitors (see Table 6.2). The seven visitor groups are defined by several factors: the setting used, the accessibility of the area and the nature of the visit, activities undertaken, experience sought and the degree of risk present, the facilities and services sought, profile of visitors and visitor numbers, and projected use.

Table 6.2: Relationship between Visitor Groups and ROS Zones

ROS Class / Visitor Groups	Urban	Urban Fringe	Rural	Backcountry	Remote	Wilderness Areas	Coastal Areas
Short Stop Travellers		X	X	X			X
Day Visitors		X	X	X			X
Overnighters			X	X			X
Backcountry Comfort Seekers				X			
Backcountry Adventurers				X	X		
Remoteness Seekers					X	X	
Thrill Seekers		X	X	X	X	X	X

Derived from (DOC, 1996)

These visitor groups can be related to the seven zones of ROS as seen in Table 6.2. The categorisation of visitors to protected areas allows for the design of strategic direction for each visitor group in each area, defining the location and range of facilities and services provided, the standards of these facilities and services, and the role of other providers.

The Visitor Strategy includes other important issues that affect how tourism and recreation are managed in protected areas. For instance, the Department of Conservation does not envision its role as being the sole provider of visitor facilities and services, but instead has the role of leader, guide and facilitator. For this reason, the Visitor Strategy dedicates a whole section to the goal of managing tourism concessions on protected lands to allow the private sector to provide visitor facilities and services. Tourism concessions are seen as an opportunity for DOC to provide further recreational opportunities while not incurring the costs of operating a guiding company. For tourism concessions, DOC charges fees and rents, and hence generates revenue to increase its budget (the issue of generating revenue is further discussed in Chapter 8).

Another important issue included in the Visitor Strategy is DOC's role in informing and educating visitors about the natural and historic heritage of the protected areas. This goal includes the issues of environmental education and interpretation. Education and interpretation can be considered indirect management techniques for tourism and recreation, as further discussed in Chapter Nine.

Another issue covered by the Visitor Strategy is the goal of managing visitor safety and risk management. The Visitor Assets Management System (VAMS) helps reach the goal of visitor safety and risk management (VAMS is further discussed in Chapter 9). The VAMS informs staff when structures are due for inspection or other maintenance work and sends an automated message to the relevant area manager (DOC, 2005b).

6.2.4 Guidelines

The Department of Conservation has also developed a series of manuals and guidelines (standard operating procedures) to enable consistent approaches in dealing with visitor surveys, inventories of recreation facilities, monitoring levels of use, managing impacts, classifying tracks, charging for use of backcountry huts and camping grounds, and signs (Corbett, 1995).

New Zealand has adapted the Recreation Opportunity Spectrum (ROS) concept developed in the United States for the planning of recreation. This adaptation resulted in a set of guidelines (see Taylor, 1993) for DOC and other agencies to apply the ROS framework to better plan outdoor recreation. According to Taylor (1993) ROS is one of the best tools available for the integrated management of outdoor opportunities (ROS is further discussed in Chapter 9).

6.3 Mexico

The government system of Mexico, like in New Zealand, is constituted by three branches: Legislature, Executive and Judiciary. The Legislature is constituted by two bodies which are the 'House of Representatives' and the Senate. The Executive power is represented by the President and the different Ministries of State. The Legislature creates and ratifies laws, and the Executive can propose laws, but in general is obligated to administer the law. The Ministry of Environment (SEMARNAT) is in charge of administering a series of environmental legislation, regulations and guidelines (as seen in Table 6.3). The following sections identify and discuss the legislation, regulations, policies and guidelines relevant to protected natural areas (some are highlighted in Table 6.3).

Table 6.3: Environmental Norms of Mexico Applicable to Tourism in PNAs

Legislation

- **General Law of Ecological Equilibrium and Environment Protection (LGEEPA)**
- General Law of Wildlife (LGVS - Ley General de Vida Silvestre)
- General Law of Sustainable Forest Development (LGDFS - Ley General de Desarrollo Forestal Sustentable)
- General Law of National Waters (LGAN - Ley General de Aguas Nacionales)
- General Law of National Goods (LGBG - Ley General de Bienes Generales)
- General Law for the Prevention and Integrated Management of Waste (LGPGIR - Ley General para la Prevención y Gestón Integral de los Residuos)

Regulations

- Regulation of the LGEEPA concerning Environmental Impact Assessment
- **Regulation of the LGEEPA concerning Protected Natural Areas**
- Regulation of the Forest Law
- Regulation of the LGAN
- Regulation of the LGBG

Mexican Official Norms (technical regulations)

- NOM-004-CAN-1995, requirements for the protection of underground water during the maintenance and rehabilitation of water extraction wells and the closure of wells in general.
- NOM-003-CAN -1996, requirements during the construction of extraction water wells to prevent pollution of water sources.
- NOM-001-SEMARNAT-1996, establishes the maximum allowed limits of pollutants of water discharges into national waters.
- NOM-003-SEMARNAT-1997, establishes the maximum allowed limits of pollutants in treated waste water to be used for public use.
- NOM-015-SEMARNAP/SAGAR-1997, regulates the use of fire in forest and agricultural land, and establishes the specifications, criteria, and procedures to order the social and governmental participation in the detection and combat of fires.
- NOM-131-SEMARNAT-1998, establishes the guidelines for the development of whale watching activities, relative to their protection and of their habitat.
- NOM-059-SEMARNAT-2001, environmental protection of native flora and fauna species of Mexico, risk categories and specifications for the inclusion, exclusion and change in the risk species list.

(SEMARNAT, 2003a)

6.3.1 Legislation

Constitution

The Constitution is the supreme legislative document regarding the laws in Mexico. The Constitution is the document from which all other laws in Mexico find their origin. The present Constitution of Mexico was drafted in 1917. Environmental and tourism laws emanate from the Constitution and therefore it is important to review some of the most important articles.

The articles of the Constitution on which the Mexican environmental laws are founded are articles 4, 25, 27 and 73. Article 4 refers to the right every person has to an adequate environment for their development and wellbeing. Article 25 relates to the role of the government in promoting the development of the country while regulating the modes of use of the natural resources and fostering the conservation of the environment. Article 27 establishes the right of the Nation to impose modes of use -on private property as well as to regulate the exploitation of natural elements so as to conserve the natural capital of the country. Article 27 also states that to reach these goals the Nation can establish reserves of land, water and forests to preserve and restore the ecological equilibrium and avoid the destruction of the natural elements. Article 73 defines the faculty of the Congress to establish fees regarding the use and exploitation of natural resources.

LGEEPA

The General Law of Ecological Equilibrium and Environment Protection (LGEEPA - Ley General del Equilibrio Ecológico y la Protección al Ambiente) was promulgated in 1988. The LGEEPA is a federal law concerning the environmental issues of Mexico. The LGEEPA includes a chapter related to the protected natural areas (PNAs) of Mexico. This chapter outlines four sections: general dispositions, types and characteristics of PNAs, the procedure to establish, manage and monitor PNAs, and the national system of protected natural areas.

The LGEEPA relates and affects regulations, policies and guidelines. For example, from this law the Executive power in Mexico defines the 'LGEEPA Regulation concerning PNAs'. Also the LGEEPA influences the elaboration of management plans for protected areas. Finally, the LGEEPA also relates to the Mexican Official Norms which regulate and guide tourism in protected areas.

The LGEEPA affects the management of tourism and recreation in protected areas in terms of several issues. These issues include the zoning of tourism in the protected areas, as well as in the issue of permissions, and concessions.

Regarding zoning, the LGEEPA states in which protected area categories tourism and recreation are allowed. The LGEEPA explicitly permits recreation and/or tourism in the following categories: national parks (terrestrial and marine), natural monuments, natural resources protection areas (APRN), and sanctuaries. However, tourism can be allowed in biosphere reserves and flora and fauna protection areas

(APFF) as long as it is a community-based project or the community is actively participating and benefiting from tourism operations. Tourism and recreation can occur in all PNA categories, but there are more restrictions in some categories than in others (M. Trejo, personal communication, September 13, 2004). The issue of zoning also relates to which zones and sub-zones in a protected area can be used for tourism or recreation. The sub-zones where tourism is explicitly allowed include: restricted use, traditional use, sustainable use of natural resources, and public use, however the human settlements sub-zone should also be included (see Figure 6.4).

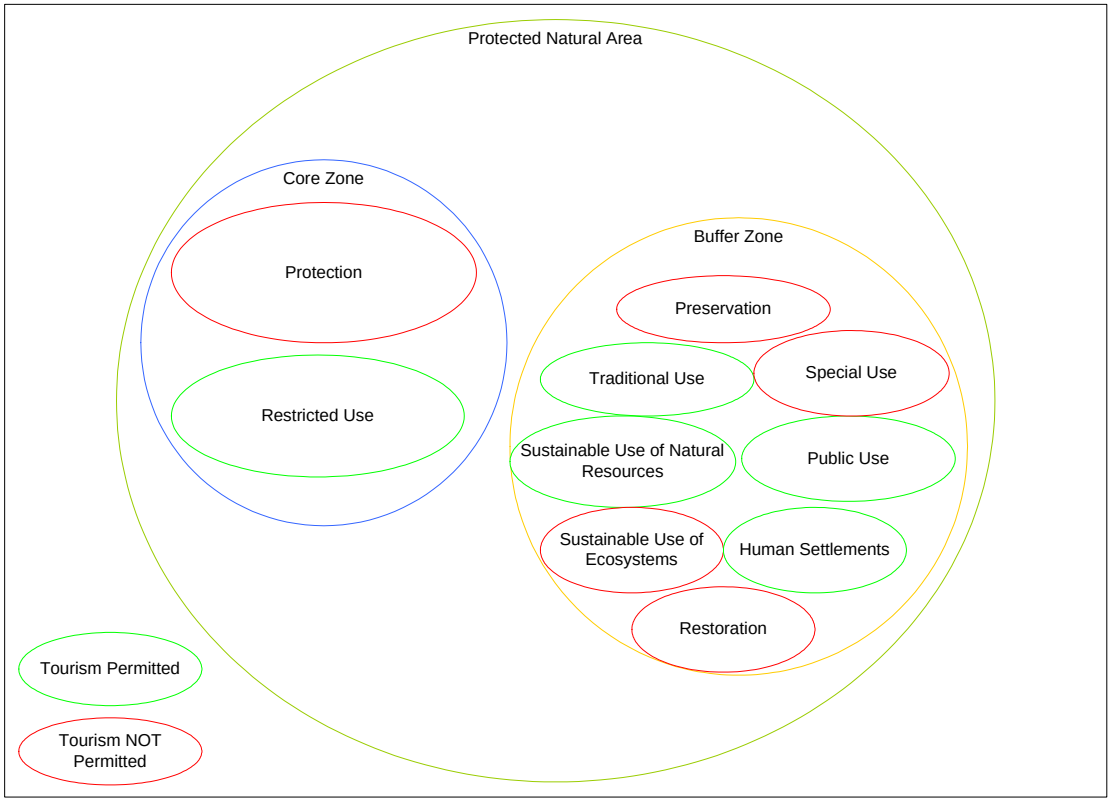


Figure 6.4: Zones and Sub-zones in protected natural areas were tourism is permitted.

The LGEEPA also discusses the permissions, concessions and authorisations to undertake activities or build infrastructure to use the natural resources (tourism permits are further discussed in Chapter 9). The LGEEPA establishes that the local inhabitants and indigenous people have a preference for permissions over external individuals or enterprises. To be eligible for permission, the applicant must prove technical capacity and economical solvency to use the resource without affecting the ecological equilibrium of the area.

6.3.2 Regulations

LGEEPA Regulation concerning Protected Natural Areas

The Executive (the President and his ministers) has the right and obligation by law to develop the regulations originated from the federal laws. The LGEEPA, which discusses the PNAs of Mexico, has a regulation document related to PNAs. This regulation provides even more details about the elements already discussed in general in the LGEEPA. In relation to tourism and recreation, the LGEEPA

Regulation concerning PNAs (Reglamento de la LGEEPA en Materia de Áreas Naturales Protegidas) details the issue of zones and sub-zones appropriate for tourism already discussed, the use of the natural resources through tourism, and the authorisation to carry out tourism in PNAs (tourism permits).

The LGEEPA Regulation on PNAs with respect to the permitted uses and applicable prohibitions discusses the issues of limits of acceptable change (LAC), the characteristics of tourism and recreation, the obligations of visitors and tourism operators, and management plans. Limits of Acceptable Change must be established by the Ministry of the Environment (SEMARNAT) and are defined as 'a determination of the intensity of use or volume of use of the natural resources in a determined surface, through a process that defines the desirable conditions or acceptable impacts of a certain use' (LAC is further discussed in Chapter 9). Together with LAC, the regulation also states the characteristics desired in any type of recreation and/or tourism allowed in PNAs. These characteristics include that recreation and/or tourism must not affect the ecosystems, preferably benefit the local inhabitants, promote environmental education, and if infrastructure is required it must blend into the landscape of the PNA. These characteristics can be the basis for a visitor strategy in Mexico. Also in relation to tourism, the regulation states that visitors and tourism operators must follow the rules stated in the management plan of the area as well as following general directives: the payment of entrance fees, use of existing tracks and trails, respect for signage and zoning of the area, follow the directives of the protected area's personnel, provide personal information for statistical purposes, support the tasks of monitoring, protection and control, as well as emergency cases, and report illicit activities seen in the area. These general directives can be the basis for an environmental code of conduct. Finally, the regulation also defines management plans as planning and regulation instruments which establish the activities, actions and basic guidelines for the management and administration of a protected natural area.

The regulation also establishes detailed procedures for the application and validity period of an authorisation. It is relevant to note the differences between tourism authorisation, permission and concession. These concepts are not defined in the regulation and must be implied or consulted with the appropriate personnel of CONANP. When a tour operator wants to offer services (tours and/or activities without infrastructure) in a PNA, it must apply for an 'authorisation' from CONANP. Then CONANP evaluates the tour operator's application for authorisation and either grants or does not grant permission to undertake the activity (M. García & F. J. Cantón, personal communication, September 14, 2004). Once permission is granted it can be accompanied by direct regulations or guidelines only applicable to this specific tour operator and his activity (F. J. Cantón, personal communication, September 14, 2004). A tourism concession in Mexico does not have the same meaning as a tourism concession in New Zealand. A tourism concession in Mexico relates to the use of public infrastructure (or the construction of infrastructure) in PNAs so the applicants can profit from its use (M. García, personal communication, September 14, 2004). For example, the concession for the construction of a hotel or ecolodge is given to a private company which must pay a fee to CONANP. Presently, there are no concessions operating in Mexico, because no tourist infrastructure has been allowed to be constructed within the borders of a PNA.

In relation to authorisation, this regulation states that authorisations must be requested, among other things, for: (1) the realisation of commercial activities in PNAs, (2) the realisation of recreation-tourism activities inside PNAs, and (3) for filming, photographs and capture of images and sounds with commercial purposes inside PNAs. The application forms and procedures for tourism authorisation have to be certified by the Federal Commission of Regulatory Improvement (COFEMER – Comisión Federal de Mejora Regulatoria). When an authorisation is granted, CONANP issues a permit to the operator. The permit document might include specific guidelines regarding the tourism activity undertaken by the tour operator. These specific guidelines are rules defined by CONANP and contained in the permission granted to tourism operators in a protected area. These guidelines are only applicable to the activity and the operator granted permission (F. J. Cantón, personal communication, September 14, 2004).

PNA Decree

A federal protected natural area can only be declared or decreed by the President of Mexico (F. J. Cantón, personal communication, September 14, 2004). The gazetting of a natural protected area means the publication of the decree in the Gazette (Diario Oficial de la Federación). The decree establishes the reasons a PNA was created, the official area and extension of a protected area, which government institutions will manage the PNA, the need to elaborate a management plan, and a set of guidelines and rules applicable to the protected natural area. The decree of a PNA affects the management of tourism and recreation through the establishment of the guidelines and rules applicable to the protected area also contained in the management plans.

Internal Regulation of CONANP

The Internal Regulation of any agency in Mexico defines the responsibilities and functions of the different areas of the agency. According to the Internal Regulation of CONANP, the areas in the agency with a direct involvement in tourism (mainly on the question of tourism permissions or possible concessions) are the General Directorate of Conservation Management (Dirección General de Manejo para la Conservación), the General Directorate of Promotion and Institutional Development (Dirección General de Desarrollo Institucional y Promoción), the Directorate of Legal Affairs (Dirección de Asuntos Jurídicos) and the Administration Office of each PNA. The role of each of these areas and the rest of CONANP regarding tourism will be discussed in Chapter Seven.

6.3.3 Policies

Work Program of CONANP

The National Commission of Protected Natural Areas (CONANP) developed a "Work Program of CONANP 2001 – 2006" to present its aims, objectives and strategies. In essence, the challenge of this Work Program is to consolidate and effectively manage the protected natural area system of Mexico that for many years has been abandoned (discussed in section 5.3.3 of the previous chapter). Even when there are many pressing needs to reach this goal, the Work Program mentions tourism (ecological, cultural and

ecotourism) as a strategic project for CONANP. The objective of this tourism project is to promote new tourism practices in PNAs which are respectful of the ecosystems, and make the local communities central participants in the conservation of such ecosystems. Furthermore, the program envisions the development and creation of new ecotourism products inside PNAs, because they are considered an activity compatible with biodiversity conservation (CONANP, 2000b).

Interestingly, CONANP discusses tourism in PNAs as a strategic project but has not yet developed a tourism policy to guide itself in the long term, as further discussed below. This shows that tourism is seen as an opportunity, but the agency has yet to tackle this lack of policy. By contrast, even without a guiding policy, different PNAs are developing their infrastructure mainly because of the external pressures for tourism facilities by visitors and operators.

Another project defined in the Work Program is that of financial sustainability. The general aim of this project is to establish an entrance fee system to support the financial needs of CONANP regarding infrastructure and non-basic operation. Although the results have been very positive in relation to the amount of money generated by this entrance fee system, the goals established in the Work Program have not been reached. This issue of entrance fee will be further discussed in Chapter Eight.

Management Plans for Protected Natural Areas

Management plans have a validity of 5 years, and must be published one year after the PNA was gazetted. The historical abandonment of PNAs means that not many PNAs have management plans. Since 2000 CONANP has worked to publish management plans for all the PNAs of Mexico. Presently there are 150 PNAs in Mexico and CONANP has personnel in 70 areas; the rest are attended in some way by State or Municipal governments or are totally abandoned (D. Guitierrez, personal communication, September 13, 2004). Only 33 PNAs have management plans, although CONANP aims to finish at least 30 more before the end of 2006 (R. Kobelkowsky, personal communication, September 13, 2004).

The format of a management plan has evolved from the one proposed by the LGEEPA to a more elaborate format created by CONANP. The first management plans were done in 2000 and had a very simple format containing the description of the area, general action directives, and a small component regarding guidelines, they were not even rules (R. Kobelkowsky,personal communication, September 13, 2004). This format for management plans has changed considerably since 2000 and are now called now Conservation and Management Programs (PCM – Programas de Conservación y Manejo), because they include an important component regarding conservation, and also involve the management of the protected areas (R. Kobelkowsky, personal communication, September 13, 2004). This new format includes, besides other things, the presentation of six subprograms and the zoning of the PNA. One of the subprograms is called ‘management subprogram’ which has a component called ‘tourism, public use and outdoor recreation’. This component will include[2] an inventory of the present tourism activities

[2] At the time of the interviews, CONANP had not yet published a PCM with this new format.

undertaken in the area, potential activities, tourism providers in the area, regulation needs regarding tourism services, carrying capacities, as well as a work plan with short, medium and long-term aims (R. Kobelkowsky, personal communication, September 13, 2004). The zoning section includes the criteria for zoning, the methodology and the zones with their management policies. The zones of a PNA are defined by the LGEEPA and reinforced by the LGEEPA regulation, as discussed earlier.

Conservation for Development Strategy

CONANP has had responsibility for the Programs of Regional Sustainable Development (PRODERS – Programas de Desarrollo Regional Sustentable) since 2001, when it was transferred from the Ministry of Environment (SEMARNAT). The PRODERS has the objective of promoting and funding sustainable development projects in the Conservation Priority Regions (RPC – Regiones Prioritarias para la Conservación). These RPCs include protected natural areas, the areas of influence around PNAs and other areas not officially protected but considered important to conserve by the Mexican government. To reach the goals of the PRODERS, CONANP has developed the Conservation for Development Strategy (CDS). One of the strategic lines of the CDS is to propose alternative productive activities for the communities living in the PNAs. One of the alternative activities proposed, and also exemplified, in the CDS is the development of ecotourism projects. Some of the ecotourism examples presented in the CDS are in Los Tuxtlas Biosphere Reserve, Mariposa Monarca Biosphere Reserve, Yum Balam APFF, Sierra Gorda Biosphere Reserve, Sierra de Alamos – Río Cuchujaqui APFF, and Tehuacán – Cuicatlán Biosphere Reserve.

The Conservation for Development Strategy affects the management of tourism in Mexico, because it views tourism as a tool for the sustainable development of local communities in protected areas. Viewing tourism as a development and conservation tool implies the need to involve and benefit local communities, along with the need to monitor tourism to avoid negative impacts on the environmental, cultural and social contexts. Such challenges make the management of tourism a much more complex endeavour for the agency.

CONANP's Ecotourism Policy

CONANP has no tourism policy as yet, but it is working slowly towards defining one. In the short history of CONANP, created in the year 2000, the focus has not been on managing tourism, but on having an institutional presence in protected areas where there is no infrastructure, personnel and or a management plan (D. Gutierrez, personal communication, September 13, 2004). Nevertheless, the pressures of tourism are a reality in many PNAs of Mexico (E. González, personal communication, October 7, 2004), CONANP's commitment to tourism promotion as seen in its Work Program and the Conservation for Development Strategy has pushed the agency to define a tourism policy. The discussion of the tourism policy has been led by the tourism project leader, Amaya Bernárdez, together with the directors of the PNAs. The tourism policy will be a long-term directive document extending to the year 2020 (A. Bernárdez, personal communication, September 13, 2004).

The first stage in the elaboration of this tourism policy resulted in a document called "Declaration of Chajul". The Declaration of Chajul declares that any model of tourism in protected natural areas in Mexico must: (1) include the priority of conserving the natural heritage, (2) generate productive alternatives to benefit local communities, (3) minimise the negative impacts on the natural, social and cultural contexts, and (4) foster a conservationist culture. The second stage in the process of this tourism policy was a national meeting of directors in September 2004 which concentrated mainly on the topic of tourism and took the Chajul Declaration as its starting point. This meeting produced a document called "Ecoturismo en Areas Naturales Protegidas: Avances y perspectivas 2004 – 2010" (Ecotourism in PNAs: milestones and perspectives 2004 – 2010).

6.3.4 Guidelines

Official Mexican Norms

The Official Mexican Norms (NOMs – Normas Oficiales Mexicanas) are mandatory technical regulations created by related government institutions (SEMARNAT, 2003a). Some NOMs created by the SEMARNAT and SECTUR (Ministry of Tourism) are applicable to the regulation of tourism in protected natural areas (see Table 6.4). Although NOMs are defined as 'technical regulations' they are included in the guidelines because they generally define guidelines and requirements for certain tourism activities or infrastructure.

Table 6.4: Applicable NOMs to Tourism in PNAs

Existing NOMs

- NOM-131-SEMARNAT-1998: Establishes the guidelines for the development of whale watching activities, relative to their protection and of their habitat.
- NOM-05-TUR-2003: Minimum security requirements that must be followed by scuba operators to guarantee the presentation of the service.
- NOM-06-TUR-2000: Minimum security and hygiene requirements that must be followed by camping grounds and caravan parks.
- NOM-09-TUR-2002: Elements to be followed by specialised guides of specific activities.
- NOM-011-TUR-2001: Requirements of security, information and operation that must be followed by adventure tourism operators.

NOMs in Process or Proposed

- NMX-SEMARNAT-2005-ECOTURISMO: Norm in process (scheduled to be published on June 2005) to create a certification system for ecotourism.
- Whale Shark Observation Norm: (Proposed but not yet accepted) Guidelines and specifications for the development of Whale Shark observation and swimming, and the management, conservation and protection of its habitat in Mexico.

(SECTUR, 2005; SEMARNAT, 2003a)

6.4 Comparing New Zealand and Mexico

The following section presents a comparison between New Zealand and Mexico regarding the legislation, regulations, policies and guidelines which influence tourism and recreation in these countries. The section discusses similarities and differences between both countries and explores the implications for tourism and recreation management.

6.4.1. Legislation

A fundamental difference in the legislation of protected areas of these countries is the significance of 'public access and enjoyment'. In New Zealand, protected areas have the dual legal mandate of protecting the natural and historical heritage, but also of allowing public access and enjoyment of natural areas. In the Mexican case, protected areas have the aim of preserving and restoring natural ecosystems. Tourism and recreation are only mentioned in the LGEEPA when these activities are considered allowable in certain protected areas or certain zones of protected areas. This difference on the legal mandate of protected areas has a direct and significant impact on the issue of recreation and tourism management and its importance on the regulations, policies and guidelines of each country. This difference implies that the importance tourism and recreation have in the protected areas of New Zealand is not as relevant in the Mexican case. CONANP views tourism and recreation as an activity that can be permitted, but should not be fostered in all PNAs. On the other hand, DOC, by legal mandate, must foster recreation and allow tourism so the public can enjoy the natural heritage of New Zealand. This key difference has important consequences in the type of policies, regulations and guidelines developed by the agencies as well as in the administrative structures of the organisation, as discussed in Chapter Seven. In addition, this difference also influences the allocation of financial resources within the organisation and the priority given to tourism and recreation compared to conservation.

Another difference between New Zealand and Mexico with respect to the legislation is the number of laws concerning protected areas and with some relevance to recreation or tourism management. While Mexico has one general law (LGEEPA) regarding protected natural areas and another law dedicated to the question of tourism (Tourism Law), New Zealand has an extensive set of statutes related to protected areas. In the New Zealand case, the Conservation Act 1987 encompasses the previous legislation on protected areas, such as in the National Parks Act 1980 and the Reserves Act 1977, but gives space to their specificity in relation to the types of protected areas they cover. The complexity of laws in New Zealand requires DOC to develop general policies that help to bridge legislation and practical management strategies and plans. The implication of this complexity to the management of tourism and recreation is that DOC has had to develop a strategy (the Visitor Strategy) that encompasses the different legal mandates regarding 'public access and enjoyment' in a directive strategy.

The specificity of legislation regarding protected areas is another difference between the legislation of both countries. While Mexico uses the LGEEPA to present and discuss- the types of protected areas,

New Zealand uses separate Acts to describe the types of protected areas (Conservation Act, National Parks Act, Reserves Act and Marine Reserves Act). The lack of specificity in the Mexican case is resolved in part by the elaboration of the 'LGEEPA Regulation concerning Protected Natural Areas' which details further the issues of protected areas.

One important similarity between the legislation of Mexico and New Zealand is the discussion of management plans. Management plans are required by legislation in both countries to be developed by the agency in charge of the protected areas. In both countries, management plans are seen as working guides for the managers of protected areas. An important difference regarding management plans is that in Mexico these documents are the most important planning and management policies for PNAs. Whereas in New Zealand, management plans are important, but managers must also guide their work in relation to tourism and recreation management by consulting and following the bylaws, the CMS of the region, and the Visitor Strategy.

The implications for tourism and recreation management of this specificity in New Zealand and the generality in Mexico are various. First, the specificity restrains the capability of the agency to explore new ways to manage tourism concessions, for example. If DOC wanted to develop a new system of concessions it would have to negotiate with the Legislature to amend the Conservation Act. Second, on the positive side, the specificity in New Zealand's legislation clarifies in detail how tourism and other concessions should be managed making the concession process a legal requirement. Third, the generality of the Mexican laws permits CONANP to manoeuvre and explore new ways to manage tourism and recreation. Fourth, the lack of specificity with regard to tourism concessions in the Mexican case demonstrates the low importance tourism and recreation have in the legal mandate of CONANP.

6.4.2. Regulations

Regulations in Mexico and New Zealand concerning protected areas have different purposes. In Mexico, regulations are documents created by the executive branch of government to specify issues presented or touched upon in the legislation. For example, the issue of authorisations only mentioned in the LGEEPA is further discussed in the regulation on protected areas. In New Zealand, regulations include the bylaws defined for each national park or other categories of protected areas mostly directed to visitors, stipulating what is and is not permitted (rights and obligations) in a protected area.

6.4.3. Policies

The policies presented for New Zealand and Mexico can be categorised by policies, work programs, activity and place strategies and place plans. Policies include documents that state only policies regarding an issue like conservation or national parks. Examples for New Zealand include the General Policies on Conservation Act and the National Parks Act. As mentioned earlier, general policies are a bridging document between the whole spectrum of environmental legislation related to PNAs and the CMSs and

the CMPs. On the other hand, Mexico has no document solely dedicated to the enunciation of policies. Work programs relate to documents elaborated by the agencies in charge of the protected areas that present their purpose, objectives and activities to be performed in a given time frame. For instance, in the case of New Zealand, DOC develops the Statement of Intent, and in Mexico CONANP writes its Working Program. Strategies refer to how policies will be implemented, and also define the direction adopted to reach certain goals. In New Zealand, these strategies include activity strategies like the Visitor Strategy and the Conservation Management Strategies which also are place (region) strategies. Mexico has only one activity strategy, the Conservation for Development Strategy, concerned with sustainable development, but which has an important component for tourism in protected areas. Place plans refer to management plans of national parks or other categories of protection.

As in legislation, the main difference between Mexico and New Zealand is the number of policies in existence, related to protected areas and the issue of tourism and recreation management. New Zealand policies start at a national level (general policies), then at a regional level (conservation management strategies) and finally at a local level (management plans). In Mexico, there is only the CONANP's work program and the management plans of the protected areas. Presently CONANP is working on a tourism policy.

An explanation for the lack of tourism and recreation policies in Mexico is the recent priority given to protected areas. Furthermore, tourism and recreation are not part of the legal mandate of protected areas in Mexico, and therefore other pressing aspects are more important to tackle before these issues. For instance, infrastructure, and staff and management plans have higher priority than the creation of a policy concerning tourism and recreation (D. Gutiérrez, personal communication, September 13, 2004). Until recently, CONANP has focused its attention on developing a tourism policy.

An important exercise of this analysis is to compare the Visitor Strategy of DOC with the planned Ecotourism Strategy for Protected Areas of Mexico. There are several conceptual differences from which Mexico can learn. While the New Zealand strategy encompasses tourism and recreation in its Visitor Strategy, the Mexican strategy narrows its focus by referring to the document as an 'ecotourism' programme. The problem with the ecotourism concept is the lack of definition agreement; also not all tourism in protected areas can be considered ecotourism. Besides these conceptual problems, the issue of independent outdoor recreation to protected areas is not covered by the term ecotourism. Another difference is that while the Visitor Strategy has clear goals as a strategy, the Ecotourism Policy must first be defined as a policy, a strategy or a program. Finally, the Visitor Strategy determines how the goals will be reached. On the other hand, the Ecotourism Policy does not seem to yet have a clear purpose. Obviously, all these comments must be considered a simple and superficial analysis discussion because the Ecotourism Policy is yet to be defined and elaborated.

6.4.4. Guidelines

The purpose of guidelines differ between New Zealand and Mexico . In New Zealand, guidelines help the standardised management of recreation and tourism. For example, standard operation procedures have been developed by DOC for visitor surveys, inventories of recreation facilities, monitoring levels of use, managing impacts, classifying tracks, charging for use of backcountry huts and camping grounds, and signs. Another example is the adaptation of the recreation opportunity spectrum as a planning tool for recreation management. In the case of Mexico, guidelines expressed by the Mexican Official Norms (NOMs) are rules and requirements to carry out a certain tourism activity or build a safe and healthy infrastructure. NOMs are not tools to improve the management of recreation and tourism, they function primarily as regulatory instruments.

6.5 The Influence of Legislation, Regulations, Policies and Guidelines on the Institutional Arrangements

This section discusses how the variables of legislation and regulations, and policies and guidelines influence the other variables within the institutional arrangements framework (see Figure 6.5). The discussion further addresses how these variables affect tourism and recreation management in protected areas.

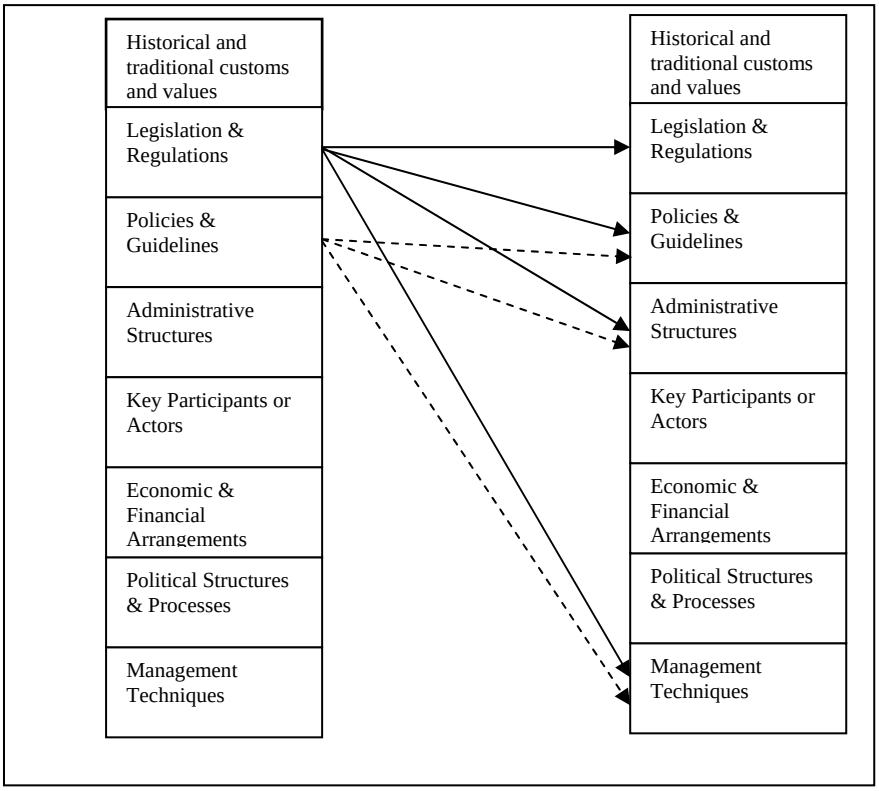


Figure 6.5: Relationships between the legislation & regulations, and policies & guidelines variables with the other variables of the institutional arrangements framework.

Legislation is one of the most important variables in the institutional arrangements because it influences the creation of the other variables. For example, legislation such as the Conservation Act 1987 created

the Department of Conservation, hence affected the administrative structures of New Zealand. In addition, legislation sets the mandate for the policies, regulations and guidelines by which the administrative structures work. Furthermore, management techniques such as zoning and tourism permits, in the Mexican case, are determined by the legislation.

In the New Zealand case, regulations such as bylaws are mentioned by the legislation and defined specifically by the management plans. In the Mexican case, regulations are an interpretation and further development of the legislation. In either case, regulations are a result of legislation and/or policies which are part of the institutional arrangements framework.

Policies affect the variables of guidelines, administrative structures and management techniques. For instance, the Visitor Strategy sets the goals that DOC must accomplish with respect to recreation and tourism. In other words, the Visitor Strategy details the functions of DOC with regard to these issues determining the work to be done by the Department's staff. Policies also affect management techniques explaining how they must be carried out in the field. For example, the Visitor Strategy explains the application of the Recreational Opportunity Spectrum (ROS) in the planning of visitor experiences. Management plans in Mexico apply the concept of zoning to the protected area, and determine which tourism or recreational activities can or cannot be allowed.

Guidelines are the result of the other variables in the institutional arrangements. Guidelines, in general, do not affect other variables of the institutional arrangements framework. Nevertheless, as in the case of New Zealand, there are guidelines to explain how a certain management technique such as ROS should be applied.

The variables discussed in this chapter make up the statutory and non-statutory framework that sets the purpose and direction of the whole protected natural area system. They are the expression of the historical values and customs of the societies within the countries analysed and the importance these societies have given to the relationship between man and nature. These variables are the written expression of the need and desire to protect nature from ourselves (ironically), but at the same time provide opportunities for us to enjoy these natural environments. The problem is that through this use expressed in tourism and recreation, visitors can have a tremendous impact on nature and then the agencies in charge of protecting these natural assets are faced again with the challenge of protecting nature while permitting use. In the New Zealand case, the paradox is much clearer with the wording in the Conservation Act and the National Parks Act determining that recreation must be fostered and tourism allowed. In the Mexican case, tourism and recreation in protected areas are permitted, but are not promoted by the legislation.

6.6 Summary

The present chapter identified the legislation, regulations, policies and guidelines of New Zealand and Mexico relevant to the management of recreation and tourism in protected natural areas. The chapter also described the legislative documents directly related to tourism and recreation. Besides this description, some relations between the different documents were detailed to understand how they influence each other. Finally, the effect of each document on tourism and recreation management was discussed.

In the comparison section of the chapter, many differences and few similarities were discussed between both countries. Legislation was more extensive and detailed in the New Zealand than in the Mexican case. Regulations differed because they had a different purpose. In Mexico, regulations specify the content of laws, and in New Zealand, they are expressed in bylaws which are rules of conduct for certain protected areas. Policy was another element with more differences than similarities, and as in legislation, New Zealand's policies were more extensive and specific. In guidelines, the main difference, as in regulations, was the purpose. Guidelines in Mexico define the rules for specific tourism activities or services; on the other hand, New Zealand guidelines relate more to the standardisation of tools for recreation and tourism management.

The previous chapter on historical and traditional values and customs assisted the understanding of the origins of the legislation as well as the government bodies and key participants involved in the management of protected areas. This chapter explored in more detail the present legislation and the regulations, policies and guidelines that emanate from this legislation. The next chapter discusses the variables of administrative structures, and key participants and actors involved in the management of protected natural areas.

7. Administrative Structures & Key Participants and Actors

7.1 Introduction

The purpose of this chapter is to identify the administrative structures and key participants interested and involved in the issues of tourism and recreation in protected natural areas of New Zealand and Mexico. The chapter discusses the working relationships between the different interested parties and how these relationships influence the management of tourism and recreation in conservation land in both countries.

For the purpose of this thesis, administrative structures are understood as the formal organisational structure, mission and functions of the main agency in charge of managing the protected natural areas of each country analysed. It also includes the formal relations between other institutions of the federal/national and state/regional governments and 'the agency'.

The variable of 'key participants and actors' concentrates on the relationship the agency has with non-governmental organisations (NGOs) and other interested parties, such as local communities, on the topic of recreation and tourism in protected areas. Although this variable of key participants and actors could include an in-depth discussion on individuals within and outside the agencies that have influenced how tourism and recreation are managed, this thesis narrows the scope of the variable to include mainly present NGOs, local communities and other stakeholders.

7.2 New Zealand

7.2.1 Administrative Structures

This section on New Zealand will present and analyse the administrative structures (mission, functions and structure) of the Department of Conservation (DOC), and discuss the structures of other government entities with which DOC interrelates to carry out its mandate regarding the management of tourism and recreation. This analysis is carried out to understand how the administrative structures affect the management of tourism and recreation.

Mission

The Department of Conservation's mission is "to conserve New Zealand's natural and historic heritage for all to enjoy now and in the future" (DOC, 2005o). This mission expresses the paradox of managing protected areas to preserve them and at the same time foster their use for public enjoyment. Public enjoyment encompasses visitors who travel to DOC managed areas for recreation (independent and self-sufficient individuals or groups) or visitors who pay for facilities and services provided by the private sector (a concessionaire) and hence can be considered tourists (DOC, 1996). The last part of the mission 'for all to enjoy now and in the future' implies that use must be sustainable, meaning people can use the resources to such an extent that it does not hinder the possibilities of future generations using the resources as well.

The mission of DOC is a clear expression of the legal mandate of the Department, derived from the legislation discussed in the previous chapter, such as the Conservation Act and the National Parks Act. As the mission of DOC is an expression of the legislation, the administrative structure is an expression of this mission and also of the legislation. Hence, the structures and functions of DOC are an institutional response to the legal mandate of the agency to perform its duties.

Structure and Functions

The Department of Conservation is responsible for the management of almost one third of New Zealand's territory. For this reason, the Department operates through a network structure composed by regional, conservancy and area offices (see Figure 7.1). DOC has two regional offices, one in the North Island and another in the South Island. Under these regional offices there are thirteen conservancies located throughout New Zealand with the main role of ensuring quality conservation management (DOC, 2005f). Under the main offices of these conservancies, there are 59 area offices in charge of the delivery and day-to-day management of the protected areas.



Figure 7.1: Map of Regions, Conservancies and Areas. (DOC, 2005k)

The Department of Conservation's key functions as set out in the Conservation Act 1987 are (DOC, 2005u):

- to manage land and other natural and historic resources;
- to preserve as far as practicable all indigenous freshwater fisheries,
- to protect recreational fisheries and freshwater habitats;
- to advocate conservation of natural and historic resources;
- to promote the benefits of conservation (including Antarctica and internationally);
- to provide conservation information; and
- to foster recreation and allow tourism, to the extent that use is not inconsistent with the conservation of any natural or historic resource.

To fulfil such functions, DOC has developed an administrative structure, as seen in Figure 7.2. This structure shows the decentralised nature of DOC through its regional, conservancy and area offices. It also shows a set of central divisions and groups which work at a strategic and improvement level giving service and support to the different level offices.

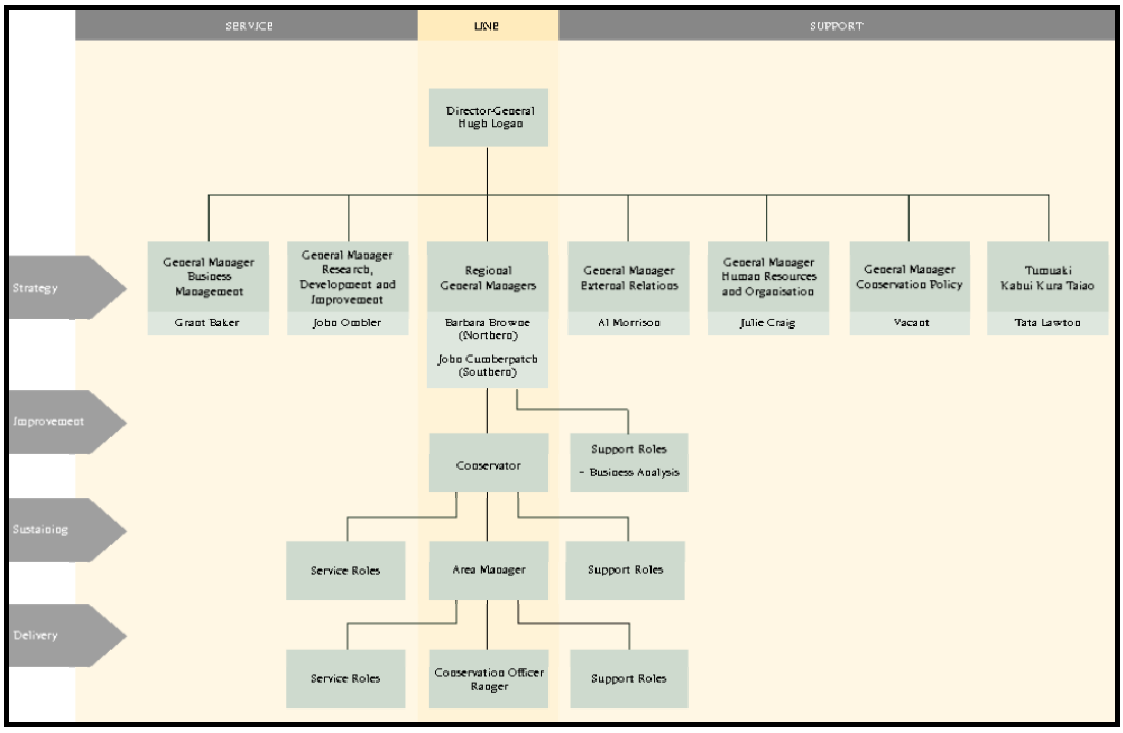


Figure 7.2: Department of Conservation Organisational Structure. (DOC, 2005e)

The most significant division regarding tourism and recreation is the new Research, Development & Improvement Division (RD&I Division) at the Head Office in Wellington. The RD&I Division focuses on the long-term improvement of conservation delivery, through new and improved systems and processes, grounded in science (DOC, 2005f). For example, with regard to tourism concessions, the Heritage Appreciation Unit works to make the concessions system better (A. Thompson, personal communication, May 17, 2005). The RD&I Division is divided into six working units (see Figure 7.3). The Heritage and Recreation Unit is the group dedicated to the issues of tourism and recreation.

Through the Heritage and Recreation Unit, mentioned above, DOC also integrates at a national level the issues of tourism and recreation (A. Thompson, personal communication, May 17, 2005). This

integration at a national level remains to be achieved at a conservancy and area level. There are separate people dedicated to recreation and tourism. Although area staff concerned with recreation and tourism see each other on a daily basis, their functions differ and further integration must be sought (A. Thompson, personal communication, May 17, 2005). A reason for this lack of integration is that staff working with concessions not only work with tourism concessions, but also with a range of other concessions, such as mining and grazing (A. Thompson, personal communication, May 17, 2005). The recreation group at the Heritage Appreciation Unit maintains a close relationship with the recreation staff at the conservancy level (see Figure 7.3).

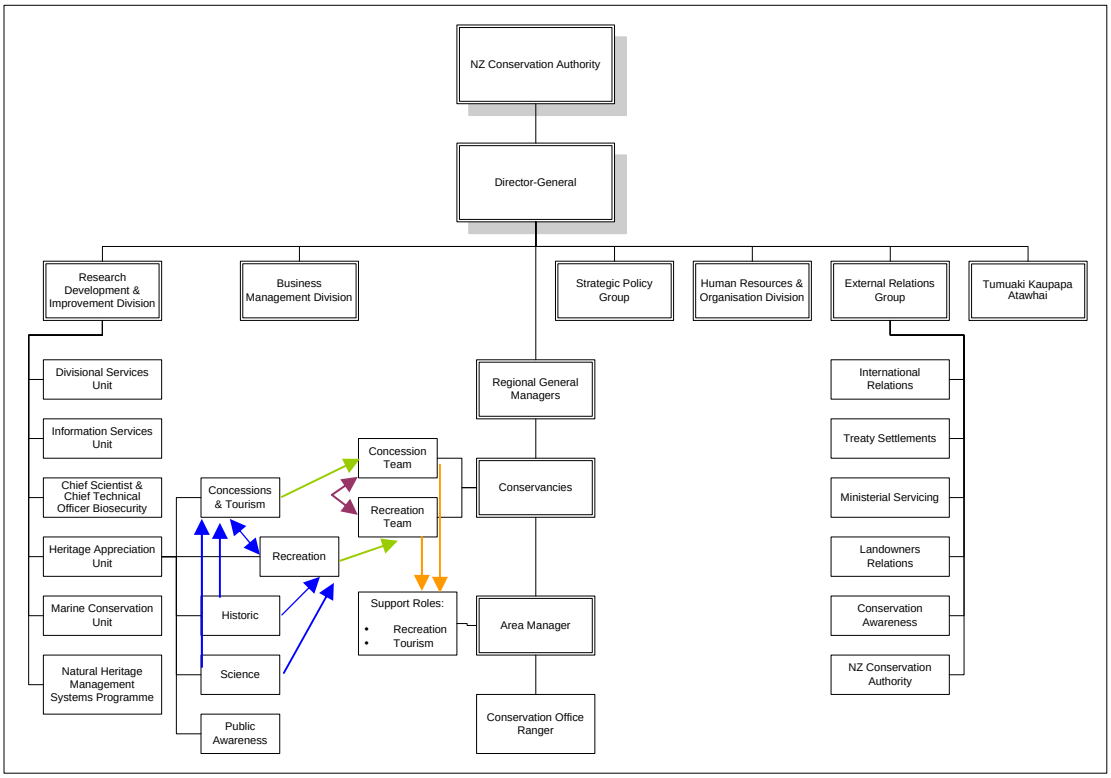


Figure 7.3: Tourism and Recreation in DOC's Structure. Adapted from (DOC, 2005e, 2005f, 2005h) and (A. Thompson, personal communication, May 17, 2005).

The relationships within DOC concerning tourism and recreation are at a national, conservancy and area level. At a national level, the recreation group and the concessions and tourism group in the Heritage Appreciation Unit, interact on a daily basis and receive feedback from the science and historic groups inside the unit (see Figure 7.3 blue arrows). The tourism and recreation groups of this national unit have daily communication with their counterparts in the conservancy offices (see Figure 7.3 green arrows). In the conservancy office, one of the interactions between the recreation and tourism (concessions) staff occurs when a tourism concession application is being processed and tourism staff consult with recreation staff (see Figure 7.3 purple arrows). With regard to the issue of concessions, the recreation group gives advice as to whether the application should be approved or not. The recreation staff at a conservancy level are also concerned about the effects of a tourism activity on the wider visitor experience. The conservancy staff work closely with their area office counterparts, who are the rangers and the uniformed staff (see Figure 7.3 orange arrows) (A. Thompson, personal communication, May 17, 2005). The recreation conservancy staff provide support, strategic overview, and advice to the area staff. In relation

to tourism concessions, the area staff work on a day-to-day basis with concessionaires, and carry out monitoring.

The internal administrative structures of DOC affect how tourism and recreation are managed in several ways. First, due to the fact that the issues of tourism and recreation are within the RD&I Division, means that DOC is putting significant effort into improving the systems regarding recreation and tourism. Second, by having recreation and tourism grouped together under the Heritage Appreciation Unit means there is a closer working relation and integration at a national level. Third, the significant integration at a national level between recreation and tourism staff remains to be improved at a conservancy and area level where staff still work separately in their functions. Fourth, the idea of maintaining tourism concessions within the broad spectrum of concessions hinders the possibility of tourism concession staff working more closely with their recreation counterparts at a conservancy and area level. However, there are areas of improvement for closer relationships between staff concerned with tourism concessions and recreation.

Intergovernmental Relationships

The intergovernmental relationships that DOC maintains can be divided between the formal relations and the *ad hoc* relationships. The formal relations are kept by the External Relations Group (see Figure 7.3), within DOC, which has the objective of providing effective servicing of the Department's relationships and effective management of issues (DOC, 2005h). The *ad hoc* relationships are those formed around certain issues such as tourism and/or recreation.

The formal relations relevant to tourism and recreation include links with iwi (Maori), ministers, New Zealand Conservation Authority[3], and landowners. Within the External Relations Group there are specific units which maintain formal relationships with the stakeholders mentioned. For example, there is the Treaty Settlements Unit (for Maori issues), the Land Conservation Unit (for relations with private landowners), Statutory Bodies Unit (for relations with the NZ Conservation Authority), and the Ministerial Servicing (for services to the Minister of Conservation including draft replies to ministerial correspondence and Parliamentary Questions) (DOC, 2005h).

Another part of DOC's structure that maintains a close relationship with Maori issues is the Tumuaki Kaupapa Atawhai. The objective of this area is "to ensure a clear strategic focus to allow the Department to achieve its responsibilities to Maori under the Conservation Act" (DOC, 2005h). This area provides the Director General and senior managers of DOC with strategic advice, mentoring and support on Maori matters.

There are also ad hoc relationships formed between certain areas of DOC and other government bodies. For instance, the tourism and concession group in the Heritage Appreciation Unit has a close relationship

[3] The New Zealand Conservation Authority (NZCA) is an independent body closely involved in conservation planning, policy and management advice, which is serviced by the Department of Conservation.

with the Ministry of Tourism and the Ministry for the Environment. The main channel for coordinating these government ministries has been the Tourism Industry Forum which was set up specifically to address issues of tourism in conservation lands (A. Thompson, personal communication, May 17, 2005). This forum not only joins DOC with other government bodies but other key participants and actors (stakeholders) interested in the issues of tourism and recreation in conservation land.

The land managed by DOC has become one of New Zealand's top attractions because of its natural and scenic beauty. In addition, the recreational facilities including tracks, camping areas and backcountry huts attract national recreationists and increasingly international visitors. In this sense, DOC is the biggest tourism provider of the country, and an important player in the tourism industry. As a result, DOC must interact with government entities concerned with tourism to better plan, manage and market the tourism opportunities while preserving the conservation estate. This is such a big task that DOC must also work with other key participants and actors outside the government arena.

7.2.2 Key Participants and Actors

The Department of Conservation maintains relationships with other stakeholders outside the government sphere (see Figure 7.4). The stakeholders are sometimes key participants and actors who have a special interest in the issues of tourism and recreation. Such is the case of recreation and conservation groups, Tangata Whenua, concessionaires and landowners, as seen in Figure 7.4.

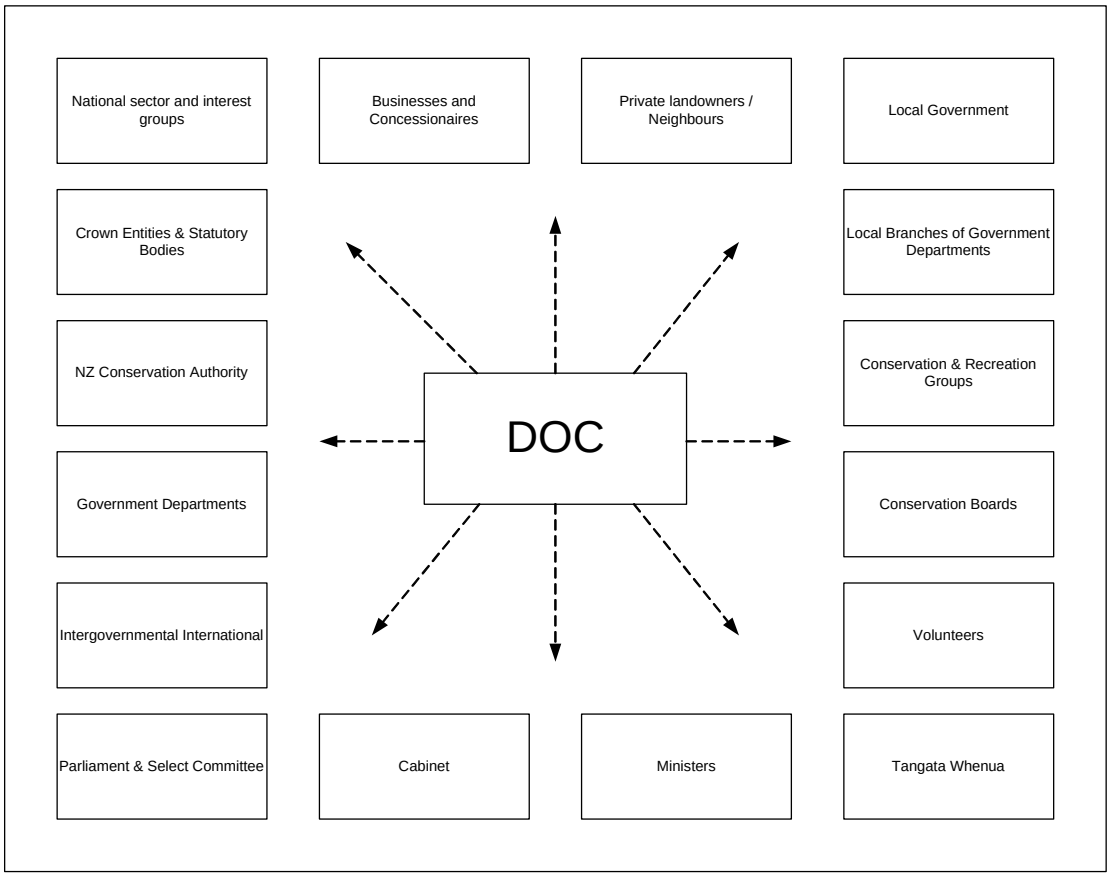


Figure 7.4: The Department Stakeholders. (DOC, 2004e)

DOC staff dedicated to the issue of tourism have relationships with these stakeholders at a national, regional and area level. At a national level, the tourism and concessions group within the Heritage Appreciation Unit maintains a working relationship with diverse stakeholders though the Tourism Industry Forum (A. Thompson, personal communication, May 17, 2005). The Tourism Industry Forum brings together, among others, the Ministry of Tourism, the Tourism Industry Association, Tourism NZ, Federated Mountain Clubs, Fish & Game, Maori Tourism section within the Ministry for Economic Development, as well as the Ministry of the Environment. At a regional level, the concession staff of the conservancy offices have relationships with concessionaires through processing their applications and managing rent reviews, with iwi (Maori), members of conservation boards who as public representatives help to write policy advice for the Department, regional tourism organisations which are responsible for marketing tourism in their regions, as well as with non-governmental organisations, such as the Royal Forest and Bird Protection Society of New Zealand and Federated Mountain Clubs (A. Thompson, personal communication, May 17, 2005). At an area level, tourism staff will have close relationships almost on a daily basis with the concessionaires, and also with local iwi.

One of the biggest political issues for the Department of Conservation in terms of relationship management is with Tangata Whenua. The Conservation Act requires DOC to give effect to the principles of the Treaty of Waitangi in conservation issues. In other words, by law DOC must reach its objectives while giving effect to the principles of the Treaty. This legal mandate is expressed by the relationship with iwi around the country through the Tumuaki Kaupapa Atawhai division within DOC at the national level, and also Kaupapa Atawhai managers in each conservancy to keep in close contact with Maori communities. Relationships with iwi in the South Island have been more straightforward than with the North Island iwi, mainly because in the North Island there are more than 30 tribes with whom to relate and negotiate (A. Thompson, personal communication, May 17, 2005).

Relationships with Maori are important for DOC on issues such as the concessions, tourism and recreation areas. The reason for the importance of this relationship is that iwi must be consulted for concessions applications to see how their cultural values may be affected by the proposed concession. Although Maori do not have a say on the approval or rejection of a proposed concession, they can influence the process and halt a concession. Also, with regard to tourism and recreation planning and management, DOC must consult with Maori especially on areas of significant cultural value to Maori, for example, sites like Matakaea (North Otago), Maukaatua (Taieri Plain) and Tititea (Mount Aspiring National Park).

DOC's recreation staff also have relationships with stakeholders at national, conservancy and area levels. A clear example of these relationships was during the consultation process prior to undertaking the 'Recreation Opportunities Review' carried out during 2003 and 2004 to review the network of visitor facilities. Between September 2003 and April 2004, DOC conservancies shared their facility proposals with the public so interested groups and individuals could make comments through submissions (until January 2004) (DOC, 2003d). As an example of this public consultation, DOC sent a questionnaire to 90

clubs affiliated to the Federated Mountain Clubs to receive their submissions and 44 of the 90 clubs participated in the review (DOC, 2004d). This was a national review focusing on proposals at a conservancy level and affecting visitor facilities in specific areas. This review demonstrates the relationship recreation staff has with other key participants and actors outside DOC.

The relationships with key participants concerned with tourism and recreation issues result in the use of public participation processes promoted by DOC. On one hand, public participation gives DOC an opportunity to consult with interested parties about plans and policies regarding tourism and recreation. On the other hand, public participation allows concerned groups to influence the management of tourism and recreation in New Zealand. The relevance of carrying out public consultation is that DOC has the mandate to provide recreational opportunities for visitors to enjoy protected areas, and through these consultation processes DOC reaches its end-users to understand their needs and requirements. In conclusion, public consultation is a vital element of DOC's management style.

7.3 Mexico

7.3.1 Administrative Structures

This section on Mexico will present and analyse the administrative structures (mission, functions and structure) of the National Commission of Protected Natural Areas (CONANP). In addition, this section discusses the structures of other government bodies outside CONANP with which this agency interrelates in carrying out its mandate regarding the management of tourism and recreation. This analysis is carried out to understand how the administrative structures affect the management of tourism and recreation.

The Secretariat of Environment and Natural Resources (SEMARNAT), referred here also as the Ministry of Environment, is the Ministry in charge of the environmental issues of Mexico. According to the LGEEPA Regulation concerning PNAs, the SEMARNAT is the ministry responsible for the protected areas. To assume this obligation, SEMARNAT created the National Commission of Protected Natural Areas (CONANP) on the 5th of June 2000 as a de-concentrated agency (see Figure 7.5). CONANP is now the federal government agency in charge of the management of federal protected natural areas. In this case, CONANP is dedicated to the issue of managing federal protected natural areas in Mexico.

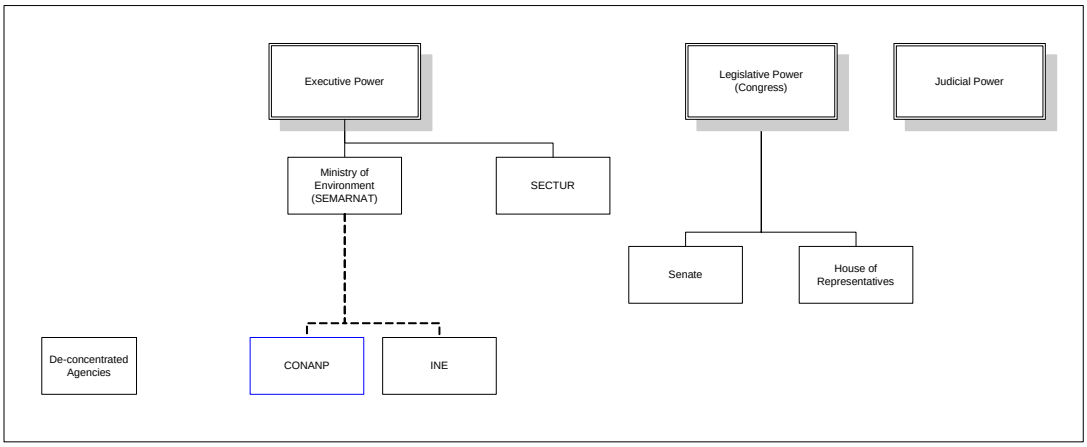


Figure 7.5: CONANP in the Administrative Structure of the Federal Government.

Mission

CONANP's mission is to "conserve the natural heritage of Mexico through Protected Natural Areas and the Sustainable Rural Development Programs (PRODERS) in the Conservation Priority Regions" (CONANP, 2001). CONANP's mission statements presents challenges to the agency by directing that it must conserve nature, but at the same time promote the sustainable development of local communities living inside conservation priority regions and protected natural areas. Hence, CONANP is managing the paradox of preservation and use by the local communities and external agents. The approach to balancing this paradox is to permit use, but through a sustainable use of the natural resources.

The mission has profound effects and connotations in the management of tourism and recreation in protected areas. First, CONANP can foster and use tourism as a tool to promote community development. Second, all tourism and recreation in protected areas must benefit the local communities in some way. Third, tourism and recreation must be managed to minimise the negative impacts on the natural, social and cultural assets of a protected area. Finally, tourism and recreation are activities that can increase the awareness regarding conservation and protected natural areas through environmental interpretation and education.

To reach this mission, the CONANP has a specific administrative structure that is evolving. This structured evolution responds to the normal changes that a young organisation undertakes to improve its work. For instance, the need to better manage tourism and recreation in protected areas requires that the different areas of CONANP work together to manage these issues. The following section discusses the structure and functions of CONANP.

Structure and Functions

The Internal Regulation of CONANP defines the responsibilities and functions of the different areas of the agency. Therefore, the internal regulation determines the 'official' structure of the agency. The following paragraphs describe the official structure and functions of CONANP according to the internal regulation, but also complement the 'real' functions and working relationships of the structure concerning tourism and recreation based on the interviews carried out for this research. The reason for the difference

between the 'official' and the 'real' is that CONANP has not yet updated the internal regulation. This internal regulation is written by CONANP and it seems that other pressing issues and the lack of staff have not yet permitted this document to be updated. It is important to note that only the functions related to managing tourism and recreation are discussed.

The official structure of CONANP is determined mainly by the Internal Regulation of CONANP and by the LGEEPA Regulation concerning PNAs. The Internal Regulation of CONANP describes the functions of the President, three General Directorates, Directorates and the Administration Offices of the Regions and each protected area (see Figure 7.6). The LGEEPA Regulation concerning PNAs describes the National Council of Protected Natural Areas[4] and the Advisory Councils[5] (Consejos Asesores) for each protected area (see Figure 7.6). The areas within the administrative structure of CONANP which have a direct involvement in tourism (mainly on the question of tourism permits or possible concessions) are the General Directorate of Conservation Management (Dirección General de Manejo para la Conservación), the General Directorate of Promotion and Institutional Development (Dirección General de Desarrollo Institucional y Promoción), the Directorate of Legal Affairs (Dirección de Asuntos Jurídicos) and the Administration Office of each PNA.

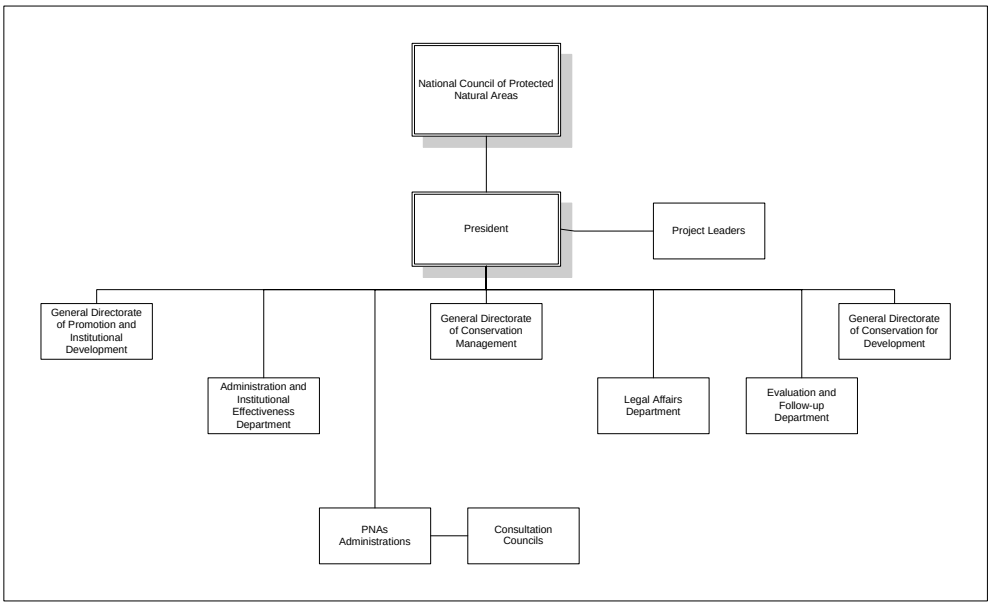


Figure 7.6: Structure of CONANP. (CONANP, 2005; DOF, 2000; SEMARNAT, 2003b)

The Internal Regulation of CONANP defines all the functions of each area in the agency. Some of these functions are related to the management of tourism and recreation. For example, the functions of the General Directorate of Conservation Management are to coordinate the elaboration of management plans, evaluate environmental impact assessments of infrastructures inside the PNAs (e.g., tourism infrastructure), as well as give, revoke and terminate permits, authorisations and licences for activities in

[4] The National Council of Protected Areas is an advisory organisation independent of the government composed of members of important conservation organisations, as well as renowned Mexican conservation academics.
[5] Advisory councils are composed by various stakeholders (NGOs, government, universities and/or research institutes, and community organisations) of a PNA. The objective is for each PNA to have its own advisory council to promote social participation regarding conservation in Mexico.

PNAs (e.g., tourism permits for tour operators). The function of the General Directorate of Promotion and Institutional Development related to tourism are finding sources of funds for the conservation of the PNAs (e.g., through tourism concessions), and promoting the protected natural areas which has resulted in increased visitation. The function of the Directorate of Legal Affairs is to review the permits, authorisations and licences (e.g., tourism permits). Finally, the functions of the Administration Office of each PNA are to manage the area according to the law, decree and management plan, and to be involved in the authorisation of permits and licences.

Although the Internal Regulation of CONANP establishes all these functions related to tourism management of the different directorates and departments, the regulation does not clarify the working relationships between each area in the management of tourism and recreation. Furthermore, the regulation does not mention other important areas inside CONANP which relate to tourism and recreation. For example, the Project Leaders are people in the agency who work as advisors to the President and are also responsible for several strategic projects of CONANP. For instance, there is a project leader for ecotourism, also responsible of the entrance fees project and relations with the Legislature branch (A. Bernárdez, personal communication, September 13, 2004). This person with respect to ecotourism works closely with other federal government agencies and ministries in the development of ecotourism planning, also leads the development of the ecotourism policy together with the directors of the PNAs, and was recently appointed by the Minister of Environment as the person in charge of ecotourism for the whole Ministry of Environment (SEMARNAT).

The General Directorate of Conservation for Development is another area in CONANP with an important involvement in the development of tourism in protected areas. This directorate is responsible for managing the Sustainable Rural Development Programs (PRODERS). PRODERS is a subsidy program that finances community-based projects in protected areas in Mexico. One type of project highly promoted by this directorate is ecotourism. Ecotourism projects are being considered as a productive alternative activity for local communities. Consequently, this directorate provides significant financial resources to communities that want to develop ecotourism projects.

While presenting other areas inside CONANP involved with tourism and recreation, Figure 7.7 also illustrates the working relationships inside CONANP around the management of tourism and recreation. Working relationships include issues of planning (e.g., management plans), regulation (e.g., tourism permits), development (e.g., funding of community projects), and promotion (e.g., information provision and promotion of PNAs).

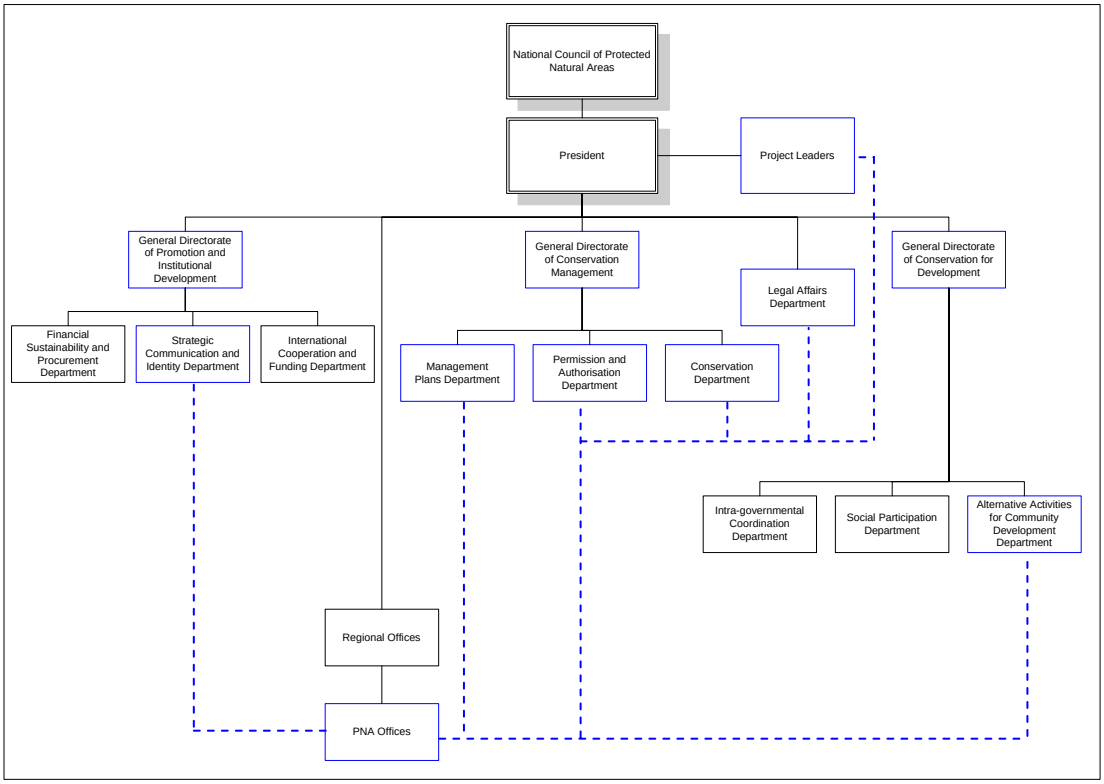


Figure 7.7: Working relationships inside the CONANP related to tourism (blue-dashed lines).

CONANP has prioritised other functions and, as a result, the agency is still in the process of developing an institutional policy for tourism, and there is no coordinating area or individual position concerned solely with the topics of either tourism or recreation. Until the issues of tourism and recreation are represented by an area or at least an individual in the structure of CONANP, important advancements will not be achieved. Such advancements include the writing of a visitors' policy, and the implementation of a visitor management system such as Limits of Acceptable Change (LAC).

It must be noted that at the time the present research was carried out, CONANP was in the process of implementing a structural change referred to as 'Regionalisation'. This process involves dividing the country into seven regions, each of which will have a regional director and staff to support the work of the different directors of the protected natural areas (C. Enríquez, personal communication, September 28, 2004). This process is a decentralisation exercise with the objective of making CONANP more effective (D. Gutiérrez, personal communication, September 13, 2004). Despite the proposed initiative, some PNA directors are not yet clear about how the issue of tourism is going to be incorporated (F. Remolina, personal communication, September 24, 2004).

The regionalisation is in essence a decentralisation process. Staff of the different directorates are being sent to the seven regions to provide support in their areas of expertise to the protected area offices all around the country. Although this process is an important step towards improving the management of the protected area system in Mexico, how this regionalisation process is going to affect the management of tourism and recreation is not yet clear. As there are currently no tourism or recreation staff a national level, it will be difficult to create such positions in the regions.

CONANP is not the only government entity concerned with the issues of recreation and, even more, tourism in protected natural areas. The Ministry of Tourism (SECTUR) views tourism in protected areas as an opportunity to market. Other ministries view nature tourism as an opportunity for rural development. As a result, CONANP works with other government bodies to manage, promote and develop tourism in conservation areas.

Intergovernmental Relationships

CONANP works with other government ministries, agencies and institutes to manage tourism and recreation. Figure 7.8 illustrates the intergovernmental relationships between CONANP and other government bodies (blue-dashed lines indicate working relations between different government agencies and departments with CONANP). The black lines represent the formal and hierarchical structure of the different ministries, agencies and departments.

CONANP has different types of working relationships with other government ministries, agencies and departments. There are political negotiations between CONANP and the Legislature. Writing and consultation of management plans occurs between CONANP and INE, CONAFOR and FONATUR. Development of tourism infrastructure is planned and financed between CONANP and SECTUR, and more specifically with the Alternative Tourism Department. Tourism training is planned and delivered with the assistance of SECTUR, and also CECADESU. Tourism monitoring is carried out between CONANP and PROFEPA. Tourism impact assessments are evaluated between CONANP and the General Directorate of Environmental Impact and Risk in the Ministry of Environment. Finally, tourism applications forms (the documents to be filled by potential tourism permit holders or concessionaires) are certified with COFEMER, as explained in Chapter Six.

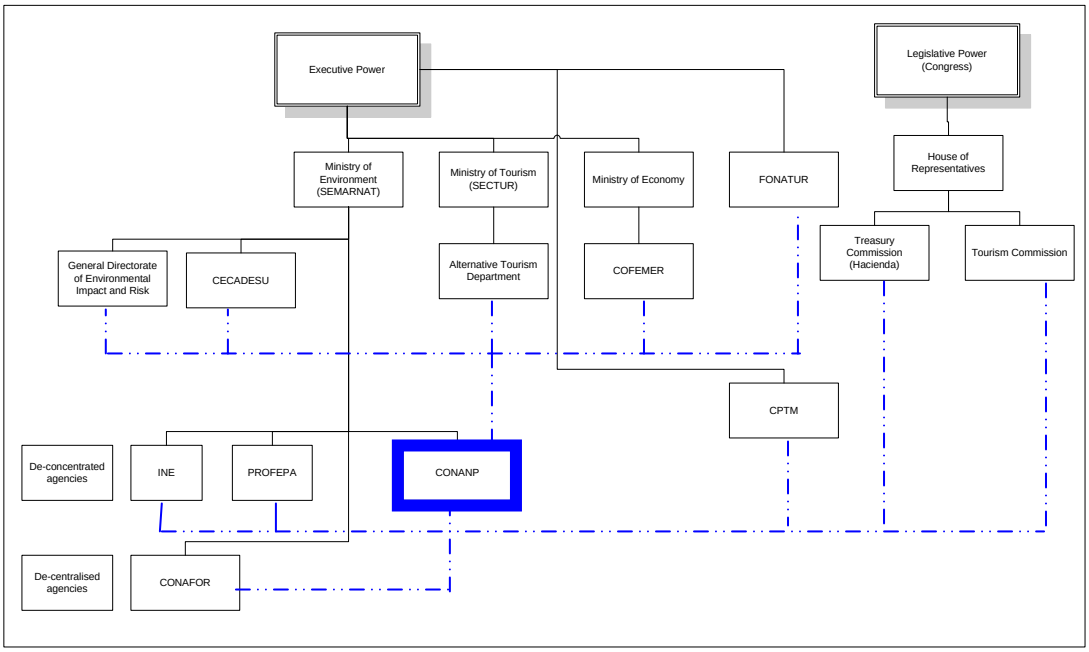


Figure 7.8: Intergovernmental relationships between CONANP and other government bodies (dashed lines).

The main importance of these intergovernmental relationships with CONANP regarding tourism and recreation is that the 'lack of knowledge' about these issues in CONANP is complemented by the expertise of other agencies. By working with all these government organisations, CONANP plans, manages and monitors tourism in protected areas more effectively. However, the expertise and vision of the government as a whole with respect to tourism and recreation in protected areas differs from other key participants, as discussed later.

To improve the working integration around tourism in protected areas, CONANP participated in signing an inter-institutional collaboration agreement for the development of ecotourism, rural tourism and other types of nature tourism in Mexico. This agreement was signed on October 4th, 2004 by four ministries, five government agencies and CONANP (as seen in Figure 7.9). The purpose of the agreement is to join efforts and resources (financial and human) to foster activities that privilege conservation and the sustainable use of natural resources, the development of rural and indigenous communities, as well as profitable tourism enterprises through the development and promotion of ecotourism, rural tourism and nature tourism.

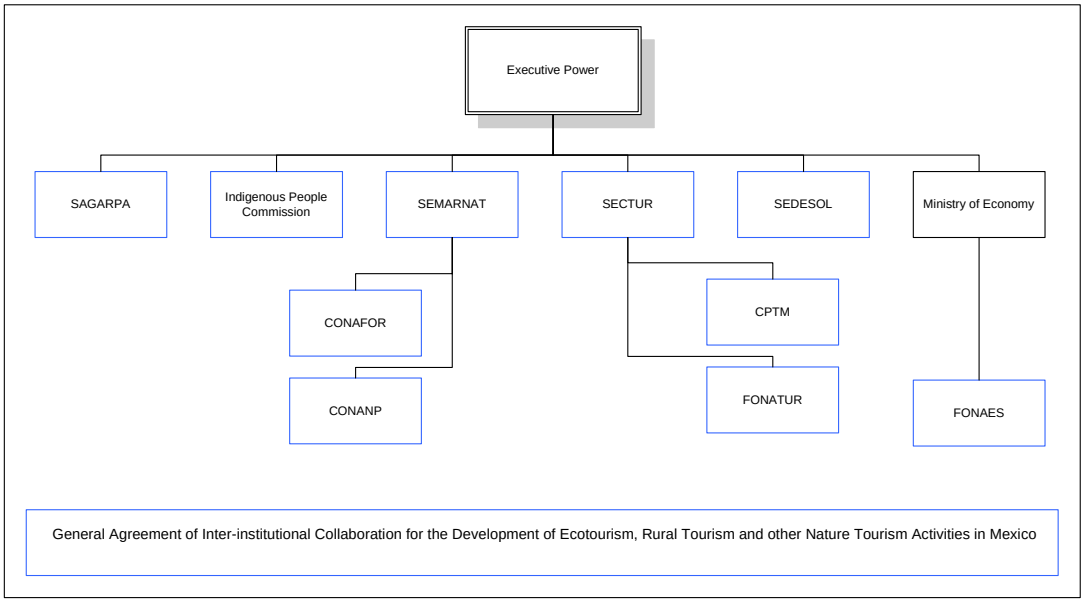


Figure 7.9: Government Ministries and Agencies which signed the Nature Tourism Agreement.

The impact of this agreement on the management of tourism and recreation in the protected natural areas of Mexico will be very significant. On one hand, it promises considerable financial resources for the development of nature tourism projects. The agreement is also the first coordinated effort between various ministries and agencies to develop and promote nature tourism. On the other hand, the agreement yet remains to effectively result in concrete actions. Furthermore, the agreement will be tested in 2006 with the national elections and the political changes that occur with the election of a new President.

It must be noted that this agreement for collaboration is the result of two parallel processes. First, the government's intention to develop nature tourism in the protected natural areas of Mexico; this strategy comes from the National Tourism Program that proposes the diversification of tourism products offered to the international market (L. Rueda, personal communication, September 8, 2004). For fifty years

Mexico has been positioned as a sun and sea destination, and now wants to supply other tourism experiences. Second, with the International Year of Ecotourism in 2002, the Ministry of Tourism together with the Ministry of Environment (SEMARNAT) evaluated the actions these ministries could take to jointly develop ecotourism (L. Rueda, personal communication, September 8, 2004). A working group resulted from this ministerial coordination and after two years the group drafted the collaboration agreement described above.

The working relationship of CONANP at the federal (national) level has ended, but at a state and municipal level work remains to be done. The PNA administration offices and their directors are the units of CONANP who maintain relations with the state and municipal governments. The relationship can be directly with the state Governor or the Municipal President, or with the state or municipal ministries or departments in charge of tourism development and promotion.

CONANP has worked during its first years to improve coordination with the different levels of government, but work remains to be done with key participants outside the government sphere. The following section discusses how CONANP relates to other organisations and entities outside the government which are relevant to the management of tourism and recreation in protected areas.

7.3.2 Key Participants and Actors

The variable of 'key participants and actors' includes non-governmental stakeholders which have an interest or relationship to the management of tourism and recreation in protected natural areas. In the case of Mexico, this encompasses communities, universities, non-governmental organisations (NGOs) concerned with the environment and/or tourism, tourism associations, and tourism consultants or experts.

For CONANP, the most important actors in the development of tourism in the protected areas of Mexico are the local communities. The local inhabitants need to benefit from the existence of tourism in the PNAs. This benefit can be through active participation in the development of community-based, tourism enterprises, or by the economic benefit derived from private, external enterprises. The administration officers of each protected natural area are the staff within the structure of CONANP responsible for maintaining relations with the local communities. The importance of relating to local communities is mainly because most land in protected areas is owned by the local communities in a communal system of ownership called ejido. Therefore, CONANP must convince local inhabitants and work together with them to conserve the natural values. Due to this fact, CONANP must maintain a close and positive relationship with local landowners. The Directors of the protected natural areas are the staff inside CONANP who have the responsibility and obligation to maintain this relationship with ejidatarios (communal landowners). In some protected areas, this relationship is very good, but in other cases CONANP has problems in reaching its conservation goals and faces problems such as illicit exploitation of the forests. To improve these relations, CONANP has created Advisory Councils (Consejos Asesores) for each protected areas, as mentioned earlier in the variable of administrative structures.

Universities and research institutes are seen by CONANP as potential collaborators in the research and monitoring of tourism and recreation in protected areas. Presently, universities and institutes are involved in some protected areas in ecological research, and in some cases in the active management of a PNA. However, CONANP views the potential role universities can have by carrying out tourism research in protected areas (CONANP, 2004a). For example, universities can monitor the impacts of tourists in the ecosystems of an area and determine carrying capacities.

Besides communities and universities, CONANP acknowledges the existence of other actors, but has not yet developed a direct working relationship in terms of tourism and recreation. Therefore, CONANP has yet to develop closer relationships with non-governmental organisations concerned with tourism such as the COMECO (Colegio Mexicano de Ecoturismo), tourism associations such as the Mexican Association of Adventure Tourism and Ecotourism (AMTAVE - Asociación Mexicana de Turismo de Aventura y Ecoturismo), and tourism consultants and experts. In contrast, CONANP considers as relevant actors only those organisations with the financial resources to develop ecotourism projects, and most of the time this only includes the government institutions that participated in the signing of the collaboration agreement.

Having said this, CONANP does have important relations with NGOs, but not necessarily in terms of tourism. For instance, the Mexican Nature Conservation Fund (FMCN – Fondo Mexicano para la Conservación de la Naturaleza) manages the Fund for Protected Areas (FANP) that provides financial resources to 16 PNAs for basic conservation activities (FMCN, 2004). Moreover, CONANP reports the initiation of the Cooperation Strategy with Civil Organisations which seeks to involve NGOs in the conservation of the protected natural areas in aspects such as planning, development of productive projects, environmental training and education, and restoration (CONANP, 2004b).

The relationship between CONANP and key participants is important for the planning, development, promotion, and monitoring of tourism and recreation in protected areas. CONANP can strengthen its capabilities regarding tourism and recreation by working together with organisations and individual experts in these topics. Though tourism and recreation in protected areas have existed for a long time in Mexico, the 1990s has seen a explosion in the demand from national and international visitors. CONANP must work to create a bridge between itself and these participants and actors to effectively manage tourism in protected areas.

7.4 Comparing New Zealand and Mexico

This section compares the mission, administrative structures and their relationships with government and non-governmental organisations of the Department of Conservation (New Zealand) and the National Commission of Protected Natural Areas (Mexico).

The missions of both agencies have important similarities relevant to the management of tourism and recreation. DOC and CONANP both have as their the mission the conservation of the natural heritage of their respective countries. In their mission statements, both agencies express the need to balance the paradox of preservation and use of natural areas. In addition, the missions imply that use must be 'sustainable'. This is important to tourism and recreation management because both missions state that all activities in protected areas must not impact negatively on the natural values now or in the future.

The missions of DOC and CONANP also have significant differences relevant to the management of tourism and recreation. First, DOC's mission states that conservation is of both natural and historic heritage. In the case of Mexico, CONANP is only concerned with natural heritage. Second, while the purpose of conservation of natural areas in New Zealand is 'for all to enjoy', CONANP's mission states how conservation will be achieved: 'through Protected Natural Areas and the Sustainable Rural Development Programs (PRODERS)'. In the Mexican case, conservation must allow and be attained through sustainable rural development. Third, the missions of the agencies refer to different users of the natural heritage. In the New Zealand case, all New Zealanders and international visitors have the right to use and enjoy the natural heritage. In the Mexican case, the users are the local communities which will benefit from the PRODERS helping their development while conserving nature. These differences affect how tourism and recreation are managed in both countries. While tourism and recreation in New Zealand is permitted so that people can enjoy nature, these activities must not impact severely on the natural values being conserved. In the Mexican case, tourism and recreation must not have any negative impact on the natural settings, but must also benefit and help the sustainable development of the local communities. In other words, conservation in New Zealand is primarily concerned with nature, while in Mexico, conservation addresses the protection of nature but above all seeks to reduce poverty through sustainable development.

DOC and CONANP differ in how the issues of tourism and recreation are imbedded in the organisational structure. DOC has staff dedicated solely to the issues of recreation and tourism concessions at a national, conservancy and area level. In CONANP, very few individual staff members have tourism amongst their many responsibilities; there is also a stronger emphasis on tourism management rather than recreation. To have staff dedicated to managing recreation and tourism in the protected areas of Mexico remains an area to be created at a national, regional and area level.

A decentralised structure responds better to the needs of a protected natural areas system. In the New Zealand, DOC has a geographically hierarchical structure. This structure works on national, regional, conservancy and area levels with clear functions and roles regarding issues such as tourism and recreation. In the Mexican case, where government functions have been centralised for decades, decentralisation is a recent process that began in the 1990s. CONANP was created in the year 2000 and was centralised with administration offices in the protected natural areas it had funds to cover. For the past two years, CONANP has been experimenting with different models to decentralise its functions.

This process has been called regionalisation and has resulted in the creation of seven regions in the country which will support the work of administration offices in the diverse protected areas.

The administrative structures of DOC and CONANP include formal communication and relations with government bodies at a national level. DOC has its External Relations Group which connects the Department with government entities, such as ministries and Parliament. CONANP, on the other hand, coordinates with other government bodies through staff that need to collaborate with other government officials to undertake their work.

Besides formal relations, both agencies relate with other government entities through ad hoc forums or public participation processes. In the New Zealand case, DOC chairs the Tourism Industry Forum which was set up specifically to address issues of tourism in conservation lands. Through this Forum, DOC works together with the Ministry of Tourism, the Ministry of Environment and New Zealand Tourism. In the Mexican case, CONANP signed a nature tourism agreement in 2004 with other government ministries and agencies to coordinate efforts to develop nature tourism in protected areas. This opened a new opportunity to work with federal government. In both cases, there is a stronger relationship with the national government than with the regional or district governments.

Both agencies also maintain contact with regional/state and district/municipal governments. DOC maintains contact with regional and district councils through its conservancy offices. The area offices have some level of coordination with district councils. CONANP maintains contact with state and municipal governments through the PNA administration offices. With the regionalisation process, the different regions will have contact with the state governments.

DOC and CONANP maintain close relations with other important political stakeholders. In the case of New Zealand, DOC has a formal liaison with Maori through its national office (Tumuaki Kaupapa Atawhai) and conservancy Kaupapa Atawhai managers. CONANP maintains formal relations with local ejidatorios through the Advisory Councils set for each protected natural area. The difference between these structural units is that DOC dedicates a whole division and has conservancy managers solely dedicated to relating to Maori tribes and communities, while CONANP, through its Advisory Councils, relate to more stakeholders besides local inhabitants. However, it must be added that staff in the administration offices of the PNAs have a close relationship with local communities in performing their work.

Relations with non-governmental organisations and individuals are important to improve the management of tourism and recreation and also to deliver the recreational opportunities sought by the users. DOC, through the Tourism Industry Forum and public participation processes like the ‘Recreation Opportunities Review’, maintains contact with non-governmental stakeholders concerned with the issues of tourism and recreation. CONANP has no clear instrument or forum to relate to organisations and individuals interested in tourism and recreation. Due to this lack of connection with important organisations,

CONANP is missing important feedback and collaboration from academics, consultants and tourism associations.

7.5 Administrative Structures and Key Participants within the Institutional Arrangements Framework

The institutional arrangements framework helps identify the variables that are important for the management of a resource. The administrative structures are the implementation bodies that put legislation and policies into action. The administrative structures are constituted by people; staff implement the abstract ideas written in laws, regulations, policies and guidelines into daily actions. To do their jobs, the staff are part of a structure which enables them to work with other people inside the agency and with other entities inside and outside the government sphere. Through this collaboration, or lack of collaboration, players of the game (administrative structures and key participants) are able to get things done while enacting the rules of the game.

Therefore, the administrative structures are the result of other variables of the institutional framework. Administrative structures are defined by the legislation. The legal mandate is the foremost variable modelling the administrative structures. In addition, the administrative structures result from the historical values and customs surrounding an issue. In this case, the historical evolution of conservation in each country created the agency in charge of protecting the natural heritage. The size and scale of the administrative structures are also determined by the financial and economic arrangements (as discussed further in Chapter 8). The amount of operational funds an organisation has can impact positively or negatively on the effectiveness of its operation. On the other hand, the variables of the administrative structures affect other variables of the institutional arrangements.

Due to the fact that the administrative structures are the implementation bodies, they affect other variables of the institutional arrangements framework, as shown in Figure 7.10. First, administrative structures affect the capacity to relate with key participants and/or actors, as well as with the political structures to collaborate and negotiate (dashed lines in Figure 7.10). Second, within the administrative structures, staff are in charge of designing policies and guidelines, determining the budget allocation and finding alternative sources of funding, as well as implementing the management techniques. The agencies design and implement policy documents to manage tourism and recreation. For example, DOC created the Visitor Strategy, and CONANP is working on a tourism policy. Also, both agencies write the management plans of each protected area and consult with other stakeholders before implementing them. The administrative structures also determine how the government budget will be used and looks for further funding sources, as will be described in the next chapter. Finally, the administrative structure determines the management techniques which help manage tourism and recreation. In addition to affecting management techniques, administrative structures also affect the overall management of tourism and recreation.

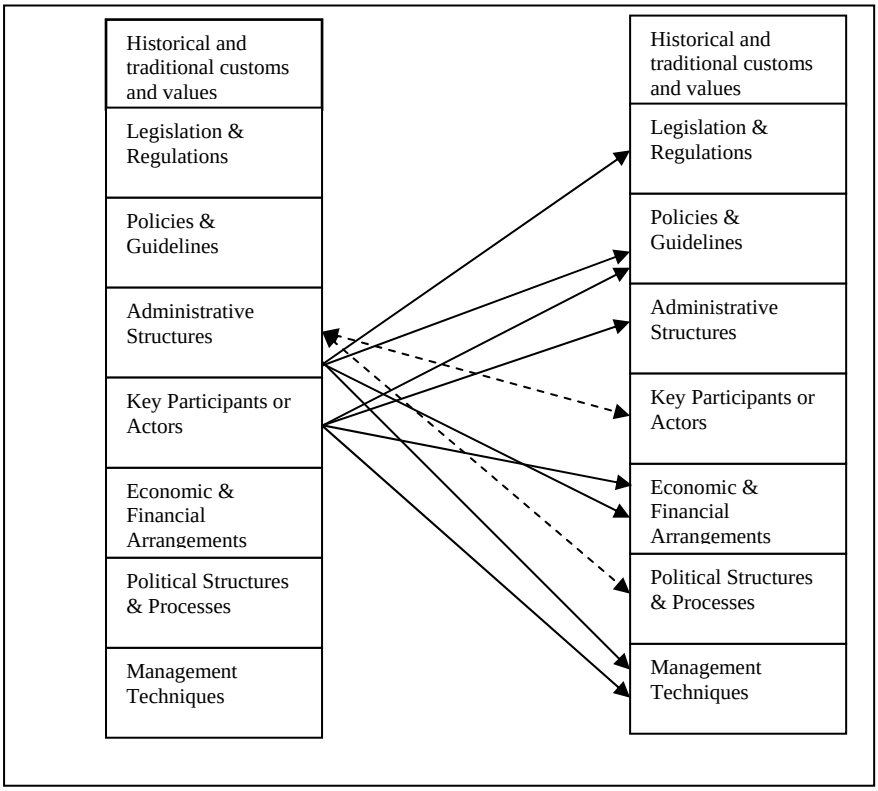


Figure 7.10: Relationships between the administrative structures and key participants variables with the other variables of the institutional arrangements framework.

Administrative structures affect tourism and recreation management through strategic planning, continuous improvement and effective delivery. Strategic planning integrates through policies and guidelines the legal mandate of the agency, the intrinsic characteristics of the natural resource and its different values (utilitarian, aesthetic, ecological and cultural), and the opinions, interests and knowledge of key participants and actors. This integration results in effective and efficient systems, processes and techniques to manage tourism and recreation. Due to the fact that the different contexts of a protected area (natural, social, cultural and managerial) and the country as a whole change, the systems, processes and techniques proposed by the strategic planning must be continually improved so effective delivery is sustained. Effective delivery depends on the strategy and improvement of the systems, but also provides feedback to assess if delivery solves the issues produced by tourism and recreation in protected areas.

Administrative structures also affect tourism and recreation management by their capacity, or incapacity, to relate to other stakeholders. These stakeholders can be government or non-governmental organisations or individuals which influence the management of tourism and recreation. This influence can be through financial resources, as well as planning, development, training, and marketing expertise and/or capabilities. If the agency ignores these stakeholders it hinders the capability of the whole administrative structure to reach its goal. In the case of New Zealand, the goal is to allow tourism and recreation while conserving the natural and historic heritage for the public to enjoy today and in the future.

Key participants influence the variables of policies and guidelines, administrative structures, economic and financial arrangements, and management techniques. DOC, and CONANP, must consult with the public policies the agencies apply to manage protected areas. Such is the case of management plans and other non-statutory documents. Through public consultations, key participants can influence the policies of these agencies. Key participants also influence the administrative structures by maintaining communication between organisations and the agency and vice versa. In addition, key participants can affect the administrative structures through contributing to the donations or sponsorship which relate to the economic and financial arrangements of the institutions, as will be discussed further in Chapter Eight. Finally, participants can influence the management techniques applied in protected areas to manage tourism and recreation. For example, Federated Mountain Clubs in New Zealand participated in the adaptation of the Recreation Opportunity Spectrum (ROS), as further discussed in Chapter Nine.

7.6 Summary

This chapter identified and described the administrative structures and key participants interested and involved in the issues of tourism and recreation in protected natural areas of New Zealand and Mexico. The chapter also discussed how DOC and CONANP relate with different interested parties and how these relationships influence the management of tourism and recreation in conservation land of both countries.

The administrative structures of any government agency depend on the economic and financial arrangements which support the agency. Government entities operate with funds which come from taxes and other revenue generating sources. Most of the budget is a result of the political structures and processes with which the agency has to negotiate to fund its requirements appropriately. The following chapter discusses the variables of economic and financial arrangements, as well as political structures and processes of the institutional arrangements surrounding DOC and CONANP.

8. Economic and Financial Arrangement & Political Structures and Processes

8.1 Introduction

The purpose of this chapter is to describe the economic and financial arrangements, and the political structures and processes surrounding the Department of Conservation (DOC) in New Zealand and the National Commission of Protected Natural Areas (CONANP) in Mexico. The chapter also compares these variables between the two countries. Finally, the chapter discusses how the variables influence the management of tourism and recreation in protected natural areas.

Economic and financial arrangements are understood as the processes by which the inputs (e.g., public funding, user fees, sponsorship, and other) and outputs of money related to recreation and tourism in protected natural areas are channelled inside the administrative structures of the institutional arrangements.

Political structures and processes cover the relations of the agency with politicians in the Legislature branch of government, political figures inside the state legislatures and ministers of key governmental organisations, such as the Ministry of Tourism and the Ministry for the Environment, who have direct or indirect influence on the issues of tourism and recreation in protected natural areas.

The economic and financial arrangements are one of the most important variables in the institutional arrangements in the government level. Action, and non-action, is determined in part by the money available to the government entity. The level of funding allocated to a department or ministry (e.g., conservation) is also an indicator of the importance of the issue in governmental policy.

Economic and financial arrangements are discussed together with political structures and processes because government bodies mostly negotiate the allocation of funds with the Legislature branch. In the Mexican case, the Executive power, the President, develops a budget for income and expenditure for the following year which is presented and debated by the Legislature before it is accepted. If the President wants certain issues to have an appropriate budget she/he must negotiate this with the Legislature where opposition political parties will try to impose their political agendas. This is why financial arrangements and political processes are included together in this chapter.

8.2 New Zealand

8.2.1 Economic and Financial Arrangements

This section regarding the economic and financial arrangements of New Zealand discusses the topics of budget, funding, and tourism and recreation revenue. The subsection on the budget describes the level of

funding that the Department of Conservation has received in recent years and the financial system of output classes DOC uses. The funding subsection concentrates on the different sources of income on which the Department depends. The subsection on tourism and recreation revenue explains the contribution that recreation provision and tourism concessions make to DOC's budget.

Budget

DOC's budget has increased during the past five years (see Figure 8.1). In 2000 DOC had a budget of $151 million increasing to $243 million in 2004. One of the reasons for this increase is the additional $349 million provided by the government to maintain the recreational assets over 10 years since 2002 (DOC, 2004e). These additional funds are a recognition by the government of the important role that conservation and recreation management plays in the tourism industry of New Zealand (A. Thompson, personal communication, May 17, 2005).

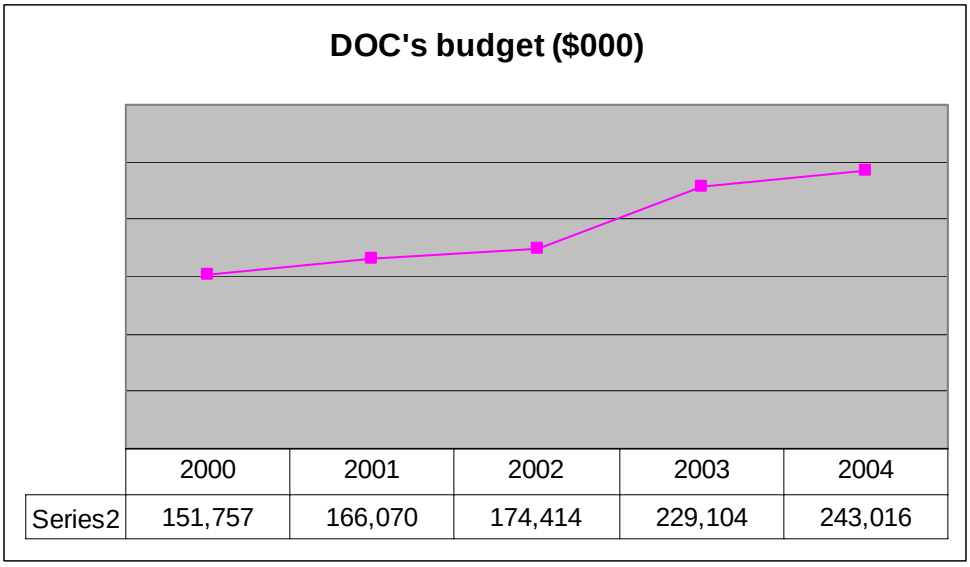


Figure 8.1: Annual budget of the Department of Conservation (2000-2004). (DOC, 2001, 2002, 2003a, 2004c)

The Department of Conservation has set up a financial system that divides the budget by output classes which are derived from the 'Departmental Outcomes' of DOC in the Statement of Intent, as discussed in Chapter Six. The two overall Departmental Outcomes are protection and appreciation. The appreciation outcome is defined as "people have opportunities to appreciate and benefit from their natural and historic heritage and are involved and connected with conservation" (DOC, 2004e, p. 12). Within this appreciation outcome the output classes included are: (1) management of recreational opportunities, (2) recreational opportunities review, and (3) conservation with the community. The management of recreational opportunities output is divided between 'visitor facilities and services' and 'visitor concession impact management'. These two outputs are issues clearly related to recreation and tourism in protected areas.

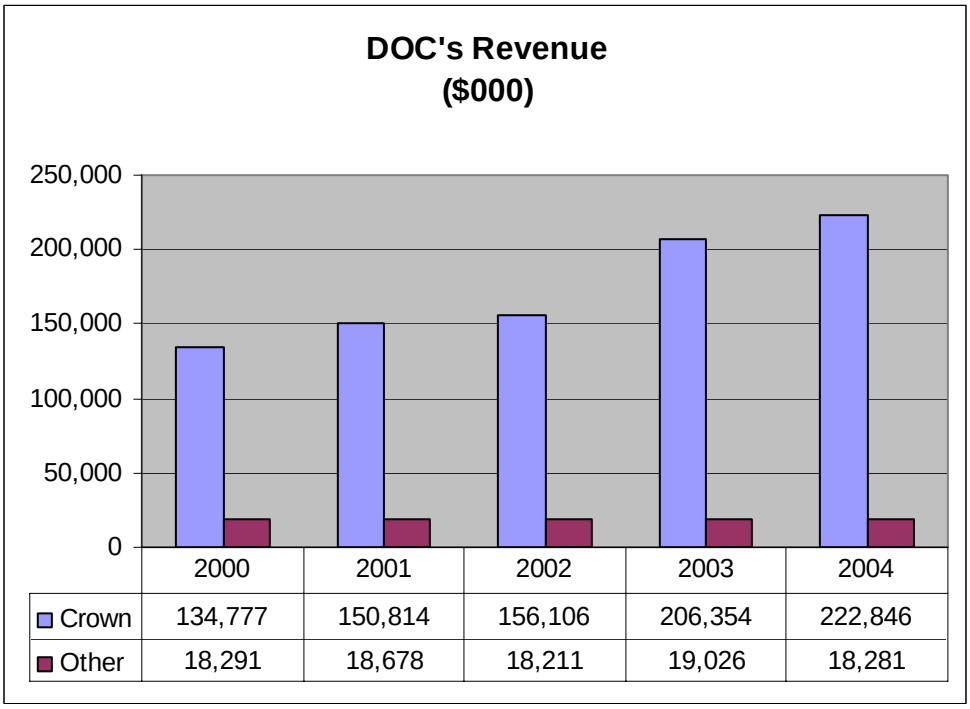
The management of the recreational opportunities output has one of the biggest budgets, only surpassed by the 'management of natural heritage' output. In the fiscal year 2003-2004 the government destined $87 million to the management of recreational opportunities output (DOC, 2004c). In the same year the

management of natural heritage output had a budget of $99 million (DOC, 2004c). This demonstrates that the majority of DOC's budget is dedicated clearly on one hand to protecting the natural and historical heritage, and on the other hand. to fostering the use of this natural and historical heritage managed by DOC.

The difference between the outputs of 'management of recreational opportunities' and 'management of natural heritage' is the revenue that these outputs generate. The provision of recreational opportunities in conservation land by DOC and tourism concessionaires generates the biggest income compared to any other output class. This will be further discussed in the section on tourism and recreation revenue.

Funding

The Department derives revenue through the provision of outputs to the Crown (government), for services to third parties and from donations (DOC, 2004e). The government annually dedicates an operation budget (revenue) for the Department of Conservation. This revenue from the government has increased throughout the years as seen in Figure 8.2. The Department also generates income from services to third parties. A clear example comes from recreation provision and tourism concessions in protected areas. The fees charged for the use of backcountry huts and camping grounds are revenue sources from the recreation facilities and services provided by DOC. The rents and fees charged to tourism concessionaires in conservation land are another important source of revenue. Another example of services to third parties is the sale of pine trees by DOC as a source of income. Finally, the Department also receives income in the form of donations from organisations, individuals and private companies.



	2000	2001	2002	2003	2004
Crown	134,777	150,814	156,106	206,354	222,846
Other	18,291	18,678	18,211	19,026	18,281

Figure 8.2: Crown and 'other' revenue (budget) of the Department of Conservation (2000-2005). (DOC, 2001, 2002, 2003a, 2004c)

When the Department of Conservation generates income from services to third parties, this is related to a certain output class, and that revenue stays within the output. This is important because it means that

revenue generated by recreation is used to improve the management of the recreational facilities and services in conservation land. This also means that revenue generated from recreation does not subsidise nature conservation, unlike tourism revenue which does, as further discussed below.

Another source of funding for DOC has been the selling of exotic trees (pine trees). When the Department was created in 1987 it inherited several tree blocks which are harvested and sold (A. Thompson, personal communication, May 17, 2005). In 2004 DOC reported that revenue from this funding source was lower than expected due to lower prices for exotic trees and the lower number of trees being harvested (DOC, 2004c).

The Department of Conservation receives donations from not-for-profit organisations and from private companies. An example is the New Zealand National Parks and Conservation Foundation. The Foundation manages a private endowment fund, creates cause-related marketing projects, attracts sponsorship from all levels of business and community, builds relationships with conservation groups, and drives a media awareness programme to lift the profile of conservation. The Foundation works closely with DOC to support its conservation projects and programmes. In 2004 this organisation funded projects for an amount of $165,000 dollars (NZ National Parks and Conservation Foundation, 2004).

The Department has many sources of income to fund its operation as shown earlier. This thesis is interested in knowing how much revenue is generated by the provision of recreational services and facilities, and by tourism concessions permitted in conservation land. The following section describes the contribution of tourism and recreation to DOC's budget.

Tourism & Recreation Revenue

The Department of Conservation is expected to generate a certain amount of revenue which can be used for conservation purposes. The second largest source of income for the Department, after the budget from government, comes from tourism and recreation. Tourism revenue is generated from rentals and fees charged to tourism concessions. Recreation revenue comes from fees charged at camping grounds and huts. In other words, recreation and tourism offer a revenue generating opportunity for DOC.

DOC charges independent recreationists for the use of facilities and services, and also charges commercial business to operate in conservation land, but it does not charge for entry to protected natural areas unlike some other countries (for example, Mexico). The reason for not charging an entrance fee is the legal mandate of free entry and access dictated by article 4 of the National Parks Act 1980 which states that:

> the public shall have freedom of entry and access to the parks, so that they may receive in full measure the inspiration, enjoyment, recreation, and other benefits that may be derived from mountains, forests, sounds, seacoasts, lakes, rivers, and other natural features.

Tourists and recreationists also generate income for DOC when buying retail products such as books, guides and souvenirs at DOC visitor centres, as well as paying for audiovisual presentations. In the 2004

Annual Report 'retail sales' were above three million dollars (DOC, 2004c). However, this source of revenue from visitor centres tends to be mostly cost recovery and is cycled back for stock sold (A. Thompson, personal communication, May 17, 2005).

Recreational charges are an important source of income for DOC. The recreation revenue generated from charges at huts and camping grounds has steadily increased in the past five years as seen in Figure 8.3. Recreational charges are one of the most important revenue sources obtained from DOC to complement the budget given by the government. Another important source is from charges to tourism concessionaires.

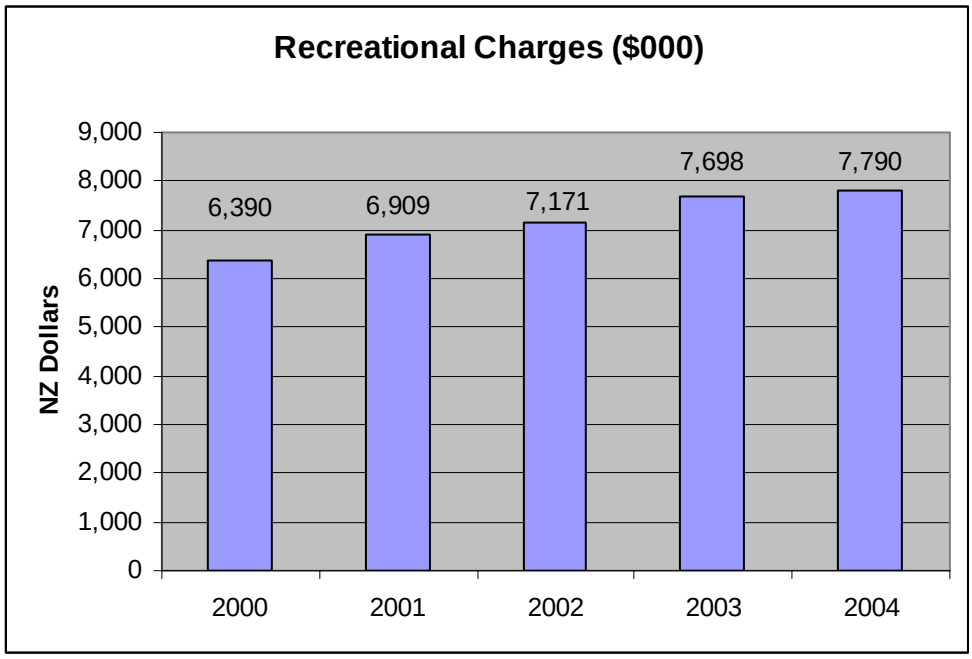


Figure 8.3: Revenue from recreational charges (2000-2004). (DOC, 2001, 2002, 2003a, 2004c)

Revenue from concessions is not accounted together with the recreational charges. Concession revenue is included under the 'other revenue' in DOC's financial statements. Revenue from tourism concessions is collected by DOC on behalf of the Crown and takes the form of concession fees, rent/leases and licences from commercial users of Crown-owned land (DOC, 2004c). Tourism concessions revenue is recognised when earned and is reported in the financial period to which it relates under the heading of 'non-departmental revenues'. "Non-Departmental Revenues are administered by the Department of Conservation on behalf of the Crown…[because] these revenues are not established by the Department nor earned in the production of the Department's outputs, they are not reported in the Departmental financial statements" (DOC, 2004c, p. 132). Revenue from concessions, leases and licences has increased in the last three years as seen in Figure 8.4.

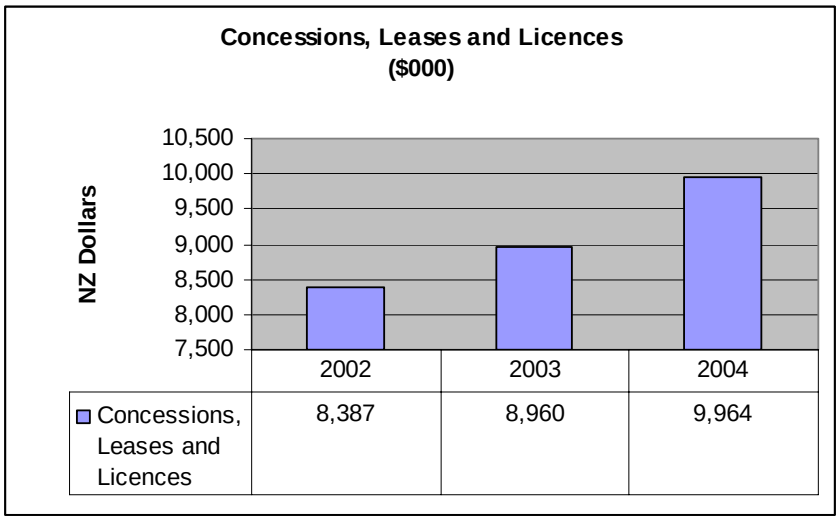


Figure 8.4: Concessions, leases and licences' revenue (2002-2004). (DOC, 2003a, 2004c)

Tourism concessions make up the most significant contribution to the revenue generated by all concessions, leases and licences. To illustrate, Figure 8.5 shows the different types of concessions for 2004. Each type of concession has a percentage indicating its contribution made in 2004 to the total revenue ($10 million in Figure 8.4). The tourism-related concessions, such as guiding, tourism occupations, ski areas, aircraft landings, residential/recreational, vehicle transport and boating, represent 62 per cent (see Figure 8.5). This clearly shows the important contribution tourism concessions make to the annual budget of DOC.

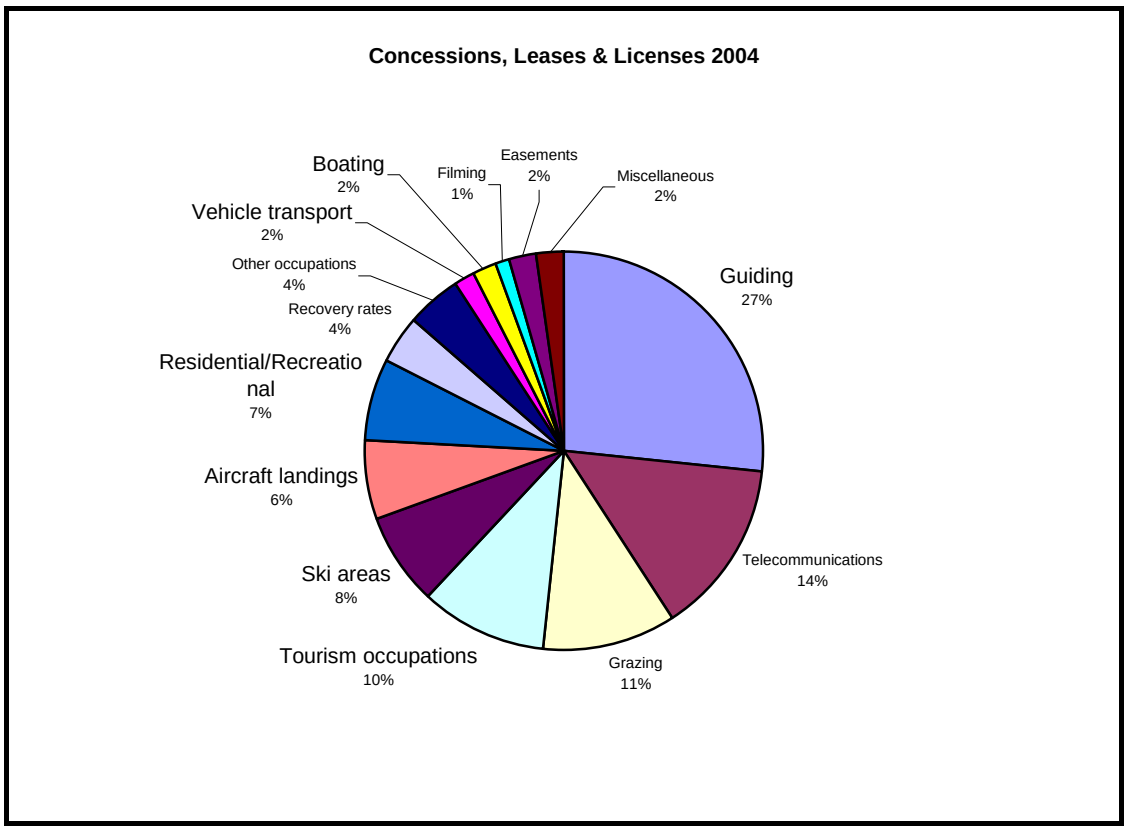


Figure 8.5: Types of concessions and their contribution to total revenue. (DOC, 2004c)

Figure 8.6 further compares the number of tourism concessions to other types of concessions. Thus Figure 8.6 shows the number of tourism concessions and other resource uses in 13 DOC conservancies.

Figure 8.6 also illustrates the use of conservation land by tourism enterprises. According to Figure 8.6, in most conservancies, tourism concessions represent less than half the total concessions, but, as shown in Figure 8.5, contribute more money to DOC.

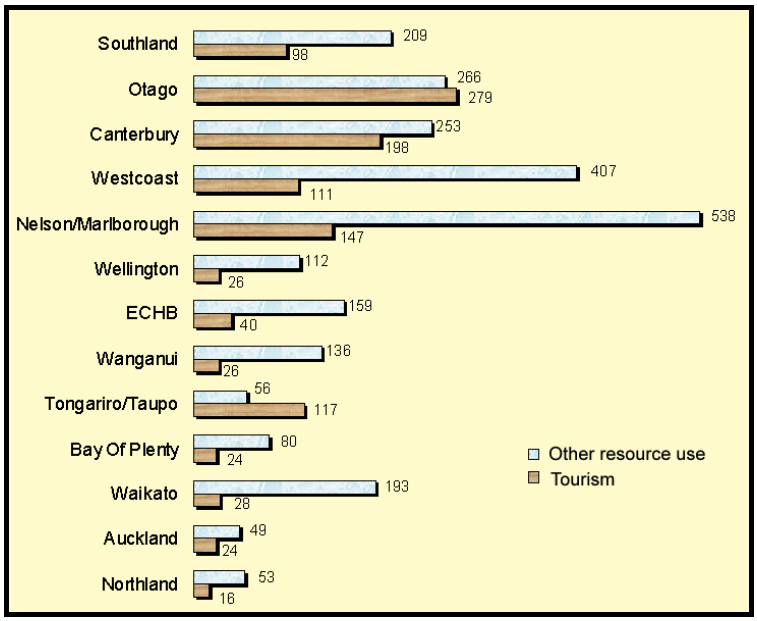


Figure 8.6: Tourism and other concessions by conservancy. (DOC, 2005s)

DOC's concession model permits money generated by concessions to be spent the following year by the Department on the agency's priorities. The money obtained by concessions goes to the Treasury and the Treasury funds it back the following year. This system has the advantage of helping to level out the highs and lows that DOC experiences in any particular season due to weather fluctuations or other issues affecting the tourism industry (A. Thompson, personal communication, May 17, 2005).

Another important characteristic of DOC's concession system is the cost recovery charges. The Department charges application and monitoring fees. Application fees are charged when a potential concessionaire presents an application to DOC. This application fee is non-refundable even when the application is rejected. Monitoring fees are charged so DOC can monitor the sites where concessionaires operate. Both of these charges are recovery costs and are different from the revenue generated from rents and fees imposed on concessionaires.

Revenue from concessions is derived from rents and fees for the privilege of obtaining commercial or other benefits from public land. These fees are the result of negotiations between DOC and the concessionaire and may be charged as a percentage of the gross revenue, a per hectare, per head or per trip charge, a fixed fee or a combination of these depending on the activity and the market rates (DOC, 2005g). The way concessions fees are determined by DOC depends on the environmental loading, and the intrinsic nature of the commercial activity (A. Thompson, personal communication, May 17, 2005). For example, concessions fees for a hotel determined by the gross revenue of the hotel is more appropriate than charging per head. Another example may be a guiding company which is better charged through a per head fee, because a fee based on gross revenue would require the operator to separate

accounts according to income from operating in conservation lands, and income from using other natural areas.

This section has shown the important contribution recreation and tourism make to the DOC's budget. Revenue generated by tourism and recreation provides funds for the Department to manage tourism and recreation, and to subsidise nature conservation projects. From tourism and recreation revenue, DOC can cover the costs of staff, equipment and systems to work on these issues. If tourism and recreation did not generate their own income, revenue assigned by the government to conserve the natural and historic heritage would need to concentrate on managing impacts of use. Presently, tourism and recreation cover their own costs and generate surplus revenue to invest in recreation, tourism, and, more importantly, nature conservation.

8.2.2 Political Structures and Processes

The political structures and processes in the institutional arrangements around tourism and recreation management in protected areas in New Zealand include the relationships DOC has with national, regional and district governments, as well as the political processes which might affect (positively or negatively) the Department's work. The following section explores the relations DOC maintains with different levels of government. Then the political processes are described in which the Department attends to the ministerial enquiries of Parliament as well as the participation of the Minister of Conservation in the Cabinet.

The Department maintains formal relationships with the different levels of government and other entities. Such relationships are imbedded in the national structure of DOC. For instance, in the formal structure of DOC, as explained in Chapter Seven, there is an 'External Relations Group' that provides effective servicing of the Department's relationships. Political relationships are also maintained at a conservancy and area level in DOC. The 13 conservancies maintain contact with the relevant regional and district councils (A. Thompson, personal communication, May 17, 2005).

The Department, through its formal structure and its participation in the Tourism Industry Forum, has raised the political importance of tourism. This political importance is a result of its active engagement with government and non-governmental organisations, but also because of the increasing importance of tourism, specifically nature tourism, to the economy of New Zealand. This has resulted in an increasing presence of DOC's work mentioned in government and tourism industry publications (A. Thompson, personal communication, May 17, 2005).

The relationship of DOC with Parliament, specifically the House of Representatives, is mostly through Parliamentary questions posed to the Minister of Conservation by any member of Parliament. These questions are answered beforehand by the Ministerial Servicing Unit at DOC (DOC, 2005h). This unit

also provides general services to the Minister of Conservation including draft replies to ministerial correspondence, requests for information and Official Information Act requests.

The Department participates in the political structures and processes of the country to reach its goals. This means maintaining contact with the political entities of the national, regional and district government. DOC engages with these political structures and by doing so has raised its conservation agenda, as well as its participation in issues such as recreation and tourism. The good performance of DOC with respect to tourism and recreation has resulted in increased funding and increased presence in the tourism industry of New Zealand.

The Department of Conservation contributes to the overall goals of the government including: protecting and enhancing the environment, strengthening national identity and upholding the Treaty of Waitangi, growing an inclusive innovative economy for the benefit of all, and improving the skills of New Zealanders (DOC, 2004e). These goals are reached through DOC's two main outcomes, which are: (1) protecting New Zealand's natural and historic heritage, and (2) giving people opportunities to appreciate and benefit from their natural and historic heritage (DOC, 2004e).

8.3 Mexico

8.3.1 Economic and Financial Arrangements

This section regarding the economic and financial arrangements of Mexico discusses the topics of budget, funding and, tourism and recreation revenue. The subsection on the budget describes the level of funding that the National Commission of Protected Natural Areas (CONANP) has received in recent years and compares it to other agencies within the Ministry of Environment. The funding subsection mentions the different sources of income of CONANP and discusses the growing importance of tourism and recreation. The subsection on tourism and recreation revenue concentrates on the increasing contribution of entrance fees to the budget of CONANP.

Budget

The budget is the main financial arrangement with which a government institution operates. In Mexico, as noted earlier, the budget is proposed by the Executive branch, the President, then discussed and approved by the House of Representatives of the Legislature branch. This political negotiation is a yearly process that can halt or permit government programmes. This section will show that the budget of CONANP has increased, but still remains one of the smallest budgets inside the Ministry of Environment even though this agency has the mandate of managing almost 10 per cent of the total territory of the country.

The budget of CONANP has increased since its creation in 2000, as seen in Figure 8.7. In 2001 the budget of CONANP was $170.9 million pesos, increasing to $241.5 million pesos in 2002 and reaching

$265.3 million pesos in 2003 (DOC had an equivalent budget of $1,669,746,606.08 pesos in 2003[6]. DOC's budget was 6.3 times larger than CONANP's budget.) (CONANP, 2003b). In CONANP's annual report for 2004 the same increasing trend is shown from 2002 till 2004 (CONANP, 2004b).

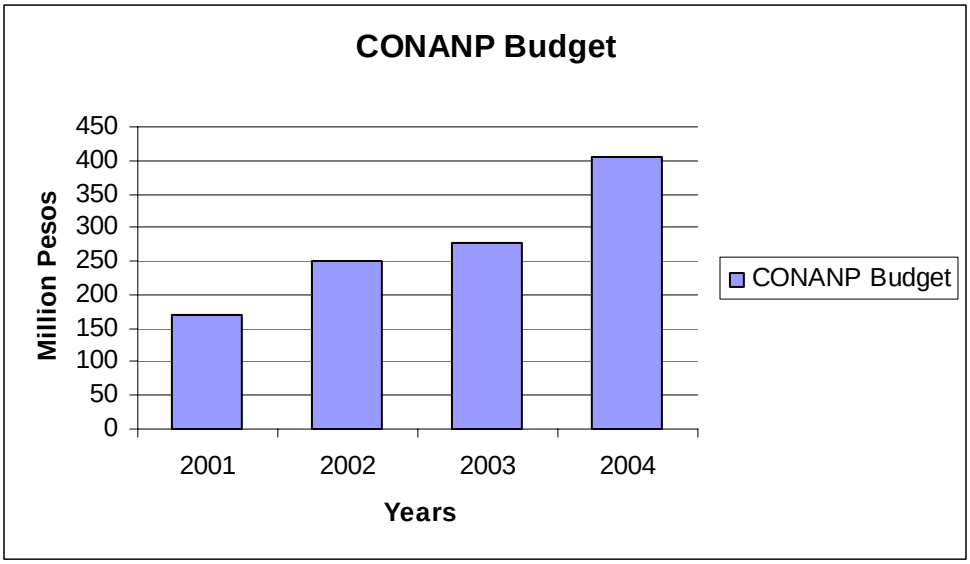


Figure 8.7: CONANP's Budget (2001-2004). (CONANP, 2002a, 2003b, 2004b)

Although the budget of CONANP has increased during the first years of the agency, informed commentators believe the budget is not enough to provide for the conservation needs of protected areas. For example, the Biosphere Reserve 'El Ocote' has worked with the same budget since the establishment of its administration office, despite the fact that the size of the reserve has doubled (A. López Portillo, personal communication, October 6, 2004). In addition, in the year 2000 the Ministry of Environment, before the creation of CONANP, reported that the average annual operating cost of a protected natural area was of $3.2 million pesos (SEMARNAP, 2000). By contrast, the protected area 'Yum Balam' for the year 2003 had a budget of only $600 thousand pesos (F. Remolina, personal communication, September 24, 2004). Several interviews with directors of PNAs reported that the budget was still insufficient to manage the protected areas effectively. These examples show that the budget of CONANP remains low compared to the real requirements of the agency.

The budget of CONANP is one of the lowest funded inside the Ministry of Environment (SEMARNAT). To illustrate, the Federal Budget (PEF – Presupuesto de Egresos de la Federación) destined $16,000 million pesos to SEMARNAT. The percentage given to CONANP represented only 1.6 per cent ($260.2 million pesos) of the total budget of SEMARNAT. The budget of SEMARNAT was divided between the Central Sector (Sector Central), De-concentrated Agencies (Organos Desconcentrados) and Decentralised Agencies (Entidades Apoyadas). CONANP as a de-concentrated agency only received 2 per cent of the 74 per cent given to this type of agencies inside SEMARNAT.

Even with these financial constraints, CONANP has been able to direct significant investments to tourism and recreation. These investments are mostly done with or by other government ministries or agencies.

[6] Conversion made in www.xe.com 1 NZD = 7.28816 MXN on 22/July/2005.

For example, SEMARNAT on April 8, 2004 signed a collaboration agreement with the Ministry of Tourism (SECTUR) in which one of the areas of investment was tourism infrastructure in protected natural areas (CONANP, 2002a). In this agreement SECTUR promised to provide $8.9 million pesos and CONANP $10 million pesos for the construction of visitor centres, interpretation trails, observation towers, and camping areas (CONANP, 2002a). Investment has not only been in infrastructure, but also in community-based tourism projects.

CONANP fosters community-based projects to achieve a sustainable development that allows the conservation of protected natural areas through its Sustainable Rural Development Programs (PRODERS). One type of project financed by PRODERS is made up of the tourism enterprises of local communities. In 2004 CONANP through PRODERS dedicated $49.8 million pesos to finance community projects in protected areas (CONANP, 2004c). Although the annual reports of PRODERS and the Conservation for Development Strategy (CDS) do not explicitly state the amount of funds dedicated to tourism projects, a superficial review of the CDS shows an important mention of financing tourism and ecotourism community-based projects in the form of training and/or infrastructure.

Although CONANP has a low budget, this has increased since its creation. CONANP has also been resourceful and negotiated agreements with other ministries to dedicate mutual funds to develop tourism infrastructure in protected natural areas. This shows that CONANP is developing new funding mechanisms to reach it goals. The following sections further explore the issues of funding and more importantly how tourism and recreation in protected areas is generating new income through entrance fees for CONANP.

Funding

Within CONANP, the General Directorate of Promotion and Institutional Development (Dirección General de Desarrollo Institucional y Promoción) has an area dedicated to exploring and proposing new funding sources for CONANP. Alternative sources of funding for CONANP include international funds (e.g., World Bank, UNDP), private sponsorships, and the entrance fees charged to visitors. These alternative sources explain the difference in budgets reported for 2004 between the documents of CONANP ($406.1 million pesos) and the federal budget ($260.2 million pesos).

Some of the funding alternatives developed by CONANP are related to the use of tourism and recreation as sources of income. One funding source related to tourism that is being explored by CONANP is the possibility of tourism concessions (which, as explained in Chapter 6, are different from tour operator authorisations). A tourism concession in Mexico relates to the use of public infrastructure in PNAs so the applicants can profit from its use (M. García, personal communication, September 14, 2004). The idea of CONANP is to allow the construction of tourism infrastructure in protected areas and, through an agreement with the private investor, to define a percentage of the profits dedicated to conservation activities such as restoration, surveillance and monitoring (M. Trejo, personal communication, September 13, 2004). An example was an ecolodge designed by the architect Hector Ceballos-Lascurain who was

hired by the ex-Minister of Environment Victor Lichtinger, but with the political changes of ministers the project has not been followed up (H. Ceballos-Lascurain, personal communication, September 6, 2004).

Tourism Revenue (Entrance Fees)

Tourism and recreation are becoming one of the main sources of funding through the charging of entrance fees. In Mexico, entrance fees (cobro de derechos) to protected natural areas are an economic instrument with the purpose of generating income for CONANP. Entrance fees have been charged since 2002 in almost all marine protected areas, and in some terrestrial areas.

Mexico, as a developing nation, with a reduced budget dedicated to conservation, must look for alternative sources of financing. User fees have proven their effectiveness in several countries, "the challenge is to devise systems that place a fair value on uses and services, and generate acceptable net returns" (Norris & Curtis, 1999). In the Mexican case, the fees charged presently in marine and terrestrial areas are a result of political negotiation rather than economic analysis. In the initial stages, the important issue was to implement the system and then work on improving the system to generate better net returns.

The income objective is to reach financial sustainability generating 17 per cent of the total budget of CONANP from entrance fees (A. Bernárdez, personal communication, September 13, 2004). In 2002 entrance fees generated $13.5 million pesos, doubling in 2003 to $25.6 million pesos and reaching $35.3 million pesos in 2004 as seen in Figure 8.8 (CONANP, 2002b, 2003c, 2004e). The increase in income generated by this economic instrument responds to the gradual implementation of the entrance fees' system, first in marine protected areas and then in terrestrial protected areas. The increase shown in Figure 8.8 is also a consequence of an improved collection mechanism and the increase in visitors to the protected areas.

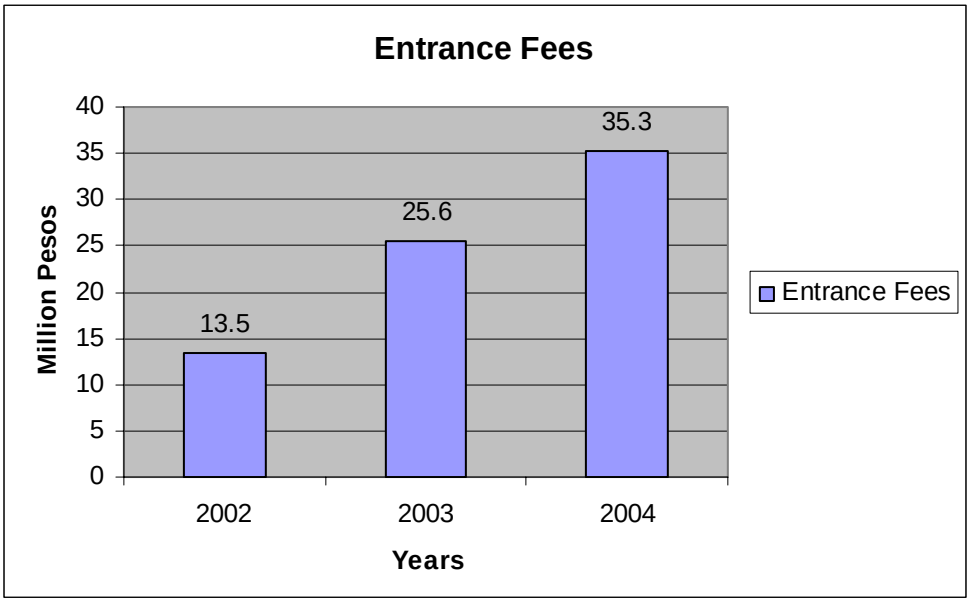


Figure 8.8: Income Generated by Entrance Fees. (CONANP, 2002b, 2003c, 2004e)

To implement entrance fees in the protected natural areas of Mexico, articles 198 and 198-A of the General Law of Taxes (LFD - Ley Federal de Derechos) had to be amended. The LFD establishes the fees or taxes that have to be paid for using public goods or property. Article 198 defines the marine areas where entrance fees must be charged and the amount to be charged ($20 pesos). Article 198-A states the terrestrial areas where entrance fees can be charged and the fee for visitation ($10 pesos).

Initially the amendments published in the Gazette in 2000 did not include the destination of the funds generated nor the obligation of tour operators to charge entrance fees. Through negotiation with the Legislature, CONANP was able to rectify these problems, and in 2002 the amendments included the specific destination of the funds to the PNA that generated them, and the tour operators were also obligated to charge the fees (A. Bernárdez, personal communication, September 13, 2004).

CONANP has been able to increase its budget by proving its importance to the federal government, making collaboration agreements with other ministries with common goals, and diversifying its funding sources. However, persistent financial and budget constraints are affecting the possibility of improving the management of tourism and recreation in protected areas. For instance, Limits of Acceptable Change (LAC) studies remain to be carried out even when they are required by law, infrastructure to receive and service tourism visitation has not been built in all protected areas which have significant influx of tourists, strategic plans still need to be defined and management systems have yet to be developed.

The process of implementing entrance fees in the protected areas has shown the importance of relating to the political structures and processes of the country. To implement this national economic instrument, CONANP had to negotiate with several political actors at national, state and municipal levels. The following section describes how CONANP relates to the broader political structures and processes of Mexico to reach its goals. The focus is on understanding how this political variable affects the management of tourism and recreation in protected areas.

8.3.2 Political Structures and Processes

The main issues regarding the variable of political structures and processes in Mexico are concerned with the relationships between CONANP, the Legislative Branch, other levels of government (state and municipal), as well as how CONANP faces the political instability of the country every six years with the national Presidential elections. On one hand there is the relationship with the House of Representatives (mainly) and other levels of government, such as state and municipal governments, related to the variable of political structures. On the other hand, there are the strategies and administrative structure changes that CONANP has adopted to face the political processes of the country. The following paragraphs will describe these issues and explain how they affect tourism and recreation management in the protected areas of Mexico.

The political structures surrounding CONANP include a close relationship with the Legislative branch. Specifically, CONANP has a close relationship with various commissions of the House of Representatives (see Figure 8.9). The person within CONANP who functions as a bridge and negotiator with the MPs is a project leader (A. Bernárdez, personal communication, September 13, 2004). With the Environment Commission the relationship is on a daily basis. With the Budget Commission, the contact is constant to negotiate and promote the issues of budget for CONANP and also to discuss issues regarding entrance fees. In 2004 CONANP sought a closer contact with the Tourism Commission and even invited a MP to a national meeting of PNA Directors where the main topic of discussion was tourism in PNAs (A. Bernárdez, personal communication, September 13, 2004).

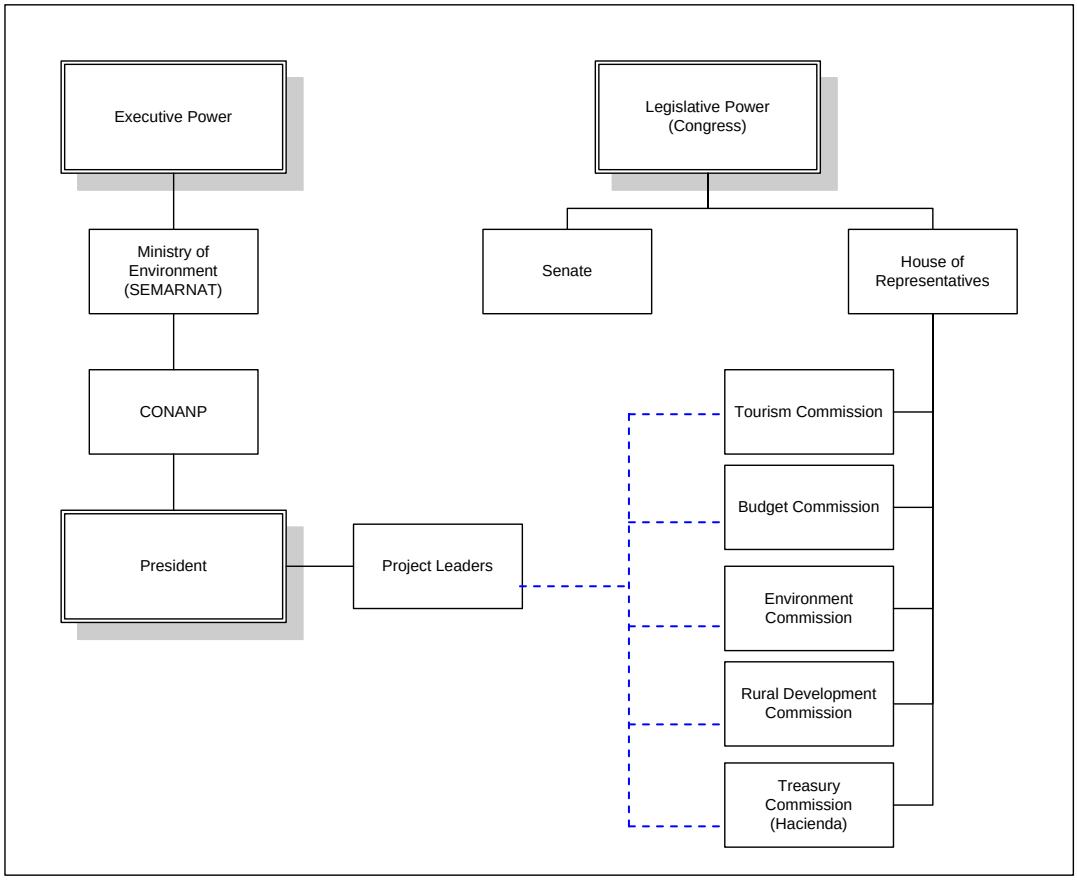


Figure 8.9: Relationship between CONANP and the Legislative Branch.
Source: (A. Bernárdez, personal communication, September 13, 2004)

The political structures and relationships are an important variable for CONANP to consider regarding the issues of tourism and recreation. The importance stems from the need for CONANP to convince the MPs of the relevance of amending certain laws to manage tourism. For example, to implement the idea of entrance fees, CONANP had to explain to the MPs what this economic instrument meant and what changes were needed to the General Law of Taxes (LFD - Ley Federal de Derechos).

In the case of the entrance fees, the relationship has been between the Budget and Treasury Commissions of the House of Representatives, but recently CONANP has strengthened its relations with the Tourism Commission. An MP from this Tourism Commission was invited (September 2004) to one of the national meetings of PNA Directors (A. Bernárdez, personal communication, September 13, 2004). This close relationship with the Tourism Commission responds to the future need of CONANP to influence

and negotiate laws and amendments related to tourism, and specifically to tourism in protected areas (A. Bernárdez, personal communication, September 13, 2004).

CONANP also needs a close relationship with the state and municipal governments where there are federal protected natural areas. In the case of state governments, CONANP has established agreements to co-manage certain protected areas. For instance, Desierto de los Leones National Park in Mexico City is administrated by the government of the city. Also CONANP had to present and explain the idea of the entrance fees to the governments of the states and municipalities. The relations with states and municipalities are maintained by CONANP through its central offices, but a more direct relationship exists with the regional offices of CONANP and the administration offices of each PNA.

How CONANP's structure relates to other political structures of Mexico (state and municipal governments) affects how tourism and recreation are managed. Again in the case of entrance fees, CONANP needed to present the idea to the governments and help them understand that the income generated was for the conservation of the protected areas exclusively (A. Bernárdez, personal communication, September 13, 2004). Another example was the Biosphere Reserve El Triunfo in which the Tourism Ministry of the state of Chiapas had destined money for the year 2004 to build tourism infrastructure in that reserve, but the PNA administration of CONANP wanted that money to be destined for tourism training and organisation rather than infrastructure (R. Escalante, personal communication, October 5, 2004). There was disagreement between CONANP and the Tourism Ministry and the money was not invested in the reserve nor in training.

Political structures at all government levels in Mexico are intertwined with the national political process. As noted earlier, one important characteristic of the national political process in Mexico is the political 'instability' that occurs every six years when the elections for a new President are held. With the change of President comes a change of Ministers, under-Ministers, and other high and middle positions in the different Ministries and Agencies of the Executive branch. Many of these changes respond to political negotiations rather than the selection of the most knowledgeable person for the post. This political instability usually affects the continuity of the work, programmes and projects of all government agencies.

CONANP has 'protected' itself from this political process that occurs in Mexico (D. Gutiérrez, personal communication, September 13, 2004). To 'protect' itself from this political process CONANP has depoliticised many key positions within the structure, such as the appointment of Directors of PNAs, as well as requiring a formal selection and contracting process to avoid political impositions. Now, even with significant political changes in Mexico, CONANP has remained stable and the same staff keep working within the agency. For example, when the present President of Mexico, Vicente Fox Quezada, took office on December 2000 the people working in CONANP remained even when the Minister of Environment changed. Also during 2003 the Minister of Environment, Victor Lichtinger, was changed and with this came many changes in the ministry, but not in CONANP (D. Gutiérrez, personal

communication, September 13, 2004). CONANP has therefore been able to de-politicise the positions inside its structure and given stability to the agency. This protection from the instabilities in Mexican politics permits the continuation of a long-term policy with regard to conservation and protected areas (D. Gutiérrez, personal communication, September 13, 2004).

The way in which CONANP relates to the political structures and processes of the country affects how the agency performs in the long term. CONANP has been able to interrelate with the House of the Representatives of the Federation with positive outcomes. These positive outcomes have been an increased budget and the possibility of implementing alternative funding mechanism such as the entrance fees. Possibly the most important success for CONANP with respect to the political processes of the country has been to 'protect' itself from instability when the President is changed. This remains to be tested again in 2006 with the election of a new President.

8.4 Comparing New Zealand and Mexico

The main objective of this thesis is to compare the institutional arrangements of New Zealand and Mexico around the issues of tourism and recreation in protected natural areas. This chapter has described the variables of economic and financial arrangements together with the political structures and processes. This section compares the most relevant issues of these two variables of the institutional arrangements of both countries.

8.4.1. Economic and Financial Arrangements

Differences and similarities in the variable of economic and financial arrangements between New Zealand and Mexico can be found in the issues of budget, the source of revenue, and the destination of the revenue. The following section compares both countries regarding these topics.

The first similarity in these variables is that the budget allocated to both DOC and CONANP has increased in recent years. The budget for these agencies is mainly determined by the government of each country. Both agencies have other revenue sources to complement their government appointed budgets. Alternative sources of income come from services the agencies provide to third parties and from donations.

The mechanisms used to generate revenue by services provided to third parties through tourism and recreation are different between countries. In New Zealand, recreation revenue comes from fees charged at camping grounds and backcountry huts, as well as products and services in DOC's visitor centres. In Mexico, revenue is generated from entrance fees to marine and terrestrial protected areas. With regard to tourism, New Zealand tourism concessionaires pay rent and fees negotiated with DOC; in Mexico, tourism permits entrepreneurs to pay a fixed fee for their application which also covers the payment for a

two-year permit. Because the fees are not very high, CONANP does not generate significant revenue from tourism permits. For the moment there are no tourism concessions in Mexico.

The sources of donations are also different in New Zealand and Mexico. DOC receives donations from national not-for-profit organisations, such as the New Zealand National Parks and Conservation Foundation. DOC also receives donations from private companies. CONANP receives donations from national and international organisations. Mexico, with its developing nation status, still receives a lot of international funds. In the case of CONANP, international donors include the World Bank and the United Nations Development Program (UNDP). Besides international donors, CONANP receives support from national, private companies and non-governmental organisations (NGOs).

An interesting characteristic of the funds received from international donors in Mexico is who manages the donations before they are given to CONANP. Due to bureaucratic obstacles that hinder efficiency and transparency, international donors such as the World Bank prefer to give the funds to reputable NGOs. For example, the Mexican Nature Conservation Fund (FMCN – Fondo Mexicano para la Conservación de la Naturaleza) established in 1994 manages a trust fund called 'Fund for Protected Natural Areas' (FANP). The FANP was created with donations from the Global Environment Facility (GEF) to support 10 protected areas. The FANP has increased with recent donations from the World Bank to provide funds for more areas.

These different sources of revenue (government budget, tourism and recreation revenue, and donations) are managed in different ways in both countries. In the New Zealand case, DOC has a financial system divided by output classes. When the recreation output class generates revenue it stays in this output class and is used for this output class only. With respect to tourism concessions revenue, the system is different because the revenue is sent to Treasury and then reimbursed to DOC the next year to use for priorities determined by the Department. In the case of Mexico, CONANP receives its budget from the national Treasury. Money generated by entrance fees is tagged and goes to the Treasury which then reimburses CONANP for that money. The money generated by entrance fees is returned directly to the protected natural areas (PNAs) that generated the income, and when all their operating costs are covered the excess is shared with other PNAs that do not produce enough money from visitors, or that have no visitation at all. The money from entrance fees does not go to the central offices of CONANP, it goes straight to the PNAs. This means that entrance fees are used directly for conservation projects in the protected areas, and not on the administrative costs of the agency.

8.4.2. Political Structures and Processes

New Zealand and Mexico have clear similarities and differences in relation to the variable of political structures and processes. These similarities and differences are in areas such as the formal structures of the agencies and their relations to the whole government structure. One of the greatest differences

between both countries is the question of political instability and how an agency like CONANP copes with this political process.

The first similarity between DOC and CONANP is that they relate to the political structures (Legislature, federal/national, state/regional, and municipal/district governments) of their countries in a formal manner. The difference, as discussed in this chapter and the previous chapter on administrative structures, is that DOC has a clear, formal structure with units and groups which as part of their job relate to the political structures of New Zealand. On the other hand, CONANP has some individual staff positions that as one of their responsibilities link with the political structures of Mexico.

Another similarity between the agencies in New Zealand and Mexico is the creation of ad hoc entities that help DOC and CONANP improve their work in relation to tourism in protected areas. In New Zealand, DOC chairs and participates in the Tourism Industry Forum which helps the agency maintain a close relationship with several tourism stakeholders including national, regional and district governments. In Mexico, CONANP signed a cooperation agreement with important national ministries and agencies to develop nature tourism in protected areas. The problem of this agreement is that it only improves relations between CONANP and other governmental bodies at a national level, and to address very specific issues.

In the above points, New Zealand and Mexico share some similarities, but in the topic of political processes, particularly instability, there is a great difference and no similarities. New Zealand, as a developed nation with a stable political life, has few concerns when political parties change power. The changes are made at ministerial levels, but departments maintain their staff and follow legislation and policies which have a long-term life-span. In contrast, Mexico suffers chronic, political instability when every six years the President of the country is changed. The problem is that not only do the President and Ministers change, but also many high and medium-level positions inside the governmental structure. Together with the staff rotation come strategy and policy changes that can be opposite to those during the previous presidency and hence all advancement in a certain field is lost. To this reality CONANP must survive to continue its conservation efforts.

8.5 Finances and Politics in the Institutional Arrangements Framework

This chapter has concentrated on two variables of the institutional arrangements framework: (1) economic and financial arrangements, and (2) political structures and processes. The variable on economic and financial arrangements focuses in essence on the funding with which the agency operates. The variable examines where the money comes from, the amount the agency has, and the amount the agency generates from recreation and tourism. The second variable, political structures and processes, concentrates on the

agency's relationship with politicians at different levels of government. The two variables described and compared affect and are affected by other variables of the institutional arrangements framework.

The variable of economic and financial arrangements is affected by several variables of the framework including: legislation and regulations, policies and guidelines, historical and traditional customs and values, key participants and/or actors, and political structures and processes. These relations are illustrated in the separate chapters on the different variables. Legislation and regulations influence the economic and financial arrangements, because some laws determine the budget that the agency receives, how much it can charge users, or how to charge through concessions. Such is the case of the annual federal budget approved by Legislature in Mexico, the General Law of Taxes, which defines the amount to be charged for entrance fees to marine and terrestrial protected areas; and in the case of New Zealand, the Conservation Act, which defines the whole concept of concessions in conservation land. Policies also affect the economic variable of the institutional arrangements by defining the priorities and goals of the agencies in the short and long term. By defining the priorities, policies determine where the money is to be spent. Historical and traditional values also are an underlying variable which influences the priorities that a country has towards an issue such as conservation, and recreation and tourism in protected areas. If the values of society support conservation initiatives, the agency can expect better budgets. This support from the values of society is expressed through the political structures and processes that authorise the government's budget. Good relations with the political structure can increase the possibility of an appropriate operating budget. Finally, key participants such as NGOs who are donors or manage conservation funds can help improve the level of funds conservation agencies receive.

The variable of economic and financial arrangements also affects the variables of the institutional arrangements (as shown in Figure 8.10). This variable influences the administrative structures and the management techniques. If administrative structures are properly funded, an agency can have sufficient staff and financial resources to operate and carry out their mandate as dictated by legislation and policies. With appropriate funding, the agency can also apply management techniques useful to managing tourism and recreation in protected areas.

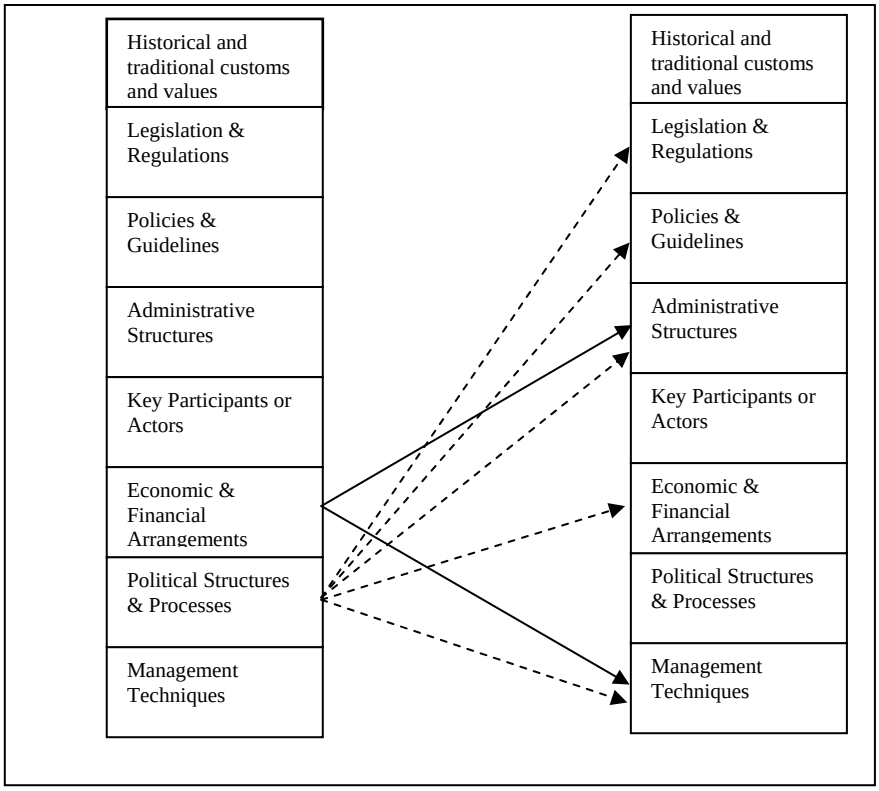


Figure 8.10: Relationships between the economic and financial arrangements, and political structures and processes variables with the other variables of the institutional arrangements framework.

As does the economic and financial arrangements variable, so does the political structures and processes variable affect other components of institutional arrangements (as shown in Figure 8.10). The variables affected by the political arena are the legislation and regulations, the policies, the economic and financial arrangements, the administrative structures, and the management techniques. Political structures define the legislation of each country, as discussed in Chapter Six. By determining legislation, political structures define the legal mandate of the administrative structures and policies. Through legislation, politicians also determine the budget for each government agency at a national level. And through legislation, political structures also determine the application of certain management techniques.

With respect to the political processes, the political instability discussed in the Mexican case affects the stability and continuity of administrative structures and long-term policies that might change if new political visions enter the internal structure. Even when the political processes are not able to interfere internally in the administrative structure, the political structures can affect the allocation of the budget, and hence hinder the economic and financial arrangements of the agency.

The ways in which political structures and processes affect tourism management are threefold. First, the intervention of the political structures and processes in the administrative structures can affect the direction and policies of the agencies and affect the ongoing management of tourism and recreation. Second, good coordination with other government entities can complement the weaknesses of the agency, and, as a consequence, strengthen its capability to manage tourism and recreation. For example, CONANP, by signing a cooperation agreement to develop nature tourism, ensures significant financial

resources and expertise to invest in tourism services and facilities, support community-based tourism enterprises and reach its goal of sustainable rural development in protected areas. Third, a close relationship with the political structures that determine the allocation of operating funds can improve the possibilities of increasing the annual budget. Both in Mexico and New Zealand, this has been the case and increasing budgets in the last five years indicate that the value of their work has been recognised.

8.6 Summary

The present chapter has described the economic and financial arrangements, and political structures and processes of New Zealand and Mexico in relation to the governmental agencies in charge of managing recreation and tourism in protected areas. A comparison between both countries has been done with respect to the amount of money available for agencies to operate, the sources of their funds, the amount of funding generated by tourism and recreation, as well as their relations with the political structures and processes of their respective countries. Finally, the chapter discussed how these two variables of the institutional arrangements framework affect the management of recreation and tourism.

The following chapter presents, compares and discusses the last variable of the institutional arrangements framework: management techniques. This variable, which is affected by all previous variables, includes the planning, implementation and evaluation tools used by DOC and CONANP to manage tourism and recreation in protected natural areas.

9. Management Techniques

9.1 Introduction

This chapter discusses the last variable, management techniques, of the institutional arrangements framework presented in the literature review chapter. For the aim of this research, management techniques are defined as the planning, implementation and evaluation frameworks related to tourism and recreation in protected natural areas.

The chapter first describes the management techniques used in New Zealand and Mexico. Second, the management techniques are compared between both countries. Third, the chapter discusses how management techniques are an expression of the other variables of the institutional arrangements framework. Throughout the chapter, the effect of these techniques on tourism and recreation in protected natural areas is discussed.

9.2 New Zealand

9.2.1 Recreation Opportunity Spectrum (ROS)

The Recreation Opportunity Spectrum (ROS) is a concept developed in the United States and applied in New Zealand (Taylor, 1993). During 1993 ROS was adapted for use in New Zealand by the Department of Conservation in consultation with the Federated Mountain Clubs, the Hillary Commission, Lincoln University and Wellington Regional Council (DOC, 1996; Taylor, 1993). Since then ROS has been used as a tool to plan and manage recreation opportunities in conservation land.

The Recreation Opportunity Spectrum is a tool for the integrated management strategy of outdoor opportunities (Taylor, 1993). An integrated management strategy helps define the long-term direction for resource management. ROS addresses the recreation component in an integrated management strategy. ROS is useful to an integrated management strategy by recognising the diverse experiences sought by visitors as well as responding to the range of natural resource management requirements (Taylor, 1993). ROS can compile an inventory of what recreation experiences are already provided, as well as what experiences potentially exist (Taylor, 1993). Furthermore, "ROS…provides a framework not only for assessing what recreational opportunities may be provided, but also determine the impacts of other management actions – such as road construction and facility development - on the existing supply of opportunities" (Eagles & McCool, 2002, p. 107). However, DOC applies ROS for the former rather than the latter reason.

The Recreation Opportunity Spectrum is a planning technique that helps identify the range of settings appropriate for different recreation activities which cater for a wider section of potential visitors (DOC, 1996). By relating ROS zones to the visitor groups, DOC can design the strategic direction for each

visitor group in each zone defining the location, range of facilities and services provided, the standards of these facilities and services, and the role of other providers (tourism concessionaires).

Therefore, ROS affects recreation and tourism in the planning, implementation and evaluation stages of the management process. In the planning stage, ROS assists DOC by identifying the different recreational zones of a protected area and the type of recreational experiences those zones will provide to the seven visitor groups. In the implementation stage, ROS helps define where DOC builds the recreational facilities and the standards of these facilities or the type of tourism concessions DOC will permit. In the evaluation stage, ROS guides the agency by monitoring the quality of the facilities and services compared to the standards defined in their construction, and helps the agency to understand the prevailing interests of the users. ROS assists this monitoring process to make sure that the recreational experiences planned are provided through quality facilities and services (from DOC or tourism concessionaires).

9.2.2 VAMS

The Visitor Assets Management System (VAMS) is both a management technique and a management system that informs DOC staff when structures are due for inspection or other maintenance work (DOC, 2005v). From the recommendations of the inquiry that followed the Cave Creek tragedy[7], DOC developed VAMS as a system for managing the Department's visitor assets all around New Zealand.

To develop VAMS the Department defined health, safety and visitor service standards for all the infrastructure with assistance from the building industry (DOC, 2005v). Having these standards helps staff compare the actual condition of the asset against the standards and determine if the asset needs maintenance or even replacement to bring it up to standard. Moreover, VAMS automatically notifies the relevant area manager when a structure needs to be reviewed again, depending on the standards.

In essence, VAMS intends to reduce many of the risks associated with managing visitor facilities. To reach this goal, the VAMS database includes detailed information of all the assets along with their photos and screens detailing what work is required, when are inspection due, what work has been done and whether the assets are of the required standard or have dropped below the standard. Besides reducing the risks associated with visitor facilities, VAMS has had an important spin-off by informing DOC of the costs of owning all the visitor infrastructure (DOC, 2005v).

As a consequence, VAMS allows DOC to inform and convince the government of the need for further investment to maintain visitor facilities and avoid future tragedies. For example, between 1997 and 2003 the government spent $45 million developing and upgrading tracks and structures, and committed a

[7] Fourteen people died in 1995 when students from the Outdoor Recreation course at Tai Poutini Polytechnic at Greymouth and the Department of Conservation's Punakaiki Field Centre Manager crowded onto the viewing platform above Cave Creek and the platform collapsed (DOC, 2005b).

further $82 million for the 2004 to 2012 period (DOC, 2005v). Furthermore, with the information generated by VAMS and the Recreation Opportunities Review carried out by DOC, the government has committed an additional $349 million over a 10-year period, starting in 2002.

The comprehensiveness of VAMS helps manage an important spectrum of visitor facilities (as seen in Table 9.1). This management system permits DOC to maintain a safe and healthy infrastructure for staff and visitors. In addition, VAMS permits DOC to plan its budget requirements to inspect, maintain and change all assets. By knowing these costs, DOC can convince the relevant political structures, government administrative structures and key participants to increase or help fund its operation.

Table 9.1: DOC's visitor infrastructure at a glance

- **Tracks: 2,928** (with a total length of 12,890km)
- **Roads: 639** (with a total length of 2,202km)
- **Bridges: 3,921 bridges** (spanning 48km)
- **Boardwalks: 5,728** (with a total length of 83km)
- **Backcountry huts: 990**
- **Other buildings: 3,19**1 (including 1671 toilets)
- **Other structures: 4,386**
- **Campsites: 306**
- **Car parks: 570**
- **Amenity areas: 396**
- **Signs: 15,698**

Source: (DOC, 2005v)

9.2.3 Limits of Acceptable Change (LAC)

Any type of tourism or recreation activity has an impact on the protected natural areas where it takes place. Sooner or later the "amount, nature, or type of change may become unacceptable…but what determines the limits of acceptable change?" (Manning, 1999, p. 70). To answer this question, several visitor impact management frameworks have been developed including one called Limits of Acceptable Change (LAC). The LAC framework has as a central focus, "identifying indicators and standards for desired resource and social conditions for visitors to natural areas" (Moore et al., 2003, p. 356). LAC is an alternative approach to the issue of carrying capacity "by asking 'how much change is acceptable?' rather than 'how much use is too much?'" (Moore et al., 2003). LAC is "a nine step process that focuses on identifying desired wilderness resource and social conditions and then prescribing management actions to preserve, restore, or enhance those conditions" (Tyson, 1989, p. 9).

Tyson (1989) prepared an internal report for the Department of Conservation to evaluate the potential of applying LAC as a resource planning framework for the New Zealand context. Tyson considered that LAC could be integrated into DOC's already existent planning and monitoring system. DOC would therefore only have to work on selecting indicators, specifying standards, implementing monitoring programs and agreeing on a range of appropriate management actions.

DOC staff consider that LAC has generally worked, but the protected areas do not have a significant visitor pressure except for very popular localities such as Milford Sound (Fiordland National Park) and Tongariro Crossing (Tongariro National Park). The lack of implementation of a formal visitor impact management system, such as Limits of Acceptable Change, contrasts with the concern about visitor impacts stated in the Visitor Strategy and other policies. DOC concentrates its efforts on monitoring the impacts of tourism concessionaires and tourists, as is further discussed in the next section.

9.2.4 Tourism Concessions

A concession is any commercial activity conducted on conservation land that has an official authorisation from DOC to operate. A concession may be a permit, licence, lease or easement which provides a legal right to carry out an activity on land or protected marine areas managed by DOC.

The tourism concession system of New Zealand helps the Department ensure that the various concession activities are compatible with the primary aim of protecting the land and other resources, as well as to make sure that services and facilities provided for visitors are appropriate, of a suitable standard and that other activities do not conflict with visitor enjoyment (DOC, 2005g). First and foremost, the concessions system is an impact-based management tool aimed at managing the impacts of tourism and other activities (e.g., grazing, telecommunication infrastructure, etc.) (A. Thompson, personal communication, May 17, 2005).

The application process ensures that concessions are compatible with natural and cultural values, as well providing safe visitor facilities and services. With respect to the natural values, the potential concessionaire must provide in its application a detailed description of the activity and/or facilities proposed together with a description of the actual and potential effects of the activity and the methods to avoid, remedy or mitigate those effects. If the activity or facility is considered of high impact, a separate Environmental Impact Assessment report is required. In the case of cultural values, the concessionaire is required to consult with local iwi (Maori tribe) if there are any potential cultural effects from the proposed activities. Although Maori opinion is important in order to avoid impact on the cultural values of certain areas, the decision to approve or not approve a concession is still made by DOC (A. Thompson, personal communication, May 17, 2005). However, Maori opinions have stopped the approval of several concessions in the past (A. Thompson, personal communication, May 17, 2005). Finally, with regard to visitor safety, the application requires that all concessionaires must have an independently audited safety plan if they offer recreation or tourism activities to clients or competitors (DOC, 2004a).

Tourism concessions are an important source of revenue for DOC. As discussed in the previous chapter on economic and financial arrangements, DOC generates income from the rents charged to tourism concessionaires as a percentage of the gross revenue, a per hectare, per head or per trip charge, a fixed fee or a combination of these depending on the activity and the market rates (DOC, 2005g). The way

concessions rents are determined by DOC depends on the environmental loading, and the intrinsic nature of the commercial activity (A. Thompson, personal communication, May 17, 2005).

9.2.5 Interpretation

Park managers around the world consider interpretation the cheapest method of visitor management, because it is more economical to prevent damage through the provision of information and appreciation than to repair the negative impacts of uninformed visitors (Beck & Cable, 2002; Knudson, Cable, & Beck, 1995). Through interpretation, the agency in charge of managing protected natural areas can also inform and educate visitors about the importance of nature conservation.

The Department of Conservation has the legal mandate of advocating for conservation, promoting the benefits of conservation, as well as preparing, providing, disseminating, promoting and publicising education and promotional material relating to conservation (DOC, 1996). This mandate is further developed in the Visitor Strategy of DOC in its goal of 'informing and educating visitors'. The Department's goal is "to share information about our natural and historic heritage with visitors, to satisfy their requirement for information, deepen their understanding of this heritage and develop awareness of the need for its conservation" (DOC, 1996). The Department hopes that through information, understanding and awareness, visitors to protected areas will reduce their impact. To broaden its interpretation reach, DOC partners with concessionaires to provide appropriate environmental interpretation.

Various methods of interpretation are used by DOC including on-site panels, signs and guides (see Figures 9.1, 9.2, 9.3 and 9.4). Interpretation can be done on-site through the use of panels and signs which are more cost-effective compared to personal interpretation.



Figure 9.1: Egmont National Park.

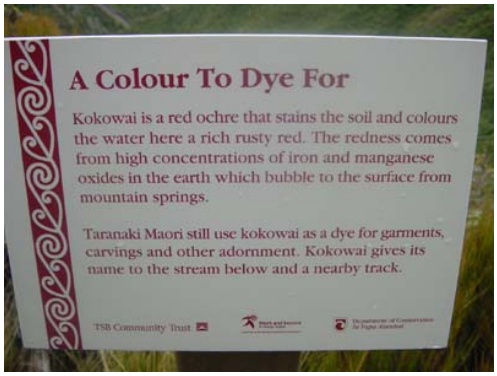


Figure 9.2: Egmont National Park.



Figure 9.3: Volunteer Interpreter in Tiritiri Matangi.



Figure 9.4: Panel and DOC Interpreter in Mount Bruce National Wildlife Centre.

9.2.6 Codes of Conduct

The Department of Conservation has developed two codes of conduct for users of outdoor areas. One is the New Zealand Environmental Care Code, and the other is the New Zealand Water Care Code. Each of the Codes has a ten point list of things to do or consider when in natural areas, or in recreational activities in water bodies such as lakes, rivers, streams, coast and wetlands (see Table 9.2). These care codes can be found in DOC's website, but are also included in many outdoors travel guides, visitor centres and interpretation panels around the country.

Table 9.2: Care Codes

NZ Environmental Care Code	NZ Water Care Code
1. Protect plants and animals 2. Remove rubbish 3. Bury toilet waste 4. Keep streams and lakes clean 5. Take care with fires 6. Camp carefully 7. Keep to the track 8. Consider others 9. Respect our cultural heritage 10. Enjoy your visit	1. Find out first *(Find out and follow the regulations governing recreational use of waterways and access.)* 2. Stay on established tracks and use existing facilities 3. Take care of your gear 4. Remove rubbish 5. Dispose of toilet waste properly 6. Be careful with chemicals 7. Respect our cultural heritage 8. Take only the food you need 9. Consider plants and animals 10. Consider other people

Source: (DOC, 2005q, 2005r)

These care codes have developed environmentally friendly practices in outdoor recreationists. For example, the 'pack in, pack out' custom of New Zealand trampers which fosters the culture that all rubbish produced by visitors must be taken out of national parks and disposed of at home or in nearby villages reduces the impact of waste on the environment. This is reflected in both care codes under the point of 'remove rubbish' (see Table 9.2).

9.3 Mexico

9.3.1 Zoning

Zoning is one of the main strategies used in Mexico to manage and conserve protected natural areas. The zoning of a territory is a planning tool which helps understand the change in the uses of the resources, determine the potential each zone has within the protected area, and establish the medium and long-term goals for preservation and sustainable use of the resources in benefit of the local communities (CONANP, 2000a). Zoning gets its historical origins from Enrique Beltrán, a Mexican scientist and conservationist, who proposed in the first World Conference on Parks in Seattle 1962 that through zoning the conflict of preservation and use could be resolved (Simonian, 1999). In Mexico, zoning (types of zones) for protected areas is defined in the General Law of Ecological Equilibrium and Environment Protection (LGEEPA - Ley General del Equilibrio Ecológico y la Protección al Ambiente) and expressed in practical terms in the management plans of each protected areas. Zoning is a prescriptive management act:

> …it is based on current conditions (description), management objectives for the park, the location of important values and features, demand for recreational opportunities and tourism services, and regional supplies of resources, opportunities and features. (Eagles & McCool, 2002, p. 108)

A protected area can be divided into two types of zones: core and buffer. In the core zone there can be two sub-zones: protection and restricted use. In the buffer zone, the sub-zones include: traditional use, sustainable use of natural resources, public use, human settlement, preservation, special use, sustainable use of ecosystems, and restoration. There are some zones where tourism and recreation are permitted and some where they are not. The management plan of a protected area will include a section on zoning defining the activities permitted in each zone and a map illustrating the zones.

To illustrate the use of zoning in the protected areas of Mexico, the management plan of the Biosphere Reserve 'El Ocote' is used as an example. The management plan includes a map (see Figure 9.5) and a section on the zoning of the protected area (CONANP, 2000a). This biosphere reserve has a core and a buffer zone. The core zone is divided between a protection and restricted use sub-zones (CONANP, 2000a). The buffer zone is divided into the following sub-zones: traditional use, sustainable use of natural resources (SUNR), and restoration (CONANP, 2000a). The management plan includes a definition for each zone and sub-zone of the reserve, together with the acceptable uses and norms or rules of use. The management plan states that the sub-zones of restricted use, traditional use, and sustainable use of natural resources can be used for ecotourism and low-impact tourism. For example, in the restricted use sub-zone, tourism activities will be permitted as long as they are compatible with the conservation of the ecosystems, the activities must efficiently control the production of possible pollutants and other impacts, tourist groups must be fewer than 25 (until studies of Limits of Acceptable Changes are done) and the activities must benefit the conservation of the reserve and the local communities (CONANP, 2000a). Unfortunately, the management plans do not define these types of tourism.

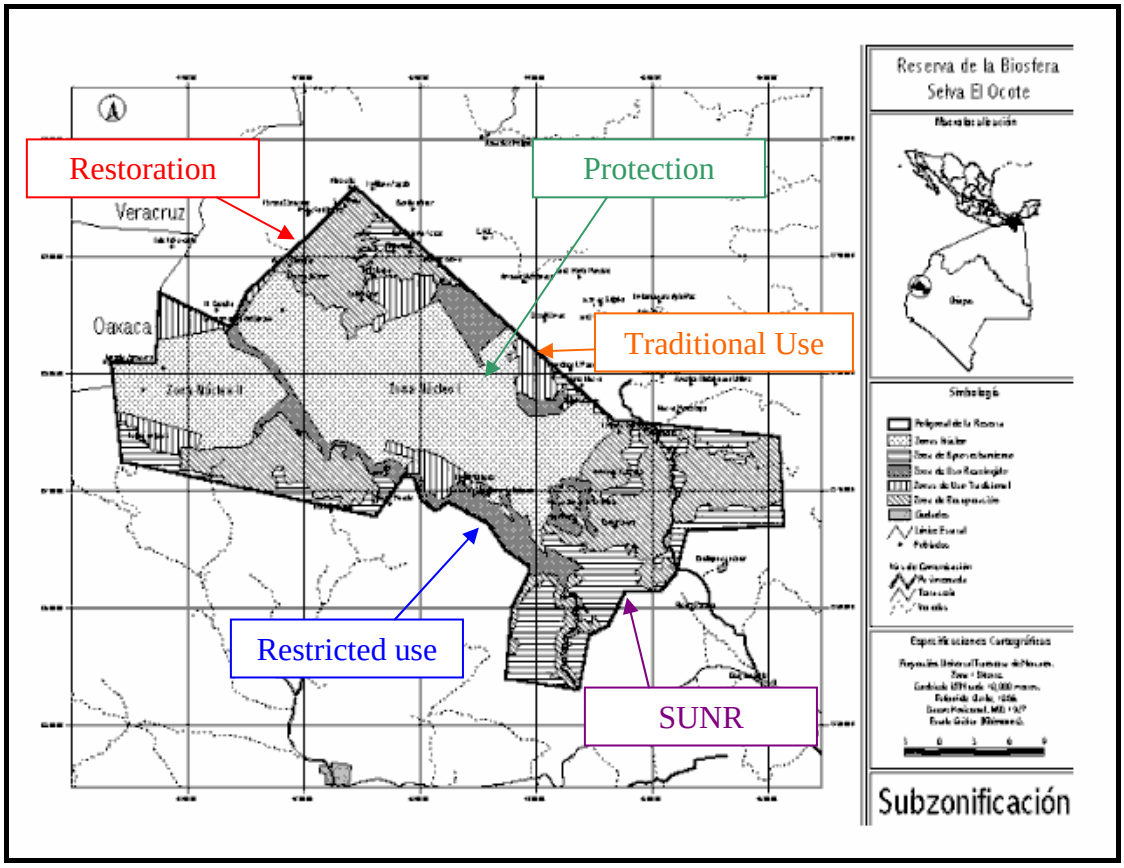


Figure 9.5: Zoning map of 'El Ocote' Biosphere Reserve. **(CONANP, 2000c)**

Zoning, besides being a useful planning tool for the management of protected natural areas, has an important application for tourism and recreation. Zoning helps determine what type of tourism and recreation can be practised within the different zones of a protected area. However, zoning is one tool that must be complemented with other management techniques to improve the management of tourism and recreation.

9.3.2 Tourism Permits

Tourism permits and concessions are legal instruments that allow CONANP to manage tourism enterprises in protected natural areas. In Mexico, tourism permits are the most common instrument used to control tourism. Tourism permits are normally granted to guiding services inside protected areas. CONANP is starting to explore tourism concessions focused primarily on accommodation infrastructure, but it can also apply to souvenir shops or visitor centres. Through these tourism legal instruments, CONANP can control the number of enterprises working and operating in a given area.

Presently, CONANP is giving preference to locally operated enterprises (e.g., guides who live in the local communities inside the protected area). The reason for this preference is to foster the development of alternative enterprises that use, in a non-extractive way, the natural resources of the area. For instance, on the island of HolBox in the north of the Yucatan Peninsula where a booming whale shark ecotourism activity has grown in recent years, CONANP has only allowed local fishermen to apply for and be granted a tourism permit. Another example is in Lagunas de Zempoala National Park where there are

already 75 tourism permit holders, mostly local people, who have negotiated with CONANP to suspend further granting of permits.

This policy of only granting tourism permits to local people is positive, but can create conflict with outside tour operators wanting to operate commercially in protected areas. To bypass this policy, external operators have established commercial agreements with local permit holders to run tours in the protected areas. These agreements already take place in some biosphere reserves where by law only local inhabitants can operate economic activities within the reserves. Although at first these arrangements might seem positive (because the external tour operator assumes the cost of marketing the product or service), the downside is that most of the income is captured by the external operators and the local people are left with meagre incomes; because the operators are the owners of the equipment, they takes the tourist groups and promote the tours. The local inhabitants, who are the permit holders to guide groups, become only low-paid employees of the operators.

In other cases, tourism intermediaries, such as travel agencies, promote the services of the local communities, but charge a high commission fee. For example, in Sian Ka'an Biosphere Reserve, local fishing operators who rely on travel agencies to sell their services end up paying from 50 per cent to 60 per cent on commissions (F. Ursúa, personal communication, September 24, 2004). In response to this situation, CONANP is fostering the creation of community integration enterprises (empresas integradoras) so community tourism projects and operators can sell their services directly to the markets, without having to rely heavily on external intermediaries.

The application process to obtain a tourism permit includes paying the appropriate fees depending on the activity proposed, supplying a copy of the ownership papers of vehicles to be used as part of the tours (if used), and other tour operator information defined in the certified authorisation procedures (presented in section 6.3.2 regarding Mexican regulations of Chapter 6). In case the tour enterprise wants to build an infrastructure, it must apply for permission to then submit an environmental impact assessment (EIA) for consideration by the Ministry of Environment (SEMARNAT). Permit applicants must submit their papers to the administration office of the PNA where they intend to operate and where there is no office, they must send their application to the central offices of CONANP in Mexico City.

In conclusion, while tourism permits are a legal instrument to control the number of tourism operators in a certain area, the focus of CONANP in allowing mostly local people to have permits has caused the creation of inequitable commercial relationships with external tourism intermediaries. The tourism permits and concessions system of Mexico must address this issue promptly.

9.3.3 Entrance Fees

The entrance fees system has become a source of alternative income for CONANP, an educational instrument and in the future a controller of excess demand. As discussed in Chapter Eight on economic

and financial arrangements, the implementation of the entrance fees system in marine and terrestrial responded primarily to the need of CONANP to find alternative funding sources. Through the implementation of the system CONANP has learned that entrance fees have had an educational effect on tour operators and tourists who appreciate the opportunity of entering the protected area. The next stage of the entrance fees system is to make it an economic tool to control demand. The use of entrance fees to control excess demand makes this economic instrument a management technique to influence visitation to protected areas in Mexico.

Starting in 2006 CONANP intends to charge different fees depending on the zones visited in a protected area, in this way entrance fees can control demand and visitation (A. Bernárdez, personal communication, September 13, 2004). With regard to differentiated fees, this is considered an important policy tool to manage demand, because it has been shown that tourists are sensitive to the level of fees; the purpose of differentiated fees should be to "discriminate between parks, and between high and low season" (Rivera Platter & Muñóz Piña, 2004). The possibility of differentiating based on nationality, on the assumption that foreign visitors have greater incomes and are willing to pay higher prices, is anti-constitutional in Mexico (A. Bernárdez, personal communication, September 13, 2004).

However, if CONANP wants to control demand because high visitation impacts negatively on the natural context of a protected area, it must define the carrying capacity of the area to determine the permissible levels of visitors. To determine this carrying capacity, the use of frameworks such as the Limits of Acceptable Change can assist protected area managers.

9.3.4 Limits of Acceptable Change

In Mexico, Limits of Acceptable Change (LAC) is the framework required by the LGEEPA Regulation on PNAs. This regulation states that the limits of acceptable change regarding any use of the protected area will be determined Ministry of the Environment (SEMARNAT). LAC is defined by the regulation as:

> determining the intensity or volume of use on the natural resources of a specific territory, through a process that considers the desirable conditions, with regard to the level of modification of the environment produced by the intensity of environmental impacts considered tolerable, in relation to the use and conservation objectives under specific management prescriptions. LAC includes a permanent process of monitoring and feedback that allows the modification of management prescriptions for the maintenance of desirable conditions when the modifications exceed the established limits. (LGEEPA Regulation on PNAs)

Although visitor impact management frameworks, such as LAC, have been recognised as useful alternatives to the complex concept of carrying capacity, these frameworks have been difficult to apply in developing countries due to constraints in funding, and staffing levels and expertise (Farrell & Marion, 2002). Such is the case of Mexico, where even when regulations require CONANP to develop LAC, the agency has as yet been unable to undertake them because of these kinds of constraints. Several of the interviewees (e.g., Directors of PNAs) mentioned the need to do the LAC studies, but none has been done

yet. In addition, the published management plans of many protected areas in the section on tourism mention the need to develop studies of 'limits of acceptable change', but none of the plans includes these studies. A temporary alternative to this situation has been to adopt the 'precaution principle' (a maximum number of visitors permitted which is probably less than the carrying capacity of the protected area) in determining the number of visitors allowed in a specific area (R. Kobelkowsky, personal communication, September 13, 2004).

9.4 Comparing New Zealand and Mexico

New Zealand and Mexico share similar management techniques to manage tourism and recreation in protected natural areas. Such is the case of the Recreation Opportunity Spectrum (ROS) applied in New Zealand and the zoning techniques used in Mexico. Though these two strategies have similarities, they differ in their purpose and function, as will be further discussed. New Zealand and Mexico also share the use of tourism concessions to control the type and number of private tourism enterprises in protected areas, but these systems also have some differences. The other management techniques, such as entrances fees, interpretation, and codes of conduct, are used more in New Zealand than in Mexico.

The similarity between ROS and zoning is the underlying idea that a protected natural area can be divided into several types of zones. Both strategies work on the basis that to manage a protected area effectively, it is useful to delineate different types of zones which will determine the type of activities allowed or not allowed within them. This zoning principle comes from the idea that by dividing a territory the agency can manage the paradox of use and preservation. In certain zones preservation is the priority and in other zones certain uses are allowed.

Although ROS is a zoning tool it differs in its purpose from the concept of zoning used in Mexico. While ROS intends to provide a spectrum of recreational opportunities within a natural area, zoning is concerned with the broader task of conserving the natural assets of the protected area. In other words, ROS is a tool used to plan outdoor recreation, while zoning is a planning tool used for conservation. Although zoning defines the zones where tourism or recreation are permitted, this planning technique is not concerned with the types of recreational opportunities provided.

Tourism permits and concessions are management techniques also shared by New Zealand and Mexico. The purpose of tourism concessions is the same in both countries: to control the number and type of tourism enterprises in a protected area. Although the word 'concession' has different meanings in each country, the idea is the same: to give authorisation to operate a tourism enterprise on conservation land. In both countries, not only is the concept similar, but so is the application process. The interested party must approach the agency, consult with the conservancy staff (New Zealand) or the director of the PNA (Mexico), fill an application form, pay the corresponding fee, and if required, undertake an environmental impact assessment (EIA).

The tourism concession systems of New Zealand and Mexico have some important differences. The first one relates to fees. In New Zealand, a tourism concessionaire must pay an application and monitoring fee. The application fee is a set fee that the potential concessionaire must pay for DOC to process its application. This fee is not reimbursed if the application is denied. The monitoring fee is a set fee paid to DOC to monitor the activities of the concession. Both fees are cost recovery fees, meaning DOC does not generate revenue from these. In the case of Mexico, the potential permit holder pays a fee to be an operator. In other words, CONANP charges no application or monitoring fees. The other relevant difference is the use of rents to generate revenue from tourism concessions. In New Zealand, DOC negotiates with the concessionaire the type of rent to be paid to DOC. Rents can be charged as a percentage of the gross revenue, per hectare, per head or per trip charge, a fixed fee or a combination of these depending on the activity and the market rates. These rents generate a significant income for DOC ($9.9 million in 2004). In Mexico, CONANP does not generate much revenue from tourism permits, because CONANP only charges a relatively small fixed fee for the duration of the permit (2 years). CONANP generates income from tourism through charging entrance fees.

Entrance fees in Mexico have become an important source of income for CONANP, but also a useful economic tool to control excess demand. Entrance fees are planned to become a management tool in the near future to control the number of visitors to certain protected areas and certain zones of the most popular protected areas. By comparison in New Zealand, where entrance fees are not charged to enter protected areas, DOC does charge different rates for its most popular tracks and facilities.

The management techniques of interpretation and codes of conduct which are well developed and promoted in New Zealand are just starting to be used in Mexico. Interpretation for DOC is an important tool to reach its mandate to advocate for conservation. Interpretation is also a useful tool to inform and educate visitors. Interpretation together with the care codes inform visitors of their expected behaviour. Interpretation seeks to educate visitors through delivering information that helps them appreciate the natural, historical and cultural values of the protected areas. In Mexico, interpretation is starting to being used as a tool of environmental education directed towards local inhabitants and visitors. With regard to codes of conduct, CONANP has yet to develop and promote one. CONANP has published some leaflets about the protected areas for visitors, and although they include ‘recommendations’ to the visitors, they are different for each protected area. A single, uniform and nationally used code of conduct would have a greater impact.

The visitor impact management framework of LAC is a legal requirement in Mexico. Due to financial and human resources constraints, LAC has yet to be applied extensively in Mexico. In the New Zealand case, LAC has been used to monitor recreational and tourist activities in hotspots like Milford Sounds and the Tongariro Crossing. In both cases there are no recent reports of the use of LAC to discuss further.

9.5 Management Techniques Classification

The following section uses the classification of the management practices framework presented in the literature review to discuss the management techniques used by New Zealand and Mexico. In addition, this section discusses how the previous variables of the institutional arrangements affect management techniques.

Management practices or techniques can be classified as direct or indirect management actions. Direct management practices directly affect visitor behaviour, while indirect management practices try to influence the decision factors of the visitor's behaviour as shown in Figure 3.2 (Manning, 1999). DOC uses a combination of direct (ROS and tourism concessions) and indirect (interpretation and care codes) to manage tourism and recreation. By determining the recreational settings or zones, ROS also decides the type of facilities and access provided for visitors. The building of tracks, campsites, and or huts directly affects the behaviour of the user. Visitors will tend to use tracks provided rather than finding routes, and as a consequence tracks guide the visitor through protected areas, maybe avoid sensitive areas, or fauna breeding grounds for example. Tourism concessions are also a direct management technique because the denial of a permission to operate in a national park stops tour operators from impacting on a natural setting. Interpretation and care codes are indirect management practices because they try to educate the visitor by providing information and suggestions of proper behaviour from which the visitor can decide to follow or not. In the case of Mexico, CONANP applies primarily direct management techniques, such as zoning, tourism permits and entrance fees. Zoning and tourism permits are direct management actions as ROS and tourism concessions, already explained. With regard to entrance fees as an economic instrument, the imposition of higher fees is planned to stop potential users going to protected areas. Although entrance fees can be seen as direct management practices, fees can also be considered indirect management actions. Entrance fees do not actually prohibit entrance to protected areas, but increase the price to a certain level that cost of entrance becomes a decisive factor which deters people from going to a protected natural area. CONANP should explore the implementation of indirect management practices to improve its control of visitor impacts.

9.6 Management Techniques as an Outcome of the Institutional Arrangements

The previous chapters regarding the variables of the institutional arrangements have explained how each of the individual variables identified in this thesis affects the management of tourism and recreation in protected natural areas. The following section discusses how these variables affect the use of these management techniques.

Historical and traditional customs and values, which make up the most important variable, affect the use of certain management techniques. In the case of Mexico, for example, the utilitarian, aesthetic, ecological and cultural values are considered in the concept of ROS. ROS considers the aesthetic,

ecological and cultural values of the different zones to minimise negative impacts on these values. Zoning is an expression of the ecological values present at the end of the 1900s that led to the need to solve the paradox of use and preservation.

Legislation and regulations of the institutional arrangements affect the application of the diverse management techniques. In the case of New Zealand, the Conservation Act and the National Parks Act define and describe the use of tourism concessions. These Acts also set the mandate and functions of DOC, which include to provide recreational opportunities and to advocate for conservation. Such legal mandate is also expressed in the use of ROS and interpretation as the means to reach such goal. In the Mexican case, legislation defines and describes the use of zoning, and regulations determine the use of LAC. Legislation also determines the use of entrance fees and the system of permits.

Policies and guidelines determine the use of management techniques in the protected areas of both countries. Management plans in both countries apply or mention the need to apply management techniques such as ROS, tourism concessions, and LAC. In the New Zealand case, the Visitor Strategy, as an overall national strategy to address the question of recreation and tourism in protected areas, applies ROS, develops the system of tourism concessions and addresses the use of interpretation. Furthermore, each of the conservation management strategies for each conservancy also addresses the issue of recreation and tourism. In the Mexican case, management plans of each protected area apply the zoning technique and address the issue of tourism in a superficial manner. Management plans in Mexico also mention the need to develop studies of the Limits of Acceptable Change.

The administrative structures determine the capability of the agencies to apply the management techniques. In New Zealand, an extensive staff dedicated to recreation and heritage appreciation at national, conservancy and area levels apply the framework of ROS, develop interpretative materials and work with VAMS. In relation to tourism concessions, DOC also has an extensive team of people dedicated to managing tourism concessions at national, conservancy and area levels. On the other hand, in Mexico, CONANP has no staff at a national level dedicated solely to the issues of tourism or recreation. In a few cases there are people dedicated to tourism and recreation, but generally more in the area of environmental education. Due to this administrative constraint CONANP needs to draw on the time and work of separate staff to manage the increasing demand of tourism in protected areas.

Key participants and actors are involved in the application of certain management techniques. Recreation groups are key actors who have influenced the use and adaptation of ROS in New Zealand. For instance, the Federated Mountain Clubs (FMC) in 1987 recognised the value of ROS and completed an inventory of land in the Otago Region (Taylor, 1993). Then in 1993 the FMC, invited by DOC, participated in the adaptation of ROS to the New Zealand context (Taylor, 1993). This shows how recreation groups interested in DOC providing quality recreation opportunities influenced the establishment ROS as a planning tool in the conservation estate. In the case of Mexico, the administration office of a protected area and the central offices of CONANP, in developing a management plan which includes the use of

zoning, consult and work together with local and regional stakeholders. This results in a commonly agreed zoning of the protected area, including the issues of recreation and tourism.

Economic and financial arrangements are the variables of the institutional arrangements framework that have a greater potential to affect the use of management techniques. When the agency lacks the proper financial resources to carry out its work, the tendency is to focus resources on priority areas. For example, CONANP, which has great financial and hence human resources constraints, has not yet applied LAC. If the agency had the appropriate resources this management technique would be used in every protected area where there is significant tourism visitation.

9.7 Summary

The present chapter described, compared and discussed the management techniques used in New Zealand and Mexico to manage tourism and recreation in protected areas. In the case of New Zealand, it was found that the main techniques used by DOC were the Recreation Opportunity Spectrum (ROS), the Visitor Assets Management System (VAMS), tourism concessions, interpretation and codes of conduct. In the case of Mexico, CONANP uses zoning, tourism permits and LAC (although yet to be implemented) as management techniques. After describing the techniques, a comparison was done to understand the similarities and differences between the management techniques used in both countries. Finally, the chapter discussed how each of the previous variables within the institutional arrangements framework affected the use of the management techniques.

The central contention of this research is that the institutional arrangements of the agency in charge of the protected natural areas of a country affect how tourism and recreation are managed. The variables of the institutional arrangements framework have been described and discussed for New Zealand and Mexico. Chapters Five to Nine have comprised the results chapters of the thesis. The following chapter draws conclusions from the institutional arrangements framework as well as lessons learned from the experience of DOC in New Zealand.

10. The Institutional Arrangements Puzzle: Lessons and Conclusions

10.1 Introduction

The institutional arrangements framework helps understand the puzzle of the complex 'real world'. This chapter develops concluding insights from the previous results chapters and also addresses research questions 4 and 5 of this thesis: (4) How do the variables of the institutional arrangements framework affect the management of recreation and tourism in PNAs, and (5) what lessons can be drawn from the New Zealand experience and applied to the Mexican situation. Finally, two proposals for further research are enunciated to build on the experience from this study.

10.2 Conclusions from the Institutional Arrangements Analysis

Institutional arrangements is a complex concept, difficult to understand and dissect into clear-cut variables of analysis. For this reason a framework of eight variables of analysis was derived from Mitchell (1989) and Nelson (1978b). The institutional arrangements framework used in this research helped draw a general overview of 'how things work' in relation to protected areas in Mexico and New Zealand. Chapters Five to Nine were essentially the results chapters that presented the different variables of the institutional arrangements framework. The chapters described the variables for the New Zealand and Mexican cases, compared the variables between the countries and discussed how each variable influenced the other variables of the framework. The general conclusions of these chapters are now presented in sections 10.2.1 to 10.2.5.

10.2.1 The Evolving Values of Nature Protection

There are three basic values (utilitarian, aesthetic and ecological) which have been present throughout the history of nature conservation in New Zealand and in Mexico. In addition to these basic values there is a re-emerging indigenous value that takes into account the traditional customs and values towards nature of the indigenous people of both countries.

The difference between these two countries is that these basic values have evolved in different manners during the history of protected natural areas (PNAs). The utilitarian value has always been present in the history of PNAs, with a stronger emphasis during the 1800s and decreasing in importance towards the end of the 1900s. The ecological values, on the contrary, have had an opposite evolution to utilitarian values: with a low importance in the 1800s and increasing in importance throughout the 1900s to become, from the 1970s, the primary value. Aesthetic and indigenous values have been more present in the history of PNAs in New Zealand, compared to Mexico. Nevertheless, in Mexico, PNA management is increasingly seeking the participation of local communities including indigenous people, however, a lot remains to be done to integrate indigenous values in nature conservation.

10.2.2 The Rules of the Game

Institutions can be understood as the rules of the game, as discussed in the literature review (section 3.2.2). The legislation, regulations, policies and guidelines are the written, formal and explicit rules that govern the institutional arrangements. These rules express the values and customs of society with regard to PNAs, and the allowed uses, such as tourism and recreation. Regulations, policies and guidelines are derived from the interpretation given to legislation by the administrative structures (or agency). Therefore, after the variable of values, legislation is the second most important variable of the whole institutional arrangements and the main rule of the game.

One of the main differences between the legislation of New Zealand and Mexico is the issue of public access to protected natural areas. In New Zealand, everyone is free to access all PNAs. In Mexico, this issue is not considered in the legislation, and since 2002 visitors must pay to enter PNAs. This difference has an important impact on the overall purpose of PNAs in both countries; while in New Zealand PNAs exist to preserve the natural heritage as in Mexico, PNAs also exist so the public can enjoy and benefit from their existence. This different legal vision influences all the other variables of the institutional arrangements.

10.2.3 The Players of the Game

Institutions can also be understood as the various players of the game, or the entities that define, enact and follow the rules of the game. Within the institutional arrangements framework, the variables that are the players of the game include: the administrative structures, the key participants and the political structures.

To change or influence the other variables, the players must interact, relate, and negotiate. Successful tourism and recreation management depends on the capacity of the players to interrelate with each other to apply, modify and/or evaluate the rules of game. DOC and CONANP, the agencies in charge of PNAs, have formal and *ad hoc* relations with other governmental and non-governmental stakeholders regarding issues of tourism and recreation. While these agencies (administrative structures) are the implementation bodies of the rules of the game, the political structures function as the creators of the laws, and key participants as the supporters and/or evaluators of the agency.

10.2.4 The Value of PNAs

Economic and financial arrangements are the monetary expression of the significance given to the preservation of protected natural areas. This recognition is given by the political structures which decide on the allocation of the governmental budget, but it is also influenced by the underlying values of society in terms of nature conservation. In addition to how much PNAs should receive for their conservation, economic and financial arrangements express the value that PNAs have to generate income from

activities such as recreation and tourism. This value is market driven and defined by the demand for the resource by the present and potential visitors.

In comparison to Mexico, New Zealand allocates (through a budget) and generates (through tourism and recreation) more money for and from PNAs. In New Zealand, revenue is generated from fees charged to recreationists and tourism concessionaires, while in Mexico, revenue is generated from visitor entrance fees and permit fees from tour operators. Mexico remains to develop a concessions system adequate to the context of the country.

10.2.5 The Outcome: Managing Visitors

The ultimate outcome of the institutional arrangements variables is to manage tourism and recreation in protected areas, in other words, managing visitors. Management techniques are the 'dependent variables' of the institutional arrangements, as will be further discussed in section 10.3. Management techniques can be classified as direct or indirect practices, as shown in section 9.5.

Zoning is an important management tool applied in New Zealand and Mexico. In New Zealand, the application of this tool is through the Recreation Opportunity Spectrum (ROS) as a planning tool for recreation. In Mexico, zoning is used to divide the PNA into zones and determine which activities are permitted or prohibited in each zone. While ROS is only used to plan recreation, zoning in Mexico is a broader technique used in nature conservation.

Other visitor management techniques used in New Zealand and/or Mexico are tourism concessions, entrance fees and educational or indirect practices, such as interpretation and environmental care codes. Tourism concessions and permits have the purpose of controlling the operation of tour operators, as well as reducing the impacts of tourists. Entrance fees in Mexico, besides generating income, have also been used to educate the tour operators and visitors about the value of the PNAs, and in the future will assist in the control of demand in popular protected areas.

10.3 The Institutional Arrangements Framework

The application of the institutional arrangements framework assisted this research to understand the complex context surrounding tourism and recreation management in the protected natural areas of two countries. Furthermore, this framework helped understand the relationships between the variables of analysis. Sections 10.3.1 to 10.3.3 develop a model of these relationships from the study of New Zealand and Mexico. The importance of this model is discussed in section 10.3.4.

10.3.1 The Institutional Arrangements of New Zealand and Mexico

Chapters Five to Nine discussed how each variable was affected by and affected the other variables of the institutional arrangements of New Zealand and Mexico. Figure 10.1 illustrates all the relations discussed in previous chapters. The number of relationships between the variables can be confusing to illustrate, but will be simplified by the application of a categorisation of variables in section 10.3.2. The point is to show all the interconnections existent between variables.

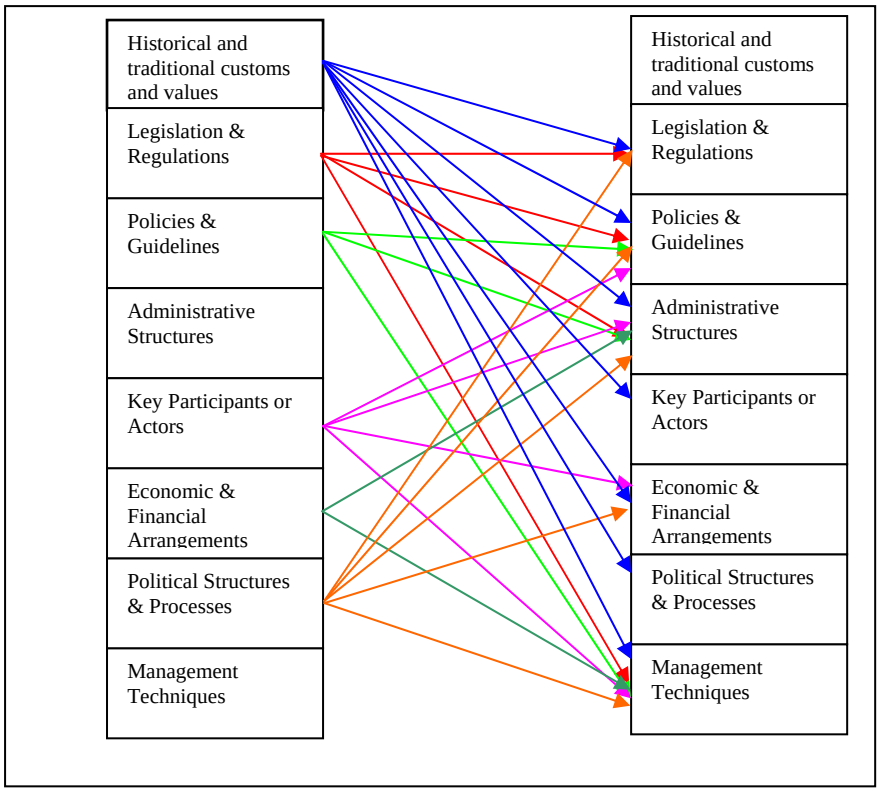


Figure 10.1: Relationships between variables of the institutional arrangements of New Zealand and Mexico.

10.3.2 Fitting Reality into Theory

As discussed in the literature review (section 3.2.4), Stern et al. (2002) suggest four categories for institutional arrangements variables: (1) possible interventions or independent variables, (2) outcomes or dependent variables, (3) contingencies or moderator variables, and (4) mediators or intervening variables. By using the causal model (illustrated in section 3.2.4), the different variables of the institutional arrangements framework can fitted into one of the variable categories, as shown in Figure 10.2.

The usefulness of the model in Figure 10.2 is that it allows for the categorisation of variables used in the institutional arrangements framework. This categorisation is based on the relationships that exist between each variable and that were found through the research (as shown in Figure 10.1). This model achieves to identify the independent variable (historical and traditional values and customs), the moderator variables (political structures and processes, and key participants and actors), the intervening variables (legislation

and regulations, policies, administrative structures and, economic and financial arrangements) and finally the dependent variables (management techniques and guidelines).

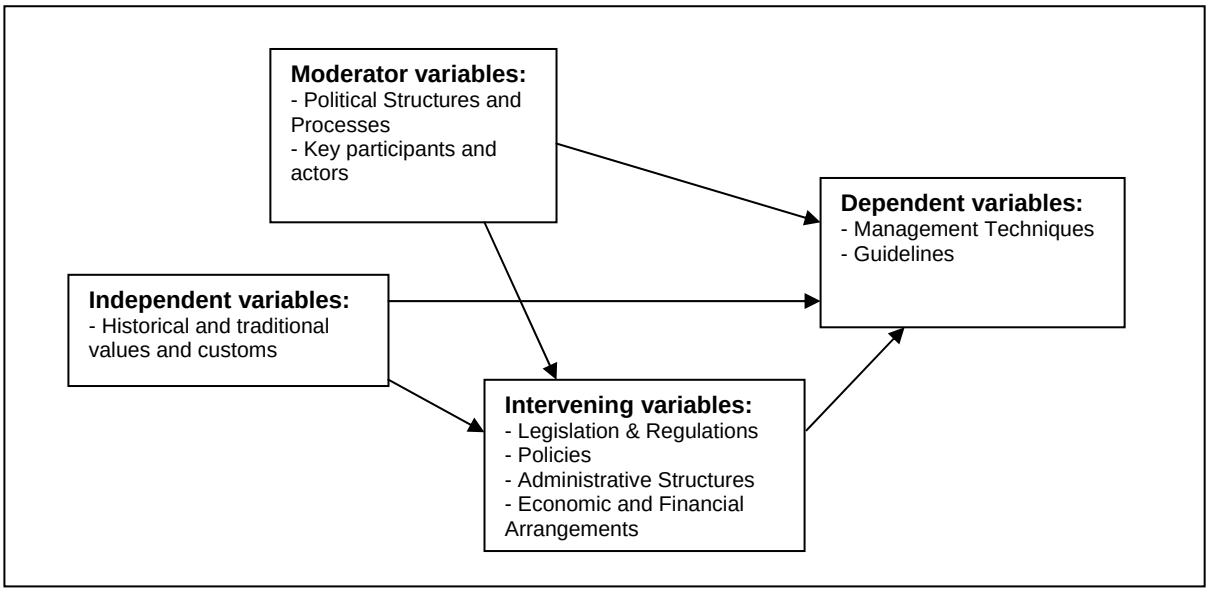


Figure 10.2: Relationships between variables of the Institutional Arrangement Framework.

Although this causal model assisted the categorisation of the variables based on their relationships, the model fails to account for some exceptions that occur in the institutional arrangements of New Zealand and Mexico. For example, as shown in Figure 10.2, the variable of policies and guidelines has been separated to include policies as an intervening variable, and guidelines as a dependent variable together with management techniques. The problem with this separation is that while some guidelines can be considered dependent variables, such as the standard operating procedures in New Zealand, other guidelines influence management techniques, such as the guidelines to apply the Recreational Opportunity Spectrum (ROS). Another significant inaccuracy of the model of Stern et al. (2002), is that while variables such as the economic and financial arrangements affect variables within the category of intervening variables, these influences are not shown in the model. Therefore, this causal model does not suit the data of the present study, and hence, a new model must be proposed that may have a wider application.

10.3.3 Creating Theory from Reality

Building from the causal model proposed by Stern et al. (2002) previously discussed in section 10.3.2, a new model is proposed that depicts more accurately the reality of New Zealand and Mexico. Figure 10.3 illustrates a proposed model of the relationships between the variables of institutional arrangements of both countries. One of the main contributions of this model is that it acknowledges that some intervening variables, besides influencing dependent variables, also influence each other. Another contribution of the model in Figure 10.3 is that bylaws (made in New Zealand for each protected area) are included in the dependant variables. The reason for this is that bylaws (considered regulations in New Zealand) do not affect any other variables, but do affect tourism and recreation in protected areas.

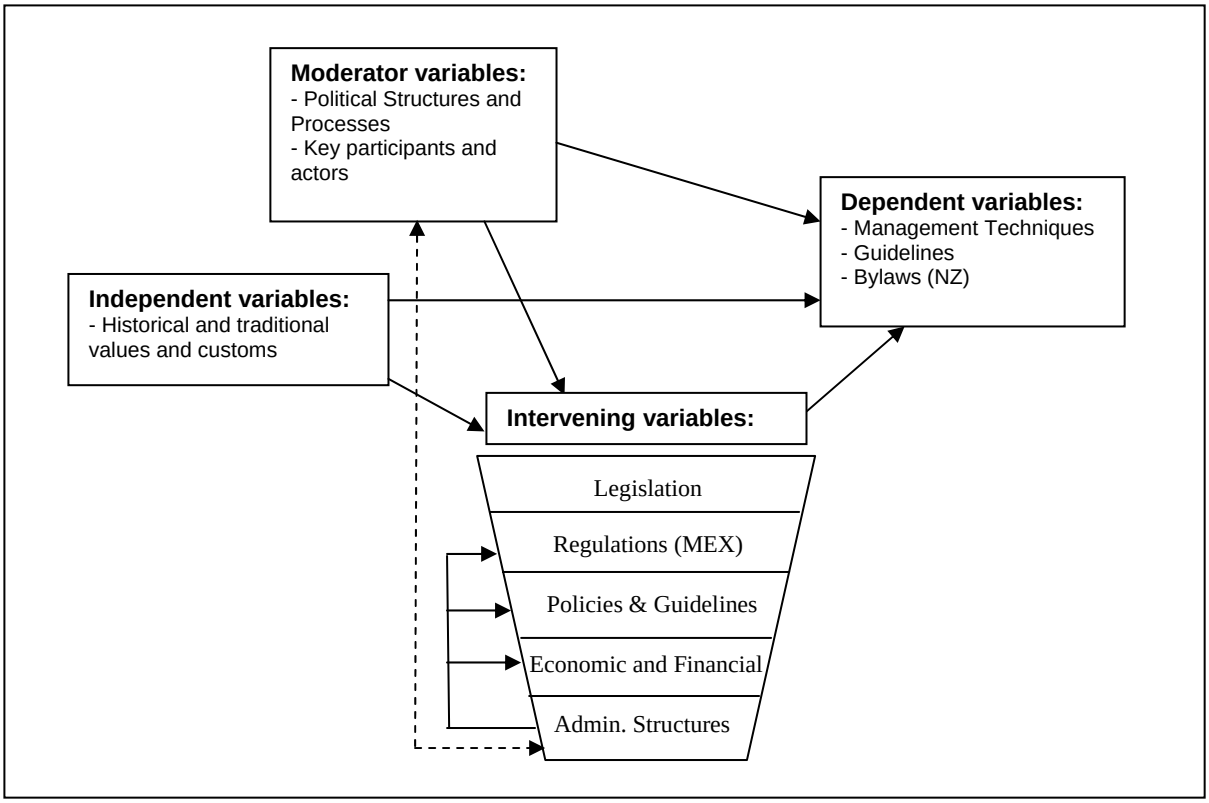


Figure 10.3: Relationship of the institutional arrangements variables of N.Z. and Mexico.

In Figure 10.3 the intervening variables are shown within an inverted triangular form in order to emphasise that the variables above affect the lower variables. For example, legislation, which is the most important variable dictating the legal mandate of regulations, policies, and the 'administrative structures', is at the top. The model also shows how the top variables influence the 'economic and financial arrangements', which at the same time affects the 'administrative structures'. In addition, the intervening variables show arrows going from the 'administrative structures' to the regulations, policies, guidelines and 'economic and financial arrangements'. These arrows represent the influence that 'administrative structures' have on the above variables. Finally, the dashed arrows between 'administrative structures' and the moderator variables show how the agencies have working relationships with the 'political structures' and the 'key participants'. These working relationships help the agency negotiate with the 'political structures' changes in the legislation, and therefore influence changes in the variables affected by legislation.

10.3.4 The Importance of a Framework of the Institutional Arrangements

The institutional arrangements framework applied in this thesis has helped understand how tourism and recreation in PNAs work in the context of two different countries. An institutional arrangements framework gives a general picture of 'how things work' and 'why they work in a certain way'. The framework can be used to draw a holistic picture of the reality analysed.

Another important use of studying the institutional arrangements is that when all variables are understood, as well as their relationships, managers (including planners and/or policy makers) can influence change

by making modifications in certain variables. In other words, there are key variables in the institutional arrangements framework that have direct influence on the other variables and can produce significant change on the whole arrangement. Hence, by making changes in one variable, managers can provoke change in other variables simultaneously. The order of importance of the variables is: the independent variables, followed by the moderator variables, and finally the intervening variables. As an example, if the agency wanted to influence the legislation it must negotiate the changes within the political structures (legislature). On another level, the administrative structures can change the policies guiding the agency, but cannot change the legal mandate unless negotiating with the political structures.

The implications of knowing these relationships between variables are that the agency, or any other stakeholder, can influence the whole institutional arrangements by changing the relevant variables. Therefore, the players within the arrangement can improve the management of tourism and recreation more effectively and more efficiently by working on changing one or two variables of the system. The change made in one variable has a domino effect on other variables of the framework.

10.4 Institutional Arrangements: The Expression of a Strategy

The thesis of this research is that institutional arrangements determine how tourism and recreation are managed in protected natural areas. It has been shown through the institutional arrangements framework applied in this study that the different variables determine the management techniques (also referred to as 'tools' or 'practices'). In addition to defining the management practices, the institutional arrangements are the expression of the overall management strategy towards protected natural areas. In other words, institutional arrangements determine the management strategy of an agency. To better understand this idea, institutional arrangements can be envisaged as a network of institutions (rules and players) which stand between the users (visitor, recreationist, or tourist) and the natural resource (national parks, biosphere reserves, etc.). Therefore, the whole of the institutional arrangements determines the management strategy which is trying to have an effect on the demand (users) and/or the supply (resources). To prove this idea, that institutional arrangements are the expression of the management strategy regarding tourism and recreation, the next section discusses the concept (management strategies) and identifies the management strategies of New Zealand and Mexico.

10.4.1 Management Strategies

Any agency dedicated to managing protected natural areas follows, either explicitly or implicitly, a management strategy concerning recreation and tourism. As discussed in the literature review "management strategies are basic conceptual approaches to management that relate to the achievement of desirable objectives" (Manning, 1999, p. 238). According to Manning (1999) , there are four basic strategies:

1. Increasing the supply of recreation opportunities to accommodate more use;

2. Limiting the demand for recreation through restrictions or other approaches;
3. Modifying the character of recreation to reduce its adverse impacts;
4. Modifying the resource base to increase its durability.

The first two management strategies deal with the supply (the natural resource) and the demand (users). The third and fourth management strategies consider supply and demand as fixed. These management strategies determined by the institutional arrangements can be illustrated as shown in Figure 10.4.

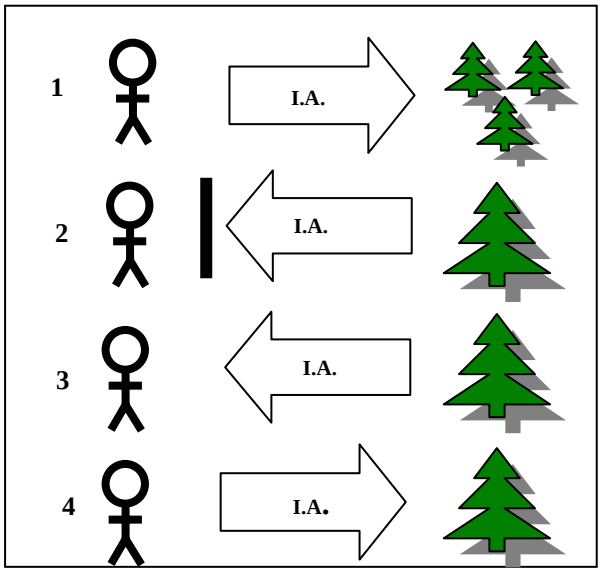


Figure 10.4: Visual representation of management strategies.

As shown in Figure 10.4, management strategies 2 and 3 try to influence the behaviour of the users (demand). The difference between strategies 2 and 3 is that strategy 2 tries to stop users from passing through to the resource. On the other hand, strategy 3 tries to educate the user to decrease its impact on the resource. Management strategies 1 and 4 work on the resource. Strategy 1 increases the number of resources available to users, and strategy 4 modifies the resources (hardens tracks, builds toilets) to extend its durability.

An agency can adopt one or a combination of management strategies to manage tourism and recreation in protected natural areas. To understand which management strategy an agency has adopted, it is important to know the desirable objectives of the agency. The institutional arrangements analysis carried out in previous chapters helps identify the objectives and the management strategies for New Zealand and Mexico.

New Zealand's Management Strategy

The desirable objective of the Department of Conservation (DOC) in New Zealand is defined by the legislation it enacts (Conservation Act, National Parks Act, etc.) and is clearly stated in its mission which is to conserve the natural heritage for all to enjoy. As discussed in Chapter Seven, the mission of DOC is to balance the paradox of preservation and use. Furthermore, the Visitor Strategy's goals also reflect this

desirable objective by including goals dedicated to preservation (Goal 1: Protection), and enjoyment of the public (Goal 2: Fostering Visits, Goal 3: Managing Tourism Concessions on Protected Lands, Goal 4: Informing and Educating Visitors, Goal 5: Visitor Safety).

Once the desirable objective is identified (preserve the natural heritage while permitting public enjoyment of the resource) the institutional arrangements analysis presented in the previous chapters helps understand which management strategies are applied in New Zealand. The Department of Conservation has used a combination of management strategies to manage tourism and recreation in protected areas. Through the Recreational Opportunities Spectrum (ROS) and the Recreation Opportunity Review, DOC has developed, maintained or removed visitor facilities (huts, tracks, campsites). Through this planning and review process, DOC has applied the first management strategy based on multiplying the number of recreational opportunities within protected areas. Together with this review and the implementation of the Visitor Assets Management System (VAMS), DOC is working on the resource base to increase its durability, showing also the application of management strategy 4.

While DOC has worked on the resource base, showing the application of management strategies 1 and 4, it has also applied management strategies 2 and 3 which work on the supply side of recreation and tourism. With regard to management strategy 2 (the demand for recreation may be limited through restrictions or other approaches), the Department has applied a booking system and differential fees for certain popular tracks, as well as using tourism concessions to control the number of private operators. The booking system and differential fees are applied to the Great Walks during the peak season of summer when the number of visitors increases considerably. Through this system, DOC is able to control the number of trampers walking on these trails. Tourism concessions are another way of restricting supply by controlling the number of concessionaires who want to attract increasing numbers of customers. In relation to management strategy 3 (modifying the character of recreation to reduce its adverse impacts), DOC tries to educate visitors through interpretation and care codes suggesting how to decrease their impacts on the resource. The logic behind educating visitors is that if they learn about the significance of a natural setting they will learn to appreciate it and hence will try to conserve it. Care codes have the intention of proposing environmentally friendly behaviours in the outdoors to decrease the impacts of visitors.

Combining the application of the various management strategies by DOC implies a broad strategy which tries to tackle simultaneously the issues of demand and supply and hence can be considered a proactive strategy. In other words, DOC through the application of ROS and the Recreation Review shows a proactive approach to the management of tourism and recreation, while not waiting for issues to build up and then responding. DOC is entering into a phase of trying to better understand the demand and whether people's expectations are being met with the supply of recreational opportunities. Nevertheless, DOC has not set up a visitor management system such as LAC to monitor the impacts of recreationists, as mentioned in Chapter Nine. However, in the case of tourism impacts, DOC's tourism concession system is an impact control system that monitors and evaluates tour operator activities.

Mexico's Management Strategy

The desirable objective of Mexico is expressed in the mission statement of the National Commission of Protected Natural Areas (CONANP) which states the desire to conserve the natural heritage while promoting sustainable development (of the local communities). As discussed in Chapter Seven, this shows that the main objective of CONANP is nature preservation, but that CONANP is also looking for alternative economic activities for the local communities so they do not degrade the natural environment. Tourism has been proposed as a viable alternative in certain areas. At the same time, tourism is already happening in some protected areas, mainly near big tourism resort areas such as Cancun in the Yucatan peninsula (near Belize). The response to this trend from CONANP has been to control demand through restrictions or other approaches.

The three management techniques used to express this strategy are: entrance fees, zoning and tourism concessions. Entrance fees have been created to generate income for CONANP, but soon differential fees will be applied to control the excess demand in different protected areas, and different zones of the most popular protected areas. Together with entrance fees, zoning is being used to restrict recreation and tourism in certain sub-zones of the protected areas. The zoning of a protected area is defined by the management plan. Finally, tourism concessions, as in the case of New Zealand, help restrict the number of private operators working inside a protected area.

The management strategy applied in Mexico, which tries to control the demand on protected areas, shows a reactive approach to tourism and recreation management. In other words, CONANP is trying to resist the existent pressures from tourism, but still remains to set up a proper management strategy to tackle proactively the issues of demand and supply. The move from a reactive approach to a proactive approach can be done by learning from the experiences of other countries, such as New Zealand.

10.5 Lessons from the New Zealand Experience

The final research question of this study was to determine what could be learnt from the New Zealand experience. The most important lessons are the ones that are applicable to the Mexican context, which is very different from New Zealand. Consistent with the analytical framework of this study, the lessons learnt can be divided between those of values, policies, administrative structures, key participants and management techniques.

The lesson learnt relating to values is the need, and historical debt, to include and consider the values and customs of the indigenous people in the management of protected natural areas. Although in some Mexican protected areas Advisory Councils include the participation of local communities, indigenous values and customs remain excluded in the government's nature conservation strategies. The government claims that practices and customs of local communities inside protected areas are one of the main

destroyers of the environment. At the same time, it is acknowledged that the most biologically diverse and preserved ecosystems in Mexico are in indigenous areas. This shows that indigenous traditional values and customs are probably the main contributors to nature conservation. New Zealand, since the creation of DOC, has integrated Maori values and participation into its strategies and administrative structure. This integration of indigenous values is a lesson that must be learnt and applied in the protected natural area system of Mexico.

A national visitor strategy is a vital policy for the effective management of tourism and recreation in protected areas. DOC's Visitor Strategy is a long-term policy which defines its goals, and guiding principles and management techniques to reach the goals. The Visitor Strategy encompasses recreation and tourism in one document without narrowing the scope of the document by defining the type of tourism or recreation, as in the Mexican case. This policy is the most important lesson for Mexico, and an urgent requirement for it to take the step from a reactive to a proactive approach in the management of tourism and recreation. The basic principles of this visitor strategy can be found in the LGEEPA Regulation on PNAs which states the desired characteristics in any type of recreation and/or tourism allowed in PNAs. These characteristics include that recreation and/or tourism must not affect the ecosystems, preferably benefit the local inhabitants, promote environmental education, and if infrastructure is required, it must blend into the landscape of the PNA.

In relation to policies, management plans could be revised every ten years, as in New Zealand. Presently, management plans in Mexico are supposed to be revised and updated every five years. One of the reasons for this medium-term life-cycle of management plans might be the political instability that Mexico experiences every 6 years with the change of President. By having five-year management plans, reaching the goals in a presidential term seems possible. Nevertheless, CONANP is still writing management plans for protected areas which have never had a plan, and is faced with the obligation of reviewing five-year-old management plans. Presently, it seems that CONANP has been able to 'protect' itself from this political process. Therefore, CONANP should push for a change in the legislation so management plans become a long-term policy document to be revised and updated every ten years. This would also help CONANP create the management plans for the PNAs which do not have a plan yet, while not worrying about having to review five-year-old management plans, which are still applicable.

In New Zealand, the divided administrative structure of recreation, on one hand, and tourism, on the other, is an issue which remains to be resolved. Mexico needs to learn from this and seek to include within its structure at a national and regional level an office, department or working group dedicated to plan, manage and monitor tourism and recreation in protected areas.

Another lesson Mexico can take from the New Zealand experience is how DOC has historically related and currently relates to key participants (other stakeholders) interested in the issues of tourism and recreation. CONANP remains still to coordinate, rely and consult more with tourism associations, tourism consultants and academics who have experience and knowledge regarding tourism and

ecotourism in protected areas. This relationship would improve the capabilities of CONANP and could improve the management of tourism and recreation.

In Mexico, by law, CONANP should be applying the Limits of Acceptable Change (LAC) framework as a visitor management system. Due to financial constraints, up until now CONANP has not been able to carry out a proper LAC study in any protected area. As discussed by Farrell and Marion (2002), visitor management frameworks are not commonly used in developing countries because protected area managers have fewer financial resources, and awareness of newer decision-making frameworks is relatively low. The Protected Area Visitor Impact Management (PAVIM) framework is an alternative to LAC and is proposed for "selected areas in Central and South America to assess visitor impact problems and identify management strategies, recognising the constraints affecting developing country protected area management" (Farrell & Marion, 2002, p. 31). PAVIM represents an interesting alternative which promises to be cost and time effective compared to management systems such as LAC.

Presently, tourism permits fee in Mexico are very low and practically symbolic. CONANP could charge for an application fee, plus a monitoring fee and negotiate rent fees depending on the type of tourism service operators are providing. As in New Zealand, fees in Mexico could be paid when applying for a permit or concession regardless of whether these application are accepted or not. The monitoring fee should be set by the cost of undertaking monitoring of tourism operations in the protected area divided by the number of operators. In case there is a low number of operators, making the costs of monitoring too high, CONANP could cover 50 per cent of the cost and the rest should be paid by the operators. Finally, CONANP could start exploring the rent fees applicable for every type of tourism operation that already occurs in the protected areas of Mexico and of potential concessions, such as hotels and ecolodges.

10.6 Further Research

This study adopted a thin perspective for the research of institutional arrangements. A 'thick perspective', which encompasses social practices that originate not only from constitutive documents, but also from common discourses and understandings of how things should be done by the participants of those institutions (Young, 2002), may have shown very different results. Therefore, further research offers an opportunity to adopt a thick perspective to better understand the institutional arrangements of New Zealand and/or Mexico surrounding the management of tourism and recreation in protected natural areas.

This research proposes that CONANP should carry out in two different protected areas with similar characteristics an implementation of LAC in one and PAVIM in the other to compare the systems and use the most appropriate system for the requirements of the Mexican protected natural area system. This study could prove useful considering the financial constraints that CONANP has and which are addressed by PAVIM.

10.7 Conclusion

The institutional arrangements framework applied in this thesis has helped understand how tourism and recreation in PNAs works in the context of two different countries. An institutional arrangements framework gives a general picture of 'how things work' and 'why they work in a certain way'. The framework is useful to draw a holistic picture of the reality analysed, and also to strategically plan changes within the institutional arrangements by affecting one, or several, of the key variables of the framework.

The institutional arrangements around tourism and recreation in protected areas define the management strategies and practices applied to manage these issues. These management strategies and practices are not defined exclusively by the agency (the natural resource agency), but are also the result of the interaction, influence and public negotiation with other institutions (rules) and entities (players). To improve the management of tourism and recreation, and to have a long-term effect, the agency must influence changes in several of the variables of the institutional arrangements and not only the management techniques.

The New Zealand experience of tourism and recreation management can provide valuable information that can assist in influencing the present institutional arrangements of Mexico. Lessons from New Zealand include issues related to indigenous values and customs, policies, administrative structures, key participants and management techniques. Mexico, by opening itself to international experiences, can improve its capability for better handling the growing development of tourism and recreation in its protected natural area system. Tourism and recreation are contemporary trends and, therefore, Mexico must now construct the basis for long-term institutional arrangements which will be able to balance the paradox of preservation and use, now and in the future.

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Appendices

Appendix A: Working Document

Introduction

The following working document is an exercise to adapt a framework of variables proposed mainly by Mitchell (1989), Nelson (Nelson 1978) and confirmed by the work of McNeely, Harrison and Dingwall 1994a to the analysis of institutional arrangements for tourism and recreation in the national parks of Mexico and New Zealand. Due to the fact that the variables were not further developed or defined I undertook the task of defining them, and deciding together with my supervisors the sources of information relevant for each variable for both countries analysed.

1. Legislation and regulations

Definition (What is this variable?)

Legislation is defined as laws considered and created by the legislature of a country or state (Pearsall & Hanks, 1999). Regulations are understood as a set of rules or directives made and maintained by a governmental authority (Pearsall & Hanks, 1999). For the purpose of this thesis the focus will be on the legislation and regulations related to recreation and tourism management in national parks in Mexico and New Zealand.

Sub-variables (What things do I want to understand of this variable?)

The sub-variables that will help define the appropriate research questions for the archival research and in-depth interviews are:

A. Description of contents of the pertinent laws with respect to recreation and tourism management in national parks;
B. The similarities and differences of past and present legislation in the contexts of recreation and tourism;
C. Purpose of national parks according to the law;
D. Providers of recreational opportunities in national parks according to the law;
E. Identification of other regulations related to recreation and tourism in national parks;
F. Identify relationships between this variable and the rest of the variables.

Archival Sources (Which documents are my data sources?)

For the case of Mexico the legislation identified is: (1) General Law of Ecological Equilibrium and Environmental Protection (LEGEEPA by its acronym in Spanish), (2) xxxx. With respect to regulations these include: (1) Internal Rules of the Ministry of Environment (Chapter 12).

In the New Zealand case the pertinent legislation encompasses: (1) Conservation Act (1987), (2) National Parks Act (1980), (3) National Park Bylaws.

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico the Director of Legal Affairs (Director de Asuntos Juridicos), the General Director Ernesto Enkerlin, and others…..

For New Zealand: Principal Analyst Nigel Parrot (Conservation Policy Division – nparrot@doc.govt.nz)

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. How are the laws and regulations expressed in the policies and guidelines, in the administrative structure of the agency, in the financial arrangements, and the management techniques?
2. What are the different interpretations that can be done of the law?
3. Are the laws adequately written for recreation and tourism? What are the strengths and weakness?

2. Policies and guidelines

Definition (What is this variable?)

Policies are “a course or principle of action adopted or proposed by a government” (Pearsall & Hanks, 1999). Guidelines encompass a general rule, principle or piece of advice (Pearsall & Hanks, 1999).

Archival Sources (Which documents are my data sources?)

In the Mexican context the present policies and guidelines related to recreation and tourism in national parks are: (1) the Work Program of the CONANP (Programa de Trabajo 2001 – 2006 http://conanp.gob.mx/programa/), (2) the management plans of each national park (http://conanp.gob.mx/dcei/didact/). **Check:** http://conanp.gob.mx/transparencia/ y http://conanp.gob.mx/anp/consulta.php y http://conanp.gob.mx/sig/decretos.html

For the New Zealand case the present policies and guidelines include: (1) General Policy for National Parks (1983 & draft 2003), (2) Statement of Intent, (3) Visitor Strategy (1996), (4) national parks’ management plans, (5) conservation management strategy (each conservancy has one), (6) Guidelines on Mountain Biking (Kay has a copy), and (7) Concessions SOP (Kay has a copy).

Sub-variables (What things do I want to understand of this variable?)

The sub-variables that will help define the appropriate research questions for the archival research and in-depth interviews are:

A. Relation between policies and guidelines with respect to legislation mandates;
B. Identify the organizations that defined the present policies and guidelines;
C. Identify the organization(s) which has the mandate to apply the policies and guidelines;
D. How do these policies and guidelines affect the provision of recreation and tourism in national parks;
E. What themes are covered by these policies and guidelines (concessions, recreation management, etc)?

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico the Director of Legal Affairs (Director de Asuntos Juridicos), the General Director Ernesto Enkerlin, managers of national parks, and other people related to the issue of recreation and tourism in national parks.

For New Zealand Principal Analyst Nigel Parrott (Conservation Policy Division), Harry Maher (Concessions DoC Head Office), Mike Edginton (Central Regional Office)

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. What are the policies and guidelines related to tourism and recreation management? (Research before hand. This question is to double check.)
2. From which legislation they derive? (for me, not to be asked)
3. Who must make sure of the application of the policies and guidelines? Who most uses the policy?
4. Does reality (what happens in the field) deviate from the policy?
5. What has changed as a result of implementation of policy X? Does the policy make a difference in what ways?
6. Why was policy X developed? (Only for some – some policies are required by law)

3. Administrative structures

Definition (What is this variable?)

For the purpose of this thesis administrative structures are the formal organisation structure, purpose and organizational culture of the main agency in charge of managing the national parks of each country analysed. It also includes the formal relations between other institutions of the federal and states governments and ‘the agency’.

Sub-variables (What things do I want to understand of this variable?)

The structures, elements of the structure, as well as the elements of the organizational culture which are relevant to understand for the present thesis include:

A. The formal structure of the agency;
B. Present the role of the agency;
C. The functions and responsibilities of the agency;
D. Identify the job positions directly and indirectly related to recreation and tourism management in national parks;
E. Define the functions of the job positions identified above;
F. Describe the relations of these key job positions with other formal structures inside the governmental sphere;
G. Understand the importance of such relations and how they affect the management of tourism and recreation in national parks;
H. Ask the employees of these positions there perception on agency's priorities.
I. Appointment (designation) of directors and employees.
J. Research.
K. History of the Agency
L. Positive and Negative aspects of the Agency
M. The relation of the Agency with the political structures of the country.

Archival Sources (Which documents are my data sources?)

For Mexico: (1) General Law of Ecological Equilibrium and Environmental Protection (LEGEEPA by its acronym in Spanish), (2) Internal Rules of the Ministry of Environment (Chapter 12). Also the online directory of the agency.

For New Zealand: (1) "Restoring the Dawn Chorus" 2001-2004, (2) Doc Statement of Intent, (3) Evan Kennedy's Master Thesis (Lincoln University), (4) DoC web site.

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico the General Director Ernesto Enkerlin, park managers, and other people of the agency related to tourism and recreation.

For New Zealand Raewyn Hutchings (Senior Technical Support Recreation)

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. What relation does your job have to the management of recreation and tourism in national parks?
2. With whom do you work (horizontally) inside the agency? With do you work outside the agency? Why do you work with these people?
3. What role do you see of the agency with respect to the provision of recreation and tourism in national parks?
4. What do you think about recreation and tourism in national parks?
5. What about the dual mandate of preservation and use? Is this realistic? What are the alternatives to reach this balance?
6. Why in DoC is recreation and tourism split in the structure? What are the advantages and disadvantages of this split?
7. Who do you recommend me to talk to discuss about tourism and recreation inside the agency?

4. Economic and financial arrangements

Definition (What is this variable?)

Economic and financial arrangements are understood as the channels and processes by which the inputs (e.g., public funding, user fees, sponsorship, and other) and outputs (e.g., user fees, concessions, and other) of money related to recreation and tourism in national parks occur inside the administrative structures of the institutional arrangements.

Sub-variables (What things do I want to understand of this variable?)

A. Inputs of financial resources that fund the management of recreation and tourism in national parks;
B. Outputs generated by recreation and tourism in national parks;
C. Origins of inputs;
D. Destinations of outputs.

E. How do the outputs compare to the inputs;
F. Compare the inputs to the global budget of the agency, to other government agencies, and to the GDP.
G. Compare inputs and outputs between countries.

Archival Sources (Which documents are my data sources?)

1. The budget of the agency, 2. the budget of the ministry of environment, 3. the governmental budget approved by the legislative body, 4. the GDP of the country.

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico people in the "Dirección Ejecutiva de Administración y Efectividad Institucional: (the financial section of the agency). To the national park managers.

For New Zealand (DOC Business Strategy)

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. What is the annual budget of the agency?
2. How is money allocated to the national parks (specific national parks)? And to other PNAs?
3. What is the income generated by tourism and recreation into national parks?
4. What are the items that generate that income? (user fees, souvenirs)
5. What other sources of funding does the organization have?
6. How is it decided to allocate the funds? Is there a set criteria? Is it defined by law, policy or by a person?
7. How much does the agency spend on managing tourism and recreation?
8. How is allocation decided for tourism and recreation management?
9. Is the money generated within the park, kept in the park? Where is the money spent?
10. Are financial instruments used to manage recreation and tourism? (e.g. user fees) What is the purpose of this? (e.g. revenue generation, reduce visitor numbers and therefore visitor impacts)
11. How can financial arrangements affect recreation and tourism management in national parks?
12. How much money is generated by concessions? How is the cost of a concession calculated? What is the purpose of the fee?
13. THINK MORE (this are contextual questions)

5. Political structures and processes

Definition (What is this variable?)

Political structures and processes cover the relations of the agency and the national parks with the politicians and other political figures inside the federal and state legislatures as well as with ministers of key governmental organisations, such as ministry of tourism and the ministry of the environment, and whom have direct or indirect influence in the issues of tourism and recreation in national parks.

It is then important to identify the following political figures:

A. Ministers;
B. Politicians of the legislature whom have close relation with the issues of national parks;
C. Other political figures related directly or indirectly to the tourism and recreation management in national parks.

Sub-variables (What things do I want to understand of this variable?)

A. What is their relation to the agency;
B. What influence do they have in the decision-making of tourism and recreation management in national parks?
C. Political interest in the national parks.

Archival Sources (Which documents are my data sources?)

?

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico to identify the members of the Commissions of Tourism and Environment in the legislature.

For New Zealand ?

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. What is the role of the Minister in the creation of policy related to National Parks and Recreation & Tourism?
2. What is the role of the Director General?
3. What is the relationship between the Ministry of Tourism and DOC?

6. Historical and traditional customs and values

Definition (What is this variable?)

For the purpose of this thesis the variable of 'historical and traditional customs and values' includes the understanding of the historical evolution of values with respect to national parks, as well as the influence and/or participation of the indigenous people's customs and values in the planning and management of recreation and tourism in national parks.

It is then important to understand:

A. The role of indigenous people;
B. The effects of national parks in indigenous people (displacement?);
C. The values and customs around national parks;
D. The historical values surrounding national parks;
E. The relationship between customs and values of nature to the recreation and tourism in national parks;
F. What were the values of the time that generated the idea of national parks?
G. Describe the historical process of national parks and conservation and how that expressed in the legislation, structures and other variables of the analysis.

Archival Sources (Which documents are my data sources?)

Articles, books, theses, reports, and other accounts of the historical processes that brought to existence the national parks of the country and their exploitation through recreation and tourism.

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico academics and experts on national parks like Hector Ceballos-Lascurain.

For New Zealand Hirini Matunga (Lincoln University), DOC Maori liaison.

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. Have the values changed through time?
2. What has been the role and importance of indigenous people's customs and values to shape the present national parks?
3. How were the indigenous people taken into account?
4. How did the establishment of national parks affect indigenous communities of the country?
5. Has there been conflict between the government and indigenous people?
6. Why have national parks been exploited for recreation and tourism?
7. Is there any conflict between the values of national parks and their exploitation through recreation and tourism?

7. Key participants or actors

Definition (What is this variable?)

In the variable of 'key participants or actors' the analysis will concentrate in individuals, non-governmental organisations and other interested parties on the topic of recreation and tourism in national parks which are not part of the governmental structure.

Sub-variables (What things do I want to understand of this variable?)

- Existence of such participants and/or actors;
- Understand the relationships, interests and influences they have in the management of recreation and tourism in national parks;
- Relation between the actors and the agency in charge of administering the national parks;
- ?

Archival Sources (Which documents are my data sources?)

- Newspapers and historical texts on specific NPs.

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico

For New Zealand David Round (EMC), Forest & Bird.

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

1. What is the interest of the organisation with regard to national parks?
2. What do you think of recreation and tourism in national parks?
3. What influence have you had about the management of tourism and recreation in national parks?
4. What are the priorities of you and/or the organisation?
5. ?

8. Management techniques

Definition (What is this variable?)

Management techniques are defined for the aim of this research as the planning, implementation and evaluation frameworks and strategies related to tourism and recreation in national parks.

Sub-variables (What things do I want to understand of this variable?)

1. Identify the management tool(s) for tourism and recreation in national parks;
2. Understand how the management tool works and how it is applied;
3. Describe how the tool relates to the other variables.

Archival Sources (Which documents are my data sources?)

N.Z. recreation planners: Steve Sutton, Raewyn Hitchings, Mike Edginton.
Mexico

People to Interview (Who are the relevant people to discuss this variable?)

For the case of Mexico

For New Zealand

Interview Questions (What do I have to ask people to understand the sub-variables and hence my variable?)

a. Means and criteria for setting carrying capacities or other limits on recreation and other uses of national parks, and the effects of these management techniques

b. Role of expert and the public in planning and management of parks. Intergovernmental or interdepartmental advisory or management committees, use of master plans, public hearings, or other means of citizen participation and their effects.
c. How is recreation provided in the national parks?
d. Who provides the recreation opportunities?
e. What is the planning tool to provide for recreation opportunities? ROS?
f. What are the environments considered in the delivery of diverse recreation opportunities?
g. Are there any environments that are not considered in the framework? Is the socio-cultural aspect not included in the framework of ROS? (Because it isn't included in theoretical framework)
h. What is the importance of including this new environment?
i. What repercussions would it have (the consideration of this environment) in the provision of recreation opportunities and tourism developments?
j. Is public participation sought and how has it changed plans of recreation provision?
k. Is there any type of social impact assessment in the process of concession granting?
l. Should there be?
m. How do the environments determine the granting of concessions? (NZ requires an Environmental Impact Assessment for example, what about the other environments?)
n. How are tourism concessions given? What are the requirements? Why are they refused?
o. How many concessions are there in national parks? What type of operations are they? What is the income of the agency thanks to this concession? Are there limits to concessions?
p. Who provides for the recreation? Who pays for the construction of the facilities? What are the users charges? How profitable is the provision of recreation? Is profitability a measurement of success? Does this relate to the mandate of the agency?
q. Is the planning of recreation a participatory exercise of all interested stakeholders?
r. What about the cultural environment?
s. Who determines the provision of recreation, the managers of the national park or the planners of the central agency? Or someone else?
t. Do they have data about visitors? How is that data recollected? What is the importance of it?

Appendix B: Consent Form

I have read and understood the description of the above-named project. On this basis I agree to participate as an interviewee in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved (or otherwise chosen by myself). I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided.

The interviewer can contact me in the future through email for further questions:

1. Yes ☐
2. No ☐

With respect to my anonymity in the publication of results I want:

1. My name to be disclosed whenever cited ☐
2. My name and job position never mentioned ☐

Name:

Email:

Signed: Date: