



Ministry of Environment Lebanon EC-LIFE Third Countries Programme

Stable Institutional Structure for Protected Areas Management

Protected Areas Management in Lebanon

Towards a Stable Institutional Management Structure

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LIST OF ACRONYMS

ADMADE	Administrative Design Management Programme
АРАС	Appointed Protected Area Committee
CCA	Conservation Corporation Africa
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBD	Convention on Biological Diversity
GAC	Government Appointed Committee
IUCN	World Conservation Union
MAB	Man and Biosphere Program
MCL	Monteverde Conservation League
МТ	Management Team
MOA	Ministry of Agriculture
MOE	Ministry of Environment
MoF	Ministry of Finance
NGO	Non Governmental Organization
РА	Protected Area
PAD	Protected Areas Department
РАР	Protected Areas Project
SPNL	Society for Protection of Nature in Lebanon
SISPAM	Stable Institutional Structure for Protected Areas Management
TNC	The Nature Conservancy
UNDP	United Nations Development Program
WCPA	World Commission on Protected Areas
WDPA	World Database on Protected Areas

1. INTRODUCTION

Protected Areas (PAs) in Lebanon can be categorized into Nature Reserves, Natural sites, under the jurisdiction of MOE, protected forests under authority of MoA and Hima depending directly on the municipalities influence. In the following, PA will be referring to Nature Reserves depending on the MOE.

Protected Areas (PAs) have been on the increase in Lebanon since the establishment of the Ministry of Environment (MOE) in 1993. Despite the legal recognition of PAs, their management remains a concern. Two management approaches have been tried so far, both through the Protected Areas Project (PAP)¹. In the first, a local environmental non-governmental organization (NGO) handled management, to be later replaced with a Government Appointed Committee (GAC) comprising representatives from municipalities, local NGOs and local government.

The MOE has adopted a management model (MOE-GAC-MT) involving a Government Appointed Committee that contracts and supervises a site Management Team who implements the management plans of the Protected Area. Seeing the need to improve this management approach towards a more stable and pragmatic structure, the Stable Institutional Structure for Protected Areas Management Project (SISPAM)² is revising the MOE-GAC-MT management model. This report aims to review the best practices in Protected Areas management, and assess their applicability to Lebanon, in order to suggest improvements to the MOE-GAC-MT management model.

The report is divided into four main chapters. Following this first introductory chapter, the second provides a rapid overview over the definitions and categories of PAs mainly those adopted by international conservation agencies and conventions. The third details through case studies the various management approaches for Protected Areas; highlighting through lessons learned their applicability to the Lebanese context. The last chapter analyses the existing management approach in Lebanon in light of stakeholder involvement; and assesses the managerial effectiveness of this approach to propose at the end a detailed description of stable management structure for PAs

¹ "Strengthening of National Capacity and Grassroots In-Situ Conservation for Sustainable Biodiversity Protection" commonly known as Protected Areas Project (PAP), executed by the MOE and funded by GEF/UNDP for five years (1996 – 2001).

2. PROTECTED AREAS: DEFINITIONS AND CATEGORIES

The new era for Protected Areas dates back to the 1872 with the establishment of the Yellowstone National Park in the USA. Since then, the world has witnessed an expansion in the number of protected areas and an enormous development in the principles of their establishment and management. The major contributor to the knowledge of PAs is the World Conservation Union (IUCN) and the original National Parks Commission, which dates back to the 1950s and is now known as the World Commission on Protected Areas (WCPA). Nowadays, the 104,791 worldwide PAs cover 12% of the Earth land area (Chape et al, 2005).

The second half of the 20th century witnessed a paradigm shift in the role of protected areas from "national parks and reserves" to a broader conceptual and practical approach covering: 1) their categorisation based on their values and management objectives; 2) the mainstreaming of conservation into the development agendas; 3) the recognition of the cultural as well as the social values of these areas; 4) and their importance as key indicators for the achievement of biodiversity and sustainable development objectives (See box) (ibid).

The Convention on Biological Diversity (CBD) endorsed PAs in its 7th Conference of the Parties meeting (COP) as an indicator for reduction of biodiversity loss (SCBD, 2004). The Millennium Development Goal number 7 (environmental sustainability) highlights their importance under Indicator 26 (land area protected to maintain biological diversity) of its Target 9 (integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources) (UN, 2005).

² Funded by EC Life Third Countries Programme

2.1. DEFINITIONS

Among the many definitions of Protected Areas adopted by international conventions and conservation organisations as in Table 1, the IUCN and WCPA definition disseminated in the Fourth World Congress on National Parks and Protected Areas became the most widely adopted. The United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) adopted this definition as a basis for recording PAs information in the World Database on Protected Areas (WDPA). The sample of various definitions and nomenclature of protected areas in Table 1 point to the lack of international standardisation in this regard. While all these definitions centre protected areas around their biological and ecosystem values, only IUCN clearly recognises the cultural significance, and the MAB programme integrates their sustainable use.

Table 1

Sample Definitions of Protected Areas

Nomenclature	Definition	Source
Protected Area	An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means	IUCN (IUCN, 1994)
Protected Area	A geographically defined area which is designated or regulated and managed to achieve specific conservation objectives	CBD (SCBD, 2005)
Biosphere Reserves	Areas of terrestrial and coastal ecosystems promoting solutions to reconcile the conservation of biodiversity with its sustainable use	The Man and Biosphere (MAB) Programme (UNESCO, no date)
Natura 2000 sites	Protected sites which represent areas of the highest value for natural habitats and species of plants and animals which are rare, endangered or vulnerable in the European Community	EC Natura 2000 (SNH, no date)

2.2. CATEGORIES

The definitions of Protected Areas remain vague without a clear categorisation as they differ in their ecosystem, resource usage and values. In this regard, categorisation differs according to various bases. Countries are free to categorise their protected areas as they deem fit to their policy orientation, but the categorisation generally depends on the available resources and the planned use of the area. National parks, natural heritage sites, recreational parks, marine protected areas, fisheries reserves, protected forests, Sites of Special Scientific Interest, multi-use protected areas, wildlife areas and transboundary protected areas are all categories of protected areas that are country specific and are not necessarily internationally comparable.

The international attempts for the standardisation of PAs categories are those of the UNESCO Man and Biosphere (MAB) programme and the IUCN. The first is based on a zonation and land use approach that divides the Biosphere Reserves into three zones: 1) the core zone for pure conservation and biodiversity preservation; 2) the buffer zone that can be used for experimentation without hindering conservation in the core zone; and 3) the transition zone for sustainable human use (UNESCO, no date). The IUCN categories remain the most widely adopted by many countries, the CBD (CoP 7) and the UNEP- WCMC. The latter promotes it as the international standardisation of protected areas' categories. The six categories are based on their management objectives, with each category differing in the level of human intervention as in Table 3, implying different approaches for management and land use under each category. The World Database on Protected Areas (WDPA) of UNEP-WCMC refers, as in Table 2, to two categorized PAs in Lebanon; one under category II (in year 1988), and the other under category IV (in year 1993). In total, protected zones in Lebanon cover 7,818 Hectares of land and constitute 0.75% of the terrestrial area versus 0.52% of the terrestrial and sea area in the country (WDPA, 2005). These figures contradict with local unofficial estimates of 2-3% PA coverage of terrestrial area of the country³. This discrepancy draws attention to the need for: 1) a serious and official demarcation of the PAs boundaries in Lebanon; 2) a categorization of those PAs either according to IUCN or locally adapted categories; and 3) the update of WDPA information on Lebanon.

Table 2Protected Areas Categorisation in Lebanon, at no specified date

Categories	Ia	Ib	II	III	IV	V	VI	No category	Subtotal IUCN I-VI	Total
Number of PAs			1		1			22	2	24
Area Protected (Hectares)			3,500		500			3,818	4,000	7,818
Percentage of terrestrial area in Lebanon			0.34%		0.05%			0.37%	0.38%	0.75%
Percentage of terrestrial and sea area in Lebanon			0.23%		0.03%			0.25%	0.26%	0.52%

WDPA, 2005

Table 3

IUCN Protected Areas Categories

Category Ia: Strict Nature Reserve

Protected area managed mainly for science

Definition: Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring

Category Ib: Wilderness Area

Protected area managed mainly for wilderness protection

Definition: Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition

Category II: National Park

Protected area managed mainly for ecosystem protection and recreation

Definition: Natural area of land and/or sea, designated to (i) protect the ecological integrity of one or more ecosystems for present and future generations, (ii) exclude exploitation or occupation inimical to the purposes of designation of the area and (iii) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible

Category III: Natural Monument

Protected area managed mainly for conservation of specific natural features

Definition: Area containing one or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance

Category IV: Habitat/species Management Area

Protected area managed mainly for conservation through management intervention

Definition: Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species

Category V: Protected Landscape/Seascape

Protected area managed mainly for landscape/seascape conservation and recreation

Definition: Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area

Category VI: Managed Resource PA

Protected area managed mainly for the sustainable use of natural ecosystems

Definition: Area containing predominantly unmodified natural systems, managed to ensure longterm protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs

IUCN, 1994

3. GOVERNANCE OF PROTECTED AREAS

A variety of management mechanisms came under play for the management of PAs. They can be managed as a state property, as private property, as communal property, or they can be co-managed. The first three management approaches differ in the controllers of the resources being the state in the first, the individual or corporation in the second, and local users of resources in the third (Berkes, 1995). Co-management merges various actors from the first three management approaches, by bringing together the state and local stakeholders for the management of a PA (Borrini-Feyerabend, 1996). This chapter evaluates the applicability of these four different management approaches to Lebanon through worldwide case studies. It draws lessons learned from the presented cases, assessing them in the Lebanese scenario.

3.1. STATE MANAGEMENT

State property regimes have been widely adopted under the metaphor of the "tragedy of the commons"⁴ that public goods are better managed and controlled by the state to improve lifestyles (Singleton, 2000). They entail the government property of land and resources and full authority to determine conservation objectives, develop management plans, and define the various forms of access and resource use. The state has no legal obligation to consult or inform relevant stakeholders (Bromley & Cernea, 1989; Borrini-Feyerabend et al, 2004).

Despite an interest in resources management in many cases, the state may lack the knowledge base, as well as enforcement and monitoring resources and capabilities for management (Berkes, 1995; Bromley & Cernea, 1989; Singleton, 2000). Often state managed protected areas displace local people and limit their access to their sources of livelihood. This leads to the loss of local knowledge and managerial regimes, and may end with degradation of resources and to irreversible social and cultural losses in many cases (See Pimbert & Pretty, 1997). Looking at natural resources as public goods in need for state or private control largely weakened local rights of ownership and use of these resources. This confined PAs management to a reductionist view of conservation rather

than widening it to its political boundaries and resource users complexities (Pimbert & Pretty, 1997; Singleton, 2000).

CASE STUDIES ON STATE MANAGEMENT

National Parks in France

National Parks in France are classified as public institutions (Creation of National Parks Law – 1960), hence the State bares all their investment, operation and research costs. A ten-members Board of Directors manages the Park, representing state organisations such as ministries, administrative boards and mayors. The Board of Directors decides how to administer and manage the park. The core zone is managed by a management team, while the peripheral zone is administered at the national level by the Ministry of Regional Planning and locally by its corresponding department. Overall staff numbers in national parks vary from 24 to 70 per park. (UNEP-WCMC, 1992)

National Parks in Greece

The Forest Service of the Ministry of Agriculture administers national parks and protected areas in Greece. Their management is the responsibility of district forest offices supervised at the national level by the Section for the Forest Environment, National Parks and Forest Recreation. This Section is generally understaffed and is responsible for the conservation work carried out by the district forest officers. Up till the early 1990s, out of the ten national parks only one had full time staffing and active management, hindering the enforcement of illegal activities. Local opposition caused difficulties in fully protecting some areas. While the National Park Service is aware of these management problems, lack of resources poses main obstacle to effective state management. (UNEP-WCMC, 1992A)

Rethinking PAs management in Nepal

The government of Nepal has successfully managed national parks and protected areas. This however came at the expense of community management practices. The imposition of these areas through top-down approaches led to the displacement of communities off the boundaries of the protected zones, and disturbing the historic indigenous relations

⁴ Where there are no rules that regulate the use of the resources, everyone has an incentive to exploit it as

between people and nature. Despite actual wildlife conservation, illegal hunting and grazing practices remained difficult to control. In the mid 1990s, the government launched the "Parks and People Project" aiming to revive the indigenous systems of sustainable conservation and re-establishing the lost trust between people and nature. (Haynes, 1998)

3.2. COMMUNITY MANAGEMENT

Community management regimes challenge the "tragedy of the commons" giving communities more rights over public goods than other groups as they depend on the natural resources under conservation for living. Community management proves that communities are able to manage resources through their own developed management rules and institutions, which may not necessarily be binding at the national level (Bromley & Cernea, 1989; Singleton, 2000). The stability of players and their ability to detect defection in the system enabled communities to design successful rules for the management of resources (Tompkins et al, 2002).

Communities however do not always choose to manage resource sustainably as in the case of deliberate burning of forests and harvest of wildlife, or small-scale ecosystems disturbances in the Mediterranean (Young, 2002). Sometimes they also do not have the full capacity to manage resources. The heterogeneous nature of some communities makes it more difficult for them to solve collective action problems (Tompkins et al, 2002). They are also likely to fail in management and maintaining their cohesion when there is a growing demand on the resource with population growth, technological innovation and market integration (Baland and Platteau, in Tompkins et al, 2002).

CASE STUDIES ON COMMUNITY MANAGEMENT

CAMPFIRE Programme - Zimbabwe

Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) is a national programme established in 1989 to encourage communities to embrace alternatives to destructive uses of the land. The core of the programme is demonstrating that wildlife is in fact the most economically and ecologically sound land use, particularly

in the more marginal agro-ecological areas of Zimbabwe. CAMPFIRE develops activities that involve communities in conservation and development by returning to them the stewardship of their natural resources and harmonising the needs of rural people with those of ecosystems. Some communities within the programme have through land-use planning designated portions of the areas under their jurisdiction for exclusive wildlife use (Murphee, 1994).

Voluntary community-owned village fish reserves - Samoa

Under a community-based fisheries extension programme in Samoa, 44 coastal villages developed their own Village Fisheries Management Plans. The plans include the conservation work to be undertaken by the villages such as enforcing national laws and implementing their own management rules. As communities have a direct interest in the success of the fish reserves, compliance with the rules is high and enforcement costs are then decreased compared with national reserves. Some villages have made their rules into by-laws so they can be applied to people from other villages. The government Fisheries Division provides technical support on the choice of the placement of the reserves and their biological monitoring and data collection on fish catch in adjacent areas. The reserves are successful as the villages have the right to control the waters and impose their rules. (King & Faasli, 1998)

Administrative Design Management Programme (ADMADE) - Zambia

ADMADE vests the responsibility of management of wildlife resources in local communities that reside inside protected areas. In exchange of protecting habitat, residents are allowed to derive revenues from legal harvest of wildlife populations. Local residents helped in management design and in directing programme revenues to support community activities. ADMADE was not without problems as the task of decentralisation of management and public participation was larger and more demanding than the founders recognised. The structure of local authorities was not well defined and this led to concerns about community participation and transparency of use of local funds. Through adaptive management ADMADE instituted reforms to address these concerns. Despite the initial problems, it improved largely by appreciating the stakeholders' differences and devolving decision-making to the local level (Lyons, 1998).

3.3. PRIVATE MANAGEMENT

Despite not being usually significant in terms of the areas they cover, private protected areas are important because of the quality of management they entail. They include those areas managed by foundations and private enterprise. Excellent examples of private initiatives which support and complement state systems abound: The Royal Society for the Protection of Birds in the UK; the Nature Conservancy in North America; the Fundacion Moisés Bertoni in Paraguay and the Royal Society for the Conservation of Nature in Jordan.

The private sector, as businesses, NGOs or research institutes, can provide financial and technical resources that may be otherwise not available for conservation. Another advantage is that the private sector can be successful in marketing and operating the Protected Area as to compete in the international tourism industry. The major criticism of private management is its risk of exploitation of local resources instead of benefiting local communities. Lack of financial transparency remains a concern, as these ventures are not obliged to share their financial records.

CASE STUDIES ON PRIVATE MANAGEMENT

Forest Management System - Indonesia

As the largest exporter of tropical timber in the world, one tenth of Indonesia's export earnings come from timber, yet the future for Indonesia's forests has never looked worse. The 1960s land tenure changes allowed large-scale development by logging and plywood companies concentrating profits in their hands. Locals have since then received a fraction of the real value benefits. Illegal logging became out of control and the forest law remained not enforced. Within communities, in general, the sharing of benefits from timber has also been inequitable. This culminated into tension and violence between ethnic groups who felt politically, socially and economically marginalized by the government, and were not equally benefiting from the returns of timber exploitation. International review stressed the need to reform the forest policy of the country to support decentralised forest management in order to remove some of the legal anomalies over land right that have been caused by centralised government. (CIFOR, 2004)

Private Non-Profit PA – Costa Rica

The Children's Rainforest founded in 1986 in Northern Costa Rica has been successfully owned and managed by the Monteverde Conservation League (MCL), a Non-Profit Costa Rican NGO. In 1995, the MCL was able to meet most of its expenditures from domestic sources of income especially government incentives and ecotourism. The Children's Rainforest is the largest private PA in Central America, and is larger than 16 of Costa Rica's national parks. It keeps expanding through a trust fund dedicated to the acquisition of adjacent land. The MCL ensures all running staff and costs including the protection programme who alone costs approximately USD70,000 per year. The MCL has actively pursued conservation work through continuous research on site, and establishment of forest corridors enabling seasonal migration to the nearby forest patches. The underlying community outreach policy allows local residents free access to the reserve and its facilities (MCL, no date)

Private for Profit PAs: Games Ranches and Lodges - South Africa

South Africa has roughly 9,000 privately owned game reserves catering to high-end foreign tourists. Among these initiatives, the Conservation Corporation Africa (CCA) develops and sustains wildlife sanctuaries across several countries in southern and central Africa. Those reserves make up an important component of wildlife conservation in South Africa, and the government removed the fences separating some National Parks from those reserves. This provided additional high quality habitat for wide-ranging species, and augmented the tourism value of the private reserves. The agreement provides CCA the exclusive rights for operating tourist activities in these expanded areas, in exchange of paying dues to the park, to be used for wildlife management, research and community-based projects. Providing high quality services is a hallmark of private for profit conservation organisations worldwide. The profitability of such venues remain unknown, partly because as private ventures they are not obliged to share financial records. These reserves pose opposite positions with stakeholder relations. While locals are granted long-term, they are usually employees rather than owners, and hence do not have a say in management (CCA, 2002).

NGO conservation networks - USA

A number of NGOs in the USA and Canada is responsible for the acquisition and management of PAs. The Nature Conservancy (TNC) in the USA is economically powerful as it buys the land and then sells it to the federal state authorities when they are in need for land to protect on short notice. TNC has set a 50-state conservation network that sets its own conservation priorities. (UNEP-WCMC, 1992B)

3.4. COLLABORATIVE MANAGEMENT

Joint collaboration or Collaborative Management links different actors to collaborate for joint management, such as governments, indigenous and local communities, and relevant stakeholders. It is advocated on the basis of the default presence of state institutions and rules even at the local and community levels through land use rules and laws, and the overall need to integrate community-based initiatives within state and national conservation policies.

State-community partnerships might require time to materialise for trust to develop between parties (Singleton, 2000). Co-management might deem arduous when state and community have different objectives and priorities (Nielsen et al, 2004), or when the state is reluctant to learn from local level management systems (Berkes, 1995). Instead of affirming local authority, co-management might reinforce state control and power through the developed rules (Agrawal, 1998 in Singleton, 2000. If co-management offers little incentives for stakeholders to participate, the latter might respond with free riding and overexploitation and sometimes neglect of management rules (Jones & Burgess, 2004; Nielsen et al, 2004). Inflexibility of national organisations, overlapping authorities and limited coordination, and outdated legislation are additional constraints to the stabilisation and dissemination of inclusive decision-making and devolution of authority (Tompkins et al, 2002).

CASE STUDIES ON COLLABORATIVE MANAGEMENT

Co-management of Waza National Park – Cameroon

At its early creation a few decades ago, the Waza National Park relocated the residents of the villages outside the park's borders. Those communities however never gave up on claiming for their right to access the parks resources necessary for their livelihood, such as collection of certain plant products and grazing in the park in time of drought. The continuous conflict between communities and park management initiated a comanagement process to secure the natural resources of the park through agreements with the various stakeholders. This eventually led to the establishment of a multistakeholder management structure to approve the management of the park and its periphery. The structure was legalised by the Ministry of Environment and Forests of Cameroon, with members having full voting rights (Ministry representatives, communities representatives, cattle-rearers and youths representatives) and other with consultative role only (mayors of interested municipalities, head of authorities of relevant districts, scientific councils' representatives, representatives from neighbouring parks) (Borrini-Feyerabend, 2000)

Institutional Changes in the Management of National Forests – USA

The laissez-faire policies of land acquisition and private ownership along the first century after the independence of the USA had their toll of social and ecological costs of soil erosion, deforestation, forest fires and socio economic problems. Progressive thinking in the 19th century argued that only federal government could provide the objectivity and expertise needed to properly regulate and manage national resources. Due to the continuous dependence of people on natural resources for livelihood, communities kept having an influence on management decisions despite them being centrally managed. In the 1960s public participation in management of resources was legitimised through public hearings. Public participation was however promoted by the government in an individual nationalistic sense rather than in a community or collective sense. Instead of promoting discussion and dialogue, public hearings were a linear presentation of information from federal officials to public audience. In the 1990s, increasing disputes over land use issues highlighted the need for a reform in the public participation system, which was proving to alienate federal officials from community residents rather than promoting cooperation. This fostered the initiation of real partnerships projects. The results of the latter interest in community-based approaches proliferated rapidly in the USA. By 1997 over 90% of national forests in the USA was said to be engaged in some form of collaborative stewardship as part of their management strategy. (Wilson, 2003)

Decision-making power and co-management – Australia

Queensland's Aboriginal Land Act leases traditionally owned land back to the government but management is by a board including Aborigines as well. In practice the board has few real power. Despite it having a principal function of cooperation role with the chief executive of government on the management plans, real power remains under the chief executive under the Nature Conservation Act to which parks remain subject. Management plans have little statutory power. Overall, limited success has been witnessed on the management of National Parks, with little confidence expressed by the Aboriginal people. In other provinces of Australia, parks are better managed because the lease is for a limited term (five years) subject to renewal with guaranteed financial compensation. Aboriginal people are better represented in the management boards and actively contribute to the development of management plans and day-to-day management decisions (De Lacy & Walson, 1997).

3.5. APPLICABILITY TO LEBANON

The case studies summarised in the sections above point to an obvious trend towards the inclusion of communities in the management of Protected Areas. Apart from vesting their local knowledge and rules in the management of PAs, communities hold an intrinsic right in both benefiting from the resources under conservation and having a say in their management. The case studies offer Lebanon a pool of lessons to learn from, and that help assess the applicability of each management approach to the Lebanese scenario.

3.5.1. State Management

Lessons Learned

- Effective state management requires decentralised state institutions with sufficient and stable human and financial resources.
- State management often distances people from PAs leaving socio economic impacts on communities depending on PAs for livelihood

Applicability to Lebanon

At its current shape, the Protected Areas Department (PAD) at the MOE cannot solely handle Protected Areas management. The department is understaffed, and is centred at the Ministry of Environment with no regional or local offices. Protected areas are mainly in rural areas, and under continuous pressures from visitors, grazing and illegal hunting as well as surrounding practices such as agricultural practices and urbanization. The PAD cannot control all these pressures on its own, hence rendering state management of Protected Areas in Lebanon a potentially failing experience.

Being under continuous pressure from human practices, PAs are never isolated from people intervention. People shaped the landscape for millennia in this densely populated country. While some practices are recreational such as hunting and visits to nature, others such as grazing, fishing and farming define the livelihoods of many living inside or in the vicinity of Protected Areas. Those resource users in specific should be integrated in protected areas management, not only because they have acquired a traditional knowledge of managing those resources, but also because it is ethically incorrect to deprive them from their sources of livelihood. Rural Lebanon faces many economic pressures mainly leading to immigration; hence entering in a cycle of a socio-economic depression both on rural and urban areas. Protected areas should avoid strengthening those pressures, by paralleling poverty alleviation to its conservation goals.

3.5.2. Community Management

Lessons Learned

- Communities best manage PAs when they foresee the benefit of conservation and acquire responsibility of developing and adapting management rules to their local institutions
- Communities do require assistance in management, mainly technical assistance.
 Extension services are among many other tools that state can use to facilitate full community control over areas under protection.

Applicability to Lebanon

Community-based management of some protected zones is in its early stages in Lebanon (See Box). The question is how to fit them within national conservation priorities?

Integrating communities in any PA management initiative is essential as it leaves positive local socio-economic impacts. MOE and NGOs initiatives are working in this direction through the promotion of A couple of programmes in Lebanon are focusing on community based management, such as the current work of Mercy Corps and the Society for Protection of Nature in Lebanon (SPNL) on preserving Ibl Essaqi forest and stimulating community benefit. The initiative is at its early stages. SPNL and Mercy Corps guide the community on the ecological importance of the forest, while the village residents are working on designing the management plans and reviving traditional management practices.

local income generating activities such as ecotourism and organic farming. While the latter are conceptually attractive, their current low marketing potential and economic return hinder their potential as successful conservation tools.

3.5.3. Private Management

Lessons Learned

- Private management is not solely the work of corporations or businesses, but also of landowners, and even NGOs solely managing the PA
- Private interventions for conservation ensure high financial and managerial manoeuvrability
- Private protected areas risk distancing their conservation priorities from national conservation agenda
- Transparent management and local livelihoods are at stake as private managers have the final say in management decisions and may be reluctant to sharing financial information
- For-profit protected areas risk prioritising interest of businesses over livelihoods

Applicability to Lebanon

Private management of Natural resources has taken various forms in Lebanon:

1) Partnerships between private sector and communities in Al Jord project for example. Al Jord is a private-community partnership for responsible tourism in the mountains of Hermel, Akkar and Donniyeh of North Lebanon. Owned by private investors (63%), local partners (25%) and an NGO (12%), Al Jord Company promotes activities with social and ecological considerations. Apart from preserving the ecological and scenic importance of the area, the company ensures local benefit from its profits through the local partnership component and employment opportunities. Actual impact of the project on local livelihoods remain however not thoroughly assessed. (Al Jord, 2004).

- 2) Voluntary conservation in the case of Aammiq wetland is a pioneer initiative on private land in Lebanon. Landowners believe they are outweighing in their conservation achievement the work of the public sector namely that of the Ministry of the Environment (Bachir, 2005). Nevertheless, because of Aammiq international importance as a Ramsar site, the question of its integration within national and international priorities surfaces again. MOE attempts to initiate partnerships for conservation with landowners is mainly hampered by the lack of regulatory and economic incentive instruments to ensure collaboration on conservation (Bachir, 2005).
- 3) NGO management that was piloted during the first phase of PAP project on three protected areas. The experience was overall unsuccessful because NGOs were an extension of local politics; and mainly run as a one-man organization lacking human and financial resources for management. NGOs however can prove useful to integrate in management, as providers of extension services and capacity building such as in the experience of SPNL and Mercy Corps in Ibl Essaqi (See Box in Section 3.5.2).

Overall, private management can allocate enough and continuous resources for management. However, the risk of overexploitation and exclusion of local users from their sources of livelihoods always holds, as the private body has the final say in the management and use of the area.

3.5.4. Collaborative Management

Lessons Learned

- Joint management works well when communities are heterogeneous and stakeholders have various interests
- Cooperation developed for a dual goal of both providing resource users with decision-making power and ensuring better management and conservation.

- Collaborative management brings state and local stakeholders closer and stimulates dialogue, bridging the gap of lack of communication and collaborative thinking in some societies
- Collaborative management can be hampered by inadaptability of societies to this new form of participation through existing bureaucracies and stiff regulations

Applicability to Lebanon

Protected Areas stakeholders are numerous in the areas under protection, given the various forms of land and resource usage: farmers, herders, hunters, fishermen, tourists, NGOs, municipalities and small businesses. This requires cooperation to foster common vision for management.

The government of Lebanon develops land use regulations and should be brought to the circle of cooperation for the management of PAs to enable face-to-face dialogue on this regard instead of confrontation. Municipalities, ministries and local community can bring their various managerial, regulatory and conflict resolution skills to enable more efficient management.

State-stakeholders dialogue needs reviving in Lebanon to reestablish lost trust between the two sides. It enables government to appreciate local management capabilities, and stakeholders to look more positively and with less suspicion at the state intervention in their areas.

3.5.5. Which Management Approach for Lebanon?

Beyond the protection of biodiversity and ecological functions, Protected Areas management should aim for equitable distribution of benefits among the groups at stake. The management approach should be acceptable by the concerned communities, and adaptable to the social and ecological changes around it. It should also be economically efficient and financially feasible and sustainable. Apart from state management, all three other management approaches can provide the human and financial as well as technical resources to meet the above principles in the management of PAs in Lebanon, with varying degrees of confidence. Private management through businesses or individuals ensures financial sustainability; however it may ignore local needs and rights of benefit from the resources under protection. The experience of NGOs management in Lebanon has however been overall unsuccessful due to their limited human and financial capital. In order to ensure that conservation objectives are met and falling within national plans, private management imposes monitoring costs on the state or the authorities in charge. Involving communities in monitoring in "community management" can save the authorities a large amount of effort and cost; and ensure local groups benefits from the PA. Communities however can be struggling with availability of funds; and request in Lebanon in general technical assistance for adequate conservation and management.

This raises the need for an integration of various skills and available resources for effective management. Collaborative management can provide the Lebanese setting the right frame to incorporate different ideas into the debate around management of Protected Areas from the local managerial and the state regulatory fields. Equitable management is best ensured when communities and local stakeholders have a say in the management of the PA. Bringing the state on board puts local management in line with national conservation priorities. Apart from its conservation and equitable benefits, collaborative management has a reconciliatory dimension as it bridges the gap of miscommunication and lack of constructive dialogue between the state and communities. It is worth pointing that successful collaborative management is the one that creates the platform for joint decision-making and enables communities to have a say in the management of the resources upon which they depend. Therefore the design of collaborative management in Lebanon should be tailored in this direction rather than towards strengthening state and local elite power over resource management rules.

4. PROTECTED AREAS MANAGEMENT IN LEBANON

The Protected Areas Project (PAP) (1996 – 2002) set the frame for Protected Areas management in Lebanon. At the first stages of PAP, management of protected areas was in the hand of local NGOs, as the MOE was newly developing in the mid 1990s. PAP mid-term evaluation highlighted the limited managerial and financial capacity of NGOs, and suggested a transfer of site management to a Government Appointed Committee (GAC). GAC comprises volunteer representatives from local environmental NGOs, municipalities, and some ministries as well as technical advisers, hence involving more stakeholders in PA management. The GAC management approach or the MOE-GAC-MT model involved three main entities in management: 1) the Ministry of Environment, 2) the Government Appointed Committee; and 3) the Management Team (MT).

4.1. MANAGEMENT PERFORMANCE OF MOE-GAC-MT MODEL

The former MOE-GAC-MT model was vertical in structure as in Figure 1. In this structure, MOE retains the major decision-making power through approval of management plans, budget, annual work plans, contracts with MT as well as major activities on sites. GAC reports management progress to MOE on monthly and annual bases; supervising and following up on implementation of yearly management plans through MT; and involving local groups in PA activities (MOE, no date). The MT has to implement the management plans under GAC supervision, in the sites where a operational MT is contracted.

This model does not integrate other state authorities in PAs management, such as the Ministries of Transport, Finance, etc (the MOA is represented in several GACs). Keeping the Ministry of Finance (MoF) outside the collaborative management frame for instance, is largely limiting the financial self-sustainability of PAs, as the government of Lebanon allows only MoF to manage the financial returns and benefits from public land, and not local groups such as the GAC in this case⁵. This vertical direction of management constrains conservation work with public sector bureaucracy, and loads almost full

⁵ Personal communication with Charbel Rizk and Carla Khater, project manager of the MedWetCoast project and SISPAM project manager respectively, October 25, 2005.

implementation on the shoulders of a volunteering body representing local stakeholders. The MT daily operations are also bound by GAC decisions and regular commitment.

Figure 1

Existing MOE-GAC-MT model of co-management of PAs in Lebanon



Source: Rizk (no date)

At the planning level, while a management structure is in place for most PAs, management plans are generic with no set objectives and targets, as well as limited attention to the specific features of these areas. They hence incur extra implementation efforts and costs on both MOE and GAC (Hagen & Gerard, 2004). Nationally, the MOE protected areas department remains understaffed, and hence short on sustaining follow up and guidance to all protected areas. Nevertheless, PAs in Lebanon seem successful on the basic levels of conservation of biodiversity and natural habitats (ibid). Finally, despite all the conservation and biodiversity related initiatives in the country for the past decade, Lebanon still lacks national conservation policy, setting the conservation priorities and aims of the country.

4.2. STAKEHOLDER INVOLVEMENT IN GAC-MOE-MT MODEL

A recent graduate study (Bachir, 2005) on stakeholder involvement in the collaborative management of two protected areas in Lebanon highlighted the pioneer step the MOE is taking towards involving stakeholders in PA management in Lebanon. Nevertheless, the

vertical GAC-MOE-MT model positions MOE on top of the decision-making process as it gives final approval on management plans, instead of jointly deciding with GAC members and MT on the management rules and their implementation. The same study found that the GAC-MOE-MT model opts out some stakeholders from the decisionmaking platform, namely resource users such as fishermen, herders and farmers. The vertical model seems so far a foil through which state imposes its control on site. For instance, in the GAC of Tyre Coast Nature Reserve, the Ministry of Agriculture is member of GAC instead of farmers and fishermen from Tyre; and head of *caza* strengthens central state control. The study added that GAC is not designed to account for the heterogeneity of local actors, be it their political or socio-economic differences. It assumes environmental NGOs and municipality are representatives of local community; and sets the clustering of stakeholder in formal organisations, such as NGOs, municipalities and clubs, as a prerequisite for representation in GAC. Women, farmers and herders, usually at the edge of society are excluded through these conditions (Bachir, 2005).

The study identified three obstacles still hindering effective stakeholder involvement in Protected Areas co-management in Lebanon:

- The regulatory framework constraining devolution of authority and collaborative decision-making between the government and local stakeholders (See Section 4.1 on example on Ministry of Finance)
- Limited use of incentive instruments to attract local stakeholders towards conservation and collaboration with the state
- Local politics and rules opting out marginalised groups from co-management.

4.3. IMPROVING COLLABORATIVE MANAGEMENT

Aiming to achieve social and ecological benefits through co-management, MOE should fine-tune the design of PAs institutions for socially and ecologically sound management, by focusing on these five areas of intervention:

<u>First</u>, it should gauge into the development of a true national conservation plan that sets the conservation priorities of the country, and delineate PAs into clear boundaries and categories based on their land use and conservation objectives. Second, it should tailor its efforts towards integrating other ministries and public institutions in the share of responsibility of conservation in the country, such as the Ministries of Agriculture, Finance, Transport, as well as Energy and Water and the Directorate General of Urban Planning. They have various authorities related to natural resources management and land use planning. Planning Protected Areas management without them will impose various regulatory and bureaucratic difficulties on management, and will limit local benefit sharing from PAs. This can then de-motivate locals from collaborating with the state and providing their managerial skills and monitoring abilities for the sake of better management. MOE should lobby for a regulatory reform that would unify the vision of conservation in the country, and decentralise the management rules.

<u>Third</u>, MOE should invest into improving the Protected Areas Department (PAD) in terms of capacity building and human resources to be able to coordinate national conservation work. MOE should also dedicate efforts towards securing stable source of funds tailored towards developing human and technical capacities of the Protected Areas.

<u>Fourth</u>, MOE should seriously explore the policy instruments that apply to biodiversity conservation in Lebanon. These vary from motivational and information instruments, to voluntary and community-assistance instruments, to property rights instruments, to pricing or economic incentive instruments, and finally to regulatory instruments. MOE should involve concerned ministries towards facilitating the use of these instruments with the relevant stakeholders.

<u>Fifth</u>, MOE should redesign the MOE-GAC-MT model towards decentralisation of management through bringing in other concerned public authorities in the model, and equalising the decision-making authority between the ministry and local stakeholders, and trusting in local managerial ideas and abilities. In this regard, MOE should not distance itself from the remaining actors in co-management especially when it comes to decision-making. It should aim to involve more concerned stakeholders in PA management mainly resource users, and remove the regulatory barriers that hinder equalising the existing power differential between the MOE and stakeholders, and even between the stakeholders themselves.

5. PROPOSED MANAGEMENT STRUCTURE FOR LEBANON

Seeing the need to reform the MOE-GAC-MT model towards: 1) flattening the relationship between the three partners in the model; 2) reducing the technical and managerial load on the voluntary Government Appointed Committee; and 3) benefiting from the availability of a skilful and full time employed Management Team; SISPAM project⁶ proposes a triangular shaped MOE-GAC-MT model, adding to it an advisory body as in Figure 2; with new responsibilities and relationships detailed in the following sections.





⁶ EC Life Third Countries funding program; implemented by the Ministry of Environment. 2004 – 2006.

5.1. SISPAM PROPOSED STRUCTURE

As previously stated (cf. Introduction), Protected Areas in Lebanon can be categorized into Nature Reserves, Natural sites, under the jurisdiction of MOE, protected forests under authority of MoA and Hima depending directly on the municipalities influence. SISPAM project is initiating a new categorization for Protected Areas, including ecological and legal frames. It is important to note that the management structure, described hereafter only applies to the category of Nature Reserves (abusively named PAs in the actual situation). Further investigations should be applied, in order to define a proper managerial structure for further developed categories of PAs once existing.

Referring to the structure described in fig. 2, SISPAM project proposes to review the responsibilities of each partner: Ministry of Environment (MOE), the Government Appointed Committee recently renamed Appointed Protected Areas Committee (APAC) and the Management team (MT).

1) The Protected Areas Department (PAD) in MOE

According to the newly voted framework law #690/05 regarding the organization of the Ministry of Environment, the PAD depends on the Service of Nature Resources that is responsible of supervising the application and implementation of environmental policies related to all activities and projects connected to: nature resources use and extraction, land use including municipal lands, beaches, swamps, lakes, rivers beds, valleys, protection of various type of ecosystems, biodiversity conservation priorities, as well as establishment, conservation and management of Protected Areas.

PAD responsibilities cover:

- Allocating yearly funds to support Protected Areas management
- Approving internal bylaw for each APAC
- Approving the nomination/contracting or replacement of APAC/ MT members
- Approving yearly budget and management plan for each PA.
- Approving or refusing performance of activities that could take place in the Pas based on EIA or IEE whenever necessary
- Assessing training needs of APACs and MTs; and making sure that new knowledge and information on PAs management is provided to them.
- Coordinating activities between different PAs through annual reunions and events gathering APACs and MTs.

- Coordinating marketing of PAs products.
- Defining the core zone and the sustainable use area and approving their change in status
- Defining the roles and obligations of APACs and MTs
- Developing a national information database on Protected Areas from monitoring results and research activities
- Developing and upgrading a PAs website.
- Developing templates and standard procedures for proper PA management.
- Exploring financial and moral incentives for APACs; and pushing through high-level policy making for their adoption in concerned ministries.
- Linking PAs to funding opportunities
- Making sure that PA Management strategies are in harmony with PAD targets.
- Organizing national awareness campaigns on PAs in Lebanon.
- Reviewing and approving yearly expenditures of PAs for accountability
- Setting classification criteria for PA establishment and categories
- Setting monitoring and evaluation indicators for PA performance assessment in conservation and socio-economic impacts.
- Setting national conservation priorities and targets, and lobbying for their adoption by the Lebanese Government
- Suggesting to council of Ministers the decree for the creation of Nature Reserves and other Protected Areas
- Suggesting edict outlining piratical measures for the application of the General Framework law on Pas
- Evaluating MT and APAC performance of work
- Linking PAs to funding opportunities
- Approving yearly work plan
- Setting in collaboration with Ministry of finance the amount of entrance fee on each site.
- 2) The Government Appointed Committee recently renamed Appointed Protected Areas Committee (APAC) comprises representatives from local stakeholders specific to each site namely resource users (such as farmers, herders, fishermen, wood collectors, surrounding industries, etc.), municipalities, and local

NGOs if present in the areas under protection, as well as experts in the PA specific ecosystem and resource management.

According to the new suggested Nature Reserve framework law APAC will benefit from administrative and financial autonomy granting them legal status of artificial person "personnalité morale". Therefore each APAC should develop and submit to MOE for approval, its internal bylaw setting equal voting power to all its members; and elect an executive committee. APAC responsibilities can be described as follows:

- Ensure proper implementation of management and work plans and budget
- Inform in advance MOE the dates and minutes of APAC monthly meetings
- Promote the Nature Reserve both on the local and national level
- Recruit, contract and supervise the Management Team according to MOE pre established Terms of Reference, and procedures.
- Report detailed yearly financial expenditures to MOE with annexed bills
- Responsible for financial management of PAs
- Review yearly budgets and workplan prepared by the Management team, and submit them to the MOE for approval.
- Send quarterly reports to MOE about technical and managerial aspects of PA
- Set internal bylaw
- Should reinvest the collected entrance fees, fines etc... into proper management of the Nature Reserve
- Suggest in collaboration with MT the management plan and send it to MOE for approval
- Supervise MT work in accordance with management and work plan
- 3) The management team implements management plans and monitors the area under protection and the sustainable use of the area (visitor management). The MT proposes improvements on the management approach through its monitoring results.

The Management Team is responsible for:

- Committing towards the GAC for a period of time to staying in their functions and ensure full time management if the site; in return of receiving a monthly salary and training on PAs management
- Developing and organizing with the GAC local and regional awareness campaigns
- Drafting management plans to GAC

- Performing monitoring activities of the PA mainly 1) recording visitors information;
 2) surveying responses to paying entrance fees; and 3) monitoring local biodiversity
- Reporting monthly to GAC on implementation of activities and problems related to the protected areas
- Seeking funds from national and international sources and inform GAC on followup requirements
- Submitting annual budgets to GAC
- Submitting annual work plan to GAC

The described structure can seek assistance from National NGOS, International Organizations, Universities and Research Institutions and local experts as well as other ministries, schools, public administrations, army, police... This assistance could materialize either as technical/ financial or scientific assistance.

5.2. CONCLUSION

SISPAM project believes that the proposed structure will ensure: 1) better equilibrium between the different actors in protected areas; 2) better community involvement; 3) a stable institutional structure; and 4) better involvement of the Management Team encouraging productivity and effectiveness. It is important to note that this structure is limited to PAs established on public land. PAs on private land are still minimal in the country, and SISPAM is working separately on developing mutual contractual agreements and promoting incentive instruments between the MOE and the landowners to set the frame for PAs management on private properties.

SISPAM project acknowledges that the structure proposed in Section 5.1 falls short on integrating other state authorities and ministries. Their involvement is essential as they are currently granted most of the legal mandate over public land in Lebanon, and the MOE can still not fully control the PAs or delegate management to a local group on its own. This raises the need for a national committee representing, in addition to MOE, all concerned government authorities who hold authority on land use in Lebanon such as Ministries of Finance, Agriculture, Transport, Municipalities and Internal Affairs, etc. The committee will delegate its legal PA managerial responsibilities to the GAC, the way the MOE is currently delegating its authority to the GAC. This enables the GAC to "legally" solely manage the PA as it will then have the same legal authorities of the different ministries.

Appendix A

Overview of Protected Areas Management Worldwide

The table below shows a number of countries with their PAs management approaches. It points that countries do not usually adopt one approach for management. There is however an obvious shift towards collaborative management. Almost all listed countries have a form of partnership with the private sector, NGOs, or local groups. It is worth noting however that this table is not exhaustive; and the country details are not conclusive about the management mechanisms in place and their effectiveness. It is just a rough assessment compiled from various internet based sources, mainly the Convention on Biological Diversity – National Reports website.

Table 4

Protected Areas Management Approaches in Various Countries

Country	State	Community	Private	Collaborative	Comments and Reference
	Management	Management	Management	Management	
Albania					Ministry of Environment drafting new Protected Areas law that will enable
	Х				collaborative management with local groups.
					http://www.biodiv.org/doc/world/al/al-nr-pa-en.doc
Algeria	Х				http://www.biodiv.org/doc/world/dz/dz-nr-pa-fr.doc
Australia					An array of private protected areas partners with the government through various
	X		37	37	mechanisms. Indigenous group are provided with voluntary incentives to partner
	Х		Х	Х	with the state for conservation and PAs management.
					http://www.biodiv.org/doc/world/au/au-nr-pa-en.doc
Austria					A number of private PAs are not formally recognised by the state, namely those in
					partnership between NGOs and landowner. The majority of PAs in the country
			Х	Х	are privately owned but legally recognised through agreements between owners and
					the government.
					http://www.biodiv.org/doc/world/at/at-nr-pa-en.doc
Barbados					A review of management of national parks pointed to the importance of partnering
	Σζ.		37	37	with local communities in order to preserve the natural and cultural heritage of the
	X		X	X	parks. Only one initiative in private management adjacent to a natural heritage site.
					http://www.biodiv.org/doc/world/bb/bb-nr-pa-en.doc
Belgium	Х		X	Х	In some parts of the country, private owners receive subsidies for the management

Country	State	Community	Private	Collaborative	Comments and Reference
	Management	Management	Management	Management	
					of their conserved land. In others, NGOs have established their own protected
					areas.
					http://www.biodiv.org/doc/world/be/be-nr-pa-en.doc
Belize			Х	Х	http://www.ccad.ws/documentos/comitestecnicos/informeSICAP2003english.pdf
Cameroon				Х	See Case Study – Section 3.4
Canada					Communities are largely involved in PAs. Aboriginal groups are part of
	v		v	V	management although legally they are considered part of government institutions.
	Δ		Λ	Λ	Partnerships developed with private protected areas.
					http://www.biodiv.org/doc/world/ca/ca-nr-pa-en.doc
Costa Rica	v		v		http://www.ccad.ws/documentos/comitestecnicos/informeSICAP2003english.pdf
	Λ		Λ		
Cuba	X			Х	Cuba reports stakeholder involvement in Protected Areas, however with no details
					on extent of involvement and whether they contribute to development and
					implementation of management plans.
					http://www.biodiv.org/doc/world/cu/cu-nr-pa-en.doc
El Salvador		Х	Х	Х	http://www.biodiv.org/doc/world/sv/sv-nr-pa-es.doc
Estonia	X			Х	Protected Areas are state institutions, and their management is in the power of the
					state. However, in some cases management is assigned to an NGO establishing
					collaboration between state and NGOs.
					http://www.biodiv.org/doc/world/ee/ee-nr-pa-en.doc
Finland	Х		Х		PAs are generally state owned and managed. NGOs and private owners have

Country	State	Community	Private	Collaborative	Comments and Reference
	Management	Management	Management	Management	
					established private PAs legally approved by the state.
					http://www.biodiv.org/doc/world/fi/fi-nr-pa-en.doc
France	Х		Х	Х	See case study in Section 3.1.
Germany	Х				http://www.biodiv.org/doc/world/de/de-nr-pa-en.doc
Greece	Х				See Case Study in Section 3.1
Guatemala	X		X	Х	Autonomous private PAs managed by scientific institutions. Some NGOs are
					partnering with state on management.
					http://www.biodiv.org/doc/world/gt/gt-nr-pa-es.doc
Honduras			Х	Х	http://www.ccad.ws/documentos/comitestecnicos/informeSICAP2003english.pdf
Hungary	X		X		PAs can be managed by various groups such as state and corporate or private
					institutions. However, nationally important PAs cannot be managed by private
					sector.
					http://www.biodiv.org/doc/world/hu/hu-nr-pa-en.doc
Ireland			Х	Х	National parks are mainly managed by the state but allowing sustainable use.
					Private owners are brought into EU Habitat and Bird directives for the
					establishment of SACs and SPAs which are mainly on private land (for protection
					of habitats and bird life in Europe). The country also has 11 privately or NGO
					owned reserves recognised by the state.
					http://www.biodiv.org/doc/world/ie/ie-nr-pa-en.doc
Italy	X		X	Х	An independent body with representatives from public and private sector manages
					PAs. Apart from some purely managed by the state, and other managed by NGOs.

Country	State	Community	Private	Collaborative	Comments and Reference
	Management	Management	Management	Management	
					http://www.biodiv.org/doc/world/it/it-nr-pa-en.doc
Jordan			Х	Х	http://www.unep-wcmc.org/protected_areas/data/pa_world_text.html
Liberia	Х			Х	Some but not all national parks involve local stakeholders in their management and decision-making process.
					http://www.biodiv.org/doc/world/lr/lr-nr-pa-en.doc
Morocco	X		X		One NGO managed site.
					http://www.biodiv.org/doc/world/ma/ma-nr-pa-fr.doc
Nepal	X				See case study in Section 3.1
The	X		X	Х	Most national parks are managed by various actors. State nature reserves are state
Netherlands					property and managed by the state. Private management through private owners
					and NGOs is entitled through legally declared management plans. Farmers
					cooperatives, local authorities, water boards and water supply companies can be
					managing some areas on their own.
					http://www.biodiv.org/doc/world/nl/nl-nr-pa-en.doc
New				Х	Protected areas have an intrinsic value in New Zealand society. This is why for
Zealand					instance access fees are not used for any. Management is generally of co-
					management with the public part of management committees.
					http://www.biodiv.org/doc/world/nz/nz-nr-pa-en.doc
Nicaragua	X		X	Х	Collaboration only between State and NGOs for management
					http://www.ccad.ws/documentos/comitestecnicos/informeSICAP2003english.pdf
Norway	X		Х		Stakeholders are involved in all process of establishment of PAs, but not to a large

Country	State	Community	Private	Collaborative	Comments and Reference
	Management	Management	Management	Management	
					extent in management.
					http://www.biodiv.org/doc/world/no/no-nr-pa-en.doc
Oman	X				Government is in process of studying possibility of moving to collaboaritve
					management through a multi stakeholder committee handling management of PAs.
					http://www.biodiv.org/doc/world/om/om-nr-pa-en.doc
Panama	X		X	Х	Collaboration in form of State-State, State-community and State-committee.
					http://www.ccad.ws/documentos/comitestecnicos/informeSICAP2003english.pdf
Poland	X		X		Some active NGOs form a network of private protected areas. The state mainly
					handles management with the approval of local authorities.
					http://www.biodiv.org/doc/world/pl/pl-nr-pa-en.doc
Portugal	X			Х	Mainly state management but using voluntary and economic instruments with
					protected areas users. Private protected areas are legally foreseen but are yet
					nonexistent in the country.
					http://www.biodiv.org/doc/world/pt/pt-nr-pa-en.doc
Samoa		Х			See case study in Section 3.2
Saudi Arabia	Х		X	Х	A private agency manages three protected areas of the country. In some PAs,
					communities have been brought in to contribute to decision-making in
					management of the area.
					http://www.biodiv.org/doc/world/sa/sa-nr-pa-en.doc
Slovenia			X	Х	Two reserves are managed privately, and one by an NGO. Other reserves have
					local stakeholders part of management boards.

Country	State	Community	Private	Collaborative	Comments and Reference
	Management	Management	Management	Management	
					http://www.biodiv.org/doc/world/si/si-nr-pa-en.doc
South Africa	Х	Х	Х		http://www.biodiv.org/doc/world/za/za-nr-pa-en.pdf
Sweden			Х	Х	http://www.biodiv.org/doc/world/se/se-nr-pa-en.doc
Switzerland			Х	Х	http://www.biodiv.org/doc/world/ch/ch-nr-pa-fr.doc
Thailand	Х				http://www.biodiv.org/doc/world/th/th-nr-pa-en.doc
Former	Х		Х		Two reserves are managed by NGOs.
Yugoslav					http://www.biodiv.org/doc/world/mk/mk-nr-pa-en.doc
Republic of					
Macedonia					
United			Х	Х	The majority of protected sites in the UK are owned by NGOs, businesses and
Kingdon					private sector.
					http://www.biodiv.org/doc/world/gb/gb-nr-pa-en.doc
United	Х		X	Х	http://www.unep-wcmc.org/protected_areas/data/pa_world_text.html
States of					
American					
Zambia		X			See case study in Section 3.2.
Zimbabwe		Х	X		http://www.unep-wcmc.org/protected areas/data/pa world text.html

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