An Assessment of Natural Resources Management Conflicts in the Working Landscapes of Mediterranean Turkey (Türkiye): Koprulu Kanyon National Park

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AN ASSESSMENT OF NATURAL RESOURCES MANAGEMENT CONFLICTS IN THE WORKING LANDSCAPES OF MEDITERRANEAN TURKEY (TÜRKİYE): KÖPRÜLÜ KANYON NATIONAL PARK

A Dissertation Presented
by

NEDİM KEMER

Submitted to the Graduate School of the University of Massachusetts Amherst in partial fulfillment of the requirements for the degree of

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Department of Landscape Architecture and Regional Planning
AN ASSESSMENT OF NATURAL RESOURCES MANAGEMENT CONFLICTS
IN THE WORKING LANDSCAPES OF MEDITERRANEAN TURKEY
(TÜRKİYE): KÖPRÜLÜ KANYON NATIONAL PARK

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Yurdanur, Erdoğan, Bobbie
Environmental conservation and natural resources management are critical global issues of the 21st century. The management of protected public lands emerges as a challenge particularly in developing countries because of the biophysical and socio-cultural importance of these lands. These lands are often referred to as ‘working landscapes’ where the natural systems and the collective actions of local residents have shaped one another in well-balanced interactions for generations.

The working landscapes of the Köprülü Kanyon National Park (KKNP) in Turkey have provided the case study for this dissertation. Eleven villages exist within the park with a total of approximately 7,100 residents. The rich natural resources of the park have been contested by local communities, management and concessionaires. The objectives of the research were: first, to understand the fundamentals of the natural and socio-cultural dynamics within protected areas in general, and within the KKNP in particular; second, to examine the social conflicts which complicate the management of the KKNP; and third, to explore potential solutions whereby the stakeholders can cooperate in
stabilizing the traditional dynamics of the park’s working landscapes. Qualitative data was collected via 38 in-depth, semi-structured interviews with local residents, managers and concessionaires.

The research found that an array of social disturbances and conflicts impact the social fabric and harm the land-human integrity of the site. These include shifting demographics, changing lifestyles of the villagers, pressures from tourism, multiple governmental authorities and instable management. Yaylacılık tradition, a semi-sedentary form of pastoralism, has played a significant role in both the traditional ecology and the social relations within the communities of the KKNP; and its abandonment has severely impacted both social and biophysical conditions. Through yaylacılık local residents had managed the lands as common property. The establishment of the national park, changing life styles and the pressures on the local agricultural economy brought an end to yaylacılık. Now the resources are treated in effect as open pool resources, thus leading to their demise. Throughout the eventful past of the KKNP the local residents have come from being integral elements of the ‘working landscapes,’ to being as antagonistic enemies of the park management.

The three ideal characteristic elements of the ‘working landscapes’ of the KKNP (controlled access, coordination and communication) which once were maintained by the yaylacılık tradition, can be re-institutionalized within the region through contemporary applications by neutral third party initiatives. Restoration, conservation and efficient management of biophysical resources and the natural environment should be the outcomes of the resolutions of social conflicts which can be accomplished by the restoration of these three elements of the social structure.
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CHAPTER 1
INTRODUCTION

1.1 Introduction

At the dawn of the 21st century the state of the environment has become a major global concern, addressed by interdisciplinary platforms, and especially within the planning profession. Research and studies in environmental conservation and their implementation have been increasingly incorporating the behavioral dimensions of human societies and their influence on the resources of the environment. This fundamental change in environmental studies has increased significantly over the last several decades in the international agenda. As a result, scholarly research of natural resources management has extended its domain beyond the boundaries of biophysical science. Literature indicates that the contemporary consensus of natural resources management is comprehensively involved with political, cultural and economic systems (human dimensions) of a particular society. The interdisciplinary planning profession now, presents an opportunity to provide frameworks to synthesize the multiple dimensions of resource management efforts in the environmental conservation context from theory to practice.

From a planning perspective the ‘working landscapes’ of national parks where people live and work, particularly in developing nations, provide outstanding case study opportunities in which the direct impact of the tensions between economic development and conservation can be explored (Philips, 1999). The impact of shifting demographics on natural resources can be monitored in the national parks fairly accurately. Pragmatic
conclusions that may be developed from these studies can be projected toward efficient resource management implementations in broader fields. Owing to the very nature of their designations, the national parks and protected areas serve in identifying sites of unique natural resources and ecosystems in urgent need of being incorporated into contemporary conservation efforts.

1.1.1 The Turkish Context

Turkey, as a developing nation with its diverse and ambitious peoples, agrarian traditions, ‘working landscapes,’ abundant natural resources and 40 national parks is a country of great importance within the regional context of the Mediterranean and the Middle East. The nation also holds a position of leadership of socio-political change in these regions which makes Turkey a critical bridge of politics in the broader international context of conservation.

The Turkish National Parks System designated sites to be conserved in many forms. These sites were often traditionally (and inadvertently) conserved by the stewardship feature of the socio-cultural and agricultural customs of the rich working landscapes of Turkey. However for the last several decades, Turkey has been experiencing socio-political changes that have resulted in a substantial impact on its social environment creating subsequent pressures on the biophysical environment and excessive exploitation of the country’s natural resources. The emergence of uncontrolled concessionaires in the national parks, and growing consumption by the local residents within the parks are only two of the many prominent issues.
1.1.2 The Köprülü Kanyon National Park

This dissertation focuses on the Köprülü Kanyon National Park (KKNP) as a case study because it demonstrates clearly the impacts of conflicting social dynamics on natural resources and on the integrity of ‘working landscapes.’ The local communities within the park and in the surrounding regions are the most significant characteristics of this park. Particularly the semi-nomadic pastoralism of the locals represents a unique resource management characteristic. They are the heirs and beholders of endemic knowledge and traditions that were developed by their ancestors in maintaining a sustainable relationship with their lands. Karaoglu (1993) has concluded in her master’s thesis that the local peoples of the Köprülü Kanyon National Park had been in a harmonious relationship with their environment, which sets this park apart as an archetype case of ‘working landscapes.’

The park is 366 square kilometers, one of the largest of 40 Turkish national parks and is located on the southern slopes of the Taurus Mountain Range in southern Turkey. The elevation within the park and its near vicinity fluctuates between 150 to 2,400 meters which also exposes a dramatic and interesting geomorphology. Deep canyons, interesting rock formations, flat plains and sheer rock cliffs are all enclosed into a lush valley by high mountains. Unique combination of natural and geological marvels of the park is complemented by a deep and diverse cultural history of thousands of years. Several endemic species of the park’s flora and fauna are enlisted as endangered.
1.2 Research Rationale and Problem Statement

Increasing population of the world and advancing technology have jointly been challenging the socio-cultural boundaries of the world. As a result the world is becoming more homogenized. Since the boundaries of any sort (physical, social and cultural) have become more transparent and less effective the world is no longer consists of distant lands and unfamiliar communities. No culture is insulated from the impact of global environmental and socio-economic changes (Kim and Weaver, 1994). Changing lifestyles are critically increasing the pressure on the environment and on the natural resources beyond the cultural and political boundaries of nations and the natural boundaries of geographies. The most eminent causes of the increasing stress on the resources of our planet and on the global environment are the prolific advances in technology and industry and their dependence on nonrenewable sources of energy. The other causes are: the infinite population growth and increasing consumption despite the finite resources; increasing migration from rural-to-urban areas; and a globally dominating market based capitalist economy. The global environment has become everybody’s concern and no place in the world is immune to the debilitating impacts and the combined negative side effects of these causes. While the global environment is not owned by anyone, the wide-spread effects of its degradation are eminently increasing due to the susceptibility of the earth’s life sustaining systems. Meanwhile, environmental sanctions and regulations on the international level seem to be losing their effectiveness despite the increasing severity of the cross-boundary impacts of environmental hazards. Similarly, the polarization of ethical perspectives in the arena of international politics is merely contributing to this globally shared hardship.
The integrity of the ‘working landscapes’ in the developing and undeveloped nations of the Third World is especially vulnerable. This is due to their relatively less disturbed stable resource bases fostered by their traditionally sustainable cultural and socio-economic management practices. These unique compositions are ‘working landscapes’ that generally sustain the resources of land while supporting the inhabitants primarily for livelihood production. These landscapes usually present a stable balance - an integrity between human and land that is developed over the centuries which allows nature to restore the impacts of human activities. This integrity is broadly called sustainability. While this cannot be generalized, such harmony is commonly observed among the traditional Mediterranean communities of rural regions in Turkey.

The world is in an era of cultural colonialism (Castleden, 2006). The exploitation of resources within foreign geographies is still as prominent and as robust as ever, except the rules have changed. Methods of contemporary exploitation in the international arena are not necessarily in the same league as the intercontinental colonization of several centuries ago, but the outcome is still the same. The contemporary colonization is more subtle and not a straightforward attack. Rather it targets cultural, economic and social systems which are the structural elements that embrace and sustain the integrity of people with their natural environments in the ‘working landscapes.’ The contemporary colonization first - breaks the traditional integrity of human and land; then exploits the wealth of the social and natural environment that is left vulnerable. This indirect form of colonization causes severe deprivation on the social and cultural foundations of third world nations, as well as on the global environment.
It is imperative to comprehend the history of the human-land relationships within well conserved ‘working landscapes’ by revealing the societal factors and dynamics that have caused these environments to become what they are today. Evidently, such landscapes are home to certain characteristics and many valuable resources. Therefore they are greatly prized and extreme efforts are employed to further conserve them in various forms of parks, national parks and protected areas. These systems not only offer the last remainders of earth’s healthy ecosystems and biosphere reserves, but they also serve as models for broader implementations of more efficient conservation and amelioration efforts.

Undoubtedly, the awareness of the efficient management of natural resources and the environment has been one of the greatest collective actions of humanity since the late 1960s. However the progression of environmental conservation in practice has not been keeping up with the pace of the progression of human civilization. This dictates that the conservation programs with strong technological components are virtually destined to remain a step behind the actions that initially harm the environment. Hence, conservation is – historically - employed as a reactive rather than proactive mechanism. Ideologically, in the current problematic context of the global environment, the questions of “what” has to be conserved and “why” it has to be conserved can be assessed with the help of the advanced biophysical science and technology. However, the pursuit for rational answers to the question of “how” to conserve should go beyond the realm of biophysical sciences utilizing proactive approaches. The “how” to conserve question intrinsically constitutes cultural and behavioral notions. In the broad context of natural resources management, social scientists argue that the current challenge of the environment is fundamentally a
problem of social science with further dimensions of economy rather than being merely a
case of biophysical science. Contemporary environmental conservation is a complicated
case with social, political, economic dimensions compounding the biophysical problems.

Considering the fact that the welfare of the global environment constitutes a
robust meeting point for international politics, the problem of conservation efforts in the
next era is a challenge of comprehending the broad spectrum of human dimensions and
stabilizing the dynamics of ‘working landscapes’. While this research explores this
problem in the context of Turkish working landscapes of the Mediterranean region, it is
an imperative general problem with global context. Despite the current pressures,
management challenges and diverse social conflicts the Mediterranean region of Turkey
presents examples of human and land harmony not only throughout its history but today.
Therefore the integrity of working landscapes in Turkey holds significant potential with
key characteristics to generate vision and ideas for producing solutions for the upcoming
and ever growing environmental issues of the greater Mediterranean and Middle East.
This dissertation has a strong potential to contribute its findings to landscape restoration
and amelioration efforts in similar geographies. The Middle East region especially
becomes a critical potential benefiter of this research due to the decades’ long wars and
resultant poverty and environmental devastation where the land and ecosystem are
severely disturbed and deteriorated. The challenge of stabilizing the dynamics of
‘working landscapes’ in Turkey from a broader regional perspective constitutes the
fundamental element of this dissertation.
1.3 Study Focus

This study brings together an array of natural resources management theories, current trends and policies within the conceptual framework of the planning profession. The study understands that the environment provides a society with basic defining characteristics for building culture, and in return culture shapes the environment until a harmonic foundation is established. The study combines the human dimensions with the biophysical attributes of conservation by focusing on the dynamic relationship of cultural adaptation.

The focal point of this study is best explained by the “cultural ecology” theorem as introduced by anthropologist Julian Steward. Cultural ecology studies the relationship between a given society and its natural environment, inclusive of humans both as benefactor and benefited (Steward, 1972). This is the conceptual center of gravity of an interdisciplinary mosaic constituted by the intricate components of ‘working landscapes.’

The study critically analyzes the relationship between the “Category V Protected Areas of the IUCN system of categorization”, and the notion of ‘working landscapes.’ Marcucci (2000) states, “a landscape is a contextual phenomenon, embedded in a world that is both spatial and temporal, or another way of saying geographical and historical.” This multidimensional correlation provides a theoretical background for this research which represents the relationship between the Category V Protected Areas that are spatial / geographical and the ‘working landscapes’ that are temporal / historical. The research also critically assesses an argument raised by Elinor Ostrom and her colleagues against Garret Hardin’s cornerstone theorem the “Tragedy of Commons” (Ostrom et al., 2001; Hardin, 1968).
The study also, critically evaluates two branches of theories through an analytical and comparative lens: 1) biodiversity conservation and ecosystem management theories which fundamentally constitute a top-down approach; and 2) decentralization, co-management and stewardship, which collaboratively suggest a management approach with a strong bottom-up emphasis. The research explores whether the relationship between these two branches is complementary or contradictory, and whether they are valid as models for conservation and management policies for the current challenges of ‘working landscapes.’

1.4 General Research Goals

The research has a series of theoretical and pragmatic goals. Environmental conservation including human dimensions is currently a topic of frequent study among international scholars. The initial goal of this research is to contribute an analytical assessment of the biophysical and social dimensions of natural resources and environment management challenges to the scholarly field.

In an effort to contribute to the pool of applied knowledge the study aims to provide the planning professionals, governmental authorities and protected area managers of Turkey and comparable nations with significant insights in developing management plans. It is particularly imperative that assistance be provided in building bridges between government and local communities to manage the resources cooperatively and efficiently. This will allow the successful implementation of proactive management strategies.
A mutual understanding of the socio-cultural values in a given region is essential for successful collaborations. In developing nations managerial agencies and authorities are generally distant from remote park locations and its residents who are the traditional stewards of the landscape. This dissertation aims to fill this gap by understanding the biophysical pressures and the contested social dynamics which collectively generate management complications. It does not intend to dramatically change the current pattern of environmental paradigms, nor does it attempt to restore the mistakes of the past. It merely attempts to learn from the mishaps of past management practices and to offer these findings to the present day.

A vision developed during the course of this research will aid in acknowledging and understanding the societal factors (cultural, economic and political) associated with the present day conflicts, thereby enabling management to address the conflicts. Such a vision allows policy makers, managers, researchers and scientists to perceive the social dynamics as opportunities rather than challenges. Findings are provided as pragmatic recommendations for policy makers, governmental managers and local communities to be implemented on national, regional and local levels.

The Mediterranean is an exceptional region with its deep history and rich and diverse social and physical environments. The human and land relationship is the most central and delicate component of the ‘working landscapes’ of Mediterranean Turkey. This dissertation studies this relationship. It significantly focuses on the socio-cultural foundations and agricultural traditions. The current conflicted and perturbed situation within this region provides a sensible field of implementation for the findings and recommendations. It is imperative to reach out and provide the local communities with
awareness on the importance of the stewardship concept which they intrinsically may possess. Therefore the research intends to explore the potential for stewardship capacities among the local residents. The findings of this research are to be further explored to expand its scope of stabilizing the dynamics of the ‘working landscapes’ beyond the context of its case study to other regional nations with comparable societal fabrics.

Ultimately this dissertation aims to execute an approach that can be generalized to develop a broad theoretical basis and perspective as opposed to a strict management model. It offers an overarching vision that places people in the forefront by understanding their weaknesses as well as their potential.

1.5 Research Questions

The research comprehensively explores the multiple dimensions of human and land relationship in a temporal context, through an effectual and developmental period. The research question is designed to uncover the unexpected and to explore the new avenues for managing the natural resources of ‘working landscapes.’ As Marshall and Rossman (1999:38) have stated, flexibility is the hallmark of the qualitative research methods. The question is designed to be both structural and flexible, in a way that can be focused, sufficiently clear, and efficiently comprehensive while adaptable to respond to the unexpected challenges that may emerge during the fieldwork. The question is not necessarily to develop strict conservation formulas and recipes with daily solutions but to learn and to develop visions and means of managing while living and working without causing further damage to the capital of natural systems.
The common grazing lands, forests, rivers and many more resources of the Köprülü Kanyon National Park are not only as perceived as the fundamentally exemplifying elements of the ‘working landscapes,’ but also as typical cases of common pool properties for this research. The research questions how the conflicts over the common resources pools within the national park can be used to examine the contemporary criticism of Hardin’s “commons dilemma” theorem and the “working landscape” notion

**The research primarily questioned:** What are the significant socio-cultural components of ‘working landscapes’ that have sustained the natural resources as well as the integrity between the traditional communities and their lands in the Köprülü Kanyon National Park? This question is addressed via qualitative interviews and observations in the field.

**The research consequently questioned:** What are the current pressing issues on the biophysical attributes of the environment and how are they related to the temporal socio-cultural, and economic and the political dynamics? This question is mainly addressed in the field using in-depth interviews and direct observations.

### 1.6 Research Objectives

Patton (2002) suggests that when one knows the future, the future becomes past. When one knows past he/she can foresee the future and can imagine further.

The research has been structured with a series of temporal objectives in order to address the research questions and to meet the aims of the dissertation. The objectives of the research are threefold: first is to understand fundamentals of natural and socio-
cultural dynamics; second is to examine the pressures and social conflicts which complicate management; and third is to explore potential solutions whereby the stakeholders can cooperate in stabilizing the traditional dynamics of ‘working landscapes.’ Each objective is worked on independently but ultimately contributes toward the general project goals while cognizant of other objectives.

**Objective 1 - Past Conditions:** The first objective is to delineate how the integration between humans and land has worked within the ‘working landscapes’ historically. Significant components of traditional economies, local cultures and national policies that comprised the social dynamics are understood and identified. It is explored that if these are the characteristics that have intrinsically induced stewardship and essentially fostered the integration of the traditional societies with their lands and thus sustained natural resources. The coordination, communication, and access control elements of managing the common properties are retrospectively evaluated and studied.

**Objective 2 - Present Conditions:** The next objective has two dimensions. The first dimension is to identify the current pressing issues, disturbances and the management contestations; and the social dynamics that contribute to them. The research observes what changes have occurred both on the landscape and in the social structures, especially during the last decade, while under the eminent pressures of increasing tourism and recreation related usage. The objective is to reveal the temporal causes and societal factors of the disturbances and dramatic changes on the natural and social environment. Present impacts of past management practices, the outcome of current policies and their temporal effectiveness are vigorously scrutinized.
In the second dimension, the objective is to delineate the enduring capital of natural and social systems that continue to support the biological and cultural wealth of the site. The study explores the social tools and techniques of the ‘working landscapes’ (coordination, communication, and access control dynamics) as potential values to be utilized in implementing the findings of the research with collaborative efforts for developing efficient recommendations for proactive conservation and amelioration measures.

**Objective 3 - Future Projections:** This objective takes the short and long term management plans, policies and strategies of the central and local governance into account. Local peoples’ aspirations for their natural environments and expectations from their lands are critically evaluated, as well as their responses to pressing conflicts and threats. Measures are explored that could stabilize those dynamics that enhance the integrity of ‘working landscapes’ in and around the national parks of Turkey; how they can be effectively implemented; and what current and other form(s) of institutions would be best suited to implement those measures?

Globalization is fast, effective and relentless whereas the actions and implementations of conservation theories are rather slow, clumsy and indecisive. Hence, the study examines whether decentralization might be a counterproductive tool that would further harm the environment in the hands of the local communities if they are disconnected with their traditions and if their cultural cohesion is further deteriorated. The study takes advantage of the comprehensive focus of this research, and raises another argument as a parallel objective to be explored. It scrutinizes whether the co-management
and participatory approaches in managing the natural resources with the local people can stand up to the impact of globalization and cultural deterioration.

1.7 Research Relevance

The relevance of the study lies in the fragile conditions of the environment of the Köprülü Kanyon National Park (KKNP) and in the cumulative severity of the depletion of the integrity of ‘working landscapes’ and the urgency for solutions. The alarming conditions do not only signal the threats for KKNP, but also for many other national parks, nature reserves and protected areas in Turkey and in other geographies of a similar social and biophysical nature. It is essential for all stakeholders to understand the multiple perspectives of the conflict in order to begin to work towards a potential resolution. This dissertation will be a critical contribution for Turkish policy makers, governmental management bodies, nongovernmental and grassroots organizations, and educational institutions. It provides a vision supported with relevant data to be utilized in developing potential solutions and conservation development tools. Natural resources management policies to be developed in Turkey are also likely to influence other developing countries, especially in the Middle East. Applicability of the findings to the conservation efforts in other nations with similar social and political systems reinforces the validity of this research.

Natural resources management has been an area of practice generally served by governmental officials with biophysical science backgrounds. Their links to politicians and to local communities are generally cumbersome or inefficient in practice. Therefore,
a significant strength of this research is that it utilizes a social science approach, and focuses on the human dimensions of natural resources management.

1.8 Dissertation Organization

The dissertation is organized to learn from the past social and biophysical conditions, to understand the current conflicts and pressures, and to acknowledge the trends and future aspirations of the Köprüülü Kanyon National Park. It is presented in seven chapters.

The first chapter briefly introduces the research rationale and the problem, and continues with the goals, the research questions and the objectives of the study as well as the relevance of the dissertation. The second chapter provides a succinct theoretical background through literature reviews on the development of environmental ethics and conservation concepts; national parks and protected areas, ‘working landscapes;’ it also covers the leading conservation theorems namely biodiversity conservation, ecosystem management as well as the sociological dimensions of natural resources management concept. In addition, a review of the tools and techniques for dealing with the resource management conflicts are offered in this chapter. The third chapter focuses on the case study site presenting environmental conservation and resource management statuses and the policy implications in Turkey; and the case study site the Köprüülü Kanyon National Park. Biophysical and social characteristics of the case site and the management plans of the national park are systematically displayed in this chapter. Chapter four introduces the research method and the data types employed for the dissertation. Data gathering, data analysis, and data process methods are further explained in this chapter. Chapter five
presents the findings of the research. Physical pressures and social conflicts on the resources are systematically described and analyzed in this chapter. In chapter six, the findings are further discussed and synthesize within the theoretical foundation of the research. Management policy recommendations are developed in this chapter. Chapter seven concludes the dissertation with a generalizable vision – a way and means of comprehension of natural and environmental resources management challenges.
CHAPTER 2
THEORETICAL BACKGROUND

2.1 Introduction

The worldwide spread of industrialization, since its revolutionary emergence of the 19th century, has accelerated in the 21st century to the point where its reach extends to all corners of the globe. Contemporary advances of modern human in technology, economic systems and ever expanding modes of communication have compounded the world into one global community living in a shrunken geography. This progression has had many positive impacts on humanity. The everyday lives of remote communities are enhanced because of the availability of advanced science and technology. Yet these benefits also have a price that is generally paid by the developing and undeveloped nations where costs are frequently greater than the gains.

Economy and politics are also changing with the pace of industry in order to provide for its increasing demands especially at the international level. Either newer forms of economic practices and political structures are being developed or the traditional ones are being adapted by the nations of the western world in order to legitimize the exploitation of resources in the remote third world regions. This co-evolution of industry and technology with economy and politics has reached its climax in recent years. Consumer culture and tourism are seemingly the two main factors of change that lead the way to the rapid development of the free market economy over the third world resources. Hence the models of economy and politics that are fostered by the western world to manage the growth are biased and based on a free market consumption economy with
capitalistic principles. In this context natural resources of the developing world are especially vulnerable since they generally do not have effective resource management policies at hand beyond local land management traditions. The local communities in the developing and undeveloped nations have been the traditional stewards and the beneficiaries of natural resources. These fragile human-land systems that have evolved within their enclosed contexts for hundreds of years are not always successful in adapting themselves to rapidly advancing co-evolution of industry with its own economy and politics. Self serving international economies and policies do not seem to have room in their agenda for long-established resource management traditions. This social dilemma generally results in such turmoil in which the resources get exploited both by outsiders and by local communities that were the traditional stewards.

Turkey is a good example of such dilemma due to the dramatic changes taking place in its social and physical environment in the recent decades. The social, political and economic structures are under severe pressure of modernization and the free market economy. This sudden change eventually generates pressure with critical impacts on its resources. Turkey is a developing nation with rich natural resources, and it finds itself in the middle of the global political-economic spectrum. Turkey’s geographical location is also quite strategic as it serves as a natural bridge among three main continents (Europe, Asia, and Africa).

A comprehensive review of relevant scholarly literature representing the latest trends of environmental conservation and natural resources management theories constitutes a substantive and epistemological background for this study. From a site-specific perspective, concise yet pertinent literature is also reviewed. Characteristics of
regional settlement patterns, land management practices within Mediterranean communities of Turkey, and changing policies that have shaped the current conditions are revealed. Notably, a thesis written by Laura Karaoglu for her Master’s Degree at Clark University in 1993 provided a significant foundation for this study. Karaoglu has also studied the Köprülü Kanyon National Park as the case site for her research of “National Parks and Traditional Communities in the Mediterranean Landscapes of Anatolia (Turkey): Searching for a Balance the Case of Köprülü-Kanyon National Park”. The findings of this thesis offer an invaluable comparison opportunity between 1993 and today from which to evaluate the impacts of socio-political changes in the ‘working landscapes’ of Turkey.

2.2 Environmental Ethics and the Development of a Conservation Concept

The climax of the industrial and technological progression of the 19th century with its mass production and mass waste was followed by a reaction as an immediate social reflex to set nature aside to be protected in definite terms simply as a separate entity free from any human activity. This reactionary and strict approach of preserving nature has not only initiated a strong environmental ethic within the global context, but it has also paved the path for a variety of conservation movements.

The era beginning with the 1960s has become a subsequently important period in which science began to put environmentalism on its agenda by undertaking an active role in advocating on its behalf. A series of publications written by Rachel Carson, Garret Hardin and Lynn White were the flagships of this period. In 1987 the Brundtland report entitled ‘Our Common Future’ set the next major landmark in the history of the
environment. It added a political dimension to the ethical and scientific discussions on the natural environment. It enhanced the diplomatic efforts to unite international organizations and institutions around the environment as a global issue requiring a mutual response. The fundamental precept of this report is that the world is finite, but it will have to provide food and energy to meet the needs of an exponentially increasing world population (Brundtland, 1990). In addition, the report highlights the increased pressure on the earth’s resources presented by growing levels of consumption as more societies adopt westernized norms of consumption. This has become the major discourse of worldwide scientific, academic and political domains promoting sustainable development in the late 1980’s through the 1990’s.

As we have entered the 21st century, the contemporary scientific approach towards environmental issues and conservation has been a focus on the management of human activities and behaviors in areas to be protected within regional or global imperatives. Ehrlich (2002) suggests that environmental sciences are now moving from the ecological and physical sciences toward the behavioral sciences, however the policy response to this shift is relatively slow. He reiterates that this shift should be handled as a cultural evolution just as the evolution of a language or the design of an aircraft. He suggests that the scientific community and public should collaborate to improve the human response to the predicament of earth’s life support systems. This approach accepts and incorporates humans with all their activities, as essential elements of the natural systems.
2.3 Working Landscapes, National Parks, Protected Areas, Partnership Parks

Somewhere around 8,000 to 10,000 years ago humankind began to exercise some measure of control over the supply of food by their systematic cultivation of certain forms of plants, notably the edible wild grass seeds--ancestors of barley and wheat, and by their domestication of animals. ‘The escape from the impasse of savagery was an economic and scientific revolution that made the participants active partners with nature instead of parasites on nature. This Neolithic agricultural revolution transformed the economy into one with an increasing food producing basis, enabling the social unit to expand, if only marginally so, that of the clan (Gordon Childe, 1964 cited in Morris, 1994:3).’ Ever since then, humanity has been sustaining its presence on earth in a variety of ways with an outstanding motive to survive. Although to fit and to adapt different environmental conditions for survival instincts are the primary reflexes of Homo sapiens modern human evolved developing other skills. Combination of all activities with various motives overall essentially shape the nature of the relationship of humans with their natural environment in what has been defined as “cultural landscapes”.

Throughout human history cultures have evolved differently in different geographies, while some were more sustainable than others in managing their resources. The United Nations Educational, Scientific and Cultural Organizations (UNESCO) defines cultural landscapes as ‘the combined works of nature and of man and are illustrative of the evolution of human society and settlement over time; under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal (UNESCO, 1995).’ Dolores Hayden adds to this definition from a slightly
different perspective: ‘It is the creation of the women, men and children who lived their lives within that landscape. Preserved and interpreted for the public, the cultural landscapes tell us who we are far more effectively than most individual works (Dolores Hayden cited in http://www.tclf.org/index.htm).’

Cultural landscapes are the distillation of the co-evolution of human culture and their environment representing the dynamic interaction between human culture and biological and physical earth systems. This interaction was a well balanced relationship in terms of the welfare of the earth until several centuries ago. Today however it can be argued, human’s participation is a hindrance in this interaction in general terms. Well balanced relationships of cultural landscapes are usually seen in the form of ‘working landscapes.’ Adrian Philips simply defines ‘working landscapes’ as “places where people live and work and which are also important for biodiversity conservation and sustaining livelihoods” (Philips, 1999). The term working landscape generally refers to agricultural lands characterized by a long-standing balance between human and natural forces (Cannavo, 2007). ‘Working landscape’ is a landscape whose function and look, or character and feel have been shaped over time by sequential, ongoing human activities as much as by natural processes (Hiss, 1990 cited in Cannavò, 2007). ‘Working landscapes’ are outcomes of generations of well-balanced collective activities of living and working in a given natural setting. The agricultural productions in the ‘working landscapes’ ought not to be confused with the contemporary industrial monoculture. Today, good examples of such well-balanced interactions between human and environment can still be found. The national parks of Europe and many developing nations such as Turkey are among the most common conservation systems that contain many typical ‘working landscapes.’
The concept of national parks, one of the noblest ideas of humanity on the will to set a portion of the earth aside for future generations in perpetuity, deserves an analytical look at its roots. O’Brien (1999) emphasizes this fact by stating that we should be thankful for what we have today considering that at the time when the notion was germinated in the mid and late 1800s there were no environmental organizations, no in depth understandings of ecology, and most importantly no environmental legislation or restrictions. Despite the population being much less in the United States (only about 40 million people in late 1800), there was no environmental law, no strict legal restriction to regulate the entirely utilitarian and exploitive land and resource management approach and thus, the environmental degradation caused by relatively smaller number of people was immense.

O’Brien (1999) refers to the establishment of Yellowstone National Park as a miraculous event in American history. In the midst of one of the most rapacious eras in its history, Americans managed to set aside an area that is over 2 million acre (8,983 square kilometer) to be preserved. This establishment of the American National Park System is one of the most emulated of American institutions. Over one hundred nations have instituted national parks systems based on this basic notion of conservation.

It is noteworthy that the national parks movement has been very successful over the years in preserving the areas designated as national parks from commercial exploitation. O’Brien argues, however, that the national park movement has focused on unique, monumental and spectacular geographic features ignoring the ultimately critical concerns to preserve habitat and ecosystems. He states that governments should have also paid attention to the more ordinary landscapes such as prairies, coastal lagoons,
marshlands, and hardwood forests which might be ecologically more important even if they represent less spectacular landscapes.

The establishment of Yellowstone as the first national park in 1872 symbolizes for many the date when the utilitarian era of relentless exploitation came to an end. However, well before this deservedly celebrated milestone of conservation movements many people were already speaking of conservation of nature and suggesting new ethical perspectives of a time of widespread natural resources exploitation. Ralph Waldo Emerson and Henry David Thoreau are the most prominent voices. George Catlin a painter (1796-1872) meanwhile deserves credit for his unique vision to create a “Nation’s Park” focusing on the American Indians and their way of life, as early as 1832. This is a vision that we have finally comprehended after 160 some years. Yet his proposed attempts were not instrumental in the making of the American National Parks as he envisioned them: protecting “the human and the beast in their wildness and freshness of their nature’s beauty”, but the basic notion of conservation by creating a nation’s park was seminal (Zaslowsky and Watkins, 1994).

The primary designation mission of the American National Parks was based upon a proactive approach to conservation. The initial conservation model was based on the strict protection of spectacular and unusual features of landscapes, while disregarding their cultural aspects. Even though the direct emulation and application of these strict objectives by other nations in different geographies has often resulted in limited success, this gift of America to the world still remains to be one of the best conservation models.

Hamin (2001) suggests that the American National Parks Service’s “partnership parks” are unique examples of collaborative management of protected lands, overcoming
the ownership challenges by sharing the management responsibilities with the local communities. These middle landscapes are the lands that are of important ecological characteristics and are either inhabited or wrought for economical gain. This system not only assures ecological protection but also brings financial support and institutional guidance; and it allows existing communities to continue to reside and maintain their economic activities on the land. In addition, they may potentially thrive as increased tourism is added to the mix of more traditional economic uses in the area.

The International Union of Conservation for Nature and Natural Resources (IUCN) has developed a natural resources management categorization system for the world’s Protected Areas. This system of categorization for protecting “areas 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” has been modified and improved in several international summits over the past twenty years (Philips, 1999). The Category II of this system provides a clear definition for national parks.

**Category II. National Park:** protected area managed mainly for ecosystem protection and recreation – 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).

Adrian Philips emphasizes that ‘working landscapes’ particularly in the developing nations emerge as noteworthy examples of conservation means due to their
well balanced systems. However, they rarely form part of a nation’s protected area system. This is due to a general misconception that protection means the ‘locking up’ of resources from local people and society. The category V of the IUCN’s protected areas category system, on the other hand, recognizes that a number of purposes of protected areas relate directly to meeting the needs of residents or neighboring human populations (Philips, 1999).

Category V. Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation. 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 (IUCN, 1994).

Therefore, protected areas should not be understood only as enclosed islands but as spaces that can promote the integration of conservation benefits into local and national economies in a sustainable manner, while also managing the threats to the integrity of these protected areas as stated in the World Parks Congress, in Durban, South Africa in September 2003.

Worldwide examples of national parks and other forms of conservation systems alike, offer invaluable records of previously conducted research and studies revealing the impacts of past managements and policy changes on the biophysical environment. With their multiple actors national parks, protected areas and many other conservation institutions from worldwide examples provide sufficient indicators to monitor the plight of the global environment. Their socio-cultural dimensions are particularly useful in also
monitoring and evaluating the impacts of interactive tensions between the policies and
traditional practices in real time examples. These well defined systems and their social
institutions are virtual laboratories for assessing the dynamics of past and current
pressures on the natural environment.

2.4 Arguments on the Tragedy of Commons

Current conflicts over the common pool resources of ‘working landscapes’ in
Turkey clearly demonstrate the renowned ‘common’s dilemma’ that has long been
discussed in academia. The ‘Tragedy of Commons’ by Garrett Hardin has constituted
one of the central concepts of the social dimension of natural resources management
since it was published in Science journal in 1968, and has become one of the most cited
articles in the last three decades. The tragedy of commons simply states that each
member of a society with full access to a common pool of resources tends to increase
their individual gain for short term benefits until they collectively bring the resources to a
total depletion. The behavioral strategy is the notion that those members who restrain
their accesses to the common pool resources lose out in comparison to those who
continue to exploit it (Hardin, 1968).

Hardin’s theorem has been challenged by contemporary scholars in several
different ways. Dietz et al. have provided a concise review of these arguments in the
‘Drama of the Commons’ edited by Ostrom et al. (2001). The first criticism is based on
accessibility, which argues that the concept of common property as defined by Hardin is
unrealistic in the way it describes a limitless access and uncontrolled use. As Ciriacy-
Wantrup and Bishop expressed, “common property is not everyone’s property” (Ciriacy-
Wantrup and Bishop, 1975:715 cited in Ostrom et al., 2001:11); and it suggests that whenever and wherever there is a common property it would intrinsically have the possession of the notion of **controlled access**. The following argument by Thompson (Thompson, 1975 cited in Ostrom et al., 2001:12) stresses that where common property existed, users had developed rich webs of usage rights that identified who had a long-term interest in the resource and thus an incentive to avoid overuse. This suggests a system of **coordination** associated with the notion of common property. Game theory scholars on the other hand (Dietz et al., 2001), challenge Hardin based on the **communication** aspect of the dilemma suggesting that the exploitation of the common resources is a repeated action. According to the basics of game theory, people are capable of communicating and developing resolution for the overuse and overexploitation problems during perpetual recurrence. Hardin’s prediction theorizes a one-shot circumstance.

The conditions developed and demonstrated by the above scholars in their arguments to challenge Hardin’s model of the Tragedy of Commons provide three generic conditions of a common property: controlled access, coordination, and communication. These, in turn, constitute the main analytical elements of this dissertation.

The ‘working landscapes’ of Turkey can be analyzed in two stages of temporal conditions: one representing the integrity during its past and the other delineating the pressures under its current circumstances. This study questions and explores whether the elements of ideal common property management (controlled access, coordination and communication) were traditional components of the integrity of Mediterranean ‘working
landscapes’ in Turkey. Building on this, it questions if the current pressures on common properties of the case site have eroded the effectiveness of the three generic elements, and whether the deterioration of the landscapes serves as a confirmation of the tragedy of the commons. This constitutes the fundamental theoretical debate of this research.

2.5 Biophysical Paradigms of Natural Resources Management

Although the conceptual focus of the dissertation is on behavioral, socio-cultural and political paradigms; it is equally imperative to understand biophysical management models of natural resources. Sustainability, biodiversity, ecosystem management and biodiversity conservation are prominent paradigms of the last several decades with biophysical foci that supplement this research.

2.5.1 Sustainability

The notion of sustainability is one of the most studied environmental concepts in the academia during the last two decades. The term in the environmental context, basically addresses the continuity in accessibility to the earth’s resources and the wealth of life support systems for the generations to come. It was first mentioned in the book “Building a Sustainable Society” by Lester Brown the founder of “The World Watch Institute” in 1981. The publication of the Brundtland Report, Our Common Future by the World Commission on Environment and Development sponsored by the United Nations in 1987 was the second major step in the advancing of the concept of sustainability in the international agenda.

Sustainability as it was mentioned in the Brundtland report implies ‘meeting the needs of the present without compromising the ability of future generations to meet their
own needs’. It also suggests that the notion of sustainability should be a central guiding principle of the United Nations, governments and private institutions, organizations and enterprises. Gro Harlem Brundtland (1990), than chairperson of the World Commission on Environment and Development, stated in her keynote address in this groundbreaking report that “the world is finite, but it will have to provide food and energy to meet the needs of a doubled world population sometime in the coming century.” We are already at the state predicted by Brundtland in her legendary report. The report states that as the resources of the world are allocated unequally, the poor and unfortunate communities will necessarily undermine the resources that they have access in order to survive. The report emphasizes that this ill-fated consequence forewarns the collective future for the global world. It suggests that communications and negotiations should take place at international levels. The report further suggests that scientists should have an equal voice as politicians in shaping the future (Brundtland, 1990). The fundamental recommendation that the report presents is a broad outline for just and resource efficient and non-inflationary economic growth.

As it was broadly discussed, celebrated and agreed upon by countless publications over the last two decades the concept of sustainability has three basic elements: 1) the systematic conservation of the environment rather than strict protection, 2) economic development, and 3) social and institutional development for equal allocation of resources. These three elements are, in collaboration, to ensure the efficient utilization of the world’s limited resources in meeting the needs of present without compromising the ability of future generations to meet their own needs (Brundtland, 1990).
2.5.2 Biodiversity

Biodiversity, short for biological diversity is the biotic basis of plants, animals, and microorganisms that are unified to form interactive and interdependent complex systems on various scales on the earth. Biological diversity is the variety of life at every hierarchical level and spatial scale of biological organization: genes within populations, populations within species, species within communities, communities within landscapes, landscapes within biomes, biomes within biosphere (Wilson 1992, cited in Callicott et al., 1998). The health of biological diversity is not only dependent on the quantity of the variety of the species forming a population but also on its integrity. Biological integrity is defined as the historic interaction among the native species’ populations. Therefore some authors refer to biodiversity as “native biodiversity” (Noss & Cooperrider, 1994 cited in Callicott et al., 1999).

Human - *Homo sapiens* as a biological species is a critical part of the biosphere hence the life-support systems of the earth. Considering the fact that there was life on earth without human, it is ironic that humans need the diverse and complex composition of other living organisms and the physical systems constituting the biosphere of the earth (Kim, Chung Ke, and Robert D. Weaver, 1994:4). Notion of biodiversity best describes this composition.

2.5.3 Ecosystem Management

Ecosystem management is another largely discussed theorem among conservation oriented scholars of science and policy in 1980s and 1990s. Practice oriented precepts of ecosystem management connotes strong pragmatic opportunities of conservation
implementations. Agee and Johnson (1989) introduce ecosystem management as a conservation concept with two main dimensions: philosophical and technical. They see the management dilemma as a broader challenge beyond the administration boundaries focusing upon the “open systems” rather than “enclosed islands” of biological systems. They emphasize the importance of social systems of humans along with the interrelations of natural system components in the conservation efforts. They also draw attention to the long term issues of management challenges by noting that no natural balance or a static equilibrium will remain the same.

Building on the foundation provided by Agee and Johnson, the ecosystem management concept has been extensively advanced by many scholars and adapted into various conservation programs. Publications by Edward Grumbine, Scott Slocombe, and John Gordon and Jane Coppock are the most cited and noteworthy contributions.

Grumbine (1994) states that ecosystem management is a response to today’s deepening biodiversity crisis. He outlines ten dominant themes from his extensive review of literature. They are briefly: 1) Hierarchical context: also referred to as “systems perspective”. This theme entails looking at the chain of an entire human-environment system rather than focusing on any one link within it. 2) Ecological boundaries: is the notion that management should extend its practices beyond the administrative political boundaries. 3) Ecological integrity: similar to the precepts of biological diversity, this theme emphasizes the importance of ecological integrity of native diversity. 4) Data collection: continuous research and inventory are essential. 5) Monitoring: results of actions should be tracked and ongoing feedback should be provided. 6) Adaptive management: scientific knowledge is provisional hence the management should be
flexible and adaptive to the uncertainties of the field. 7) Interagency cooperation: institutions within the ecological boundaries under consideration should collaborate. 8) Organizational change: structural changes may be required in the operational habits and policies of existing management agencies. 9) Humans embedded in nature: this is an overarching theme of ecosystem management that humans are fundamental influences on ecological patterns and processes and are in turn affected by them. 10) Values: regardless of the role of scientific knowledge, human values play a dominant role in ecosystem management goals (Grumbine, 1994).

This concise list of ten themes provides a succinct framework, a check list, for conservation programs of land, wildlife, and for protected area management with an ecosystem approach. The list brings a comprehensive order to the themes that are sporadically mentioned in the broad conservation literature.

John Gordon and Jane Coppock have criticized the traditional notion that, the economic development and nature protection are viewed as separate, if not opposing activities. They introduce ecosystem management as a new approach, uniting the two camps rather than letting them be developed in individual pockets. This new approach takes seriously the need both to protect habitat and to promote economic growth. The regulatory principles of ecosystem management are for goal setting rather than prohibiting, while providing a broad framework within which context-specific solutions can be developed. This benefits the specific circumstances and limits compromising future economic development and the environment (Gordon and Coppock, 1997). It also perspective suggests a synthesis of the principles of biodiversity and sustainability.
In his definition of ecosystem management, Slocombe (1998) reiterates that the interaction between biophysical and socioeconomic environments should be understood and managed thoroughly. He also emphasizes that this process should take place within the self-maintaining larger and similar systems. Slocombe takes the ten themes of ecosystem management approach offered by Grumbine to a next level of analysis and provides a clear step by step set of tools. He outlines these practical lessons as: a) defining management units, b) developing understanding, and c) creating planning management frameworks. Each step comes with further delineated context-specific explanations (Slocombe, 1998). Furthermore, he supports his proposal planning-oriented tools for successful ecosystem management applications in several case study examples.

Finally, Dekker et al. (2006) put a cap stone on the discussions of ecosystem based management with three forest policy examples at the international level. First, they confirm all fundamental notions of ecosystem management discussed earlier. They demonstrate how ecological management is interpreted differently by different people. While political documents take it as a political concept referring to certain desired attitudes towards ecosystem, some scientific scholars limit it to natural resources management (Dekker et al., 2006). They argue that ecosystem management is lacking a clear definition, consequently this vagueness poses a danger in that anyone can implement it according to their own views and interests. Cross boundary application is a fundamental element of ecosystem management concept and commencing interdisciplinary communications and negotiations is an essential process. Social systems, unlike natural systems, are more context-specific hence adaptability is among the key
characteristics. It is critical to comprehend the larger contexts where the social phenomena occur.

2.5.4 Biodiversity Conservation and Ecosystem Management

The history of nature has records numerous extinct species. Such extinction is an inevitable part of the evolutionary system of nature. It is a positive phenomenon as a part of earth’s ecological systems. Throughout the millions of years, the natural systems have evolved with the ‘extinction of species’ for the wellbeing of a greater system and for the benefit of the survivor species. However, the increasing role of human on extinction is new; and its impacts on nature are more severe than evolution can cope with. The results are depletion with a domino effect that threatens the planet’s capacity to support life (Kim and Weaver, 1994). Grumbine (1994) states that ecosystem management is a response to this deepening biodiversity crisis.

Landers et al. (1998) state that all lands, no matter how large or small, remote or near, pristine or modified, are delineated by administrative boundaries. Cultural and political territories of administration are merely defined according to human experience rather than the evolutionary processes of nature. The natural boundaries of ecological systems and the administrative boundaries often contradict. This presents a crucial challenge to conserving biodiversity. In order to overcome this challenge, the concept of ecosystem management suggests that strict goals are needed to be set for managing across the human-defined boundaries. Although the ecosystem management concept considers human activities as part of natural systems, the focus is limited to regulating economic and political activities in the environment. Thus the management methodology
of the biophysical approach seems limited. And it operates on authoritative and top-down regimes.

Callicott et al. (1998) have systematically analyzed all three theorems (biodiversity, sustainability, and ecosystem management) according to their definitions in two conceptual dimensions: the compositionalist glossary and the functionalist glossary. They consider that the soundness of the naturalness of biodiversity conservation disregarding the human with its survival and economic activities is its strength. At the same time they succinctly include sustainability and ecosystem management within the content of functionalist glossary with their strong human notions. They demonstrated socio-economic activities as opportunities rather than challenges for environment conservation and resources management practices.

2.6 Socio-political Paradigms of Natural Resources Management

Assessing the social conflicts affecting the natural resources management is one of the most important problems facing the planet today. Natural resources management problems of our time often have deeply embedded roots beyond the reach of local administrations and communities. Therefore, it is essential to comprehend the dynamics of socio-political paradigms of natural resources management to produce preventive measures for efficient implementations.

2.6.1 Human Dimensions of Natural Resources Management

Since the beginning of environmental movement of the 1970s, several strategies for environmental conservation have been developed. Social factors and human dimensions of natural resources management are the latest concentration of such
conservation discussions. The human dimensions concept on conservation issues is increasingly becoming the common topic of international commissions of science and academia. The contemporary approach towards environmental issues has been a subject of the management of all human activities in the areas to be protected. Both biological and behavioral existences of humans are equally crucial elements of this approach.

Kennedy and Thomas (1995) argue that a professional orientation of managing natural resources or the environment as a social value is not inconsistent with a biocentric perspective and is a more valid, comprehensive, and evolutionary management model than focusing primarily on the physical and biological resources.

Figure 2.1: Human dimensions and biophysical systems of natural resources management.
The conceptual diagram of Kennedy and Thomas, redrawn in figure 2.1, graphically demonstrates the relationship of professional orientations towards natural resources management. The figure proportionately stresses the importance of the human dimensions over natural and environmental systems. While each component is of significant importance they can be further categorized in two main domains as anthropocentric and biocentric. As further demonstrated in the table 2.1 below, the natural resources management is largely a concern of anthropocentric values which lies within the broad realms of social science, economy and politics.

<table>
<thead>
<tr>
<th>Resource Management Values</th>
<th>Social System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anthropocentric</strong></td>
<td><strong>Economic System</strong></td>
</tr>
<tr>
<td>Human Dimensions of</td>
<td>allocation of land, labor, and capital on social systems</td>
</tr>
<tr>
<td>Resource Management</td>
<td><strong>Political System</strong></td>
</tr>
<tr>
<td></td>
<td>policy, laws, formal power relations</td>
</tr>
<tr>
<td><strong>Biocentric</strong></td>
<td><strong>Natural Environmental System</strong></td>
</tr>
<tr>
<td>Biophysical Dimension of</td>
<td>Biosphere Elements:</td>
</tr>
<tr>
<td>Resource Management</td>
<td>wildlife populations, natural resources, ecosystems, human societies</td>
</tr>
</tbody>
</table>

Environmental sociology provides a holistic perspective in explaining the intricate relationships among humans, other animals, land, water and air. In his brief definition of environmental sociology, Bell (2004) states that environmental problems are not only problems of technology and industry, of ecology and biology, of pollution control and
pollution prevention. They are also problems of society – problems that challenge us to change those patterns of organization.

Management of the environment is clearly a typical problem of anthropocentric values. ‘Working landscapes’ integrated with their human actors set relevant examples of such dynamics in balance, and present invaluable cases to be explored for environmental studies. Human components of the process underlying the parks’ characteristics need to be understood in depth. Those are the vital factors that not only give cultural identities to the natural environments as landscape but also are critical factors conveying them with their working dimensions up to today’s state of appraisal. Social dimensions of natural resources management practices between local residents and governing bodies appear to be crucial determinants of conservation challenges.

2.6.2 The Planning Profession in the Conservation Context

The planning profession has made significant paradigm shifts in response to recent global social, political, economic changes. Since the day first two dwellings or settlement compounds were ever arranged in respect to one another on the earth, the planning is an integral element of human societies and it has been evolving as a profession. Human civilization and planning are coevolving in a symbiotic relationship. Although, it was not a distinct profession until the late 19th century, planning as a time and activities management practice, is a central element of the civilizations. The primary focus of the profession is to regulate healthy and sustainable interaction for the envisioning, designing and implementation of both the physical and the social environments. Karl Marx, Friedrich Engels, Ebenezer Howard, Patrick Geddes, Frederick
Law Olmsted are the prominent contributors who sowed the first seeds of the planning profession. The tenets these pioneers produced were essentially responses to the social and physical conditions of living and working environments resulting from an industrial society. Therefore, the course for a newly emerging profession was set accordingly.

Planning as a profession was originally conceived with the mission of focusing on the physical environment. As a discipline, planning continued to be studied and practiced within the context of city and urban planning as a supplementary element in dealing with spatial organizations. Only in the mid 20th century did the planning profession expand its horizons toward social planning objectives in conjunction with the post World War II social movements. This was the critical point in time when the planning profession gained its identity.

Jane Jacobs (1992), Paul Davidoff (1965) and David Harvey (1997) are only few of the many people who have paved the path for the planning profession towards its interdisciplinary theoretical discourses. This change that moved the profession beyond the production of technical documents was a critical turn. However, it did not happen overnight or due to a specific event. Invaluable theories on economic development and equity planning in accordance with nature and environmental conservation concepts, and civil rights movements have been produced in the newly emerging dimensions of the planning profession in this era – the second half of 20th century.

Today the planning profession is recognized and practiced as a discipline of policy making with an array of interdisciplinary dimensions. Extensive discussions considering advocacy and pluralism in planning as well as communicative planning
theories have led the way for newer visions and theories. They now incorporate all of the stakeholders of the planning procedure as active participants on planning boards.

The notion of advocacy planning, a term borrowed from law, suggests that the public and authority are two antagonistic concepts and planners may take a side. Godschalk and Mills (1966 cited in Margerum, 2002b) stated that “meaningful and effective planning must be based on a two way communication between the public and the planning agency.” While plural participation of multiple actors in the decision making processes and their delegations were being conceptually celebrated, Sherry Arnstein (1969) has brought a critical analysis to the discussions. She has demonstrated that multiple actors based planning and policy development practices are essential but can be a manipulative process of power relations. She has demonstrated her criticism on the rungs of a ladder rising from the “nonparticipation” to the ideal condition of “citizen power”. German Sociologist Jurgen Habermas heralded the beginning of the communication era in our modern world by institutionalizing communicative rationality as a social theory of action (Booher and Innes, 2002). Starting from 1960s to the present the development of an array of perspectives has collaboratively contributed to the planning profession. Hence, it is not merely a discipline of technical engineering for producing physical plans. Instead it has become a distinct discipline of facilitating the norms and policies of social activities, for orchestrating societies, managing resources and delegating the voices of broad stakeholders with democratic applications. (LeGates, 2000; Healey, 2003; Gunton, 2003)

The contemporary state of the planning profession, with its socially analytical and physically creative multidisciplinary orientation becomes a significant discipline to
mediate the environmental agenda at global level. The history of planning with its pragmatic and theoretical dynamics and its contemporary state as interdisciplinary mediator, promises a critically important position for not only providing ground for proactive yet radical solutions for the future of the global environment but also for instigating the means of effectual implementations. Lane (2005) outlines the characteristics and purposes of the urban and regional planning profession as follows: it is fundamentally concerned with the organization and management of land and resource use; it is commonly concerned with mediating between diverse claimants in the use of urban and rural landscapes; it has a problem solving focus; and it has a future seeking dimension that means it is concerned with improving the circumstances of human existence, commonly expressed as equality and sustainability.

### 2.6.3 Collaborative Planning

Collaborative planning today is the ultimate crystallization of the past 50 years of planning theories and broad social perspectives into a democratically collective form of facilitation. Collaborative planning incorporates energies of multiple stakeholders with different interests into plan development and policy making processes in an interactive fashion. It brings contending parties together to work out a strategy to address a shared problem in face-to-face dialogues. Joint fact finding and learning how to work together are two main objectives of collaborative planning (Innes and Gruber, 2005). Building on a long tradition of public involvement in planning, collaborative planning seeks to bring together major stakeholders to address controversial issues and build consensus rather than use majority rule (Healey, 1992; Margerum, 2002a; Innes and Booher, 1999a).
Gunton (2003) states that the “advocacy planning” approaches of Davidoff (1965) and “alternative dispute resolution” methods introduced by Susskind and Field (1996) complement one another and the emergence of the collaborative planning paradigm is a logical extension of both. Antagonistic parties with competing interests are the inevitable elements of the planning process that professionals deal with. Gunton (2003) stresses that this challenge of the advocacy planning theory is shared by the collaborative planning principles and further states that different interests must be engaged in a negotiation process to seek mutually acceptable outcomes.

According to Gunton (2003), collaborative planning processes will more likely reach a decision on a plan because stakeholders are constructively incorporated into the process instead of remaining outside. Collaborative planning brings more alternatives to the table and hence arrives at a plan with strong public interest. Plans developed via a collaborative planning process will likely be implemented successfully because the stakeholders, who may otherwise prevent implementation, are big an important part of the plan. Collaborative planning creates social capital out of the knowledge and skills of the stakeholders and works with the relationships developed during the process beyond the specific plan (Gunton, 2003).

Certain conditions are necessary for the collaborative planning to be able to produce effective policies and plans. The dialogues must be self-organizing. Meetings should be face-to-face and be facilitated rather than being chaired. Perspectives and views of all stakeholders with interest in the issue should be represented with active participation in the planning process. Participation of the stakeholders should be genuine and sincere. The information that is essential to be utilized in the plan development and
the interests and perspectives of the stakeholders should be represented comprehensively and accurately (Innes and Gruber, 2005).

The process of collaborative planning can be broadly classified into three phases (Gray, 1989 cited in Margerum, 2002b). First, a problem-setting in which stakeholders become involved and convened around a mutual interest. Second, a direction-setting in which stakeholders interact in an effort to reach a consensus. Finally, the stakeholders put their individual and group efforts to work to implement the plan. The first two phases demonstrate that consensus building is the fundamental element for successful collaborative planning.

2.6.3.1 Consensus Building

This approach is increasingly practiced as a common way to develop feasible strategies, plans and policies among stakeholders to deal with uncertain, complex, and controversial planning and policy tasks (Innes and Booher, 1999a). It is systematically and sophisticatedly performed within the collaborative planning principles to accomplish positive communications and interactions between the government and the public. It is not necessarily chaired but facilitated by a governmental agency or an affiliated organization. Innes and Booher (1999a) refer to consensus building as an array of practices in which stakeholders with different interests come together face-to-face, for long term dialogues. Meetings are facilitated with special techniques that allow all participants to be heard and be informed, and encourage discussion that is both respectful and open-ended. Innes and Booher (1996b) remind us once again that the communicative rationality theory of Habermas is the fundamental element of collaborative planning.
They reiterate that the communicative rationality constitutes the basic notion of consensus building concept (Booher and Innes, 2002).

Practicing with the communicative rationality principles allows knowledge to be emancipated so that solutions go beyond self full-filling rationalizations. It is the essence of communicative rationality that the emancipation of knowledge can be achieved through dialogue. The stakeholders must be equally informed, listened to, and respected and none can be accorded more power than others to speak and make decisions (Innes and Booher, 1999b). This also applies to consensus building that fosters dynamic social interaction in order to eliminate log jams before they become an issue. It brings stakeholders around the table as active participants with relatively equitable shares. In consensus building, agreements can be reached among the stakeholders who would otherwise not talk to one another. Consensus building not only enables broad and contending stakeholders to produce tangible agreements that are implementable, but most importantly it also may produce intangible new relationships, new practices, and new ideas by changing stakeholders’ social habits. Consensus building may be effective even when it does not accomplish what its participants originally intended. Consensus building may change the direction of a complex, uncertain, evolving situation, and help a community toward a higher level of social environmental performance because its leaders have learned how to work together (Innes and Booher, 1999b).

Through consensus building the collaborative planning process is able to produce effective implementation. Innes and Booher (1996b:419) provide the following set of criteria to define a process for a good consensus building one that:

- Includes representatives of all relevant and significantly different interests.
• Is driven by a purpose that is practical and shared by the stakeholders.
• Is self-organizing, allowing participants to decide on ground rules, objectives, task, working groups, and discussion topics.
• Engages participants, keeping them at the table, interested and learning through in-depth informal interactions.
• Encourages challenges to the status quo and fosters creative thinking.
• Incorporates high quality information of many types and assures agreement on its meanings.
• Seeks consensus only after discussions have fully explored the issues and interests and significant effort has been made.

Margerum (2002a: 183) states that the quality of the process is an important factor in evaluating the effectiveness of collaborative planning. He contributes the criteria below for evaluating the collaboration process.

• Include the full range of stakeholders
• Include public participation and involvement
• Support and facilitate the process
• Establish a common problem definition or shared task
• Organize the process in terms of ground rules, agendas, etc.
• Engage participants jointly search information, and invent new options.
• Reach agreement through consensus.

There is a significant overlap between the two lists of criteria. While the criteria by Innes and Margerum delineates the process for good consensus building the criteria by Margerum is recommended for evaluating the collaborative process. Broad representation of public, a willful and self motivational approach, sincerity of participation on a mutually shared issue, and reaching an agreement by consensus are the most noteworthy characteristics that are necessary for a successful collaborative planning.
2.6.4 Community Based Collaborative Resources Management

The Community-Based Collaborative Resource Management (CBCRM) and the Community-Based Natural Resource Management (CBNRM) theorems are increasingly gaining importance and draw attention to the notion of community collaboration in scholarly literature. CBCRM and CBNRM emerge as theoretical convergence grounds where conceptual nuances clash on resources management related issues, i.e. natural resources extraction, recreation and conservation. The basic notion of CBCRM or CBNRM is a self-developmental communal consciousness of resources management as an alternative to the conventional top-down public administration models. CBCRM or CBNRM entail local, site-specific and place-based projects, programs and policies that have the goal of providing healthy environments and human communities. Integration of science with social institutions; and devolution of authority to the lower level of organizations are the two main collaborative co-management characteristics exemplifying the management trends of CBCRM (Lurie and Hibbard, 2008). Its essence is voluntary participation in the democratic process for building communal consensus and self-organization of case-specific groups. CBCRM or CBNRM approaches are generally developed as a reaction to the slow processing and unpractical top-down governance of resources management. They are the product of a series of social changes over several decades. These changes include increasing mistrust of government and concomitant challenges to prevailing political institutions; public disagreements regarding the validity of scientific and technical information; and a growing expectation that decision makers should include equity issues in considering environmental policies (Bacow and Wheeler, 1984; Blackburn and Bruce, 1995; McSpadden, 2000; Steel and Lovrich, 1997; Williams
and Methany, 1995; Wondolleck and Yaffee, 2000 cited in Lurie and Hibbard, 2008). Lurie and Hibbard (2008), state that there is no consensus on a definition of CBNRM. They add that it is a flexible, place based, multi-interest, cooperative effort linking private and public partners for problem solving. It typically involves consensus decision making and joint learning procedures in an effort to develop mutual gains solutions (Daniels and Walker, 2001; John, 1994; Weber, 2003; Wondolleck and Yaffee, 2000; Lane and McDonald, 2005 cited in Lurie and Hibbard, 2008).

Social capital is a critical asset of CBCRM and CBNRM that stakeholders can use to obtain results they seek and accomplish goals that are otherwise unattainable (Putnam, 1993 cited in Wagner and Fernandez, 2008). Social capital is important because it can provide access to other forms of capital such as financial capital, human capital, natural capital, and it may improve a community’s ability to come up with innovative solutions (Adger, 2003; Olsson et al., 2004 cited in Wagner and Fernandez, 2008).

Social capital is an essential element to initiate the collaborative resource management process and a product of it. A strong social capital ensures the facilitation of successful collaborative management and constructive communications over the conflicts towards resolution especially in the cases with multiple and diverse stakeholders such as traditional communities. However, the measurement of social capital is a challenge. Key mechanisms for building social capital in collaborative groups emerged, including commitment and continuity; understanding, empathy, and respect; transparency; and dependability and predictability (Wagner and Fernandez, 2008).
2.7 Natural Resources Management Examples

2.7.1 Green Belt Movement in Kenya

The Green Belt Movement (GBM) is a grassroots non-governmental organization, indigenously initiated in Kenya under the leadership of Wangari Maathai in 1977. The majority of the thousands of participant members of this movement were women and youth who planted about 30 million trees throughout rural Kenya over two decades.

Planting trees was the essence of the movement. The trees symbolized hope for African development and healing. It was initiated as a reaction to the deforestation of Kenyan landscape. The direct impacts from planting trees included increased local availability of food through fruit production and wood for fuel, and decreased soil erosion and desertification. The overall societal impacts of the GBM, however, were much more expansive than the direct environmental improvements. The GBM is an illustrative model of how grassroots initiatives can lead to societal change. Although the central activity was a nationwide tree planting campaign, the environmental conservation, community development, and capacity building were the main objectives of this movement accomplished with an holistic approach. The GBM programs grew and evolved to include promoting organic farming and training in rural communities. (Maathai, 2004)

2.7.2 CAMPFIRE Program

Communal Areas Management Program for Indigenous Resources (CAMPFIRE) was initiated in Zimbabwe with the intend of allocating indigenous resources - mainly wildlife - for the benefit of communities via increased value through ecotourism. It was also emulated in other countries in southern Africa. The basic notion of the CAMPFIRE
program is conserving while harvesting. The CAMPFIRE program has succeeded during a process of changing ownership statuses of the wilderness lands of Zimbabwe from communal ownership through colonialism. Until today the three overarching tenure systems existed: state, communal, and private have been experienced in Zimbabwe (Metcalfe, 1993). The Payment for Environmental Services (PES) and Wildlife Industries for All (WINDFALL) projects positively influenced the development of CAMPFIRE which spanned from 1960 through 1980.

PES, by introducing novel approach of sustainable use of wilderness resources and having achieved its conservation goals laid the ground for CAMPFIRE. WINDFALL introduced the notion of allocating meat from elephant culling and some revenue from trophy fees. The revenue was occasionally paid to rural communities adjacent to state-managed protected areas with the aim of encouraging a positive attitude to wildlife (Frost, 2007). CAMPFIRE mainly generates revenue and protein for the locals through hunting organized by community collaborative ecotourism efforts. Program regulations provide protection for the wildlife and conservation for the ecosystem through controlled access and communication. Otherwise these resources would deplete due to excessive extraction because of traditional consumptions and recreational exploitations.

2.7.3 Mount Everest and the Sherpa

The Mount Everest area of Himalayas has become one of the most controversial tourism destinations in the world over the last 50 years. It has been widely argued that increasing visits for mountaineering and trekking activities have changed many aspects of the biophysical landscape and the social structure in the region. The most common
argument concentrates on the premise that outsider visitors have had a severe negative impact on the prominent social values of the region – the land and resources management traditions of the local Sherpa residents. Although tourism development has brought the Sherpa significant prosperity, it has changed centuries-old traditional land and resources management patterns. Broad scholarly and non-scholarly publications have extensively argued that tourism has caused severe deforestation and a significant depletion of fragile alpine ecosystems in the Mount Everest region (Stevens, 2003). The Sagarmatha (Mount Everest) National Park was established in 1976 as a result of an international outcry. In 1979 the site was designated a World Heritage Area. The Sagarmatha National Park was a pioneering example of a new kind of protected area because it acknowledged the local residents’ settlement and subsistence rights (Stevens, 2003).

Stan Stevens (2003) sheds light on the controversy by examining the tourism versus deforestation dilemma through an evaluation of the past and present forest use and change. He questions whether tourism has caused a deforestation crisis, and if not, what its impacts have been on forests and alpine vegetation in the region. In order to answer this question he analyses numerous documents, historic photographs and interviews with Sherpa. His initial findings indicate that deforestation was much less than reported. The mistaken deforestation perception caused the national park managers to implement a strict top-down banning of resources use. Stevens found that the main impacts tourism had on local vegetation were forest thinning in some areas and the loss of alpine shrub in some others. No doubt the tourism has increased the resources use. However, the major finding of Stevens indicates that the vegetation change is associated with the subsistence use of the forest and alpine resources, development of the timber trade, and the changing
forest management goals of community and central government. He states that the forest
degradation and loss of alpine vegetation continue to be the major environmental issues
despite more than a quarter century of conservation efforts. The resource management
conflicts of Mount Everest area and the Sagarmatha National Park will continue to be
controversial issue due to increasing tourism, presence of Sherpa and the fragile alpine
ecosystem.

2.8 Resource Management Conflicts

2.8.1 Conflict Typologies

The conflicts over the management of natural resources are usually of two main
matters. Kriesberg (2006) defines interests and values as the major issues of contention.
Interests are either tangible material goods or more socially, relative power and
prestigious statuses. Values on the other hand, are inherent notions that contesting parties
might be holding onto as the essence of their solemn existence and identities. Interests
are what people “want” but values are what people “stand for” and ultimately what and
who they are. Therefore, values generally cannot be compromised while the interests can
be negotiated via an approach of mutual gain (Susskind and Field, 1996) and alternative
dispute resolution tools.

Building mutual respect towards value differences is most important in dealing
with those conflicts of this nature. Mutual understanding, appreciation and assurance of
value differences enables parties to have positive dialogues in dealing with conflict and in
managing resources even if the development of a concrete solution was not
accomplished.
A typology of conflicts based upon a combination of feasibility and negotiability of interests as well as the severity of value differences is recommended by Northrup (cited in Susskind and Field, 1996). The typology categorizes conflicts in three levels, with the most challenging being the third. In the cases of conflicts with value differences fundamental values are largely threatened, despite when there might be some mutual realities among the actors. According to the typology, the value based conflicts necessitate second-level and third-level changes for resolution. Susskind and Field (1996) further reiterate that the third-level changes are either impossible or require relatively longer times. Type three conflicts will require more effort in developing trust relationships. A mutual understanding will provide positive grounds for the type two conflicts to be negotiated and be resolved. Even though with education ignorance can be eliminated, certain fundamental values will remain the same, which will continue to generate type three conflicts.

2.8.2 Tools and Techniques of Dealing with Conflicts

There are several social tools and techniques that can be useful for social conflicts with basic value differences. Formal Alternative Dispute Resolution (ADR) and the Mutual-Gains Approach are the two main ones.

ADR method suggests working in six non-coercive steps towards efficient resolutions with long term effectiveness as an alternative to the conventional coercive and formal resolution methods (Costantino and Merchant, 1996).

1) Preventive Methods: suggest avoiding new disputes while dealing with the current disputes. 2) Mutual Gain Approaches: are referred to as a win-win approach by
different authors. Its basic tenet is step by step development of a mutual ground based upon earlier experience that would satisfy every participant and would benefit all stakeholders even if minimal. 3) Facilitated Methods: suggest the dispute to be facilitated by a neutral third party who has no interest on the issue of conflict. NGOs however may have minimal interest on the site could be considered as best candidacy for facilitating the negotiations among the parties. 4) Fact-finding methods: provide the resolution efforts with helpful expert reports and scientific guidance to ensure satisfactory and rational settlements on the basic conflicted issues. 5) Advisory methods: with the assistance of a neutral third party the potentials of resolution is rendered. This method should be evaluated after the establishment of successful dialogues and negotiations. 6) Imposed methods: binding measures are arbitrated by the neutral party with this method.

The Mutual-Gains Approach offers an excellent framework for dealing with the conflicted interests based social disputes systematically and efficiently (Susskind and Field, 1996). This approach encourages participants to:

- Acknowledge the concerns of both sides: Parties should not be afraid of understanding the other side’s concerns but should be looking at it as they are gaining ground towards resolution in both areas of dispute.
- Encourage joint fact finding: as was mentioned within the content of ADR all parties of the conflict should have believable information on the issue.
- Offer contingent commitments to minimize impacts if they do occur. Central governmental management or an NGO; the facilitating neutral third party should demonstrate that there is a plan B at hand in the case that the negotiations, resolution efforts and preventive measures do fail. This is not necessarily to be implemented in the cases of occurrence but is essential as an assurance in order to encourage local public in participating and to collaborating positively.
• Accept responsibility, admit mistakes, and share power: the mutual-gain approach requires mutual trust, sincerity and goodwill. These are important qualities that come handy and are cost effective in long term approaches towards conflict resolution.

• Act in trustworthy fashion: to acknowledge and respect morals and values of local communities especially in the cases with a history of conflicts. Trust building becomes a crucial issue if a disappointment was experienced previously.

• Focus on building long-term relationship: a resolution for a social conflict is the product of social engineering and is a living entity.

The non-coercive suggestions of the ADR and the Mutual-Gains approaches offer excellent working principles to conduct the social conflict resolution efforts with systematically save methods. They recommend keeping the focus of the resolution efforts onto the contradicting parties rather than the sources and causes of the conflicts. Weaknesses and potentials of the social attributes of the parties become crucially important under the guidance of these working principles. This is particularly critical for the efficiency and the long-term impacts of the conflict resolution efforts especially under the constantly shifting unpredictable conditions of the dynamic social environments in the less developed nations. This research greatly benefits from the ADR and the Mutual-Gains principles due to the severely disturbed social environment hence the many intricate conflicts that its case site presents.

2.9 Conclusion

The tourism industry, a free market based economy, management confusion caused by the multiple and contradicting policies, changing consumption habits of local
communities, rapid adoption of technologies, and abandonment of traditional agricultural
practices are the main sources of contemporary pressures on natural and environmental
resources worldwide. Advancing science and technology increase the pressure on the
precious and limited resources of the world that are increasingly and broadly considered
common pool resources due to the impacts of globalization.

The resolutions often lie at the source where the problems originate and that they
are generally far away from where the damages occur. In essence, the pressures are
multifaceted compositions of social relations. They are generated by various levels of
social systems and organizations. Therefore the resolutions should be planned as social
compositions of social systems supporting one other within multiple levels. The
communication and information era we live in offers the most fertile ground in the human
history for interdisciplinary approaches with multiple dimensions to acknowledge the
experience, both spatially and temporally. This is both a unique opportunity and a
challenge for the planning profession to learn from the experience and to synthesize the
universal information to produce comprehensive plans and implementation measures for
place-specific conditions.
CHAPTER 3
THE TURKISH CONTEXT AND THE CASE STUDY SITE: KÖPRÜLÜ KANYON NATIONAL PARK

3.1 The Turkish Context

Turkey is a developing nation with its diverse and ambitious peoples, agrarian traditions, ‘working landscapes,’ abundant natural resources and 40 national parks. It is a country of great importance within its regional environmental context of the Mediterranean and the Middle East. A vibrant mosaic of diverse ecologies of significant importance is adorned with a rich human culture throughout the vast geography of mainland Turkey - the Anatolia, historically referred to as "The Cradle of Civilizations".

Figure 3.1: Turkey: a political, cultural, and ecological bridge to Europe, Asia and Africa; source: Google Earth, Retrieved May 2, 2008.
The nation holds a critically important position of leadership of socio-political change within its region which makes Turkey a critical bridge of politics in broader international contexts of environmental conservation. The Turkish Government has undersigned several international agreements including Ramsar. However the implementations of national environmental conservation policies and regulations are far from being satisfactory in relation to the magnitude and the importance of the resources the Turkish main land possess.

3.1.1 Turkish National Parks System

Turkey has 40 national parks and various other nature conservancy sites. The total area surface of national parks is 8,977 square kilometer which is only the 0.01% of the land cover of Turkey. The Turkish General Directorate of Nature Conservancy and National Parks is a unit under the Ministry of Environment and Forestry. The main mission of the Turkish national parks system is to designate and to manage the natural sites, cultural sites, nature parks, natural monuments, and nature conservancy sites with national and international importance with the objectives of conserving and improving their characteristics. The general management concept is to conserve the resources and to allow controlled recreational, educational, and scientific research related activities for the general public. A national park can be designated by the Turkish National Assembly of Ministers upon the proposal of Ministry of Environment of Forestry under the auspicious assessment of the Ministry of National Defense, Ministry of Culture and Tourism, Ministry of Energy and Natural Resources, and other relevant ministries. The administrative structure of the Turkish national parks system presents a strong central
governmental, political, hierarchic, and bureaucratic system. This strictly top-down administrative model often appears in the sites with clumsy and contradicting management practices and policy implications due to multiple authorities and coinciding interests of different governmental units. It was a governmental tradition for decades that the managers and policy makers hired for the national parks were often forestry engineers which induces a management model without perspective but for strict timber production.

The Turkish national parks system designated sites which were often traditionally and intrinsically conserved by the stewardship feature of the socio-cultural and agricultural traditions of ‘working landscapes’ of rural Turkey. However for the last several decades, Turkey has been experiencing socio-political changes causing a substantial impact on its social environment with subsequent pressures on the biophysical environment and excessive exploitation of natural resources. The emergence of increasing recreational visitations in the national parks with resultant uncontrolled commercial practices, and changing consumption habits of the local residents are only few of the prominent issues that generate pressure on the parks’ resources in Turkey.

3.1.2 Forest Management Policy of Turkey

Natural forest resources in Turkey display a structurally diverse and rich composition due to three main floral regions (Irano-Turanian, Mediterranean, and Euro-Siberian) and many microclimatic sub regions. Only few country in the world displays this many floral variety. Turkey hosts about 900-1000 endemic floral species within seven major national regions. Forests of Turkey are rich and diverse wonderful
compositions of mixed species representing the characteristics of the three main floral regions.

Majority of the forest resources of the country are planned and managed by the General Directorate of Forestry under the governmental jurisdictions of the Ministry of Environment and Forestry. Forest management plans are developed mainly to manage forests for timber production. Currently there are nine schools of forestry programs in the Turkish universities. They graduate forestry engineers to supply the need for the forest managers significantly with technical management orientation ensuring the productivity of forests (Baskent et al., 2005). Starting from 1917 to date the Turkish forests has experienced various management policy changes. None of the policy plans had any significant focus on the sustainability of the biodiversity of the ecosystems. Forests were always managed to remain along the border of being entirely exploited and continue to meet the wood supply demands of the nation. Although in 1960’s silviculture forest management model is adopted from Germany, Austria, France and United Kingdom it was still for commodity production focuses (Colak and Rotherdam, 2006).

The silviculture model is chiefly based on introducing single tree species by removing the native vegetation that is often a harmonious composition of various species. Silviculture with timber production objective is still the leading focus of the General Directorate of Forestry in managing the Turkish national forests today for all of the forest stands of the nation even when they are in the jurisdiction of the national parks. The ecological integrity of the environment and the biodiversity of flora and fauna are not necessarily the primary concerns of this management model. While the timber production is the focal management objective of forestry in a form of industrial practice, it is ironic
the fact that more than half of the rural population lives near the forests and depends on the forest resources. Changing lifestyles in the rural regions, increasing access to advanced science and technology have altered the ways of Turkish society’s perception of forests. Increasing considerations of biodiversity conservation, collaborative resource management and ecosystem management concepts appear in contradiction with recreational use, water and resources extraction. Deeply-seated timber production oriented forest management policies are not flexible enough to keep up with the changes and they remain incapable of handling such contradictions. The forestry engineers with strict technical and biophysical perspective do not seem well suited for serving for the needs of a new era for biodiversity and ecosystem management principles with socio-political and human dimensions.

3.1.3 The SIT Regulations of Turkey

SIT is a term for a set of strict protection laws issued by the Turkish Ministry of Culture and Tourism for national monuments and lands with cultural and natural significance. SIT protection laws are implemented in three categories. They are natural, cultural, and archeological. SIT regulations also are in effect in three levels of importance (indicated as 1st, 2nd, and 3rd degrees). The first degree indicates the most valuable monuments and lands enforcing the strictest protection. SIT laws have the power to overrule all permissions for usage over a national resource that might have been granted by any other governmental organization. The SIT laws are issued by commissions of experts assembled by case specific members consist of scientists, academicians and artists.
The “Higher Council for Conservation of Cultural Antiquities and Natural Entities” as also commonly referred the “Higher Council for National Monuments” has the highest authority in issuance of SIT laws per specific entities with national significance. Case specific commissions are consist of seven members in two main bodies: bureaucrats and experts. The members are attained by the Minister of Environment and Forestry and the President of Higher Education Council for the conservation councils of 20 different conservation regions of Turkey.

The SIT laws appear as critical regulatory policy elements in Turkey due to their strict protection power for many cultural and historical antiquities and natural resources with significant beauty regardless of their location and ownership statuses.

10-12 years ago a plan was issued for a hydro electric power dam to be built in the Köprüçay River valley. Various 1st and 3rd degree archeological and natural SIT conservation regulations were employed to prevent this dam. Now, the locals wish the SIT regulations would be abolished because of the limitations come with it even though they owe their homes, fields and the entire wealth of the resources of the valley to the power of the SIT regulations.

3.2 Köprülü Kanyon National Park

This dissertation focuses on the Köprülü Kanyon National Park (KKNP) in Turkey as a study case because it represents clear impacts of conflicted social dynamics over rich resources. The Park is designated in 1973 and is one of the largest and oldest of 40 National Parks of Turkey.
The Köprülü Kanyon National Park has an area surface of 36,616 ha (90,500 acres). 78% of its area is covered by forest which is owned and managed by the General Directorate of National Forestry of Turkish Government and the reminder 22% is open land of which 2,300 ha is used for traditional subsistence agriculture by the local communities (GEF, 2007). The park is located in the valley of Köprüçay River / Köprüülü Kanyon on the southern slopes of Taurus Mountains in the Southern Mediterranean region of Turkey. The coordinates of the park’s boundaries are (approximately): 37°25’N-31°11’E, 37°23’N-31°06’E, 37°18’N-31°03’E, 37°16’N-31°16’E, and 37°07’N-31°12’E.

Figure 3.2: Location of the KKNP in Turkey; source: Mapping Headquarter Office of the Turkish Army (T.C. Harita Genel Komutanlığı).
About 7500 people live in the 11 villages and in some sporadic settlements within the national park. The park is extensively used by daily visitors for rafting based tourism activities. It is estimated that 600,000 – 700,000 tourists visit the park in a year with daily rafting tours. Along with the agrarian local residents of the valley; members of various levels of governmental management bodies and NGOs, political parties, concessionaires; and many visitors are the fundamental stakeholders of the park’s resources. The intricate relationships among these groups and their conflicting interests often present a chaotic situation which also represents a remarkable study opportunity. The dissertation focuses on three of these interest groups: locals, management and the concessionaires.
The site presents a unique combination of natural and geological marvels. These include rich species of vegetation and wildlife, all of which are celebrated by a deep and diverse cultural history of thousands of years. The park’s resources are best analyzed in two main categories as natural and cultural (Çetinkaya, 2002), which all are interchangeably, utilized for recreational purposes with the rising tourism activities of last ten years. These resources are further described below in four categories. All four are important elements of a bigger system that is enclosed within the secluded Köprülü Kanyon valley to form a well balanced greater cultural and ecological system with a biological diversity in centuries.

- Natural Resources
  - Biological Resources
  - Geomorphologic & Hydrological Resources
- Cultural and Social Resources
  - Archeological Resources
  - Resource Management Traditions
Figure 3.4: The Köprülü Kanyon National Park
3.2.1 Natural Resources

The site of the Köprülů Kanyon National Park is a place where many natural resources of a greater system concentrate. The long history of human settlements within the boundaries of the national park is a clear indication of the wealth of natural resources.

There is a 1st degree natural SIT conservation area within the KKNP. This site is located on the Köprüçay River; presented in the figure 3.9. The natural resources of the park’s greater ecosystem are briefly assessed in two main categories: biological (flora and fauna), and geomorphologic and hydrological.

3.2.1.1 Biological Resources

**Flora:** The Köprülů Kanyon National Park is home to a large number of flora species while located in the Mediterranean floral region. Ayasligil and Duhme (1993) stated that the Köprülů Kanyon National Park hosts 12 endemic species in a diverse composition of over 900 plant taxonomies. The park presents rich sources of endemism and a large diversity of vegetation species because of its unique location. Significant characteristics of three major floral regions of the world can be observed within the park. All three floral regions are represented with the existence of their characteristic plants in the native flora of the park (GEF, 2007).

The compositions of the dominant plant communities of the site are the outcome of various activities of human societies throughout the last 2 millennium. The table 3.1 shows some of the trees and shrubs commonly found in the parks flora. The villagers used to meet their fuel and building needs from the forests of the park before the banning
issued with the implementation of strict forestry management regime about two decades ago.

Table 3.1: Trees and shrub commonly found in the KKNP (GEF, 2007)

<table>
<thead>
<tr>
<th><strong>English Name</strong></th>
<th><strong>Scientific Name</strong></th>
<th><strong>Turkish Name</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cilician fir</td>
<td>Abies cilicica subsp. isaurica</td>
<td>Kilikya göknarı</td>
</tr>
<tr>
<td>Grecian strawberry tree</td>
<td>Arbutus andrachne</td>
<td>Sandal ağacı</td>
</tr>
<tr>
<td>Strawberry tree</td>
<td>Arbutus unedo</td>
<td>Çilek ağacı / Kkocayemis</td>
</tr>
<tr>
<td>Cedar of Lebanon</td>
<td>Cedrus libani</td>
<td>Lübnan Sediri / Katran</td>
</tr>
<tr>
<td>Mediterranean hackberry</td>
<td>Celtis australis</td>
<td>Çitlembik</td>
</tr>
<tr>
<td>Carob</td>
<td>Ceratonia silique</td>
<td>Harnut</td>
</tr>
<tr>
<td>Judas tree</td>
<td>Cercis siliquastrum</td>
<td>Erguvan</td>
</tr>
<tr>
<td>Smoke bush</td>
<td>Cotynus sp.</td>
<td>Sumak</td>
</tr>
<tr>
<td>Cypress</td>
<td>Cupressus sempervires</td>
<td>Selvi / Andız</td>
</tr>
<tr>
<td>Brierwood</td>
<td>Erica arborea</td>
<td>Funda</td>
</tr>
<tr>
<td>Juniper</td>
<td>Junierus sp.</td>
<td>Ardiç</td>
</tr>
<tr>
<td>Bay</td>
<td>Laurus nobilis</td>
<td>Defne</td>
</tr>
<tr>
<td>Bead tree</td>
<td>Melia azaderach</td>
<td>Tesbîh ağacı</td>
</tr>
<tr>
<td>Myrtle</td>
<td>Myrtus communis</td>
<td>Mersin</td>
</tr>
<tr>
<td>Laurel rose / oleander</td>
<td>Nerium Oleander</td>
<td>Zakkum</td>
</tr>
<tr>
<td>Olive</td>
<td>Olea europa</td>
<td>Zeytin</td>
</tr>
<tr>
<td></td>
<td>Phyllaria latifolia</td>
<td></td>
</tr>
<tr>
<td>Red pine</td>
<td>Pinus brutia</td>
<td>Kızıl çam</td>
</tr>
<tr>
<td>Austrian pine</td>
<td>Pinus nigra ssp. Pallasiana</td>
<td>Karaçam</td>
</tr>
<tr>
<td>Mastic tree</td>
<td>Pistacia lentiscus</td>
<td>Sakız ağacı</td>
</tr>
<tr>
<td>Cyprus turpentine</td>
<td>Pistacia terebinthus subsp. Palaestina,</td>
<td>Çitlik, Menengiç, Mastîk</td>
</tr>
<tr>
<td>Turkish oak</td>
<td>Quercus cerris</td>
<td>Saçlı meşe / Pelit / Pınar</td>
</tr>
</tbody>
</table>

The old growth of Mediterranean Cypress (*Cupressus sempervirens*) within the park is the only example of undisturbed natural growth in the world of its size with an average of 450 ha (1,112 acres) spread (GEF, 2007). Majority of park’s forests are mixed conifer communities of cedar of lebanon (*Cedrus libani*), austrian pine (*Pinus nigra*), red pine (*Pinus brutia*) and cilica fir (*Abies cilicica ssp. Isaurica*). The cilica fir is an endemic species of the park and it is red listed by the IUCN as a threatened species.
Although the majority of the vegetation cover of the park is forest (72%) *maquis* are the native composition of the vegetation.

![Image of Mediterranean cypress](image)

**Figure 3.5**: The old growth stand of Mediterranean cypress (*Cupressus sempervirens*).

*Maquis* are characteristic plant communities of the Mediterranean region composed of thicket shrubs and low trees (GEF, 2007). The height of *maquis* varies between 1-2 meters. They are believed to be evolved in response to the excessive impacts of human societies over centuries, such as the cutting and grazing of the native Mediterranean forests. The types of plants commonly seen in *maquis* are: Mediterranean hackberry (*Celtis australis*), oak species (*Quercus sp.*), olive (*Olea europaea*), carob (*Ceratonia siliqua*), prickly juniper (*Juniperus oxycedrus*), mastic (*Pistacia lentiscus*),
oleander (*Nerium oleander*), bay laurel (*Laurus nobilis*), strawberry tree (*Arbutus unedo*) and blackberry (*Rubus sp.*) (Çetinkaya, 2002).

**Fauna:** the park abundantly hosted deer, bezoar goat, bear, fox, wolf, rabbit, wild boar, and badger; large number of bird species, and various fish and bat species. Bezoar goat (*Capra aegagrus*) is an iconic species for the park. It was said that eagle, hawk and vulture species used to nest on the rugged terrains above the canyons. Red spotted trout is the most significant species of the aquatic habitat of the Köprüçay River.

Table 3.2: Mammals common to the terrestrial habitats of the KKNP (GEF, 2007)

<table>
<thead>
<tr>
<th>English Name</th>
<th>Family</th>
<th>Scientific Name</th>
<th>Turkish Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bezoar goat</td>
<td>Bovidae</td>
<td><em>Capra aegagrus</em></td>
<td>Yaban keçisi</td>
</tr>
<tr>
<td>Fox</td>
<td>Canidae</td>
<td><em>Vulpes vulpes</em></td>
<td>Tilki</td>
</tr>
<tr>
<td>Golden Jackal</td>
<td>Canidae</td>
<td><em>Canis aureus</em></td>
<td>Çakal</td>
</tr>
<tr>
<td>Fallow dear</td>
<td>Cervidae</td>
<td><em>Cervus dama</em></td>
<td>Alageyik</td>
</tr>
<tr>
<td>Eurasian lynx</td>
<td>Felidae</td>
<td><em>Lynx lynx</em></td>
<td>Vaşak</td>
</tr>
<tr>
<td>Hare</td>
<td>Leporidae</td>
<td><em>Lepus europeaus</em></td>
<td>Tavşan</td>
</tr>
<tr>
<td>Vole</td>
<td>Muridae</td>
<td><em>Microtus guentheri</em></td>
<td>Tarla faresi</td>
</tr>
<tr>
<td>European marten</td>
<td>Mustelidae</td>
<td><em>Martes martes</em></td>
<td>Sansar</td>
</tr>
<tr>
<td>Caucasian squirrel</td>
<td>Sciuridae</td>
<td><em>Sciurus anomalus</em></td>
<td>Kafkas sincabı</td>
</tr>
<tr>
<td>Wild boar</td>
<td>Suidae</td>
<td><em>Sus scrofa</em></td>
<td>Kara domuz</td>
</tr>
<tr>
<td>Brown bear</td>
<td>Ursidae</td>
<td><em>Ursus actos</em></td>
<td>Ayı</td>
</tr>
<tr>
<td>Greater horseshoe bat</td>
<td>Vespertilionida</td>
<td><em>Rhinolophus ferrumequinum</em></td>
<td>Büyük Nalburunlu  Yarasası</td>
</tr>
<tr>
<td>Lesser horseshoe bat</td>
<td>Vespertilionida</td>
<td><em>Rhinolophus hipposideros</em></td>
<td>Küçük Nalburunlu  Yarasası</td>
</tr>
<tr>
<td>Mediterranean horseshoe bat</td>
<td>Vespertilionida</td>
<td><em>Rhinolophus euryale</em></td>
<td>Akdeniz Nalburunlu  Yarasası</td>
</tr>
<tr>
<td>Long-fingered bat</td>
<td>Vespertilionida</td>
<td><em>Myotis capaccini</em></td>
<td>Uzun Ayakh  Yarasası</td>
</tr>
<tr>
<td>Ground gleaning horseshoe bat</td>
<td>Vespertilionida</td>
<td><em>Rhinolophus blasii</em></td>
<td>Nalburunlu  Yarasası</td>
</tr>
<tr>
<td>Greater mouse-eared bat</td>
<td>Vespertilionida</td>
<td><em>Myotis myotis</em></td>
<td>Fare Kulakh Büyük  Yarasası</td>
</tr>
</tbody>
</table>
Table 3.3: Fish species found in the aquatic habitats of the KKNP (GEF, 2007)

<table>
<thead>
<tr>
<th>English Name</th>
<th>Family</th>
<th>Scientific Name</th>
<th>Turkish Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red spotted trout</td>
<td>Salmonidae</td>
<td><em>Salmo trutta macrostigma</em></td>
<td>Kırmızı benekli alabalık</td>
</tr>
<tr>
<td>Rainbow trout</td>
<td>Salmonidae</td>
<td><em>Oncohynchus mykiss</em></td>
<td>Gökkuşağı alabalığı</td>
</tr>
<tr>
<td>Carp</td>
<td>Cyprinidae</td>
<td><em>Barbus capito pectoralis</em></td>
<td>Bıyıklı balık</td>
</tr>
<tr>
<td></td>
<td>Cyprinidae</td>
<td><em>Capoeta capoeta angora</em></td>
<td>Siraz balığı</td>
</tr>
<tr>
<td>European Eel</td>
<td>Anguillidae</td>
<td><em>Anguilla anguilla</em></td>
<td>Yılan balığı</td>
</tr>
<tr>
<td></td>
<td>Cyprinidae</td>
<td><em>Vimba vimba tenella</em></td>
<td>Eğrez balığı</td>
</tr>
<tr>
<td>Blenny</td>
<td>Blenniidae</td>
<td><em>Blenius fluviatilis</em></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.4: Birds commonly found in the KKNP (GEF, 2007)

<table>
<thead>
<tr>
<th>English Name</th>
<th>Family</th>
<th>Scientific Name</th>
<th>Turkish Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial eagle</td>
<td>Accipiridae</td>
<td><em>Aquila heliaca</em></td>
<td>Şah Kartal</td>
</tr>
<tr>
<td>Eurasian black vulture</td>
<td>Accipitridae</td>
<td><em>Aegypius monachus</em></td>
<td>Kara Akbaba</td>
</tr>
<tr>
<td>Magpie</td>
<td>Corvidae</td>
<td><em>Pica pica</em></td>
<td>Falak / Sakçağan</td>
</tr>
<tr>
<td>Semi-collared flycatcher</td>
<td>Muscicapidae</td>
<td><em>Ficedula semitorquata</em></td>
<td>Alaca Sinekkapan</td>
</tr>
<tr>
<td>Francolin</td>
<td>Phasianidae</td>
<td><em>Francolinus francolinus</em></td>
<td>Turaç</td>
</tr>
<tr>
<td>Partridge</td>
<td>Phasianidae</td>
<td><em>Alectoris sp.</em></td>
<td>Keklik</td>
</tr>
<tr>
<td>Nuthatch</td>
<td>Sittidae</td>
<td><em>Sitta krueperi</em></td>
<td>Anadolu Sivacısı</td>
</tr>
</tbody>
</table>

3.2.1.2 Geomorphologic and Hydrological Resources

Köprülü Kanyon National Park is located in the Köprüçay River valley on the Southerly slopes of Western Taurus Mountains in the Southern Mediterranean region of Turkey. Rugged terrain of the park’s geography displays a dramatic elevation change with sudden fluctuations between 150 to 2,500 meters while the park’s width is an average distances of 20,000 meters East to West and 32,000 meters South to North. This dramatic terrain is embellished with bizarre *karstic* rock formations, steep and narrow canyons and high river beds enriching its landscape qualities. Climatologically also a
variety of micro-climate patterns are dictated by the terrain differences with high elevations and close proximity to the Mediterranean Sea in addition with its location on the natural passages of the Taurus Mountain Ranges.

The Köprüçay River is the main water body, which runs through the national park collecting tributaries and springs throughout the valley. Number of streams feeds into the Köprüçay River in the main canyon. Although the river runs a long path starting from the Taurus Mountains until the Mediterranean Sea the springs within the park are the major water source of the river year round. Since majority of the river is fed by the streams filtered through the karstic and limestone geology of the Taurus Mountains. Hence the water of the river has an outstanding drinkable quality at most points and it provides habitat for rich aquatic habitat (GEF, 2007). Overall length of the river is 140 km of which 20 km runs along the border of the national park and 25km runs through the park. The Canyon of Köprülü housing the river is among the park’s main landscape features and the namesake. They together constitute a good location for rafting with sightseeing qualities. Local residents perceive the river as an economic commodity from which to generate quick and easy revenue, disregarding its fragile aquatic ecosystem. The rafting tourism is being performed in the site since the early 1990s.

Precipitation regime of the valley represents the characteristics of Mediterranean climate. It is generally low (1120 mm/year) and the main rain falls occur during the winter months. Temperature is above the national average year round in general, especially during the dry summer months particularly in the lower regions. But it is milder in the higher elevations where it also snows during the winter months within the park boundaries and in the greater ecosystem of the park.
Figure 3.6: Geomorphologic relief of the Köprüçay River Valley and the greater ecosystem of the KKNP.
3.2.2 Cultural and Social Resources

The landscape of the site has taken shape throughout its cultural history to date. It presents many interesting human impacts in various aspects. Humans, and flora and fauna responded each other for centuries in the Valley of Köprüçay River ultimately to compose a harmonious landscape. Some local communities have developed traditions in regards to the site’s biophysical characteristics for millenniums; some nomadic communities came with their traditions to be adapted and further be developed in the site for the last several centuries. Critically important and effectual elements of human-land interactions of the KKNP are assessed in two categories: archeological resources and resource management traditions. Karaoglu (1993) stated that the local communities of the park had been in a harmonious relationship with their environment in the past.

3.2.2.1 Archeological Resources

Ruins of Selge ancient city are the most significant archeological resource of the park along with few other artifacts. Selge possesses outstanding historical importance. The information about the history of Selge is limited because the city was never been excavated. However, the history of the region says that the first settlement here goes as far back as 1000 BC. The ancient residents of Selge produced herbal medicines, sacred herbal remedies, wine, oil and lumber. Most of the architectural structures are collapsed due to the earthquakes over the centuries. The city was most prosperous during the Roman era circa 200 BC. The ruins that are visible today are mainly from that era. As the prominent elements of ancient cities of this geography and its era a temple of Zeus, a theatre, an odeon, a forum with agora, a stadium, a fountain - nymphaeum, baths and
agricultural terraces are still visible today for the naked eye in Selge. The ancient Selge was well known with the ointment they made from the vegetation grows in the region. Many of those herbal plants are waiting to be rediscovered today (Gül, 2007).

A Turkish village called Zerk / Altinkaya situated over the ruins of ancient city of Selge. Over the years local people have recycled architectural artifacts in building their dwellings and agricultural structures. Locals refer these stones as infidel stone – ‘gavur taşı.’
An ancient royal trail (*St. Paul Route*) connected the Mediterranean coastal region to the inlands of Turkey for missionary purposes found a passage through the Taurus Mountains within the secluded valley of the parks geography. Portions of pavements of this ancient trail are still visible and being used today to access the Northern provinces beyond the Taurus Mountains for trekking tourism (figures 3.4 and 3.9).

A series of archeological SIT conservation regulations protects the ruins of *Selge* and the two bridges of the KKNP. They are category 1\textsuperscript{st} and 3\textsuperscript{rd} in the *Selge* ancient city and 1\textsuperscript{st} and 3\textsuperscript{rd} in the Köprüçay River banks. These archeological SIT conservation sites can be seen in the figure 3.9 as well as the other natural SIT conservation sites.
Figure 3.9: SIT conservation areas of the Köprülü Kanyon National Park.
The *Oluk Köprü* and the *Büğrüm Köprü* - two ancient bridges from the Roman era are the namesakes of the *Köprüçay River* and the Köprüülü Kanyon National Park. *Köprü* means bridge in Turkish. The bridges are also important elements of the St. Paul Trail. The story of these bridges is one of the living legends of the land.

Figure 3.10: Two ancient bridges of the Köprüülü Kanyon National Park: *Oluk Köprü* (left) and *Büğrüm Köprü* (right).

**Story of the two bridges:** the legend of the land says that the bridges of the Köprüülü Kanyon National Park were built in different times by two masters. The apprentice to the master of the earlier bridge, the *Büğrüm Köprü*, was commissioned to build the latter bridge, the *Oluk Köprü*. The situation likely intimidated the old master. Perhaps the apprentice also contributed to the intimidation by going around and talking about his accomplishment. Knowing
human nature, he very well might have added some cynical comparative comments about the two bridges as well. But what we do know for sure – according to the way the legend was told- is that the old master became very jealous because of the overwhelming beauty of the new bridge, Oluk Köprü, which stands not far from his earlier bridge.

Legend has it that the old master could not bear the humiliation so he decided to put an end to it. He decided to play a trick. He invited the apprentice to have a meeting on the Oluk Köprü Bridge. (The legend turns somewhat tragic at this point). The apprentice arrives at the meeting point in the middle of the bridge expecting to have a master-to-apprentice talk. Possibly after some tense greetings and some small, formal talk the master points out something on the side of the bridge making the apprentice lean over the side. Meanwhile the master quickly pushes the apprentice over the bridge and hurls him into the canyon to his death.

The people of the land today, love to tell this story to newcomers. They make sure that the tragic notion of the story is emphatically stressed: that the bridge for which the apprentice was so rightfully proud brought his decimation.

3.2.2.2 Resource Management Traditions

Deeply intertwined abundant resources of the national park have been sustaining its resident communities for centuries. This harmonious relationship represents itself in many different forms. Local residents have developed social systems to manage the resources and to organize their activities while meeting their needs for sustenance from the environment. Yaylacılık and imece are the two critical examples of such traditional systems.
3.2.2.2.1 Yaylalıklık Tradition and Yaylas

Yayla is the Turkish name for the high alpine meadows and pasture lands located in the higher elevations where yaylalıklık - the traditional seasonal agricultural lifestyle - takes place. The yaylalıklık tradition is a semi-sedentary pastoralism that is fundamentally a combination of agricultural and cultural activities common for the mountainous regions of Turkey from the Black Sea to the Mediterranean. It is mainly a seasonal migration of villages from their permanent settlements in the lower elevations to temporary settlements in alpine meadows at higher elevations during the summer months. Tuncdilek (1974) defines yayla as “A place to go for a definite period during the summer for: grazing of animals, conducting agricultural practices, supplying livelihood or even rest, which lies outside of the subsistence boundaries of a village, is usually the joint property of a village, and although far away, is wholly or partially tied to that village with socio-economic connections, or a secondary area added to a village’s actual subsistence area”. It is a general agricultural tradition of the rural societies of Turkey that has strong cultural and recreational components.

Fundamentally, yaylalıklık is a land management practice that is primarily rooted in regulating the grazing grounds in a rotational pattern in order to utilize common resources efficiently. Relocating grazing and other agricultural practices through seasonal migration provides villagers with increased access to resources in broader areas on a regulated access pattern. However there is also an aspect of comfort to yaylalıklık which offers an escape from the heat by seeking the cooler climate conditions of higher elevations. The quote below by an elderly village woman in the lower-stream region of the KKNP provides a clear depiction for the essence of the tradition.
“We even took our cats and flies and went to yayla without even locking the doors. Nobody possessed anything anyhow that would be worthy of stealing. Everybody in the village would all go. Even the poor who did not even own a single animal would come and we would share our food with them.”
[11.pd7196mo; an elderly woman]

Villagers would travel to yayla grounds upon finishing the harvesting in their permanent settlements. They waited to migrate and to start grazing their goats until the grasses in the yayla pastures had grown enough to drop seeds to reproduce themselves. It is said that the yaylacılık was the main reason the agricultural practices and animal husbandry, in particular the goat grazing, were sustainable subsistence practices in the region. Traditional yaylacılık activities allowed wild life to take over the entire landscape in rotation. Humans and the wild life would take turns in performing their seasonal activities on the land. Vegetation in yayla pastures used to be thriving because of the controlled and regular grazing. Grasses and wild flowers would flourish to transform an entire meadow into a field of flowers, which is rare to see in the present. When villagers migrated to yayla right after the harvest, both aquatic and terrestrial wild life would be free to take over the environment and to regenerate in and around the permanent settlements and throughout the agricultural fields. A variety of birds were abundant, and they were naturally helping the native vegetation to spread wildly through the environment. This was a break for the nature and that the yaylacılık was the reason for a harmonious relationship among people and wild life.
“When we came from yayla we always found our village covered with dried tall grass. It was surrounding all of our homes and barns. Grass would grow so high in the summer months that we could not reach our village without throwing fire on it upon our return from yayla.” [12.ct7206ya; a villager man]

Yaylacılık and the wide spread yayla grounds are the most significant traditional elements of the greater region of the KKNP. The tradition of migrating has been active among the majority of the KKNP communities until very recently, and was a vital resource management method. The locals used to go to yaylas with entirety of their village. The most prominent socio-cultural aspect of yaylacılık was that it brought the residents of different villages from the greater region all together, and served as an opportunity for them to unite, socialize and interact with each other, and in some cases to exchange goods. Everybody in each village, with or without animals, would gather and walk to yayla together. They sang ballads, chanted altogether and danced along the way. Various games were played in yaylas that young and old--everybody would participate in. They used to have weddings, festivals and various kinds of entertainment in yaylas. They would invite the members of other villages to each other’s events.

Because the temporary yayla settlement patterns were much different than the permanent winter settlements, the neighborhood opportunities were also different in yaylas. While in yayla, people would have a chance to interact and socialize with other people whom they would not have had the opportunity to get to know otherwise. These temporary migrations to yaylas were exceptional and irreplaceable social events that rejuvenated the social capital of these small rural communities seasonally.
“White bearded elders used to play in the yayla like children. People in the old days were merrier.” [11.pd7196mo; an elderly couple]

They used to build seasonal dwellings in the yaylas and they would take them down before their return to the villages each year. They would pile and store the building materials so that they could reconstruct their temporary dwellings in the coming year. The proverb below quoted by an elderly village man in the upper-watershed region reflects the temporary nature of the yayla houses in retrospect.

“They used to build seasonal dwellings in the yaylas and they would take them down before their return to the villages each year. They would pile and store the building materials so that they could reconstruct their temporary dwellings in the coming year. The proverb below quoted by an elderly village man in the upper-watershed region reflects the temporary nature of the yayla houses in retrospect.” [17.bb7266st; an elderly village man]

Migrating to yayla grounds as well as the rebuilding and then disassembling of dwellings every summer also served as entertainment for the thousands of years old nomadic heritage. The ethnicity of the main rural communities who introduced yaylacılık to Turkish lands is Yörük. Yörüks are the descendents of a nomadic ethnic group Oğuz who migrated from central Asia. Their chief agricultural activity is animal husbandry. The word yörük is a derivation of the Turkish word yürü (walk), yürümek (to walk), and it derivatively means “those who walk” or “walker”.

The access to yayla grounds was substantially via paths that were only wide and accessible enough for humans and animals to walk or climb on. Today, almost all yayla grounds are accessible with vehicles. This dramatic change on the physical structure eradicated the most critical essence of yayla traditions, the walking. Today it is even common to see people commute to work in nearby cities on a daily basis by motorcycle and minivan while they reside in yayla homes during the summer months.
The *yaylacılık* tradition has a recreational aspect too. This is to escape the intolerable heat of the sub-tropical climate of the lower Mediterranean regions in the summer months for the cooler microclimates of the higher elevations. Although the locals of the KKNP can still be seen going to *yaylas* today, the migrations are insignificant and irregular. These visitations are chiefly for recreational purposes, as opposed to agricultural.

In general, the essence of *yaylacılık* has been considerably lost. The reasons for this are: the dramatically changing lifestyles under the strong influences of modernization from exposure to western culture, the technological advancements in living conditions in the permanent dwellings, the availability of new and different employment opportunities at lower elevations, and changing economic activities.

The villages located in the lower elevations have *yaylas* located either inside or outside of the national park up in the high elevations of the surrounding mountains. Although each village still keeps the possessions of their *yayla* sites with unwritten rules, the tradition is extensively abandoned as a resource management activity. See figure 3.4 for *yayla* locations and routes.

*Yaylacılık* is not expected to be restored in this site as a land and resource management activity due to several reasons. Main cause is the fact that goat husbandry is not economically feasible anymore. The primary elements that have constituted and necessitated the traditional *yayla* activities, either agricultural or recreational, have been eradicated by the products of advanced technology. The widespread usage of refrigerators and air-conditioners have also contributed to the abandonment of the *yaylacılık* tradition. Another severe cause of destruction to the *yayla* landscapes is that all
yayla grounds are being developed with second homes using permanent construction technology. This is indeed a national trend, and is very effective in the KKNP as well.

3.2.2.2 Imece

Imece is a collective work tradition that is commonly performed in the rural communities of Turkey. Members of a community voluntarily participate in imece. They collectively form work teams to contribute their labor on a task that either benefits a member or the whole of the community. The KKNP communities have tackled many different forms of work via imece in earlier days. The social capital and communal solidarity were the greatest aspects of imece. While these works were for agricultural and resource management purposes in general, they were usually due to limited technology.

“In the old days imece was a traditional institution of ours. We often formed communal working groups to tackle many daily tasks collectively. We quickly repaired the spots that were torn by floods on the river and stream banks as soon as the floods receded in order to prevent erosion, and we maintained our irrigation channels with imece.” [18.do7268oo; an elderly village man, upper-watershed region]

Imece were formed to build houses for one another as well, although the agricultural work was more commonly performed by them. In the village of Altinkaya, prior to SIT restrictions, they used to build houses by using timber from the forests of the village common lands via imece. It was a practice that the person for whom the imece is formed was responsible for providing the building materials and the food for the participating members of the community. In cases of house fires, a community would
simply gather to support the victim by bringing anything they might need and working all together in building a new house for them.

It was observed and recorded that *imece* is still being widely performed today in the KKNP villages among women for everyday housekeeping and food processing chores, such as bread and salsa making. In other cases such as in harvesting oregano, carob, chestnuts, etc. in the village common lands, village residents continue to work collaboratively as well. However it is not accurate to consider these activities *imece* because they have a commercial aspect - a profit share focus.

### 3.2.3 Local Communities and Settlements

There are 11 villages and many sporadic settlements within the boundaries of the Köprülü Kanyon National Park. The total population of the park’s communities is 7,102 according to the 2000 census data acquired from the General Directorate of Turkish Census and Citizenship Affairs. The administrative park boundaries follow an abrupt route dividing village lands or separating village settlements with their fields. Each village holds the ownership of certain lands as common resources for the village. The legal ownership statuses of fields, forests and especially the dwellings, and concessionary and agricultural structures present a chaotic circumstance in the park due to the lacking cadastral records. These ownerships are based on unwritten rules and on fuzzy lines that are often customary and defined by the traditional and historic usage patterns: grazing, farming and collecting woods. Settlement centers of six villages (*Beşkonak, Karabük, Altinkaya, Gaziler, Ballıbucak, and Yeşilvadi*) are enclosed within the national park boundaries; some portions of the common grazing lands and woods of some of these
villages are located outside while their settlements located inside the park; and conversely five other villages are settled outside while their forests or grazing lands are enclosed inside the park boundaries. Only five (Karabük, Altınkaya, Çaltepe, Yeşilvadi and Degirmenozu) out of eleven villages have partial cadastral records of their fields and dwellings as the legal documents of their ownerships. All these intricate and uncertain legal and practical ownership statuses create a social environment that severely challenges the management of resources.

Local communities of the park are farmers and herders in general. An array of agricultural practices was developed depending on the locations of the fields and settlements, accessibility of the water resources, microclimate conditions, and the terrain. Remote locations on the mountains and in the valley were not accessible for market opportunities until recently hence the agricultural practices were limited and remained to be self sufficient only allowing for insignificant amounts of exchange of goods among the villages. While the villages demonstrate minor ethnic and cultural differences among themselves in general the stewardship notion appears as a mutual characteristic and as a bonding tradition.

For an in-depth analysis of the communities of the valley it was found helpful to classify the villages in two groups because of their social characteristics of which they eventually contribute to the conflicts: the upper-watershed region and the lower-stream region. The human dimensions of the national park in terms of the resource management activities are also better evaluated within these two regions due to their distinct social, cultural and bio-geographic differences. The upper-watershed region is located in the higher terrains of the greater watershed of the Köprüçay River on the Southern skirts of
the Taurus Mountains. The lower-stream, on the other hand, is a much narrower yet more concentrated area and is located on the flat plains along the River.

Table 3.5: Regional locations and populations of the KKNP villages (2000 census data)

<table>
<thead>
<tr>
<th>Village</th>
<th>Population</th>
<th>Region</th>
<th>Regional Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beşkonak</td>
<td>2408</td>
<td>Lower-stream</td>
<td>3118</td>
</tr>
<tr>
<td>Karabük</td>
<td>710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altınkaya</td>
<td>628</td>
<td>Upper-watershed</td>
<td>3984</td>
</tr>
<tr>
<td>Gaziler</td>
<td>515</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballıbucak</td>
<td>357</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Çaltepe</td>
<td>578</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Değirmenözü</td>
<td>604</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hasdümen</td>
<td>322</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demirciler</td>
<td>299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yeşılbağ</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beydilli</td>
<td>488</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The distinct socio-cultural and economic differences between the communities of two regions constitute a serious challenge in developing one comprehensive general management plan that can be effective for the entire park. Despite its smaller area of coverage and the two villages it consist (Beşkonak and Karabük), the social and economic conflicts in the lower-stream region are extremely complicated and drastically challenging. Beşkonak and Karabük villages are easily accessible because they are located at the southernmost end of the park. This region also serves as a gate to the national park (see figure 3.4).

Local communities of upper-watershed region are significantly different from the villages of the lower-stream region socially and characteristically. The social fabric particularly in the villages of Değirmenözü, Yeşılbağ and Çaltepe is unrealistically pristine. This is mainly because the villages are inhabited by high majority of old people who seem to resist the contemporary lifestyle. Young generation has migrated to Istanbul
and other bigger cities in the region in search of employment. Therefore the wonderful traditions the village has generated over the centuries are still in active. These villages present a strong and well established self control system in managing resources such as forest, pastures, water and hunting. It is clearly visible that the upper water-shed villages have the most unpolluted, undisturbed, near pristine physical conditions in their natural environments and the strongest social capital of the entire valley. The condition of the natural resources and the physical environment seem quite unpolluted and healthy as an indication of the wealth of their social environment and their cultural values. This seemed to be due to their remote locations. Despite they did not have the means to benefit from the tourism industry it was observed that the residents of these villages fortunately but inadvertently benefiting from this remoteness. Their social fabric was much less stained since they are not exposed to tourism as much as the rest of the valley. It is understandable yet unfortunate that they desire to change this situation and wish to access to their share of the tourism pie since their activities are limited by the national park’s regulations in general.

The quote below describes the old days of the Değirmenözu Village located in the upper-watershed region in the words of an elder. Another story depicting the contrast between today and the past in the upper-watershed region can be seen in appendix ‘A - Visiting Çaltepe Village.’

**The old days in the Değirmenözu Village:** “Animal husbandry, seasonal employment in the forestry service and producing fruit and vegetable were our main sources of livelihood. We were very aware of erosion and we fought against it by building new terraces or maintaining the old ones that were there since the
archaic era. Nobody knows who built the old irrigation trenches first, they were always there and owned by everybody. The village board of elders has controlled fishing in our streams to ensure the wealth of our fish. In the old days, when the village was more crowded we used to cultivate all terrains possible. Now people only cultivate in the flat grounds. This is due to a new habit of using tractor and fertilizer which increase the productivity and we also have much smaller number of people in the village. If it continues like that the forest might take over all sloped fields soon; thanks to the old walls surrounding the fields the invasion of forest is slow. We did not mind the villagers of the neighboring Beydilli village came and hunt deer and chamois in the mountains around our village. I never remember a quarrel over a resource with the people of other villages. Everything was so plenty. If a smoke appeared in the woods after a lightning storm we all gathered and went to put the fire off before it got bigger. We built roads, irrigation channels, and repaired terraces around the fields with imece. We had strict rules in the village to regulate the irrigation practices to allocate the channel usage. Everybody voluntarily and traditionally obeyed these rules even though they were not written anywhere. We used to have strong unity in the village. The social unity was great, and that we were very supportive of each other. We did not have any major dispute in the village. Everybody respected others’ fields and gardens and grazed their animals with great care just as they would take care of their own.” [18.do728600; an elderly village man, upper-watershed region]

3.2.3.1 Demographic Analysis

Population dynamics are both the reason and the outcome of the nature of the relationship between the human societies and their environment particularly in the cases of rural traditional communities such as the local residents of the KKNP. It is essential to evaluate and comprehend the shifting patterns of demographic structures of societies in individual village levels and in the contexts of regional characteristic differences (upper-watershed and the lower-stream) to understand the impacts of past management policy
implications as well as to predict the outcomes of the future policy plans. Therefore, for a further quantitative analysis the secondary census data acquired from the General Directorate of Turkish Census and Citizenship Affairs were used. A series of age-gender distribution pyramids for the year 2005 projections and line chart graphics for the village population trends for the year 2010 were generated to provide visual analysis and comparison opportunities via graphical elements. The census data with age and gender distribution details were available only for nine villages of the total of eleven villages of the Köprülü Kanyon National Park for the years of 1985, 1990, 2000 in consistence. These nine villages are: Beşkonak, Karabük (lower-stream region), Altınkaya, Ballıbucak, Beydoğan, Çaltepe, Değirmenözü, Demirciler, Hasdümen. The data for the years of 1970 and 1980 were not available for two villages (Yeşilvadi and Gaziler) or the data were inconsistent. This situation limited reliable projections for every village beyond year 2000 for a comparative analysis of population dynamics. Projections for individual village population trends and line chart graphic were produced only for nine villages of strategic significance out of eleven villages due to the data limitations.

3.2.3.1.1 Rural-to-Urban Out-Migration

Extensive interviews with the resident members of the local communities and the representatives of governmental management bodies revealed that the communities of the Köprülü Kanyon National Park severely suffers from rural-to-urban out-migration which eventually causes radical shifts in the demographic patterns of the populations. Istanbul Antalya, Manavgat are the three main big cities where the natives of the KKNP communities seek employment usually in the construction and the tourism industries and
seldom in the agriculture in the outer establishments. Reportedly, unemployment, limited source of revenue, abandonment of agricultural practices, and regulatory pressures of the conservation policies (SIT regulations) are among the main causes of the rural-to-urban migration and the shifts in the demographic patterns. It is also a considerably effective factor that the younger generations move to bigger cities not only for seeking better employment opportunities but also for better living conditions for their families and better education opportunities for their children.

3.2.3.1.2 Population Trends

The villages located in the upper-watershed and the lower-stream regions display significant differences in their demographic structures and population dynamics due to the regional differences of economic opportunities and socio-cultural characteristics. Especially in the remote locations of upper-watershed region with limited employment opportunities and revenue resources the village populations are in decline.

Table 3.6: Regional population trends of nine villages of the KKNP

<table>
<thead>
<tr>
<th>Regions</th>
<th>Villages</th>
<th>1985</th>
<th>1990</th>
<th>2000</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower-stream</td>
<td>Beşkonak</td>
<td>1693</td>
<td>1572</td>
<td>2408</td>
<td>2595</td>
</tr>
<tr>
<td></td>
<td>Karabük</td>
<td>589</td>
<td>635</td>
<td>710</td>
<td>751</td>
</tr>
<tr>
<td></td>
<td>Regional Total</td>
<td>2282</td>
<td>2207</td>
<td>3118</td>
<td>3346</td>
</tr>
<tr>
<td>Upper-watershed</td>
<td>Altınkaya</td>
<td>624</td>
<td>676</td>
<td>628</td>
<td>637</td>
</tr>
<tr>
<td></td>
<td>Ballıbucak</td>
<td>327</td>
<td>375</td>
<td>357</td>
<td>372</td>
</tr>
<tr>
<td></td>
<td>Beydilli</td>
<td>450</td>
<td>416</td>
<td>488</td>
<td>494</td>
</tr>
<tr>
<td></td>
<td>Çalıtepe</td>
<td>649</td>
<td>578</td>
<td>578</td>
<td>548</td>
</tr>
<tr>
<td></td>
<td>Değirmenözü</td>
<td>501</td>
<td>518</td>
<td>604</td>
<td>636</td>
</tr>
<tr>
<td></td>
<td>Demirciler</td>
<td>490</td>
<td>495</td>
<td>299</td>
<td>245</td>
</tr>
<tr>
<td></td>
<td>Hasdıimen</td>
<td>564</td>
<td>380</td>
<td>322</td>
<td>227</td>
</tr>
<tr>
<td></td>
<td>Regional Total</td>
<td>3605</td>
<td>3438</td>
<td>3276</td>
<td>3159</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>5887</td>
<td>5645</td>
<td>6394</td>
<td>6505</td>
</tr>
</tbody>
</table>
The table 3.6 shows the populations trends of nine villages (two from the lower-stream region and seven from the upper-watershed region) and the regional totals that are utilized in analyzing the population trends of lower-stream and the upper-watershed.

Figure 3.11: Population trends of nine villages of the KKNP.
Individual village population trend analyses display that the villages located in the upper-watershed are relatively steadier while the populations of the two lower-stream region villages (Beşkonak and Karabük) are on rise for the years 1985 through 2005.

Despite the overall population of the villages of KKNP displays an increase this trend does not represent both regions. The population increase in the valley is a result of the population trends of the two villages (Beşkonak and Karabük) of the lower-stream region. The steady population decrease in the upper-watershed region is eminent especially in the remotely located villages.

The line-chart graphic in figure 3.11 demonstrate this population trend difference between the villages of upper-watershed and the lower-stream regions and the graphic in the figure 3.12 demonstrates the difference between the region totals.

![Line chart showing population trends of villages in the upper-watershed and lower-stream regions of KKNP.](image)

**Figure 3.12:** Population trends of the two region totals of the KKNP.
Bar chart in the figure 3.13 demonstrates the significance of the decline and the increase of the regional totals of the populations by percentage in 20 years period.

![Bar chart demonstrating population trends](image)

Figure 3.13: Regional population trends demonstrated by percentage.

Although it is only available for a limited period during the summer months the employment opportunity through the rafting tourism seems to be the reason for the increase of the population for the lower-stream villages of Karabük and Beşkonak. These two villages located on both sides of the Köprüçay River at the southernmost tip of the national park. Due to their strategic locations these two villages act as the gate communities to the Köprülü Kanyon National Park and they benefit from the employment opportunities the rafting tourism offers. Meanwhile the villages in the upper-watershed region continue to lose their residents, especially the males, to the rural-to-urban out-migration mainly due to the limited employment.

### 3.2.3.1.3 Age-gender Distribution Analysis

Local communities within the Köprülü Kanyon National Park display an unhealthy demographic pattern as well as the irregular population trends. Despite the
increasing trend of the total population of Karabük and Beşkonak villages of the lower-stream region demographic structure of these two villages do not display a healthy pyramid of age-gender distribution (figure 3.14). Meanwhile, a demographic analysis of the total population of seven villages of upper-watershed region displays an alarmingly unhealthy pyramid in the already decreasing population of this region (figure 3.15).

Figure 3.14: Age-gender distribution pyramid of the total population of two lower-stream villages (Karabük and Beşkonak).

Figure 3.15: Age-gender distribution pyramid of the total population of seven villages of the upper-watershed region of the KKNP valley.
In order to provide a better understanding of these structural disturbances, a further comparison opportunity was provided with the age-gender distribution pyramids of the national population distribution of Turkey and the total population of the three major cities located near to the KKNP (Antalya, Manavgat, and Serik) (figure 3.16 and 3.17). All age-gender distribution pyramids are developed based on the demographic projection for the year 2005.

Figure 3.16: Age-gender distribution of the population of Turkey

Figure 3.17: Age-gender distribution of the total population of three cities near to the KKNP (Antalya, Manavgat, Serik).
The graphics demonstrate that the pyramids of Turkey and the three cities demonstrate a healthy distribution while the total population of seven upper-watershed villages and the total population of two lower-stream region villages (Karabük and Beşkonak) demonstrate various irregularities.

The pyramid of the lower-stream region demonstrates that the cohort of 15-29 is bulging while the 0-14 cohort seemingly declining. This is because young people are returning to the region for the employment opportunity the tourism offers. However it appears that the young people at the marriage age are not getting married to give birth to the next generation.

The graphic, which is far from being a pyramid for the upper-watershed region displays several disturbances. Firstly, the percentages of over 60 age cohorts are notably increasing as an indication of population aging. Secondly, the percentages of female cohorts appear largely greater than male counterparts especially in the middle ages cohorts (15-29, 30-44 and 45-59). Thirdly, while the female cohort of 15-29 is outrageously bulging the young generation between the ages of 0-14 is diminishing. These three irregularities clearly indicate that the upper-watershed region is severely suffering from out-migration problem. 15-29 and 30-44 cohorts of young and middle age males seemed to be left the region for employment opportunities outside. Out-migration of the young males also results lessening of marriages, which is related to the diminishing of 0-14 cohorts despite the bulging female cohort of 15-29 in the region.
3.2.4 Management History and the Future Management Plan

Management history of the KKNP presents a puzzling combination of various policies over the past several decades. Since its designation in 1973 variety of policies have been implemented in managing the park’s resources often in conflict with each other. The initial designation of national park in 1973 was an adaptation of the United States’ National Park model with strict restrictions. A review of the first management plan of this designation reveals that there is not even a single reference given to the local residents. Although the management plan of 1973 provides a comprehensive inventory of biophysical natural resources and archeological resources of the site and offers management recommendations; it is a colossal weakness of this plan that it fails to see the local communities of the site.

The first management body of the national park was formed on the site in 1998. Until then the site was managed by the National Forest Service with strict commodity production objectives (silviculture) adopted from Europe.

National park notion as an active management came to the site only in 1998 by implementing the 1973 management plan which continued to overlook the local communities. Until then local’s perception was already set at a very utilitarian perspective. The management concept was mainly preventing the locals from further utilizing the resources without proving an alternative. Inevitably the top-down and strict regulatory management principles adapting the US model management largely failed in dealing with the local communities. Throughout this period of management turmoil resources of the site were exposed to an ever increasing exploitation for years beyond the definition of any protected area categorization.
The Protected Area Management Authority (PAMA) of the Turkish national parks has been working within the Köprülü Kanyon National Park to promote biodiversity conservation, and to improve the current natural and cultural resources management practices within the park’s greater ecosystem. This effort has been funded by The World Bank through the Global Environment Facility (GEF) project for two terms: 2000-2003 and 2003-2007. The project has been evaluated and managed in two regions due to their distinct social, cultural and bio-geographic differences: the upper-watershed and the lower-stream. The distinct socio-cultural and economic differences within the two regions constitute a serious challenge in developing one comprehensive general management plan that can be effective for the entire park.

Management plans are developed for the regions of the KKNP (upper-watershed and lower-stream) by the GEF project team. The plan for the upper-watershed includes: a) evaluation and improvement of cultural resources, b) restoring an old and abandoned village (Beydilli) to be utilized in cultural and ecological tourism, c) restoration of traditional houses in alpine meadows (yaylas), d) natural resources protection, e) herb harvesting and packaging mainly oregano and sage (adaçayı), f) carob and chestnut conservation and production and g) developing a management plan for the Selge Ancient city in Altinkaya village.

For the lower-stream region, the GEF aims to develop an immediate resolution for the unplanned rafting issue because it appears as the concentration of many social and environmental conflicts. Despite its smaller area of coverage, the social and economic conflicts in the lower-stream region are extremely complicated and drastically challenging. Especially the rafting tourism has been in practice in the region for 15 years
now, yet there is no general management plan for the rafting potential of the site. It has been practiced by anybody and everybody on the river in a haphazard manner. Despite many attempts in the past international organizations, NGOs, the Turkish National Park Department and the local people could not get together and develop a plan for a mutually beneficial and safer rafting tourism practice due to the severity of the conflicts. The first term plan of GEF was assessed as unsuccessful by the World Bank due to the unresolved conflicts in the lower-stream region at the end of 2003. The failure of the plan was caused by the deadlock conditions in the lower-stream region. Therefore the second term of GEF project was not allowed to proceed on the upper-watershed region without resolving the issues of the lower-stream region. As a result, GEF included both regions in the second term project despite its challenges of combining the conflicts and resolutions in one management plan. The main focuses of the second term GEF project are raising awareness, education, and most importantly bringing a resolution to the unregulated and uncontrolled goat grazing issue within the boundaries of the national park. The second term management plan is waiting to be approved by the Turkish Government hence the implementation has not been initiated yet.
4.1 Research Design

The social world is holistic and seamless (Rossman and Rallis, 1998). This research took place in the social dimensions of a natural domain. Typologically, this study was a research of grounded theory that was developed with relevant data acquired qualitatively from the social phenomena of everyday lives of human populations.

Qualitative studies are tools used in understanding and describing the world of human experience (Myers, 2000). The research focused on the human dimensions; and as a product, it targeted the wealth of biophysical environment. The research aimed to produce a qualitative synthesis of theories acquired through review of literature and field data. Both social and biophysical qualitative data are gathered in the field with in-depth interviews and direct observations for the research. My landscape architecture background was employed as a strong asset during the research that played an important role particularly in gathering biophysical data and in evaluating the landscape change.

The methodological system of the research was based on two interactive steps. First is to acquire two forms of qualitative data: physical and social via interviews and observations. Second is to synthesize the data with theoretical foundation to extract findings and to draw conclusions (figure 4.1).
Figure 4.1: Methodological components of the research design

The study employed “how” and “why” questions to examine a series of behavioral phenomena in order to further develop a theoretical framework for larger implementations. The case site the study focused presents strong rational links to the theoretical background of the research. The site offers strong potentials for inquiring relevant data in the field. These conditions entail this study as an ideal case of
explanatory and descriptive case studies according to the typologies Yin (2002) developed.

This study also took advantage of the principles of longitudinal case studies since it took a master’s thesis written by Karaoglu (1993) as a starting point for its theoretical foundation. Karaoglu has studied on the same site with a similar research question however the findings of Karaoglu is outdated since the contemporary paradigms and socio-political stance have considerably advanced during the last decade. This research took the conclusion of Karaoglu thesis and brings it to today’s stances analytically and respectfully.

4.1.1 Site Selection Criterion

In order to provide the focus and objectives of this study with valid research opportunities; several case sites with significant natural and sociological characteristics in Turkey have been thoroughly evaluated and the Köprülü Kanyon National Park has been selected. The criterion listed below:

- **internal validity**: ability for rapid assessment and promotion of co-operation; capacity of prompt and active implementation of potential solutions to set a precedence.
- **external validity**: capacity of general applicability of the outcome to the outer theoretical and tangible domains (Ritchie and Lewis 2003).
- significant human activities interfering with the natural cycles of the resources and interacting with their management practices,
- natural, ecological and cultural importance of resources with international significance, (i.e. biodiversity potentials, international migration routes of wildlife, biosphere reserves, world heritage sites, special habitats for endemic and endangered species, etc.).
• an eminent urgency of prevention or protection for one or more environmental, cultural or biological resource that is endangered or threatened.

4.1.2 Informant Selection Methods and Coding

This research is a site specific descriptive case study. Characteristics of the research design delineate the methods for sampling the informants for this research. The three main types of non-probabilistic informant sampling methods were employed in this research: a) convenience / opportunistic, b) purposive, and c) snowball / chain samplings (Berg, 2004:34). Stakeholders representing various social, cultural and political domains of social environments provided the informants for this research. Informants were selected and sampled from three main populations of interests:

• Local residents
• Local and central government agencies (at different management levels)
• Concessionaires (outsiders and local)

4.1.2.1 Local Residents

About 7,000 people live in the remote settlements and in 11 villages that are administratively and practically linked to the Köprülü Kanyon National. The population is randomly staggered in the challenging terrain of the park’s geography. While some village centers are densely concentrated; in some other villages substantially large numbers of people live in the sporadic patterns of settlements in the remote locations. In some cases the settlements are located outside of the park boundaries while their fields of sustenance are located inside. Therefore, the central strategy for sampling was a qualitative equity approach based on relative distribution of informants in the geography
rather than quantitatively even distribution among the villages. However, special attention was given in sampling an average of 3 (2-4) informants per village in order to make valid inferences of the population(s). Sampling of local residents was of opportunistic and snowballing methods. Opportunistic sampling is also referred as accidental or availability sampling. Considering the traditional, closed society nature of the local communities of the case site, invisibly segregated social spaces, hierarchy of private to public domains, gender and religion related issues were all effectual social notions that are critically considered in the sampling in rural settlements. Trust building was a critical issue particularly in conducting interviews with local residents. Building mutual and sincere conduct with an accidental informant does not only provide the research with reliably helpful information but also leads the research to find next informants who can potentially be the key informants in relatively private domains. It is a commonly seen social phenomenon in the traditional and rural communities that certain elder people are culturally designated and nurtured as the keeper of the collective wisdom of the community. These elder people are particularly critical to provide excellent key informants for a research like this one. Snowball sampling method was a crucially effectual method in locating key informants while working with the local residents in rural settings.

The research met its target of sampling a variety of men and women, elderly and youth within certain limitations. Although all of the recorded individual informants appear male for this research the inputs of female members are watchfully observed and recorded in group interview dynamics. It was a critical limitation that one-to-one interviews could not be conducted with the young and middle aged female members of
the local residents. This was because the communities of the Köprülü Kanyon National Park in general present the characteristics of closed societies of rural Turkey. The research respected strict social rules and morals of the local residents of the park in approaching their social environments and in selecting informants.

4.1.2.2 Governmental Managers and NGOs

By their nature, sampling from the population of governmental agencies and management bodies was a non-probabilistic purposive method since they were evident, relatively smaller in number, publicly accessible and approachable. Almost all of the governmental employees of the Turkish National Parks Department in the central agency in Ankara and in the local and regional offices in Antalya were nearly key informants without exception due to the objectives of the research. They were eminent and available to direct approaches. It was very important that they are willing to cooperate. The research sampled all of the employees, directors, managers and engineers with biophysical background from the center in Ankara thorough the regional office and to the site. Two officials in Ankara, four managers and forestry engineers in the regional office in Antalya, one gendarme officer, and two national park employees on the site are interviewed. All these informants presented that they had significant experience with the development and the implementation of the changing policies on the park.

The research targeted and accomplished to interview all critical members of this population with a non-probabilistic approach. However, snowball sampling method was also employed especially in closing the interviews with the informants of this group since they were critically resourceful in directing the research towards further critical key
informants not necessarily within their populations but also in the other groups of interests. However they are small in number the people in this population was extremely important since they all have some form of liaison with everybody from remote office of Ankara to the very site in broad sense. The research took advantage of their unique statuses hence their experience in sampling and interviewing this population.

4.1.2.3 Concessionaires

The members of this population were the most elusive and challenging to be sampled for gathering reliable data despite they were considered to be critically important. They were small in number yet prominent and evident. The biggest challenge was the fact that they constituted a big part of the resource management conflicts and seemed to be aware of this situation. In some cases, it was said that they purposefully aggravate the conflicts to maintain the status quo that they benefit from. Therefore they did not only seem to be unsupportive of a research effort but their responses were expected to be critically biased if not preventive. This is because they were aware of the fact that almost all of the concessionary activities performed within the park were illegal and that they either exploit the resources or cause damage. During the initial pilot study of the site a severe case of skepticism was observed especially among the members of this group. Opportunistic and purposeful sampling methods were employed in order to gather reliable data from this population. Extreme care was employed working with this group because the members of this group appear to be the front faces of the conflicts over the park’s resources.
This population had two distinct sub groups. One group consisted of the tourism corporations that are stationed either in the nearby big cities such as Antalya or in abroad while they practice in the park. The other group is the local entrepreneurs. The local villagers perform a variety of concessionary activities often in conflict with the management. Although the concessionaires, in general, are small in number; critical informants from this population were sampled and interviewed.

4.1.3 Informant Coding

Informants were coded with a sequence of numbers and letters indicating interview order, location, date, and the individuals’ name, gender, age and/or affiliation depending on availability due to privacy. First number simply indicates the order of interview. First set of two lowercase letters indicates the abbreviation code for the location. Next set of numbers indicates the interview date in month-day-year order; zeros are omitted. Following, a set of letters indicates initials for the first name and last name if available otherwise letters indicate gender, age or affiliation whichever is available. A key for the informants with associated codes is kept only in my office and in the office of Dr. Elisabeth Hamin who is the committee chair and adviser of this research.

For example: the code “3 bv7177ot” designates an informant that is listed as the third person for the research who was interviewed in Beşkonak Village on July the 17th in 2007 whose name is Osman Turk.
Table 4.1: Informants coded

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Stake Holder Status</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.np7146sa</td>
<td>Ankara</td>
<td>GEF Project Director, National Parks General Directorate</td>
<td>Management</td>
</tr>
<tr>
<td>2.np7146oc</td>
<td>Ankara</td>
<td>Biologist, National Parks General Directorate</td>
<td>Management</td>
</tr>
<tr>
<td>3.na7176yk</td>
<td>Antalya</td>
<td>Forestry engineer, National Parks Regional Office</td>
<td>Management</td>
</tr>
<tr>
<td>4.na7186yo</td>
<td>The KKNP site</td>
<td>A national park employee on the site</td>
<td>Management</td>
</tr>
<tr>
<td>5.gs7206ym</td>
<td>The gendarme</td>
<td>Commander of the gendarme station on the KKNP site</td>
<td>Management</td>
</tr>
<tr>
<td>6.ta7216ht</td>
<td>Taşağıl Town</td>
<td>Forestry engineer, Forestry Service Regional Office</td>
<td>Management</td>
</tr>
<tr>
<td>7.ns7296mc</td>
<td>The KKNP Site</td>
<td>A biologist, NGO member</td>
<td>Management</td>
</tr>
<tr>
<td>8.bv7316ht</td>
<td>Beşkonak Village</td>
<td>A non-native resident, teacher</td>
<td>Local</td>
</tr>
<tr>
<td>9.sz7186sd</td>
<td>Altınkaya Village</td>
<td>A village man</td>
<td>Local</td>
</tr>
<tr>
<td>10.pd7196aw</td>
<td>Pelitdibi Village</td>
<td>An elderly woman, mother in-law of a shopkeeper</td>
<td>Local</td>
</tr>
<tr>
<td>11.pd7196mo</td>
<td>Pelitdibi Village</td>
<td>An elderly couple, narrated the black snake story</td>
<td>Local</td>
</tr>
<tr>
<td>12.ct7206ya</td>
<td>Çaltepe Village</td>
<td>A villager man</td>
<td>Local</td>
</tr>
<tr>
<td>13.ct7206ak</td>
<td>Çaltepe Village</td>
<td>An elderly village man</td>
<td>Local</td>
</tr>
<tr>
<td>14a7216mo</td>
<td>Taşağıl Town</td>
<td>A veterinarian</td>
<td>Local</td>
</tr>
<tr>
<td>15.td7226tk</td>
<td>Tazı District</td>
<td>An elderly village man</td>
<td>Local</td>
</tr>
<tr>
<td>16.by7256md</td>
<td>Bozyaka Village</td>
<td>A villager, young man</td>
<td>Local</td>
</tr>
<tr>
<td>17.bb7266st</td>
<td>Ballıbucak Village</td>
<td>An elderly village man</td>
<td>Local</td>
</tr>
<tr>
<td>18.do7286oo</td>
<td>Değirmenözu Village</td>
<td>An elderly village man</td>
<td>Local</td>
</tr>
<tr>
<td>19.ip7286me</td>
<td>İkizpinar Village</td>
<td>A native visiting from Istanbul where he lives</td>
<td>Local</td>
</tr>
<tr>
<td>20.ip7286ah</td>
<td>İkizpinar Village</td>
<td>Village headman</td>
<td>Local</td>
</tr>
<tr>
<td>21.Kb7296ht</td>
<td>Karabük Village</td>
<td>Village headman</td>
<td>Local</td>
</tr>
<tr>
<td>22.Kb826sa</td>
<td>Karabük Village</td>
<td>A native, retired Agricultural Credit Cooperatives employee</td>
<td>Local</td>
</tr>
<tr>
<td>23.bv7186hk</td>
<td>Beşkonak Village</td>
<td>A local, restaurant owner man</td>
<td>Concessioner</td>
</tr>
<tr>
<td>24.ok7306ht</td>
<td>Oluk Kopru District</td>
<td>A native, retired teacher, rafting and restaurant owner</td>
<td>Concessioner</td>
</tr>
<tr>
<td>25.na7207gc</td>
<td>Antalya</td>
<td>Forestry engineer, National Parks Regional Office</td>
<td>Management</td>
</tr>
<tr>
<td>26.na7207oy</td>
<td>Antalya</td>
<td>Forestry engineer, National Parks Regional Office</td>
<td>Management</td>
</tr>
<tr>
<td>27.nk817kk</td>
<td>Antalya</td>
<td>Regional Directorate of Cultural and Natural Resources Conservation Department</td>
<td>Management</td>
</tr>
<tr>
<td>28.do7297mp</td>
<td>Değirmenözu Village</td>
<td>A villager man</td>
<td>Local</td>
</tr>
<tr>
<td>29.da7227ha</td>
<td>Düzagac Village</td>
<td>An elderly village man</td>
<td>Local</td>
</tr>
<tr>
<td>30.sz7237yb</td>
<td>Altınkaya Village</td>
<td>Village headman</td>
<td>Local</td>
</tr>
<tr>
<td>31.yy7247do</td>
<td>Yesil Vadi Village</td>
<td>A villager man</td>
<td>Local</td>
</tr>
<tr>
<td>32.yy7247rk</td>
<td>Yesil Vadi Village</td>
<td>Village headman</td>
<td>Local</td>
</tr>
<tr>
<td>33.bv7257hb</td>
<td>Beşkonak Village</td>
<td>A Forestry Service employee from Düşağıa village</td>
<td>Local</td>
</tr>
<tr>
<td>34.by7257ra</td>
<td>Bozyaka Village</td>
<td>A villager couple</td>
<td>Local</td>
</tr>
<tr>
<td>35.sz7287sb</td>
<td>Ballıbucak Village</td>
<td>A native of Altınkaya, hiking tour helping hand</td>
<td>Local</td>
</tr>
<tr>
<td>36.bv7287rc</td>
<td>Beşkonak Village</td>
<td>A villager man, coffee house and convenient store owner</td>
<td>Local</td>
</tr>
<tr>
<td>37.ir7267oc</td>
<td>Karabük</td>
<td>An outsider, restaurant and rafting business owner</td>
<td>Concessioner</td>
</tr>
<tr>
<td>38.nr7267na</td>
<td>Gokcesu</td>
<td>A local, restaurant and rafting business owner</td>
<td>Concessioner</td>
</tr>
</tbody>
</table>
4.2 Data Collection Methods

It is the strength of qualitative data that they focus on naturally occurring, ordinary events in natural settings, so that the research can have a strong handle on what “real life” is like (Miles 1994). This dissertation fundamentally utilized an interpretive and emergent qualitative research.

The field works systematically gathered **qualitative data** via interviews and observations that were categorized in three groups in accordance with the research objectives and the research question. Informant groups were interviewed by questions pertinent with the data groups according to the targeted objectives. First group of data (A) established an epistemological foundation for the research from the information gathered on the historical and socio-cultural facts of ‘working landscapes.’ Second group of data (B) conveyed the current status of biophysical environment; assessed the pressures, conflicts and threats; and provided the study with information on the indirect impacts of national and global economy on the stewardship and co-management notions. Third group of data (C) focused onto the future aspirations and anticipations of the local communities and the future management and policy plans of the governmental agencies.
<table>
<thead>
<tr>
<th>Informants: Stake Holders, Constituents of Working Landscapes’ and Human Dimensions</th>
<th>Data Groups: Interview Question Contents and Objectives</th>
<th>Number of Informants Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informants:</strong> Stake Holders, Constituents of Working Landscapes’ and Human Dimensions</td>
<td><strong>Data Groups:</strong> Interview Question Contents and Objectives</td>
<td>Number of Informants Interviewed</td>
</tr>
<tr>
<td><strong>Local Residents, Villagers, Farmers</strong></td>
<td><strong>A. Historical</strong> Social assets and dynamics of ‘working landscapes’</td>
<td>23 total n=2 - 4 per village</td>
</tr>
<tr>
<td><strong>Central Government Office, Ankara</strong></td>
<td><strong>B. Current:</strong> Biophysical and social status of ‘working landscapes.’ Pressing issues, social conflicts.</td>
<td>2 total</td>
</tr>
<tr>
<td><strong>Regional Offices in Antalya and the Office on Site</strong></td>
<td></td>
<td>6 Antalya 1 NGO 1 Teacher 1 Gendarmerie</td>
</tr>
<tr>
<td><strong>Managers and Employees of Outsider Corporations</strong></td>
<td></td>
<td>1 site representatives</td>
</tr>
<tr>
<td><strong>Local Merchants, Entrepreneurs, and Local Employees</strong></td>
<td></td>
<td>3 informants</td>
</tr>
</tbody>
</table>

& Critically important interviews *(some key informants)*

# Important interviews

△ Interviews with less or no importance

Figure 4.2: Matrix of informant groups and data correlation
4.2.1 Collecting and Recording Qualitative Data

Both social and physical characteristics of the ‘working landscapes’ in the Köprülü Kanyon National Park were systematically and explicitly collected with in-depth interviews and direct observations that are the two main and complementary data gathering methods of qualitative researches. Switching between two methods was distinctly determined spontaneously in the field based on the emerging and unexpected conditions that informants and the social environments presented due to the flexible nature of the qualitative research.

The qualitative data was recorded as field notes, digital photographic images and as audio recordings all within the consent of informants. A voice recorder and a still camera were used during the interviews in the occasions only if permission was granted. Field notes were clearly delineated on the differences between direct quotations and narrations by informants and the spontaneous interpretations and observations that occurred in the field.

Although approximately 150 people have been contacted only 38 interviews were accomplished thoroughly with solid outcome in two visits to the site and to Ankara headquarter and Antalya regional offices of the Turkish General Directorate of Nature Conservancy and National Parks, the Ministry of Environment and Forestry, and Antalya regional office of the Cultural and Natural Resources Conservation Department. Majority of the registered informants (23) are from the local residents of the national park communities.

Human subject constituted the main element of the research therefore the Human Subject Protection Training Program was completed and the necessary certificate of
approval was obtained through the Institutional Review Board of the University of Massachusetts. All interactions with the informants are conducted in an unintimidating, respectful and courteous manner and within the limitations and recommendations of the Responsible Conduct and Research (RCR) course program of the Collaborative Institutional Training Initiative (CITI). Voluntary participation of informants was accomplished in all cases by introducing the project and explaining the letter of informed consent form that is issued in Turkish prior to the interviews. Some informants willingly signed the form while some others agreed to continue with interview without signing the form although they supported the research. The copy of this form in English and in Turkish can be found in the appendix ‘D’.

4.2.2 Physical and Numeric Data

Physical materials were collected in order to supplement the research with tangible and measurable basis as aggregate data. The research took advantage of the advanced map technology - Geographic Information Systems (GIS) documents and photographs. Combination of maps and photographs were collected to assess the current conditions of biophysical and cultural resources of the landscape. The data recorded via the observations and the aggregated physical data were analyzed thoroughly and comparatively to provide the research with a visual foundation.

Numeric census information were acquired as a secondary data from the General Directorate of Turkish Census and Citizenship Affairs for the administrative villages of the national park; the three big nearby cities (Antalya, Manavgat and Serik); and for Turkey. The census data with age and gender distribution details were consistently
available only for nine villages of the total of eleven villages of the national park for the years of 1970, 1980, 1985, 1990, 2000. Total population trends were projected for the individual villages and age-gender distributions were projected for the two regions of the KKNP for the year 2005 to be utilized in the demographic analyses.

4.2.3 Direct Observation

The basic notions of the direct observation method of inquiry are systematic noting and recording of events, behaviors, artifacts, material culture and more specifically the landscape significance of the social setting (Marshall and Rossman, 1999). The concrete data collected via direct observation method revealed the complex actions and interactions of society and the interviewees’ connection with their environment for this research. Marshall and Rossman (1999) state that the researcher mainly gazes, studies, records and describes the apparent characteristics of the natural and social environment with nonjudgmental and unobtrusive observations without interacting with the everyday lives of the inhabitants. Observation plays an important role during the in-depth interviews as the researcher notes the interviewee’s body language and the physical conditions of their surroundings and their physical environments in addition to their words (Marshall and Rossman, 1999). The data collected with observation method in this research is used mainly for a) understanding the interviewee’s connection to their environment, the way how they relate to land and resources; and b) for denoting the current biophysical conditions of ‘working landscapes’. My landscape architecture expertise was a critical asset in the direct observations particularly, in assessing and recording changes in the landscape and on the biophysical qualities of surrounding
environment. Quality of soil, erosion conditions on the river banks, built structures, biodiversity conditions, plant compositions, and general impacts of various usages on the site were carefully observed and recorded.

4.2.4 In-depth Interviewing

An interview is a conversation with a purpose (Kahn and Cannel, 1957 cited in Marshall and Rossman, 1999). This is the most commonly agreed upon definition of interview among the broad range of scholars within social science research. In-depth interviews are the primary method for data gathering in qualitative research.

Unstructured, in-depth interviews incorporating open-ended questions were employed in this research for gathering its main qualitative data within the social environments of the case site. According to Rossman (2003) a qualitative researcher is a learner, and generates knowledge based on previous learning; hence the research becomes an evolutionary process. Semi-standardized interviews using open-ended questions were the fundamental method for this research. However they were occasionally switched to informal conversational interviews. Since conventional questionnaires and direct questions may include clues for biased answers, they were largely avoided especially when interviewing the local people.

Although the targeted way of interacting with the informants was one-to-one conduct, on significant occasions groups quickly and spontaneously formed from intrigued bystanders who had volunteered to participate in and contribute to the interviews. When this happened, the interviews were conducted as group interviews. The inner dynamics of the discussions within the groups were carefully assessed and
recorded. The group encounters among the local people often quickly transformed into independent conversations and discussions of heated topics. I was courteously attentive to the fact that this could be both disadvantageous and advantageous for the interview, and eventually for the research since it could impact the reliability of the data. As the researcher, I might have less control over the conduct and the course of the interview when groups formed. On the other hand it has proven to be an advantage for this research, because the interactions within the groups presented unique opportunities to observe and record the social dynamics inside the group throughout the personal encounters.

It was observed in the field studies that on almost all occasions the local people within the case site were very welcoming and friendly while at the same time evasive and curious; and they were notably skeptical towards outsiders. Considering these factual characteristics of the social environments the research was conducted as humbly as possible so as not to further intimidate the informants, but at the same time capturing the necessary information via non-threatening, semi-structured or entirely unstructured inquiries. As a researcher, I was always very attentive and observant to the initial signals of the first conduct in order to choose less formal interviews due to the fragility of the situation with the local communities.

Hostility was experienced in two cases on the site. On both occasions this was founded on the skepticism that has been caused by the management history, and on the fact that this particular social environment is typically a closed society. I was extremely conscientious and courteous with all social conducts in general. I was particularly
conscientious when approaching women in the absence of local men in attempts to avoid any hostility and intimidation. The anecdote below depicts one such moment.

**Doctor of asking questions:** Perhaps due to some general distress in the entire valley and to the chaotic social and economic status there, people were willing to talk. But the problem was that they wanted to talk about what they wanted to talk about. Although a challenge, this experience provided an amazing opportunity for social research. In almost every conduct, I had to be attentive to myself and my informants to keep the conversation on track. It was difficult, yet entertaining to steer the conversation around the research topics. While my research interest was on the past practices of agriculture, past lifestyles, and earlier conditions of the environment, wildlife and agricultural fields; accomplishing this was particularly challenging. This is because the people were deeply and personally invested in their issues which seem much more critical, contemporary and vital than my research interests.

Another issue that I came upon was that people were very suspicious. Because I was riding a government owned motorcycle (indicated by the black background of the license plate), they quickly labeled me a traitor or a spy. Some people openly said that I was lying to them when I introduced the tasks of my research; others asked what would be his/her benefit in talking to me. I do not think that I would have enjoyed any other subject case with fewer challenging social issues than this.

On one occasion, as I was exploring a village for interview opportunities while riding my motorcycle, I passed by a group of women of various ages sitting under a tree in a village square. Although, I was afraid of intimidating them with my noisy governmental motorcycle, my being a man, and them being all female etc. it was too good of an opportunity to not pursue an interview. I turned around and approached the women incredibly gently, as though I was closing in on a flock of wild birds. I stopped the motorcycle engine meters before I reached them, and
simply rolled the motorcycle downhill until I was under the tree with them. The women were conversing while doing needle work. At the point when I was introducing my research, I happened to say that I am a doctorate student. This mistakenly led them to believe that I was studying to become a medical doctor. Then one woman said, somewhat demandingly “Okay. Then we will talk to you. But, you will remember us when we need you, and come to you with our medical problems.” I replied with an explanation that my candidacy for doctorate was not of a medical nature, but more of a social science. Another woman responded with an implication that I was useless “so, you will become a doctor of asking questions.”

Later, on sharing this story with professor DeStefano he commented “this is what we are, after all”.

4.2.5 Narrative Data

Narrative expressions of personal experience and legends of the land were recorded as qualitative data within the context of in-depth interview. Narrative analysis values the signs, symbols and expression of feelings in language, validating how the narrator constructs meaning of the context (Marshall and Rossman 1999).

Narrated stories of the land were imperative elements of this research. The narrations voluntarily contributed by the local elders were carefully and courteously assessed particularly in revealing the temporal characteristics of the landscape, natural resources, and more importantly the land and human interactions. The voluntary nature of the story telling event not only unleashed the memory of the land but also presented an analysis opportunity of the psychological conditions. The elder informants who contributed their stories along with their participations to the group interviews often
expressed eminent reminisces to the conditions of natural environment, traditional activities, ways of performing agriculture, social capital, and moral values of old days. Narrations revealed many clues on the physical characteristics and conditions of the social contexts: village settlements, agricultural fields, and *yaylas*. The flexible nature of qualitative data gathering methods of this research (in-depth interview and direct observation) provided many unique opportunities of recording narrations of the land and communities during the field work. One such story is included in the appendix ‘B’.

### 4.2.6 Semi-structured Interview Questions

Three sets of semi-structured open-ended questions were developed and used to guide in-depth interviews on three groups of informants: 1) local residents, villagers; 2) governmental management agencies, NGOs; and 3) concessionaires. The open-ended questions were designed with probing dimensions to explore the experience of the informants and to encourage them to reveal information and not to limit the course of in-depth interview process. While the questions were being designed for specific informant types, their contents were derived from the research objectives. This semi-structured systematic provided clarity in categorizing and classifying the data and further eased the analysis and interpretation stages.

The contents of the semi-structured questions were designed according to the specific informant groups to explore and to understand the following objectives.

**A:** to explore the historical social dynamics of the ‘working landscapes;’
**B:** to explore the current biophysical and sociological status of the park, the pressing conflicts, the outcomes of current policy applications and management challenges; and

**C:** the future projections of the management and the aspirations of locals.

The matrix in figure 4.2 demonstrates the correlation between the **contents** of the objective-specific questions and the **informant** groups.

The questions can be found in the appendix ‘E’.

**4.2.7 Data Gathering Limitations**

It was among the initial objectives of the research to provide a comparative analysis of old and current conditions of the landscape via physical data, old maps and physical documents. However such data could not be acquired sufficiently. There is not much published information found about the site.

Another limitation is the fact that almost all of the registered local resident informants of this research are mainly male members of the local communities. Although significant input was acquired about the perspective of female members of the communities the inquiry was accomplished either via group encounters or indirectly through the perspectives and experience of male members of the communities. The local communities of the rural regions in Turkey are generally male dominant societies. It would not ethically be acceptable to conduct interviews directly and solemnly with female members of the local residents unless the researcher is female. Although the female members of the KKNP communities were contacted in this research the interaction was always limited and filtered through the male members who were usually
at present. Therefore the qualitative data gathered in the site was acquired necessarily
either through a solemn male perspective or a collaborative group interview. Despite the
eminent male dominance, the communities of the Köprülü Kanyon National Park cannot
be characterized as strictly closed and introvert societies. Young or old, married or
unmarried significant numbers of women actively participated into interviews and
voluntarily expressed their opinions while accompanied by men. Although any interview
was not conducted with a female member of the local residents by using the semi-
structured interview question solemnly, in general, they freely expressed their opinions of
the national park and their traditions and experience on the resource management in
informal settings of group interview interactions. Their responses were usually valuable
and were carefully evaluated during the data processing.

Informant reliability emerged as a challenging issue especially when analyzing
the qualitative data. It was a challenge not to record the contributions of some informants
those with critical interest in the site and on the resources knowing that they might be
manipulating the interview for their personal preferences. It was ironic that these
informants did not seem trustworthy despite they presented themselves as abundant
sources of information. For example: although the informant 15.td7226tk seemed very
confused and mistrustful, in general his observation on the changing landscape had a
merit. He expressed a self taught awareness on the fact that the domination of pine tree as
a single species due to the governmental silviculture policies is contradictory with the
biodiversity concept. He clearly was a very sharp and enthusiastic individual, and was
more than willing to contribute to the research. But it was not certain whether everything
what he said was based on true experience. As a researcher, I remain suspicious whether
this particular informant was envisioning some ideal conditions and whether he was
fabricating some tales simply to entertain the research and himself. Overall, many
reactionary and manipulative data were carefully denoted and scrutinized accordingly
beyond their verbatim expressions.

4.3 Data Analysis and Synthesis Methods

The qualitative data of this research was analyzed with qualitative content
analysis and grounded theory methods. The data (field notes, voice recordings,
photographs, maps, etc.) were iteratively processed, hierarchically classified and
categorized. Phonetic data were transcribed and were translated into English along with
the field notes. The data were enumerated, quantified and color coded according to its
qualitative content. Then via assigned codes the content was classified according to the
specific objectives eventually to address the research question. Correlations among the
contents were established. This analysis and correlation process of technical nature was
performed in conjunction with the interpretation of the grounded theory which was a
rather conceptual dimension of the research. Synthesis of the qualitative data with the
grounded theory provided a well defined conceptual framework and a strong theoretical
background for the potential findings of this research. This systematic analysis and
collaborative synthesis were executed as such that new theories be explored and allowed
to emerge.

4.3.1 Data Codifying and Building Coherencies

The content of the field notes and the phonetic data were systematically
transcribed and translated from Turkish to English and categorized into stake holder
groups. The data was mainly searched through for the occurrences of two types of information within their groups. First was the verbatim meanings of the content and the other was the suppressed emotions. Both were equally searched through the transcribed data.

Table 4.2: List of repeated words and expressions

<table>
<thead>
<tr>
<th>Codes</th>
<th>Extracted Words and Expressions</th>
<th>Numbers of Occurrences</th>
<th>Categories of Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>WF</td>
<td>wildlife / habitat / fish / river</td>
<td>16</td>
<td>Biological and Physical Resources that are Under Pressure</td>
</tr>
<tr>
<td>W</td>
<td>forest / wood / silviculture</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Se</td>
<td>the ancient city of Selge</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>pine (coniferous) trees</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>endemic species</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Td</td>
<td>customs</td>
<td>18</td>
<td>Social Characteristics, Emotions and Management Traditions</td>
</tr>
<tr>
<td>Sk</td>
<td>skepticism / suspicion / mistrust</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>community / social capital</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>yaylacilik / imece</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>agriculture</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Pe</td>
<td>pessimism</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>beekeeping / honey</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>optimism</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>migration</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>goat / grazing</td>
<td>12</td>
<td>Conflicts, Threats and Management Challenges</td>
</tr>
<tr>
<td>F</td>
<td>fire threat</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td>tourism and rafting</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Ca</td>
<td>lacking cadastral records / tenure</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>tree and branch cutting / lopping</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>SIT</td>
<td>SIT regulations</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Hu</td>
<td>illegal construction</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>herb / oregano</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hu</td>
<td>hunting / wild boar</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Each data set was analyzed for their specific contents in order to extract consistently repeated and emphasized words, and expressions of true experience were extracted. Simple codes of abbreviations were assigned to symbolize the repeating words and expressions. It was confidently observed that significant number of repetitions of
words and expressions overlapped in interviews conducted in different social environments. Then the extracted and coded information was listed according to the hierarchy of coherencies.

Most repeated words and expressions were further organized and categorized in three main groups of impacts and general characteristics; they are: 1) biological and physical resources that are under pressure; 2) social characteristics, emotional expressions and traditions; and 3) conflicts and resource management challenges. This categorization was later utilized in establishing discussion and analysis topics in the following Chapter 5 – the Findings.

Complicated content of qualitative data was explicitly searched by looking beyond the superficial verbatim in order to expose the true experience. Emotional expressions and hidden messages of informants such as aspirations, ambitions, reminiscences, angers, distresses, desires, satisfactions, dissatisfactions, frustrations, and threats were appraised and recorded via observations and carefully evaluated. Such emotions were crucial indications of the experience of informants that were not bluntly expressed in general but suppressed due to many social and cultural reasons. Structured or semi-structured interview questions were not necessarily capable of exploring those emotions. Direct-observations, on the other hand were able to assess and convey such experience into qualitative data analysis process. Many symbols of body language and usage of certain words and selection of tenses can reveal many of those emotions as critical information for qualitative research. While an informant pronouncing a certain word for a certain opinion or an experience he or she can actually be giving away an entirely opposite experience via the way how those words were punctuated and with what
type of bodily gestures supported for the attentive eyes of a qualitative researcher. Observation by an attentive qualitative researcher can acquire valuable information through body languages. The content of qualitative data was explicitly coded by looking beyond the superficial verbatim in order to expose the true experience (Berg, 2004; Marshall and Rossman, 1999; Patton, 2002).
CHAPTER 5

FINDINGS

5.1 Introduction

A wide array of conflicts can be clearly observed in Turkey amongst various stakeholders over its abundant natural resources, which is typical of many developing countries. Today, the national parks and a large collection of conservation systems in Turkey’s overall landscape are interwoven within the everyday life activities of local communities. This creates a challenge in which the vibrant yet frequently chaotic combination of agricultural, industrial and tourism practices in the rural regions often interfere with one another as well as the dynamics of natural systems. The abandonment of centuries old, long-standing traditional land use patterns; newly emerging forms of usages; and unclear ownership circumstances are among the leading challenges for management models to be developed with conservation objectives.

Having experienced an era of management turmoil over the last several decades, the Köprüllü Kanyon National Park (KNNP) management is now attempting to operate from a model which integrates the local communities by considering the needs of the villages. This new management model induces a certain degree of stewardship by community members. However due to the strict top-down management models applied by earlier administrations of the park, the local people and the government are quite distanced from each other. It appears that the greatest challenge for this site is to restore the trust and integrity among the broad stakeholders including governmental institutions before initiating any resource management or administration efforts.
The abandonment of the yaylaçılık tradition along with other agricultural traditions of the Köprülü Kanyon National Park Region is the most significant sociological change. The region is also suffering from out-migration because the younger generation is moving to big cities along the Mediterranean coast for employment opportunities. Changes in lifestyles and shifting demographics leave the ‘working landscapes’ untenured and vulnerable to the impacts of unregulated goat grazing and the exploitation of other resources by the outside tourism concessionaires.

Remarkably gaping differences in the basic social norms between members of the different generations of the same society were noted during the interviews. The perception of nature and the natural environment is the most noteworthy of these differences between the elders and the youth. While reminiscing about the earlier harmonious days, the elders always seemed to regard nature and the surrounding environment as the source of greater life. When they were conversing about nature, they seemed aware of a larger system that extends beyond their neighborhoods and surrounding lands. During our conversations the elders usually avoided eye contact, or focused somewhere further away while seemingly facing me. They were obviously concentrating on a different dimension while staring into the deep horizons or above the mountains as they were talking. Perhaps they were reminiscing about some long-gone landscapes.

Members of the younger generation on the other hand, always talked feverishly. They were particularly persistent, and they were trying to make sure that I was listening to them and that I was convinced by their statements. Their perceptions of the natural environment and of natural resources were rather materialistic and individualistic. This
was a contrast to the elders whom generally referred to a communal well being by choosing pronouns such as the people, society and community. The majority of the comments and statements by the youth were complaints. In their claims, they hastily criticized the managerial restrictions and the limited access rights to the resources, or the inequitable distribution of the revenue generated from the rich resources. The quote below from a young local who is the owner of an illegally built restaurant expresses this concern. He feverishly criticized government for not allowing them (the villagers of Beşkonak) to build tourism amenities in the valley. He further complained if they are prevented from building then the government should develop the valley to utilize the resources. Like the rest of the youth in the valley his main claim in his complaints was that the resources were left inert and that they were not permitted to utilize.

“We (locals) suffer despite our living in a heaven.”
[23.bv7186hk; a native young man]

Several of the stories and legends of the land narrated by the elders of the communities have demonstrated that not only was there an abundant variety of vegetation and wildlife in the environment, but humans were an integral and harmonious element of the natural composition. It was recorded on a number of occasions that the elders referred to wildlife in their narrations with eminent courtesy, as though they were addressing their next door neighbors, distant relatives, or other members of their village community. In the same context the environment was regarded as the home and natural habitat of friends and relatives of their extended family. It is unfortunate that this
perception of nature and the natural environment is not observed among the younger
generation of local communities within the park.

The elders seemed to not only be longing for the earlier conditions of the
environment, but also for the harmonious coexistence of humans and wildlife described
in their stories. The story below was told to me by an elder while sitting on the porch of
his house overlooking a canyon.

**Eyes of a magpie (falak):** It was a morning of a cold winter day - years ago - my
wife and I were very young then. Actually, it was when we were married for only
a couple of years. I went downstairs to wash up and to start tackling the chores of
the day. The wash bin is in a dark corner of the main hall (hayat) downstairs -
right over there (pointing to a corner of the house with his arm). There is a small
window right above the wash bin on the other side of the corner (continuing to
point the corner).

There used to be an oak (pelit) tree standing in front of the house. We’ve had to
take that tree down since then because the branches and the roots were growing
into the house. A branch was spanning across that little window. Magpies love to
eat the acorns (gilik) of oak trees; and they often perched on our tree.

That morning as I was washing my face, I was staring out of the window. I
noticed that a magpie was sitting on the branch just in front of that little window. I
slowly reached out of the window, and gently grabbed the bird. The poor little
thing could not even understand what happened to it. The bird was so frightened
that she was shivering in my hands as I continued to hold gently and kissed her
head.
I quickly went upstairs to show the magpie to my wife as a gift of the day. My wife and I always enjoyed our oak tree with magpies on it. We admired the beauty of the bird in my hand for a while; but we quickly delved into sadness noticing the fear in the eyes of the bird. My wife then, genuinely said, “Look at those eyes! They are just as beautiful as yours! You two have the same color in your eyes”; and she asked me to release the bird. “Set it free. Let her go and live.” So I went back down stairs, reached out the window, and released the magpie.

Another story describing the perception of the nature by the generation of elders can be seen in appendix ‘B – Princess Black Snake and Hunter Ahmet.’

Figure 5.1: Goats, rafters and the damaged top soil on the river banks

5.2 Conflicts and Pressures on the Biophysical Resources and on the Socio-political Structure

It was extensively observed during the two field works that the biological habitats and the physical environment of the national park were notably depleted and were under severe pressures. Interviews conducted with management representatives, local residents,
and the concessionaires have also revealed consistently that the changes on the biophysical and social environments are the products of the recent several decades. Many forms of pressures (biophysical or social) are deeply interconnected. They are mainly: eminent deterioration of biodiversity, domination of the park’s flora by a single species, eradication of wildlife, illegal construction of various structures that cause visual and ecological disturbances, destruction of archeological resources, solid waste deposition, arson fires, over grazing, over harvesting, illegal hunting, lopping, and excessive use of resources for tourism beyond their ecological carrying capacities.

5.2.1 Pressures on the Fish and Wildlife and on their Habitats

The qualitative interviews and narrations of the land have extensively revealed that the lushly vegetated natural environment of the KKNP, from valley bottom to the mountain tops, was home to bountiful and diverse wildlife until very recently.

“The surrounding landscape was so rich and abundant that our women had to put a leash on their children so as not to lose them in the tall grass while they worked in the field.” [13.ct7206ak; an elderly village man, upper-watershed region]

The native flora of the park comprises all three major floral regions of the world (Irano-Turanian, Mediterranean and Euro-Sibirian) (GEF, 2007). The range of vegetation spans from thermo-Mediterranean to alpine environments; it also includes a well balanced proportion of natural and manmade ecosystem fragments with transient gradients (Ayasligil and Duhme, 1993).
It was repeated a number of times in different interviews that until very recently the locals could catch trout in the river and at the sources of springs with their bare hands. It is said that the locals did not even need to develop a fishing method; all they needed to do was simply walk by the stream and catch a big fish by hand. In their words, and certainly somewhat exaggerated, they described that in certain spots there were more fish in the water than the water.

“You thought the fish in the river could not be finished by catching.”
[11.pd7196mo; an elderly village man, lower-stream region]

The descriptions broadly describe the red dotted trout (*Salmo trutta macrostigma*) that is an endemic species for the Köprüçay River. This species has nearly disappeared from the environment, as have other species, all due to uncontrolled fishing with newly introduced illegal methods, pollution and excessive use of the river by the rafting based tourism (GEF, 2007).

It was observed that the primitive irrigation practices interfere with the reproduction cycle of the fish in the entire fish habitat of the valley. Local farmers block the small rivers, streams and tributaries of water sources coming down from the surrounding mountains with makeshift dams to divert the majority of the water into their fields for irrigation purposes. This practice takes place at a critical time of early summer when the young fish migrate into the main river after the spawning season. The irrigation channels divert numerous of young fish into dead-ends in the agricultural fields where they are gathered and perished.
Figure 5.2: The diversion of streams into irrigation channels with primitive dams

Figure 5.3: Locals fishing in the receded riverbed during the dry season
During the hot and dry summer months when the amount of water is lower than usual in the streams and rivers massive amount of fish concentrate into small pockets of stagnant water bodies. This provides an easy catch. Park’s visitors relentlessly catch these fish for food although they are very young and small. It was also observed and recorded that the farmers pump water for irrigation from these ponds with the young fish concentrated in them. Although it is inconceivable for a national park, examples of such exploitation of fish and their aquatic habitat were observed on several occasions and in different locations within the greater ecosystem of the Köprülü Kanyon National Park.

The overall depletion of aquatic habitat presents a clear problem of lacking education and stewardship. It was recorded that the elders of the villages in the upper-watershed region used to control and regulated the fishing activities in their streams according to the spawning season.

The loss of top soil occurs at an alarming rate in many spots along the river banks. This has several causes. Firstly, the native mixture of vegetation on these steep slopes is largely replaced by the austrian pine tree (Pinus nigra) as a dominant species. Although it is native to Turkey the evergreen nature of the pine trees alters the ground texture, hence it decreases the resilience of the soil against erosion. Pine trees do not support an understorey vegetation because they increase the acidity of the soil that kills the microscopic and herbaceous flora. Secondly, over grazing by goats remove the forest floor vegetation leaving the soil on the steep river banks vulnerable to natural and manmade impacts thereby inducing erosion. Thirdly, the concessionaires contribute to the erosion on these already damaged sites with large number of uncontrolled visitors they bring to the site. Several thousand visitors come to the park in a day during the peak days.
of summer months for rafting and for picnicking. Because the protective native vegetation is already removed on these sites the walking of excessive number of people at one time as well as driving of vehicles cause the top soil to erode easily. This clearly appears as an over use problem of the fragile resources beyond their carrying capacity.

The banks of the Köprüçay River in the lower-stream region are registered as the first and third degree Natural SIT conservation sites despite their heavy use. The conflicts over these resources are due to tourism and related illegal constructions built on the river banks. The rafting establishments fill in the riverbanks to build terraces for rafting activities. Many makeshift shacks and restrooms are illegally built in the “first degree Natural SIT conservation” areas that are sensitive aquatic habitats. The discharge from these structures directly or indirectly gets in the river. The deposition of solid waste, mostly non-biodegradable along the river banks and in the picnic grounds is beyond control.

The wildlife is notably depleted in the valley. One elder stated “three things: rifles, pesticides and fertilizers, and pine trees have ruined the nature here.” Now many species of the national park such as the iconic bezoar goat and many birds, including eagles, are all eradicated in the environment. As stated by the same elder “no one has sighted any deer in the site for years.” Although the hunting and the use of agricultural chemicals are effective, the domination of the landscape by the pine trees is accepted as the major cause for the depletion of wildlife by the local residents.
5.2.2 Silviculture and the Natural Vegetation Change

The interview findings extensively revealed that the vegetative composition of the working landscape of the surrounding environment was a combination of *maqui* and deciduous trees. As a result, the environment could sustain a lot more animals, both domestic and wild, in the past. Considering the fact that several centuries long human history has had a critical impact on the plant composition, the majority of the plants were native to the Mediterranean region. The outcome of the past human impact was a harmonious composition of vegetation supporting abundance of wildlife. Major tree species are: strawberry tree (*Arbutus unedo – cilek, Arbutus andrachne – sandal*), oak (*Quercus sp. - piynar- pelit*), olive (*Olea sp. – zeytin*), carob (*Ceratonia siliqua – harnut*), hackberry (*Celtis australis – citlembik*), pistachio (*Pistacia terebinthus - citlik agaci-menengic*), *cavlaotu*, poplar, blackberry and pear.

“In the old days the forests consisted of a variety of trees and each household used to have tenure of a segment of forest where they met their needs and protected. But clear cutting has wiped out all these systems and forest management traditions.” [24.ok7306ht; a native retired teacher, rafting and restaurant business owner, lower-stream region]

The proverb below was contributed by an elderly village man in response to a question about the native vegetation and the presence of the evergreen forests. It humorously presents local residents’ perception of the oak tree and its linkage to humans.

“A soul comes to life if a drop of blood dripped onto a soil where an oak sheds leaves and goats poop.” [15.td7226tk; an elderly village man]
Community elders in the old days treated pine tree as a weed. They did not let it grow around the fields and houses because it did not have much use for them, for their goats nor for wildlife - other than building. They say in the past, the mountains nearby their villages were not dominantly covered with conifer trees as now. The clear cutting and planting of pine and other conifers have significantly altered the vegetation from lower elevations to high mountains. Even though pine, fir, juniper and cypress were existing in the park as the evergreen species they were either in high elevations as they were mixed with deciduous trees. The vegetation around the villages was mostly of native fruit bearing deciduous plants such as strawberry tree, oak, pistachio, etc... Although the landscape was composed of maquis and native trees of the Mediterranean region it was still altered by human activities over centuries. However, it was the dominant composition of this valley and was broadly accepted as the natural composition until the clear cutting practices of silviculture. The dominant plant of the landscape is now, the austrian pine (Pinus nigra) due to the silviculture forest management policy practices in the region. Austrian pine does not support wildlife, spreads like a weed and is very fire-prone. It severely harms the soil’s chemistry, hence the vitality of the soil, eventually making it susceptible to erosion in the long term.

Silviculture is in effect in Turkey for over 80 years as a commodity production based forestry management model (Baskent et al., 2005; Colak and Rotherdam, 2006). Especially after the introduction of silviculture model from Europe, not only were the native species removed from the natural forests but as a single species, austrian pine, was planted in the KKNP as well as other forests throughout Turkey. Although the species is
a native to Turkey a dominant austrian pine forest is exotic for this landscape of the KKNP. It is much harder to call the vegetation of the national park a forest, rather it is a large field of trees. The ecological integrity of the environment and the biodiversity of flora and fauna are not necessarily the primary concerns of silviculture management model.

This vegetation change took place especially after the designation of the national park and during the increasing influence of governmental forest management. This is a typical ‘forest economy’ policy that approaches forest as a renewable source of timber. Obviously this approach disregards the sustainability of ecological systems and the biological diversity. It covers the land with a single species that can be considered as sterile in broad ecological terms. The lands of national park have severely suffered from this dilemma. Especially after the forest fires that are caused by either natural phenomena or human abuses, forest management has continued to plant pine saplings or seeds in the disturbed areas. The forestry service has employed local people for reforestation efforts to support the local communities, and to use this as an opportunity to build good relationship with locals under the silviculture management. In turn, this became a motivation for locals to start a new fire anytime when they needed to buy something – a new tractor or when they had a new expense – such as wedding. Locals used to find seasonal employment opportunities in logging, forest fire prevention and replanting services through the regional Forest Service. These employment opportunities facilitated the National Forest Service to enter the valley.

Locals say, prior to the management of the national park in the 1970s they met their timber and fire wood needs in the surrounding forests. They used to cut only the
unhealthy and dead and dried trees for their fire wood needs. When a fire broke in the forest the villagers quickly rushed and put out the fire as a communal effort. They were always on look out. This is still the case if the fire site is accessible; locals would rush to the fire even before the governmental forest fire prevention units reaches it.

“We would never cut a branch or a tree unless it is absolutely necessary and it was strictly controlled by the community. When a noise of an axe was heard in the woods people would yell out and ask to stop those who were performing some sort of cutting in the woods; the forests were larger in the past despite nobody owned them.” [29.da7227ha; an elderly village man, upper-watershed region]

The quote below indicates a value of the land by an elder who was told by his elders at his young ages.

“These officers of government will go away tomorrow and we will stay here with our forests do not trust them to protect your forests for you and take charge in protecting them.” [24.ok7306ht; a native retired teacher, rafting and restaurant business owner, lower-stream region]

It was said that the village board of elders in the upper water-shed region penalized any type of wood cutting unless it was absolutely necessary. Especially in the villages of upper-watershed region, it was stated repeatedly that the forests were simply protected by the villagers. Strict forest managers however has disappointed and upset the villagers who in response, set arson fires in the forest. Now the locals cannot even cut a pine tree that is in their own gardens. They say they did not use to cut branches of trees but collected oak acorns to feed to their animals during the winter months in the past.
However it appears now that the traditional integrity between the people and the forest has been broken.

“The forest has lost its true owner and steward due to the wrong administrations in the past, which cannot be rectified and restored in the coming 30 - 50 years.”

[15.td7226tk; an elderly village man]

The old-growth stand of Mediterranean cypress (*Cupressus sempervirens*) is now among the best preserved biophysical resources of the Köprülü Kanyon National Park. This old-growth stand is the only example of this species in the world with its size of undisturbed forest. It is located in the South-West of *Altinkaya* Village (GEF, 2007).

### 5.2.3 Tree and Branch Cutting

Lopping is a method of feeding goats by cutting the branches of trees and hauling them to corrals or simply throwing them in front of the goats in the forests. Lopping has become as a big problem in the Köprülü Kanyon National Park in the recent years. This is relatively a new practice that has two main causes. They either cut the branches of the trees that are too high for the goats to reach or they cut branches from the national park forests that the goats are not allowed to graze in. They carry out the branches as big bundles of feed to the goats that they keep in their corrals. Another motive of lopping is that after the goats eat the vegetative parts of the branches reminder is used as kindling for fire. Although lopping is prohibited it is a big challenge to control because it is usually performed in small amounts at a time and it is always too late when it was
spotted. Natural vegetation of the national park is found to be severely deformed due to lopping especially around the yayla settlements.

“We did not have lopping / branch cutting method to feed our goats. This is something new that young generation started.”
[17.bb7266st; an elderly village man]

Figure 5.4: Cut branches of a strawberry tree taken to be fed to goats in the KKNP

“They practice lopping, especially on cedar and oak trees. They cut the branches of trees in rotation from one side of the tree to the other from year to year in order to keep the trees alive, and to ensure that there will be vegetative parts for future years.”
[3.na7176yk; a forestry engineer, Antalya regional office of national parks]
5.2.4 Goat Grazing

Goat husbandry is a traditional way of living for the semi nomadic locals who are the descendents of yörük. Goat grazing traditionally has been the primary way of utilizing the resources of the site and it constitutes the main source of livelihood for most of the local communities of the national park.

Goats can consume any vegetative part of almost any plant all year round and they do not require as much daily chore as the other livestock (sheep or cows). Goats are the dominant livestock in this region because of the rugged terrain covered with shrubs and trees; scarcity of herbaceous plants and grassy meadows; and most importantly the nomadic heritage of the local communities. Despite the challenges of the environment the goat can supply milk, meat and hair with minimal effort year round.

“Goat meat is traditionally the main subsistence of these people’s diet and they will never quit or replace this flavor.”
[6.ta7216ht; a forestry engineer, Forestry Service Regional Office]

In general, goat husbandry is decreasing in the valley as the dominant livelihood practice due to out-migration and changing economic opportunities. The number of goats in the valley is reportedly decreasing because of the young generation either leaves the valley or takes up different occupations such as tourism (GEF, 2007).

Locals continue to keep their goats even though in smaller numbers; and many families still practice goat husbandry as the main source of livelihood instead of cultivating their lands because it can be done with minimal effort. Also it is still the only
thing that many families can practice to provide livelihood. Although the overall
population of goats is smaller, ironically the damage caused by the goats to the
environment and is much greater in comparison to past practices due to the uncontrolled
and year round grazing they practice now.

The informant [6.ta7216ht]; a forestry engineer in the Forestry Service Regional
Office stated that the goat husbandry would be a highly labor intensive form of farming if
it was practiced properly as the way the ancestors of the inhabitants of this region did in
the old days. They used to control the way they grazed their goat herds within the
community with self managed regulatory rules. They also used to rotate the common
pasture lands when grazing. Yaylacilik was the essence of this way of goat husbandry. In
the past, they gathered and corralled their goats at the end of every day and milked them.

However, people do not practice controlled grazing now; they do not gather the
goats at the end of day; and do not even bother with milking them. Most importantly they
do not pay attention where the goats forage and when they graze. Therefore, despite there
being much less goats in the valley during the last several decades in comparison to the
past, goat husbandry has become considerably more harmful to the environment. This is
because the goats graze year round and consume any fresh vegetative part that they can
freely reach everywhere in the environment without any control. Uncontrolled grazing
prevents vegetation from regenerating. The biggest harm is caused when the trees and
shrubs are shooting new buds and suckers during the spring. While the valley banks may
look quite lush from a distance, the vegetation in reality is very old and the soil is
ostensibly barren and compacted.
Abandonment of *yayla* tradition plays an important role in the change of goat husbandry. In the past, the locals used to winter their goats in different locations every year in order to prevent tick parasites. This management tradition was also abandoned due to the availability of a new medicine that prevents tick parasite in the goats. *Yörük* people traditionally did not own more animals than they could safely tend.

“We did not use to go to yayla before June so the grasses and plants in yaylas could drop seeds; and did not return until November so the vegetation in the villages could grow. Now everybody goes anytime they want and they graze year round. Some people have about 150-200 animals in the village today perform free grazing practice Therefore the grass is much less now. Older people were smarter than us. They [old people] used to graze the fields in rotation. They did not allow even a single animal to enter in the fields that were designated to rest for a year. This was also a way to control the tick parasite. Now, there is a medicine that kills ticks easily.” [12.ct7206ya; a villager man]

In some rare yet dramatic cases in certain villages the goat numbers are on rise. Especially in the *Ballıbucak* village a small number of people return to the site to practice goat husbandry. They use an excessive number of animals to take advantage of the uncontrolled grazing opportunity in the abandoned environment. They release the herd of goats in the environment and let them graze freely in the open environment and in the forests for weeks or months. The goats are never stationary and are always on the move. Therefore it is also not possible to monitor and record the exact number of animals. The locals would not reveal how many goats they have even if they knew. They do not have a way of knowing until they round-up the herd from the environment.
This newly adopted unconventional practice of animal husbandry with the way of free grazing minimizes labor and expense, and increases the gain. This dramatic change on the grazing methods is directly or indirectly related to demographic shifts as well as the new economic opportunities, and changing lifestyles and politics. Especially considering the fact that the common pastures are abandoned and the wild predators such as wolf and jackal are eradicated the free grazing appears as a profitable method.

5.2.5 Oregano Harvesting

The demand for oregano has significantly increased in the last several decades in the Turkish market, consequently increasing its market value. This has had a significant impact on the socio-economic activities of the KKNP communities since the oregano (Oreganum minutiflorum) has become a new source of income especially for the villages in the upper-watershed region. Goats graze around the oregano leaving it alone making it easier to harvest. Furthermore it needs no cultivation. However harvesting oregano in the village common lands has caused new conflicts to emerge especially among the upper-watershed region villages, where their lands are not clearly defined due to the absence of cadastral records.

The peaceful relationship that used to be maintained among the three villages of upper-watershed region - Çaltepe, Ballıbucak and Altınkaya – has been broken in the recent years due to the newly emerging oregano harvesting conflicts. This conflict also represents a typical case of the commons dilemma. These three villages have only recently started to harvest oregano, and there is not much central control to ensure the sustainability of this resource. Due to the unclear boundaries of the village common lands
and meadows villages often clash with each other over the harvesting of oregano. This competition causes the villagers to harvest oregano before the plants can regenerate themselves. It is said that if they continue to practice like the way it is being done very soon oregano will be eliminated from the environment just as the *salep* did. Some elders complained that oregano harvesters rip the roots of the plants preventing them from regenerating.

People of Çaltepe village state that they all are very poor now and are severely struggling despite the prosperity of their village in the past. They used to share their wealth with other villages where water is scarce. They had traditional ways of managing common resources with unwritten rules. They held wedding ceremonies for seven days; and fed anybody who visited their village. The produce was bountiful. Now, they are thankful for the oregano that they harvest from the village commons so they can at least stay alive. Altınkaya village meanwhile is in a similar situation due to the severe restrictions from the SIT regulations. Hence the oregano harvesting opportunity emerges as a critical source of revenue for them as well. Ballıbucak was also a very prosperous village in the past; and was well known for their honey production. Today, they are also dependent upon to the nominal revenue they generate from oregano harvesting. Therefore, these three villages do not want to share the limited profit they generate from oregano and are in conflict with each other due to the uncertain boundaries of their common meadows.

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1 *Salep* is the name of a family of orchids (*Orchidaceae*) native to Turkey. A very popular hot beverage also called *salep* made from the ground flour of the dried tubular of this plant. Due to extensive harvest *salep* is now eradicated from many habitats including KKNP and is endangered in Turkey.
The park management and the GEF project collaboratively have developed plans to improve and regulate oregano harvest. They have built an oregano packing facility and obtained a certificate indicating the oregano produced in the valley is organic. However, the altercations amongst the three villages are still not resolved. The locals complain that the operations are not performed collaboratively and the revenue is not distributed equitably. A story relates to oregano harvesting can be seen in appendix ‘C - Visiting Dêğirmenözü Village’.

5.2.6 Hunting and Wild Boar Infestation

Uncontrolled hunting has become a serious problem in the park in the recent decades. Hunting had much less impact on the wildlife in the past. People hunted with primitive rifles that could be loaded from the barrel with single shot capabilities at a time. This gave the game animal a chance to escape if the hunter missed the first and single shot. They would shoot responsibly to make the most of their single shot on a game that would be worthy. Unfortunately this has changed today due to the increased possession of automatic and high tech rifles with long range scopes and multiple shooting capabilities. Some visiting hunters even shoot bezoar goat and deer across the canyon at long ranges beyond their reach using high tech rifles with long ranged scopes [informant 15.td7226tk; an elderly village man].

As repetitively stated by the representatives of management and by the locals uncontrolled hunting depleted the wildlife in the KKNP especially the large mammals. Now nearly every household has an automatic rifle with long range scopes and multiple shooting capabilities in a short time without giving prey any chance to escape. In some
cases they even kill a deer or mountain goat across the canyon despite they know that they will not be able to reach the kill. They just kill because they can; with the long range scoped rifles.

“Hunting was regulated within the community in the times of our elders.”
[15.td7226tk; an elderly village man]

An elder said, only designated people were allowed to hunt deer; they used to hunt for the entire community. These hunters knew how and when to hunt with minimal harm to the environment. It was prohibited by the community to fire a rifle in the woods until winter (zehmeri). Hunting seasons were regulated by the community according to the breeding, nursing and nesting seasons for every animal. Now it is impossible to see even one bezoar goat, deer or eagle in the valley. Elders believe that partridge (keklik), rabbit, fox and marten (sansar) have all disappeared because of the extensive use of pesticides and fertilizers. An elder summarized that the three things: increasing possession of long-range automatic rifles; pine trees; and the use of pesticides and fertilizers caused the depletion of the wild game.

It is said that there used to be clouds of pigeons that fed on the lush strawberry trees (Arbutus unedo – cilek). The sky would be darkened when the pigeons took off. The villagers trapped rabbits in their gardens both to protect their produce and as a food source. Every family used to eat a rabbit a week. Flocks of wild, yet tamed, quail used to take refuge in the village streets. Local residents repetitively stated in number of different interviews that they used to catch partridges by their bare hands. Although it might have a fraction of exaggeration they loved to say number of times that they could reach and
catch a pigeon perching on a branch of a tree. Now, none of these animals have been sighted in the site for years.

Bezoar goat is an iconic species of the Köprülü Kanyon National Park although it is hard to spot one in the wild now-a-days. As said, there used to be many bezoar goats in the wild. Along with this iconic species there used to be abundance of deer, martens, fox, rabbit and partridges in the surrounding mountains. Wolves and jackals would come and take their share from the herds of goats to feed their young; and that would be tolerated by the locals. The local elders believe that extensive use of fertilizers and uncontrolled hunting brought bezoar goat and the other wildlife to depletion. There used to be eagles nesting on the cliffs. One could see eagles soaring on the sky above the valley on any given day in the old days. While residents admit that the use of fertilizers has increased the productivity of their agriculture, they also strongly believe that it not only weakened their soils but also severely harmed the wildlife.

In the recent years some hunters came from the outside and hunted partridges in the hundreds at a time just for the basic joy of killing. These visiting hunters used plenty of ammunition and high tech rifles. Until then there were flocks of partridges in the environment. A villager called hunter Osman reportedly, claimed to have single handedly killed 1,500 deer and bezoar goat in his lifetime. He had many children to feed and he did not have any other source of income other than hunting. These days the geese do not even stop in this valley on their migration anymore. As stated by the villagers cranes and francolin (bozlak) have not been seen in the site for years. Many informants stated that along with habitat change uncontrolled hunting and increase of high-tech fire arms possession have brought wild life to depletion.
Wild boar infestation: The wilderness of the national park is infested with wild boar. The villagers repetitively complain about the wild boar infestation and that the national park is protecting them. They even believe that the wild boars are released to the wilderness to prevent the villagers from farming the lands and in order to discourage them living in the national park. There were once many jackals (cakal - *Canis aureus*). Now, the environment is infested by wild boar (*kara domuz*), which are protected by the national parks. Locals claim they cannot protect their crops against wild boar no matter what they do. They say they have tried everything from guard dogs to automatic noise-maker devices. Nothing would scare the wild boars away. Wild boars are able to study the situation and overcome their prevention measures. They state that wild boars often outsmart them with great ease, and ruin their crops. They claim if they shoot a boar they get penalized by the national park. I sighted herds of wild boars roaming along the roads and forests in the KKNP on three different occasions at dawn and evenings during the field works. In fact any sort of hunting and killing of wild animals is illegal and subject to a fine in the national park but this does not stop the locals from hunting deer and bezoar goat which are endangered. Additionally the boar is not permitted to be consumed by the Muslim religion and is considered sinfully filthy even to touch (*not halal*); so the people do not want anything to do with it. Because humans do not hunt to eat wild boar, and all of its natural competitors and predators are removed from the environment by humans, the boar population is increasing in the wildnesses of Turkey and becoming a nuisance in the agricultural fields.

The villagers of the upper-watershed region said, they did not use to let their own cows and goats to enter in the grassland in order to allow bees make honey in the spring,
but now, they cannot keep wild boars out of fields and meadows. They used to go for wild boar hunting collectively once every week to protect their crop.

5.2.7 Fire Use

Local residents used to manage wild vegetation growth with controlled fires. Villagers in the old days set fires in the village commons before they went to yayla and burned a different area every year around their villages. This was to allow native vegetation to refresh itself by growing during their absence on the burnt lands thereby allowing goats to graze on the refreshed and regenerated vegetation upon their return from yayla.

“When we came from yayla we always found our village covered with dried tall grass surrounding all our homes and barns. Therefore it was forbidden to make fires within the village boundaries in order to prevent large scale fires, and it was enforced by the village elders. Women who needed fires for cooking and washing were only allowed to build them by the river.” [12.ct7206ak; a villager man]

They used to have regulations in the village to control fire usage for cooking and heating in order to prevent a fire from escaping to the surrounding forests. They also removed accumulated dry grass with controlled fires in order to prevent wild fire. The locals also used fire to prevent pine trees from coming into their lands. It was treated as a weed because the goats would not eat it. After the fire it took about two years for pine trees to come back to a site whereas the other deciduous native vegetation such as bead tree (Melia azaderach - tesbih), sakiz, citirga could come and restore much faster and establish a healthy growth.
5.2.8 Fire Threat

Especially after the adoption of silviculture forest management programs and after converting the native vegetation cover of the national park to a commodity forest fire has become a powerful instrument in managing the resources and regulating the relationship amongst the stakeholders. The locals utilize forest fire both as a source of income and as a threat to management. They economically benefit from the fire in either case. They are largely employed by the fire prevention units as firefighters and are hired to restore the forests after the fires. This makes fire an excellent source of revenue for the local families. Although the results are catastrophic the management perceives the forest fires as an opportunity to introduce new trees with the silviculture forest management principles.

“Forest fire prevention employees set fires first to be able get employed early in the year summer season and then set another fire to extend their period of employment until fall. Later, they are employed again, this time, to plant pine trees in the burnt areas.” [36.bv7287rc; a villager man]

“If you squeeze (pressure) the locals too much they take it out on the forest by setting arson fires.” [4.ns7186yo; an employee of the national park]

Fire is a serious tool of threat in the hands of the locals. When the management puts a policy into operation that restricts the locals from either grazing their goats or practicing a concessionary activity the result is often a fire either in the forest or in a national park amenity. Despite the strict and top-down forestry laws, SIT restrictions, and
national park regulations the management cannot implement any of these laws or regulations thoroughly.

“If one day, this national park expels us we will set these forests in fire first, then we will leave; the biggest weapon these people have is a single stick of match.”  
[15.td7226tk; an elderly village man]

The surrounding landscape has clear indications of many fire damages in an around the KKNP. These spots have been replanted with the single species of austrian pine or red pine by the forestry department. Replacing the native vegetation mix with a fire-prone species have made the vegetation cover of the region extremely vulnerable to fire. Considering the fact that the region becomes extremely hot (max 33.5°C - 92° F in August) during the dry Mediterranean summers any pine forest is as a time bomb. Another school of thought suggests that banning of goat grazing in the forests is another factor of accumulation of dry grass as fuel for fire in the forests. Fire prevention efforts seem only to delay a catastrophe which grows even greater as it waits.

The forests of the national park sites and the surrounding national forest lands have had two big fires in the past (1995, 2000) and one big fire this year (2008). The first two fires are said to be caused by arson due to several conflicts and the last one is still under investigation. Allegations say that the fire in 2000 was started by the management of the forest fire prevention unit.

The quote below is written using alias names in order to protect privacy. This quote provides a succinct summary of continuously repeated responses and allegations on the forest fire issue in and around the national park. The segment quoted below was
voluntarily told by a local resident who during the interview stated that he would be willing to take a witness stand should the research initiate a court case. It needs to be understood that the locals occupy their properties under ‘zilliye’ which is a temporary legal permit that allows villagers to continue to reside in their homes and to cultivate their fields despite the lacking of deeds. Property exchange becomes a complicated legal, political and social issue under these circumstances. Local witnesses hold a critical position in as proof of ownership in property trading procedure.

“There was a big fire around 1995. It was believed that Mark Adam (pseudonym) started this fire. Alan Taylor (pseudonym) has overheard a conversation that Mark Adam was being threatened to be denounced the fact that he started the 1995 forest fire if he took the witness stand on a field exchange case. Because the village does not have cadastral registration there are no deed records to proof the ownership in the village.

Mark Adam, who is a native of the village, ended up taking the witness stand to falsely testify on the land exchange case under the ‘zilliye’ rules. This freed him from the threats of being denounced as the arsonist of the big fire. He still works in the forest fire prevention unit. According to another rumor it is believed that Mark Adam set the arson fire in the forest under directions from his supervisor - the current forestry service director who as a result protects Mark Adam from being prosecuted; and he continues to hire him in the forest fire prevention unit every season in order to keep him quite. Rumor again says that another fire in 2000 was believed to be set by Kevin Kaplan who was encouraged by the same director of forestry service.

The forest fire prevention unit is the biggest employment opportunity in the region. Obviously fires are extremely harmful to wildlife and to ecosystems.
Forest fires are very profitable events for the managers and the employees of the fire prevention units as well as the temporary local employees. It is commonly expected to see one fire at the both ends of employment season every year. Therefore it is to their benefit to start the season of employment with an arson fire early in the season, in the beginning of summer, and to have another arson fire in the fall to extend the employment periods.

Although forests are strictly protected by the governmental efforts they are ultimately very profitable logging fields despite they are located inside or outside of the national parks. Forest fires are the perfect justification for cashing the revenue from those resources by the locals. Otherwise it is not known when and by whom the resources would be logged. Strategically set arson fires become most practical harvesting methods. From night watch to the top director all employees at the every level of management benefits via an alleged illegal profit share agreement inside the forest service. On the other hand locals claim that when they utilize a naturally fallen tree, even if it was on their properties, they are penalized as though they cut a tree in the forest. Rumors in the field allegedly state that the employees of forestry service accept bribes to close their eyes to illegal tree cuttings in the forests as well.”
[36.bv7287rc; a villager man]

5.2.9 Conflicts with the Ancient City of Selge

*Altinkaya* village presents one of the most challenging management conflicts within the national park. It sits on rich cultural resources in a geographical location of high elevations away from all sources of water and forest lands. The village is situated over the ruins of *Selge* Ancient City and the surrounding archeological sites. The residents of the village are primarily stranded due to the strict Archeological SIT restrictions of protection.
Selge is a very important site with its long and glamorous history. The archeological remaining of this city is protected under the 1\textsuperscript{st} and 3\textsuperscript{rd} degree Archeological SIT regulations. The ownership conflict in the Altınkaya village is the biggest of many problems because it sprawls over the ancient city. The villagers of Altınkaya do not have deed documents for their fields and homes. They have been occupying and using the lands with zilliye,\textsuperscript{2} some sort of earned rights of use and occupation of property. Zilliye acts are manipulated by the locals to continue to occupy the lands even though they are designated as the 1\textsuperscript{st} degree natural and archeological SIT conservation areas.

They continue to reside in their village homes despite the compromised, hygiene and comfort conditions due to the restrictions. There are significant numbers of dwellings within the 1\textsuperscript{st} degree archeological protection site. The residents of Altınkaya are neither

\textsuperscript{2} Zilliye: is a legal term indicating a temporary right to continue to access a property and use of its resources that is being occupied historically despite a legal document of ownership is lacking.
permitted to build additions nor to repair their homes because of the strict SIT regulations. Especially, the 1st degree archeological SIT regulations strictly prevent any construction activity. Most of the dwellings do not have the basic necessities of hygiene and comfort such as bathroom and kitchen. The villagers continue to reside in their villages with zilliye. Concurrence of the 1st degree SIT conservation regulations and the zilliye is the core of the conflict. They neither can build new homes or additions to their existing homes when their children get married and the families grow. In some cases three or four families live together in the same house without the basic necessities of a dwelling. This predicament well described in the words of the village headman in the quote below.

“Just as a person a house too gets old and eventually collapses and we are not allowed to fix and repair our houses that we age in.”
[30.sz7237yb; village headman]

It is also a big problem for this village that there is not any water either for drinking or for farming due to its desolate location. They can hardly farm their fields around the villages. The only source of income in the village is goat husbandry and that is very limited. Several capacity building projects such as grapevine and fruit orchards establishments by GEF have failed in Altınkaya because of the scarcity of water.
The majority of the villagers of Altınkaya have migrated to Antalya; and the reminder residents seek employment in the rafting based tourism and in restaurant businesses on the river banks in the lower-stream. The villagers of the lower-stream do not welcome them because the Altınkaya village is located in the upper-watershed. The situation often poses serious tension with severe results between the residents of lower-stream region and the Altınkaya villagers over the allocation of river banks for rafting purposes. Villagers of Altınkaya are also regarded in the valley by the lower-stream communities very discourteously because of ethnic differences. They are not yörük; and are believed to be the descendents of the people of the ancient civilization that they reside over. Although not proven this belief is kept alive in the rumors of lower-stream communities with notable expressions of aversion.
The village head brought running drinking water to each house in the village by a fund he has received from the Antalya province (özel idare). Because any construction is considered illegal within the village boundaries due to the 1st degree Archeological SIT regulations the national park sued the village head over the construction of waterlines.

Figure 5.7: A dwelling and barn built with the ancient artifacts

The Ministry of Culture and Tourism and the Ministry of Environment and Forestry have intended a collaborative project for Selge, alas failed. The details of this project were not found. The Altinkaya village head states that many project intentions like these have failed in the past establishing a huge mistrust against government and outsiders. Governmental representatives of earlier managements falsely promised services such as issuing a pension building permit within the Altinkaya village boundaries from the Ministry of Culture and Tourism. They promised to bring water to the village. Alas, they never could meet their promises hence they cannot even come to the village for a visit. The result is that the residents of Altinkaya do not want to trust anybody from
outside anymore. Especially after the arrival of the court summon over the drinking water the link between the government and the village head is entirely broken. The villagers like to believe that one day the SIT regulations will be abolished.

The combination of all these conflicts and pressures enforced many villagers of Altınkaya to migrate to Antalya. Now, the majority of the permanent residents of the village are old and they live in very primitive conditions. The wonderful resources of Selge ancient city is left unutilized.

5.2.10 Tourism and Rafting

The resources of the national park are heavily utilized for various tourism activities. Rafting and picnicking are the two main ones. Especially the rafting which is a newly introduced recreational activity attracts excessive number of visitors to the park that is already highly visited. The rafting tourism potential of the site is very high due to its low rate of rafting challenge which is about 2.5. The international scale of river difficulty defines class 2 as medium for novice rafters with minimum skills while it defines class 6 as extreme and exploratory rafts that are beyond difficult for rafting (American Rafting, 2008). This is among the main causes that the site is being visited by disproportioned number of visitors. However despite an average of 500 thousand tourists in a year and about 40 rafting concessionaires, according to the GEF (2007) report, the potential of the site is not utilized well. As stated in the GEF report 6,000-7,000 tourists visit the site in a day during the peak season. A total of 245 local people work in the businesses related to the rafting tourism in the entire valley (as of the summer of 2006).
The employment in the valley is generally seasonal; hence the locals are usually unemployed during the winter months and suffer from the lack of income.

![An excessive number of rafting visitors in the Köprüçay River](image)

**Figure 5.8: An excessive number of rafting visitors in the Köprüçay River**

Despite its mishaps the rafting is the single source of income for many families in the lower-stream villages. Many families who were formerly farmers have abandoned their farming and *yaylacılık* traditions; sold their farm equipments; and invested their limited wealth into rafting boats. Now, there are more rafting boats in the valley beyond the carrying capacity of the river. This large number of rafting demand has created a business competition amongst the local concessionaires that eventually lowering the rafting price outrageously. Meanwhile the outside agents continue to charge tourists at a regular rate. Consequently, the profit margin of the outside tourism agents is increased and the quality of the rafting and the associated supplementary tourism services such as food and entertainment has been significantly deprived.
The lack of co-ordination and communication leading a lack of access control creates a chaotic situation that eventually harms the resources, causes the locals to suffer economically. Considerably high number of tourists participates into rafting activities at a given time in the river under the guidance of insufficient number of untrained local rafting concessionaires. Due to the unorganized services and lack of marketing all tourists are brought to the site for a day trip by outsider agents with all inclusive tourism arrangements. While they sell the services to the tourists at relatively high prices they pay only a nominal fee to the locals for accessing the river and purchasing a lunch per tourist. A big portion of the revenue generated through the rafting does not even come to the site because of the all-inclusive tourism practices; and that the local communities do not benefit from the tourism potential of the site. Only a small number of outsider concessionaires largely benefit from the rafting in the site. The legality of these companies is all disputable yet they still continue to practice in the site without permission or any regulation. They do not pay any fees to the national park management or to the local administrations. They employ small number of young men from the nearby local villages (Karabük and Beşkonak in the lower-stream region) to simply get an access to the site and to use the lands on the river banks. Due to the poverty and depleted local agriculture locals remain dependent onto the revenue they receive from the rafting tourism despite it is significantly nominal and only available during the summer months. They (locals) prevent government and the park management from changing this situation even if it is for their benefit. They fear of losing the revenue they receive entirely. It is widely expressed in the interviews that their dependence on the outside dynamics of the tourism practices with all inclusive marketing applications is the biggest cause of this
fear. It was also reported that the outsider concessionaires manipulate the situation and that they maintain the status quo.

Figure 5.9: Goats and rafters

Figure 5.10: Visual pollution caused by concessionaires at the entrance to the park

It is noted that the poorest people of the Antalya province live in this valley. Alcohol abuse is on the rise among the youth of the lower-stream villages. The competition on the access right to the river and on other resources increases the tension among the villages and often causes serious altercations. One or two fatalities due to poor guidance of tourism and rafting services are common incidents every year.
Considering that there is no control and any regulation on the visitation and on the recreational activities many direct impacts on the park’s resources become inevitable. The magnitude of the visitations goes beyond the carrying capacity of the environment and produces a massive amount of waste. It is beyond conception that immense amount of solid waste that are mostly non-biodegradable end up being dumped into the depth of the woods and in the lower streams of the canyon. Although it is eminent that these waste are produced by the concessionaires the management nor a local organization can prevent them or even charge an entrance fee to the national park.

Figure 5.11: Un-biodegradable solid waste dumped into the woods

Many unplanned shacks are built illegally and unplanned. Aquatic habitat is polluted. Along with garbage deposition, the noise and visual pollutions are extreme. The
natural environment of the KKNP is inundated with biophysical indications of the severity of the abuse and mismanagement all due to the pressures of tourism economy. The health and safety conditions are alarmingly low both for tourists and the locals.

Picnicking, hunting, fishing, and touring with all-terrain vehicles practiced by the daily visitors within the park boundaries with no control generates serious pressure on the biophysical resources of the KKNP. The overall condition of general tourism services not only endangers the tourists, distresses the locals but also generates more pressure on the environment.

![Figure 5.12: A vehicle parked in the riverbed by a picnicking family](image)

The negative impacts of the tourism are not limited with the biophysical environment. It also threatens the socio-cultural values at an alarming rate. The quick wealth generated by the unorganized tourism emerges as the major impetus for abandoning traditional agricultural activities of the region. This leads to losing historical and traditional dynamics of the crucial stewardship notion of human and land integration.
This leads to exploitation of the resources that are left untenured. The interference of
tourism on the local communities’ relationships with their ‘working landscapes’ presents
a much greater negative impact on the social fabric of the region than on its biophysical
environment in the long term.

5.2.11 Illegal Construction

500,000 visitors come to the KKNP in a year during the summer months and
7,000 permanent residents live in and around the park. Construction of new service
structures and dwellings and maintenance works on the existing buildings are inevitable
in order to meet the needs of such a load. Although it is not permitted to construct any
new structures or to perform any restoration work on any part of the existing buildings,
many shacks are being built either as new or additional all illegally by the locals and
outsider concessionaires within the park boundaries.

Any form of construction is not permitted within the national park especially in
the first degree SIT conservation sites. Therefore a design guideline or any sort of
building regulation is not even an issue. The inevitable outcome of these illegal
constructions built on these fragile habitats and sensitive environments is a massive
visual and environmental pollution. Many signposts, walls and shacks of odd sizes, colors
and proportions sporadically located within the park boundaries and on the way to the
park. Also due to the ambiguous management and ownership statuses almost all of the
buildings are constructed haphazardly, mostly using cheap materials which are often
environmentally unfriendly. Some of the damage given to the physical conditions of the
environment is irreversible.
Figure 5.13: Landform destruction to provide parking for buses.

Figure 5.14: Unsightly structures inside the national park
An uncontrollable conglomeration of illegal unplanned development is in constant growth under the nose of national park management. The landform is also constantly being altered mostly for non-agricultural but commercial purposes. The park management can only record these changes without even intending to prevent due to the apparent threat. On the other hand several structures built by the national park management to provide service to both locals and to the visitors were demolished by the local villagers overnight.

5.2.12 Absence of Cadastral Records

The locals resisted and prevented the governmental cadastre service to come and work in the valley in the past. They prefer to continue to utilize the temporary legal permit granted by the ‘zilliye’ to reside and use their own lands and properties. Their intention was mainly to keep the government away to avoid paying property tax and payment for public services such as running fresh water etc. Now because of this, they do not hold the deeds for their homes that they dwell in, nor for their fields on which their livelihood is dependent upon. Beşkonak and Altınkaya villages did not let government to register cadastral records because the cadastral service would record the common grazing lands of the village as the governmental lands. They thought they would lose the access rights to their common lands. Only five (Karabük, Altınkaya, Çaltepe, Yeşilvadi and Degirmenozu) out of eleven villages have partial cadastral records of their fields and dwellings as the legal documents of their ownerships.

They often have altercations among themselves due to the uncertainty of their property boundaries. Lacking deed documents of properties make indirect impacts on the
social relationships within the community. Legalization of buying and selling of properties are based on the verbal statements of witnesses under the oath which is widely manipulated. These witnesses are the neighboring residents within the community who also are with various interests on the resources. The verbal statements of these witnesses become a valuable commodity, which eventually are utilized as a balancing factor in handling various issues within the community. Because of not having the tangible deeds the interactions are widely abused and eventually the resources exploited despite the legal statements are taken under the oath.

The villages who do not have deed documents cannot receive any governmental support for agriculture because the distribution of the support is based on the cadastral registration. The fields that are cultivated are granted a certain amount of supplement in order to enhance the agriculture. Only the villages Altınkaya and Beşkonak cannot receive it because they do not have a legal proof of the ownership of their lands.

5.2.13 Policy and Management Conflicts

Multiple governmental organizations and several nongovernmental institutions have jurisdiction on the site with various impacts on the management of the resources. The Ministry of Culture and Tourism, The Ministry of Environment and Forestry under which the National Parks Department and Global Environment Facility (GEF) Project Units, The National Water Works, The General Directorate of National Highways, The General Directorate of Rural Services (Köy Hizmetleri Genel Müdürlüğü), The Provincial Governments of Antalya and Isparta, Townships of Manavgat, Serik and Taşağılı, and an NGO (Kanrafbir counsel of village heads) are the prominent management units with
administrative authority on the Köprülü Kanyon National Park site and its resources. When a site of this size with 11 villages within has this many authorities --each with a different focus, almost all of the policies produced and the projects implemented without any collaboration will inevitably contradict one another. The General Directorate of National Highways may enter in the site and build roads and repair bridges based on daily politics and favoritism with no permission from the national parks neither from the Ministry of Culture and Tourism. The illegal establishments can legally obtain electric power from the local authorities. The severity of the contradiction is better seen when observed between the two branches of the Ministry of Culture and Tourism. Under the same ministry, the Department of Culture authorizes the issuance of the SIT conservation acts and the Department of Tourism issues operation permit to the concessionaires that are established on the SIT conservation sites.

“Ministry of Environment and Forestry issues demolition orders for illegal buildings but the Ministry of Tourism issues concessionary permits for them.”
[7.ns7297mc; a member of NGO]

The multi-headed governance generates either a vacuum or excess of identity and authority, resulting in over-exploitation or under-utilization of the resources. The administrative landscape, under multiple authorities becomes very susceptible for manipulation. The situation of multiple authority over the park and on its various resources cause severe contradiction, which eventually cause severe harm to the resources due to the gaps created by the clashing policies and governance practices.
“The villagers lost their minds because of the changing and contradicting policies of multiple authorities: National Park Department, Ministry of Public Works (Bayındırlık Bakanlığı), Ministry of Culture and Tourism (SIT regulations) all have been pressuring from different directions.”

[37.ir7267oc; an outsider restaurant and rafting concessioner]

The national park did not have a local management of its own until 1998. Before then, the resources of the site had been subordinately managed by three neighboring National Forest Service offices. The priority of these offices was to protect the forests in the areas of their primary jurisdiction. Protection of the national park’s resources was not among their chief responsibilities. During that period the replacement of the native vegetation by timber species such as pine with economic value was initiated and it remained as the chief governmental management action along with the forest fire protection.

About two decades ago a young forestry engineer were attained as the director of the national park to the site just after graduating from the forestry school who hastily implemented natural resources protection and management rules and regulations of then with strict top-down regime (whose name and the time of service are censored due to the individual privacy rights). Unfortunately this method severely back fired, and set the relationship between local communities and the government on a very negative course. Today all the effort to rectify this situation is still taking place on that course.

The things did not get any better when the national park took over the management of the site in 1998 because the mismanagement of the local forestry offices prior to 1998 have already tainted the locals’ perception of the national park to be something much less valuable than the national forest resources. Furthermore the
government controlled timber industry was and still is the main source of employment opportunity for many local people live in the national park.

“In the past, they (the forestry managers) even have encouraged villagers to practice their harmful resource exploitation activities in the forests of the national park sites in order to keep the locals away from the national forests of their jurisdiction.”
[3. na7176yk; a forestry engineer, Antalya regional office of national parks]

The Ministry of Culture and Tourism designates SIT areas remotely. It is the national park’s duty to inspect and to govern the resources under the SIT designation therefore the locals’ impression of national park is very negative in general. The locals believe that anything evil comes from the national park and anything the national park does is evil. However if demolition orders are issued, they cannot be implemented due to severe threats by the locals. Because the local people are not permitted to build within the SIT sites, they in turn demolish every structure that the national park builds and they steal the building materials. The local people prefer to blame the local national park management for the building restrictions and the demolition orders since it is a visible face of the government on the site, despite the fact that the SIT laws are remotely mandated by the Ministry of Culture and Tourism. A water storage depot was filled with stone and the water pump was stolen. Fences built by the park management around the picnic ground were demolished and removed. Locals destroyed the tracking paths and relocated the stones that are placed to prevent cars from entering into the picnic grounds. Locals have demolished the amenity buildings of the national park in the picnic ground. According to threatening statements of some informants this was a message that if one
day the demolition orders are implemented in the I. degree SIT areas while the
government builds structures in the national park the locals will blow up the old historic
bridge (Büğrüm Köprü) located in the picnic ground which is among the critical assets of
the national park. Furthermore the management is always under the threat for arson fires
in the forests.

Some governmental department or some individual paved asphalt on a dirt road
within the national park last year and nobody knows who has done it. Favoritism is a big
problem and a great challenge for the management. The locals get things done by simply
using political connections based on their daily advantages without inquiring any
permission from the park administration. It is a major source of conflict and threat on the
resources that locals always manage to find a way to obtain some sort of legal permit
from either one of the governmental unit for their contradicting activities. This creates
many irreversible conflicts. Because one permit usually contradicts with the management
mission of another unit within the park.

The fresh water resources of the valley of Köprülü Kanyon National Park will
continue to be attraction for the neighboring larger settlements. Politicians manipulated
the management policies to present the resources of the valley as untapped resources and
used them in their political agenda. In the past, some politicians promised to bring the
water of the national park to the neighboring towns that are located in a different
watershed in their propaganda speeches before the political elections for local
governments. Considering the lack of clear authority it is easy to predict that such
pressures will continue.
The national park had confiscated the village people’s firewood right before the winter approached; hence three old people died due to a severe cold then. As a result of this, people set arson fire in the woods. In their claims, the villagers used to collect only dead and dried woods from the forest to meet their firewood needs. Now they take anything that they can get their hands onto—dried or green; illegally. The local people do not want to live under the national park’s management because of the national park outlaws goat husbandry and prevents people from picking wood and at the same time they protect wolves and wild boars which are nuisance for the local agriculture.

Anything that the national park management does only back fires and worsens the chaotic circumstance in the park. No matter what the national park does, the locals always think and make each other believe that the national park is slowly sneaking, and making its way into the site, and eventually they will be expelled. In some cases, I was greeted as a governmental representative and the first thing people (in some cases group of women) asked me “if I came to notify them about the expel order” upon my first arrival to the social environments in remote locations. Locals do not trust government anymore. Management policies of past governmental administrations are as responsible as the locals for the disputes that generated the mistrust.

“Now pine has become the single plant covering over all of the land. This is because the Turkish Government adopted the American National Park and Forest Management model, they have planted pine trees in places that were burnt and damaged. Pine is economically more efficient for them. Pine does not support any wildlife, and it eventually kills other plants under its cover. The soil quality has deteriorated since pine trees came. The soil and plants are addicted to fertilizers and pesticides because the government kept pushing new fertilizers and pesticides
to rectify the harm that was done by earlier ones. Now, how do you expect the villagers to trust either the government or anybody from the outside?”

[15. td7226tk; an elderly village man]

The administrative conflicts observed in the park are of multiple characteristics and they are interrelated because of the large diversity of stakeholders, resources and related pressures. National and regional dynamics of economic activities, shifting demographics greatly contribute to the pressures. Outsider businesses try to generate revenue on the park’s resources, local people want to take their share and the government tries to manage them all from a distance yet from above. Overall situation creates more restrictions and more pressure on the local residents making the park notion and its resources become a burden. The local’s impression of the Turkish Republic as is very weak and that they are very antagonistic against the government in general. They do not expect anything good come from the Turkish government.

The GEF project team and the national park management are collaborating in an attempt to shift the management models from strict, top-down practices to co-management models encouraging a certain degree of stewardship by community members. They developed two plans and within them, several projects to revitalize the agriculture, to better organize the tourism, and to introduce new livelihood resources for the villagers and they have provided them with vine, fencing material barbwire, sheep, beehive, fruit tree saplings and some materials for tourism. One purpose for these projects was to generate alternative livelihood resources to the currently dominant goat husbandry. But they gave these educational support and the materials to only few villagers excluding the rest of the village. This caused a serious problem among the
villagers and eventually led the projects to failure. Another mishap was the fact that the projects are handled as individual operations. This escalated the problematic situation of disconnect not only amongst the villagers but also between the members of a village.

The GEF plans appear as only a small step from the mistakes of the initial management plan of 1973. They recognize the local communities but only try to promote biophysical management principles to the local communities. It appears that the needs, strengths and weaknesses, ethnic; cultural or religious attributes of the local communities are still disregarded whereas these characteristic may play crucial roles in the success of collaborative management efforts.

It is challenging to predict the impacts of the national political and economic shifts on the natural resources. Regardless how well intended they are, all management plans for the national parks are received by the youth of the local communities and by the outside entrepreneurs as the tools to be manipulated for exploitation opportunities. The GEF plans do not seem to have strong precautions and provisions in that respect. It is a serious weakness that the GEF management plans promote implementations of various independent capacity building projects but they appear as isolated attempts ultimately causing severe harm to the social environment because of segregating the individuals within the villages.

The current Turkish Government has recently proposed an amendment for the National Forestry Law. Although it did not pass it has generated nationwide controversies over the forestlands. This amendment named as 2B proposes to re-designate the disturbed and illegally developed forest lands as non-forest lands and pardons the existing developments and allows them to be further built and developed. By their nature these
lands of controversies are often adjacent to forests, and are usually valuable sites ecologically and economically. However the 2B cannot be effective in the national park sites when these lands are located within the park. No matter how heavy the disturbance is the national park law does not allow any activity other than restoring the forest within its boundaries. Also the SIT protection laws with their strict regulations overrule the 2B. Therefore the people of Beşkonak village want to be excluded from the boundaries of the national park and expect the SIT regulations to be abolished within their village lands. Expecting one day the notorious 2B will be passed and that they will be able to utilize the resources freely they continually further damage the forests, disturb the landscape, and built illegal structure so that these lands can be exuded from the national forests in the future. Although it was intended for economic development, it is dramatic to see what impacts a single word of freedom can make.

This example shows that it is not actually the freedom but the pressures create the manipulative social environment. Although inadvertently; this social reaction has been prepared in the past. Because of the years-long pressures and restrictions of top-down managements the people has received the proposals of the amendment as a unique opportunity of release of control and as a freedom in accessing the long restricted resources.

5.3 Changes on the Social Structure and the Resource Management Traditions

"Life was much sweeter in the past there was solidarity among people.”
[33.bv7257hb; a native man, Forestry Service employee]
In general, socially and administratively, the villages of the Köprülü Kanyon National Park are quite distant and hostile to each other. There is not any form of mutual social, cultural or administrative organization to unite the administrations of 11 settlements. There are significant ethnic differences among the villages in the valley which constitutes a challenge for the management. The villages of this valley do not have coffee houses that are the traditional common spaces for gathering, entertainment and socialization purposes in the Turkish villages of rural settlements. The Yaylacılık, as a lifestyle was the only means of socialization. It was a critically important tradition for the communities of this valley for building social capital. However this tradition was abandoned for a while.

The villagers are extremely suspicious towards outsiders; they do not trust anybody from outside and are always against anything that the government proposes even though it is clearly positive and highly beneficial for everybody. They simply do not want to have anything to do with the government.

Rural-to-urban out-migration is in effect in the valley and that constitutes a serious threat to the social structure of the valley. A large number of younger people have migrated from the site to the nearby big cities (Antalya, Manavgat and Serik) to work in the tourism, construction and agriculture sectors over the last two decades.

5.3.1 Abandonment of Yaylacılık and İmece

The yaylacılık used to be the most significant tradition of this region. As an interwoven combination of various cultural, agricultural and recreational activities, the
yaylacılık was a unique lifestyle. A seasonal migration of an entire community including the livestock is the most basic notion of this semi-nomadic lifestyle.

It is unfortunate that the yaylacılık was abandoned and is not expected to return in its fundamental nature. The yaylacılık was mainly a form of migration from the permanent settlements to the temporary alpine meadows in the high elevations by the entire village. Yayla grounds are usually the common properties of the villages on which all temporary seasonal activities used to be managed communally with unwritten rules. The timing of migration and the other associated activities were determined by the necessities of the agricultural production and to ensure the wealth and sustainability of the resources in both of the permanent settlements and yayla grounds. The timing was coordinated communally. In some cases people of different villages congregated during their visits to yaylas and exchanged goods, performed cultural activities together and sustained a social capital. Within the village community whole villagers would gather and start walking all together by supporting and entertaining one another. The most critical outcome of this migration was a rotational use of all of the resources in the environment by humans and livestock. Wildlife and meadows in both regions would be left alone, free of grazing and harvesting once a year at the time when they were most fertile.

Now the villagers do not necessarily go to yaylas mainly because of the changing agricultural patterns. Although they cultivated the lands in both settlements the main practice was herding their goats into larger pastures. Rural-to-urban out-migration of younger generations and new economic activities such as tourism decreased the number of goats in the valley (GEF, 2007). Due to the changing social norms and lifestyles the
remaining people do not want to practice goat husbandry. Small number of goats do not necessitate seeking for broader pastures.

Another reason for the abandonment of yaylacılık is the fact that there is no control, coordination and communication among the local communities in accessing the resources. Therefore the remaining goats are grazed freely and openly everywhere and year round which also eliminates the need for going to yaylas. Along with the new form of animal husbandry, newer agricultural activities are practiced in the permanent village settlements thus removing the agricultural necessities of migration. The introduction of modern supplements such as mechanization, fertilizers and pesticides, and the market dynamics are the common causes of the adaptation of new agricultural practices.

The old foot paths connecting villages to yayla grounds are either widened or paved by now. Electric power is also made available in the villages and even in some of the yayla grounds enabling the villagers to access the means of comfort served by the latest technology. Such increase of the accessibility and level of comfort everywhere not only changed the means of migration but also enabled everybody to go anytime they wish. This change resulted in eliminating the organized migration of the whole community and most importantly the communal communication. Again due to the increased accessibility now, there is a new tourism trend in which the yayla grounds are being visited by large number of people who generally come from cities. Yaylacılık tourism brings many people to yayla grounds for a short term but intensive visitations are ruining the notion of ‘working landscapes.’

Although the yaylacılık has been abandoned as a lifestyle the yayla sites are still being visited and settled extensively, yet irregularly. The main purpose of these
visitations today are chiefly recreational rather than agricultural. The villagers state in their words that only a few rich people go to yaylas mostly for recreational purposes. As an outcome of these recreational visits the yayla grounds are now being built up with permanent yet secondary homes. These homes are equipped with products of latest technology; and are accessed via paved roads. The main concern of building these permanent yayla homes is individual comfort and the building norms are often derived from the built environments of the cities. Neither this individualism is a social norm of the yayla environments nor are the permanently built structures an element of yayla landscapes. The outcome is a development that resembles the unplanned neighborhoods that surrounds Turkish cities. Considering the ambiguous ownership statuses the management challenges of the resources in yayla grounds are chaotic.

Due to the abandonment of the yaylacılık the entire habitat does not get a break anymore. The wildlife does not get their turn to control the environment freely. The wildlife and humans have to share their habitats concurrently year round; and they are not in the habit of doing so. The resources such as vegetation, soil and water are being used continuously by both humans and wildlife.

The tradition used to bring people from different villages together around various cultural activities and celebrations once in a year in yaylas. When they were in yaylas, they maintained tactfully balanced relationships with each other and with the other villages. In building their temporary dwellings and communal tents they were very careful in controlling distances and were never too far from each other nor too close, whereas now the permanent settlements are being built haphazardly and randomly.
Imece - the tradition of working collectively - was also abandoned in the valley at a great extent. Only older women of villagers perform some collective work for food processing and bread making type of chores. The form of imece used for resources management and agricultural purposes are extensively abandoned. This is mostly due to the lessening of agriculture that is also mechanized and enabling farmers to perform almost all of the agricultural duties by themselves. These are the reasons the necessity for collective work are eliminated. The abandonment of imece can be considered both an outcome and an indication of the loss of social capital. The locals reminiscently express that there is no purpose left for communication amongst the members of the community. Especially after the abandonment of community organized migrations to yaylas now, there is no link for coordination of any sort.

Considering the fact that both the yaylacılık and imece had significant cultural and recreational aspects of enjoyment, loss of both traditions appears to be critically important for the general psychology of the communities. This state of mind on a communal level creates significant negative impacts upon the potentials and challenges of coping with the conflicts and the management of the resources.

5.3.2 Abandonment of Subsistence Agriculture

The communities of the valley used to produce everything and met all their needs from the land. Ethnic characteristic of local residents is of a nomadic and semi-sedentary society and that an animal herding is their chief heritage. Culture and the ethnicity of the local residents dictate the way how they supply their sustenance. It was widely stated that
the agriculture was quite primitive until about 1995 in the entire valley. Everything was
done by human power, mule and oxen force back then.

Although the goat husbandry is the main activity of the valley the locals used to
grow varieties of other produces as well especially after they have adopted a semi-
sedentary lifestyle. Due to the changing market demands they switched between various
different produces in the past. However it significantly differs from one village to
another, in general, they used to produce wheat (buğday), rye (çavdar), barley (arpa),
cotton, corn (akdari, sümek), melon, grape and peanut. In Çaltepe village they used to
grow enough corn that they could feed seven other villages. They harvested carob,
mulberry, chestnut and myrtle leaves from the trees in the village commons. They grew
vegetable only for their consumption needs due to the marketing limitation. Some
villages especially in the upper-watershed region had orchards and that they grew apple,
pomegranate, fig, quince, plum, apricot, cherry, peach, almond and walnut.

Çaltepe and Ballıbucak villages were well known for their honey production in
the past. All other villages too, were producing honey at the least for their consumption.
Now the honey production is entirely eradicated in the valley. They only have a few
beehives today to produce nominal amount of honey that is not even enough for their
own consumptions. The management and the Global Environment Facility (GEF) project
team provided beehives and education to revitalize the old tradition of beekeeping of the
valley and to increase the honey production. It is reported that those attempts are not yet
successful and the production of honey is not satisfactory.

Over the last several decades the local communities of the KKNP have quickly
adapted their traditional agriculture to contemporary technological products and started to
use fertilizers and took advantage of agricultural mechanization with diesel engines when they become available around 1970s. But when it started to become inefficient to use them due to the increasing prices of fertilizers and diesel fuel, and the decreasing market value of the produce they largely quit cultivating. Now, the local communities cultivate insignificant amount of cotton, wheat and corn as the main subsistence in the flat plains and on the banks of the valley. The locals used to make perfume out of bead tree (*Melia azaderach* - tesbih agaci) in the upper–watershed region which is also abandoned. Although limited some barley, rye, and oat (*yulaf*) are also grown in the valley. All communities of the valley harvest oregano, sage, blackberry, carob, chestnut from the common lands. *Çaltepe* and *Ballıbucak* are two villages of upper-watershed that continue oregano harvesting extensively and industriously.

The villages of upper water-shed region and the lower-stream region display significant differences in the agricultural production because of several reasons. They are: accessibility levels of water resources, terrain and the marketing limitations. Despite the abundance of the water resources in the canyon the agriculture in the valley is chiefly dry due to the irrigation challenges because of the terrain. *Beşkonak, Çaltepe, Değirmenözü* and *Hasdümen* are the only few villages practicing agriculture with irrigation using old and primitive irrigation channels, and electric pumps.

The terrain in the upper water-shed region becomes a challenge. The local communities built and maintained agricultural terraces in the past and that they were able to cultivate the land. However now, the contemporary villagers do not want to cultivate these terraces unless they can knock the terrace walls down and access these terraces with
their farm equipments and tractors. The fields of the lower-stream region on the other hand, are located in the flat plains but the irrigation is a challenge for them.

Marketing is a big challenge. Not being able to transport the agricultural products to a nearby market is a major challenge and a definitive factor for the agricultural practices. Although it is stated as a generic problem in the entire valley this appears as a greater problem for the villages of upper-watershed region. As said they could technically, grow almost everything there (upper-watershed) but the challenge of delivering the produce to a market along with the wild boar infestation problem are serious issues preventing them from farming and growing crop.

The wild boar infestation of the environment is another reason that the local agriculture is depleted. The locals extensively claim that due to the protection by the national park the wild boar population increased and that depleted the agriculture. They say they cannot protect their crops against wild boar no matter what they do. Therefore they would much rather not cultivate their fields than to see their crops be ruined by the wild boars of the national park.

It seems that the advancing technology and the increasing availability of fertilizers and pesticides to control parasites have disconnected the local people from their traditional ways of managing resources through communal efforts. They do not want to practice agriculture without using fertilizer anymore although they are aware of the long term harm of the fertilizers.

Young generation migrated to Istanbul, Antalya, Manavgat and some other nearby cities to take employment in tourism construction industry, and in agriculture. There are not enough people left in the villages to utilize and value the resources by farming. There
are only a very few people remained in the villages who practice agriculture. The common pasture lands of the village are left unattended and not tenured. Therefore the agriculture in the site is abandoned other than producing nominal amount of vegetation and goat grazing for self consumption. The abandonment of agriculture left the fields untenured leaving them unguarded against the impacts of environment. The quotes below depict this situation.

“The old people used to build walls along the river banks to protect the fields from eroding away. Now a majority of the fields are lost and the river bed has widened to expose the rocky bed because of lack of maintenance.”
[12.ct7206ya; a villager man]

“Nobody wants to touch the soil nowadays in the villages.”
[10.pd7196aw; an elderly village woman]

The tradition of cultivating the land has been lost due to increasing technology and changing lifestyles. During the pre mechanize era they used to collaborate and help each other with field work, mostly plowing etc. with imece. People seem to have lost their contact with their land and with each other. The people used to be more socially bonded because of the nature of agricultural society. As claimed by the villagers, the unity – the social capital is lost now due to the abandonment of agriculture.

“The type of agriculture they practice is a very labor intense animal husbandry. They do not cultivate the land anymore but only use for grazing. Because the animal husbandry does not require collective work (imece) the social network is broken. Goat meat is traditionally the main subsistence of their diet. The people of
this valley were always self sustainable. The valley was always prosperous they never had severe scarcity of food in their history.”

[6.ta7216ht; a forestry engineer, Forestry Service Regional Office]

“Now, there is not even a single household that sustains itself on solely agriculture; the pasture lands of the village are left unattended and not tenured.”

[33.bv7257hb; a native man, Forestry Service employee]

5.3.3 Demographic Shifts and Changing Lifestyles

The outcomes of both qualitative and quantitative data analysis provided noteworthy similarities on the demographic shifts of the KKNP communities. Analysis of the secondary census data has quantitatively confirmed the findings of the qualitative data. The qualitative data that are gathered via the interviews especially with the local residents and the park management revealed that a series of dramatic facts on the demographic characteristics and the population structure of the local communities of the national park are alarming.

The most significant finding is that the percentage of over 60 age cohort in the total population of nine villages of the KKNP is remarkably increasing; secondly, the young generation between the ages of 0-14 is alarmingly diminishing; thirdly, percentage of the female population at the age of marriage is increasing. It is also noteworthy that the overall population of the national park villages is reducing especially in the remote locations of upper-watershed region with limited employment opportunities and revenue resources.

Young local males of the lower-stream villages find employment in the rafting tourism working in close contact with many foreign tourist women in the rafting
businesses. This situation overall causes a dramatically negative impact on the social
structure and on the cultural potential of the valley. The setting of the rafting activity
creates an awkward situation stimulating the young minds to dream to get involved with
one of these foreign women. The foreign visitors are relatively more open minded and
eager to have fun during their visits. They also seem to have less or no social pressure
while they are in an environment that is foreign to them; and their primary purpose for
being there is to enjoy. The local young men hope to take advantage of the situation.
They desire to become involved with, and eventually marry a foreign woman so that they
can leave the country together for better employment and living opportunities. An
outcome of this is that they become reluctant in getting married with their kinds.

“Young local males working in the rafting businesses during the summer months
intermingle with foreign tourist women establishing close contacts. Due to the
nature of the rafting activity, all parties are usually scantily clad. This situation
overall causes a dramatically negative impact on the social structure and on the
cultural potential of the valley. There are a large number of unmarried young local
people mostly women in the valley who are much older than the traditional
wedding age.”
[5.gs7206m1; Commander of the gendarme station on the KKNP site]

On the other hand due to the strict morals of the closed rural society the local
women are not allowed to interact with the foreign men hence are not permitted to work
in tourism and in rafting. Considering the agriculture and related traditions are abandoned
there is not much left for the women. They usually stay at home or commute to nearby
cities to work in factories, or in big hotels as maid. Their working and transportation
conditions are horrendous. They get packed into small vans; ride for 1½ to 2 hours one way; and work long hours every day for a very small income. Six days a week a minibus drives through the national park villages in the lower-stream region collects young girls and women and drives them to hotels and various manufacturing industrial facilities in the nearby big cities to work. They work long hours and spend more than three hours only on the road both ways packed in small minibuses. Meanwhile the village men work in the rafting related tourism industry in the park for very low pay. These people are the descendents of traditional farmers who sustained their livelihood in various form of agriculture. This was once the essence of the ‘working landscape’ in the region demonstrating the characteristics of Mediterranean ‘working landscape.’

The forestry department is still the largest employer in the valley although it is seasonal too. The population decrease and the demographic shifts are mainly due to (rural-to-urban) out-migration for economic reasons. In general young and middle aged productive males migrate outside and leave females in the villages, because of this, females at marriage age are not getting married hence the birth rate is significantly low. Young families with children generally move to big cities for better employment and education opportunities. The findings also indicate that there is not a noteworthy immigration case exists in the site because there is no significant source of attraction for outsiders. A few rafting concessionaires draw in an insignificant number of seasonal help as either rafting experts, or as bilingual rafting guides for specific foreign languages. Conversely, the out-migration (rural-to-urban) case occurs in the site causing a critical demographic shift with clear impact on the social structure, and eventually disintegrating.
the rural capital. The rural-to-urban migration has a significant impact on the social demographics.

Almost no next generation is left in the villages of the upper-watershed region and the population is dramatically aging in the lower-stream region. Most of the young people have migrated to the nearby big cities. Only old people left in the villages with the traditional knowledge of managing resources yet lacking the stamina to perform farming traditions adequately. The overall demographic situation presents itself as a time bomb of social structure in this site. The social ties among the locals are deteriorating both laterally and horizontally. The links between the members of the communities and between the generations are breaking. In general, the out-migration breaks the traditional ties between the generations hence; the local knowledge of tending the land is lost. A generation later there may not be any living individual with the possession of the local knowledge and the tradition of managing the resources in the entire region.

5.4 Conflicts According to the Social Characteristics

The most significant finding of social status that the villages of the national park have distinct characteristic differences all eventually make significant impact on the management of the resources and on the conflicts associated with them. Even when there is a potentially disputable issue among the villages they seem to let it go simply to avoid the trouble to escalate. This seems to be a social pattern in the entire valley. They are in peace but not necessarily are peaceful. They keep a certain distance with other villages. This state naturally does not support any healthy fertile ground for any mutual action for a resolution on a mutual problem. The research found that the villagers quite tense in
general. They present strong potential in sabotaging any project that benefits community. They are extremely skeptical and mistrustful in general.

This social pattern of tolerating one another was also observed between the park management and the local communities. Park management and the locals demonstrate radical differences between the perceptions of the notion of national park.

The locals of the lower-stream strongly believe that the limitations caused by the restrictions and the regulations of the national park are the reason for their poverty. Therefore they desire to be excluded from the national park.

The current conditions within the site present severe management challenges. Multiple and extremely complex conflicts are not only intertwined, but also affected by the current national political and economic dynamics. This makes it extremely challenging to forecast which direction a conflict may grow. Since the predictors are so complicated, a minor change at the national level quickly impacts the dynamics within the site due to the eminent social, economic and political instability.

5.4.1 Conflict Types According to their Sources

The conflicts are analyzed according to the sources where they are originated. To comprehend the sources of the conflicts is particularly important for producing solutions with a holistic approach. First they are categorized and analyzed whether they are originated from outside or inside the park. Then it was analyzed how the conflicts are generated due to the social characteristic differences between the upper water-shed and the lower-stream villages.
5.4.1.1 Conflicts from Local Sources

These are the most obvious conflicts. They often generate amongst the management and the local villagers. Causes are mainly internal and are two types. One is based on the allocation of various resources such as grazing, tree cutting, lopping, fishing and herb (oregano) harvesting. And the other is illegal construction and occupation of properties. The administration pattern of the park is another internal source for conflicts. While all the lands are under the jurisdiction of the central government the park lands are allocated among the villages as the common properties with disputable boundaries and that constitutes another internal source of complication. This situation not only creates conflicts between the park management and the villages but also causes competitions on the allocation of resources amongst the villages within the park and the neighboring communities. Results are, as reported, excessive grazing, excessive fishing and harvesting of woods and herbs, illegal logging or setting fire in the park forests. The turmoil often results in causing severe depletion on the ecosystem, harming the biophysical conditions and most importantly weakening the social traditions by harming the integrity of the local people with their lands.

5.4.1.2 Conflicts from Outside Sources

The second group of conflicts, which are of outside sources is seen among the management, outsider concessionaires and local entrepreneurs. The conflicts are mostly caused on the tourism based revenue generated from outside markets utilizing the park’s resources. The outsider corporations bring large number of tourists with organized marketing operations and all inclusive arrangements (travel, rafting and meal) to the site
and receive the large portion of the profit. In return, they not only generate excessive amount of garbage to be dumped in the river and set negative examples with the construction of illegally built structures for tourism purposes but also cause remarkable disturbance in the social fabric of the local communities. The park management can neither regulate the activities of these companies nor can charge any fee for maintaining the park’s resources, for cleaning the garbage or entering the park because of the ownership conflicts between the local communities and the government. Access rights for picnic and camping grounds, unregulated recreational off road driving and hiking on the mountainous terrains of the park, uncontrolled hunting are the other forms of pressures generating various forms of conflicts among the management, outsiders and the local residents since the majority of these activities are performed by the visitors from outside.

The stakeholders outside the park in general are much less diligent in co-operating towards the solutions despite they are equally effective in causing the conflicts. This is because they usually benefit from the chaotic situation. The inside stakeholders, meanwhile, are always on the heraldic, forefront positions of the conflicts and are more visible with the problems. This is because they have direct interests in the park and its resources and they are directly impacted by the changing conditions of the resources.

5.4.1.3 Conflicts According to Village Types

The villages can be analyzed in three groups in terms of conflict statuses. First group of villages are the supporters of the status quo. They usually benefit from the chaotic circumstance by exploiting the resources through the managerial and administrative gaps; they express loudly that they wish to be excluded from the
jurisdiction of the national park. The population increase in these villages appears to be stable while the age-gender distribution does not seem to be healthy. This is due to the seasonal employment opportunity come with the rafting business. They are located in the lower-stream region. The second group is relatively more peaceful and cooperative. They are remotely located in the upper-water-shed region hence are suffering from limited resources of revenue. They are relatively more co-operative and are more open to change.

The third group is also located in the upper-watershed. They severely suffer from a shortage of water. In general, they are very limited in supplying livelihood for themselves. They are very disappointed that they believe the lower-stream villages are prosperous through the rafting tourism. They are eager for a change and that they are in a hurry. They are aware the management and the government are their only refugee but they at the same time, express that they are very disappointed due to the earlier management practices.

5.4.2 Conflicts According to the Requirements of Changes

The conflicts that are classified and described above are clearly the representation of two main matters: interests and values as Kriesberg (2006) defines as the issues of contention. Interests are either tangible material goods or more socially, relative power and prestigious statuses. Values on the other hand, are inherent notions that parties might be holding onto as part of their solemn existence and identities. Local people in the Köprülü Kanyon National Park are extremely angry, frustrated, fearful and skeptical. Because not only their current needs are not taken into account during the development and implementation of new policies but also their values demeaned and their traditions
are ignored. Their integrity with their lands, which is the crucial constituting element of the Mediterranean ‘working landscapes,’ has been broken. Because their values have been threatened and in some cases, have been damaged they are severely perplexed hence their approach towards conflicts are often negative and are driven with anger.

Workability and negotiability of interests and the severity of value differences define the levels of conflicts: level one being the moderate and level three is the severe. In the case of Köprülü Kanyon National Park, despite there are some mutual realities among the actors, fundamental values are largely threatened. According to the model for deescalating intractable conflicts suggested by Northrup (cited in Susskind and Field 1996) the changes necessitated for the resolution of the conflicts are second-level changes and third-level changes. They further reiterate that the changes necessitated for resolving the third-level conflicts are either impossible or require relatively longer times.

5.5 Summary

Changing lifestyles and shifting demographics within the local communities, increasing tourism economy and management insatiability collectively increase pressures on the environment, deplete wild life and eliminate the regeneration ability of native vegetation. Traditional lifestyles and agricultural practices which are the fundamental support systems of ‘working landscapes,’ are directly influenced by the increasing impacts of the rapidly growing technology and globalization. While these impacts primarily may cause the social fabric to change drastically, they may also lead to the total abandonment of traditional practices. Destruction of the biophysical environment is often
the most eminent outcome of such abrupt changes upon social and traditional foundations.

This research has revealed that the management challenges within the Köprülü Kanyon National Park of Turkey present a highly problematic case of social conflicts, all of which are clear representations of the three sub elements of anthropocentric values (sociological, economic and political).

These conflicts can be categorized as:

- Sociological changes; cultural depletion; shifting demographics; and changing lifestyles.
- Poverty caused by national economy; and pressures of tourism economy.
- Multiple authorities of governance; abrupt policy changes without clear plans; and instable management.

Once culturally working landscapes of the Köprülü Kanyon National Park are now, culturally deteriorated and naturally depleted sites. This national park is an exceptional example of complex management challenges associated with a variety of social conflicts because its rich and fragile biophysical and socio-cultural resources are under severe pressure. The conflicts clearly appear to be contestations over the natural resources of the ‘working landscapes’ among long term residents, outside entrepreneurs and government agencies. The causes of the deeply intertwined social conflicts are multiple: lack of education, cultural depletion, rapidly changing lifestyles, global and national economies, and tourism.

While the ‘working landscapes’ of the park and its vicinity represent the static characteristics of the region’s long human history, today’s landscapes demonstrate clear
indications of substantial environmental damage and ecological suffering due in many ways to the changing habits and cultural depletion of the last several decades.

Contradictions between the land management practices of the Mediterranean communities and the changing policies of the Turkish government have created most of today’s challenging conditions.

Abandonment of yaylacılık tradition along with other agricultural traditions of the Köprülü Kanyon National Park Region is the most significant sociological change. The region also suffers from the out-migration of the younger and relatively more productive generation. Changes in lifestyle and the shifting demographics break the integrity of the ‘working landscapes,’ leaving its untenured resources vulnerable to the impacts of various forms of exploitation.

Locals used to meet their livelihood needs from the resources in the environment within the self regulated rules of their traditions. While the social structures of the villages were different, all of the local communities in general were self aware and concerned about the wealth of the resources up to certain extents. For the last several decades however, a fear began to incubate in the local people’s minds that they will be banned from accessing the resources, and eventually be expelled from the national park altogether. This had an important negative impact on the stewardship notion and on the integrity of the land-human relationship. This fear was not necessarily planted in response to the designation of the national park, but has been developing over the last two decades as a direct result of the contradicting management policies enforcing top-down approaches. This tension especially escalated when a new forestry engineer was appointed as the director of the national park who started implementing strict preventions
and regulations that limited the local peoples’ access to the natural resources. Although the management attempted to build good relationships with the locals via several projects, none of these ended with complete success. As a result, the locals’ perception of the concept of a “national park” took on an extremely negative tone. The common belief among the locals is that the national park is administered by a branch of government whose chief mission is to prohibit. This constitutes a large part of the challenge for the management of the national park. Now the locals have become extremely skeptical that the national park’s management will restrict their traditional ways of grazing goats entirely, and will control every agricultural production; thereby dramatically distancing them from their traditional ways of relating to their lands. Consequently, the circumstances within the national park have become cases of ‘open pool resources’ because the local peoples relentlessly exploit the resources by accessing and extracting anything they can while it is available. Local communities have come from being traditionally integral stewards of the resources to being antagonistic enemies of the ‘working landscapes’ out of spite for management.

Precious habitats along the river banks of the KKNP are overwhelmed by many unplanned and illegal structures in order to meet the needs of the large number of visitors. Visitation and recreational use beyond the ecological carrying capacity, as well as the accumulation of solid waste and illegal buildings are the most compelling biophysical pressures emerging within the KKNP in the last two decades. Meanwhile poverty and the depletion of agriculture pose a dramatic threat on the social structure of this site. While the practices are limited and harmful, locals are generating revenue in various ways (mostly through tourism) all at the expense of the sustainability of the resources. This
status-quo is perceived by the locals as being somewhat legal. The illegal activities are
often justified by various forms of work permits that are granted by various governmental
offices due to multiple authorities with contradicting missions. In addition the
legalization through *zilliye* only complicates the status by earning time for illegal
exploitations and occupations.

Dramatic differences have been observed within the physical conditions of the
environment between two visits to the site over a one year period including newly built
structures and land form alterations in critically fragile environments. Either the existing
buildings were enlarged with additions and renovations, or new ones were bluntly built.
Some dirt roads that provide emergency service through undeveloped forests were paved
with asphalt in this one year period just because they are also accessing a few dwellings.

Locals have a habit of using the resources of the park without any control.
Naturally, new rules and regulations instigate immediate reactions. Locals perceive any
regulatory measure as an attack upon their land tenure rights. Due to the lack of cadastral
records, especially in the central villages, land use rights are highly challenging to
manage. The national park management often finds out about the environmental
wrongdoings and abuses after irreversible damages have been done.

It is a serious challenge to restore the natural integrity of these areas. Even to
attempt to remove or to relocate the illegal structures would provoke catastrophic results.
Demolishing even the smallest illegal structure built by the locals is interpreted as an
open invitation for arson within the national park forests. The only thing the national park
management can do with their limited resources is to prevent the damage before it is
done. Once a structure is illegally erected on a public land and becomes beneficial for the
locals, the status-quo is granted as an access right to the land and the building becomes the possession of the locals. Time has been utilized as an element of justification for all wrongdoings. It is often ecologically too late after a certain point. The current confrontation between the locals and the government can be best described as ‘turf war’.

Despite the systematic amelioration efforts by specialized experts of the Global Environment Facility (GEF) project team and the sufficient amount of funding available, the overall perspective in the KKNP is far from being enhanced mostly due to the chaotic social and administrative landscape, and the problems of mistrust and limited integrity.
CHAPTER 6
DISCUSSION AND ANALYSIS

6.1 Theoretical Analysis

The findings of qualitative interviews and observations have revealed that the Köprülü Kanyon National Park (KKNP) was a site of plentiful resources where the pastoral lives characteristic of the Mediterranean region found a home. Today however, both the park and its residents are under severe pressures due to many conflicts of various causes. Despite many resources and great potential the future is ambiguous for the KKNP and for its residents.

When the Köprüçay valley were identified by the managements as though they were accidental settlers of the region and sole beneficiaries of the natural resources. Although the policies of earlier managements had good intentions, none of them represented the local residents thoroughly nor was their presence acknowledged as an asset for the national park.

The local communities of the KKNP and outsiders often collaborate in performing illegal tourism practices that openly harm the resources, despite the park management’s surveillance. The locals destroy the amenity structures built by the management and vandalize the governmental properties and instruments in order to prevent the park management from having control in the park entrance. The traditional agricultural practices have been transformed into various forms of exploitative activities.
all in conflict with the management. These antagonistic interactions are clear indications that the stakeholders of the site are lacking a positive link, especially between the management and the rest of the stakeholders. The only agreement that is socially formed within the site among the diverse and conflicting stakeholders appears to be resisting governmental management efforts in the park. It is nearly impossible for management representatives to enter some areas to initiate new projects while constant threats of forest fires and sabotage are hanging above their heads.

The Global Environment Facility (GEF) project implementations were not successful in general despite their conscientious intentions to provide initial comprehensive conservation perspectives, capacity building dimensions, and seemingly equitable management principles. Nor do they promise success for future implementations. This is largely due to the severely broken integrity between locals and managers, and new social norms with an orientation on profit motivation within the communities of the valley.

The GEF has a new general management plan for the KKNP which is pending for approval. Despite its acknowledgement of the local residents as assets this plan too, has some limits. In this new plan the local people have begun to be identified as the integral elements in the composition of the ‘working landscapes.’ The policies and projects seem to be developed focusing on the needs of local communities with the assistance of an interdisciplinary team of experts. However, it still lacks implementation plans with a vision that would incorporate the active participation of local communities within the administration and the management of the resources. The implementation efforts of the early GEF projects have proven that the success of the conservation programs is limited
by the quality of the participation of local communities regardless of the weight of their stakes.

Further analysis of relevant theorems provides a theoretical perspective to better comprehend the interrelated statuses of the conflicts and the potentials of the KKNP.

6.1.1 Commons Dilemma versus the Counter Argument (Controlled Access, Coordination, Communication)

The ‘working landscapes’ of the KKNP are analyzed distinctly in two temporal conditions: one representing the integrity during its past and the other demonstrating the pressures within the current circumstances. The study explored and questioned whether the factors of the ideal conditions as described by Ostrom et al. (2001) – “controlled access, coordination and communication” - had any implications within the Mediterranean ‘working landscapes’ in Turkey as an integral part of the commons at any point. The current conditions of the common properties of the case site were also evaluated to understand whether the pressures of today pose any threat to the ideal conditions, and whether the ‘working landscapes’ is a representation of a classic case of the tragedy of commons.

It is found that today’s conditions of the Turkish natural environment particularly in the KKNP is a typical representation of the common’s dilemma theorem introduced by Garret Hardin in 1968. The counter arguments by Ostrom et al. (2001) and Dietz et al. (2001) describe a set of ideal conditions for common property management practices which represent the main land and resource management traditions found in the KKNP in the past. Table 6.1 demonstrates within a temporal context that a case of open pool
resources is indeed happening today, and the ideal conditions of the three Cs (controlled access, coordination, and communication) were in occurrence in the past.

Table 6.1: Temporal comparison of the ‘common’s dilemma’ theories and the conditions of open pool resources in the ‘working landscapes’ of the KKNP

<table>
<thead>
<tr>
<th>Theoretical Background</th>
<th>Representation of Ideologies in Turkish Cases</th>
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<tr>
<td>Classic case of tragedy of commons as described by Garrett Hardin (1968)</td>
<td>Current Condition</td>
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<td></td>
<td>Pressures on resources</td>
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<td></td>
<td>Social conflicts</td>
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<td>Management challenges</td>
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<tr>
<td>Ideal condition as described by the counter arguments by Ostrom et al.: (2001)</td>
<td>Past Conditions</td>
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<td></td>
<td>Integrity of traditional ‘working landscapes’</td>
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<tr>
<td></td>
<td>was in occurrence within the yayla tradition.</td>
</tr>
<tr>
<td>• Controlled access</td>
<td></td>
</tr>
<tr>
<td>• Coordination</td>
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<td>• Communication</td>
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It was expressed by the various informants in different interview settings that the local communities had various unwritten land management and resource allocation rules and regulations. It was also disclosed from locals’ memories and through broadly recorded narrations of the land that as a result, the vegetation was diverse and bountiful and the wildlife was abundant; hence the biodiversity was rich and sound.

It was found through extensive interviews that the implications of the three ideal management conditions (controlled access, coordination, and communication) were traditionally found among different communities within the national park; in many different forms; and on variety of different resources. Main examples of these are: controlled and rotational grazing on common meadows; seasonal allocation of cultivated fields; harvesting fruits and nuts from trees belonging to the villages; and regulating irrigation, hunting, fire usage, and wood cutting within the village communities. It was
also revealed that the villages were not necessarily harmonious due to several ethnic differences but were able to maintain a certain level of peaceful balance especially on managing the resources. Assemblies of village elders were effective in enforcing the customary ways of regulating resources use in general.

Memories of the local residents disclose that *yaylacılık* tradition was the concentration of harmonious utilization of resources through the three ideal management conditions outlined by Ostrom et al. (2001). The most central attribute of *yaylacılık* – the seasonal migration was to increase access to broader resources. The **control** notion was at its best with the *yaylacılık* tradition because of its carefully regulated seasonal migration patterns timed in accordance with the natural cycles of the resources. Each village has designated *yayla* grounds located in the high alpine grounds as their common lands. This induced a strong notion of stewardship. Through the dynamics of *yaylacılık* a social network was in action year round and that the social bonds were very strong not only within the villages, but also among the different villages of the valley. This enabled local residents to establish strong links of **communication**. The development of many regional traditions of agricultural and cultural activities, and mutual understandings could only be achieved via strong interaction, which translates as communication. The communication and *yaylacılık* was in a symbiotic relationship in the KKNP, which ultimately benefited the management of resources. The resources of the environment were accessed by the local residents on a rotational pattern eventually bringing an order and **coordination** to the utilization of resources. Although the village borders were not clearly defined all members of the community sacredly respected the indefinite boundaries separating the common pastures, woods and *yayla* grounds. In the old days of the rural settings of the
social environments nobody could afford to be expelled from the unity of the community. To follow the common rules of the majority would be for the benefit of every individual, hence order was granted by nature of a mutually developed common sense. All these were the essence of the integrity of any closed rural society and it was animate in the KKNP; yaylacılık was the crystallization of this social phenomenon.

The current state of KKNP resources, especially after the abandonment of yaylacılık tradition, appear as dramatic cases of open pool resources and represent the characteristics of the ‘common’s dilemma’ theorem: “the overuse and exploitation until depletion of the resources.” This result is due to the combination of several impacts: a) a lack of ownership; b) inconsistent management policy implementations; c) mistrust towards governmental management practices due to incomplete and/or unsuccessful projects; and d) shifting demographics and changing lifestyles.

6.1.2 The IUCN Protected Area Management Categories II and V

A large majority of the conflicts noted in the KKNP appear to be direct or indirect outcomes of various social distresses. This is mainly because the management models of the KKNP, from its designation in 1973 through the establishment of the park management unit on the site in 1998, always took reference from the classical notion of strict top-down biophysical management model of national parks as originated in the United States. This model does not have a place for live-in human communities in the parks. Meanwhile the KKNP is a working landscape and it has been home to large number of local residents for centuries. Currently, the total population of the local residents within the park is over 7,000. The livelihood of these people depends on the
resources of the park through traditional subsistence agriculture. All of the plans and policies developed and implemented in the park prior to the latest GEF management plan have disregarded the traditional livelihood needs of the local communities.

The management dilemma of the KKNP is a colossal difference of perception. The management intentions are far from being realistic in comparison to the true conditions of the site. This difference can be best explained by the IUCN Protected Area Category System. A pragmatic observation and analysis reveals that the differing management models and the conditions within the site are clear examples of Category II and Category V Protected Areas.

Category II is a strict preservation model that is compatible with top-down management regimes. The definition of Category II - National Park Protected Area criteria indicates that the natural areas are mainly managed for ecosystem protection and recreation. Protection of ecological integrity, exclusion of exploitation, and occupation are the main purposes while allowing visitation for scientific, spiritual and recreational purposes all which are environmentally and culturally compatible (IUCN 1994).

The category V Protected Landscape criteria indicate that the areas are mainly managed for landscape conservation and recreation. Safeguarding the integrity of traditional interaction is vital to the protection, maintenance and evolution of protected landscapes. The essence of management objectives of category V Protected Landscapes is the conservation of the distinct characteristics of significant aesthetic, ecological and/or cultural value, and often with high biological diversity as the outcomes of the interaction of people and nature.
Adrian Philips (1999) emphasizes that the traditional management models of strict nature reserves and national parks with focus on natural or near nature conditions are not necessarily suitable for the conservation of lived in landscapes and many have met failure in their tasks.

The IUCN’s category V Protected Landscape management definition presents distinct similarities with the definition of ‘working landscapes.’ The Category V Protected Areas category system recognizes that a number of purposes of protected areas relate directly to meeting the needs of residents or neighboring human populations (Philips 2002). Within this context the KKNP with its rich and diverse resources and most importantly, with its local communities is an excellent example of ‘working landscapes’ while also meeting the IUCN’s category V Protected Landscapes definition. Adrian Philips emphasizes that the ‘working landscapes’ particularly in developing nations emerge as noteworthy examples of conservation means due to their well balanced systems. In this context the emergence of the perception of the local people as an asset in conservation efforts brings the Category V of protected landscape to life, and unites it with the notion of ‘working landscapes.’ ‘Working landscapes’ are places where people live and work, and which are also important for biodiversity conservation and for sustaining livelihoods. However they rarely form part of a nation’s protected area system. This is due to a general misconception that protection gives an impression of ‘locking up’ resources from local people and society (Philips, 2002).

This difference in the perception of the park by its main management body explains the social conflicts which challenge the implementation of management plans leading all efforts to an inevitable failure in the KKNP. Another challenge is the fact that
the changes of the management models were often abrupt shifts from one extreme to
other, with dramatic impacts on the lives of local residents.

Category V approaches are better suited to the management needs of the
KKNP: With its emphasis on the value of the interactions between people and nature
over time, the Category V designation can be particularly appropriate for lived-in
landscapes in developing regions of the world. In particular, it is a useful approach
because it (Oviedo and Brown, 1999 cited in Philips, 2002):

- links people’s needs and livelihoods to the conservation and sustainable use of
  natural resources and hence biodiversity;
- typically comprises a mosaic of land ownership patterns, including private and
  communally owned property;
- can accommodate, and increase respect for diverse management regimes,
  including customary laws and religious observances governing resource
  management;
- has important specific objectives related to the conservation of cultural
  heritage;
- seeks to bring benefits to local communities and contribute to their well-being
  through the provision of environmental goods and services; and
- has proven to work well in certain places where strict protected areas have
  failed because of the difficulties of securing support from local communities.

6.1.3 Collaborative Management Precedents

6.1.3.1 The Green Belt Movement

The Green Belt Movement (GBM) lead by Dr. Maathai (2004) in Kenya may set
an excellent precedent for the Köprülü Kanyon National Park in terms of restructuring
the social network of the site. GBM started by organizing women in poor rural regions of
Kenya to plant trees. Although the initial aim was to restore the fuel source mainly used for cooking, the movement was escalated to be one of the most remarkable social movements in Africa with environmental conservation and ecological restoration dimensions. Considering the fact that it is unrealistic to expect the yaylaciılık tradition to return, the GBM can offer a unique capacity building model for the KKNP with the energy it generates from the women of rural communities.

Women members of the KKNP communities are socially restrained despite the social potential they possess. Although they are behind the scenes, they demonstrate the last remaining remnants of the social attributes of the region with their modest imece activities. They still maintain some level of communication among themselves. Most importantly, they are the only remaining members of the families who continue to perform agricultural farming practices in the villages. These are all extremely valuable assets to the site with critical potentials to be further enhanced and expanded upon. Dr. Maathai and her GBM have accomplished this task of collaborating with the women with planting trees which started as a symbolic effort in Kenya. The unity of women across rural Kenya was the greatest outcome of this movement.

Past lives of the KKNP communities present numerous social and cultural elements with symbolic qualities to offer opportunities for the initiation of such programs. The initial target should be in releasing the confined energy of the women; then utilizing this energy in unifying the people of the valley and in building a social network. This would provide the most effective alternative to the intention of the youth of today who anxiously desire to exploit the resources according to the current market trends with haphazard establishments.
The administrative and managerial social environment is severely polluted in the KKNP. It would require extra effort to ameliorate the current relationships between the broad stakeholders (management, locals and concessionaires) in order to establish a healthy working ground for project initiations. Whereas working with women would not only double the human potential of the site, it would also provide a relatively clean social ground on which to initiate successful collaborative project implementations.

6.1.3.2 The CAMPFIRE

The CAMPFIRE program in Zimbabwe -- conserving while harvesting indigenous resources with the collaboration of local communities, may also set a valuable precedent for certain resources in the case of the KKNP. However the CAMPFIRE program cannot find a direct implication in the KKNP because of the wildlife especially the game species, which are almost entirely eradicated from the habitats of the park. But the tourism practices (especially the rafting) and the general agricultural activities (oregano harvesting and honey production) can be best managed in collaboration with the local villagers of the region. Considering the fact that the local communities of the KKNP are disconnected and are lacking a positive link among them, an organization such as the CAMPFIRE would set an excellent example. The best aspect of the CAMPFIRE was that it has worked across the tribal segregations uniting them around collaborative management efforts of the resources.

Such an organization with site specific characteristics would encourage positive participation of the local residents in the projects for managing site’s potentials by inducing a critical notion of ownership through equitable allocation of resources and
profit share programs. Local people could be expected to be more attentive to the longevity of the project implementations and the sustainability of the resources in comparison to the outsider concessionaires if their voluntary participation is accomplished.

6.2 Recommendations

The sources of the identified conflicts are interrelated; likewise the resolutions should be integrated. The potentials of the natural resources, the human capital, and the social conflicts with their associated pressures should all be handled holistically. The site of the Köprülü Kanyon National Park (KKNP) is a whole of many interconnected smaller social (cultural, economic and political), biological and physical systems.

The resolution program efforts should be attentive to the following facts:

- The social network has been fragmented.
- Biophysical problems are isolated from their true origins.
- The foci on individual problems are severely narrowed due to the pressures generated by the dynamics of economics and politics at national and global levels.
- Conflicts are often either made dormant or are escalated because the solution attempts lack multidimensional perspectives.
- Developing independent resolutions for individual problems only causes further fragmentation within the site. It generates more problems for the entire site by breaking the solidarity.

When a social conflict is resolved the outcome could lead the way to the initiation of the resolution efforts for another problem. The interconnected nature of the social potentials and conflicts over the biophysical resources can be developed into an
advantage via smart planning approaches by defragmenting the social structure. Each solution can have an ameliorating impact upon the sources of another pressure.

6.2.1 Local Level Recommendations

The resolutions of the social conflicts should be targeted to have direct healing impacts upon the social environment and rather indirect impacts on the biophysical pressures. It is the core concept of the ecosystem management theorem that the focus of resolution attempts of social conflicts should have broader perspectives on broader domains. The precepts of ecosystem management can be adapted to the site of the Köprülü Kanyon National Park (KKNP) by:

- developing and planning a chain of resolutions with integrated approaches;
- defining ecological boundaries;
- setting goals for the ecological integrity of the resources with a focus on biological diversity;
- conducting continuous research and gathering data;
- monitoring responses;
- employing management adaptations;
- achieving interactive cooperation and collaboration through institutionalized systems;
- acknowledging the necessities of rational and organizational change;
- incorporating human potential as an active component of the management processes;
- bringing human values in to management efforts as well as scientific knowledge (Grumbine, 1994).

Restoration, conservation and efficient management of biophysical resources should be the outcomes of the resolutions of social conflicts. Only then the resolutions could be comprehended by the local communities as a result of their participation and
that way they would perpetuated. Collaborative projects with strong focuses on the stewardship notion which would be facilitated and administered by the management bodies and the neutral third party, would greatly improve the management conditions within the site in general.

Resolution efforts should be initiated at the sources of conflicts, especially in the cases when the pressures originated in the distant social, political and economic domains outside of the administrative boundaries of the park. The resolutions would be more effective and have broader and long-lasting impacts if the conflicts were resolved at their sources.

The strength of the general management plan developed by the Global Environment Facility (GEF) project is that it incorporates the local communities as both the effective benefactors for the management efforts and the benefited of the resolutions. However a significant weakness of this management plan is that its focus is limited within the administrative boundaries of the KKNP. The general management plan of the GEF is about to introduce another set of radical changes in the site during its second term implementation. Although this plan consists of comprehensive and rational policy recommendations the implementations need to be operated gradually. The changes in the social environments should be conscientiously prescribed in phase by phase project implementations, and each step should be monitored carefully.

The fragmentation of resources and the segregation of community members appear to be a significant challenge for the collaboration and amelioration efforts. Unifying the social structures is an eminently urgent need for the healthy initiation of all resolution efforts. Defragmentation of the social environment can be accomplished by the
implementation of projects with integrated approaches supplemented with the precepts of ecosystem management.

The active and positive participation of all members of the local communities should be the main focus and this can be best accomplished via a consensus of the KKNP.

6.2.1.1 Consensus Building

This is essentially the first step in initiating resolution efforts for social conflicts. A neutral third party authorized by the central government should first facilitate coordination among the multiple governmental authorities, and next between the local communities and the government. Communication is the core component of a positive consensus. A strong link of communication should be reestablished within the social environment of the national park, and between the locals and the management.

Under the invisible facilitation of the higher governmental organization with the aid of the neutral third party all stakeholders should be equally regarded. Consensus of the KKNP should be accomplished through the voluntary participation of the full spectrum of stakeholders. The positive participation of the critical leaders of rural communities such as elders, religious leaders and representatives of mosques (hodjas and imams); and specific key figures with critical impacts on the society should be accomplished. The collaboration efforts for trust-building purposes should be initiated with provocative individuals of the society who possess unique potentials for influencing the others which appears as a serious challenge. Successful participation of these certain individuals will set a precedent for the rest of the community and will prevent potential
logjams by demonstrating a story of success especially with the most challenging circumstances.

Conflicts with the most common interest should be targeted in order to utilize the resolution efforts as a uniting factor; by clearly presenting a transparent plan.

### 6.2.1.2 Collaborative Planning

The smart planning of projects and policy implementation can only be effectively accomplished via collaborative efforts among the contending parties. Furthermore the inert energies of the communities (i.e. women and elders) can be incorporated into the management efforts through collaborative planning. All parties should come together in face-to-face dialogues under the facilitation of the neutral third party and a higher governmental organization. It is a challenge that the ruling stakeholders are not necessarily the representatives of the population, but those who possess some form of power through the manipulation of the current chaotic and corrupt social system. Collaborative planning should be attentive to this fact and aim to have equal participation by all members who otherwise would not be heard in the planning and implementation efforts.

The collaborative planning of projects with a focus on uniting should be accomplished in three steps: 1) a problem or a conflict regardless of its size and importance, but with the most common interest for the majority within the entire site should be targeted; 2) all stakeholders and especially the contending parties should be convened around a mutually agreed upon direction through consensus; 3) the implementation of this project should be executed with the direct involvement of the
participants. Although this project may be significantly small in size, it should be symbolically important.

6.2.1.3 Ecological Carrying Capacity

The ecological carrying capacities of the resources of the entire valley should be carefully assessed. All future management plans should be planned and developed within the scientific restrictions of the ecological carrying capacities. Assessing the carrying capacity of the aquatic resources should be given the priority due to the emergence of the current conditions that are under severe uncontrolled exploitation due to alarmingly increasing pressure. Biological diversity management principles can provide the necessary criteria for the assessment programs. Priorities should be given to the ecological systems that are under immediate threats. The historic interaction among the vast species both from the flora and fauna kingdoms is the essence of the natural composition of the KKNP. National park managements tend to focus onto the iconic species in their conservation programs with strict protection regimes. These programs bring more harm to the resources in the long terms. Individual species should not be favored over the entire ecosystem which is the essence of their existence. Management programs of the resources within their ecological carrying capacities would enable the park management to explore the inter-species dynamics to be conserved.

6.2.1.4 Tourism and Rafting

Within the same context all rafting establishments should be registered and unified around a central organization to control the rafting activities within the ecological carrying capacities of the resources. Registering and licensing all rafting boats and rafting
guides just as it is done with commercial taxi cabs in cities would bring a significant control factor. Every personnel working in the tourism sector who is either from local settlements or from the outside should be trained and licensed. The rafting operations should be managed as a professional business to be run by a collaborative consortium of local representatives. All aspects of the tourism related activities, starting from marketing through the education, entertainment and finally should be managed professionally yet transparently. Most importantly, the revenue should be allocated equitably. Maintaining the ecological and cultural integrity and protecting the biological diversity of the site should be the central focuses of all of the concessionary operations. Despite its significant revenue generating capacity the rafting tourism potential of the site is underutilized economically. The revenue that would be generated through safe and memorable recreational activities should be distributed among the stakeholders equitably. All of the financial operations of tourism with their wide-spread impacts for the entirety of the park can be managed by a cooperative foundation equitably and sustainably.

6.2.1.5 Cooperative Foundation

A financial cooperative foundation can be very operational and effective in bringing resolution to many of the social conflicts within the KKNP as well as in mitigating the pressures on its resources. Although the rafting and tourism activities can be the main revenue generation sources, the cooperative efforts in the foundation do not have to be limited by them. The cooperative foundation can promote partnership operations among the local communities that are specific for the KKNP resources.
Agriculture, honey production, oregano harvesting and hunting operations can also be incorporated within the collaborative efforts of the cooperative foundation.

The Cooperative Foundation can be an excellent instrument in restoring the essence of the *yaylacılık* tradition and in stabilizing its dynamics. Communication, coordination, and access control are valid components from which to operate any organization with collaborative management principles. Symbolic or functional, many assets of the *yaylacılık* tradition can be adapted into the operations of the mission of cooperative foundations.

The excessive and uncontrolled goat grazing and the lopping conflicts can find resolution through the integrated operations of the cooperative foundation. The foundation can purchase goat feed and distribute it among the villagers within the profit share programs in order to prevent illegal grazing and lopping activities which especially occur particularly in the winter months most harmfully.

The foundation can also initiate financial investments in different, broader economic practices outside of the park besides rafting and tourism from which the capital fund of the cooperative can be amplified. Then a sound and sustainable profit share system can be established for the local families to distribute these funds equitably, especially when the site is dormant during the winter months. This would enable the local communities to continue to enjoy their traditional and habitual diets without harming the native vegetation while keeping their goats in corrals and barns.

An important outcome of a central operation is that it would eradicate the competition occurring among the local individual rafting operators and eventually enable them to offer rafting services with reasonable, centrally regulated prices. The central
operation of rafting and tourism activities will allow the concessionaires to share the externalities that are both beneficial and negative.

Figure 6.1: Operation diagram of the KKNP Cooperative Foundation

Outcome:
- No lopping
- No uncontrolled goat grazing
- No uncontrolled hunting and exploitation
- No wild boar infestation
- Agriculture restored
- Increased employment opportunity
- Biodiversity and Natural Resources are conserved
- Regulated Tourism and Rafting
- Park is cleaned
- Park identity is established
6.2.1.6 Design Guidelines and Zoning

A central control system should be developed for regulating all construction and land use activities within the national park. Public or private, all building structures constructed by either the management, local residents or concessionaires should be regulated equitably. Only then the positive participation and cooperation of the locals could be accomplished. Form based design guidelines, and a zoning map as a regulatory tool can be implemented in several phases. Ultimately, the existing illegal structures should either be demolished or remodeled according to their locations and the conditions within the SIT conservation regulations. The ideal condition would be to promote the locals to perform the demolitions and the remodeling operations themselves with incentives.

Women members of the local communities are traditionally excluded in all aspects of the management efforts in the valley. They only become visible in the labor and are generally behind the scene. The active participations of women in the valley need to be engaged in the resources management decision making process and in the implementations via collaborative management efforts. This will constitute a social structure that will eventually contribute the well being of the social environment whose healthy development is currently confined.

Training programs should be incorporated to induce awareness on the natural and cultural systems, and on the significance of the archeological resources. It was noted that the locals do not understand scientific terms such as ‘biodiversity’ and ‘GEF’ and that they find it intimidating when the projects have English names to them.
6.2.1.7 The Selge vs. Altinkaya Conflict

The contemporary Altinkaya village resides atop the ancient settlement of Selge. These two settlements coexist on the same physical ground despite a time difference of two millennia. It is a colossal challenge to adapt the hygiene and comfort needs and necessities of contemporary Turkish citizens to present day living conditions while dwelling in a place that deserves to be conserved as an open air museum.

Considering the scarcity of water, limited agricultural opportunities and the fact that a large majority of the villagers have already migrated out, it appears that the best solution for the Selge vs. Altinkaya conflict is to relocate the remaining residents of the Altinkaya village to another location within the region. This would open up many opportunities for both the villagers and the management efforts. After the relocation the ancient city of Selge should be conserved and managed as an open air museum. The case of Aphrodisias sets an excellent precedent for the Altinkaya village at this point.

Aphrodisias is an ancient city with significant historic importance located in Central Western Turkey. This city, rich with archeological resources, is adorned with magnificent temples, theatres and gymnasiums. There used to be a village located over this city named Geyre. Through a very successful program conducted by Professor Kenan Erim, the settlement of this village was relocated to another site within the region. Now, Geyre is a prosperous small town situated next to Aphrodisias and is greatly benefiting from the revenue generated through the archeological tourism. Due to the successful relocation of Geyre and to subsequent conservation efforts, the open air museum of Aphrodisias is one of the best conserved and most beautiful archeological sites in Turkey. It is greatly benefiting from the stewardship of the residents of its neighboring town of Geyre. (Baykal, 2007)
6.2.1.8 Recommendation for Management and Concessionaires

Many governmental departments that have authority on the KKNP attempt to provide services to local communities and to manage the resources of the park despite the contradicting strict rules of one another. The various departments usually have different policies and missions with often contradicting priorities of services. Furthermore each of them has strict internal operational rules. Therefore the overlapping of services often result in deadlock situations. The departments need to work together; not against each other in these situations. It needs to be understood that a large number of governmental departments may have some type of interest and associated authorities on a given site. Antagonistic approaches between the different departments of the same government over the inevitable contradictions cause extremely harmful results for the overall impression of the government before the local communities.

“A higher governmental organization is essential for this site.”
[1.np7146sa; the Director of the GEF Project]

A new organization with a neutral status and higher authority can be extremely instrumental in alleviating the current chaotic circumstances in the KKNP. Such an organization can facilitate the principles of the Alternative Dispute Resolution (ADR) and the Mutual-Gains approaches to mediate between the contradicting powers of the multiple authorities and the local stakeholders, and utilize their experience of the site.

Any program to be developed in dealing with the conflicts of the Köprülü Kanyon National Park can greatly benefit from the following social techniques suggested by Susskind and Field (1996) in accomplishing efficient resolutions. Plans may only promise
resolution when they are developed by comprehending the site specific condition and by incorporating integral relationships of all temporal and spatial actors.

1\textsuperscript{st} step - Define conflicts: conflicts and their associated resources that are under pressure can be defined, categorized and prioritized by clear delineations of their biological importance, their urgency of conservancy needs, and their integrity with other resources and pressures.

2\textsuperscript{nd} step - Eliminate the biases and personal weaknesses of the individuals from the issues: certain individuals with their personal characteristics or their experiences may misguide the negotiation process either purposefully or inadvertently. The negotiation process should be attentive to this fact and keep its focus on resolution of the issues, rather than losing energy on the weaknesses that may be brought onto the table by the individuals.

3\textsuperscript{rd} step - Understand both sides of the conflict: all sides of the conflicts should be understood thoroughly within their temporal and spatial contexts for efficient resolution opportunities. Strong and effective links should be developed through which all of the actors listen to one another.

4\textsuperscript{th} step - Focus on mutual gain: via prior educational programs and mediations all parties should be brought up to an understanding that every stakeholders’ benefit is dependent upon the benefit gained by every other stakeholder. This is an essential balancing factor that needs to be attained. (Susskind and Field 1996)

The projects and policy implementations should be conducted with goal setting approaches rather than prohibiting ones. Adrian Philips stated that the category V criterion rarely form a nations protected area system because of a misconception that
'protection' gives an impression of ‘locking up’ resources from local people and society. Within this context, the immense resources and greatly challenging social conflicts of the KKNP offer a unique opportunity to set a precedent and to change this misconception for the Protected Areas of the world.

The first step should target building bridges and mutual trust between the locals and the facilitators. This is essential in order to begin the communications immediately on a positive note. The governmental institutions and organizations should abandon the perception of ‘protection against’ the locals, and adopt the notion of ‘protecting with the locals.’ Perception of such understanding by all stakeholders prior to the collaboration efforts would highly increase the chance of positive participation by local residents.

The government representatives should also openly accept and admit the mistakes and wrongdoings of the past managements. Approaching the negotiation with the local communities with demonstration of such radical changes within the vision of the government would generate significantly positive energies in the negotiation. Both parties, the government and the local communities, should stop beating the dead horse by constantly criticizing one another and then expecting the other party to change for the “better”. It is a great irony that there is no consensus on what the “better” is.

The villagers in the KKNP claim that they are ready to collaborate in any conservation effort as long they are listened to. In their claims they are aware that their livelihood is dependent upon the forest and the environment that they already had been protecting. Some village heads expressed that an honest manager of goodwill should come to the site and start building trust. Only then could the problem be resolved and the
projects could succeed by eventually helping everybody. Local people do not have any
tolerance for the further exploitation of their trust.

The villagers of Altınkaya suggest that any management effort should be
performed without segregating people, and that the projects should include all of the
people in the village. Villagers do not feel comfortable in going to luxurious hotels in
Antalya to attend meetings so that they can voice their opinions. They find the settings of
these hotels and meeting halls intimidating. On the other hand in the earlier years, in
Beşkonak village the locals refused a director by throwing stones and damaging his car
when he arrived in the village to have a meeting with the villagers. The methods of the
bridge building efforts by the management should be reevaluated to develop a mutually
agreeable way.

“This land can never be managed remotely.” [7.ns7297mc; a member of NGO]

Establishing an on site field office to station well trained full time employees--
not necessarily for conducting and controlling the projects but for outreach purposes,
would be greatly beneficial for every management related collaborative efforts on this
site.

Management services and conservation efforts of the national park should not be
profit oriented. This intimidates the local people. They are already very skeptical that
outsiders (including the government) are taking advantage of them and their resources.
When the government introduces a new regulation for the use of the land and resources
of the park with a revenue making feature, the locals prefer to sabotage and prevent it
rather than allow the management to receive any revenue. They have demolished the
amenity buildings, fencing and parking regulation posts of the picnic ground. According to some informants from the management this was both due to the minimizing influence and presence of the government on the site, and to the sabotaging of a governmental revenue generating regulation.

Within the same context the silviculture forest management model should be abandoned as the chief forest resources management principle. The native vegetation should be gradually restored with fire resistant native deciduous species which would also support wildlife within the boundaries of the national park.

It is one of the most compelling challenges of the KKNP that all of these recommendations for changes in methods or the implementation of new polices demand a fully neutral third party negotiator. The Köprülü Kanyon National Park greatly suffers from a lack of trustworthy third party facilitators. Some NGOs and local government agencies whose neutrality is arguable seem to be the only organizations willing to undertake such a crucial duty so far.

6.2.1.9 Recommendations for Local Communities

The locals are eager to see something good happen in their land and in their lives. It was stated by a considerable number of informants who are not native (a national park employee, a teacher, a veterinarian) that the locals do not like to work hard, and are laid-back in general. The research found through careful observations that the contemporary local villagers tend to find short cuts to quick gains in many aspects of their everyday lives. They should be helped to change this perspective to an alternative one that would motivate them to undertake initiatives with active roles for their own lives. It was also
found that their ancestors had formed communities with higher social morals and self-organizational control systems, and that they were patient in accomplishing tasks. The local people should have more faith in their intrinsic powers and release their inert energy and knowledge. They should begin by bringing the women members of the communities out to more active and frontier positions and allow them to participate in negotiations and training programs. They should be given some leadership positions in certain projects.

It is unfortunate that members of the local communities continuously produce rumors about governmental policies, and end up believing them. They need to concentrate their energies on issues by taking more positive and active participation in meetings and negotiations. The past was not good, but it can be an area of experience to learn from in an effort to make the future better. Living in the past only makes the future as bad as the past was. This is what is happening currently in the KKNP, especially between the management and the local communities.

The locals have to unite among themselves to avoid disorganized operations and to prevent further confusion. This would increase their credibility, upon which they can bring their claims onto the discussion table positively. They have to comprehend that the status quo only benefits a very limited number of people who are mostly outsider. Remaining hostile with the Turkish Government will not serve any good for them or the resources. The national park management is their only chance. Sooner or later they will have to collaborate with the governmental representatives for the wealth and protection of this land which is their heritage along with all of its history.
6.2.2 Regional Level Recommendations

The Southern Mediterranean region and the Taurus Mountains are home to many rich resources all of which are compatible with the characteristics of the Köprülü Kanyon National Park (KKNP). The park is surrounded with many archeological ruins of ancient settlements and cultural structures, a variety of traditional ‘working landscapes’ and a number of other national parks, national forests, rivers and beaches on the Mediterranean Sea. The region is a vast geography of interrelated greater ecological systems. All of these resources are managed individually despite their strong interconnectedness naturally, culturally and historically.

As a national trend of the last several decades all of the management’s missions are adapted to have economic motives with high profit margins. This situation does not only pose a threat to the sustainability of individual resources of the KKNP but also to the neighboring resources. The resulting conflicts tend to escalate and become a source of multiple pressures for their region. Due to the interconnected nature of the resources these pressures may start impacting other resources within their regions despite they may appear to be secluded within individual administrative boundaries.

The management of the individual resources within a region should be handled as a whole; within their regionally traditional, cultural and ecological contexts. Management efforts can be united under the umbrella of the Köprülü Kanyon National Park Cooperative Foundation. Especially the conservation of yayla grounds can only be possible with regional scale conservation programs. A greater and regional consortium of management institution could be facilitated by the leadership of the Antalya Regional Office of the Turkish National Park Department.
Multiple and efficient utilization of many physical resources and human resources would be possible through unified management of regional organizations. Broadly inclusive approaches to the conflicts would enable the management efforts to benefit from the neighbors’ experiences within the regional context. Teams of experts, staff, material resources, amenities, and marketing efforts, would all be efficiently utilized multiple times within similar conflict types on regional scales. Marketing policies can be developed for utilizing the historic potentials of the site for long term visitation programs. Management models and administrative principles should be attentive to the social, political and economic dynamics of the region. Broadly inclusive approaches with a holistic vision will not only help to conserve the resources in the long term, but will also increase their value by appraising their potential within broader contexts.

6.2.3 National Level Recommendations

The social conflicts of resources management challenges can be a generic problem for Turkey. Many of the cases explored and revealed in the Köprüülü Kanyon National Park may represent the management challenges of the diverse resources of Turkey. The immense resources of Turkey are deeply intertwined and seriously pressured under the impact of multifarious social conflicts at the national level because they often have multiple stakeholders. Many different national and international governmental and nongovernmental organizations have different and yet often conflicting interests on the natural and cultural resources of Turkey. Considering the richness of its resources and the depth of Turkish cultural history, the environmental and cultural resources conservation
programs are important issues in Turkey; and they are in need of improvements incorporating radical policy changes towards contemporary management principles.

It is essential to have a sole administration with predominant power and authority only to better facilitate and coordinate the management efforts of the different governmental and non-governmental organizations and institutions. Thus the internal contradiction among the organizations would be eradicated. First, regional organizations should unite the sporadic and conceptually disconnected yet ecologically and culturally interrelated neighboring resources at regional levels with holistic approaches. Then these regional management systems should be connected in a national network of management web with active, functional links. Although the current administrative pattern displays a theoretically similar management system it is more bureaucratic than genuinely practical. Thus it is dysfunctional due to lacking tasks. The network should be connected across a national web with an operational hierarchy of works and projects but not of ranked offices. Conventional governmental hierarchy tends to get ahead of the operation of the natural systems and to interfere with them. Focusing onto the interconnected tasks would greatly eradicate the clumsiness of the process within the government. Such a network of tasks and conservation programs would enable capacity building and training programs to be more efficient since they would utilize the resources at larger scales and would reach to broader domains.

The regulation of concessionary, recreational and agricultural activities; and the control of concessionaires and open air museums all can be managed from a central point more efficiently. Design guidelines and standards for structural constructions, landscape restorations can be developed to be employed through nationwide applications. The
unified management would allow tourism and recreation plans to be developed and operated on a national scale.

A central authority as the sole organization overseeing the national parks, protected areas and all ‘working landscapes’ would greatly improve the image of the government. That way the local communities would be able to approach government through direct inquiries. The basic principles of the ecosystem management theorem could be adopted in developing national level management policies for the entire natural and archeological resources of Turkey. This would enable the nationwide management efforts to operate across the existing fragmented administrative boundaries. The ecological and cultural boundaries of the resources would be the definitive characteristics of the management efforts within the visionary perspective of the Category V Protected Area management principles.
CHAPTER 7

CONCLUSION

As we have entered the 21st century, the worldwide spread of advanced technology and economic systems has expanded to such an extent that the dramatic impacts of this growth reach remote corners of the world. The free-market based capitalist economy meanwhile nourishes this unrestrained phenomenon of modern humans, while also thriving on it. If the current global growth pattern is perpetuated, further progress in developed nations may only become possible at the expense of the resources of less developed nations. Although such growth may have positive outcomes for the less developed nations, negative impacts with long term effects are often inevitable. These impacts are mainly in the forms of cultural imperialism and the exploitation of natural resources. Tourism and the free-market based economy are usually the instruments. The social values of the more traditional communities of less developed nations appear to be vulnerable assets under the severe impacts of this phenomenon. Neither the natural systems nor the social environments can regenerate and restore themselves fast enough to keep up with the frantic pace of the resulting exploitations of the biophysical and cultural resources.

Human communities, especially in the rural regions of developing nations, meet their most basic needs for livelihood from the resources of the land. The perception of the land by its traditional residents is the essence of the landscape, and this constitutes the most vital component which defines the implicit value of ‘working landscapes’ beyond its biophysical resources. The core notion of this integrity is a system of mutual support between land and humans; and this integrity essentially makes up the strongest asset of a
landscape, generating resistance to stand against the pressures of contemporary global growth and the capitalist economy. Any harm to this integrity constitutes the utmost threat to the wealth and sustainable use of a land and its resources.

The successful implementation of natural and cultural resources management projects and conservation programs are significantly dependent upon the quality of the participation of local communities regardless of the weight of their stakes. When a strong public constituency is in effect factors such as the availability of funds, managerial authority and expertise, etc, are far inferior and much less effective. All efforts –from plan development, through implementation, to monitoring - should concentrate their focus on the integrity between the land and humans. The restoration, conservation and efficient management of biophysical resources and the natural environment should be the outcomes of the resolutions of social conflicts. Only then the resolutions could be comprehended by the local communities as a result of their participation; and that way they would perpetuated.

In the case of the KKNP, the local communities were identified by the policies of earlier managements as though they were accidental settlers of the region and sole beneficiaries of the natural resources. Their presence was not acknowledged as an asset of the ‘working landscapes’ within the national park despite their stewardship notions and strong traditional ties to the land. They were not understood thoroughly, nor were the fact that they were indeed benefactors of the environment. This misperception has largely caused the management to perceive the local communities as the main sources of all of the conflicts during the disorderly past.
Meanwhile, the pressures of global growth have harmed the integrity of the ‘working landscapes’ of the Mediterranean region through the dynamics of the national economy. The social fabric was deteriorated, and the mutual trust and communal ties have been disrupted within the local communities. As a result, the local residents seem to have lost their intrinsic connection to their lands in the KKNP, and their perception of the environment has dramatically changed. The role of the locals within the context of environmental conservation and resources management has changed from serving as stewarding benefactors, to being exploitative beneficiaries and ultimately to behaving as adversaries of the national park. Throughout the eventful past of the KKNP they have come from being integral elements of the ‘working landscapes’ to acting as antagonistic enemies of the park management.

Many of the management challenges of the KKNP (illegal constructions, goat grazing, tree lopping, oregano harvesting, and excessive hunting and fishing) all appear to be dramatic cases of open pool resources. The current conditions of the common resources today, are nearly as dramatic as what was defined by Gerrett Hardin (1968) as the “The Tragedy of Commons” four decades ago. Once traditionally working landscapes of the KKNP incorporating the yaylacilik tradition, are now suffering from a condition that is better described as the “tragedy of open pool resources.” The abandonment of yaylacilik tradition, inconsistent administrative policies and impaired integrity and the shifting demographics of the villages in the KKNP have interactively brought about the depletion of the social and natural environments.

Ostrom et al. (2001) defined that whenever and wherever there is a common resource it would intrinsically have the access control notion with it. Common property
users have always developed webs of coordination to avoid overuse. The exploitation of common resources requires repeated action; and people are capable of communicating to respond to the consequences of any overuse during perpetual recurrence. The memories of the yaylacılık tradition have disclosed that it was the concentration of the harmonious utilization of resources through the three ideal management conditions: **controlled access**, **coordination** and **communication**. These three characteristics of the yaylacılık tradition which constituted a healthy social structure were the essence of the management of the resources. The abandonment of the yaylacılık appears to be the most critical of all of the social changes leading to the demise of the regional integrity. Clearly, the yaylacılık will never be fully restored as a traditional land management activity within this site. This constitutes the most detrimental breaking point of the traditional integrity of this once working landscape.

The site of the KKNP is still rich in many aspects. Its resources will continue to attract increasing pressures from regional actors because of the national dynamics that are the reflection of global change. This complex and sobering trend represents not only the plight of the KKNP, but also of the entire social landscape of Turkey with regards to the conservation of resources and the environment. Under the current circumstances, it is unrealistic to attempt to facilitate any conventional management efforts no matter how well planned, unless the positive participation of locals is assured. “Comprehensive Conservation and Management Plans” incorporating collaborative objectives, site specific and society specific temporal focuses, and broad spectrums need to be developed for nationwide application in Turkey as well as in the KKNP.
The stabilization of the traditional dynamics of ‘working landscapes’ should be the objective of all management models in the KKNP especially considering the influence of newly adopted lifestyles, contemporary socio-economic systems, and political dynamics. To accomplish this, it is recommended that the essence of the *yaylacılık* tradition has to be comprehended thoroughly. The three ideal characteristic elements of the ‘working landscapes’ of the KKNP (controlled access, coordination and communication) which once were maintained by the *yaylacılık* tradition should be re-institutionalized among the national park communities as management conditions. The resolution of biophysical conflicts should be accomplished as the outcomes of the resolutions of social conflicts which should be accomplished by the restoration of these three elements of the social structure. The KKNP Cooperative Foundation can be the institutional substitution for the social structure provided by the *yaylacılık* tradition. Contemporary applications adopting these principles can be operated by neutral third party initiatives.

All management efforts should be initiated by building consensus among the individual communities and the diverse stakeholders including management; and should be aimed restoring the integrity of the ‘working landscapes’ between the land and humans. The local’s perception of their environment must be rejuvenated and improved via a series of training and awareness raising programs.

Differential access to modern benefits in different communities has lead to different outcomes for different villages, even under the open poll regime. This causes the villages in upper-watershed and lower-stream regions to respond to collaboration attempts differently. All 11 villages of the KKNP present different interests and
inclinations in participating in the resources management and conservation efforts and projects. These plans and projects should be developed with specific focuses on the challenges and the potentials of each community, and on region-specific and village-specific characteristics.

The second term management plan of the GEF project is a result of well studied comprehensive efforts. This plan can be further improved upon by making the government less visible, and by incorporating the positive participation of the local people. It can be implemented initially under the governmental park management by full time experts on the site. Eventually, the administration of the plan could be gradually handed over to neutral third party collaborative organizations and local institutions. The government should ensure the wealth of the resources and the integrity of the ‘working landscapes’ by monitoring, financing, and providing expertise and services at a prudent distance. This is a lengthy and ongoing process of planning which requires constant monitoring, evaluating and adapting. This “Comprehensive Conservation and Resources Management Plan” should be targeted as the general management plan administration model for the entire national parks system of Turkey in the long term.

Through the “Comprehensive Conservation and Resources Management Plan” of the KKNP an “Associative Management Model” can be developed for the ‘working landscapes,’ protected public lands, and national parks of Turkey. This is an integrated approach that takes advantage of the interconnected nature of the wide spread causes of the social conflicts. The resolutions to be developed for a given conflict can eradicate the sources of another conflict. Linking resources and conflicts through their causes would induce the positive participation of the stakeholders.
Resources management conflicts are the built up outcomes of the interplay between multiple social actors. Radical solutions with long term impacts for the social conflicts would be possible with the development and implementation of management models that utilize holistic approaches. All causes should be thoroughly examined and all actors from biophysical through cultural, political and economic should be included in the resolution efforts. Management plans with multiple dimensions and objectives should be adapted, developed and implemented within phases.

The cultural and ethnic differences among the communities need to be recognized while developing and implementing plans for integral approaches beyond administrative boundaries that span across the continuum of ecological and natural systems. The local communities and their traditions, with mainly the yaylacılık as a uniting tradition, should be recognized and designated as an asset to the entire management system.

A conglomeration of national parks, archeological sites, areas of natural and ecological conservation significance and other ‘working landscapes’--all within the Mediterranean region, can be united under the central leadership of the KKNP for practical capacity building programs with conservation focuses.

The initial focus of conservation efforts in the ‘working landscapes’ should be to build consensus and to establish trust between the locals and the facilitators via outreach and communication. In the absence of this, the efforts will fail greatly, and will only worsen the conditions by degrading the social environments. It is essential to establish a mutually agreed upon foundation among all of the stakeholders and the facilitators of the ‘working landscapes’ prior to the application of all projects.
Substantial resolutions with long term positive impacts on national and regional scales can only be achieved through the development and phase-by-phase implementation of multidimensional “Comprehensive Conservation and Resources Management Plans.” This can be accomplished through collaborative approaches that address the region-specific social conflicts and potentials of the ‘working landscapes’ of Turkey, and of the developing countries of the Middle East. The resolution efforts for intertwined conflicts should be planned to have integral connections to allow the outcomes to be further utilized towards the resolution of associated conflicts. This can only be possible via the planning and development of site specific and society specific, temporally conscientious institutions with “communication, controlled access and coordination” objectives.
APPENDICES
I visited Çaltepe village where I found a group of 8-10 men sitting under a big walnut tree in the village square. Chickens and children were running around contributing their joyful noises to the scene. The village idiot played an important part in this gathering with his constant motions. He was a mute and was quite agitated yet, he repeatedly walked away and came back to shake and kiss my hand with additional expressions of kind gestures. While doing those he was mumbling some meaningless noise and pointing my pocket. He was clearly expecting me to give him some change as a tip. The energy he was dispersing while circling around us was presenting a fascinating contrast to the serenity of the group. It was making me quite nervous anytime when he gets out of my sight. I was seeking some comfort in the faces of the men who were calmly sitting in front of me and was trying to understand that everything was fine behind me. Although it was quite tempting I could not turn around and look to keep him under control. I am not certain why, I either did not want to insult the group or did not want to express my fear. Nevertheless the contrast was making it quite challenging to converge with my hosts it was providing a valuable opportunity to emphasize the tranquility of the village.

There was a mound of watermelons piled under the shade of the tree brought by a merchant from outside who was sitting by the pile. I had purchased one watermelon from him and shared it with everybody having served slices to the children first. Perhaps this gesture made the village idiot presume that I could be a good source for some spare change. It was sadly ironic to see this once prosperous village of Çaltepe, where they used to produce everything in their fertile fields along the Köprüçay River and share their grain with the poor people in neighboring villages, now purchasing watermelons brought from great distances. The irony is that the villagers complain that they cannot transport the goods to outer markets if they were produced; yet they cannot escape from being a market for outside producers. In their words, sitting under a tree at a total dormant state is their only option.
Meanwhile in the background, another group of relatively younger men were busily carrying large sacks of oregano from somewhere in back of the houses and loading them onto a truck in the village square. They say thanks to the oregano that now keeps them alive.
APPENDIX B

PRINCESS BLACK SNAKE AND HUNTER AHMET

One day hunter Ahmet goes to a nearby mountain for hunting. He sits on a rock expecting to see some game that would be worthy of hunting while contemplating and enjoying the beauty of nature. After a while, he notices that a black snake is staring at him and he begins to stare back at her with great admiration for her serenity and beauty. As the black snake and the hunter continue to enjoy each other’s company, a gray snake appears through the bushes behind the black snake. This makes hunter Ahmet greatly nervous, especially as he notices that the gray snake starts to encroach on the black snake. Knowing the evil intentions of the gray snake getting ready to attack the black snake, hunter Ahmet quickly grabs a stone and throws it aiming at the gray snake. Alas, he inadvertently hits the black snake and injures her to his regret. Both snakes vanish in the bushes quickly. Unfortunately the black snake is wounded and she is deeply disappointed thinking that the hunter intended to kill her, not knowing the threat caused by the encroaching gray snake at her back. This black snake was the princess daughter of the sultan of the black snakes’ realm. Although hunter Ahmet actually intended and somewhat managed to rescue her, princess black snake unaware of the circumstances goes to her father’s palace and complains about hunter Ahmet. This news greatly surprises and disappoints the Sultan since he knows hunter Ahmet as a decent person who would not harm a black snake for any reason. He sends two messenger black snakes after Hunter Ahmet in order to further find out about the incident. Meanwhile, hunter Ahmet returns to his village and goes to the village coffee house and sits in a corner quietly and deeply disappointed with his own act. He does not forgive himself for having harmed the black snake even though it was unintentional, and he sits pouting. Seeing his obvious sorrow and pouting face his fellow village men ask him what was bothering him so much. While he was explaining what a terrible mistake he did and how he hurt a black snake unintentionally in an attempt to rescue her from the potential attack of a gray snake, the two messenger black snakes sneak into the coffee house and hear all that hunter Ahmet says. They quickly return to the palace and reveal the better news to the Sultan and the princess black snake that the hunter indeed rescued their princess from the peril of an evil...
gray snake. The princess feels ashamed for having blamed hunter Ahmet and wishes to reward him for rescuing her. The Sultan sends his army of black snakes to bring hunter Ahmet to his palace. As he was still sitting in the coffee house indulging himself in his sorrow, hunter Ahmet notices that he is surrounded by hundreds of swirling black snakes. The slowly and gracefully moving mass of snakes form an opening as a path in front of the hunter and lead him to walk out of the coffee house, then continue to guide him through the woods and bring him to the palace of black snakes. The Sultan of the black snakes greets hunter Ahmet with gratitude and thanks him for saving his daughter’s life. Then, princess black snake sitting next to her sultan father glances at hunter Ahmet gratefully and thanks him for what he did. She then asks Ahmet to stick his tongue out and she touches Ahmet’s tongue with her tongue, granting him the ability to speak and understand all of the languages that all of the animals speak in the world…

The story escalates from here. Hunter Ahmet starts using this new skill to gain advantages in defending himself on many occasions. He receives especially helpful tips both from wild and domestic animals during hunting, and in conducting his relationships with other people including his wife.
Chicken, Children, Women and an Old Man – Çavuş: Değirmenözü is a well-preserved village located up high on a mountain just outside the boundary of the Köprülü Kanyon National Park in Turkey. It was mid day one holy Friday when I arrived in this lovely village -- the sacred prayer time of the week. A cool breeze, flowing through the lush vegetation from the surrounding mountains was providing a gentle comfort on this nice summer day. As I was strolling and beginning to explore along the village streets I came to realize that this was not the best time to visit a Muslim village, for I found myself all alone. All of the men of the village-- young and old alike would be in the mosque for the Friday prayer, leaving the public spaces nearly deserted.

I was already feeling guilty for the thunderous noise coming from my motorcycle resonating through the entire bowl-shaped terrain of the village while I was searching for a less obtrusive place to park. Now, even after hiding the motorcycle under the lowered branches of a big tree, I was feeling even guiltier for walking the empty streets along with the chickens, cows and dogs while all the men were in the mosque praying. Instead of praying at such a holy time I was disturbing the peace on the cobble stones and scaring chickens away with my senseless presence in a desperate attempt to find somebody to talk to. I suddenly was aware that the only human interaction I could possibly have would only be with the women and children of the village, which would not be the most socially or morally acceptable means of conduct in such a rural settlement. My guilt was escalating even more and was accompanied with a fear.

I would never have thought that my presence could be so uncomfortable in such an inviting and precious looking village. This was a unique moment in which I felt no sense of belonging in any place for the first time since I had been in this region. Evidently the timing was making a big difference on the social characteristics of spaces. It is magical how such a modest call for a prayer from the minaret of a mosque can convert all public spaces to private spaces instantaneously. As though a public-air was drained from the streets in an instant leaving a wandering stranger like a fish-out-of-water. All the more surprising to me was the fact that my being outside of a mosque was the reason for
this discomfort, as opposed to being inside of one. I would normally have perceived this
the other way around knowing that my comfort zone did not include the insides of
mosques.

At first I wished that I had arrived here a bit earlier to join the jamboree of men so
that I would have avoided being so deserted. Then I quickly realized that I should be
grateful indeed that I did not arrive earlier; otherwise it would have socially necessitated
me to enter the mosque and participate in praying with all of the men of the village, and
this would reveal that I do not know how to pray. Such an exposure would eventually
cause a much more severe level of alienation despite being physically embraced by one
half of the village population in the mosque.

After this quick evaluation of the circumstances I thought the best option would
be for me to wait in the mosque’s yard until the men of the village finished praying and
came out. I figured this would be the safest way to face my escalating guilt and the
associated shame. If I were to get on my motorcycle and run away I would never be able
to come back, and my guilt feelings would find no relief. So, despite my mixed feelings,
running away was not an option. Thus, I continued my walk with a purpose and an
associated confidence, searching for the mosque.

The mosque was easily spotted because of its beautifully slender, clean white,
modest minaret rising above the rooflines of the village houses and pomegranate trees.
When I arrived at the mosque I found a group of children peacefully playing on the
porch, right next to 60 to 80 pairs of shoes that were left by the praying men at the door
step. Shoes are considered unclean and are not welcomed in mosques. Despite their
cleanliness here, the shoes were still left behind, waiting on the mosque’s porch as though
they were some sort of loyal companions of the village men. The way the shoes were
placed in front of the door, they resembled a random close pack, displaying a pattern that
was reminiscent of a natural phenomenon as a social behavior.

Their composition was perhaps mimicking the pattern the owners had inside the
mosque. Almost all the shoes were radiating inward, their noses pointing to the entrance.
Every space among them was strategically utilized.

One could tell many stories about the social character of the village population by
looking at the shoes. For example, the shoes that looked like they belonged to older
people were sitting closer to the entrance indicating early arrival, which implied willingness to be in the mosque. On the other hand shoes with sportier looks and sneaker types were placed on the outskirts of the mass of shoes in a much more dispersed and irregular pattern. Some of those shoes that appeared to belong to younger members of the communion were even separated from their mates, indicating late arrivals—perhaps due to reluctance. Therefore the outline of the shoe mass was an untraceable fuzzy line in contrast to the close pack in the center. Some significantly small sized shoes that clearly belonged to the children of the communion were tightly embraced among the shoe mass while also being accompanied by some larger shoes. The mass also contained some shoes staggered among them that looked like they came from higher classes. The collective orientation depicted in the shoe mass resembled a radial and harmonious movement with a purpose, lead by the older and more experienced members of the society, who proportionately seemed to be in smaller numbers, yet were loyally followed. The warm whisperings and murmurings of the children on the porch was creating a joyful, somewhat mischievous yet harmonious blend with the mystic and serene prayer sounds that were pouring from the mosque. After admiringly studying the shoes, I decided to join the children. I was immediately welcomed and simultaneously victimized by their naïve curiosity as I sat next to them on the bench. Perhaps part of it was due to my being outside of the mosque. Regardless, my childlike, humble personality confined in an adult-like body, garnished with a touch of guilt, did not escape the attention of the children. They knew from the moment that I walked in and sat next to them that I was not one of those adults that they should be afraid of. My camera and I were quickly received as entertainment. However this new source of attention was a bit too amusing so that the children’s whispers and giggles soon turned to much higher laughter. My childhood memories were telling me that the noises we were making at certain instances were definitely disruptive enough for an adult inside the mosque to be commissioned to come out and scold us. Now this was a new guilt at a different level to terrify me—that somebody would come out of the mosque to yell at the children, and find me among them. Since when had I gotten out of the frying pan to find myself in the fire? This was not exactly what I was seeking to relieve my earlier guilt and mixed feelings; but it did
not seem I had a choice. I helplessly started to pray outside of the mosque that the prayer inside would finish sooner so that I could interact with my peers.

At last, the prayer in the mosque was over and a variety of village men started to come out of the door. This was both a heavenly yet chaotic offering for me as a social science researcher. I impulsively tried to capture and hold as many people as I could in a futile attempt to interview all of them at once. Upon their coming out of mosque they were courteously clearing the way for the people behind them, while at the same time trying to find their shoes. On finding their shoes, they were hurriedly walking while hastily trying to push their feet into them with weird ankle twists in between irregular steps. The amazing pattern of shoes that I was greatly admiring was deteriorating before my eyes. While this orderly chaos caused by the shoe searches was earning me a few seconds to observe the mass of moving men, it was still quite a challenge to keep a focus and approach one person to initiate a conversation. They were quickly dispersing into different directions as soon as they put their shoes on and brought an order to their steps.

In fact, I could still find them in the village if they had returned to their houses. But, they were all here within my reach, and I did not want to miss any of them. I especially did not want to take any chance of losing the elders who are the most valuable informants for my research and the more pleasurable to converse with. I could not individually go through my academic routine to introduce my project and ask for their consents to be interviewed because of the chaos. I would have loved to keep them all in my company on the mosque’s porch and listen to their stories all day long. Alas, regardless of their ages they were moving quite fast seemingly anxious to reach their homes, perhaps for delayed lunch.

I soon realized that fighting against this commotion would not offer me any interview as long as I was trying to capture them all. The men were dispersing one by one, and rapidly. Frantically trying to talk to more than one person at a time and keeping an eye on another person was not working for me. I quickly withdrew this panic and wisely started to let go of the men who were already beyond my reach. Albeit it was painful to watch some potentially interesting looking old men walking away and disappearing behind the corners of the village streets, I let them go none the less. I concentrated my focus on one or two of the most elderly persons and directed all of my
efforts towards them in the hopes of accomplishing at least one thorough interview. This was a good decision and my luck was turning.

I calmly chose an elderly man, and I held him as a treasure. I was determined to keep him in my courteous captivity on the mosque’s porch for the next several hours, and I directed all my focus onto him for a potential interview. As I introduced myself and my research project his response was only affirming that my decision was sound and he was an excellent choice. Indeed, he had proven to be a gem; I had many most enjoyable moments listening to this sweet elderly man of the village. His memory was as crisp as yesterday. It was clear that this man had had a good and happy life, and still was happy, and he was generous enough to share it with me.

He began by telling me that he had earned a nick name in the army, and was still very proud of carrying it. Çavuş – lieutenant; that is. All of the time while I was interviewing him I was aware that I was not only in the fortunate company of an elderly and mature man now, but of a man who had been mature all through his young and adult life. His minute appearance was not due to his age but to his nature. Indeed at some point he expressed that he was always a person of relatively small stature with proportionately greater accomplishments. The energy that he radiated from his child-sized body was magical enough to embrace and bless me. I greatly respected the grandeur of this old man in every moment of my time with him. I am genuinely thankful for the time he spent with me and for the experiences that he graciously shared. On the conclusion of my interview with him all of my guilt was washed away, and I contently felt that I was welcomed and was in my social group.
APPENDIX D
LETTER OF INFORMED CONSENT

The University of Massachusetts Amherst
Institutional Review Board

Completeness of Informed Consent Form

Study Title: An Assessment of Natural Resources Management Conflicts in the Working Landscapes of Mediterranean Turkey (Türkiye): Köprülü Kanyon National Park

Principal Investigator Statement:
My signature below indicates that I have proofread and/or edited the informed consent form for the above mentioned study and that it contains the essential elements required for informed consent.

Dr. Elisabeth M. Hamin, University of Massachusetts Amherst, MA
Signed Date

Researcher Student
Nedim Kemer
Signed Date

RESEARCH INFORMED CONSENT FORM

Subject: Assessing the Social dynamics of the traditional ‘working landscapes’ of Köprülü Kanyon National Park in Turkey.

Principal Investigator: Dr. Elisabeth M. Hamin

Student Investigator: Nedim Kemer

Title of Project: An Assessment of Natural Resources Management Conflicts in the Traditional Working Landscapes of Turkey (Türkiye): Köprülü Kanyon National Park
By signing this consent form you, --------------------------------- ----------------------------------, indicate that you willingly agree to participate in this project. The essence of this project is as follows:

**PURPOSE OF RESEARCH:**

The research initially aims to understand the fundamental attributes of natural and socio-cultural dynamics of the traditional ‘working landscapes’. The consequent aim of the research is to understand the biophysical pressures and the social dynamics which complicate the natural resources management challenges in the traditional ‘working landscapes’. Eventually, the study will explore the socio-ecological factors to stabilize the dynamics of the ‘working landscapes’. The study aims to provide planning professionals and protected area managers of similar nations with significant insights in developing management plans inclusive of human dimensions and while building bridges with local peoples for managing cooperatively and efficiently.

**PROCEDURES:**

As an interviewee, you will be asked several open – ended questions regarding your background, your agricultural tradition, legends and stories of the land that your ancestors might have told, your views and memories of your natural surroundings, your use of natural resources, and some detailed wildlife and vegetation knowledge questions.

**RISKS AND DISCOMFORTS**

There are no risks associated with this interview. If you at any time feel uncomfortable with my questions you may refrain from participating and /or stop at any time.

**BENEFITS**

Your participation in this interview will help the research team to develop information related to the research questions that are the focus of the study. Your contribution will help inform us about the issues, attitudes, values and preferences of residents and indeed all the stakeholders regarding conservation and best management of the natural resources in the region in a sustainable manner.

**COSTS & COMPENSATION**

There are no funds available for reimbursement of expenses incurred as a result of the interview.

**CONFIDENTIALITY**

We will take every precaution to ensure the confidentiality of your responses. If you let us a voice recorded will be used otherwise handwritten notes will be taken and
confidentially archived at the University of Massachusetts Amherst. Specially developed codes will be used to provide anonymity and to differentiate individuals. Your name will never in any way be associated with what you say during this interview.

**VOLUNTARY PARTICIPATION**

You are under no obligation to participate in this project. You may withdraw your participation at any time without prejudice.

**REQUEST FOR ADDITIONAL INFORMATION**

Should you have any questions about your participation in this study, you may call my Professor Dr. Elisabeth Hamin at (00-1) 413 545 2255 (English), or Nedim Kemer (00-1) 413 545 6627 (Turkish).

If you would like to speak with someone not directly involved in the research study, you may contact the Human Research Protection Office at the University of Massachusetts via email at humansubjects@ora.umass.edu; telephone (413) 545-3428 (English speaking only); or mail at the Human Research Protection Office, Research Administration Building, University of Massachusetts Amherst, 70 Butterfield Terrace, Amherst, MA 01003-9242.

**SUBJECT STATEMENT OF VOLUNTARY CONSENT**

When signing this form I am agreeing to voluntarily enter this study. I understand that, by signing this document, I do not waive any of my legal rights. I have had a chance to read this consent form, and it was explained to me in a language which I use and understand. I have had the opportunity to ask questions and have received satisfactory answers. A copy of this signed Informed Consent Form has been given to me.

________________________________________________________________________

Informant’s Name

________________________________________________________________________

Signature   Date

**STUDY REPRESENTATIVE STATEMENT:**

I have explained the purpose of the research, the study procedures, the possible risks and discomforts, the possible benefits, and have answered any questions to the best of my ability.

________________________________________________________________________

Signature:       Nedim Kemer       Date
Turkish Transaltion of Letter of Informed Consent

BİLGİLENDİRİL.SQLite İRADEYLE ARAŞTIRMA İZİN FORMU

Araştırmacı Konusu: Türkiye Köprülü Kanyon Milli Parkı içerisindeki üretim yapılan peyzajların geleneksel sosyal dinamikleri.

Ana Araştırmacı: Yardımcı Doçent, Dr. Elisabeth M. Hamin
Massachusetts Üniversitesi Amherst, Massachusetts, Amerika Birleşik Devletleri

Öğrenci Araştırmacı: Nedim Kemer

Proje Başlığı: Türkiye’de Geleneksel Üretim Peyzajlarında Doğal Kaynak Yönetim

Çelişkilerinin Değerlendirilmesi: Köprülü Kanyon Milli Parkı

Siz, ____________________________________ bu izin formunu imzalayarak, kendi iradenizle bu projeye katılma kabul ettiği ifade etmiş oluyorsunuz. Bu projenin özü aşağıdaki açıklandığı gibidir.

ARAŞTIRMANIN AMACI:
Bu araştırma öncelikle geleneksel üretim peyzajlarının temel doğal değerleri ile sosyo-kültürel dinamiklerini anlamayı hedeflemektedir. Bunu takip eden amaç ise geleneksel üretim peyzajlarında doğal kaynak yönetim çalışmalarını güçlendiren biyolojik ve fiziksel baskılar ve sosyal dinamikleri anlamaktır. Bu çalışma, nihayi olarak, üretim peyzajlarının dinamiklerini sabitlenmesini sağlayacak sosyo-ekolojik nedenleri inceleyecektir. Çalışma benzer ülkelerdeki bölge plancılarına ve korunan alan yöneticilerine de yönetim planı geliştirme çalışmalarında ön ayak olabilecek doğal kaynak yönetim olgusunun insan boylarını anlayış ve kavramayı sağlayacak değerleri sunmayı ve aynı zamanda yerli halkla yönetim birimleri arasında etkili ve katılmcı yönetimleri sağlayacak köprüler kurmayı amaçlamaktadır.

YORDAM:
Bir katılımcı olarak size geleneklerinize, tarımsal adetlerinize ve atalarınızı tarafından size aktarılmış araziye dair efsane ve hikayelerinize, doğal çevreye dair görüşlerinize ve anılarınız, doğal kaynakları kullanış biçimlerinize hakkında bazı ucu açık sorular ve yaban hayat ve doğal bitkiler hakkında da nispeten daha detaylı sorular sorulacaktır.
RİSKLER VE RAHATSIZLİKLAR
Bu görüşmeyle ilgili olarak hiçbir risk ve olası rahatsızlık söz konusu değildir. Eğer benim sorularım nedeniyle rahatsızlık duyarsanız, arzu ettiğiiniz herhangi bir noktada durabilir ve katılımından vaz geçebilirsiniz.

FAYDALAR
Bu görüşmeye katılımınız araştırıma ekibine bu araştırmanın hedefi doğrultusunda bilgi geliştirilmesinde yardımcı olacaktır. Katkıların bize, yerli halk ve asında arazi üzerinde söz sahibi olan herkeze olabilecek doğal kaynakların sürdürülebilir şekilde en iyi yönetimine dair tüm konular, davranışlar, sosyal değerler ve tercihler hakkında bilgi edinme konusunda yardımcı olacaktır.

GİDERLER VE GİDERLERİN TAZMİNATı
Görüşme nedeniyle ortaya çıkabilecek masrafların karşılanması için kullanılabilecek bir parasal kaynak mevcut değildir.

GİZLİLİK
Cevaplarınızın gizliliğini garanti altına almak için gerekli her türlü önlem alınacaktır. Eğer izin verirseniz görüşmeler sesli olarak kayıt edilecek, aksi halde el yazması notlar alınacak ve bu kayıtlar gizlilikle Massachusetts Üniversitesi'nde arşivlenecektir. Özel geliştirilmiş kodlama sistemi kullanılarak isimler ve şahıslar gizli tutulacaktır. Sizin isminiz asla ve hiç bir şekilde bu görüşmeler esnasında söyleneceğiniz şeylerle ilgilendirilmeyecektir.

GÖNÜLLÜ KATILIMCILIK
Bu projeye katılmak için hiçbir zorunluluğunuz veya yükümlülüğünüz söz konusu değildir. Hiç bir önyargı altında kalmak kalmayarak herhangi bir noktada katılımınızı geri çekebilirsiniz.

İLAVE BİLGİ TALEBİ
Eğer bu çalışmaya katılımımızla ilgili olarak bir sorunuz olursa, hocam Dr. Elisabeth Hamin’i (İngilizce) 00-1 413 545 2255; veya ben Nedim Kemer’i (Türkçe) 00-1 413 545 6627 arayabilirsiniz.

Eğer araştırma projesiyle direkt olarak ilgisi olmayan birisiyle konuşmak isterdensiz, Massachusetts Üniversitesi'nin İnsan Üzerine Araştırmalar Koruma Ofisine emaile veya telefonla bağlantı kurarak görüşebilirsiniz: humansubjects@ora.umass.edu; telefon (413) 545-3428 (sadece İngilizce konuşulabilir); veya bu adrese mektup gönderbilirsiniz: "Human Research Protection Office, Research Administration Building, University of Massachusetts Amherst, 70 Butterfield Terrace, Amherst, MA 01003-9242, ABD."
KATILIMCININ GÖNÜLLÜ İRADE BEYANATI


Katılımcının Ismi

______________________________

İmza:                                                                 Tarih

ARAŞTIRMACININ BEYANATI:

Araştırmanın amacı, çalışma yordamı, olması riskler ve rahatsızlıklar ve olması faydaları açıkladım; ve soruları mümkün olduğunca cevapladım.

______________________________

İmza:                                    Nedim Kemer           Tarih
APPENDIX E

SEMI-STRUCTURED INTERVIEW QUESTIONS

Local Residents and Villagers:

1. What natural resources were your ancestors’ livelihood dependent upon?

2. What is your livelihood dependent upon?

   *(If there is a significant difference in past and present dependence on Park resources)*

   **Probing Questions:**

   2a. How has your use of Park resources changed?

   2b. In your view, what has caused the changes?

3. I would like to ask you to close your eyes for a moment. Envision the past conditions of the surrounding landscape by either refreshing memories from your personal experience as far back as your childhood days or recalling the stories and legends that you might have heard from your ancestors. What significant differences in the landscape do you see today?

   **Probing Questions:**

   3a. What particular element of the surrounding landscape such as rivers, wildlife, vegetation, or perhaps some another aspect, do you see is different? What is your opinion of the differences or the changes?

   3b. What do you think might have caused these changes?

4. Do you harvest any of the natural resources from the landscape, such as fish, wildlife, wood, fruit etc.?
5. Especially since the establishment of national park and after the tourists started to come what physical aspects do you think have changed in this valley in broader terms?

   Probing Question:
   5a. Can you tell me more about these changes and what is your opinion of them?

6. Do you see any significant change on the social structure of your community after the establishment of national park and the increasing visitations of the tourists?

   Probing Question:
   6a. What is your opinion on the changes?

7. Can you tell me about your agricultural practices, and varying seasonal activities that traditionally delineate the ways of interacting with your land?

   Probing Question:
   7a. Is it any different than the times of your childhood or from the stories that you might have heard from your ancestors?

8. How is your relationship with the other villages in the valley, do you get together, socialize or communicate with them?

   Probing Questions:
   8a. (if yes) What are the main purposes of the gatherings? Is there any land and resource management purpose associated with those meetings? How do you control access, how do you communicate, and how do you coordinate for more efficient and sustainable land and resource management on the common resources?

   8b. (if no) Why do you not communicate or gather with other villages?

9. What are the cultural and traditional ways of celebrating or spiritually identifying the land?
10. Do you gather any goods from the landscape for your own medicinal or spiritual usage?

_Probing Question:_

10a. How have you learned that, are you teaching them to anybody?

**Governmental Agencies and National Park Managers:**

1. What are the most pressing issues that are challenging your agency in managing the national park currently?

_Probing Question:_

1a. Based on your experience and personal view, what resources of the park are under threat due to those pressures?

1b. What measures are you currently taking to deal with those issues?

1c. Do you have any future plans to deal with those issues?

2. I am particularly interested in the issues that are involved with the local communities in terms of managing the Park and its resources with collaborative efforts. Can you tell me, whether you as the management have collaborated with the local communities on a natural resources management related issue in the past?

3. What natural resources do you think the local communities are using the most? What is the role of your management in coordinating, and controlling the access to these resources?

4. Can you explain the land ownership status of the park’s coverage area? What percentage of the land is owned by the government, and how is the rest allocated among the 11 villages?

5. Has there been any significant policy and management change in the short history of park?

_Probing Questions:
5a. *(if yes)* Can you tell more about that, such what direct and indirect impacts those policy changes have had on the biophysical environment and on the social structure of the site?

6. What do you think of your current general management plan; do you think it is effective?

*Probing Questions:*

6a. *(if yes)* Can you tell me more about what aspect of the current management plan is working the best and that you would like to see improved for it be more effective?

6b. *(if no)* In what way it is not effective?

7. Do you anticipate that your management is planning a general policy change in the future?

8. Can you tell me more about your personal experience in interacting with the local residents of the park in general?

*Concessionaires:*

1. Can you describe, what type of services do you usually provide?

*Probing Questions:*

1a. How old is your business?

1b. How long has this type of activity taking place in the valley?

1c. Could you tell me more about your customers as to where they generally come from, how long do they stay in the valley, etc.?

2. How would you describe your relationship with local communities? Does your practice contest over the resources with them or do you collaborate with them?

3. How many employees do you usually have during the peak season?

*Probing Questions:*
3a. Are your employees from this region, or outside?
3b. (if they are local) Are they trained and/or certified in performing the services they are providing?
3c. (if it is a seasonal activity) I believe this is a seasonal activity; do you let your employees go during the winter months and rehire them every summer?
3d. (if yes) What is their livelihood dependent on during those months of unemployment?

*Your experience are very valuable for my research because you have been performing your business here for a significant amount of time by interacting with local people, government, and the visitors at the same time. Therefore I would greatly appreciate your views in general.*

4. What is your experience with the park management in general? Have you ever cooperated with any other establishment, NGO, or any institution in order to improve your services, to serve the community or to help with the land and resources conservation programs?

*Probing Questions:*

4a. *(If the answer is negative and they wish to cooperate)* I understand you are willing to co-operate, and to serve for the community and even would like to help in conserving the Park and its resources. Based on your experience, can you tell me what the major hindrances are?
4b. I actually would like to hear most immediate and long term issues of conflicts that are preventing you from improving your services and from sharing your wealth with the community?

*Generic Questions to be Asked at the End of Every Interview*

1. If I was a governmental employee from the General Management of the Turkish National Parks in Ankara, or a park manager what would you like to tell me, or what would you like to see being changed and done differently?
2. Is there anything that you might care to add, or what should I have asked you that I did not think to ask?

3. Since you have a clear idea about my research now, do you know anybody who might be helpful and would be willing to talk to me?
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