

# **Sustainable Governance of Coastal Zone – Apathy or Commitment: Evidence from North Cyprus (TRNC)**

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Submitted to the  
Institute of Graduate Studies and Research  
in partial fulfillment of the requirements for the Degree of

Master of Science  
in  
Tourism Management

Eastern Mediterranean University  
June 2012  
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

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## **ABSTRACT**

Coastal zones are one of the most sensitive and fragile environments around the world. As increasing numbers of world population is gravitated toward the coasts, they have become prone to numerous problems including, population pressure, recreation, tourism, urbanization, accommodation/residential development, infrastructural pressure, oil drilling and sewers. As the coastal population increases, demand for a continuing supply of clean water, waste disposal, public health, food, protection from natural disasters and conservation is also increasing. However, the relationship between coastal ecosystems and tourism is highlighted through sun, sea and sand tourism which is mass oriented and its impacts are challenging in terms of sustainability issue. Coastal resource management has been established as a significant environmental undertaking wherever the productivity and health of these zones is in question. In respect of sustainable management of coastal zones, Integrated Coastal Zone Management (ICZM) has been recognized as a planning instrument to address and manage these unique ecosystems. In the case of island states, this issue demands greater responsibility from the institutions and policy makers in these environments as they are highly dependent on coastal zones as natural capital, not only for the purpose of tourism, but also for the sustainability of these island states as they are highly vulnerable to natural and man-made disasters. The aim of this research is to assess and explore policies of and planning approaches to ICZM in the case of TRNC which is dependent on the sustainability of these ecosystems for various economic and development purposes and more so for the purpose of tourism. It is assumed that policy makers approach to ICZM is not necessarily according to the

coastal zone specific management system. Moreover, it has not captured the attention of the relevant institutions as an urgent issue that demands a scientific analysis, legal body, public awareness, as well as, an organizational system. Nonetheless, to reveal a clear picture and investigate the condition of ICZM in TRNC, a qualitative research method based on inductive reasoning has been utilized through interviewing 11 respondents who are directly or indirectly associated with institutions supposedly in charge of planning and management of the coastal zones. To achieve the aims of the research, 30 semi-structured in-depth interview questions were administered in an open-ended manner to delve into the minds of policy makers and their conduct toward a sustainable management of coastal areas known as ICZM. for the purpose of an inductive research and subsequent data analysis, questions were designed based on literature, case studies and main principles of ICZM as conceptualized by Stephen B, Olsen's (2011,2009,2007) well known ICZM framework that remains to be the conceptual backdrop in this subject. Interviewees who have been contacted are related to and involved in this issue either directly or indirectly. They are mainly involved with the issue in question through municipalities, town planning departments, ministry of tourism and environment, as well as, scholars, NGOs and people who involved in eco-tourism. Based on data analysis and synthesis of information collected, the research revealed that there is a general perceptual feeling among the policy makers and those who are involved with environmental issues that coastal areas might need a special management system; however, this is a very simplistic view and at best can be described as superficial. Study revealed that except for a few regulations left form British colonial time, coastal zones have not been given deserved attention and have been neglected. The study has not found any traces of ICZM based on its practical principles as they are

implemented in different cases. In fact, an ICZM supposed to be in the context of wider Environmental Management System (EMS); however, despite the presence of an environmental office (i.e., as an appendix of ministry of tourism), is ill equipped and lacks the basic knowledge and expertise in this area and more so regarding ICZM. The research revealed that the policy maker's behavior toward coastal zone management can be described as apathetic at best and lacks vision of and commitment to the sustainability of the coastal zones. What is needed is an articulate framework of governance with full involvement of public, as well as, a constitution to address this issue in the context of a highly regulated and monitored process.

**Keywords:** Integrated Coastal Zone Management (ICZM); Sustainability and Governance; Environmental Management System (EMS); Coastal zone planning; Tourism and the coastal zone; North Cyprus.

## ÖZ

Kıyı bölgeleri dünyanın en hassas ve narin ortamlarından biridir. Dünyadaki artan nüfus sayısının kıyılara yönelmesi nüfus baskısı, rekreasyon, turizm, kentleşme, konaklama/konut geliştirme, altyapı basıncı, petrol sandaj ve kanalizasyon gibi sayısız problemleri yatkın hale getirmiştir. Kıyı nüfusu arttıkça, temiz suya, atık bertarafına, halk sağlığına, gıdaya ve doğal afetlerden korunma ve muhafazasına da olan talep artmaktadır. Ancak, kıyı ekosistemleri ve turizm arasındaki ilişki, kitle odaklı ve etkileri sürdürülebilirlik konusu açısından zorlayıcı olan güneş, deniz ve kum turizmi ile vurgulanmaktadır. Kıyı kaynakları yönetimi, bu bölgelerin verimliliği ve sağlığı söz konusu olan her yerde önemli bir çevresel girişimi olarak kurulmuştur. Bütünleşik Kıyı Alanları Yönetimi (BKAY), kıyı alanlarının sürdürülebilir yönetimi konusundaki bu eşsiz ekosistemleri ele almak ve yönetmek için bir planlama aracı olarak bilinmektedir. Ada devletlerinin durumunda, bu konular, sadece turizm amacıyla değil, aynı zamanda da ada devletlerinin sürdürülebilirliği açısından, doğal ve insan kaynaklı afetlere karşı savunmasız olduğundan ve doğal sermaye olarak kıyı bölgelerine son derece bağımlı olduğundan kurumlar ve politikacılar tarafından daha fazla sorumluluk gerektirmektedir. Bu araştırmanın amacı, çeşitli ekonomik ve gelişimler amacıyla ve daha çok turizm amacıyla bu ekosistemlerin sürdürülebilirliğine bağlı olan KKTC'deki BKAY ile ilgili olan planlama politikalarını ve planlama yaklaşımlarını keşfetmek ve değerlendirmektir. Politika yapımcılarının BKAY'ye karşı yaklaşımları kıyı bölgesi özel yönetim sistemine uygun olmadığı varsayılmaktadır. Ayrıca, bilimsel analiz, tüzel, kamu bilinci ve örgütsel sistem talep eden acil bir konu olarak ilgili kurumların dikkatini

çekmemiştir. Bununla birlikte, net bir resim ortaya çıkarmak ve KKTC’de BKAY’nin durumunu arařtırmak için, dođrudan veya dolaylı olarak kıyı bölgelerinin planlaması ve yönetiminden sorumlu olan sözde kurumlardan 11 katılımcı ile tümevarımsal mantıđa dayalı bir nitel arařtırma yöntemi kullanarak görüřülmüřtür. Arařtırmanın amaçlarına ulaşabilmek için, 30 yarı yapılandırılmış derinlemesine mülakat soruları, politika yapımcılarının zihinlerini ve BKAY olarak bilinen kıyı alanlarındaki sürdürülebilir yönetime dođru olan davranıřlarını derinlemesine arařtırmak için sorular açık uçlu bir şekilde politika yapımcılarına uygulanmıřtır. Tümevarımsal bir arařtırma ve müteakip veri analizi amacıyla sorular literatür, vaka çalıřmaları ve bu konuda kavramsal zemin olmayı sürdüren Stephen B. Olsen’in (2011, 2009, 2007) tanınan kavramsallařtırılmıř BKAY çerçevesine dayalı temel ilkelerine göre tasarlanmıřtır. Temasa geçilen katılımcılar bu konuyla dođrudan ya da dolaylı bir şekilde ilgilidirler. Genelde söz konusu olan konu ile belediyeler, Őehir planlama dairelerin, turizm ve çevre bakanlıđının yanı sıra, akademisyenler, sivil toplum örgütleri ve eko-turizm ile ilgilenen kiřiler aracılıđıyla ilgilenirler. Veri analizi ve toplanan bilgilerin sentezine dayanarak arařtırma, politika yapımcılarının ve çevre sorunları ile ilgili olanlar arasında genel algısal duyguların kıyı alanlarının özel bir yönetim sistemine ihtiyaç duyulabileceđini ortaya koymuřtur; ancak, bu çok basit bir görüřtür ve en azından yüzeysel olarak tarif edilebilir. Çalıřma, ingiliz sömürge zamanından kalan bir kaç yasa dıřında, kıyı bölgelerinin hak ettiđi ilgiyi görmediđini ve ihmal edilmiř olduđunu ortaya çıkarmıřtır. Çalıřma, farklı durumlarda uygulanabilen pratik ilkelere dayanan BKAY’ye ait izler bulunamadı. Aslında, geniř bir Çevre Yönetim Sistemi (ÇYS) bağlamında bir BKAY olması gerekiyordu; ancak, çevresel bir ofisin (yani, turizm bakanlıđına ek olan bir ofisin) varlıđına rađmen kötü donatılmıř ve bu alandaki temel bilgiye ve daha çok BKAY için gereken uzmanlıđa

sahip deęildir. Bu arařtırma, kıyı bölgesi ynetimine doęru olan politika yapıcılarının davranıřları ilgisiz olarak tanımlanması ve kıyı blgelerinin srdrlebilirlik vizyonunun ve sorumluluęunun eksiklięini ortaya ıkardı. Ynetimin belirgin bir ereveye ve tm halkın katılımının yanı sıra, olduka dzenli ve takip sreci baęlamında bu sorunu gidermek iin bir anayasaya ihtiya duyulmaktadır.

**Anahtar Kelimeler:** Btnleřik Kıyı Alanları Ynetimi (BKAY); Srdrlebilirlik ve Ynetim; evre Ynetim Sistemi (CYS); Kıyı blgesi Planlaması; Kıyı blgesi ve Turizm; Kuzey Kıbrıs.

## **ACKNOWLEDGMENT**

First of all, special thanks to my dear adviser Associate prof. Dr. Habib Alipour, which without his support and kindness this research could not be done. I owe him too much.

My deepest gratitude goes to my family for their unflagging love and supports throughout my life. I am indebted to my mother and father for their love and care.

I would like to thanks all the members of this faculty for helping me to finish my master. Finally I would like to thank all respondents who generously help me to collect the required informations.

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# Chapter 1

## INTRODUCTION

### 1.1 Introduction

Coastal areas have lots of resources which are valuable for nature; of course these resources need to be managed not only for present but also for future generations. Coastal areas have biological and physical resources for human use, so balance between these uses based on a given set of objectives are necessary. Nevertheless, population growth, urbanization, industrialization, oil exploration, tourism are among the activities that gravitated towards the coast and shorelines. “As increasing number of the global population gravitates toward the coasts, and pressure mounts on ecosystems and the infrastructure at coastal locations. In the coastal zone many problems have arisen, including coastal population growth and degradation of natural capital, from the neglect of the four capitals that enhance sustainability: natural, built, social and human” (Duxbury & Dickinson, 2007, p. 319).

Tourism industry plays a unique role regarding the changes and management of coastal areas and its resources. After the climate, the coast and the sea are perhaps the most important geographical resources for tourism (Burton, 1995). With such intensive interaction between human and the coast, the sustainability of coastal zones has become the subject of special management system known as Integrated Coastal Zone

Management (ICZM), which its history goes back to industrial revolution in the developed world, notably in North West Europe and Eastern coast of the United States. Unfortunately, human habitation has negative influence on coastal areas and resources. “Main sources of fecal pollution include municipal sewage systems, on-site sewage systems, storm water runoff, marinas and boaters, recreationalists, farm animals, pets and wildlife” (Glasoe& Christy, 2004, p. 1).The negative impacts on the coastal environments are resulted from the tremendous pressure on limited local resources, increased or unwanted invasion of natural areas and serious conflict between tourism and other sectors (Garrod& Wilson, 2003).

To achieve a sustainable quality and productivity of the coastal areas, there is need for a combined effort between public and private sectors, along with NGOs, to establish a legally binding ICZM as a governance plan.

“With approximately 41% of the world's population living within 100 km of the coast the importance of the coastal zones and issues of sustainability are at a paramount. If the trends observed between 1990 (2 billion people living within 100 km of the coast) and 2000 (2.3 billion) continue, the UN Population Division (2001) estimates that the number of people living on and around coastlines will increase to 3.1 billion people by 2025” (Duxbury & Dickenson, 2007, p. 319).

The coastal zones are define as ‘... a kind of transitional zones between the terrestrial and marine ecosystems, influenced by both natural forces, such as the ocean, land and atmosphere, and other non-natural forces coming from human society, making matter

and energy exchange actively . In addition, the coastal zone is a typical fragile ecosystem and in poor stability, for being disturbed frequently by marine and terrestrial ecosystem' (He, 2010, p. 136).

Coastal areas have lots of resources which are valuable for nature; of course these resources need to be managed not only for present but also for future generations. Coastal areas have biological and physical resources for human use, so balance between these uses based on a given set of objectives are necessary.

With the concentration of the population and tourism activities in and around the coastal areas, the issue of ICZM in North Cyprus demands considerable attention.

Cyprus is the third largest island in the Mediterranean Sea. With the partition of the island in 1974, about one-third of the island has declared independence and formed a separate political entity known as Turkish Republic of North Cyprus (TRNC). With an area of 3,355 km<sup>2</sup>, North Cyprus has established a political economy based on tourism mainly sun, sea, and sand, as well as, higher education for international students from around the world. With the concentration of the population and tourism activities in and around the coastal areas, the issue of ICZM in North Cyprus demands considerable attention. Regarding that coastal zones are the main resources for economic development and tourism, the question is whether a systematic effort by the public sector is in place to achieve the objectives of ICZM? And if there is, is there any policy to embed ICZM in the overall development process? With respect to fragility of coastal environment and its vulnerability, ICZM has become a significant policy and plan in

different parts of the world. The present study attempts to explore the extent of public effort, and policy making process regarding this issue. The sustainability of the coastal areas cannot be guaranteed unless a clear policy and required laws are in place toward ICZM. Antunes and Santos (1999, p. 217) contend that: “ICZM is a continuous planning process in which interested parties, stakeholders, and regulators reach general agreement on the best mix of conservation, sustainable resource use and economic development in coastal areas”. North Cyprus is limited in terms of natural resources and has a fragile archipelagoes oriented environment, considering tourism as the backbone of the economy, and coastal areas as the main resource for recreation, drastic compromises need to be made if sustainability is a goal.

## **1.2 Problem statement**

According to the previous studies that concern some similar issues in case of North Cyprus, some problems rise, obviously the problem is that coastal areas are under stress and pressure because of numerous activities and impact. Population growth, urbanization, industrialization, oil exploration, tourism are among the activities that gravitated towards the coast and shorelines. Human activities along these zones are multidimensional and require a multidisciplinary solution. Coastal zones are affected by various impacts including urbanization, accommodation, tourism, agriculture, fisheries, and petroleum related impacts. An ICZM must have human resources, organizational structure, policy and plans, public relations, and a definite governance to achieve the desired results.

### **1.3 Significance of the study**

North Cyprus is highly dependent upon its natural resources, which are mainly composed of coastal zones for tourism and settlement. This by itself demands a special attention. Coastal areas are the most productive zones in terms of marine life, coral reefs, tourism, sea pollution, fish stock, and so on. therefore a special management system is needed to protect them against impact from population and cities. The present study aims to explore whether a clear policy regarding ICZM is in place, and to what extent the approach of policy makers is in line with 'sustainability' concept and guideline. This study also aims to examine the overall governance of ICZM in North Cyprus. By showing the situation and the problems of planning in case of North Cyprus, this research will be guiding to achieve a sustainable quality of the coastal areas in TRNC.

### **1.4 Rationale of the study**

This study is conducted to assess the environmental institution's management system toward the protection of coastal areas within the ICZM framework. This study is conducted in consideration of the North Cyprus's approach to ICZM in order to protect these natural capitals for the purpose of tourism and long term sustainable productivity of these ecosystems. This study contains information and data about problems and prospects for the coastal zone management toward the improvement of economic base and environmental quality in TRNC. Using these data, the researcher will try pinpointing the strength and weaknesses of ICZM, as well as, to specify the reasons of failure if any. Moreover, the study shall be a guiding tool in providing other countries the specific strengths and weaknesses of the TRNC's case in its pursuit toward ICZM. This study could be used as a benchmark for other developing countries as well as other

economies in transition who have been struggling with the affairs of enhancing and protecting the environment and specifically the coastal zones. This study stresses that the ICZM is an excellent tool in achieving environmental quality, sustainable development, sustainable planning, and coastal zone protection that will have a positive implication for the nation's economic wellbeing, thus should be regarded as one of the vital functions of public and private sector along with NGOs.

### **1.5 Methodology**

A qualitative research strategy is applied for the purpose of this study. A survey will be conducted based on an in-depth interview with the public officials, private sector entities, and NGOs. A semi-structured interview questionnaire is designed for the purpose of data collection. Data analysis will employ routinely applied methods associated with this type of research (i.e., coding process). The design of the questionnaire is enriched by various studies on sustainable approaches to coastal management

### **1.6 Organization of the study**

Chapter one will contain of introduction which include problem statement, significant of the study, rational of the study, scope of the study and also a brief methodology which is applied. In chapter two it has been discuss about coastal planning management which include the history of coastal planning and management, defining the coastal areas and its characteristics, sustainability issues, policy and coastal governance, and so on. Chapter three is about coastal planning specific issue. In this chapter urbanization and population pressure and also resource exploitation will be discuss. In chapter four coastal zone and tourism will analyze. Chapter five is about North Cyprus, the Integrated

Coastal Zone Management in Cyprus, the national policies, and also discuss about local initiative in TRNC. Chapter six in about methodology and data collection and final chapter which is chapter seven is conclusion and discussion.

## **Chapter 2**

### **COASTAL PLANNING AND MANAGEMENT**

#### **2.1 Introduction**

Coastal entities are economically productive and environmentally vulnerable wherever they come to contact with human activity whether for the purpose of settlement development or extractive activities. One should also add tourism to the range of activities that are done in and around coastal zones/environments. Coastal zones have been subjected to various institutional evaluation and understanding for the purpose of sound and protective management systems in order to achieve their sustainable management for various land uses. Nowadays, Coastal Zone Management (CZM), or Integrated Coastal Zone Management (ICZM) has become a generic terminology and concept to take control and monitor the health of these fragile environments (Henocque, 2003). As Henocque (2003, p. 2).reported:

Like in most European countries, the institutional framework for coastal zone management in France is comprised of two elements: a land use planning system administered by territorial authorities at one or more sub-national territorial levels, and sectoral laws which are usually reflected in sectoral administrations within the national government. Specific policy for coastal areas is provided for under the Coastal

Development, Protection and Enhancement Act (1986) known as the Coast Act, mainly devoted to land use planning for control of urban expansion in coastal areas.

The importance of the coastal zones, which produces different geological features and creates varieties of ecosystems, has played a significant role in attracting, as well as, in the settlement of population, which is also intertwined with their economies (Kay & Alder, 1999). Coastlines cover about 8% of the world's surface, but provide 25% of the world productivity. According to Brown *et al.* (2002) crisis on the coastal areas comes with approximately 70% of the world's population being within a day's walk of the coast. Moreover, the two-third of the world's cities is on the coastlines (Crooks & Turner, 1999).

According to the report by Development for Environment Food and Rural Affairs (DEFRA), there is no special framework to facilitate integrated coastal zone management in relation to all activities in coastal areas. DEFRA (2006) explains the negative effects of the lack of framework in coastal areas as:

- “Developments and uses that are considered through different policies and regimes, resulting in single-sector responsibilities for determining development and uses in the marine environment in most countries;
- Lack of connection between various authorities responsible for individual activities or the protection and management of the environment as a whole;
- Lack of certainty for marine developers and users as well as for environmental managers; and

- Lack of protection and conservation of marine areas with high levels of biodiversity”

In DEFRA’S report regarding coastal zone planning process, 10 dimensions have been forwarded as significant sectoral elements that ICZM should investigate and involve if the aim is to achieve the goals of ICZM. These are: aggregate, fishing, ports, shipping, energy/renewables, local government, public bodies/agencies, recreation/tourism and others (DEFRA, 2006, P. 2).

## **2.2 Defining the coastal areas- conceptual model**

First of all, having a simple definition about coastal areas is very important. Basically, most of the people know coastal area as the interface between land and ocean or sea which is clearly known as a line on a map, but in reality it is not so. Coastal area is defined as where the land and ocean meet through a gradual transition and also it is the scene of active change. In fact, coastal area is affected by the biological and physical processes of both terrestrial and marine environments. Therefore, coastal areas are the geographic entity of land and water (Beatley *et al.* 2002).

According to Charlier and Charlier (1995, p.14), “The concept of coastal zone is not defined with geographical precision; in fact, it even varies with geographical location, and also with the discipline to which the specialists belong. On one thing, though, they all agree: it is of crucial importance for mankind”.

Surly coastal areas have lots of resources which are valuable for nature; of course these valuable resources, including biological and physical ones, need to be managed, not only

for present but also for future generations. Thus, balances between these uses based on a given set of objectives are quite necessary (Duxbury & Dickinson, 2007).

“Coastal zone resources encompass the ‘goods and services’ which are grouped in the following broad classes: mineral and energy resources; seawater, bio-resources; prime space for ports, industries, communications; tourism and recreation opportunities; ground and surface water supplies; sand gravel or clay recovery; residential areas; waste disposal. Agriculture, animal husbandry, fisheries, and trade establishments have been squeezed out. Natural coastal systems thus offer a wide range of resources, yet only a selected few are retained and then an attempt is made at maximizing production. This approach entrains, in many cases, the waste of opportunities for economic and social improvements, but also leads to eventual degradation, destruction, even outright loss of others – already existing or still untapped” (Charlier & Charlier 1995, p.14-15).

Economic activities such as fisheries, tourism industry or agriculture depend on the quality of estuarine and also provide the environment in which wide range of valuable natural functions take place (Arndt *et al.* 1987).

Lee (1993, p.170), divided the coastal zone area into three sections which are interactive, dynamic and hazard zones (see figure 1).

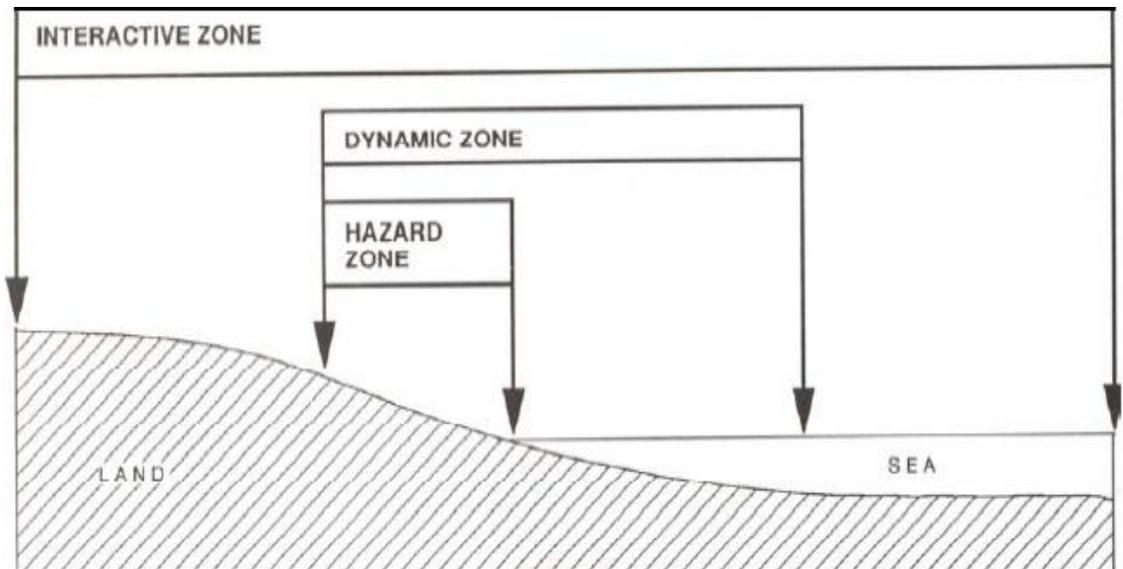


Figure 1: Costal zone area  
Source: Lee 1993

“The interactive zone is a broad area where human activities are influenced by or can influence the quality of the whole coastal area. This area can extend far inland to encompass coastal watersheds or seaward as necessary to control activities that may affect the coast.

Natural processes such as storm surges and erosion directly affect the dynamic zone. Because of this, no two dynamic zones are alike. By understanding the natural processes influencing a particular area, this zone becomes clearly defined. The hazard zone is the area susceptible to damage from coastal processes. Damage may include potential loss of life as well as property damage.” According to Taljaard *et al.*, there are ten paradigms to inform Integrated Environmental Management. “The theoretical bases of the ten paradigms are explored by discussing the key concepts of each paradigm and then

distilling the characteristics of the paradigms as they manifest in practice” (2011, p. 630).

Analyzing the evolution of Integrated Coastal Management (ICM) practice in the last two decades has demonstrated that “the uniformities that contribute to Integrated Environmental Management (IEM) implementation are also evident as uniformities in ICM implementation” (Taljaard *et al.*, 2011, p.646). Nevertheless, the processes of coastal zone management have been affected by perspectives that are relevant to planning and environment in the context of sustainability. As elaborated by various studies, “further exploration of paradigms such as the ecosystem-based management paradigm and the spatial planning paradigm is required for a meaningful improvement as well as the effectiveness and sustainability of ICM in the future” (as cited in Taljaard *et al.*, 2011, p. 649). As demonstrated in IEM model (see figure 2), which is also a conceptual model that guided the study, Integrated Environmental Management is a broad framework that ICZM is embedded in its context. In another hand, without such framework, ICZM cannot be addressed alone. However, this does not mean that coastal management system is not in place; rather it becomes an organic part of broader environmental institution. The capacity and structure of such coastal management system depends upon the particular economy and its environment. For instance, in the case of island states this can carry a particular significance. As elaborated by various studies:

“... the critical importance of the coast as a landscape resource for both visitors and residents and considered the need for integrated management to ensure: erosion control, physical protection of the landscape and implementation of effective urban planning measures to ameliorate tourism pressures. It was suggested that this approach will ensure an

attractive environment for visitors and ultimately assist in maintaining Spain's position as a major player in the global tourism market... it was necessary to determine and apply coastal management lessons derived from cross-national comparisons. Therefore, from a cross-national analysis of the problems and consequences of erosion, and management lessons learned, effective decisions can be made for the future protection of tourism infrastructure" ( as cited in Phillips & Jones, 2006, p. 252-253).

At any rate, as the model indicates, it is within a broader environmental framework that ICZM can be established and validated. As shown in figure 2, the first section of the process in the model addresses fundamental environmental issues that must be in place before structuring an ICZM. For instance, environmental governance (Bramwell, 2011; Benn et al, 2009), spatial planning, and ecosystem-based management are playing a vital role in establishing a framework for environmental management system and ICZM (Curtin and Prellezo, 2010). The second part of the model indicates 14 building blocks for ICZM. Although, this is not a fixed parameter; however, they must be addressed wherever ICZM is required. In this regard Taljaard et al elaborated:

"Whereas much of the ICM literature focuses on learning-by-doing, we choose to focus on distilling theory-based building blocks for constructing and evaluating ICM implementation models. We identifies fourteen practically recognizable criteria for evaluating the design of ICM implementation models. In this, we go beyond the work of Stojanovic, Ballinger, and Lalwani who determined nine factors important for successful ICM on the basis of a grounded theoretical assessment, yet did not connect the factors to easily recognizable elements of ICM practice" (2011, p. 629).

In a way, these building blocks are essential mechanisms to achieve the ICZM implementation in the context of broader EMS. For instance, without financial support, capacity building and enabling legal framework one cannot achieve any form of implementation. The model has also embedded different categories of coastal areas because the impact of different use and application of the activities are

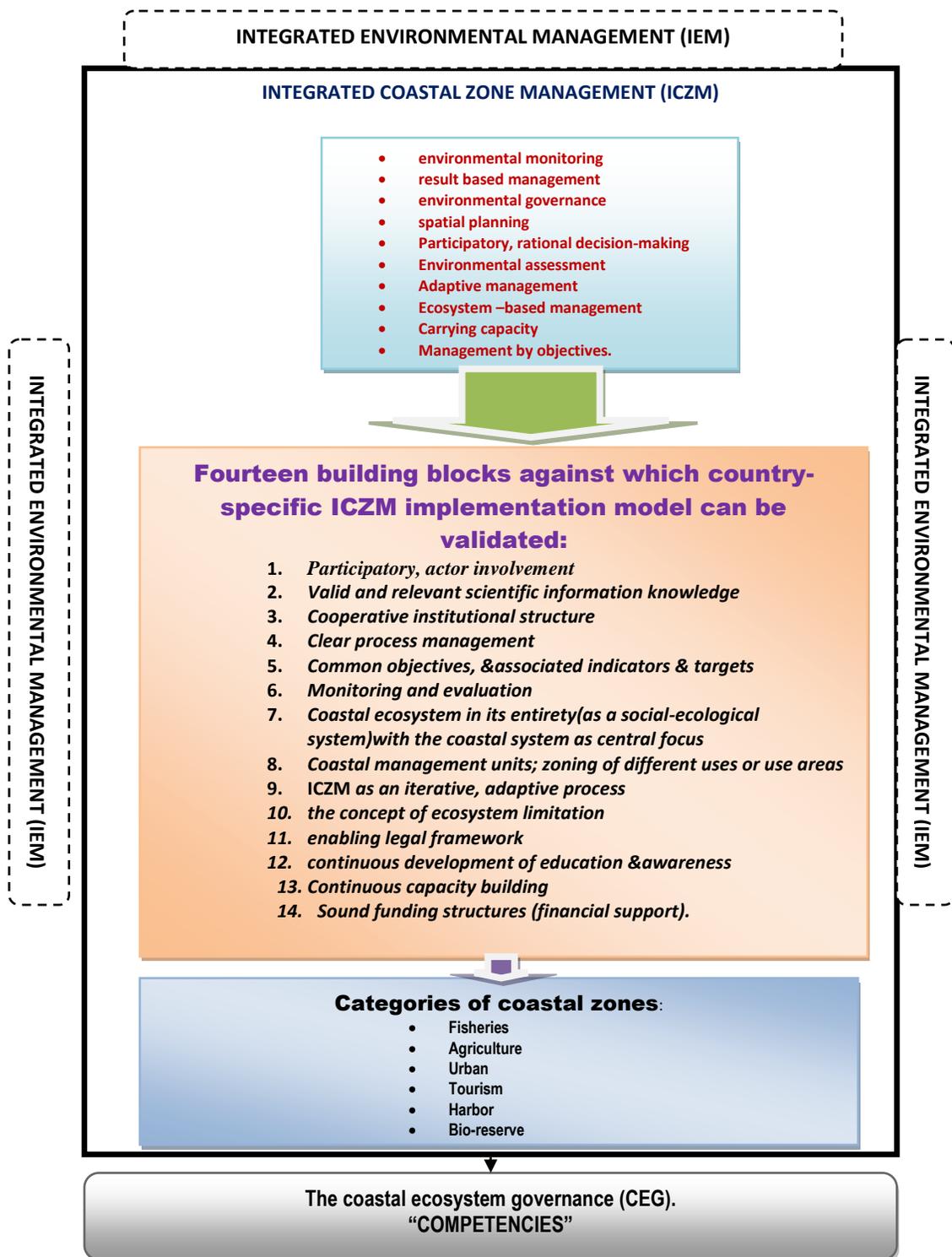


Figure 2: ICZM in the context of IEM.  
Source: Adopted from Olsen (2003) and Taljaard *et al.* (2011).

Not identical, but rather each category makes its own specific impact and results in different outcome (Cho & Olsen, 2003). The model ends with the coastal ecosystem governance (CEG) where the competencies of policy makers and community are combined. Competencies are in a way the process of building knowledge, skill, and ICZM specific processes that are essential through time to manage the coastal areas. As Olsen (2010, p. 266) noted: ‘the order in which the competencies are presented traces the process of characterizing a site or a region, the analysis of the responses of the governance system to ecosystem change through time, to strategic planning, and on to monitoring and evaluation’. Thus, competencies are stages and processes that prepare the institutions and communities to tackle the ICZM in an organized manner with necessary instruments. In this regard, Rodriguez et al (2009, p. 104) stressed: ‘ICZM is increasingly integrated in local, national and international administrations. Implementation of those management policies needs a tool able to store and display all information related to the target area as well as to carry out spatial, visual and statistical analysis into the information layers’.

### **2.3 Environmental characteristics**

To understanding the characteristic of the coastal zone, first understanding the people, space, pattern and place is necessary. According to Haggett (1972) to considering the geographical characteristic of the coast, two main characteristics of geography are useful, namely, orthodox and integrated approaches.

“The orthodox approach is concerned with the organization of geographical knowledge into physical and human geography, with their various subdivisions; together with

thought processes ranging from the philosophy of the subject at one extreme through practical fields such as cartography at the other”. (Fletcher & Smith, 2007, p, 420)

The consideration relationships between geography and other disciplines are orthodox approach. (Haggett, 1972) And the fields such as physical geography and boundary delimitation are written by non-geographers. (Smith, 2004)

The integrated approach underlines the circumstance that, over time, geography in common with other disciplines has evolved through many philosophical epochs and has embraced numerous traditions and branches. These philosophical epochs have resulted in a number of paradigms within geography, each of which is particularly useful in certain ways and under certain circumstances (Fletcher & Smith, 2007, p.420-421).

The physical character of coastal arises are in combination of the geological, geomorphologic, and ecological contexts with prevailing atmospheric and marine processes. And the human character of coastal areas are results from continues phases of technological, economic, social, and political development. The combination of these two physical and human characters ‘makes’ coastal space (Fletcher & Smith, 2007).

## **2.4 Policy issues and coastal governance**

Fundamental challenges are facing those countries and regions where coastal ecosystems are part of their landscape. This is an obvious issue and problem because; contemporary coastal management reflects a growing awareness of the difficulties that are inherent in modulating human activity in the ecosystems where our species is most concentrated. According to the Millennium Ecosystems Assessment, 40% of the human population is

concentrated in coastal regions on only 5% of the inhabited landscape. Today 12 of 15 largest cities of the planet are coastal cities. This implies that coastal regions contain the lion's share of the infrastructure that supports industry, transportation and trade, energy processing, tourism as well as several important sources of food production. Coastal regions therefore generate a disproportionate share of the global consumption of man-made and natural resources and the resulting wastes that such consumption generates. How humanity manages its activities and their impacts in coastal ecosystem is therefore a major challenge to the twenty-first century (Olsen, 2009, p. 253).

What type of governance is in place to manage and monitor coastal regions is the main question to be discussed? UNDP (1997, p.11) used definition of the governance as: "The exercise of political, economic, and administrative authority in the management of a country's affairs at all levels. Governance comprises the complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations". Therefore, the government and governance are not synonyms. According to Olsen (2003), there is a focus on the ICZM policy because it cares about sustainability to improve the objectives, structure and also processes of governance which control coastal area resources.

Perez *et al* (2011, p.1250) categorized the goals of coastal areas policies through following points:

- "To rectify environmental problems identified in the coastal zones.
- To protect and restore the coastal zones.

- To direct decision making actions.
- To offer a reference frame suitable to support the development of Coastal Zone Management Plans on different scales.”

Olsen *et al.* (2009) believe that governance baseline has two parts. One part is the focus on the past and the performance of the governance, and the other one focuses on future. “It places current pressures and threats in the context of long term ecosystem change. It assumes that a careful documentation and analysis of the existing governance system provides important insights into how best to design a forward-looking management and governance initiative. Part two of a baseline outlines a strategic approach to the design of a new program and records the goals, objectives, and strategies” (Olsen *et al.* 2011, p.315). Also see figure 3.

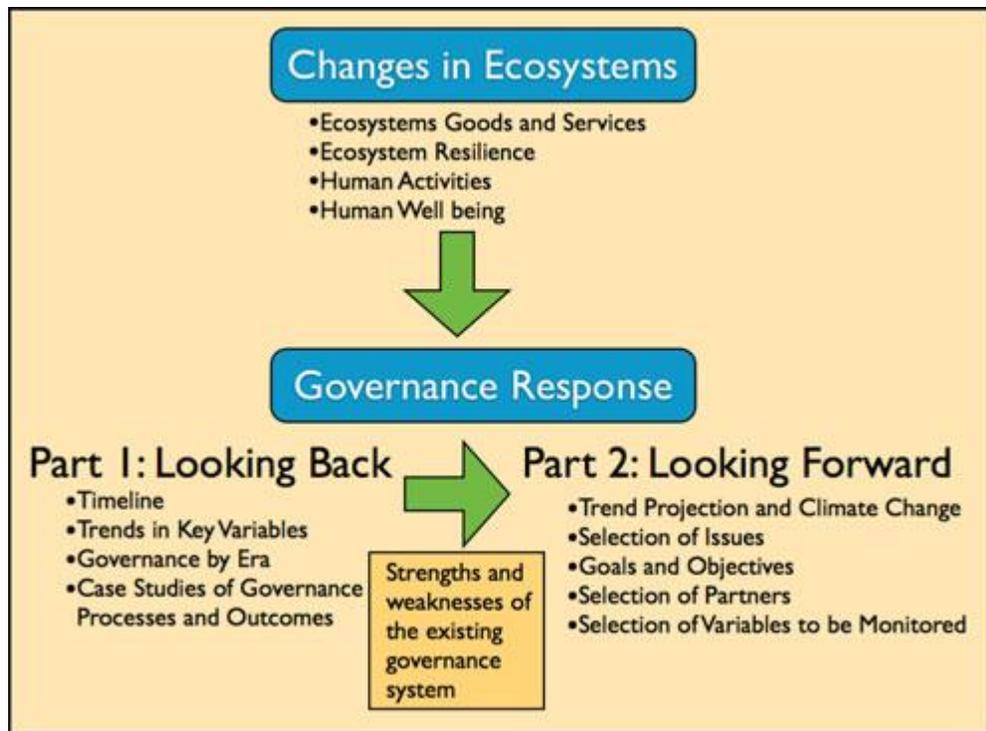


Figure 3: Major Elements of Governance Baseline  
Source: Olsen *et al.* 2011

## 2.5 The Uniqueness of Coastal Areas

Along coastlines, there are plants and animals' population, which can protect ecological vitality. There are lots of marinas and also boat yards, fisheries, hotels, passenger ferries, waterfront access, many restaurants for tourists, and water dependent industries. All these activities and natural recourses make the coastal areas unique.

The concept of coastal zone varies not just according to the geographical area, but also according to the point of view of the different specialists. Therefore, oceanographers, geologists, ecologists, geographers, engineers, economists, and planners might use the same term with different meanings. Anyway, they all agree on the importance of this zone for the mankind (Brambati. 2004).

The Mediterranean countries become the world's leading tourist area, accounting for around 35% of all international tourist arrivals and revenues (Farsariet *al.*, 2007). Thus, it is not surprising that the coastal area of the Mediterranean countries is going to increased levels of disturbance by tourism (Badalamentiet *al.*, 2000; Salmona & Verardi, 2001).

“A comparative analysis of how neighboring countries manage their coastal resources will provide a greater understanding of the lessons learn” (Siry, 2006, p.269). Understanding more about the diversity and uniqueness of coastal zones in Mediterranean countries will enrich cross-regional knowledge.

## **2.6 History of coastal management and planning**

Coastal zone management or simply the management of the coast has become a significant indication of an integrative approach to urban planning, agriculture, fisheries, public health, and recently tourism/recreation. Historically speaking, the first serious consideration to the coastal management began in the United States in 1969 with the release of the Stratton Commission report; then continued with the United Nations Conference on the Environment and Development (UNCED) in 1992. The second phase of the focus on coastal management surfaced during the World Summit on Sustainable Development in 1992 (United Nations, 2002). Since then, this issue has continued to draw policy makers' attention as a vital policy issue around the world (Olsen, 2009).

Kamphuis (2010) believes that, traditionally, coastal zone management has been carried out by engineers, because coastal management was focused on coastal projects which included design and construction of works.

According to Fletcher and Smith (2007, p. 419), there is a relationship between geography and coastal zone. It explores the nature of geography as well as the geographical underpinnings of key notions within coastal management, in particular, 'coast', 'conflict', and 'integration'.

A substantial number of countries have learned societies in geography, and the International Geographical Union has existed at international level since the closing decades of the 19<sup>th</sup> century. As such, it has membership of both the International Council of Scientific Unions and the International Social Science Council. By contrast, coastal management appears relatively recent in its origins, a major landmark being the federal Coastal Zone Management Act of the United States, enacted in 1972. In reality, coastal management, at least in sectoral terms, has a substantial history that also extends back to the industrial revolution in the developed world, notably in northwest Europe and the eastern seaboard of North America, where extensive port and harbor development, coast protection works, and fisheries expansion illustrate this claim (Fletcher & Smith, 2007, p, 419-420).

Sorensen (2002) designed ICZM timeline from 1965 until 2002. This shows significant events in the history of ICZM in the world and table 1 demonstrates the case of Kenya as an example.

Table 1: Significant event in the history of ICZM in the world and in Kenya

<b>Year</b>	<b>Significant event in the history of ICZM in the world and in Kenya (marked in italics)</b>
1965	First coastal zone management program in the world. San Francisco Bay Conservation and Development Commission.
1972	First academic journal devoted to ICZM is published: the Coastal Zone Management Journal. U.S. Coastal Zone Management Act is passed.
1973	United Nation Environment Programme (UNEP) is established.
1977	First ICZM in developing country. Costa Rica.
1982	Law of the Seas Convention is adopted by the United Nations.
1983	United States Agency for International Development (USAID) becomes The first international development assistance institution to create an ICZM program. Pilot projects in Ecuador, Sri Lanka, and Thailand.
1985	UNEP facilitates regional coastal zone management cooperation in East Africa, incl. Kenya. Regional Seas Action Plan.
1991	OECD issues international guidelines on ICZM.
1992	United Nation Conference on the Environment and Development in Rio de Janeiro
1993	Arusha Resolution calls for sustainable development and integrated Management of coastal areas for the benefit of coastal communities in East Africa. World Coast Conference in the Netherlands. Delegates from 90 Countries, 20 international organization, and 23 NGOs. IUCN issues international guidelines on ICZM. The World Bank Issues international guidelines on ICZM.
1994	Nyali-Bamburi-Shanzu ICZM project initiated in Kenya, stretching Some 12 kilometers of beach north of Mombasa.
1995	International Coral Reef Initiative. UNESCO, IUCN, World Bank. UNEP issues international guideline on ICZM.
1996	Nairobi Convention on the Protection, Management, and Development Of the Coastal and Marine Environment in the Eastern African Region

	Comes into force. The Seychelles Meeting (follow-up to Arusha Resolution)
1997	The European Commission initiates ICZM program.
1998	Pan-Africa Conference on Sustainable Integrated Coastal Management. International Year of the Ocean.
1999	International Year of the Reef. Kenya's Environmental Management and Co-ordination Act (EMCA) is Passed.
2000	Diani-Chale ICZM project initiated in Kenya, covering 20 kilometers of Beach south of Mombasa.
2002	The National Environmental Management Authority (NEMA) is set up. NEMA holds the main responsibility for implementation of ICZM in Kenya

Source: Sorensen (2002)

## **2.7 Integrated Coastal Zone Management (ICZM)**

Traditionally coastal areas have been the source for many areas that were mainly assigned to the fishing industry. "At the end of the 19<sup>th</sup> century, tourism in Europe sprung forth, the beach acquiring great relevance as a place for rest and leisure. Since then, the coast has been subjected to an intense exploitation aimed at offering progressively more demanding tourist services" (Rodríguez et al., 2009, p, 100). However, it is valuable for social and economic resource but sometimes it is ignored that the coastal zone is a very vulnerable environment; because it has biological and also ecological values, which need protective measures to be preserved.

A main common environmental argument is the climate change and also predictions of causes and effects (Christy, 2001; Croner, 2001; Environmental Scientist, 1999;

Matthews, 2003; Nature, 2002). Some of these divinations, such as sea-level rise, may have consequences for future management of the coastal zone (Granja & Carvalho, 2000; Jensen, Bender, & Blasi, 2001; Leatherman, 1991; Rivas, Ratas, & Kont, 2002; Vilibic, Leder, & Smircic, 2000). According to the World Tourism Organization (2001), coast erosion raises a threat to all stakeholders, especially tourism, which is the world's largest industry.

“The concept of Integrated Coastal Zone Management (ICZM) belongs to a family of concepts, which counts among its members coastal zone management, integrated coastal management, coastal area management, coastal resources planning, and other similar concepts. They are all descendants of sustainable development and modern environmentalism, as are conceptual relatives like natural resource management, community-based natural resource management and many other concepts that have engaged scientists, politicians, planners, and others over the past decades” (Isager, 2008, p.6)

ICM is “a process by which rational decisions are made concerning the conservation and sustainable use of coastal resources and space. The process is designed to overcome the fragmentation inherent in single-sector management approaches (fishing operation, oil and gas development, etc.), in the splits in jurisdiction among different levels of government, and in the land- water interface” (Cicin-Sain & Knecht 1998, p. 1).

ICM is a broad and dynamic process that requires the active and sustained involvement of the interested public and many stakeholders with interests in how coastal resources are

allocated and conflicts are mediated. The ICM process provides a means by which concerns at local, regional and national levels are discussed and future directions are negotiated (UN, 2007).

Coastal management is a continuous and dynamic process by which decisions are made for the sustainable use, development, and protection of coastal areas and resources. Coastal management requires understanding complex, dynamic ecological systems, and creating governance systems capable of addressing issues of concern to society. Imperial, Hennesey, and Robadue (1993) observed that this is perhaps one of the most demanding challenges in the field of environmental management". Responses to coastal issues require an understanding of the interplay between social processes and ecosystem change (Torell 2000, p.354). These definitions show that ICZM is about balancing development and protecting coastal zones at different scales, also classifies them from very local settings to international regions.

According to Christie (2005), social span, economic, institutional, biophysical, and legal conditions are the factors, which influence sustainability in coastal management. Sorensen (1997) argued that, growing the ICZM over the past 30 years, there is little information and uncertain successful strategies. Human migration to the coast and growth in coastal tourism, have increased investment in coastal locations (JHCS, John Heinz III Centre for Science 2000). Global warming and sea-level rise are coastal hazards difficult to understand the costs of falling property values and tourism revenues (Philips & Jones, 2006).

Van der Meulen, Misdorp, and Baarse (2001) stated that ICZM is a process of problem recognition, planning, implementation, and monitoring which should be used to improve and manage conflict. Tourism development for instance, may, on times, be unsuitable protection (Philips & Jones, 2006).

## **2.8 Sustainability issues**

For the first time sustainability development was defined in the Bruntland Report in “Our Common Future” (World Council on Environment and Development, 1987). After that there were many interpretations of sustainability development along with its general acceptance.

Mebratu (1998) believes that there is agreement on approaching the environmental crisis, and there has been difficulty to gain a single definition of sustainable development. Duxbury and Dickinson (2007, p.320) believe that three different explanation of sustainable development exist, which are: “the Institutional Version (need satisfaction); the Ideological Version (a root in 3 separate liberation theories (eco-feminism, eco-theology and eco-socialism), and the Academic Version (a science-based response from sociologists, ecologists and economists, from a reductionist viewpoint)”.

Dodds (1997) contends that sustainable development is a need to good improvement of the poor while maintaining the basis of future well-being.

Daly (1990) also has a definition. He states that sustainability is a physical resource and has qualitative capacities which are developing to satisfy human wants. The National Flood Insurance Program (NFIP) in the United States is an example of sustainable

development (Bagstad *et al.*, 2007). The relation between ICZM and sustainability is embedded in the concept of both ICZM and ‘sustainable’ development. The bond between these two approaches/processes is elaborated as follows:

‘Integrated Coastal Zone Management (ICZM) promotes sustainable coastal development by adapting the use of natural resources in a way that avoids serious damage to the natural environment. This requires an integrated and organized action of all institutions that are involved in coastal development’ (Rodríguez *et al.*, 2009, p. 100).

In fact, ICZM has been forwarded to achieve the goals that are inspired by sustainability concept. In another hand, ICZM can be interpreted as an instrument to achieve those goals. For instance, in the case of China,

‘As a result of the rapid development of industrialization and urbanization, the coastal zone in China showed a rapid change during the past few decades. In particular, the issues about coastal ecology and environment had brought about a serious challenge for coastal zone sustainable development (CZSD). Ecological sustainability has also been put forward due to the foreseeable threats represented by a serious worldwide environmental degradation, this gives rise to an increasing awareness of the profound impact of humans on the functioning of marine ecosystems (Yu et al, 2010,p. 1218).

## **2.9 Institutional Issues and implementations**

In the 1970s, Integrated Coastal zone Management was about currency but now it is a part of international agreement and also a tool to draw attention at the local levels. Bellamy *et al.* (1999) believe that ICZM intends to increase the number of successful environmental resources which are dependent on the ability to achieve structures through spectral management.

Allmendinger et al. (2002) believes that the understanding of coasts is growing because coasts are not only natural environments; but also complex policy areas consisting of overlapping objectives, responsibilities, and power operations.

Allmendinger et al. (2002) contend that along with increasing attention in integrated coastal zone management there is a change in attitudes to gain benefit of land use planning as a tool of delivering effective environmental management.

There are three issues of ICZM and land-use planning: “First, the role of land-use planning mechanisms in attempting to achieve ICZM is misunderstood. Second, attention has been and is being paid to large coastal management schemes including, the Firths Initiative, while other areas that would also benefit from integrated management initiatives have been ignored. Third, there is a suspicion that policy makers at all levels of government have limited awareness of or interest in, coastal issues” (Allmendinger *et al.*, 2002, p, 178-179).

## **Chapter 3**

### **Coastal Planning Specific Issues**

#### **3.1 Introduction**

Coastal zone is very important because it is one of the most important areas for human activities and one of the most affected areas by anthropogenic changes like pollution, excessive nutrient loading, and municipal developments (Long, 2010). “Confronting problems in coastal ecosystems are diverse, making management difficult to plan and implement. Some of the pressing issues are: (a) climate change, (b) eutrophication and associated hypoxia and harmful algal blooms etc” (Long, 2010, p. 20).

Sherman and Duda (1999), proposed a specific globally joined and modular strategy for management of the declining global coastal ecosystem.

#### **3.2 Urbanization and population pressure**

“As increasing numbers of the global population gravitate toward the coasts, pressure mounts on ecosystems and the infrastructure at coastal locations. In the coastal zone many problems have arisen, including coastal population growth and degradation of natural capital, from the neglect of the four capitals that enhance sustainability: natural, built, social, and human” (Duxbury & Dickinson 2007, p. 319).

There are lots of factors which can affect sustainability of coastal zones but clean water is the most important one. Unfortunately, human habitation has negative influence on coastal areas and resources. “Main sources of fecal pollution include municipal sewage systems, on-site sewage systems, storm water runoff, marinas and boaters, recreationalists, farm animals, pets and wildlife” (Glasoe & Christy 2004, p. 1). When population grows, it affects development and change of the development influences the landscape of coastal area and also puts greater pressure on shellfish harvesting and other resources and functions of the coastal environment.

Urbanization is the process by which small cities and towns develop and grow into larger areas, and include the movement of people from rural areas, towns and cities to urban areas (Simms, 2008). As posited by Brown *et al.* (1987, p.5), “Aside from the growth of world population itself, urbanization is the dominant demographic trend of the late 20<sup>th</sup> century. The number of people living in cities increased from 600 million in 1950 to over 2 billion in 1986. If this growth continues unabated, more than half of humanity will reside in urban areas shortly after the turn of the century”.

Since 30 years ago, the population living in urban areas, has risen to fifty percent, and will grow to 6 billion people, by 2050 (Un-Habitat, 2006). Based on statistics, only 25% of migration growth in Africa and 34% in Latin America and around 60% of population in urban areas growth worldwide is because of natural increase (Brennen-Galvin, 2001). “In Asia, however, migration remains the dominant factor, providing for 64% of city growth across the continent” (Simms, 2008, p.2).

As Glasoe and Christy (2004, p, 1\_2) mention, “Coastal areas are uniquely productive, valuable, and fragile environments. They are also uniquely attractive and desirable places to live, work, and play. This leads to the complex and challenging task of accommodating growth and development while, at the same time, trying to preserve healthy coastal ecosystems”. As expressed by Lipp *et al.* (2001, p, 286), “a fragile balance exists between the needs of coastal cities and communities and the health of aquatic systems”.

Consequently, the pressures on the coastal areas are high and rising. These pressures are landscape alteration, coastal erosion, changing land use, agricultural lands and the impact of waste and tourism on the coastal areas, which are common to most coastal environments (Burak *et al.*, 2004).

Olsen and Christie (2000, p. 7) believe that, “In broad terms, they are expressions of anthropogenic change to coastal ecosystems brought by intensifying pressures from human activities that are expressed as:

- The degradation or destruction of important coastal habitats (wetlands, coral reefs, sea grasses, estuaries) and the resulting loss of biological diversity;
- The decline of estuarine-dependent fish and shellfish populations and their associated fisheries;
- Declining near shore water quality and changes to the volume, quality, and pulsing of freshwater inflows to estuaries;

- The inappropriate sitting of shorefront infrastructure and their subsequent high vulnerability to the impacts of floods, storms, and erosion/accretion processes;

### **3.3 Resource exploitation**

The passage between the land and the sea, which is known as coastal zone, is one of the most sensitive, complexes, and profitable ecosystems. In addition, coastal zone is a potential area for recreation and non-conventional energy resources such as wave and wind energy. Coastal area is the zone of dynamic activity, transforming to equilibrium and then changing to intensity of the natural processes. “Operating the coastal zone has diverse ecosystems like mangroves, corals, beaches, wetlands, estuaries, lagoons and backwaters harboring many ecologically and economically important fauna and flora and also serves as a barrier against many destructive natural hazards”(Sawale & Mahadevia, 2011, p, 295). Because of sensitivity and the importance of this area, having a coastal zone management is necessary. According to Sawaleand and Mahadevia (2011, p. 295), sewage, land use, tourism, transportation, oil exploration and production, and dumping at sea decrease the marine sustainability environment. “Felling of mangroves and clearing of forests increase the sedimentation rate affecting the live coral and species diversity. Mangroves are a crucial component deserving high priority in any coastal zone management plan as they are degraded and destroyed due to conversion into agriculture, aquaculture, and industrial land”. In addition, fishery and fishery resources can negatively affect the environment of coastal zone.

#### **3.3.1 Tourism, fisheries, gas and oil, shoreline protection**

Ramanathan *et al.* (2010, p.4) propose that “the reproduction and nursery grounds of most fish and shellfish species of economic value are in the coastal strip, and a

significant proportion of the catch of these species comes from this area, which accounts for almost half of the jobs in the fisheries sector”.

One of the most important causes to worry about is the quality of the coastal zone water. There are two main things in recent years, which are unusual ‘oil slicks and algal blooms’. This is the illustration of the fact that coastal zone communities regularly accept the result of events and developments occurring inland or offshore and these things are out of their control. Residence of the coastal zones and users of their natural resources, since early times, have made unique forms of rural and urban landscapes, that reflect cultures on trade and outside activities. Urbanization and agricultural and industrial developments have substantially decreased the biological diversity and cultural distinctness of the landscapes in all over the world. Human activities such as industry, tourism, fishing, aquaculture, etc., take place in the coastal zones which are not so much different from other parts of the areas. (Ramanathan *et al.*, 2010)

One of the practices for ICZM is fisheries community management, (White, 1998). This special management includes regional use make rights in fishing for common fishing. “The functional aspects are: (i) ecological aspects of coastal fisheries resources for conservation; (ii) economic aspect that fishers maximize their profit in catching particular target species and selling them to the market and (iii) the social and cultural background secures social equity and equity among local fishers and people in a fishing community” (Kumar & Chauhan,2010, p82).

Povh (2000) mention that,75% of the world's population will be living within 60km of the coastal areas by 2020, surely the demand will be increase for coastal leisure and tourism accommodation. Although coastlines are viewed as stable permanent assets, but in reality they tend to be dynamic, responding to natural processes and human activities.

Ketchum (1972) identified six major domains of human activity in the coastal areas: residency and recreation; industry and commerce; waste disposal; agriculture, aquaculture and fishing; conservation; military. Anyway, they are increasingly in opposition with one another and also with longer-term natural processes. For example, in the Philippines, tourism is growing in importance with activities such as dive tourism and whale-watching whilst traditional fishing is in decline (Christie, 2005). Consequently, the point is how to protect and manage our coastal resources from these issues while accommodating growing pressures for tourism development.

### **3.3.2 Infrastructure: transportation, ports, harbors**

Coastal tourism is based on unique sources, which are combined of land and water such as beaches, marine biodiversity, and good food, rich terrestrial and also good infrastructure including transportation, ports and harbors.

According to Ashe (2005), the infrastructures such as roads, rail networks, airports, etc. should support coastal tourism. Ashe (2005) also mentions that one of the obstacles of Small Island Developing States (SIDS) is the lack of an adequate tourism infrastructure like road network and rail network.

Small islands merely depend on their natural resources and environments to attract tourists. “The number of visitors attracted, however, can often exceed that of the local population. This can lead to inverted situations in which the tourism industry continues to expand until tourist pressure on local natural resources and infrastructure increases in such a way that they begin to degrade, resulting in undesirable aesthetics and uncomfortable experience” (UNEP, 2009, p. 17). According to Kanji (2006), decreasing the number of tourists is a cause of economic reduction and also social tension and it can collapse the tourist sector, which is impossible to reverse. “The national government should direct all efforts to build infrastructures and provide the necessary financial resources to the local institutions” (Nandy & Aminul Islam, 2010, p.65).

### **3.3.3 Conservation, protection of biodiversity**

”Local level institutions have many advantages over central agencies in that they are familiar with the local biodiversity, its history, and value” (Nandy & Aminul Islam, 2010, p.65).

Many coastal zones have negatively undergone change and lost their inhabitants. This is a cause of biodiversity loss (WWF, 2000).

Biodiversity is losing due to pollution, the increase of waste, international conflicts and also climate change. “Tourism is not the biggest or the only cause of biodiversity degradation but it can be considered as one of the most significant” (UNEP, 2009, p.23).

But tourism can protect the nature by making significant contributions which can be financing biodiversity protection, establishing protecting areas; giving economic

justification to the protection zones; establishing economic alternatives to local people to decrease the exploitation of wildlife resources and also supporting biodiversity on an individual basis (CI, 2003).

### **3.3.4 Impact and pollution**

The aim of Integrated Coastal Zone Management and development program is to emphasize an integrated approach, implicating groundwater quality supervision, hydrology, and other environmental issues. Most of the crucial groundwater pollution problems specifically arise because of the impact of natural hazards like tsunami, immoderate groundwater abstraction in the coastal areas, which lead to groundwater salinity. To have a sustainable coastal zone management, inter-disciplinary and multi-disciplinary characters should be developed including participation of geologists, coastal engineers, geochemists, medical practitioners, and social scientists, also stakeholders and policy makers must be involved to understand the complex issues (Ramanathan, *et al.*, 2010).

Unfortunately, there is a mass pollution on the earth, which is important for specific indicators such as greenhouse gases and increase in global temperature. Most environmental stressors are local, like land cover change, and also the impacts tend to be local such as human health (Patz *et al.*, 2005). “The implications of climate change on ecosystem is complex and of global scale. We are still a long way from being able to quantify the impacts with desirable precision” (Long, 2010, p.35).

By sure coastal eco-tourism and related anthropogenic activities have increased in the last twenty years; there were impacts and pollution of tourism on coasts and also on

natural disasters (Latha & Krishna Prasad, 2010). As a result, ecosystems are reflected by intensive biogeochemical processes with a potentially impacting global element cycles (Dittmar *et al.*, 2006; Bouillon *et al.*, 2008).

### **3.3.5 Coast and continental shelf**

Based on the definition of the continental shelf, “This zone extends a minimum of 200 nautical miles from the coastal baseline and may extend up to 350 nautical miles in special circumstances. The coastal country has exclusive jurisdiction over the mineral resources of its shelf, including oil. Up to 7 percent of the profits from mineral development beyond the 200-mile line from shore must be shared with the international community. The coastal country is obligated to protect the continental shelf’s marine environment from negative consequences of oil development” (Beatley *et al.*, 2002, p.60).

On the continental offshore waters shelf can receive nutrients from many resources, such as deep part of the ocean water, rivers and sewage materials from land, and deposition from the atmosphere (Nixon *et al.*, 1996; Prospero *et al.*, 1996; Howarth, 1998).

### **3.3.6 Coastal hazards**

There are two main general types of coastal natural hazards: sudden, cataclysmic events such as earthquakes and landslides and gradual, imperceptible alterations like the more subtle processes of erosion and accretion (Hildreth, 1980).

Hwang *et al.* (2005), classified 3-C policy for coastal zones and environments, which are coastal habitat management, coastal erosion management, and coastal pollution control.

These three processes which are related to each other should apply in active and strong community participation in every citizen to sustain nature.

Priya *et al.* (2010, p.275), claim that the “improper land use practices due to lack of appropriate legislation and enforcement of regulations and policies related to their management are the major drawbacks in the conservation of coastal areas”. However, lack of knowledge, education, and expertise of professionals and also lack of communication between the locals and public are the major failures in conservation of the coastal resources. Nonetheless, lack of professionals in the field of crisis management in many scientific and management institutions, law enforcement agencies and local communities is rising up the problem (Priya *et al.*, 2010).

Suitable planning for coastal zone development needs an organization. Since Island countries are moving to develop industrial capacity and tourism potential, there will be a need for coastal hazard mapping and organizing the area for decreasing the risk to the lives and properties connected to the development in hazardous locations.

Acceptable hazard organization of coastal zone as part of an official ICZM plan could be used as an object for decision-making. Finally, “given the importance of tourism to the region, tourists from the developed world need to be educated that appropriate coastal development may be antithetic to the expectation of luxurious hotel development directly on the beach”( Solomon & Forbes, 1999, p. 545).

## **Chapter 4**

### **Coastal Zone and Tourism**

#### **4.1 Introduction**

It is estimated that by the year 2020 three-quarters of the world's population will be living within 60 Km of the shoreline which will be in juxtaposition with increasing demand for coastal leisure and tourism infrastructure (Povh, 2000). Coastal areas are perceived to be stable environments; however, they are highly dynamic and respond to various human related activities. Some of these activities are making great impact on the health and sustainability of the coastal zones. These include 'residency and recreation; industry and commerce; waste disposal; agriculture, aquaculture and fishing; conservation, and military, and these still hold true. However, they are increasingly in conflict with one another as well as with longer-term natural processes' (Phillips & Jones, 2006, p. 518). Therefore, the issue at stake is how to manage coastal zones while pressure from tourism development alone is growing and making numerous impacts on the coastal ecosystems.

There are a number of reasons for leaving tourism to tourism specialists. First, while one can debate whether or not tourism is an industry, there is widespread recognition that tourism is fragmented among many varied operations of differing sizes and with different products" (Wall, 2007. p.193) such as transportation, accommodation, food,

attraction, souvenir producers and etc. “Furthermore, much tourism training has a relatively narrow focus upon hospitality. To complicate matters further, tourism is a phenomenon, which has links to many other sectors of the economy and many tourism issues are not solely tourism problems but involve relationships with agriculture, forestry, mining, environmental protection and a host of other activities” (Ibid).

## **4.2 Tourism impact**

Tourism is a common and massive industry and it is in the whole world, so it’s social, economic, and environmental impacts are also in all over the world. These impacts can affect positively and negatively affect. Sustainable tourism aims to minimize the negative impact and maximize positive effects which are economic benefits.

One of the hotly debated tourism impacts is the environmental impact. Especially, on the coastal areas where the pressure is the highest and the landscape is the most fragile. “Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within the acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources” (www.oppapers.com).

All kind of tourism and activities are deeply dependent on environmental resources. According to UNEP (2009, p.15), “tourism has a major environmental impact in many

coastal areas, which are particularly vulnerable to pressure associated with its growth. The relationship existing between tourism and environment is best qualified as a relation of mutual dependence: not only tourism is highly dependent on environmental quality but environmental quality is also highly vulnerable to tourism development”.

Coccosis and Mexa (2004) claim that the impact of tourism can, positively and negatively, affect the coastal zone. The coastal habitants can gain benefits from tourism because of job opportunities, the raising of revenue, the development of infrastructure, improvements in health and safety conditions, and enhancement of aesthetics, etc. one important thing is investment in environmental protection of tourism development. However, the negative impacts, on the other hand, could be urbanization and mass tourism, which are accused of being the main causes of the ribbon development and ecological losses in coastal areas. Unfortunately, tourism developments have changed the visual aspect of many coasts and also the natural dynamics of coastal ecosystems (UNEP, 2009)

Tourists demand a variety of goods and services, so tourism is a huge consumer of natural resources, such as drinking water, which is a rare resource in many coastal areas; or food (causing pressure on local production, especially seafood) and electricity (making tourism a massive consumer of energy). Gossling (2002) believes that six elements are global environmental consequences of tourism: changes in land cover and land use, energy use, biotic exchange and extinction of wild species, exchange and dispersion of diseases, and changes in the perception and understanding of the environment and water use.

“Marine pollution may also result from the discharges from tourist yachts, excursion boats, car ferries and, particularly, cruise ships. These ‘floating towns’, with a capacity of up to 4,000 passengers, are considered a major source of marine pollution through the dumping of rubbish and untreated sewage at sea, and the release of other shipping-related pollutants” (WWF, 2007, p.170).

“Besides ecological damages, tourism may impact negatively on the local society. The impact of tourism on traditional lifestyle and local customs, the erosion of traditional socio-cultural values and the loss of identity of the local population, and the devaluation of property values due to overbuilding are some of the negative impacts” (UNEP, 2009, p.16).

UNEP (2009, p.16) states that the main challenges for sustainable tourism in coastal areas “revolve around extending tourism development from narrow coastal area to the hinterland and thus, reducing the existing imbalance between communities living in these adjacent areas; reducing the seasonality of demand; providing for a more rational use of resources, especially water and energy and reducing the pollution of coastal and marine environments, as well as threats to wildlife and habitats”.

### **4.3 Tourism infrastructure**

Tourism industry started growing in the 1970s and 1980s. This is bound to shape special demands on planning and development in tourism infrastructure facilities and tourism centers. Tourism planners should cater for not just increasing the number of tourists in particular coasts but also the economic and social processes. These changing processes are brought by many factors such as changing states, mobility patterns and modes of

travel, standards and so on. Tourism development has lots of effects on production of goods and services, accelerating the particular sectors catering on tourism demands, income distribution pattern, entrepreneurship and etc. According to TTF “Tourism infrastructure is the supply chain of transport, social and environmental infrastructure collaborating at a regional level to create a destination” (2007, p. 1).

Tourism infrastructure includes transportation, social, environmental and collaborative infrastructure. Transportation infrastructure includes airports, major roads, and railways which provide visitor access from international and domestic source markets to destinations. Social infrastructure includes hotels, convention centers, stadiums, galleries, and tourist precincts in a destination. Environmental infrastructures are natural places such as national parks, marine parks, and reserves, including visitor facilities.

According to Sakkai (2006, p.266) “tourist infrastructure is foundational in tourism development, second in importance only to a destination’s attraction resource base, because infrastructure is vital to the commerce of tourism. Infrastructure increases the efficiency of privately producing and distributing tourism services, and in certain cases, such as tourism enclaves or remote destinations, makes possible the supply of tourism services”.

Infrastructure also includes public safety, medical and financial systems, national defense and other services that could support tourists and residence demands such as retail and shopping (Ritchie & Crouch 2005).

“Tourism, and especially the development of mass tourism, frequently brings with it the improved airports, roads, docks and seaports, and commercial distribution systems which improve the quality of life for all of the inhabitants of an island or region. These infrastructure improvements can include sewerage systems, solid waste management facilities, portable water systems, and other infrastructures with direct impacts on environmental conditions and the public health” (Thomas & Islands, 1996, p.23).

#### **4.4 Tourism accommodation**

All countries intend to increase the number of tourists; but what exactly do tourists bring and what do they leave behind? Mediterranean countries are the biggest tourism regions in the world, according to EEA (2001) accounting for 30% of international arrivals. In 1990, the number of tourists in Mediterranean countries was 260 million and it would increase to 440-655 in 2025. It represents an annual growth rate of about 3%. Therefore, “sustainable approach in building and energy systems in tourism accommodation facilities are necessary in order to achieve sustainable development of tourism that is one of the world’s most rapidly growing industries” (Zanki & Galaso, 2005, p.1).

“In coastal areas, where accommodation to rapid change is often required, flexible decision-making calls for a continuous process of planning, implementation, and goal-adjustment” (UNDP, 2009).

Demunter and Dimitrakopoulou believe that in Europe the tourists’ accommodation sector in 2010 and 2011 is in slow recovery. “Following two years of negative growth, the European tourist accommodation sector started to recover in the year 2010, with

nights spent at hotels and similar establishments increasing by 2.8 % compared with 2009” (2011. p.1).

McNamara (2008, p. 2) mentions that “the implementation of environmental initiatives in the tourism accommodation sector does vary considerably when measured at an inter-regional scale”. Planners in local areas explain the variation between size of settlement and also environmental sensitivity. The aesthetic of culture and the ecological value of coastal zone would need to produce special kinds of planning priorities (McNamara, 2008).

According to UNEP, to have spatial configuration of tourist accommodation planners should follow and relate to specific land-use plans and policies and also emphasize the following (1999, p. 62):

- “Location-wise tourist accommodation should be functionally/ organically (regarding socio-economic inputs) and physically (regarding technical infrastructure) related to, or integrated within the existing towns or settlements’ network; and
- Accommodation should concentrate on specific zones of tourist development potentially identified or determined in the general and tourism-specific land-use plans avoiding the sprawl of accommodation units along the coastline or the uncontrolled linear development of ‘independent, self-serviced’ tourist settlements”.

#### **4.5 Recreational issues**

Coastal recreation activities have been increasing in dimension and in number during the last ten years, occupying a special place in coastal tourism. UNEP (2009) identifies two

main types of recreational use in coastal zones as consumptive such as fishing, shell fishing and shell collection, and non-consumptive activities like swimming, diving, boating, surfing, jet skiing and etc.

Jiménez *et al.* (2007) generalize three main managerial concerns related to coastal zones, which are protection, recreation and supporting natural values. Each of these functions can affect special role in coastal area surface: “absorbing/dissipating the incident wave energy during storms reducing its impact on the hinterland, offering an environment for leisure and supplying a physical substrate for the development of coastal ecosystems” (p. 507).

Because recreation is the main mission to be maintained or raise the value of beaches, managerial or planning process has to be designed to justify all factors controlling the recreational carrying capacity of the coastal area. According to Manning and Lawson (2002), “beach carrying capacity” is related to the number and type of visitors that can be accommodated in the coastal zone without unacceptable social and negative effect on resources. “Two main aspects are usually included in the assessment of the recreational carrying capacity: the integrity of the resource-base and behavioral component” (Jiménez *et al.*, 2007, p. 508). Sowman (1987), named these interactions of this critical component “biophysical component” which describes the quality of recreational experience. The basic demands of beach-users are limited to a clean beach, which includes water and sand, services, access and availability of space (Pereira *et al.*, 2003).

Of course to suitably manage the beach from a recreational view, coastal zone managers should control all the factors which affect the carrying capacity. “Thus, the beach is mainly used (or exploited) for recreational purposes (leisure and tourism) and the interest (and need) of the beach manager can be expressed in terms of a series of questions and/or statements” (Jiménez *et al.*, 2007, p. 509).

#### **4.6 Sun, sea, sand and the beach/coast**

Tourism in coastal areas goes back to Roman times, when the first villas were built in the southern part of the Apennine peninsula. In the following centuries, especially from the mid-18<sup>th</sup> century till now “Coastal tourism was generally related to the therapeutic properties of sea and sun. Sun, sea and sand have continued to provide the main ingredients for coastal tourism until today, especially in the second half of the 20<sup>th</sup> century, which was marked by the development of mass tourism”(UNEP. 2009, p.10).

The coast is the interface of the sea and the land, which is called “a junction of seascape and landscape.” Coastal tourism can be found mostly on sandy coasts; rocky or marsh coasts are less popular. The coastal zones are divided into four areas that are relevant to tourism: the marine zone, the beach, the shore land and the hinterland. The beach is the most important of these, as it is where the main tourist activities take place. Some differentiates between four kinds of coastal type. First, there is the oceanic type with a large tidal range. The oceanic type may be continuous with long stretches of beach or discontinuous, where cliffs or marshland interrupt the beach. Second, there is the Mediterranean type. Again, this can be continuous or discontinuous. The coast has a special climate. Cooler air from the sea that flows landwards creates a breeze at the

seashore. Without this breeze the thermal conditions at the beach would not be as pleasant (Von, 2005; Wong, 1994; Mieczkowski, 1990).

#### **4.6.1 Major coastal planning techniques**

There are several planning techniques and management tools to implement and successfully shape the quality of coastal living environment in future. These illustrate examples that are Comprehensive Plan, Conventional Zoning, Setback Requirements, Community Character and Sense of Place and Subdivision Ordinances.

Much coastal domination has adopted general plans and is using them impressively to guide growth and development. A comprehensive plan, which is known as master plan or general plan is a fundamental tool. In fact, it is the foundation for any coastal community's travail to shape its future. A comprehensive plan in many ways organizes documents providing guidance for the ten thousand decisions a society makes and the land use and growth management tools discussed in this segment. Some unique land use tools such as zoning are destined to be implemented and be consistent with a community's comprehensive plan. In some coastal states, compliance with the plan is in command by law (Beatley *et al.*, 2002).

Conventional zoning commands to control the type of land uses allowed in some parts of a community such as residential, commercial, and industrial and their extreme degrees like bulk, height, floor-area ratio, and setback provisions. Conventional zoning can be useful in performing a multiplicity of local goals, such as forbiddance or reducing development in environmentally sensitive coastal zones. These ordinances can be used

to ban or limit development in the high-risk zones to decrease exposure of people and properties to coastal hazards (Beatley *et al.*, 2002).

‘Setback Requirements’ is a part of zoning and it is a very important element to regulatory communities in many coastal areas. This technique is used in urban settings to make certain that adequate land is available for future roads and other public improvements and to be sure about adequate light, access, and separation of framework. ‘Setback requirement’ in a coastal hazard zone is an extension of this area and is prevailed for minimizing the impact of development on beaches and reducing exposure to storm hazards (Kusler *et al.*, 1982; University of North Carolina, 1984).

Zoning ordinances are also one of the techniques used by many coastal localities to protect community characteristics. As Beatley *et al.* (2002. p.209) state: “a coastal community imposes architectural design standards in an effort to protect the integrity of the town’s historic architecture”.

Subdivision ordinances regulations govern the transformation of raw land into building sites and extent of improvements made in this conversion. Subdivision regulations can manage the elements and plan of development and also can effectively establish necessities and standards for public improvements, including streets, drainage pipes, and sewer outlets. “The requirement of minimum lot size, although usually done in the zoning ordinance, can reduce the amount of new development exposed to storm hazards” (Beatley *et al.*, 2002. p.209).

#### **4.6.2 Implications for tourism**

Government can play an important role in tourism and the influences of state policy on tourism development are of interest to scholars (Bramwell & Lane, 2000; Hall, 1994; Hall & Jenkins, 1995; Jenkins, 1980; Jenkins & Henry, 1982). Since the 1990s, there has been a progressive shift in approach in the tourism policy literature from the concept of government to that of governance (Beaumont & Dredge, 2010; Greenwood, 1993; Hall, 1999; Yüksel & Bramwell, 2005). “This shift has extremely significant implications for sustainable tourism, given that it influences such factors as the relationships between policy actors, the capacity of the state to act, the selection of policy instruments and indicators and, potentially, even the definition of policy problems” (Hall, 2011, p.437).

Hall (2009) identified three models of implementation and especially their implications for tourism planning and policy, which are “top-down rational”, “bottom-up” and “interactional network”. Hall models are also related to different forms of mediation, but he didn't examine the contribution of these concepts for understanding whole tourism policy (Hall, 2011).

#### **4.6.3 Environmental Impact Assessment**

Coastal areas are undergoing a severe downgrading, basically due to the composing of large harbors, chemical and petrochemical industries, highly intensive agricultural schemes, urban expansion and overfishing (Adams & Shane, 1992). Diegues (1998, P.119) poses that “In order to control the effects of environmental degradation, the government relies on environmental laws and regulations, mainly the establishment of protected areas, and the application of environmental impact analysis”. Most studies for the EIA and for the establishment of protected areas are under control by natural

scientists such as biologists, ecologists, botanists with very little input from the social scientists. Therefore, the results are usually based on the interests of traditional communities and are not correctly taken into account (Bailey *et al.*, 1992).

Environmental Assessment, which is abbreviated as EA is a “decision-making process used to promote good environmental planning by assessing the potential effects and benefits of certain activities on the environment” (UNEP, 2009, p. 40). Environmental Assessment should make sure that all environmental effects, including, risks, and benefits suggested to development plans, policies, programmes and projects are recognized and sufficiently addressed.

Environmental Impact Assessment (EIA) is an implement standard to review and evaluate the impacts of activities such as construction on tourist facilities and also on the environment and natural resources. The EIA processes identify, predict, interpret, and communicate the relevant potential impacts (UNEP, 2009).

UNDP (2003) identifies the main objectives of EIA in sustainable tourism in coastal area:

- Make planners aware of the important environmental effects of submitted projects;
- Characterize the alternatives with different environmental impacts;
- Recognize approaches of avoidance or lowering of environmental damage and other impacts on coastal areas;

- Anticipate coastal degradation by using the implementation of possible alternatives;
- Display to the public the reasons of plans by using environmental effects;
- Encourage harmony among stakeholders;
- Enhance participation of people in relation to decision making programmed in a coastal area.

#### **4.7 Administrative and institutional/legal issues**

Coastal areas are one of the first to damage from the impacts of global and environmental problems, and also from the impacts of lots of activities like urbanization, irrigation and hydro-development projects. Kaya, (2006) believes that the results of these global and environmental problems such as critical climatic phenomena, floods, erosion, regression of the sea, the shifting of the coastal lines, water pollution, loss of wildlife, human and economic negative externalities, etc. are starting to appear in all over the world.

“There are several causes of environmental problems in the Mediterranean regions. These include laws and regulations that are inadequate or enforced administrative conflict in terms of the environment, lack of adequate equipment, unskillful personnel to monitor the environmental problems, insufficient transportation system, inadequate development policies, etc” (Kaya, 2010. P. 23).

The main goals of the integrative environmental planning in the Mediterranean coastal zone is to care about the relationship between populations, resources, environmental development and their impact on the coast (METAP, 2002). “Certainly, it must be a

prospective and a systematic approach to obtain an instrument to explore the interactions between development policies and environmental circumstances” (Kaya, 2010, p.26). In the Mediterranean region, there are several problems and sub- regional planning must be designed to address them. These problems are associated with the management of coastal system (METAP, 2002).

According to Kaya, (2010, p.26) these problems are:

- ”The conversion of coastal prime agricultural lands, especially coastal specialty croplands for nonagricultural uses.
- The restriction of recreational visitor accesses to the coastal zone through preemption of public service system capacities (e.g., water, wastewater, and highway) for residential development.
- The lack of adequate water supplies, highway system, energy, health, etc.
- The impact of land uses located in a watershed on resources within its complex.
- The residential and industrial effluent joined with agricultural runoff and untreated wastewater generates a serious pollution in the coastal environment.
- The deterioration in the scenic qualities of coastal communities and landscapes by development activities and physical modification of the environment.
- The socio-economic mixture of coastal communities and related land uses.
- The conflict between local authority and national force”.

According to Özhan (1996), policies in national coastal zone must have generality because they set the rules and also regulations, which are made up of different elements

for local planning in a wide area. “The commission has to improve guidelines that translate the generality of coastal policies into terms from which local governments and other affected entities may identify the way to apply to the jurisdictions under their control. The ideal guidelines could lay out a set of criteria, measures, standards, and analytical methods for each of the policies of a coastal act. Since each policy involves criteria and measures for its application. Standards can judge the degree of harmony between a local coastal plan and federal or state coastal policies. Though, this task could be quite difficult and complicated in practice to apply, it can be applicable to the extent that local and federal forces agree on its application” (Kaya, 2010, p.27).

#### **4.8 Biophysical/geological characteristic of the Mediterranean Sea**

The Mediterranean Sea has a hydrological problem balance, through runoff and precipitation the input of water evaporation exceeds. This deficiency is mainly balanced by the flow of Atlantic surface waters via the Strait of Gibraltar (35,000 km<sup>3</sup>) (Jeftic *et al.*, 1989). The water balance are net inflows through the Strait of Gibraltar (1,800 km<sup>3</sup>) on the input side, and the Dardanelles (300 km<sup>3</sup>), river inflows (500 km<sup>3</sup>), and precipitation (1,000 km<sup>3</sup>). The negative side of the balance is evaporation (3,500 km<sup>3</sup>) (Batisse & Grissac 2003).

During winter and spring because of the strong and dry continental winds, high-salinity deep water is formed. Except in very few areas, the Mediterranean is characterized by very weak tides (Jeftic *et al.*, 1989) that result in shorelines ‘pollution (Batisse & Grissac 2003).

The Mediterranean current system shows a numerous spin-offs eddying along the way formed by migration of Atlantic water towards the east (Jeftic, *et al.*, 1989). Normally there is no east to the west surface return system, but a return of Mediterranean water takes place by intermediate and deep water immigration from east to west (Batisse & Grissac, 2003).

According to Jeftic *et al.*, (1989) a fundamental characteristic of the Mediterranean water is impoverished nutrient concentration. Few large plains, little good agricultural land, ports, and harbors tightly hemmed between sea and rock, and few broad fluvial basins are the consequences of interpenetration, young relief, and close contact of the sea and the mountains.

During recent years, urbanization, increasing salinization, and pollution have caused environmental degradation. The quality of life in urban settings is also decreased as traffic congestion worsens, noise pollution increases, air quality degrades, and the accumulation of waste knows no bounds (Lesser, 2009).

The question is ‘what is to be done for these environmental problems especially coastal areas of Mediterranean region, as its coastal zone is heavily populated?’

“The first step is for all parties to see the Mediterranean region as a shared space through an environmental lens. Polluted waters affect everyone. Increasing desertification will occur throughout the basin. The list is endless. While there has been nominal success through the Barcelona Process in the fields of urban development, coastal management,

and the protection of the environment, the process has had limited success in maintaining an ongoing dialogue between the EU (European Union) and its Mediterranean partners and building strong lasting alliances, especially between southern Mediterranean partners. The problem is that cooperation within the EMP (Euro-Mediterranean Partnership) has been based on political stability and economic growth, both highly uncertain under current conditions.

Second, solving the regional environmental problems of today ideally entails targeted responses without reference to political entities or boundaries.

While this is not an ideal world, the new Union for the Mediterranean provides a method to bypass the political and economic divides that so often plague multilateral processes by tackling specific issues on a project-by-project basis. The prominence of environmental topics on the Union for the Mediterranean's agenda bodes well for the future.

Third, integrating the extant policy instruments outside of the EU will be increasingly important, since environmental conditions in the Mediterranean cannot be isolated from developments on a global level and the work of other key actors" (Lesser, 2009, p. 38-39).

According to the studies mentioned above, it can be concluded that to the knowledge of this writer, there is no specific research based on the sustainable governance of coastal

zone in North Cyprus. This research can be a new outline to achieve a sustainable quality of the coastal areas in TRNC.

## **Chapter 5**

### **The Case of North Cyprus**

#### **5.1 Geography**

Cyprus is an island country, which is in the Eastern Basin of the Mediterranean Sea. After the Sicily and Sardinia islands, Cyprus is the third largest island in the Mediterranean and 81th largest island in the world. Cyprus is between Western Asia, Southern Europe, and Northern Africa. The whole island's area is 9,251 km<sup>2</sup> (of which 3,355 km<sup>2</sup>, 1,295 sq mi) are under the administration of the de facto Turkish Republic of Northern Cyprus. According the recent census, population of north Cyprus is approximately about 400,000. The island of Cyprus is located in the Eastern Mediterranean. Its neighboring lands at the nearest coastal points are Turkey 40 miles north, Syria 60 miles east, Lebanon 108 miles south-east, Israel 180 miles south-east and Egypt 230 miles south. North Cyprus is some 100 miles long, 40 miles across at its widest point and has a total area of 1357 sq. miles or nearly one third of the whole of the island. The geography of North Cyprus is characterized by a unique blend of mountains, plains and beaches. The Kyrenia Range, with its magnificent jagged limestone peaks, the highest of which is Mount Selvili at 3357 ft. runs along most of the north coastline to form a startling backdrop. Northern Cyprus extends to north east till the Karpaz Peninsula, from the west to Morphou Bay and Cape Kormakitis, and from south to the village of Louroujina or Akincilar. The urban population is employed mainly in the

service industry and light industries such as beverages, clothing, and construction and in other commercial establishments. The rural population lives in villages. There are some 195 villages in North Cyprus. People in rural areas are mainly engaged in agriculture and produce a variety of crops. Wheat, barley, olives, carobs, melon, grapes, figs, potatoes and basic vegetables are grown commercially on a moderate scale. Citrus is the main export produce, however, exports from North Cyprus have been restricted to a great extent, due to the political status of the state. To the east of the island the mountain range loses height as it extends along the narrow peninsula known as Karpaz or 'The Panhandle'. Along it one finds the best beaches in Cyprus. (www.northerncyprusproperties.co.uk). See also figure 4.



Figure 4: North Cyprus Map

## **5.2 Economic profile and tourism:**

In 1878, the Ottoman Empire let Britain assume the administration of Cyprus, which means Cyprus, became colonized by Britain ([www.cyprustouristguide.com](http://www.cyprustouristguide.com)). However, in 1960, it gained independence from the U.K and the Republic of Cyprus was set up as a constitutional democracy guaranteed by Greece, Turkey and the United Kingdom. These countries granted the Greek and Turkish communities political equality and the right to share power and administer the island in partnership (Kyriacou, 2000; Muftuler-Bac, 1999; Richmond, 1999). Unfortunately, the post-independent engulfed in tension between the Greek Cypriot and Turkish Cypriot populations which eventually led to separation of two communities in 1974. Since then, two separate enclaves established on the island, which are known as the south side-recognized by the world as the republic of Cyprus (Greek enclave)- and the north side-which has not been recognized by the world community other than Turkey (Turkish enclave). Because of its lack of recognition by the international community other than Turkey;it has remained highly dependent on Turkey's support for protection against Greek Cypriot' harassment and embargos that are still in place. This situation has hampered full force development in this part of the island (Cockburn, 2004; Leonard, 2006).

Nevertheless, north Cyprus has been administered as a fully functional nation state with representatives in various countries around the world (Emirson & Verheugen, 2004; Diez, 2002).North Cyprus like many other small islands has limited natural recourses and limited internal markets. Economist stated that (2000, p.32) “the local economy of North Cyprus is almost entirely dependent on handouts from Turkish government”. The political economy of north Cyprus has taken a special path and influenced/shaped by its

inherited challenges and limitations as a result of aftermath of division in 1974. 'So far, Turkey has been the only country that recognizes the sovereignty of the Turkish North Cyprus, and has established close political and economic ties with it. In particular, economic isolation from the world economy has eradicated the capability of the Turkish Cypriot economy to generate foreign currency resources, which are inevitably required for a sustainable development of a small island economy, and this leaves the North Cyprus economy extremely dependent on the Turkish economy and foreign currency inflows in the forms of aid and export earnings obtained both from and via Turkey' (Guncavadi and Kucukcifci, 2008, p. 2).

Lack of recognition by the international community, continuation of embargos, lack of direct flight, degraded infrastructure that it left with after the war, and lack of financial support other than Turkey, has had devastating impact on its transition to a full blown economy. 'In addition to political problems, North Cyprus also deals with economic problems of being a small island with limited natural resources and a very small domestic market which constitutes insufficient domestic demand that is required for any sectoral development. Due to almost full integration into the Turkish economy, the Turkish Cypriot economy is also exposed to all the real and monetary shocks and instabilities prevailing in the Turkish economy' (Guncavadi and Kucukcifci, 2008, p. 2).

The military intervention to resolve the political dispute in 1974 led to the partition of the island into two separate administrations, and from then on both sides started to follow different development paths. However, the international community has continued to recognize the administration on the south as the legitimate government of

two societies in the island. Under the latest protocol between Turkey and TRNC signed in January 2001, Turkey undertook the provision of Turkish Cypriots loans and financial assistance totaling \$350 million for the purpose of financing projects in public finance, tourism, banking, and privatization. Turkey also agreed to provide a supplementary amount of \$140 million to entrepreneurs in the form of low-interest loans to support export-oriented industries and tourism. Another characteristics of north Cyprus's economy is its sectoral composition (see table 2), which is dominated by non-tradable goods.

‘In the latest period in the table the share of tradable sectors in GDP was 17.2% in comparison with the 73% share of the non-tradable output. These shares in the period of 1985-1989 were 25.2% and 67.3% respectively. This is clear indication that the North Cyprus economy possesses an economic structure which largely produces non-tradable goods with a limited capability of generating foreign earnings. In addition to this feature of the economic structure, embargoes also put the economy under an extra burden by restricting the involvement of the already existing tradable sectors into foreign trade, and reduce the capability of generating foreign currency through foreign trade which is extremely necessary to close up resource gaps’ (Guncavadi & Kucukcifci, 2008, p. 2).

Despite the dominance of non-tradable economic activity, north Cyprus has been able to generate foreign exchange income, especially TL. Thanks to tourism and higher education as well as the transfer of money from Cypriots abroad (remittances). At end, the economic profile that revealed by Guncavadi and Kucukcifci indicate that:

‘...Exports and final demand were two crucial components of economic growth. Due to insufficient private sector and domestic markets the public sector becomes more important in generating final demand. But the fiscal stance of the economy in generating public-sector-driven economic growth would be the main concern in this regard. Exports, on the other hand, are another contributor to growth. However, the economic and political embargoes seem to be the main disadvantage of the economy, restricting its ability to access the international markets, particularly to

the European Union market. The removal of the embargoes in this respect would generate substantial economic growth for the North Cyprus economy, and this should be considered as a precondition for eradicating the income gap between two sides of the island before reaching a peaceful settlement of the political dispute (2008, P. 23).

See also table 3 for the role of the sectors in GDP and GNP.

Table 2. Sectoral composition of the GDP (%)

	1985-1989	1990-1998	1999-2003	2004-2007 <sup>a</sup>
Agriculture	13,9	9,1	8,1	7,5
Manufacturing	11,3	12,4	10,8	9,8
Construction	6,8	5,3	4,3	7,7
Trade	23,5	19,1	16,0	16,6
Transport & communication	8,0	9,4	12,3	10,6
Financial services	5,0	8,0	6,8	5,9
Housing	2,7	2,1	2,7	3,1
Other services	5,2	6,8	9,6	10,1
Public services	16,0	19,6	21,3	18,5
Import taxes	7,5	8,2	8,1	10,3
<b>Tradable sectors<sup>b</sup></b>	<b>25,2</b>	<b>21,5</b>	<b>18,9</b>	<b>17,2</b>
<b>Nontradable sectors<sup>c</sup></b>	<b>67,3</b>	<b>70,3</b>	<b>73,0</b>	<b>72,5</b>
Import taxes	7,5	8,2	8,1	10,3

Sources: SPO (2008), *Economic and Social Indicators*, Nicosia: North Cyprus.

a) Figures for 2007 are provisional.

b) The share of the tradable sectors is the sum of agriculture and manufacturing sectors.

c) The share of the nontradable sectors are taken as the sum of the sectors other than manufacturing and agriculture.

Table 3. Sectoral behavior of TRNC in relation to their role in GDP/GNP

Sectors	2003	2004	2005	2006	2007	2003-2007 Annual Avg. Change (%)
<b>Agriculture</b>	7.3	8.5	2.8	-3.2	-4.3	2.1
<b>Crop Production</b>	4.1	9.4	-6.0	-6.3	-9.4	-1.9
<b>Livestock Production</b>	13.1	6.0	12.4	5.7	-2.4	6.8
<b>Forestry</b>	-16.6	99.2	19.2	- 31.8	2.8	6.8
<b>Fishing</b>	13.3	-5.5	29.8	- 23.1	32.2	7.1
<b>Industry</b>	7.7	10.6	6.4	20.0	-3.2	8.1
<b>Quarrying</b>	24.5	8.6	11.0	47.2	- 10.2	14.7
<b>Manufacturing</b>	7.3	10.2	5.1	21.5	-6.1	7.2
<b>Electricity – Water</b>	7.2	13.3	11.7	8.6	13.1	10.7
<b>Construction</b>	30.8	5.3	18.9	68.1	- 12.9	19.1
<b>Trade-Tourism</b>	12.5	25.5	20.8	9.5	-6.3	11.8
<b>Wholesale and Retail Trade</b>	14.6	27.2	24.9	13.6	-8.4	13.6
<b>Hotels and Restaurants</b>	5.0	18.9	3.3	- 11.2	7.6	4.2
<b>Transport- Communication</b>	4.2	8.8	14.2	-0.7	-2.2	4.7
<b>Financial Institutions</b>	6.7	-0.3	4.2	8.9	2.0	4.2
<b>Ownership of Dwellings</b>	2.4	2.4	3.4	20.1	1.4	5.7
<b>Business and Personal Services</b>	5.7	26.0	19.1	12.5	3.2	13.0
<b>Public Services</b>	4.1	5.2	6.8	2.4	3.6	4.4
<b>Import Duties</b>	36.9	48.8	29.7	-0.6	10.9	23.5
<b>GDP</b>	10.6	14.2	13.8	12.7	-2.1	9.7
<b>Net Factor Income from Abroad</b>	123.6	88.4	4.2	34.1	- 16.3	37.6
<b>GNP</b>	11.4	15.4	13.5	13.2	-2.5	10.0

Source: State Planning Organization (2009)

### **5.3 Tourism**

The significant role of tourism in and its impact on TRNC's economy and society is undeniable. Despite well documented pitfalls and shortcomings (Alipour and Kilic, 2005) tourism remains active and dynamic in various forms. Being an island state and not having a strong private sector, which is exacerbated by embargos and lack of recognition, the state plays a determining role in planning, management, and marketing of tourism products. North Cyprus is blessed with historical, cultural, and natural attractions which the climatic conditions play an exceptional role in making it a paradise for sun, sea and sand seekers. By far, tourism, especially outdoor tourism activities, make it one of the sought after destinations in the world. Its main micro-environmental DNA (Gunn & VAR, 2002) is the climate, which produces a superb coastal areas and sea condition in this part of the Mediterranean-two important factors as a magnet for sun lovers. Not to mention its location which is highly accessible by European market? There are several plains on the coasts of the Island. These are divided into two groups: Alluvial coastal plains and Eroded coastal Plains. The TRNC has 396 km of it. In the north is the Girne valley with its narrow dentelated coasts, in the west is the Guzelyurt valley; in the east is the Magusa valley. The most important gulf of the island is: Hacisofu, Guzelyurt, Gazimagusa, Iskele, Limasol and Yalova. The capes are as follows: zafer, Poyraz, Pile, Dogan, Ikizler, Arnavut and Korucam (<http://www.cyprusive.com/?CID=5>). Despite political and economic difficulties, tourism sector has progressed in various fronts. The infrastructural capacity has been increased, the airport has been renovated, the power cuts are less frequent, air carriers have been upgraded and more importantly, bed capacity has been quadrupled(MTE, 2011). See also table 4 for tourism movement.

Nevertheless, there are certain barriers which are associated with the so called micro-environment competitiveness on a sustainable basis in the case of TRNC. Some of these barriers are lack of vision, lack of education about tourism impact, lack of commitment, lack of education about development processes, lack of direction and organization, and last but not least, politics. In this context, governments' role has remained to be able to meet the 'governance' expectations. The key to solving some of these barriers is within the public sector domain. Now the question is '*what are the ramifications of this situation for the ICZM*'. According to Post and Lundin (1996), Hatzios (1997) and GESAMP (1996), ICZM is a step-by-step process of learning and institutional capacity building. The difference between these guidelines is in terminology, length, and detail. Moreover, they try to balance between technical and governance aspects of ICZM but the overall idea of ICZM as a sequence of learning is same. Olsen *et al.*, (1997) categorize one to five steps to regard as a generation of an ICZM program. In North Cyprus, and tourism sector needs more attention because it is the heart of the economic development. "Unintentionally, North Cyprus has avoided the heavy concentrations of resorts that characterize many Mediterranean coastlines. Only the coastal area of Kyrenia – where new hotels and villas are under construction – shows signs of transformation. But there is little doubt that North Cyprus is now at the threshold of rapid tourism development and in a sense this reinforces the environment at center stage in the local tourism debate" (Yasarata, *et al.*, 2010. p. 353).

Table 4: Tourism Share in TRNC's Economy (1996-2007).

<b>YEARS</b>	<b>NUMBER OF ARRIVALS</b>	<b>NET TOURISM INCOME (MILLION USD)</b>	<b>THE RATIO OF NET TOURISM INCOME TO THE TRADE BALANCE (%)</b>	<b>OCCUPANCY RATE (%)</b>
1996	146,668	175.6	70.0	32.5
1997	193,746	183.2	61.3	35.6
1998	209,142	186.0	55.2	36.6
1999	231,926	192.8	53.5	36.7
2000	254,448	198.3	53.0	37.2
2001	228,316	93.7	39.5	30.9
2002	285,419	114.1	43.2	37.8
2003	272,162	178.8	41.9	37.0
2004	306,244	288.3	36.4	40.7
2005	335,235	328.8	28.0	40.2
2006	368,891	303.2	23.2	33.2
2007	423,396	376.2	27.4	32.2

Source: MET, 2008.

## 5.4 ICZM in Cyprus

Almost half of the population lives and works within coastal area and 95% of the tourist industry are located in coastal zones. Tourism is one of the most important economic activities of the island. According to Loizidou (2004) coastal areas are the primary destination for tourists and in 1999 Cyprus has had 2.5 million tourists. Cyprus Tourism Organization (2000) had a target to increase the number of tourist to 3.5 million by 2010 which means annual growth of 3, 4% and it means coastal zone is under extremely high pressure. See also table 3 for tourism movement in TRNC.

Regarding the characteristics of the coastal zone development in last twenty years; Loizidou, (2004) argues that “formerly agricultural and natural zones at the coastline are converted to tourist development zones after each revision of the land use planning zones every four years. The situation after the last revision of the land use planning zones along the coastline in 1997-98 was as follows:

- Tourist zones cover 105 km, i.e., 37% of the coastline (in length)
- Open areas/protected natural or archaeological areas cover 125 km, i.e., 43%
- Agricultural zones cover 36 km, i.e., 12%
- Residential zones cover 17 km, i.e., 6%
- Industrial zones cover 9 km, i.e., 3%” (Loizidou, 2004, p. 2-3)

The coastline of Cyprus is characterized by sand, gravel and rock formations.

The following figure shows the coastline of Cyprus and its main physical and socio-economic indicators in 2006. See also table 5.

Table 5: Physical and socio-economic indicators

<b>Physical and socio-economic indicators</b>	<b>Mediterranean Sea</b>
Sea Level Rise	<b>Medium</b>
Coastline length	<b>367 km</b>
10 km coastal zone below 5- meter elevation	<b>&lt; 5%</b>
Coastline subject to erosion	<b>110 km (30%)</b>
GDP in 50km zone(€ million)	<b>2 970 (100%)</b>
Population in 50 km zone	<b>730 367 (100%)</b>

Source: Policy Research based on EEA (2006)

Integrated Coastal Zone Management initiated in 1993-1995 in Cyprus with the project “Coastal Zone Management for Cyprus”. The foundation of this framework was European Union Program MEDSPA. This project distinguishes three main systems in coastal area. The first one was just the natural system, and not human domains. The second one was the user functions, and the last one was technical and organizational infrastructure. The first management problem to be solved was harmony and integration of the activities of all these authorities. ICZM of the National Committee has operated very efficiently and actively for the last three years. After that a crucial decision was supposed to be made concerning ‘erosion’, which was the main problem of the coastal zone of Cyprus, because 30% of the coasts were under severe erosion. The decision of National Committee was the project focusing on “Shoreline Management” and ICZM

framework set up during its first phase. In 1995, to control coastal development for Cyprus, general policies were prepared by the Project and Master Plans for three coastal areas. This project was a systematic effort to implement an ICZM approach in Cyprus (Loizidou, 2004). Loizidou (2004) classified the trends for development to “Sub-urbanization” like population growth and development in suburbs located at the edges of the urban areas and “Coastal development” such as coastal tourism development. See also table 6.

Table 6: Action associated with different steps in an ICZM policy cycle

Step 1: Issue identification and assessment	Rapidly assess existing conditions Consult key stakeholders and identify priority issues
Step 2: Program preparation	Select issues to be addressed and geographic focus Conduct sustained public education program Define boundaries of management area Define management objectives, strategies, and actions Carry out early implementation actions
Step 3: Formal adoption and funding	Adopt formal management plan and funding governance process Secure adequate funding for implementation
Step 4: Implementation	Construction/operation of infrastructure Promotion of compliance to regulations and agreements Implementation of sustainable development practices
Step 5: Evaluation	Evaluate governance process and outcomes Reassess issues and strategies Select adjustments to plan and governance process

Source: Olsen et al. (1997, p.161)

Among developing countries, the Philippines have one of the longest and richest experiences of ICZM. “The accomplishments of particular local governments are

reviewed at province level to begin with and the Department of Environment and Natural Resources in collaboration with a multi-agency and multi –sector body awards the ultimate certification to the local government” (Isager, 2008, p.19).

As White *et al.* (2006) mention, in many cases ICZM received financial assistance to perform programs. (see also table 7).

Table 7: ICZM benchmark and certification system in the Philippines

<b>Level 1:Beginning ICZM</b> Acceptance of ICZM as a basic service of municipal/city government with planning and field interventions initiated (1to 2 years)	<b>Level 2:Intermediate ICZM</b> Implementation of ICZM plans underway with effective integration to local governance (2 to 5 years)	<b>Level 3:AdvancedICZM</b> Sustained long-term implementation of ICZM with monitoring, measured results, and positive returns (5 years or more)
<ul style="list-style-type: none"> <li>• Baseline assessment conducted.</li> <li>• Multi-year coastal management plan drafted.</li> <li>• Coastal management related organizations formed and active.</li> <li>• Annual budget allocated for ICZM.</li> <li>• Shoreline/foreshore management measures planned and initiated.</li> <li>• At least two ICZM "best practices" planned and initiated. For example: Municipal water delineation Coastal zoning Fisheries management Marine protected areas Mangrove management Solid waste management upland/watershed management Coastal law enforcement</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-year ICZM plan finalized and adopted.</li> <li>• Monitoring plan developed for assessing socio-environmental conditions.</li> <li>• ICZM related organizations active and effective.</li> <li>• Financial and human resources assigned permanently to ICZM activities.</li> <li>• Shoreline/foreshore management plan adopted with implementing guidelines.</li> <li>• At least four best practices implemented with measured success.</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-year ICZM plan implemented, reviewed, and revised as necessary.</li> <li>• Socio-environmental conditions assessed in accordance with monitoring plan.</li> <li>• ICZM related organizations effective and supported financially through municipality/city budget or revenue generating mechanisms.</li> <li>• Annual programming and budget sufficient to implement the plan.</li> <li>• Shoreline/foreshore management effective with regular monitoring and enforcement guidelines.</li> <li>• At least six best practices implemented with measured results and positive returns.</li> </ul>

Environmentally friendly enterprises.		<ul style="list-style-type: none"> <li>• Illegal activities and destructive practices minimized or stopped.</li> <li>• Biophysical improvement measured.</li> <li>• Socioeconomic benefits accrue to coastal residents.</li> <li>• Positive perceptions of ICZM interventions among stakeholders.</li> </ul>
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Source: White et al. 2006, p.292

### 5.5 National Policy

Planning sustainable tourism policies and their performance, in developing countries, are prevented as a result of power struggles and political strategies among important actor groups such as government, private sector, political parties, local government and communities (Altinay *et al.*, 2007 & Tosun, 2000).

While the nature of planning is decentralized in advanced economies, which are known as ‘developed world’, the opposite succeeds in many developing countries, where tourism planning is often centralized and most decisions are made through government interference rather than pluralism (Choi & Sirakaya, 2006; Inskip, 1991; Tosun & Timothy, 2001). That is why the ruling elites of developing countries decide under the cover of bureaucratic traditions (Shamsul-Haque, 2007).

Most of the times developing countries have the lack of implementation of those policies and regulations for tourism to perceived as an isolated economic tool (Alipour & Kilic,

2005) to respond the need of rich foreigners and also have a strategic to imperative for poverty and wealth creation. As an example in the case of Urgup in Turkey, Tosun and Jenkins (1998) find that shortage of policies of political and economic expedience is the cause of rapid emergence of mass tourism and finally it can affect environmental degradation and social structures. This is the result of local community being disfranchised and disconnected from the natural and economic resources (Yasarataa *et al.*, 2010). According to political culture, North Cyprus allows politicians to make rules serving their own benefits. With respect to the case of TRNC, alas to say that ICZM has not been on the agenda of the public sector contrary to its urgent need for a clear policy and organizational tool. Nowadays, there are ample evidence for its urgency from environmental, sustainability and tourism asset point of view. It is the responsibility of public sector to inject a process for the purpose of ICZM within a broader environmental management system. Otherwise, the cost to these fragile environments will irreversible and high.

## **5.6 Local initiatives**

During coastal management initiative analyzing, differentiation between different sectoral integration degrees that are being attempt is important (Olsen *et al.*, 1997) is as follow:

- **Enhanced Sectoral Management:** Focuses on the management of a single or topic sector but shouldclearlyshows the impacts and the relation and connection with other sectors and the ecosystems affected. Investigation in coastal tourism and transportation infrastructure funded by development banks (Lemay, Vaughan & Rodriguez, 1998).

- Coastal Zone Management: Multisectoral management focused on both development and sustainability issues within limited geographically described issues of coastline and near shore waters. Many state coastal management programs in the United States (Beatley *et al.*, 1994) and the first stage of the Sri Lanka program (Lowry & Wickremeratne, 1989) exemplify this approach.
- Integrated Coastal Management: Explain the cross-sectoral character of coastal zone management to care of the ecosystem processes in coastal watersheds and oceans; it clearly explain its goal in terms of progress to have more sustainable forms of development (Cicin-Sain & Knecht, 1998; Clark, 1996).

“In many instances, the initial objective of a coastal management initiative must be to slow down and, where possible, reverse well-established trends of environmental degradation, sustained or even increasing poverty, and mounting conflicts among user groups. In order to promote greater realism in what may be feasible to attain and then sustain, it is useful to consider the sequence of outcomes that must be attained in order to achieve the ultimate goals of (1) an acceptable and sustainable quality of life in coastal communities and (2) the sustained well-being and qualities of coastal ecosystems” (Olsen & Christie, 2000, p. 14). It is visual in order intermediate outcomes.

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- **Coastal Zone Management:** Multisectoral management focuses on both development and sustainability issues within limited geographical areas which describe the issues of coastline and near shore waters. Many state coastal management programs in the United States (Beatley *et al.*, 1994) and the first stage of the Sri Lanka program (Lowry & Wickremeratne, 1989) exemplify this approach
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According to the studies mentioned above, it can be concluded that to the knowledge of this writer, there is no specific research regarding island states focusing on coastal zones in islands. This research can be a new outline to achieve a sustainable quality of the coastal areas in North Cyprus.

## CHAPTER 6

### RESEARCH METHODOLOGY AND DATA ANALYSIS

#### 6.1 research methodology

Qualitative analysis-which yields data in words and images rather than numbers-is an important tool in any research project. Census data, population projections, trip estimates have been utilized by planners; however, numbers don't always tell the whole story. In numerous research endeavors qualitative strategy has made inwards to and become instruments for planners by focusing on field research, photography, focus groups, content analysis and in-depth interviews to develop compelling data for exploration and discovery (Gaber, 2007). Qualitative research methods are designed to help researchers understand people and what they say and do. These methods are designed to the social and cultural contexts. Shank (2002, p. 5) defines qualitative research as “a form of systematic empirical inquiry into meaning”. By “systematic” he means “planned, ordered and public”, following rules which is agreed by members of the qualitative research community. By “empirical”, he means that this type of questions is found by experience. “Inquiry into meaning” means researchers try to understand how others make sense of their experience. There are four common approaches in qualitative research; they are ethnography, phenomenology, field research and grounded theory. This study applied the ‘field research’ which is also considered to be either a broad approach to qualitative research or a method of gathering qualitative data. The essential

idea is that the researcher goes into the field to observe the phenomenon in its natural state or in situ. As such, it is probably most related to the method of participant observation and in-depth interview. The field researcher typically takes extensive field notes and recorded material (i.e., as in this case) which are subsequently coded and analyzed in a variety of ways ([www.socialresearchmethods.net](http://www.socialresearchmethods.net)).

According to Denzin and Lincoln, qualitative research involves an “interpretive” and “naturalistic” approach: “This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them” (2000, p. 3).

Qualitative research has advantages which is also conducive to this research.

Accordingly to these advantages include:

- Flexibility to follow unexpected ideas during research and explore processes effectively;
- Sensitivity to contextual factors;
- Ability to study symbolic dimensions and social meaning;
- Increased opportunities:
  - To develop empirically supported new ideas and theories;
  - For in-depth and longitudinal explorations of leadership phenomena; and
  - For more relevance and interest for practitioners (Ospina, 2004, p. 2)

Qualitative research (i.e. inductive and exploratory in nature) has the ability to provide complex textual descriptions of how other people experience in a research issue. In the qualitative research more information is about the human side of an issue. These issues can be the contradictory behaviors, opinion, beliefs and also relationships of individuals (Conger, 1998; Bryman et al, 1988; Alvesson, 1996).

Finally qualitative research helps to interpret and better understand the complex reality of a given situation and the implications of quantitative data. Nonetheless, three most common qualitative approach is: participant observation, focus groups, and in-depth interviews. Participant observation is suitable for collecting data on behaviors in the usual contexts. Focuses groups are effective to bring data on the cultural standard of a group and in generating broad overviews of issues of concern to the cultural groups or subgroups represented. In-depth interviews are best for collecting data on individuals' personal histories, perspectives, and experiences, particularly when sensitive topics are being explored.

In-depth interviews are for persons who are willing to tell their stories to empathic listeners whose projects are framed a shaving both personal and political liberator potential (Gergen, 2001). Brinkman and Kvale (2005) noted that intimate and caring exchanges became widely accepted as the appropriate ideal style of interviewing for research. Furthermore, interviewers' were framed as the instruments through which this could be realized (Duncombe & Jessop, 2002). It followed that attention was primarily directed at what researchers said and did. This attention on researchers was also reflected in discussions of participation. The extent to which participants were

participating in knowledge making was often construed as a function of what researchers ‘activities afforded (Macran & Ross, 2002). In-depth interview is applied because the data can be recorded in a wide variety of ways including stenography, audio recording, video recording or written notes. In depth interviews differ from direct observation primarily in the nature of the interaction. In interviews it is assumed that there is a questioner and one or more interviewees. The purpose of the interview is to probe the ideas of the interviewees about the phenomenon of interest.

Sampling method/technique is based on non-probability sampling which is narrowed to ‘purposive sampling’ approach. This is an approach where researcher samples with a purpose in mind. Researcher usually would have one or more specific predefined groups to focus. One of the first things researchers likely to do is verify that the respondent does in fact meet the criteria for being in the sample (e.g., in this case they are relevant to the topic under investigation). Purposive sampling can be very useful for situations where researcher need to reach a targeted sample quickly and where sampling for proportionality is not the primary concern. ([www.socialresearchmethods.net](http://www.socialresearchmethods.net)).

This research used convenience sampling method which is also referred to especially in qualitative research. “such sampling is essentially strategic and intails and attempts to establish a good correspondents between research questions and sampling. In other word, the research samples on the basis of one thing to interview people who are relevant to research questions” (Bryman, 2004, p. 333-334).

This study has utilized a multi method analysis known as triangulation.

The purposive sampling is also complemented and enriched by *snowball sampling*. In snowball sampling, researcher begins by identifying someone who meets the criteria for inclusion in the intended study. Researcher then asks them to recommend others who they may know who also meet the criteria. ‘A sampling procedure may be defined as snowball sampling when the researcher accesses informants through contact information that is provided by other informants.

This process is, by necessity, repetitive: informants refer the researcher to other informants, who are contacted by the researcher and then refer her or him to yet other informants, and so on’ (Noy, 2008.p. 330). The number of 11 respondents/interviewees targeted for this purpose that came from different background. Nevertheless, they were members of public sector institutions relevant to environment, tourism, and possibly ICZM related plan and programs. Among the respondents were also members of NGOs that are actively involved in environmentally related activities with knowledge about the coastal zones.

For the purpose of this specific study 30 open-ended interview questions were designed based on ICZM literature (Bramwell, B., Lane, B. 2000; Cockburn, C. 2004; Croner 2001; Kamphuis, J. W. 2010; Kaya, L. G. 2010) and specifically the studies by Henocque (2003) who has developed a credible ICZM specific indicators for the case of France. The other highly relevant and useful guideline to achieve the design of the interview questions was Olsen’s numerous researches on ICZM (Olsen, 2010, 1997, 2002, 2003, 2000). Stephen Olsen has been recognized as the so called ‘GURU’ of ICZM ([www.campusdomar.es](http://www.campusdomar.es)). I have to confess that his articulation and knowledge in

this area is unrivalled. The open-ended in-depth interview questions designed in the form of an open-ended interview questions because In-depth, qualitative interviews are excellent tools to use in institutional and planning investigations discovery-oriented method, which allows the interviewer to deeply explore the respondent's feelings and perspectives on a subject. This results in rich background information that can shape further questions relevant to the topic. The key characteristics of open-ended in-depth interviews are as followings:

- i. Open-ended Questions need to be worded so that respondents expound on the topic, not just answer “yes” or “no.”
- ii. Many open-ended questions begin with “why” or “how,” which gives respondents freedom to answer the questions using their own words.
- iii. The degree of prior research on the subject of concern. The more that is known, the easier it is to define the questions and the response options with clarity, that is, to use close-ended questions,
- iv. Second consideration leading us to use an open-ended approach was our desire to maximize response validity. Open-ended questions provide a greater opportunity for respondents to organize their answer within their own frameworks. This increases the validity of the responses and is best for the kind of exploratory and in-depth work,
- v. The other major consideration is the receptivity of respondents. Elites especially—but other highly educated people as well—do not like being put in the straightjacket of close-ended questions (<http://edis.ifas.ufl.edu/fy393>).

To process of interview initiated with locating the wrights informant in the relevant institution or organization. Then, an appointment was made prior to visitation. Those informants who did not know English but were competent informants, interview process was accompanied a native speaking assistant to conduct the process in Turkish. However, there were informants whose English were proficient. Each interview lasted one-and-half hour to about two hours. A digital recorder was used to record all the conversations which also accompanied written note taking. Interviews were conducted in a relaxed manner and informants did not show any limitation or intimidation to their conversations. To strengthen the research process certain provisions are essential in open-ended interviews, which are positive rapport, high validity (i.e., no direction from interviewer), clarification of complex questions, and avoidance of pre-judgments (i.e., the interviewer is not pre-judging what is or is not important information ([www.sociology.org.uk](http://www.sociology.org.uk))). Utmost attention was made to adhere to these principles. It was also important to brief the respondents about the nature and purpose of the study. This was explained and clarified prior to the interview. In the meantime, it was made sure for respondents to feel comfortable that all the conversations will remain confidential. There are also certain cautious approach that is essential to increase validity of the interview process including not omitting any question even though the answer might be obvious, as well as, interviewer should not finish the sentence of the informant. Informant must have opportunity to finish her/his statement without any interruption. These processes are vital if one expects the credibility of the study to be high. The interview was naturally based on an interactive Interview approach as interviewers were very knowledgeable of the subject and the context. At the end, the outcome must adhere to the crux of the scientific research in terms of transferability (external validity), confirmatory

(objectivity), credibility (internal validity), and dependability (reliability) (www.socialresearchmethods.net). These outcomes are highly approachable constructs that require meticulous application of qualitative research requirements.

## **6.2 Data analysis and findings**

Data analysis in qualitative approach, through open-ended in-depth interview, began after all the responses tape recorded and complemented by note taking during and after the interview process. This method increases the reliability of the study result (www.rsmas.miami.edu). The tapes and notes were analyzed to show the dynamic interrelatedness of the various pieces of information that the respondent presented. This is by far analytically active enterprises that takes the respondents' discussion and interpret it with reference to the larger concerns of the project. The recorded materials transcribed word for word and categorized based on relevant theme. Themes which are already an organic part and embedded in the interview questions focus on numerous dimensions of the study– the ICZM in TRNC. In the meantime, interview questions are by their nature generative and not necessarily static or confining. Through this process, theoretical linkages are also developed between the core concept (ICZM) and the data. After meticulous identification of linkage between responses of the informants and the core concept, coding process did begin. Coding is a process for both categorizing qualitative data and for describing the implications and details of these categories. Initially an open coding was done, considering the data in minute detail while developing some initial categories. Later, the process was moved to more selective coding where one systematically codes with respect to a core concept (Trochim, 2006; Ratcliff, 2002; Renner, 2003). For data analysis process, see figure 5. The responses were

coded to each item in the questionnaire which resulted in an integrative data analysis matrix (IDAM) (see table 6). This was developed based on pulling all of the detail together, to help make sense of the data with respect to the emerging picture relevant to the issues of the research.

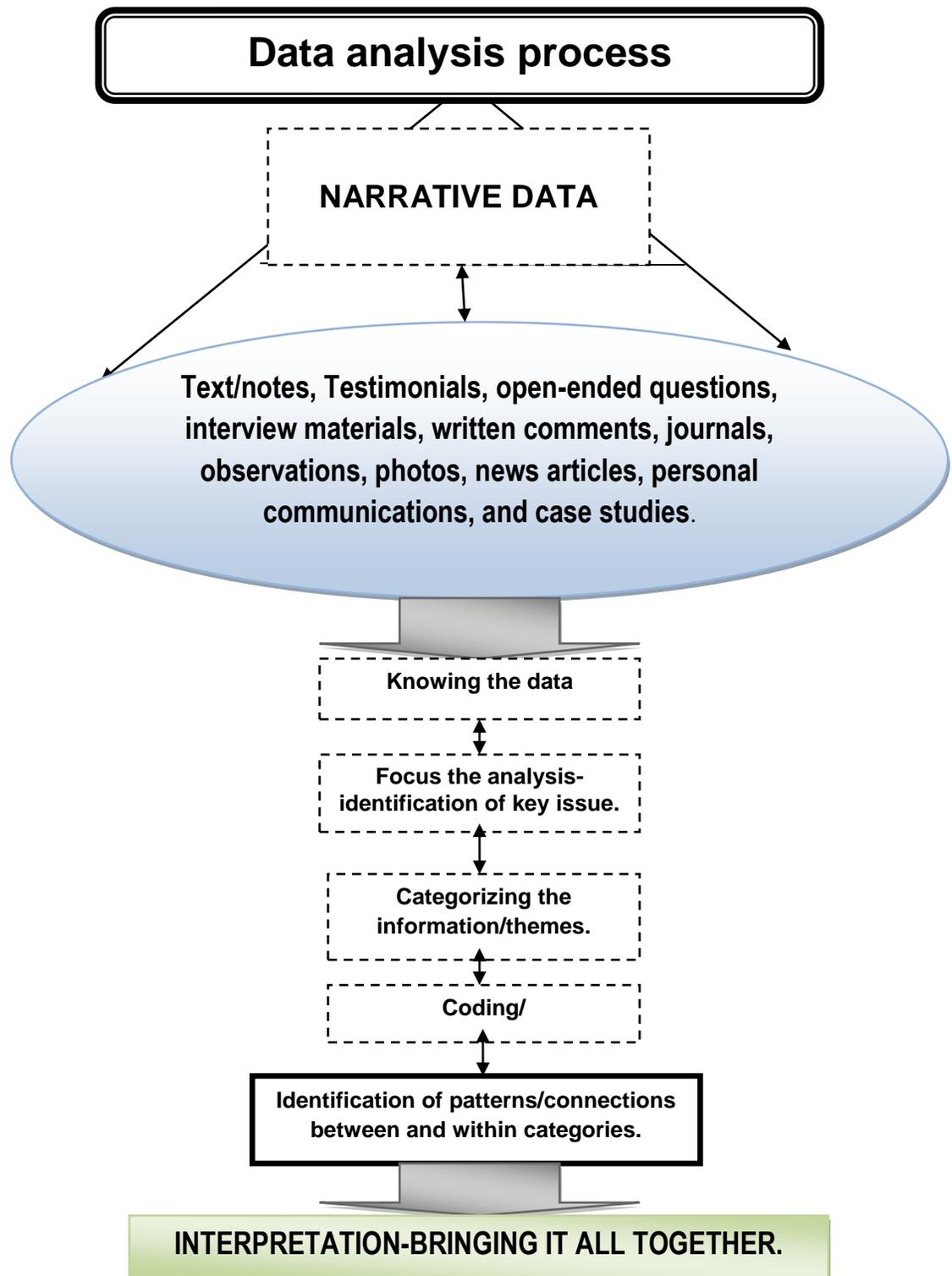


Figure 5. Data analysis scheme.  
Source: adopted from Taylor-Powell & Renner (2003)

As demonstrated in the IDAM table, the responses provided an extremely well-considered explanation for an accurate exploration of ICZM condition. From here, the process and outcome can be explained in words and is usually presented with much of the contextually relevant detail collected. From 30 interview questions that were designed initially, 26 themes have been extracted, coded, categorized and labeled. As shown in the IDAM table, Often, each category has been given a short label that represents the theme in the response (i.e., code description). The reason for omitting 4 questions from the categories is the lack of recognition by the informants of the difference of the questions which sounded overlapping. For example, ‘community participation’ theme did not generate anything different from the theme that asked about ‘how to entice community to participate’. Nevertheless, all the 26 themes generated ample data to be interpreted/analyzed which are relevant to the context of the objectives of the research. As Trochim (2006) noted: ‘Be flexible in your inquiry of people in context rather than approaching measurement with the idea of constructing a fixed instrument or set of questions, allow the questions to emerge and change as you become familiar with what you are studying’ ([www.socialresearchmethods.net](http://www.socialresearchmethods.net)). In the meantime, 26 themes provide a reasonable amount of building blocks to reach the study’s objectives which is exploring the condition of ICZM in TRNC through insights of the respondents who are the main institutional players and decision-makers. Furthermore, the findings can be assessed against the ICZM conceptual model (figure 5).

In regard to institutional framework and specific coastal zone policy, there was a unanimous response that such framework is not in place which have resulted in

undermining the protection of coastal zones and coastal environment. Regarding institutional framework, the TRNC's response has been almost non-existent or extremely limited. Truly ICZM in TRNC will depend on the development of a policy framework that gives high priority to environmental issues (Stanhope, 2000) and acknowledges the integrated nature of ICZM, as well as a cultural shift in the values and behavior of the institutions. This process is elaborated as institutional instrument or legislative framework that addresses various aspects of ICZM (Henocque, 2003). In regard to this particular theme; the answer to question:

Is there an institutional/legislative framework? Respondent R1 clearly indicated (direct quote) that:

“No, coastal areas are not addressed through a proper planning process...there might be a theoretically written material; however, the practicality of any plan is absent. There is a need for a specific ICZM plan with instruments for its implementation... Roma beach in Karpaz has been filled with gravel to make room for parking space, Alagadi coastal area up to Akapulko, as a public beach, have been subjected to development and this affected the KaretaKareta turtle nesting space. These and many other examples have been protested by NGOs; however, destruction of the beaches and conflictive development are taking place in various coastal zones...another case is the area which is known as laptaplajh, extending from Lapta to Kyrenia, has been destroyed. In addition, most of the coastal areas in the north part of the island have been subjected to apart monetization and holiday home development to an extent where public access to the beach areas are hampered. With the extension of power line to the karpaz area, a preparation for development is in progress and the future of Golden Beach (altinkum) is in doubt. We have not seen any specific legislation to address the uniqueness of the coastal environment. This is kind of new to us. I can easily show you how any developer is playing his/her own town (her kesnasilisterse, chalirdudyini). I can assure you that the concept of ICZM is never been heard or discussed in our institutional circles”.

Respondent R2 expressed her answer to the same question by saying:

“I have been working in this department for over three decades. I am a planner by profession and training. Every planning decision and planning process has to go through my department and eventually to become a law which finally must be implemented. When it comes to specific coastal laws, we have some laws remained from British colonial time. However, there is no specific law to address ICZM. We do not have ICZM. It is up to municipalities to address coastal regions, but their legislative authorities are also limited to certain areas. Another interesting thing is that sometimes we work on a plan for several years and then the plan supposed to become legal for implementation, but I have witnessed political influences have turned some of these plans upside-down in a few minutes”.

Respondent R3:

“When it comes to the issue of coastal zones, we do not have any authority to control the coastal areas. Although there is law that indicates no development should be allowed within 100 meters along the shorelines, but in many cases this is not enforced and now law to punish whoever violates the law. In terms of ICZM, no there is no such process or provision. There are some general ideas, but not specific ICZM framework”.

Respondent R4 simply answered:

“No, there is no such framework to even address the issue”.

Respondent R5 expressed that:

“There is a general law in this case, but in coastal zone or the quality of the coastal area, we don't have much authority to do anything”.

Respondent R6 elaborated by saying:

“100 meters of the coastline is government property but no one take it seriously but environmental protection office in tourism and environment ministry is dealing with environmental issues. Unfortunately there is no agency who is dealing with coastal zone and in North Cyprus there is no coordination of the ICZM”.

**These answers show that, ICZM is not adopted in the case of TRNC despite its popularity around the world and especially in countries with coastal areas. Even if there are some laws, they are archaic in nature and not necessarily addressing this specific issue.**

Such condition is in contrast to a practical ICZM which is crystallized into legislations in the form of: Coastal Act, Water Act, and spatial planning and development Act...etc. These laws are essential to protect coastal areas against urban expansion, bad farming, land erosion, construction firms, as well as, tourism (Fletcher and Smith, 2007; Leschine et al, 1997; Cho & Olsen, 2010).

When asked:

What type of planning instrument have you designed and applied towards ICZM? This aspect of ICZM manifested in instruments such as marine area zoning plan, regional nature park and various categories of coastal zone that are under different types of impact . “A zoning scheme which provides for a mosaic of different uses within the coastal zone that introduced in different coastal locations (Olsen, 2010).

R1 replied:

“We are preparing ordinance but we don’t have any physical development plan for all North Cyprus, and we definitely do not have it for coastal areas.

R2 expressed that:

“There is lots of “Amir Nameh” like Kyrenia, but government didn’t manage to finish those regulations. Also three years ago they prepare a regulation for Bogaz

but last year the minister decided to change that regulation. If they can change it whenever they want, what is the purpose of these regulations?”

R 3:

“I doubt if we have such planning instrument”.

R 4:

“In 2008, municipality law was amended as well. All the settlements in this country were cover with municipal bondage. Before 2008 there were two types of region. One municipal area and second the area outside the municipal area. The law and constitution said: those areas within 100 meters must be protected however those types of coastal areas within municipal bondage should be protected by law. So the area outside the municipal area was out of the control of constitution and also the area inside the municipal bondage was not really effective because of apparent law”.

R 5, 6, 7, and 8 bluntly expressed that:

“ICZM has never been an issue and coastal zone management simply ignored as far as the legislation concerns”.

**This answers show a real opinion and originality that are based on institutional culture and practice. Respondents have never familiarized with the concept of ICZM as a system within a deliberate planning process with essential instruments toward implementation. Coastal areas understood as an appendix of rest of the environment that can be automatically managed. The answer are completely based on respondents own institutional experience.**

When responding question:

Why is it important to involve the local initiatives for CZM ? And/or, how do you make sure that the decision making process is a cohesive/integrated one-based on community participation and involvement?

R1. Simply replied:

“I have no idea”

R2. Elaborated by saying:

“The communities are [start] losing their interest with the environment because of wrong application. Ministers blame NGOs and after that people see NGOs as the organizations who don't like development. NGOs try to do something but government doesn't listen and then people start looking NGOs as a useless organization”. NGOs simply become bad guys”.

R3. Although believing in community involvement, had no idea how this can be achieved. In the meantime the response clarified the issue as follow:

“All planning concepts should have a participatory. Planning inland is not so much different with coastal planning concept. But what we mean by participatory is involve stakeholders in the process who can have good action and inform to public. I don't remember such a process that politicians influence by ordinary people”.

The rest of the remaining respondents expressed that there is no such approach or principle in the case of TRNC.

The answers to this item in the survey indicated that the role of NGOs has remained minor and trivial as far as influencing the policies concern. It also indicates that most of the decisions are taking place within the government circle and lack of governance is obvious. It shows that community consensus is an alien subject. Interestingly when

asked about the significance of community involvement and community consent, respondents agreed with the value of this type of approach, but are not aware of how to involve the community or simply do not have the experience of this type of approach.

This is contrary to what is known as the value of public participation for various purposes, specially the capacity building among the communities and public (Olsen, 2010). As Kyler (2005) noted: “The result of this approach to land uses that a region grows chaotically without thought for the stress it places on the regions natural resources, the sustainability of the development, or for the safety of the populace in areas that are prone to coastal hazards” (Duxbury & Dickenson, 2007, p. 322).

In response to question on countrywide environmental institution and within it a coastal environmental commission (CEC), there was a unanimous response that such commission is unheard of. However, such commission is a normative part of overall environmental institutions in various counties. This is a commission composed of number of members, representatives from ministries, government agencies, regions and universities, assisted by three ICZM experts. It can be chaired by an institution responsible for the environment and coastal ecosystems in the nation which is also involved in R&D in this area (Kamphuis, 2011, Henocque, 2003; European Commission, 2007).

Respondent R10 elaborated that:

“The government doesn’t want to do anything. For example for petrol storage, we are complaining for last three month. After three month government ask company to prepare environmental impact assessment and also ask us to evaluate the EIA. We said there isn’t any relevant information about EIA. After all these things government don’t want us to check the EIA. They don’t want such commissions because they want to be there”.

With respect to question on respondents perception of coastal areas and present approaches to coastal classification in terms of ‘impact’, they were totally unaware that coastal areas have their own specific management processes that categorizes the coast depending its natural status and in relation to impact that they are subjected to.

Respondent 3,4,5,6 and 7 simply replied:

“There is no such commission in north Cyprus”

The answers to this question indicates that overall environmental policy with a clear framework is not in place; even though there is an environmental department/agency ,which is an appendix of Ministry of Tourism, but the department lacks a national environmental policy and plan to begin with. Secondly, when such policy is not in place, it will be naïve to expect a coastal commission. In the meantime, such a national plan is essential for the overriding the policy direction for the whole country. Such a plan will need revision and legal status if the sustainable tourism development in Cyprus is considered an important issue. Knowing the fact that coastal areas are at the heart of tourism product development and destination competitiveness (Stanhope, 2000; Farrell, 1986). This is the revelation coastal environment has not been recognized as they are the

fundamental physiographic attributes of the destinations which can influence any other attraction when it comes to tourists' travel plan (Ritchie & Crouch, 2003).

As Talgaard et al (2011, p. 643) elaborated:

'Stable institutions, committed and accountable, were identified as another necessary component of cooperative environmental governance. These included governments Ministries, nongovernmental organizations, and informal institutions. Although recognized as key to ICM sustainability, the community involvement and ICM project characteristics that foster long-term sustainable management were not well developed but were gaining attention reflecting a move toward more participatory, rational decision-making'

When asked about ICZM management tool such as 'coastal classifications' (i.e., fisheries, tourism, urbanization, agriculture, nature reserve...etc.); each category makes a different type of impact, therefore, it requires an approach relevant to that particular impact (Cho & Olsen, 2003; Olsen, 2003). Respondents' replies indicated either the lack of such instrument or a very limited classification of the coastal areas in certain zones.

For instance, R 1. Commented that “

We don't have such detail information but in Karpaz there is some zone for turtles”.

R 2.Mentioned:

“No, normally in some area you expect to see tourism development but it is not. There is no such a thing because people want their own residence wherever they want, so we cannot control these things”.

R. 3. Replied:

“There are some protection areas that Environmental Protection Department (EDP) planned for TRNC. But for coastal zone it is just done in Alagadi beach. There are also areas that protect just by law but on the other hand there are some protection

areas that government itself saying to destroy those protected area for companies. So I don't know how much applicable are those laws. If there is a law to categorize different types of coastal zone, such as agriculture area, urban area, or natural area, then the investors can invest in right place or if they want to build in natural area, then we can say: according to this law you cannot build an apartment there. But there is no such a law”.

R4, 5 and 6 simply replied

“No”.

R. 11. Sceptically answered:

“Yes and no, because for example in Famagusta we have military port, port, military zone and after that Famagusta is finish. So this coastal line is not under our control. Military zone controls by army, ports have their own authority, which we are not included. It is just 2 kilometers and 400 meters long coastal line and also on this coastline the construction is controlled, so it is protected. We cannot much do on those areas”.

Answers to this question shows lack of cohesiveness in the comments made about coastal classifications. This is not only an indication of lack of a clear policy and plan; it is also an indication of certain degree of awareness that coastal areas are vulnerable and fragile environments. For example, there is a notion of certain distances from the coast for construction; however, this is not implementable as there is no legal process and lack of holistic understanding of the ICZM. ‘This has contributed to a very major problem with the designs of most ICM initiatives in developing nations (Olsen, 2003.p. 355).

Another thematic question was:

Is there a record/data about different coastal zone in TRNC to indicate the changes and impacts (monitoring and evaluation theme).

R.1 replied:

“We get data from other offices and one of them in Environmental Protection Department. According to the data we collect, we put it in ordinance. We are not real responsible office. We just consider the others data”.

R. 2 Commented:

“Sometime we collect but it is not systematic. Gathering data need money and time but government is not interest in these data”.

R. 5 Expressed that:

“Coastal zone is the most dynamic region because of waves. So there are some steps that we have to follow to at list have a technical definition of the island and coastal region. So, with respect to that definition we can do some plan. I don’t think we have that kind of information”.

R. 10 Commented that:

“No. in late 80s and early 90s we had but government has decided to [delimitate]”.

R.8, 6, 11, and 7. Simply stated:

“No”.

Answers to the above question are a clear indication of an attitude which is leaving the coastal area on their own and allow for their development without limiting them by certain environmental laws and regulations. This is especially relevant to tourism. As many respondents commented, the growth pattern, in the past decade, has resulted in exploitation of coastal resources that is characterized by rapid coastal development, property speculation, booster’s economic policies and laissez faire planning. If this process is happening at this time in TRNC, it has also happened in many other destinations over three decades ago (Sanchez and Dredge, 2011). When this attitude is

present, data and impact analysis is not taking under consideration as it will conflict with so called laissez faire policy (Vousdoukas et al, 2009).

When asked about EU in this regard:

Whether TRNC is soliciting advice and assistance from EU to implement ICZM?

Knowing that EU's ICZM is well established, it also has special plan and program for the Mediterranean environment/coast with extensive environmental schemes including Natura 2000.

R. 1.

“I don't think so”.

R. 2.

“Government gets the money but not directly from EU. They give 259 million euro to TRNC. The fund is allocated to different schemes mostly in sewage system, but not for ICZM, and EU cannot monitor the use of this fund.

R. 5 and 3.

“Don't know”.

R. 7.

“No. They do have mission here for example: hundreds of experts are coming in to provide advice in banking system, sustainable development, fisheries...etc. but planning is not one of the EU's Legal Framework. If there is no coastal planning in the context of broader masters plan, then no ICZM.

R. 10.

“Municipality legally doesn't have power to plan. The only planning authority is town planning department, but ICZM is not on the agenda”.

Answer to the above question demonstrates that EU has not been forthcoming in this area because there is no IZCM in place. Lack of this type of plan and policy and lack of approach to coastal management resulted in an attitude of ‘why bother’ among policy makers. ICZM should be in a position known as cheek-by-law within the environmental institutions, which is not.

ICZM is an inseparable part of environment and ecosystem in every nation. Most of the ICZM processes are organized and approached within broader environmental institutions; in the meantime ‘environment’ is a holistic concept requiring a holistic approach. For instance, the whole island of Cyprus shares a continuous environment. It is logical to establish a cooperative environmental organization between north and south. Regarding this theme, researcher asked:

Has there been any effort to cooperate with the south regarding these zones?

The responses of all the informants were a unanimous

“NO”.

However, the implications of these answers are noticeable when it comes to the issue of ICZM. Of course, it is difficult to comment about the south as no data available to verify it. Nonetheless, this might be the result of prolonged political disputes between the north and the south. It worth to be focused as the issue of ICZM can be highly fruitful if such cooperation was in place (Rochette & Bille, 2010; [www.environment.gov.au](http://www.environment.gov.au)).

Respondent's answer to the question:

Are you aware of any individual or firm who may have inflicted any damage to particular coastal area through certain activities (e.g., construction, removal, intrusion...etc.) which may have resulted in a legal action against the violator?

All the Respondents unanimously replied:

“No”

Answer to the above question shows that despite numerous violation regarding coastal areas, which indicated by the respondents, none of them had any knowledge of legal case against violators. This shows that the legal and institutional capacity and instrument is not in place. This is contrary to the routine court cases that experienced in other similar cases. For example, polluter pay's principle (PPP) is an example of such instrument practiced around the world. Not to mention the zoning law which is highly practical instrument in monitoring the coastal entities against any kind of violation (Olsen, 2002; [www.learnnc.org](http://www.learnnc.org); [www.sbcountyplanning.org](http://www.sbcountyplanning.org)).

However, the lack of policy instrument to manage the coastal area in TRNC is not mystery. The next question revealed that the void is explainable. When asked:

Do you have an establish IEM (integrated environmental management)?

It is customary that ICZM practiced and implemented within the broader IEM (Talgaard et al, 2011).

Respondents' answers were unanimous:

“No”

Therefore, when IEM is not in place, one cannot expect ICZM to be in place as the latter must be an issue in the context of the former (Pastakia, N.D.).

Another significant issue that has been forwarded by ICZM around the world is “principles for the sustainable governance of the coastal zones”. These principles are sustainability, adaptive management, participation, and integration (Duxbury & Dickenson, 2007). Among the principles, ‘adaptive management’ warrants attention. “Adaptive management encompasses the idea that the non-linear nature of ecosystems warrants a flexible management approach through learning from operational management experience as an ongoing, adaptive and experimental process” (as cited in Duxbury and Dickenson, 2007, p. 326).

As noted by Mendis et al (2003): “Adaptive management is an essential factor in achieving sustainability, and it provides the opportunity for all levels of government to make decisions about managing the coastal zone and its associated problems, especially with regards to coastal hazards. A range of knowledge is necessary in order to have the flexibility to make decisions regarding coastal hazards, and an array of both skilled and trained personnel are needed for the decision-making process at different levels of governance (local, regional, state)(as cited in Duxbury and Dickenson, 2007, p. 326).

When asked about:

Governance for coastal zone in TRNC (i.e., the concept was explained to the respondents prior to their answers).

R. 1.

*“None”*

R. 2.

*“I don’t think they care about these things”.*

R. 3.

*“I don’t know”.*

R. 4.

*“Now it is very centralize. We have 28 municipality and they are two types. All municipalities have power and they exercise that power. But in some area, because it is rural municipality they don’t have skill and technical staffs. So, it is not possible for them to exercise their power. We help them but money goes to municipality”.*

R 5, 7, 9, and 11.

*“The only planning authority is town planning department. We don’t have power to plan”.*

Respondents were asked about the:

Barriers/challenges to the ICZM in TRNC?

R. 1.

“There is no any physical development plan for all North Cyprus”.

R. 2.

“Government doesn’t take any measure on sustainable development and also they didn’t separate the coastal areas such as protection areas, developing areas, tourism areas and so on. I don’t believe they are going to do that. Anyone can do anything in here. Unfortunately three companies are building in Golden beach and that are expanding their”.

R. 3.

“It depends on development and sustainability. First you should have plan for island and according to that plan you should start to develop. Coastal environment are natural environment and you should not construct hotels, restaurants and properties on this areas”.

R. 4.

“I see the challenges not only in coastal area but also inner territories. In northern part of Cyprus is the part of global system. We are not under protection of legal system and market system. There are lots of barriers. There is lots of a person who cannot see the need for protection, they only desire for more money. Compare the life style of forty years ago and now. Life style is better but the quality of life is not really good. Rest of the barriers is related to this core one”.

R 5 and 6.

“There are lots of challenges and lack of plan is one of them”.

R 7, 9 and 11.

“The restriction that we have at the moment is main problem. We need master plan which regulate residents and investments. Military zone and property issues are also problems. So, legal regulation should realize”.

Answers to the above question signify the awareness of respondents in regard to the main principle that is essential to begin the process of ICZM. That is their unanimous consent about the lack of ‘PLAN’ as a general challenge. This challenge is not just in

relation to ICZM solely, but also to overall environmental cases and the whole ecosystem.

Last but not the least, respondents were asked about:

Their views regarding military zones which are along the coastal areas?

An interesting unanimous answer was:

“We are glad they are there and it is a blessing because they are protecting those zones against any haphazard development and activities. We are happy that they will remain unaffected by pollution and development”.

To summarize, the information that are gathered and analyzed are not only environmental and coastal specific, it may also concern all aspects of the population's heritage: local structure, lifestyle, institutions, socio-economic activities, customs, practices, the local history, architecture, and so on. Usually, the corresponding data is collected via an approach incorporating interviews and surveys. The purpose of the questionnaire is to survey the activities of the main groups of actors concerned, their management styles, open or potential conflicts, and their vision of the issues. The social observation tools understand the social scene as interplay of different groups and interests, where different rationales and priorities are in conflict. In a way, this study is kind of social engineering (Swirski, 2011) that tried to test some prescriptive and practices which aim to shed light on the social actors' aptitude to adapt, resist, or innovate in response to environmental problems. Another significant outcome of the analysis is the lack of governance in TRNC with a connotation specific to its environment and natural capital in the context of sustainable planning. It may not have been a conspicuous challenge, but it is definitely a void that needs a careful

reexamination. The qualitative data revealed that some of these natural resource related issues/challenges cannot be tackled unless practical governance is designed to bond the scientific community and policy makers in a reconciling platform. As Clark (1998) suggested: “the distinction between science and policy roles in modern natural resource management is both very important and very difficult to define; however, policy-makers and scientists do have different roles, but, in order for the coastal zone to be managed and governed sustainably there needs to be integration between disciplines, cross-scale linkages, And dissemination of information between all parties” (Duxbury and Dickinson, 2007, p. 328). Qualitatively and inductively speaking, such governance is a far-fetched scenario in the case of TRNC. See also integrated data analysis matrix (IDAM) (Table 8).

Table 8. Integrative Data Analysis Matrix (IDAM).

QUESTIONNAIRE	Respondents.		R	R	R	R	R	R	R	R	R	R	R	Data Interpretation Outcome.
	Categories/themes	Code/ Indexing.	1	2	3	4	5	6	7	8	9	10	11	
1	INSTITUTIONAL FRAMEWORK	IFW	L	L	L	L	L	L	L	L	L	M	M	poor
2	COASTAL-SPECIFIC POLICY	SCP	L	L	L	L	L	M	M	L	M	L	L	poor
3	COASTAL PLANNING TOOL	CPT	L	L	L	L	L	L	M	L	M	L	L	poor
4	COMMUNITY PARTICIPATION	CP	L	L	L	L	L	L	L	L	L	M	L	poor
5	LOCAL INITIATIVES	LI	L	L	L	L	L	L	L	L	L	L	L	poor
6	COASTAL ENV. COMMISSION	CEC	L	L	L	L	L	L	L	L	L	L	M	poor
7	ENVIRONMENTAL COMMISSION	EC	L	L	L	L	M	M	L	M	L	L	L	poor
8	COASTAL CATEGORIES	CC	L	L	L	L	L	L	L	L	L	L	L	poor
9	SECTORAL APPROACH	SA	L	L	L	L	L	L	L	L	L	L	L	poor
10	IMPACT MONITORING	IM	L	L	L	L	L	L	L	L	L	L	L	poor
11	EUROPEAN UNION	EU	L	M	M	M	M	L	M	M	M	L	M	Average
12	COASTAL KNOWLEDGE	CN	L	L	L	L	L	L	L	L	L	L	L	poor
13	SOUTH-NORTH COOPERATION	SNC	L	L	L	L	L	L	L	L	L	L	L	poor
14	POLLUTER PAYS' PRINCIPLE	PPP	L	L	L	L	L	L	L	L	L	L	L	poor
15	INTEGRATED ENV. MGMT	IEM	L	L	L	M	M	L	L	L	L	L	M	poor
16	RESEARCH & DEVELOPMENT	RD	L	L	L	L	L	L	L	L	L	L	L	poor
17	GOVERNANCE/BOTTOM-UP D-P	G	L	L	L	L	L	L	L	L	L	L	L	poor
18	LAND USE	LU	M	M	L	L	M	L	M	L	M	L	L	poor
19	TOURISM IMPACT	TI	L	L	L	L	L	L	L	L	L	L	L	poor
20	GEOGRAPHIC INFORMATION SYSTEM	GIS	L	L	L	L	L	L	L	L	L	L	L	poor
21	BARRIERS TO SUSTAINABLE DEV.	BSD	L	L	L	L	L	L	L	L	L	L	L	poor
22	HUMAN RESOURCES/CZM SPECIFIC	HR	L	L	L	L	L	L	L	L	L	L	L	poor
23	MILITARY ZONE	MZ	H	H	H	H	H	H	H	H	H	H	H	strong
24	CULTURE & COAST COHESION	CCC	L	L	L	L	L	L	L	L	L	L	L	poor
25	COASTAL ZONE IDENTIFICATION	CZI	L	L	M	M	M	L	L	L	L	L	M	poor
26	COASTAL ZONE DATA BANK	CZDB	L	L	L	L	L	L	L	L	L	L	L	poor

SCALING: low (L) indicates the responses to the interview questions revealed an absence of relevant category; medium (M) indicates the responses to the interview questions revealed an average approach to the relevant category; high (H) indicates the responses to the relevant category satisfies the ICZM requirements.

DATA INTERPRETATION: 'POOR' (issues related to ICZM have not been addressed at its entirety); 'AVERAGE' (issues related to ICZM have been addressed minimally); 'STRONG' (issues related to ICZM have been addressed satisfactorily).

### **6.3 Content analysis**

To supplement the qualitative methodology and enrich the research process, content analysis was also utilized in this study. Content analysis is the analysis of text documents. The analysis can be quantitative, qualitative or both. Typically, the major purpose of content analysis is to identify patterns in text (e.g., the incidence of news piece about the coast). Content analysis is an extremely broad area of research. It includes: Thematic analysis of text, the identification of themes or major ideas in a document or set of documents and indexing. The documents can be any kind of text including field notes, newspaper articles (in this study), technical papers or organizational memos ([www.socialresearchmethods.net](http://www.socialresearchmethods.net)). In this study, thematic analysis of newspapers and subsequent indexing of the themes were done to establish the fact that problem with the ICZM is also expressed by the public.

Advantages of Content Analysis:

- Content analysis offers several advantages to researchers who consider using it. In particular, content analysis:
  - looks directly at communication via texts or transcripts, and hence gets at the central aspect of social interaction
  - can allow for both quantitative and qualitative operations
  - can provides valuable historical/cultural insights over time through analysis of texts

- allows a closeness to text which can alternate between specific categories and relationships and also statistically analyzes the coded form of the text
- can be used to interpret texts for purposes such as the development of expert systems (since knowledge and rules can both be coded in terms of explicit statements about the relationships among concepts)
- is an unobtrusive means of analyzing interactions
- provides insight into complex models of human thought and language use
- when done well, is considered as a relatively "exact" research method (based on hard facts, as opposed to Discourse Analysis)

Content analysis is an unobtrusive method of measures that don't require the researcher to intrude in the research context. Direct and participant observation requires that the researcher be physically present. This can lead the respondents to alter their behavior in order to look good in the eyes of the researcher. A questionnaire is an interruption in the natural stream of behavior. Respondents can get tired of filling out a survey or resentful of the questions asked. Unobtrusive measurement presumably reduces the biases that result from the intrusion of the researcher or measurement instrument. 'It is a very flexible method that can be applied to a variety of different media. It is usually treated as a research method because of its distinctive approach to analysis' (Bryman, 2004, p. 181). For the purpose of this study, two highly read newspapers were selected to be

scrutinized for their contents regarding environment and the coast. The content of these Medias examined between years 2007 and 2012. Findings revealed that the news items that were critical of the environment in general and the coast in particular have been risen dramatically. The critical items are an expression of various community members and NGOs in and around the country.

The result of the content analysis shows that during the observed period, there is clearly an increase in the coverage of critique of environment and coastal areas that concerned the community members. This has definitely increased dramatically during the 2012(see also Appendix C). This analysis which is also known as ‘manifest content’ supports the findings of the study based on interview and its results. There is clear revelation that environment and coastal related issues are significantly concerned the community. Furthermore, community members are aware of problems associated with these ecosystems; however, a passive role of the government and an absence of ‘governance’ have become the main barriers to this end. This is the result of the content analysis which allowed the researcher to explore specific words (environment and the coast) in the text, which also entailed revealing certain ideas (environmental concerns) within the text (*kibrisgazetesi and havadisgazetesi*) (two highly read dailies in north Cyprus). Altogether, 75 news items were detected which most of these incidents appeared in 2012 media reports. In a way, the gradual high incidents of this particular issue entail the environmental deterioration due to lack of a clear and structured policy and implementation.

## **Chapter 7**

### **Discussion and Conclusion**

#### **7.1 Discussion and Conclusion**

This study has been conducted based on a broad conceptualization of environmental sustainability in the case of TRNC which depends upon its limited resources, especially the climatic uniqueness and consequently the attractive coastal areas. Coastal zones, regardless of geographic location, have become highly sensitive ecosystems that demand a careful management system (ICZM) as an inseparable parts of broader environmental/ecological entities. Although, the topic of coastal zone management can be addressed and researched from different point of view based on numerous disciplines, this study has focused on policy issues within the possible existence of ICZM in the case of TRNC. This task and the process of analysis founded upon an examination of institutions through their players via an inductive method to explore how and in what ways TRNC is approaching ICZM? One should bear in mind that government's role regarding this subject remains to be central (White, 2009). It is also an imperative to have an environmentally compatible tourism planning in place, especially in the case of TRNC where the coastal zones are the major natural capital and the carrying capacity of these coasts are highly limited due to minimal land mass. Furthermore, the geographic location of TRNC has made it highly popular tourist destination which manifested in an explosive development of infrastructure and construction for the domestic use and

tourists consumption in the form of temporary and long-term accommodation. One of the major factors behind such expansion is the coastal zones which is not just relevant to TRNC, but witnessed in various locations with similar characteristics (Gun and Var, 2002).

According to the findings of the research, it can be concluded that there is not any specific frame work regarding to “coastal zone management” in North Cyprus. There has been only one primary rule which does not allow the construction within specific coastal zone areas. This rule is not objected to hotels and restaurants. Hotel constructions in the best coastal areas of North Cyprus have some vigor and inevitable damages which may create some problems. Furthermore, coastal zone damages may cause some changes in coastal nature as well as coastal zones which may reduce the number of tourists for the destination in long term.

According to the findings, it is obvious that certain main and fundamental frameworks are not in place regarding the ICZM. First and foremost, an Environmental Management System (EMS) must be in place to address and embed the ICZM. The EMS has been around for over two decades. It is a tool to achieve sustainable development; however, it cannot address the ICZM unless it is equipped with green specification with a clear focus on coastal zone management (Lam et al, 2011). The EMS will work as an instrument within larger environmental organization/institution which will encompass: a theoretical perspective with strategic emphasis to address wide range of environmental entities such as land, water, air, biodiversity, impact, to name a few. It should involve in conceptual analysis and pragmatic intervention on many fronts. It should arm itself with

multi-disciplinary strategic assessment (e.g., economic, legal, social, and ecological evaluation). It must undertake methods of monitoring, assessment, enforcement and education regarding environmental protection and regulation. In the case of TRNC, it must have a department in charge of ICZM. Public/community participation and involvement play a crucial role in preserving coastal zones. Especially, community's that are in direct contact with the coastal zones must be in constant collaboration with the formal sector in the process of management and protection of these fragile ecosystems. As Olson and Christie (2000, p. 8) noted:

‘The overall goal of ICM is to improve the quality of life of human communities who depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems. . . . It is a process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal ecosystems and resources. Expressed in this way, the goal of ICM is clearly consistent with national and international commitments to sustainable development for all environments (terrestrial and marine), from the headwaters of catchments (watersheds) to the outer limits of exclusive economic zones...’

The interviews demonstrated that there is not any coastal environmental commission in North Cyprus and NGOs do not have any control in this regard. According to the existing rule in North Cyprus, the ones who do not own a property in coastal zone areas can not complain about the existing problems in these areas. Unfortunately, the study revealed that the laws are either too old or non-existent when it comes to addressing this issue. This is in contrast to designed environmental plans and policies around the world where they are regularly updated and revised as the ‘environment’ demands new approaches and considerations because of population growth, economic changes, social preferences, technological changes , as well as, changing the behavior of the governments form governing to governance. For instance, in the case of some of the

European countries the 'plan' sets out a framework strategy in which technological, social and economic change, supported by cooperative actions at international level and they are overriding policy direction for the country which are reviewed every four or six years and approved by the parliament (Stanhope, 2000). Such an approach is fundamental to the sustainability of the coastal zones because they are constantly stressed due to changing human activities in an around these zones. Human activities along these zones are multidimensional and require a multidisciplinary solution. Coastal zones are affected by various impacts including urbanization, accommodation, tourism, agriculture, fisheries, and petroleum related impacts, to name a few. An ICZM must have human resources, organizational structure, policy and plans, public relations, and a definite governance to achieve the desired results. Presently, such framework is not in place in TRNC.

Furthermore, it is a vital practice to distinguish coastal zones based on their physiographic nature/characteristics. Spatial, temporal, and Sectoral Integration are the hallmarks of the practice (Olsen and Christie, 2000). But as far as the research shows; there is not any suitable partition for coastal zone areas in North Cyprus. In order to have a convenient and sustainable planning, various parts of the coastal zones must be separated. The lack of suitable separation and partition in coastal areas may damage the coastal lines which biologically have negative effect on coastal zones. By having a suitable separation and partition, different sections and areas such as fishing, agriculture, urban areas, and tourists' areas can be created. As a result there will be specific planning approach, as well as, planning tool suitable for controlling each part.

The respondents believe that some parts of coastal zones in North Cyprus have remained immune to impact. These are areas zoned for military purposes. They believe those coastal zones that are under military supervision are the only areas without any damage. The lack of planning and specific rule regarding to coastal zone areas have created lots of problems for the country. The researches revealed that municipalities are not allowed to have specific planning for coastal areas and there is only one organization, namely “town planning department”, is responsible for planning issues. The mentioned organization blames the municipality for lacking suitable and sustainable planning for coastal zone areas.

As mentioned earlier, the fast population growth, increasing tourists’ arrival, construction, the lack of suitable sewer system in some areas, and oil and gas interchange areas are the main sources of the problems that coastal areas are facing. This may affect the next generation as well. As the population increases and environmental problems are mounting, these fragile ecosystems become more and more vulnerable to damage and destruction. As Olsen and Christie (2000, p. 7) eloquently draw policy makers attention to some of the generic problems which is highly associated with the case of TRNC. As they elaborated:

In broad terms, they are expressions of anthropogenic change to coastal ecosystems brought by intensifying pressures from human activities that are expressed as:

- the degradation or destruction of important coastal habitats (wetlands, coral reefs, sea grasses, estuaries) and the resulting loss of biological diversity;

- the decline of estuarine-dependent fish and shellfish populations and their associated fisheries;
- declining near shore water quality and changes to the volume, quality, and pulsing of freshwater inflows to estuaries;
- the inappropriate siting of shorefront infrastructure and their subsequent high vulnerability to the impacts of floods, storms, and erosion/accretion processes;
- reduced access for traditional users and the public to the shore, wetlands, and fishing grounds.

As the research revealed, some of those generic problems are associated with the case of TRNC and the situation requires an immediate action towards initiating an ICZM process. However, to achieve this end, there must be a legal framework in place to monitor and manage these areas. Finally, for the policy makers and particularly the environmental institutions, Olsen and Christie's recommendation might sound general; however, it is an eye opening warning.

'Coastal management programs must be built place by place and will only be sustained if they are owned by the people who are most immediately responsible for them and affected by their actions. The emphasis on participation and building the constituencies that understand and support the values and goals of coastal management is based on the recognition that a society must believe in a coastal management program if it is to make the necessary changes in behavior that can produce progress toward sustainable forms of coastal development. Anxiety that it is already too late and the desire to move quickly often lead to projects operating on inappropriately large geographical scales, to an over' reliance upon outside experts, and to forms of participation that are peripheral rather than central to each step in the evolution of a project or program (2000, pp. 16-17).

As recommendation of this study, there are several ways to protecting coastal zones such as education about tourism impact, education about development processes, sufficient infrastructure, direction and organization, politics and need for hospitality training.

## **7.2 Limitation of the study**

For this study, the researcher faced few limits during data collection. First, some organization and respondents did not wish to participate for interviews. Data would be much more effective if it could be possible to gather all information from all the organizations that are responsible for this issue. Second, because the interviewers are responsible for major position in their departments, they have limited free time. So, it was not possible to gather all information in short period of time.

For future studies it could be some research that recommend. First, is it possible to categorize coastal zone in North Cyprus and if it is possible how to categorize them? Second, according to the sustainable plan for sustainable coastal zone regarding to developing countries, is it possible to adopt some of these plans for North Cyprus as well? Third, how we could reduce the damages those coastal zones in North Cyprus are facing?

## **7.3 Policy implications**

Like other researches, this study has its implication for practitioners and scholars as well. The result of this research might open the eyes of those who are responsible in decision making in North Cyprus. To find out about the problems, the data analysis matrix will be a useful guide.

There are useful managerial implications on the basis of the findings of this study. According to this research, we can conclude that the first and most important issue in North Cyprus regarding to coastal area, is lack of having “frame work”. The managers and responsible individuals have to create a sustainable plan for costal areas that can protect environment as well. Furthermore, managers have to motivate local residents to participate in implementing the plans. Another significant implication for managers and responsible individuals according to this study is that the government has to empower NGOs to have control over coastal areas. The central government also has to involve municipality in decision making and controlling the activities in coastal areas.

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## **APPENDICES**

## **Appendix A: Interview Questions**

1. What is the institutional framework for coastal zone management in TRNC?
2. Do you have a specific policy/law that addresses CZM?
3. What type of planning instruments have you designed and applied towards CZM?
4. The CZM requires local involvement; how do you make sure that the decision making process is a cohesive/integrated one?
5. Why is it important to involve the local initiatives for CZM ?
6. What is 'coastal environmental commission (CEC)'?
7. Do you have such 'commission'? If you do have, would you please tell me where can I contact them? Do you have any idea about their approach?
8. Do you have any coastal zone assessment scheme to categorize and analyze different types of the coast?
9. Coastal zones demand special attention as "a continuous and dynamic process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the

protection and development of the coastal ecosystem and resources”. To what extent this process has been realized /approached in the case of TRNC?

10. Is there a record/data about different coastal zones in TRNC to indicate the changes and impacts?
11. Have you ever contacted the EU for advice on how to plan and implement ICZM?
12. Coastal areas are the most vulnerable places in the world; any idea why?
13. You are sharing your coastal environment with the south Cyprus; has there been any effort to cooperate and manage these zones together?
14. According to the experts on ICZM, coastal management is not the matter of governments but governance; what does this mean to you?
15. Has there been a case of punishing someone or a firm for damaging the coast and violating laws of ICZM?
16. It is customary that ICZM practiced and implemented within the IEM (integrated environmental management); do you have an established IEM?
17. In relation to ICZM, water policies are significant (i.e., polluted water, farming, urban waste water, fisheries...etc.). What sort of policies do you have?

18. In order to achieve ICZM and a dynamic process towards the implementation of ICZM, you need to bring together community, public and private sectors, university/science people, and NGOs. Have you ever involved in such scheme?
19. Two approaches need to be in place to achieve ICZM; decentralized approach (territorial and regional planning), and centralized approach (state planning organization, Ministry of environment). Is there such process in place?
20. In order to control and monitor the process of ICZM, there is a need for zoning based on impact of inhabitants, farming, fisheries, tourism, urbanization and nature reserve. Is there such a plan?
21. One of the other types of development along the coastal areas is construction of holiday homes and marinas. Do you have any plan to monitor and evaluate their impact and possible prevention of pollutants?
22. In various issues of Kibris Gazetesi these concerns have been expressed in relation to the Coastal areas. What is your view in this regard?

“Sahillerdeyoğunkirlilikşüphesi”KuzeyKıbrıssahillericidditehlikealtındaSahillerö  
lübalıkdoldu SahillerpislikyuvasıAlagadisahilleriçöptengeçilmiyorSahillerdetem  
izlikkampanyasıİskelesahilleriDikmen'denbeter!Denizlervesahillertemiztutulmal  
ıSahillerdekikirlilikdehşetvericiSahillerbetonlaşacak”

23. Has there an accurate definition of the coastal areas geographical boundaries, administrative boundaries with respect to the seaward and landward parts sufficiently represented within the delimited area?
24. What do you see as the barriers/challenges to the sustainable use and development of coastal areas in TRNC?
25. Assuming there is an ICZM in TRNC; how would you involve local people and convince them to adapt to the demands of ICZM?
26. According to Stephen Olsen-one of the experts in the field of coastal management-most of the processes for coastal management remains within the technical framework. According to Olsen, 'Ecosystem Governance is about all of the social processes and it must address issues combining science, technology and values'. This means social and political commitment; what is your opinion regarding Olsen's statement?
27. Coastal areas are unique ecosystems within the broader environmental context; do you have specialized practitioner regarding coastal management?
28. Have you ever made an effort to tailoring coastal management principles to the culture and the priority issues of TRNC?

29. There are several military barracks along the coastal zones in TRNC; are you allowed to monitor and evaluate the impact on those zones?

30. An integrated coastal zone management has been in place around the world. This process contains three approaches:

i. Enhanced Sectoral Management (Focuses upon the management of a single sector or topic but explicitly addresses impacts and interdependencies with other sectors and the ecosystems affected. Investments in coastal tourism and transportation infrastructure funded by development banks increasingly feature this approach.

ii. Coastal Zone Management (Multi-sectoral management focused upon both development and conservation issues within narrow, geographically delineated stretches of coastline and nearshore waters.

iii. Integrated Coastal Management (Expands the cross-sectoral feature of coastal zone management to consideration of the closely coupled ecosystem processes within coastal watersheds and oceans; it explicitly defines its goal in terms of progress toward more sustainable forms of development.

WOULD YOU PLEASE TELL ME TO SOME EXTENT THESE APPROACHES  
HAVE BEEN REALIZED IN TRNC?

## Appendix B: Interviewers' Profile

	<b>Occupation</b>	<b>Department</b>
No. 1	Deputy director	Town planning department
No. 2	Head of planning department	Ministry of tourism
No. 3	Professor of environmental science	NEU
No. 4	Professor of civil engineering	EMU
No. 5	Planner	Town planning department
No. 6	Architect	Municipality
No. 7	Manager	Municipality
No. 8	Head of environmental department	Ministry of tourism
No. 9	Professor of eco-tourism	EMU
No. 10	Coordinating director	Municipality
No. 11	Chief of water affairs	Municipality

## Appendix C: Textual Content Analysis and Findings

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### 2007

- 1) 16 Eylül 2007, Pazar 10:27 Alagadi, "Çöp Sahil'e" dönüştü
- 2) 16 Ağustos 2007, Perşembe 07:56 Alagadi sahilleri çöpten geçilmiyor
- 3) 24 Temmuz 2007, Salı 08:52 Sahiller pislik yuvası
- 4) 20 Ocak 2007, Cumartesi 09:31 Kuzey sahil yolunda birçok ağaç tehlike altında

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### 2008

- 5) 13 Ağustos 2008, Çarşamba 08:51 Sahillerdeki kirlilik dehşet verici
- 6) 26 Temmuz 2008, Cumartesi 08:03 Şanlıdağ: KKTC'de kirli sahil kalmayacak
- 7) 13 Şubat 2008, Çarşamba 02:05 İskele sahil şeridi, özel şirketlere "peşkeş" çekiliyor

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### 2009

- 8) 05 Ekim 2009, Pazartesi 08:33 Sahil şeridi temizlendi
- 9) 06 Aralık 2009, Pazar 09:55 Sahile dokunmasınlar
- 10) 05 Ekim 2009, Pazartesi 08:33 Sahil şeridi temizlendi
- 11) 22 Haziran 2009, Pazartesi 08:34 İskele sahilleri Dikmen'den beter!
- 12) 03 Mayıs 2009, Pazar 09:51 Glapsides sahilini temizlediler
- 13) 07 Kasım 2009, Cumartesi 09:03 Sahil şeridinde betonlaşma

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2010

- 14) 07 Haziran 2010, Pazartesi 08:44 Alagadi sahil şeridini temizlediler
- 15) 05 Haziran 2010, Cumartesi 08:48 “Temiz doğa, temiz sahil”
- 16) 25 Mayıs 2010, Salı 09:34 Yine kuzey sahil yolu tartışması17) 21 Ekim 2010, Perşembe 09:16 Silver Beach sahili çöpe boğuldu
- 17) 18 Ekim 2010, Pazartesi 09:25 Sahiller çöpten geçilmiyor
- 18) 15 Eylül 2010, Çarşamba 09:12 Afrodit sahili koktu
- 19) 05 Haziran 2010, Cumartesi 08:48 “Temiz doğa, temiz sahil”
- 20) 19 Ağust, 2010ÇEVRE FELAKETİ: Karşiyaka’daki Şirinyalı Bar ve Restaurant karşısındaki körfezin kirliliği birçok balık türüne zarar veriyor. Bunun yanında denizdeki kirlilik oranı ciddi derecede arttı
- 21) gemiler atıkları bırakıyor... Karşiyaka’daki Şirinyalı Bar ve Restaurant’ın yan tarafındaki deniz pislik içinde. Deniz içinde öğütölmüş pislik ve çöpler sadece görüntü olarak değil, canlılara da büyük zarar veriyor. Restoranın işletmecisi Hamit Şahin, gemilerden atılan pisliklerin ve petrolün denizdeki kirlilik oranını artırdığına dikkat çekti. Same date.
- 22) Karşiyaka’daki Şirinyalı Bar ve Restaurant’ın denizi, ciddi anlamda kirlilik saçıyor. Bölge halkı, gemilerin çöplerini öğüterek bölgeye bıraktığını belirtti.
- 23) Şirinyalı Bar ve Restaurant işletmecisi Hamit Şahin belediyeye bağılı arıtma tesisinin çevreye ve tesise zarar vermeyecek düzeyde olduğunu açıkladı.
- 24) Şahin gemilerden atılan pisliklerin ve petrolün denizdeki kirlilik oranını artırdığına dikkat çekti.

25) Şahin, “İngilizler daha duyarlı. Vatandaşımız, pikniğe giderken, balık avlarken çevresine zarar vermemek için bilinçli bir şekilde davranmalı. Restoranımıza gelen müşteri kötü manzaraya maruz kalıyor. Açıkta ve akıntılarla çöplük birikintisine dönüşen denizlerimize dikkat etmeliyiz” dedi.“Yanlış betonarme yapıldı”

26) Körfezlerin temizlenmesi ve yeterli arıtma tesislerinin belediye tarafından düzeltilmesi gerektiğini vurgulayan Hamit Şahin, suyun dönmediğini, geçmişte yanlış betonarme yapılandırmalarla çevre ve görüntü kirliliği yarattığını vurguladı.

27) Turizmin KKTC’deki ekonomik ve çevresel faktörlerde önemli bir rol oynadığını kaydeden Şahin Orfoz, bunların Sokan, Sorgoz, Eskavro, Melena, Atarina (Gümüş) ve Akdeniz sularında yaşayan balık türleri için büyük bir dezavantaj olduğunu söyledi.

28) Körfezin ilerisinde temiz bir koy olduğunu fakat tüm denizlerin kirlenmemesi için birçok gönüllü ve yetkili kuruluşların yardım etmesi gerektiğini belirten Şahin, finansmanının sağlanmadığı 32) çevre ve hayvan hakları örgütlerine Kıbrıslı gençlerin daha katılımcı olması gerektiğini söyledi.

29) Şahin sözlerini şöyle sürdürdü:

30) “Bir süre önce kayalıklarda bir kaplumbağa buldum. Kafasına darbe almıştı. Turtle Watch’un yardımıyla, bir veteriner korumasına alınmıştı. Balıkçıların ağlarına takılıyorlar. Bu yüzden de kolaylıkla zarar görebiliyorlar. Kirlilikten etkilenmelerinin yanı sıra, yunus ve kaplumbağalarda da azalma oluyor. Hatta birçok büyük şirketlere ait gemilerdeki çalışanlar, bu türleri öldürüyor. Kartpostallara konulan bahsi geçen türler bizim için doğal birer zenginliktir. Gerekeni yapmalı, onları korumalıyız.” Same date.

31) 21 örgütün katılımıyla oluşan Kıbrıs Çevre Platformu tarafından hazırlanan “Yerel Yönetimler ve Çevre Manifestosu” Kıbrıs Türk Tabipleri Birliği (KTTB) Merkezi’nde dün

düzenlenen basın toplantısıyla açıklandı. Basın toplantısında manifestonun okunmasından sonra Kuzey Tarık'ın müzik grubuyla birlikte hazırladığı, çevre kirliliğini eleştiren “Dur Demek Lazım” isimli şarkısına çekilen klibin gösterimi de yapıldı. Kıbrıs Çevre Platformu ayrıca, çevre sorunlarına dikkat çekmek amacıyla Dikmen Çöplüğü yakınında 5 Haziran Cumartesi günü saat 18.00’de konser düzenleyecek.

32) Yeşil Barış Hareketi Başkanı Doğan Sahir tarafından okunan “Yerel Yönetimler ve Çevre Manifestosu”nda, bir süre sonra seçilecek yerel yöneticilere çevre ve toplum sağlığı açısından önemli görevler düştüğüne dikkat çekildi. Manifestoda, birçok şehre kullanılmı ve içmeye elverişli olmayan su verilmesi eleştirilerek, bu konunun çözümü talep edildi. Ülke genelinde kanalizasyon atık ünitelerinin yetersiz eski teknolojiyle çalıştığı belirtilen manifestoda, Girne ve Gazimağusa’daki biyolojik arıtmaların örnek alınması istendi. Ağıl ve ahırların hala insan sağlığını tehdit edecek şekilde yaşam alanları içinde olduğuna, dağların taş ocaklarıyla kemirildiğine, tüm bunların sadece toplum sağlığını bozmakla sınırlı olmadığına aynı zamanda gelecek nesillerde önemli sağlık sorunlarına yol açacağına işaret edilen manifestoda, kimyasal zehir ve hormon kullanımı yerine yerel yöneticilerin organik tarımı teşvik etmesi talep edilerek, “Kıbrıs Çevre Platformu kaynağında ve biyolojik mücadele yöntemlerinin uygulanmasını ısrarla savunmayı sürdürmektedir” denildi.

33) Yol kenarlarındaki otlarla mücadele gerekçesiyle siyanür türevi veya benzeri kimyasal zehirler kullanan belediye başkanları olduğu savunulan manifestoda, yeni seçilecek belediye başkanlarına bu tür uygulamaya son verilmesi çağrısı yapıldı. Manifestoda, hava kirliliğinin en önemli nedenlerinden birinin egzoz gazları olduğu belirtilip yerel yönetimlerin egzoz kontrolüne önem vererek toplu taşımacılığı teşvik etmesi istendi.

34) Tabela kirliliğine kesin çözüm bulunarak, önemli bir çevresel sorunun ortadan kaldırılması gerekliliği üzerinde durulan “Yerel Yönetimler ve Çevre Manifestosu”nda, “Yüksek gerilim hatlarının, elektrik iletim ve dağıtım araçlarının, trafo merkezlerinin oluşturduğu manyetik

alanlar ile baz istasyonlarının ve trafik radar aygıtlarının çevreye yaydığı radyo-frekans dalgalarının hücre zararını geçirgenliğini bozduğu bilinmektedir” denildi.

35) Hava kirliliği, erozyon, kötü iklim koşulları gibi birçok çevre sorununun oluşmasında yeşil örtünün özellikle de ağaç eksikliğinin önemli nedenlerden olduğu ifade edilen manifestoda, özellikle büyük yerleşim yerlerinde tüm kaldırımların ağaçlandırılması ve kişi başına en az 15 metrekare yeşil alan hesabıyla parkların yapılması gerektiği üzerinde duruldu. Manifestoda, çöplerin yeniden değerlendirilip yeniden üretime katmak, çöp toplama işlemini buna uygun şekilde yapmak gerektiği belirtilerek, bunun yapılmaması sonucu Kuzey Kıbrıs’ın hemen her yerinin çöpler tarafından işgal edildiği savunuldu. Toplum sağlığını ve çevreyi olumsuz etkileyen birçok çevre sorunu bulunduğu ifade edilen manifestoda, “Havamız, suyumuz, toprağımız, her geçen gün daha da kirlenmektedir. Bu sorunları ele alıp, çözüm önerileri sunan adaylara hangi partiden olursa olsun Kıbrıs Çevre Platformu olarak destek verilmesi gerektiğini kamuoyuna açıklarız” denildi.

36) Kıbrıs Çevre Platformu, Baraka Kültür Derneği, BES, Biyologlar Derneği, Çevre Mühendisleri Odası, Genç Vizyon, Hamitköy Kültür Dayanışma Derneği, Kıbrıs Havaları Derneği, KEMA Vakfı, Kıbrıs Gençlik Platformu, Kıbrıs Türk Eczacılar Birliği, Kıbrıs Türk Tabipleri Birliği, Kıbrıs Tabipleri Odası, Kıbrıs Türk Veteriner Hekimler Birliği, Kıbrıs Türk Yöneticiler Derneği, Lefke Çevre ve Tanıtma Derneği, Ortay, The Management Center, Tıp-İş, Turizm Emekçileri Sendikası ile Yeşil Barış Hareketi’nden oluşuyor.

37) Turizm, Çevre ve Kültür Bakanı Kemal Dürüst, çevrenin korunması ve gelecek nesillere daha yaşanabilir, temiz bir çevre bırakmanın, sürdürülebilir bir çevre politikasının gerçekleştirilmesi gerçeğine bağlı olduğunu söyledi. Sürdürülebilir çevre politikalarının yanı sıra, çevre bilincinin ülke geneline yerleşmesi ve yaygınlaştırılmasının ancak eğitimle gerçekleştirileceğini kaydeden Dürüst, “Çocuklarımızdan ödünç aldığımız bu ülkeyi, yine

çocuklarımıza daha yaşanabilir bir biçimde bırakabilmek adına, tüm sivil toplum örgütlerimiz, üniversitelerimiz ve bu amaç doğrultusunda çaba gösteren tüm kurum, kuruluş ve kişilerle iş birliği ve desteğe hazır olduğumuzun altını çizerim” dedi.

38) Dürüst, 5 Haziran Dünya Çevre Günü nedeniyle yayımladığı mesajda, Anayasa’da yer alan “sağlıklı ve dengeli bir çevrede yaşama hakkı”nın, çevre politika ve stratejilerinin ana temasını oluşturduğunu söyledi. Doğal kaynakların yönetiminde, var olan kaynakların korunmasının birinci amaçları olduğunu kaydeden Dürüst, çevre değerlerini koruyarak kullanma prensibini bütün sektörlerde işler hale getirmek için çevre yasalarını, hem zaman içinde gelişen ihtiyaçları karşılamak hem de yerel sorunlara daha kolay cevap verebilmek için güncelleştirerek, Avrupa Birliği normlarıyla uyumlu hale getirmek için çalıştıklarını söyledi.

39) Hava kalitesi çalışmaları

Dürüst, hava kalitesini koruyarak, daha bilimsel veriler elde edilmesi için Lefkoşa, Gazimağusa, Girne ve Alevkayası’nda Hava Kalitesi Ölçüm İstasyonları kurulduğunu kaydetti. Verilerin, merkezi bilgisayarda rutin olarak değerlendirildiğini söyleyen Dürüst, Güzelyurt’ta kurulacak yeni hava kalitesi ölçüm istasyonu için ise yer seçimi yapıldığını belirtti.

40) Bio çeşitliliğin korunması Kemal Dürüst, Çevre Koruma Dairesi adına Avrupa Birliği tarafından finanse edilen “Kıbrıs’ın Kuzeyi’ndeki Potansiyel Natura 2000 Alanlarının Korunması ve Yönetimi İçin Teknik Yardım Projesi”nin uluslararası “Niras IC” şirketi tarafından yürütüldüğünü söyledi. Bio çeşitliliği koruma adına önemli bir adım atıldığına işaret eden bakan Dürüst, yürütülen proje doğrultusunda Karpaz, Akdeniz köyü, Güney Karpaz sahilleri, Alagadi, Tatlısu sahilleri ve Girne Dağları olmak üzere altı potansiyel Natura 2000 alanının belirlendiğini belirtti. Dürüst, “Bu bölgelerin sürdürülebilir şekilde yönetilmesi ve mevcut durumun muhafaza edilerek çevrenin korunması için gereken altyapı oluşturma

çalışmaları devam etmektedir; proje sonuçlandığı zaman doğa ve biyolojik çeşitliliğin korunmasında büyük bir adım atılmış olacaktır” dedi.

41) Atık sorunu

Ülkedeki atık sorununa, özellikle en önemli çevre sorunlarından biri olan atık suyla ilgili kesin çözüm bulma çalışmalarının sürdüğüne dikkat çeken Dürüst, şöyle devam etti: “Atık suların çözümü şehirlerde kanalizasyon ve arıtmalarla mümkündür ve birçok belediye de bugünlerde artıma ve kanalizasyon sistemlerini başlatma aşamasındadır. Ancak yerleşim alanlarında her yerin kanalizasyon sistemiyle merkezi arıtmalara bağlanması mümkün değildir. Burada uygulanacak olan vidanjör sularının tamamen doğal yollarla, kimyasal katılmadan arıtılmasıdır. Bakanlığımızın atık su konusundaki çalışmaları da devam edecektir.”

42) Turizm, Çevre ve Kültür Bakanı Dürüst, çevre bilincinin bir eğitim meselesi olduğuna ve sadece bir bakanlığın, tek başına bir kurumun başarabileceği bir iş olmadığına da işaret ederek, “Çevre bilinci, bütün kişi ve kurumların içinde yer almasını gerektiren bir seferberliktir. Ancak bu çalışmaların başarıya ulaşması için bütün vatandaşlarımızın toplumsal desteğine ihtiyaç duyuyoruz. Bunun için başta medya mensuplarımız olmak üzere bütün kamu kurum ve kuruluşlarının, sivil toplum örgütlerinin bize destek olacaklarına inanıyorum” dedi.

43) çevreciler mahkeme kapisinda

44) Karpaz’a elektrik götürülmesine karşı çıkararak dava açan çevrecilerin, üç yıl önce açtığı davanın duruşması, 31 Mart 2010 tarihinde yapılacak.

45) Kamuoyunda büyük tartışmalara neden olan ve dün mahkemede görüşülen davada, davacıların dava açma hakkı olup olmadığını karara bağlamak yerine, davanın esasını dinlemeye karar verildi.

46) Yüksek Mahkeme Başkanı Şafak Öneri, üye Talat Refiker ve üye Narin Şafak huzurunda görüşülen davada, Savcı İlter Koyuncuoğlu, Kıbrıs Türk Elektrik Kurumu adına Avukat Tevfik Mut ve davacılar Yeşil Barış Hareketi, Kema Vakfı, Bioder, bireysel davacı ve şahitler avukatı Boysan Boyra hazır bulundu.

47) 2007 yılında Karpaz'a elektrik direklerinin dikilmesine karşı çıkan çevreciler, ara emri ile durdurmaya çalışmış ancak mahkeme o tarihte davayı dinleyip, çevrecilerin bu talebini uygun bulmamıştı.

48) Dünkü davada, ön itirazın dinletilmesi beklenirken tarafların ortak aldığı kararla davanın esasının dinlenmesine karar verildi.

49) Yüksek Mahkeme Başkanı Şafak Öneri, davayı duruşması yapılmak üzere 31 Mart tarihine erteledi.

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2011

50) 03 Haziran 2011, Cuma08:23 “Sahillerde yoğun kirlilik şüphesi”

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2012

51) PETROLEUM DEPOT ON THE COASTAL AREAS OF TRNC .Büyükkonuk bölgesinde petrol dolum tesisi kurmayı planlayan Rixoh Investments Ltd, basın toplantısı düzenleyerek projeleriyle ilgili bilgiler verirken ülkede çeşitli kesimlerden gelen tepkileri de yanıtladı. 4 Mart 2012

52) Yedikonuk'ta inşa edilmesi planlanan petrol dolum tesisine karşı çıkan Demokrat Parti (DP), bu konudaki tavrına dikkat çekmek amacıyla bölgede bir piknik düzenledi. Parti Genel Sekreteri Bengü Şonya başkanlığında Genel Merkez binasından otobüslerle Yedikonuk'a giden partililere Lefkoşa İlçe Başkanı Kemal Öztürk, Kadın Örgütü ve Gençlik

Örgütü Başkanı Münür Öztürk de eşlik etti. Heyete Büyükkonuk'ta, Yenierenköy Belediye Başkanı Özay Öykün, Mehmetçik Belediye Başkanı Beyazıt Adalier, Gazimağusa İlçe Başkanı Fikri Ataoğlu, İskele İlçe Başkanı Ahmet Cennetoğlu, Gazimağusa ve Karpaz bölgesinden partililer de katıldı.

53) Şonya: Hükümet inatla bildiğini okuyor DP Genel Sekreteri Şonya burada yaptığı basın açıklamasında, DP'nin Yedikonuk'ta yapılması planlanan petrol dolum tesisine karşı olduğunu, konunun ilk gündeme geldiği günden itibaren belirttiğini, kamuoyunun yoğun tepkisine rağmen hükümetin bu konuda inatla bildiğini okuduğunu ve halkın iradesini hiçe saydığını kaydetti. DP'nin bölgede fok balıklarının yaşadığını görüntülerle tespit edip kamuoyuyla da paylaştığına dikkat çeken Şonya, doğanın katledilmesine ve bölgede yaşayan hayvanların yok olmasına seyirci kalmalarının söz konusu olmadığını söyledi.

Şonya, şöyle devam etti: “Ülkemize büyük bir tehlike yaratacak bir tesis niye burada yapılıyor, niye bu araziler bir kuruş alınmadan hibe ediliyor, niye buraya yapılacak tesisler serbest bölge ilan edilecek, niye bu tesislerde bu kadar büyük risklere karşı sadece 5-10 kişi istihdam edilecek? Biz bunu anlamış değiliz... Amacımız konu hakkındaki ciddiyetimizi çok daha vurgulu şekilde ortaya dökmek, içinde bulunduğumuz güzelliği öyle har vurup harman savuracak bir iktidarın ne yaptığını daha iyi göstermek...”

55) Kamuoyunu daha fazla duyarlılığa da davet eden DP Genel Sekreteri, “Halkımıza da bir kez daha bunu düşünmelerini ve bu ülkeyi parsel parsel pazarlığa çıkaran hükümete karşı tavır koyma çağrısında bulunuyoruz. Duyarlı vatandaşlarımız sayesinde ümit ediyoruz ki başını çektiğimiz bu hareket gittikçe büyür ve sonuçta bu tesis buraya yapılmaz”dedi. Heyet daha sonra Büyükkonuk'ta düzenlenen Eko Gün etkinliğine de katılarak halkla bir araya geldi.

56) Petrol Dolum Tesisine hayır inisiyatifi ve 13 sendika petrol dolum tesisine karşı olduklarını yineledi

Yedikonuk'ta yapılması planlanan petrol dolum tesisine karşı olan Petrol Dolum Tesisi'ne Hayır İnişiyatifi ile 13 sendika ortak basın açıklaması yaparak, yanlış hesaptan geri dönülmesini istedi.

İnişiyatif yanında KTAMS, Dev-İş, KTÖS, KTOEÖS, Güç-Sen, Koop-Sen, Bes, Tıp-İş, DAÜ-Sen, DAÜ Bir- Sen, Çağ-Sen, Hava-Sen, Basın-Sen'in imzalarını taşıyan ortak açıklama metninde, "Petrol dolum tesisine zemin hazırlayanlar artık yaptıkları yanlış hesaptan geri dönmek zorundadırlar. Aksi halde toplumun yükselen öfkesi karşısında duramayacaklardır" denildi.

57) 13 sendika ve İnişiyatif, her türlü mücadelenin toplumun diğer kesimleriyle birlikte verileceğini ve bu ülkeye petrol dolum tesisi kurulmasına hiçbir şekilde onay vermeyeceklerini açıkladı.

KTAMS Lokali'nde sendika ve İnişiyatif temsilcilerinin katılımıyla gerçekleştirilen açıklama sırasında, Petrol Dolum Tesisine Hayır İnişiyatifi adına Doğan Sahir, sendikalar adına Ahmet Kaptan birer konuşma yaptı. Hazırlanan ortak açıklamayı ise Hasan Sarpten okudu.

58) Petrol Dolum Tesisine Hayır İnişiyatifi adına konuşan Doğan Sahir, aylardır ülkenin gündemini meşgul eden petrol dolum tesisine bölge halkının gösterdiği tepkiye verilen desteğin her geçen gün arttığını kaydetti.

Bugün UBP Genel Sekreteri Ertuğrul Hasipoğlu'nun bu bölgede eski eser çıktığıyla ilgili bilgilendirildiği anda "bana yetki verilirse sit alanlarını ortadan kaldırım, 2 tane mezar için yatırımcının önü durdurulamaz" şeklindeki açıklamalar yaptığını iddia eden Sahir, siyasilerin bir kısmının bu konuya hırs ve ihtirasla katkı koymak için çabaladığını belirterek,

Kaptan, "Uzaktan kumanda" dedi

59) Sendikalar adına konuşan KTAMS Başkanı Ahmet Kaptan ise, "Uzaktan kumandayla

idare edilen hükümet kendinden geçerek, tüm değerlerini ayaklar altına alırken doğal güzellikleri de yok etme pahasına karar vermeye devam ediyor” iddiasında bulundu.

60) Dolum tesisine karşı olan örgütler olarak yok oluşa karşı verdikleri mücadeleyi yetkililerin görmezden geldiğini ifade eden Kaptan, “biz de bu sesimizi duymayanlara karşı yaptığımız eylemleri yükselterek devam edeceğiz” dedi.

Kaptan, 14 Mart Çarşamba günü 15.30’da Başbakanlık önünde miting düzenleyip, toplanan imzaları Başbakana sunacaklarını anımsatarak, “bizleri susturmaları mümkün olmayacak çünkü bizlerin hedefinde koltuk yoktur, ülke sevgisi bağlılık ve insanımıza verdiğimiz değer vardır...” dedi. Kaptan, yetkililere attıkları adımdan geri dönme çağrısı yaptı.

61) Sarpten: UBP’yi anlamıyoruz

62) Baraka’dan “Petrol Dolum Tesisine Hayır Platformu”na destek 14 Mart 2012

63) Baraka Kültür Merkezi, Petrol Dolum Tesisine Hayır Platformu’nun bugün Başbakanlık önünde yapacağı eyleme destek belirtti.

Merkez adına Nazen Şansal imzasıyla yapılan açıklamada, tesisin ülke doğası ve insanları için büyük bir felaket olacağı belirtilerek, “Yeni ve alternatif enerji yöntemleri geliştirilerek doğa ile dost teknolojiler yaratılacağına hala daha kirli teknolojiler gündeme gelmekte ve bizlere dayatılmaktadır” denildi.

“Halk sağlığı tehdit edilirken, halkını ve ülkesini ön plana alarak sermayeye hayır deme basiretini gösteremeyen hükümetlerin tıpkı Karpaz Milli Parkı’na elektrik direkleri diktikleri gibi Karpaz bölgesinde bir felakete daha imza atmak üzere olduklarını” savunan Şansal, bölge halkının örgütlenerek, ekoloji ve çevreye duyarlı örgütlerle işbirliği içerisinde kurduğu Petrol Dolum Tesisine Hayır Platformu’nu desteklediklerini ve mücadelesini de kendi mücadeleleri saydıklarını ifade etti.

Platformun bugün 15.30’da Başbakanlık önünde yapacağı eyleme destek belirten Nazen

Şansal, Baraka Tiyatro Ekibi'nden bir sokak tiyatrosuyla eyleme katılacaklarını duyurdu ve yeryüzünün yaşanabilir bir yer olması için mücadeleye inanan herkesi eyleme çağırdı.

64) KKTC Avcılık Federasyonu da petrol dolum tesisi kurulmasına karşı çıktı:28 Mart 2012

65) KKTC Avcılık Federasyonu Genel Yönetim Kurulu gerçekleştirdiği toplantısında petrol dolum tesisi kurulmasına karşı karar üretti.

KKTC Avcılık Federasyonu'ndan yapılan yazılı açıklamada, tüm yatırımlarını turizm ve üniversiteler üzerine yapan KKTC'de bu boyutta bir petrol depolama tesisi yapılmasının uygun olmadığı görüşü dile getirildi.

Türkiye de bile burada yapılmak istenen boyutta bir tane petrol dolum tesisi var. KKTC'nin ihtiyacı olan petrol zaten Kalecik'ten sağlanmaktadır” iddiasına yer verilen açıklamada, kurulacak olan tesisle ülkede var olan çevre sorunlarına bir yenisinin daha ekleneceği savunuldu.

66) “Halkın sağlığına olumsuz etkiler bırakan bunca çevresel sorunlar varken hükümetimizin bu tür bir tesis düşünmesine anlam veremiyoruz” denilen açıklamada kurulacak tesiste çıkabilecek bir yangının yaratacağı tahribatın maliyetinin KKTC tarafından karşılanamayacağı belirtildi.

67) KKTC'de petrol veya akaryakıt piyasasını düzenleyen ilgili mevzuat olmadığı gibi böyle yatırımlarda olması gereken kriterler, tedbirler, uluslararası yasalar ve denetimin de olmadığı ileri sürülen açıklamada, özetle şu ifadelere yer verildi:

68) “Ülkemize kurulmak istenen petrol dolum tesisi ile ülkenin eko turizm yatırımlarının yapılmakta olduğu yerler olan Yedikonuk, Büyükkonuk, Karpaz bölgelerinin güzellikleri vedeğerlerini yok edilmekle kalmayıp ülke için geri dönülmez zararlara neden olacaktır.

69) Avcılık camiası olarak, petrol dolum tesisi kurulması yönünde bir karar alan hükümetimizin, konuyu bir kez daha gözden geçirmesini ve alınan kararın iptalini beklemekteyiz.”

70) TDP'li Barışsever, hükümeti çıkardığı yasaların gereklerini yerine getirmeye çağırdı 26 Mart 2012

71) Toplumcu Demokrasi Partisi (TDP) Parti Meclisi Üyesi, Çevre Komitesi Başkanı Mehmet Barışsever, hükümetin, çıkardığı yasaların gereklerini yerine getirmediğini ileri sürerek, buna Çevre Yasası'nı örnek gösterdi.

72) Mehmet Barışsever, TDP Basın Bürosu aracılığıyla yaptığı yazılı açıklamada, Cumhurbaşkanı Derviş Eroğlu tarafından Meclis'e iade edilen Avrupa Birliği (AB) mevzuatı ile uyumlu ilk yasa olan Çevre Yasası'nın, Meclis'ten onaylanarak yürürlüğe girmiş olmasına rağmen, hükümetin uygulamalarında çevreyi koruma hususunda herhangi bir iyileştirme veya yenilik görülmediğini savundu.

73) Hükümetin, elektrik santrallerine filtre taktırma konusunda girişim sahiplerine süre üstüne süre tanıdığını, halkın zehirlenmesine ve çevrenin kirletilerek doğal dengenin bozulmasına “bile bile göz yumduğunu” ileri süren Barışsever, TDP olarak Yedikonuk'ta kurulması planlanan Petrol Dolum Tesisine kesinlikle karşı olduklarını yineledi.

“Anayasa, Çevre Yasası ve Turizm Gelişim Yasası”na aykırı olduğunu savunduğu, “denize, çevreye ve insanlığa geri dönülemez zararlar verecek”, Petrol Dolum Tesisi konusunda, TDP olarak 9 Şubat 2012 tarihinde Anayasa Mahkemesine başvurduklarını anımsatan Barışsever, hükümete bu projeden bir an önce vazgeçmesi çağrısında bulundu.

74) Petrol tesisinin kurulmasıyla birlikte, bölgedeki eko sistemin çok büyük zarar göreceğine, hava ve yaşam kalitesinin sağlık yönünden ciddi şekilde düşeceğine dikkat çeken Barışsever, Petrol Dolum Tesisinin bölgedeki turizm faaliyetlerinin sonunu hazırlayacağını kaydetti.

Barışsever, ayrıca, yatırımların çevreye vereceği zararlar ile maliyet/fayda yönünden dikkatle analiz edilerek, onaylanması gerektiğini de belirtti.

75) Ülkenin, katı atıkların her yana döküldüğü bir çöplük haline geldiğini, çevreye gelişigüzel dökülen vidanjör atıklarının Mağusa'ya kadar ulaştığını söyleyen Mehmet Barışsever, yetkili

makamların önlem almak biryana, suçu birbirine atarak, felaketin daha da büyümesine neden olduklarını kaydetti. Petrol Dolum Tesisine Hayır İnsiyatifi tüm halkı Yedikonuk'taki etkinliğe davet etti

### **Appendix D: Coastal Zone Pictures**











