A CRITICAL REVIEW OF THE TOOLS & TECHNIQUES USED IN COASTAL PLANNING: CASE STUDY MUGLA-GOKOVA SPECIAL ENVIRONMENTAL PROTECTION AREA

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A CRITICAL REVIEW OF THE TOOLS & TECHNIQUES USED IN COASTAL PLANNING: CASE STUDY MUGLA-GOKOVA SPECIAL ENVIRONMENTAL PROTECTION AREA

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ABSTRACT

A CRITICAL REVIEW OF THE TOOLS & TECHNIQUES USED IN COASTAL PLANNING: CASE STUDY MUGLA-GÖKOVA SPECIAL ENVIRONMENTAL PROTECTION AREA

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M. S., Programme of City Planning

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This study focuses on the issue of coastal area management in terms of planning techniques and tools as well as legal aspects necessary in order to clarify the components of a successful coastal area planning process. It has been emphasized that planning of the coastal area should be performed within the context of integrated policy mechanism considering maintance of biodiversity, public participation and, promoting diversification among coastal related economic uses such as tourism, aquaculture, fishing. The thesis haS been grouped into according to definitions of coastal area, coastal planning and legislation, institutions, organizations, international commisions regarding coastal areas and Gökova Special Environment Protection Area from the perspective of Integrated Coastal Management (ICM). The case section of the thesis formed by five phases of Gökova SEPA 1/25.000 scaled Environmental Relation Plan in order to achieve ICM. Also, this is the first study performed by the reviewing of the tools and techniques used in the Gökova SEPA towards Integrated Coastal Management approach.

Key Words: Coastal Area Management, Integrated Coastal Management, Coastal Area Planning, EPASA, Gökova.

ÖZ

KIYI PLANLAMASINDA KULLANILAN ARAÇLAR VE TEKNİKLERE BİR ELEŞTİRİ ÇALIŞMA ALANI: MUĞLA-GÖKOVA ÖZEL ÇEVRE KORUMA BÖLGESİ ÖRNEĞİ

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Bu çalışma kıyı alanları yönetimi konusunun yanı sıra yasal yönleri, süreç içerisinde kullanılan araç ve teknikler ve kıyı bölgelerinde başarılı bir planlama sürecinin oluşturulması için gerekli olan bileşenler üzerinde odaklanmaktadır. Kıyı alanlarının entegre politika mekanizması çerçevesinde biyolojik çeşitliliğin korunması, halkın katılımı, kıyı ile ilgili turizm, balıkçılık, kültür balıkçılığı gibi ekonomik kullanımların çeşitlendirilmesi gerekliliği vurgulanmıştır. Tez; kıyı alan tanımları, kıyı planlama ve mevzuatı, kıyı ile ilgili kurum, kuruluş ve uluslar arası komisyonlar ve Gökova Özel Çevre Koruma Bölgesi 1/25.000 ölçekli Çevre Düzeni Planı'nın Bütünleşik Kıyı Yönetimi (BKY) çerçevesinden ele alınması gibi gruplara ayrılmıştır. Tezin çalışma alanı bölümü, Gökova Özel Çevre Koruma Bölgesi (ÖÇKB) 1/25.000 ölçekli Çevre Düzeni Planı'nın Bütünleşik Kıyı Yönetimi'ni sağlamada kullandığı beş aşamasından oluşmaktadır. Ayrıca bu çalışma Gökova Özel Çevre Koruma Bölgesi'nde kıyı araç ve tekniklerin incelendiği, Bütünleşik Kıyı Yönetimi kapsamında gerçekleştirilen ilk çalışmadır.

Anahtar Kelimeler: Kıyı Alanları Yönetimi, Bütünleşik Kıyı Yönetimi, Kıyı Alanları Planlaması, ÖÇKKB, Gökova.

To my dad İbrahim YUSUFOĞLU

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LIST OF ABBREVIATIONS

CIA: Central Intelligence Agency

CWA: Clear Water Act

CZM: Kıyı Alanları Yönetimi
Coastal Zone Management

CZMA: Coastal Zone Management Act

EIA: Çevresel Etki Değerlendirmesi
Environmental Impact Assessment

EPASA: Özel Çevre Koruma Kurumu Başkanlığı
Environmental Protection Agency for Special Areas

EU: Avrupa Birliği
European Union

FCMA: Fishery Conservation and Management Act

GEF: Global Environment Fund

ICLARM: International Centre for Living Aquatic Resources Management

ICM: Bütünleşik Kıyı Yönetimi
Integrated Coastal Management

ICZM: Bütünleşik Kıyı Alanları Yönetimi
Integrated Coastal Zone Management

IUCN: Uluslararası Dünya Koruma Birliği
The International Union for Conservation of Nature

KTVKBK: Kültür ve Tabiat Varlıklarını Koruma Bölge Kurulu
The Directorate of Preservation Regional Board of Natural and Cultural Assets

METAP: Mediterranean Environment Technical Assistance Programme

MHW: Mean High Water

MLW: Mean Low Water

MMPA: Marine Mammal Protection Act

MOPU: Ministry of Public Works, Transport, and Environment

MOS: Ministry of the Sea

MPA: Marine Protected Areas

MPRSA: Marine Protection, Research and Sanctuaries Act

NEP: National Estuary Program

NEPA: National Environmental Policy Act

NERRS: National Estuarine Research Reserve System

NGO: Non Governmental Organization

NOAA: National Oceanic and Atmospheric Adminitration

OECD: Organization for Economic Co-operation and Development

OCSLAA: Outer Continental Shelf Lands Act Amendment

SAD : Sualtı Araştırma Derneği
Underwater Research Society

SATDP: South Antalya Tourism Development Project

SEA: Strategic Environmental Assessment

SEPA: Special Environmental Protection Area

SGP : Small Grant Program

SMAP: Small and Medium Action Programme

SMVM: Schemas de Mise en Valeur de la Mer

SPA: Özel Koruma Alanı
Specially Protected Area

SPO: Devlet Planlama Teşkilatı
State Planning Organization

UNEP: United Nations Environment Programme

UNDP: United Nations Development Programme

URI: University of Rhode Island

WCED: World Commission on Environment and Development

WSSD: World Summit for Sustainable Development

WWF: World Wide Fund for Nature

CHAPTER 1

INTRODUCTION

1.1 The Objective of the Study

Developing an understanding of the current approaches to the issue of coastal area management in terms of planning techniques and tools as well as legal aspects is necessary in order to clarify the components of a successful coastal area planning process.

Even though, there are certain laws in Turkey related to coasts i.e. The Coastal Law (Law No. 3830) and Tourism Incentive Law (Law No. 2634), it is not an integrated policy mechanism. In fact, there are many settlements that face serious problems caused by legal regulations such as coastal law and the current tourism incentive law lacking of biological sensitiveness, for example, also exorbitance these problems even more.

The aim of the thesis is to assess the success of the Gökova Bay Special Environmental Protection Area (SEPA) 1/25.000 scaled Environmental Relation Plan and to unravel the issues that successful coastal planning process should entail. These issues are, first, the maintance of biodiversity in the coastal areas. The second issue is to promote cross-sectoral coastal planning approach focussed upon both development and conservation issues since single-sector development approaches demolish the natural balance and facilitate the amount of wrong implementation such as concrete development. The third fostering economic development and promoting diversification among coastal related uses such as tourism, aquaculture, fisheries. Finally, the fourth aim of the thesis is to underline the major elements of integrated coastal planning process in Turkey.

The first chapter of the thesis defines objectives and contents of the study and also reveals which kind of methods are used in the study. Since, coastal region has so many definitions in terms of different scientific contexts, with the second chapter, the aim is to define coastal environments in terms of human interference with national process in literature. Definitions and characteristics of coastal areas will be analyzed. In addition, second chapter contains theoretical activities concerning coastal areas within the context of country behaviours toward coastal areas and also includes development of coastal legislation in Turkey. The third chapter covers history of coastal planning and current coastal planning approaches. As a new paradigm; Integrated Coastal Management will be clearly identified in the third chapter. In order to find an answer the question of what a successful process of coastal planning should entail, case study will take place in the fourth chapter of the thesis. In the fourth chapter, it is questioned whether the legal regulations, planning techniques and tools to which Gökova Bay is subjected are applicable on Gökova Bay at the present and the main themes to question are the problems occurring when these planning techniques are enforced in Gökova Bay which can be described as a coastal town included in the "Specially Protected Area of Gökova Bay" and the planning approach of Environmental Protection Agency for Special Areas about the area beyond the shore strip. There are also two case study questions and hypotheses in this chapter.

The case study research questions:

1- Is the Gökova Bay's 1/25.000 scaled Environmental Relation Plan a successful coastal planning example?

2- Is there any deficiencies of this Plan in terms of ICM, in this case what would they be?

In relation to these research questions the case study hypotheses are as follows:

1- As a Special Environment Protection Area (SEPA) Gökova Bay's 1/25.000 scaled Environmental Relation Plan is a pioneering example for coastal planning experience in Turkey.

2- Although this planning study takes care of biological diversity protection and has cross-sectoral approaches toward coastal areas, there are certain deficiencies in this plan. An important deficiency of this Plan in terms of ICM is the lack of efficient tourism carrying capacity study in order to prevent Gökova Region from increasing future tourism demand.

In this chapter, Gökova case is also investigated for the Perspective of Sustainable Tourism – as a Model "South Antalya Tourism Development Project - Çıralı Community Based Tourism and there is also a comparison between Gökova and Çıralı within the context of sustainable toruism.

Finally, in the last chapter, certain concluding remarks and recommendations are determined under the light of case study questions and hypotheses.

1.2 Definition of Problem and Contents of the Study

As being the interface between land and sea, coast is a unique geological, ecological, and biological domain of terrestrial and aquatic life forms including humankind *(Timothy Beatley, David J. Brower, Anna K. Schwab " An Introduction to Coastal Zone Management" p. 1.).* In other words, the coast is unique, due to the fact that, it is where land and sea meet may appear rather obvious. The coastal regions of planet earth are marvelious areas. Therefore, these regions are the world's most significant and intensely used among all areas settled by humans.

The importance and value of the coastal zones cannot be underestimated since they are most productive areas for human uses. That is why coastal resources have been, and will be, under multiple and competing pressures. The recreactional aspect of the coastal zone is one of the most important factor because we value a certain region. Fishing, swimming, boating, beach-combing and sun bathing are among the numerous leisure facilities in which humankind can access.

Since coastal areas home to tremendous biological diversity, if they are managed in conjuction with a system of protected areas they can significantly contribute to the maintenance of global biodiversity. That is why authorities should be aware of the issues in the region of influence of a protected area as a basis for actively engaging and involving local communities in planning and implementing biodiversity conservation process (http://www.oas.org/usde/publications/Unit/oea04e.pdf).

Human activity can interfere with the natural process of the coasts and prevent the ecosystem from sustaining its continuous vitality. The transition between land and sea at the coast produces diverse and productive ecosystem, which have historically contributed to human being.

Moreover, human interference with coastal environment can alter ecological communities and diversity of species. Coastal jurisdictions contain disproportionate number of rare and endangered species. Moreover, coastal regions represent important habitat for numerous species that may not be endangered. In many of coast lines, endemic species are threatened by increasing development, automobile traffic and also by increasing tourism facilities that make vulnerable coastal areas damaged.

Although existing coastal legal regulations attempt to solve the problems that coastal zones face with, characteristics of coastal settlements have serious implementation problems. The tourism policies, for example, in the 1980s as well as the intense structuring pressure on coastal zones caused various problems for coastal ecosystems and irrecoverable damage and habitat losses on coastal habitats, i.e. including dunes, coastal forests, creeks, estuaries, reedbeds and marshes. Overstructuring and uncontrolled structuring in Bodrum and Marmaris Provinces of our regions in Turkey are the results of the tourism policies pursued in those years.

However, protected areas interact with their surrounding region in certain ways i.e. they play an essential role in their economic development; and the saving of their

values depends on their proper monitoring. Therefore humans should realize the full potential of a protected area, regardless of its stated goals, requires the development networks with other sectors of society. Protected areas cannot exist without people. Hence interactions between a protected area and other development activities, such as agriculture, fisheries, turism, forestry, need to be clearly identified.

1.3 Methodology

In order to emphasize the significance of integrated coastal management in Gökova Bay some methodological steps have been taken; firstly, problems related coastal areas are addressed. Secondly, variety of databases regarding to coastal planning and management are searched thoroughly.

Data gathering and aggregation within the context of coastal areas both literature and case study surveys are carried out. Ideally, this specific search would turn up a dedicated published sources, maps and approved plans that I could then use to fill out the majority of the information. In other words, discourse analysis will be used as the method for analyzing constitutions, coastal laws and regulations.

The questionnaire was conducted on a randomly selected sample of local population, usually people in coffe houses, restaurants, beaches and streets. This study was conducted between 9 May 2008 and 17 June 2008 in Akyaka, Akçapınar, Çamlı, Gökçe and Gökova with the aim of measuring the consciousness level of the public about the area that they live in. The questionnaire which consists of 11 questions was conducted by 10-15 team members in these selected areas.

Within the context of the study, published sources related to biodiversity and habitat conservation, integrated coastal zone management and planning in Turkey is examined throughly. Thirdly, institutional interviews from Environmentaly Protection Agency for Special Area (EPASA-Ankara-Köyceğiz), Ministry of Culture and Tourism, Muğla The Directorate of Preservation Regional Board of

Natural and Cultural Assets, Akyaka Municipality and Muğla University have provided great progress to the study. Consequently, some evaluations and proposals have been identified under the light of all these researches.

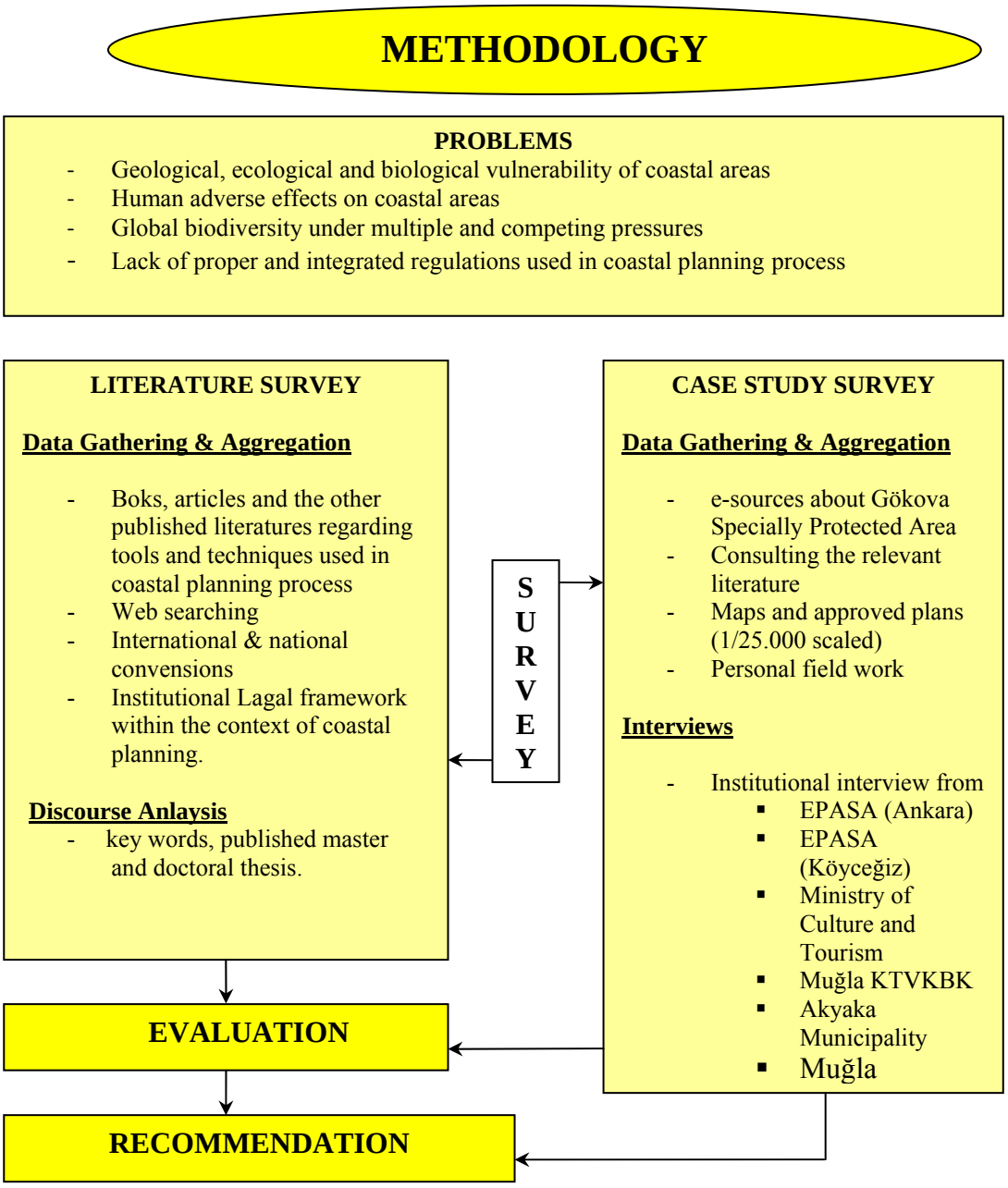


Figure 1: Methodology Chart

1.4 The Method of Review

Researching of a case study will be an adequate methodological approach to overviewing the tools and techniques used in coastal planning process. Data gathering method, document analysing, personal and institutional observations from a field work to case study will take place in this thesis. To provide a convenient observation with institutions, discourse analysis within the context of coastal law and regulation will be examined. Institutional interviews also will be realized to obtain several documents. For this study three visits were made to the region. First one was a pilot study tto recognize the region and actors of the Gökova. Second visit was made to meet all stakeholders and project partners of the region. And the last visit was made to complete personel interwievs which will give the outcomes of the planning studies.

As it is mentioned above, some part of case study based on interviews with institutions attempts to assess the achievements of the Gökova Bay's 1/25.000 scaled Environmental Relation Plan.

Table 1. Institutions Chosen for the Interviews

Institution Person concerned	EPASA (ÖÇKKB) Ankara Senior Expert City Planner
Institution Person concerned	EPASA (ÖÇKKB) Ankara Head of Department
Institution Person concerned	EPASA (ÖÇKKB) Ankara Department Manager
Institution Person concerned	EPASA (ÖÇKKB) Köyceğiz City Planner
Institution Person concerned	Muğla (KTVKBK) The Directorate of Preservation Regional Board of Natural and Cultural Assets Senior Expert City Planner
Institution Person concerned	Akyaka Municipality Mayor
Institution Person concerned	Ministry of Culture and Tourism Senior Expert City Planner

Institution Person concerned	Muğla University Master Student -Biolog

Stakeholders answered the questions by considering the situations appeared following Gökova Bay's conservation statute and institutional achievements of the region. According to stakeholders answers, Gökova Bay's 1/25.000 scaled Environmental Relation Plan prepared by EPASA has reached success interms of protecting common heritage of Gökova region and preventing biodiversty loss. Stakeholders agree with during the period of 1988-2003, Gökova Bay faced with many planning studies and researches. The 2003 Revision of the Environmental Relation Plan of Gökova, which is stil in effect, has been the main guiding document for the both development and conservation of the region. In fact, the plan has determined land use principles by taking into account relevant institutions' oppinions.

1.5 Case Study Selection Criteria

In order to review of the tools and techniques used in coastal planning process within the context of sustainable development of the coastal area through close integration of development goals and ecosystem protection, a case study, Gökova Specially Protected Area will be analyzed. Since, Gokova is a regional settlement, which is included in Specially Protected Area of Gökova Bay and is not wholly under the pressure of location selection for a number of usages (industry, secondary resident, small, medium and large sized tourism facilities, etc.), this case fullfils the aim of the study. In other words, there are many benefits in protected areas and coastlines. Coastal protected areas can be seen as a natural laboratories that provide precious study sites and advantages for research for scientists. Coastal protected areas also, benefit the investigators whether they will be hotel operators on these areas, or ecotourist agencies in some part of region. In addition, such a clean, healthy coastal area is attractive to visitors. On the other hand, Gökova SEPA represents a succesful case study in terms of institutional integration in planning process. EPASA, Muğla Regional Conservation Council, Municipality of Akyaka, SMAP, WWF, UNEP-MAP, Underwater Research

Society (SAD) are some of national and international organizations responsible for Gökova SEPA. As a result, to offer a compatible sample with aim of the thesis Gökova SEPA is selected.

CHAPTER 2

COASTAL AREAS UNDER THE LIGHT OF RELEVANT LITERATURE

Our coasts should be planned by using a new approach and new model. In fact, these coasts should be thought not only as being consisted of shore or shoreline but also should be considered as a territory, and planned within a framework of integrated planning approach. The land-sea interactions and the coastal environment must be continuously reoriented in relation to land-based activities. One a selected monitoring programme will have to be carried out by an interdisciplinary team of engineers, marine scientists, city planners and archaeologists. The programme must focus on the sustainable development processes, protection of biodiversity, and the rate of human effect on coastal areas. In order to accomplish this study, there are many definitions and different views on coastal areas and tools that used in planning process will be examined under the light of relevant literature.

2.1 Definitions of Coastal Area

2.1.1 Biophysical Definitions of Coastal Area

According to Cicin-Sain (1993) "this place where the waters of the seas meet the land –the coasts-are indeed unique places in our global geography. They are unique in a very real economic sense as sites for port and harbour facilities that capture the large monetary benefits associated with waterborne commerce and as locations for industrial processes requiring water cooling, such as power generation plants. The coasts are highly valued and greatly attractive as sites for resorts and vacation destinations, and they are valuable in many other ways as well." (http://www.globaloceans.org/story/icm_coast.html)

According to R. W. G. Carter's definition; " The coast is where land, water and air meet. This triple conjuction is further complicated by the fact that the water may be fresh or salt. The coast is the best viewed as a zone of mixing or adjustment."

A more formal definition is; "The coastal zone is that space in which terrestrial environments influence marine environments and vice versa. The coastal zone is of variable width and may also change in time. Delimitation of zonal boundries is not normally possible, more often such limits are marked by an environmental gradient or transition. At any one locality the coastal zone may be characterized according to physical, biological or cultural criteria. These need not, and in fact rarely do coincide." *(R. W. G. CARTER "An Introduction to the Physical, Ecological and Cultural Systems of Coastlines" p.1)*

2.1.2 Administrative Definition of The Coastal Area

Especially in scientific definitions coast is not a single line. Coastal areas contain land which interacts with the sea in some way, and sea space which interacts with the land. Thus, coastal areas contain both land and sea components (Kay and Alder, 2005, p.2-3). In addition, there is not only one way in defining the coast. As definitions of coasts differ scientifically, they also differ administratively (Table 1).

Table 2: Existence and definitions of the coastal zone for purposes of coastal planning in different European countries (adopted from EUCC, 2000).

COUNTRY	Definitions/Comments
Denmark	Terrestrial planning responsibility generally landward from start ofcontinuous land vegetation. In practice this means generally above the limit of highest astronomical tides.
England	Terrestrial planning responsibility generally landward from mean low water (MLW) mark; no statutory planning below MLW.
Finland	Planning focuses on terrestrial, where guideline is development restriction generally in 100 m coastline strip, but some places now have "archipelago zones" which include marine.
Germany	Terrestrial planning responsibility generally landward from mean high water (MHW) mark. Whole marine area seaward of MHW administered by Water & Shipping Directorates.
Norway	Planning is a unitary system covering all land, watercourses and the marine area out to a baseline, defined as a line drawn at low tide between the outermost skerries along the coast. Terrestrial limit of coastal zone defined locally depending on local needs.
Poland	In practice Maritime Offices have planning responsibility in both sea area and terrestial parts of coastal zone; latter being defined as a shoreline-linked techical belt of up to 200 m landward of the mean position of waves (Baltic Sea has no tide) and a protective belt up to 3 km landward, there are individul arrangements for urban areas.
Spain	The National Shores Act provides a definition of the shore, the sea and its inlets. The shore includes the foreshore between high and low water marks of of equinoctial tides, banks of tidal rivers and lowlying land that is at times flooded by the sea, and also all natural and artifical beaches, shingle deposits and dunes.Delineation of the boundaries of the shore (for the purposes of defining coastal public property) is a statutory consultative procedure.
Sweden	Within the planning system, coastal zone includes the marine area out the 12 nautical mile limit, and the shore and terrestrial area including a shore protection area a minimum of 100 m (max. 300 m) from the shoreline.
Turkey	Coast line: the line along which water touches the land at the shores of the seas, natural or artificial lakes and rivers, excluding inundation periods. Coast: the area between the coast line and the shore edge line, defined as: the natural limit of sand and gravel beaches, rock, boulder, marsh, wetland and similar areas which are created by water motions in the direction of land starting from the coastline. Note that these definitions cover both coastal and inland (freshwater) shores. Although the definition is precise, in practice the delineation of the shore edge line on the ground often proves difficult.

2.1.3 Policy-oriented Definitions of Coastal Area

The definition of coastal area depends on, the concept of "areal foci" used by Jones and Westmaccot (1993) is useful. Areal foci include;

- an administratively designated area, in the sense that the political process or the administration will designate the responsibility to manage,
- an ecosystem area,
- a resource base area, e.g. a mineral body, oil fields, fisheries, habitats, etc.,
- a demand area, i.e. the wider area from which demands are exerted on the designated coastal area, such as for use, for recreation, marine transport and waste disposal.

2.2 The Unique Characteristics of Coastal Area

The coastal areas are unique because they contain countless dynamics both natural and economic. As Kay & Alder (2005) state that, the transition between land and sea at the coast produces diverse and productive ecosystems, which have historically contributed to human well-being. In the following definitions explain the unique characteristics of coastal areas;

Foreshore means the land lying between high water mark and low water mark as is ordinarly covered and uncovered by the flow and ebb of the tide at spring tides.
The coast is all areas within or neighbouring the foreshore.
Coastal management includes the protection, conservation, rehabilitation, management and ecologically sustainable development of the coastal zone.
Coastal waters are sea waters to the limit of the highest astronomical tide.
Coastal wetlands include tidal wetlands, estuaries, salt marshes, lakes or minor coastal streams regardless of whether they are of a saline or fresh water (http://www.grummittplanning.com.au/files/pdf/coastalmanagementact).

The coastal zone is including, coastal waters and all areas to the landward side of the coastal waters in which there physical features, ecological or natural processes

or human actvities that affect, actually or potentially as the coast or coastal resources.

2.3 Coastal Use (Human Activities and Coastal Change)

The human influence on coastlines expands to large area. Man is a major factor in coastal change, at various scales. Impact may take many forms: it can be gradual or sudden, premeditated in advertent. In other words, coastal environments are often irreversibly damaged by human impacts without prior assessment of the consequences. This is a universal problem. In addition to all these, economic development often outweights the concern for conservation and monitoring of the coastal environment resources.

“Of course, people at the shore, both permanent residents and visitors, need to be housed, fed, and entertained. The pressures exerted by the presence of human beings at the coast emanetes from these needs. Houses, hotels, condominiums, restaurants, gas stations, shopping malls, golf courses, pears, amusement parks- in short, development- is spreading along all reaches of many coastlines. All these various development projects require infrastructure- roads, bridges, parking lots, sewers, etc., each of which can exert pressures on the environment or lead to various negative impacts.” (Timothy Beatley, David J. Brower, Anna K. Schwab “ An Introduction to Coastal Zone Management” p. 3)

These human uses have caused severe damage to the coastal environments in a number of ways. Historically, such damages have resulted in the destruction of wetlands, the leveling of dunes, and the degradation of water quality, among other impacts. The risk of coastal environment to spread such impacts is crucial.

As Borgese mentioned that, “there have been profound changes in the economies of the industrialized countries. The development of the new high technologies, including micro-electronics, genetic engineering, new materials, has accelerated the

transition from an economic system based primarily on production to one based very largely on services.

This, in turn, has facilitated "globalization" of production systems and services, including the financial system, as well as the migration of people. The ongoing global "Great People's Migration" is, generally, from the hinterland to the coasts where already today, over 60 percent of the human population resides exercising unprecedented pressures on the coastal environment. Clearly, this justifies the current emphasis, at global, regional and the national level, on the need for coastal management." *("Fundamentals of Integrated Coastal Management"* Vallega, A. (1999) *p. 11)*

Under the light of Vallega's expressions, this increasing pressure on the coastal environment may have more than local effects. "It not only threatens the human health in densely populated coastal areas, as well as the survival of many of the marine living resources; it may also accelerate a climate change which appears to be in the making although there are as yet many uncertainties both about its natural causes and the interaction between natural and anthropogenic causes." *("Fundamentals of Integrated Coastal Management"* Vallega, A. (1999) *p. 11)*

2.3.1. Examples of Coastal Use Models

Countles efforts have been revealed to provide a typology of coastal uses and their interactions. A. Vallega (1996) presents an overview of the categories of coastal uses found in the literature (Table 2). As it can be seen in table 2. coastal area usages can be differed from one to another in a content of emphasizing both land side and sea side of the coasts. While Couper's global marine interaction model (1983) classify interactions among coastal users as conflicting, Pido and Chua's model emphasizes semi-harmful interactions amoung coastal areas and users.

Table 3: Coastal Use Models

Couper's Global Marine Interaction Model (Couper 1983)	Sorensen and McCreary (1990)	Pido and Chua (1992)	Vallega Coastal Use Framework (Vallega 1992)	Hawaii Ocean Resources Management (Example of CZM Approach) (1991)
1- Navigation and communication 2- Mineral and energy resources 3- Biological resources 4- Waste disposal and pollution 5- Strategy and defence 6- Recreation 7- Research 8- Marine environ-mental quality	1- Fisheries 2- Natural area and protection systems 3- Water supply 4- Recreation development 5- Tourism 6- Port development 7- Energy development 8- Oil and toxic spill contingency planning 9- Industrial siting 10 -Agriculture 11- Mariculture	1- Agriculture 2- Fisheries and aquaculture 3- Infrastructure 4- Mining 5- Ports and harbours 6- Industry 7- Tourism 8- Urban develoment 9- Forestry 10- Shipping	1- Seaports 2- Shipping 3- Sea pipelines 4- Cables 5- Air transportation 6- Biological resources 7- Hydrocarbons 8- Metalliferous renewable resources 9- Renewable energy resources 10- Defence 11- Recreation 12- Waterfront structural development 13- Waste disposal 14- Research 15- Archaeology Environmental protection and preservation	1- Research 2- Recreation 3- Harbors 4- Fisheries 5- Marine ecosystem protection 6- Beaches and coastal erosion 7- Waste management 8- Aquaculture 9- Energy 10- Marine mammals

(Vallega 1996.)

It can be implicated from the authors' coastal use models that have been already mentioned in Table 2. major uses and activities of the coastal area can be listed as in the Table 3.

Table 4: Principal Coastal Activities

Navigation and Communications	**Coastal Infrastructure Development**
Shipping	Roads, bridges, other transportation infrastructure
Port and harbour development	Water supply and treatment
Navigational aids	Reclamation or alteration of coastal waters (e.g. for building of human settlements, impoundment for aquaculture ponds, diking for recreational facilities)
Communication cables	Desalination facilities
Living Marine Resources	**Waste Disposal and Pollution Prevention**
Fishing (traditional, artisanal, industrial)	Siting of industrial facilities
Aquaculture	Sewage disposal
Gathering of seaweed	Dumping of dredged materials
Gathering of other marine creatures	Disposal of other wastes
Tropical fish collection	Nonpoint sources of marine pollution
Collection of marine mammals for consumption, display, or research	Oil and toxic spill cintingency planning
Watching marine mammals (e.g. whale watching)	**Coastal Environmental Quality Protection**
Marine biotechnology applications; use of marine organisms or processes for product development.	Protection of the coasts global role in regulating climate
Mineral and Energy Resources	Protection of the coasts from pollution
Hydrocarbon (oil and gas) exploration and production	Protection of the coasts from transport and disposal of hazardous meterials
Offshore drilling, pipeline laying, platforms, installations	Establishment of marine and coastal protected areas, parks to protect special areas or features
Explotation of sand and gravel aggragates	Marine mammal protection
Explotation of other minerals (gold, placer, deposits, sulfides..)	Protection of cultural resources
Tourism and Recreation	
Otels, vacation homes	
Tourism infrastructures (transportation,	

servises) Swimming and diving, underwater parks Recreational fishing, boating Nonconsumptive aesthetic uses **Beach and Shorline Management** Erosion control programs Protection structures (against storms, waves) Prevention and mitigation of coastal hazards	**Research** Oceanography Marine geology and coastal processes Fisheries and marine mammal research Marine biology, biodiversity, biotechnology Archaeology Studies of human uses of the coasts

2.4 Country Behaviours Toward Coastal Areas

The scholarly literature on coastal areas has intended to focus primarly on the land-sea interface and on approaches, technics and methods in order to sustain coastal life forms. This section of the thesis discussed the major coastal elements of some selected countries and also some responsibilities and behaviours of these countries toward coastal areas.

Although coastal area issues traditionally began on the just land side of the coastal zone, with increased use of the sea and the coastal zone in the twentieth century both land and sea side of the coast handled in together in the literature. Being as a model for other countries considering coastal management and planning the United States is selected to examine the attitutes toward coastal areas. In fact, the USA has many major laws related to the coastal environment so it has been selected

2.4.1 Policy Issues in the European Coastal Zone

Developing a compatible European coastal zone management, the main environmental concerns in the European coastal areas were identified in the European Commission Communication on Integrated Coastal Management

strategy, and furthermore described in the DOBRIS assessment report (Ledoux, L. (2005) *ELOISE Research and the Implementation of EU Policy in the Coastal Zone in Managing European Coasts*).

According to Turner's investigations, the primary concerns can be categorized as: habitat and biodiversity loss, including fisheries; water quality; sea level rise and coastal erosion. Behind these environmental changes are socio-economic and physical drivers investigated, and also revieved in the DOBRIS report. This report also includes that, pressures resulting from human actions, related to urbanisation and demographic changes, tourism, port and harbor development, agricultural intensification, industrial development, fisheries and aquaculture. Depending on geographical and cultural varieties, the priorities clearly change across European coastal territories. Table 4. indicates that policy responses at the European level and main issues with their spatial relevance.

Table 5: Major environmental issues in European coastal waters and associated drivers and responses at the European level, (Stanners and Bourdeau, 1991)

Environmental Issues (Impact)	**Drivers**	**Pressures**	**Spatial Extent**	**Response at European level**
Eutrophication	Agriculture, Urbanization, Industry	Diffuse pollution, waste emissions	Most seas. Relatively less important in North Atlantic Ocean, Norvegian, Barents and White seas	Water Framework Directive, Nitrates Directive, Urban Waste water Directive
Overfishing, loss of biodiversity	Fisheries, population growth	Fish catches, fishin gear	All seas. Especially North Sea, Wadden Sea, Black Sea, Barent	Common fisheries policy
Deterioriation of bacteriological quality, health impacts	Agriculture, urbanization, industry	Waste emissions, agricultural runoff	Mediterranean, Black Sea, North Sea	Bathing Directive
Habitat loss	Agriculture, tourism, climate, change	Habitat conversion, ports and touristic development, coastal erosion, sea	European regions with high tourism and intensive agriculture, low lying coasts and deltas	Birds and Habitat Directives

		level rise		
Toxic contamination (loss of biodiversity, health risk)	Industry, urbanization, transport	Emission of cantaminants (heavy metals, synthetic organic compounds), contaminated sediments	All seas, especially around major European estuaries.	Water Framework Directive, dangerous substances Directive, Seveso II Directive
Oil spill related ecological impacts	Maritime transport	Dumping, shipping accidents	Mediterranean, Black, Caspian, Norwegian, North sea	Regulation on prohibition of transport of heavy oils in single-hulled tankers.

Figure 2: EU Member States

2.4.1.1 EU Policy in the Coastal Zone

Ledoux' (2005) investigation concerning the EU's historical approaches on coastal environment shows that, during the 1970s, the EU became for example a signatory of the Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (1972); the Paris Convention for Prevention of Marine Pollution from Land-based Sources and the Helsinki Convension for the protection of the

Marine Environment of the Baltic Sea(1974); and the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution (1976). Researches state that, the Oslo and Paris conventions later merged into the Convention for the Protection of the Marine Environment of the northeast Atlantic (OSPAR) in 1992, while the Helsinki and Barcelona conventions were revised in 1992 and, 1995 respectively. Integration of policies in the 1980s, with the adoption of European Coastal Charter in 1983 (Ledoux, L. (2005) *ELOISE Research and the Implementation of EU Policy in the Coastal Zone in Managing European Coasts*).

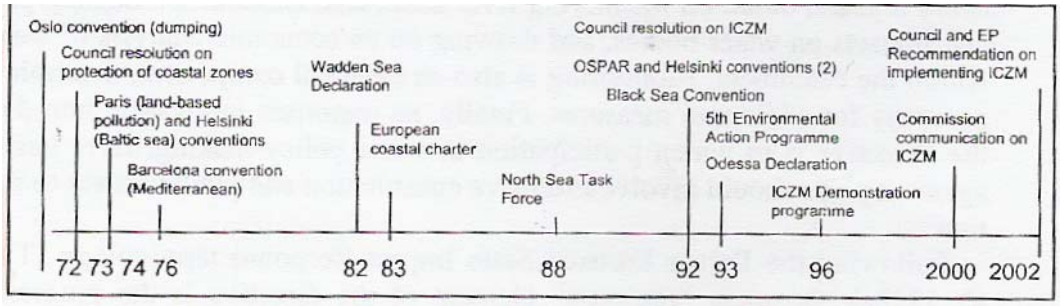


Figure 3: EU initiatives having an effect on water and coastal zone, L.Ledoux, 2005 pp.1-9

As Ledoux states that it was not until 1992, however with the new environmental remit brougth by the Maastricht treaty, that a council resolution calling for the development of a European strategy on coastal zones was adopted. A three-year demostration program on integrated coastal zone management lead to a European Commission Communication entitled "Towards a European Integrated Coastal Zone Management (ICZM) Strategy". The ICZM demostration program provided some agreed general principles for efficient management of coastal zones.

Table 6: General principles for good management of coastal zones

General principles for good management of coastal zones (EC 1999);
▪ Take a wide-ranging perspective ▪ Built on an understanding of specific conditions in the area of interest ▪ Work with natural process ▪ Ensure that decisions taken today do not foreclose options for the Future ▪ Use participatory planning to develop consensus ▪ Ensure the support and involvement of all relevant administrative bodies ▪ Use a combination of instruments

According to all these commisions and EU legislation e.g. The Environmental Impact Assessment Directive-EIA, Strategic Environmental Assessment-SEA), Member States take a strategic approach to the management and planning of their coastal zones based on the protection of the coastal environment, following and ecosystem-based approach, the recognition of the threats of climate change and sea level rise to coastal zones, taking appropriate and ecologically responsible measures, sustainable economic opportunities and employment options, a functional, social and cultural system in local communities, adequate accessible land for the public, the maintenance or promotion of cohesion in the case of remote coastal communities, improved coordination of the actions of all relevant authorities, both at sea and on land. In addition to updating their old measures, the member states have developed their coastal zone planning approaches (http://www.cs.iia.cnr.it/EUROCAT/publications/WD33.pdf).

Table 7: National Strategies for ICZM (OJECL 14, pp 24-27)

National Strategies should:
▪ Identify the roles of the different administrative actors whose competence includes activitiesor resources related to the coastal zone, as well as mechanisms for their coordination; ▪ Identify the appropriate mix of intruments for implementation of ICZM principles. In paticular Member States should consider: ▪ Develop national strategic plans for the coasts, ▪ Include land purchase mechanisms and declarationsof public domain, ▪ Develop contractual or voluntary agreements with coastal zone users, ▪ Harness economic and fiscal incentives, ▪ Work through regional development mechanisms, ▪ Develop or maintain national /regional /local legislation or policies and programmes addressing marine and terrestrial areas together, ▪ Identify measures to promote bottom-up initiatives where needed, and examine how to make best use of existing financing mechanisms both at European and national levels, ▪ Identify mechanisms to ensure full and coordinated implementation and application of community legislation and policies that have an impact on coastal areas, ▪ Include adequate systems for monitoring and disseminating information to the public about their coastal zone, ▪ Determine how appropriate national training and education programmes can support implementation of ICZM principlesin the coastal zone.

2.4.1.2. France

Located in the south by the Mediterranean Sea, in Western Europe, France has 2,783 kilometer coast. France's coasts contain several coastal feutures inculing coral reefs, wetlands, beaches and dunes. On the other hand, France coasts have many coastal problems, such as degraded water quality, tourism impacts, damaged productive coastal ecosystems.

Coastal management in France began in the 1970s when the national government made a special commission to identify the opportunities and disadvantages related

to coastal development with the aim of achieving state of-the-art solutions. In 1975, following recommendations of the national coastal commission, the "Conservatoire du Littoral" occured. Its aim was to acquire property along the shores of beaches to protect such lands from urban pressure, protect the ecological species and improve public access to them, and constitute marine resource plans. Remaining a todays major coastal management agency, the Conservatoire du Littoral, the two lead French coastal management agencies Direction de1'Environment and Direction de 1'Equipement also have significant effect on coastal management. And these two agencies are responsible for zoning, land use, and protection of the environment.

Enacted in 1983 two national laws in France regulate coastal management in order to attitude land use plans and zoning marine environment. The first one is, the Schemas de Mise en Valeur de la Mer (SMVM), and the second one is the Loi Littoral (Seashore Act). Both acts are responsible for only few sectoral development, however, coastal management issues are divided among several national institutions, such as management of marine and coastal areas. In 1981 Ministry of the Sea (MOS) was founded created to coordinate all national marine subtitles (fisheries, oil, gas, mineral development, scientific researches).

According to Miossec, 1996, the Loi Littoral has been a useful means of directing coastal development away from areas prone to coastal hazards. The SMVM, though, has been less successful, with only one area actually zoned on the Mediterranean coast. In addition, the French legislation does not describe the relationship between coastal systems. And there needs to be beter coordination of these two management mechanisms urgently.

As Meltzer (1996) states, with a primarly nationally driven system, intergovernmental integration of coastal management is also deemed moderately unsuccesssful. Both The Loi Littoral and SMVM have had limited success on improving linkages among the different levels of government managing coastal resources.

On the other hand, according to Denis 1996, with respect to interdisciplinary integration, France has been a leader in marine sciences and technology for several decades.

2.4.1.3. Spain

With its 4,964 kilometer coastline, Spain is on the south and west by the Mediterranean Sea. Northern and Southern Spain are politically the same country but in most categories they differ. The south is known for vibrancy, heat, flamenco, touristy coasts and dry land, while the north is better known for green landscapes, exquisite food, unspoilt scenery, authenticity and a colder climate (http://www.eyeonspain.com/spain-magazinenorth-vs-south.).

Spain's coastal management experince began with 1978 Constitution through the 1988 Shores Act. This Act established in order to define, protect and regulate the use and government police power on the coastal public property (Suarez de Vivero, J., 1992, *The Spanish Shore Act and its Implicationas for Regional Coastal Management*, Ocean and Coastal Management 18: 307-317). According to Suarez de Vivero 1992, this broad statement specifically relates to management of public areas of the coastal zone, such as setting of coastal boundaries; concessions and authorizations of public lands; approval of use and protection of public lands, and regulations for the use of beaches, such as coastal defense and regeneration.

The lead implementing coastal agency in Spain is the Ministry of Public Works, Transport, and Environment (MOPU). Spain's all these coastal experiences arise coastal planning in the beaches and foreshore areas as a direct result of the 1978 constitution of regional government. Besides these jurisdictions, some coastal management measures used by the Spanish government include a program monitoring water pollution, small commercial and pleasure horbors as well as fishing in inland waters, and protecting marine ecosystem.

Other coastal initiatives consider the establishment of a system of marine protected areas in 1982 (MPA). With MPA multiple use and marine reserves, national marine terrestrial parks and conservation areas have been zoned and related measures have been taken by the Spanish authorities.

The 1988 Coastal Law had taken all beach property into public ownership ahead of demolition. The 1988 law declares that the beach is public land, up to the point where the sea reaches in the worst of storms. Any homes built in that area before 1988 were taken into ownership by the state ahead of demolition, but the granting owners up to 60 years grace, but they were told that they could not sell or reform their properties. The decision on whether a particular property lies in the public area was allowed to take five years.

(http://www.spainexpat.com/spain/forum/viewthread).

The reform has now come via an amendment to the Maritime Navigation law, taking the legislation change directly via the Justice department and away from the Environment Ministry, needing only additional approval in Congress.

It states that such property can now be bought and sold, and indeed passed in inheritance, provided the building was built legally before 1988. An estimated 45,000 homes are estimated to be affected all along the coasts of Spain."

2.4.2 The United States

The United States, a federal republic with a strong demeocratic tradition, was the first nation to formally initiate a coastal zone management program at the national government level. With its 19,800 kilometers long coastline, The United States' many large cities are located on the Atlantic and Pacific coasts. In fact, thirty of the fifty states are considered coastal settlements.

The government response to the environmental concerns of the 1970s included the enactment of a plethora of largely single purpose legislation addressing different ocean and coastal resources (Cicin-Sain 1982). Many major laws related to the environment and coast are established in those years. Some of these are 1969 National Environmental Policy Act (NEPA), the 1972 Federal Water Pollution Control Act later known as the Clear Water Act (CWA), the 1972 Coastal Zone Management Act (CZMA), the 1972 Marine Mammal Protection Act (MMPA), the 1972 Marine Protection, Research and Sanctuaries Act (MPRSA), the 1973 Endangered Species Act (ESA), the 1976 Fishery Conservation and Management Act (FCMA), and the 1978 Outer Continental Shelf Lands Act Amendment (OCSLAA) (http://research.rem.sfu.ca/theses/navarro.pdf). Being first coastal act the 1972 Coastal Zone Management Act (CZMA) has served in some respects as a model for other countiries considering coastal management initiatives.

The 1972 Coastal Zone Management Act (CZMA) has focused on several issues such as, coastal hazards (storms and hurricanes), wetlands protection, management of non-point source pollution. This act also created a protected area program, the National Estuarine Research Reserve System (NERRS) in order to research and monitor coastal purposes. Similarly, a companion program, the Marine Sanctuaries Program was established as a part of the 1972 Marine Protection Research and Sanctuaries Act along U.S. coasts. These programs are administered by the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration (NOAA).

As a coastal protection program, The National Estuary Program (NEP), enacted in accordance with amendment to the Clean Water Act is administered by the Environmental Protection Agency. Providing federal funds to states bordering important estuaries, this agency can be compared to Environmental Protection Agency for Special Areas in Turkey, Ministry of Environment and Forestry. The National Estuary Program (NEP) has some difficulties while implementing effective measures to put the coastal plans.

According t CIA researches, since the United States have many largest cities located on the long coastal areas, there are more coastal and ocean legislations than any other nations. Some of these laws are related to coastal life protection and some of them are relevant to coastal management ıssues. Overall, U.S. ocean and coastal policy is weak in its multisectoral coordinating activities because these are in federal level. In addition, there is no formal program for planning and management. And that is why the United States needs urgent integrated coastal mechanism like many of world's countries need.

2.5 Description of Coastal Problems of Turkey

Turkey has a coastline of 8.300 kilometers (5.160 miles). Turkey's coastal areas are richly endowed with natural beauty, cultural attractions, and bays, estuaries, and wetlands replete with recources (OECD 2005). These recources have been regraded, polluted and threatened by a sharp increase in coastal population density and economic activities such as agriculture, industry, tourism, fishing, aquaculture, and urban development. Turkey's population growth rate (14.5 per thousand in 2009) is one of the highest in Europe. Almost half of the national population resides in the coastal areas. At present there is a rapid shift of population toward the coast, particularly with the migration of Turks from central Anatolia in search of better living conditions. In addition, rapid growth of the tourism industry along the coastal areas has doubled the population pressure on the coastal zone, resulting in many environmental and socioeconomic effects, for example, pollution of coastal waters threatens swimming, public health, fisheries, and biodiversity.

Turkey's agricultural production constitutes a major economic activity in the coastal areas. Remarkably, 90 percent of tobacco, 80 percent of cotton, 70 percent of rice production of the country take place in coastal provinces (http://www.globaloceans.org/country/turkey). Consequently a great challenge

facing the country is to reduce agricultural pollution runoff resulting from incentive use of fertilizers and pesticides (OECD 2005).

Industrial waste is one of the country's most serious sources of marine pollution. Most of Turkey's industrialization has also taken place in the coastal provinces. Although such industrial development is economically important, its rapid expansion along the coast has caused severe coastal water and land pollution and deterioration (OECD 2005).

2.5.1 Tourism as a Pressure on Coastal Environment

Özhan states that, tourism is Turkey's largest single earner of foreign exchange revenue, as a result of the Tourism Incentives Law No. 4957/2634 of 1982, an average of 10 million tourists, both foreign and domestic, have visited the coast annually in the 1990s-2000s, requiring substantial investment in tourism infrastructure (OECD 2005). Construction of tourist accommodations and vacation houses along the coast has contributed significantly to sewage and solid waste problems and degradation of water quality. As tourism infrastructure and service facilities were rapidly expanding along the coastal zone, industrial and agricultural developments competed with tourism for coastal land use in some areas *(Özhan et al. 1993; Özhan 1996a).*

According to Eke, "Tourism Incentives Law numbered 2634 that was issued in 1982 by the Ministry of Tourism, the Ministry is authorized to plan, arrange, administer, and make financial incentives available at the tourism protection and development areas or centers. Tourism facilities promoted in an unplanned manner by the single-sector development approach spoil the natural balance and increase the amount of concrete development (Eke and Karaaslan 1997)".

Eke suggest that, sustainable development of coastal areas that are targets of touristic activities require special techniques and means for planning and

implementation. Adoption of general principles and use of classical tools to manage these areas are insufficient, because coastal areas are special and necessitate special measure and attention (Eke, F. 1998).

Tekeli (1976) states that development of tourism is set as a very important objective for the solution for Turkey's development issues. Moreover, it is referred to as the tourism industry to take benefit from the prestige of industrialization. As Turkey's development becomes a national goal and as tourism is viewed as a very important tool for the achievement of this goal and as Turkey's tourism is identified with increased use of coastal resources, planners no longer need a goal towards public interest. Consequently, planning becomes a public excluded objective when merged with the goal towards the tourism development in a certain sense. Promoting foreign tourism for coastal planning in particular becomes a single-dimensional target. Thus, planning aims at achieving this goal accordingly (Tekeli 1976, 47).

2.5.2 Evolution of Governmental Responses

In response to Turkey's emerging coastal and ocean problems, the national government, with the cooperation of a number of international organizations, such as the Regional Activity Center of the UNEP-MAP for Priority Actions Programme, the OECD, the World Bank, SMAP, and the Global Environment Facility (GEF), has played a major role in the country's coastal zone management. The national government's involvement in management of coastal resources and environment is mandated by numerous laws and regulations on a sector-by-sector basis, the laws were passed primarily during the 1980s and 1990s.

The major laws and bylaws which relate to various issues of coastal zone management are well described in articles by Erdal Özhan *(Özhan et al. 1993; Özhan 1996a)*. Major marine-oriented laws are selected and summarized as follows:

2.5.2.1 Fisheries Law (22.3.1971, Amendments 15.5.1996)

For protection, production and control of living resources, Turkey's Ministry of Agriculture and Rural Affairs was authorized to regulate fisheries and mariculture. This law prohibits dumping of harmful substances into inland waters and prohibits bottom-trowling in inland waters (Özhan, E. (1996)Coastal Zone Management in Turkey *Ocean and Coastal Management* 30 (2-3): pp.153-176)

2.5.2.2 Tourism Incentives Law (12.3.1982)

In order to urge guide and regulate tourism development, tourism areas were declared by a decree of Council of Ministers following a proposal by the Ministry of Tourism, which is responsible for national tourism development, mainly in the coastal zone (especially along the coasts of Aegean and Mediterranean Seas) during to mid-to late 1980s (Özhan, E. (1996)Coastal Zone Management in Turkey *Ocean and Coastal Management* 30 (2-3): pp.153-176).

2.5.2.3 Environmental Law (9.8.1983)

The bylaw on water pollution control provides water quality criteria for lakes and seawater. Another bylaws requires an environmental impact assessment (EIA) to be prepared by organizations, companies, and establisments that have the potential to cause environmental problems through planned activities. The metropolitan municipalities are authorized to permit sea outfalls within their borders on approval of the Ministry of Environment. The Council of Ministers is authorized to designate areas that have ecological significance and are sensitive to degradation as Specially Protected Areas (SPAs) (Özhan, E. (1996) Coastal Zone Management in Turkey *Ocean and Coastal Management* 30 (2-3): pp.153-176).

2.5.2.4 National Parks Law (9.8.1983)

National Parks are identified by a decree of Council of Ministers following a proposal by the Ministry of Environment and Forestry, which is responsible for management of national parks, including coastal parks. By 1996, three coastal national parks have been designated: Olympus-Bey Daglari, Dilek Peninsula and Gelibolu. A fourth coastal park was recently declerated near the town of Marmaris, one of the major tourism resorts on the southern Aegean Sea (Özhan, E. (1996) Coastal Zone Management in Turkey *Ocean and Coastal Management* 30 (2-3): pp.153-176).

2.5.3 The Progress of Coastal Legislation in Turkey

The progress of the coastal law was subject to countless revisions until today. These efforts contain insufficient protection and utilization decisions. As begining with, Ottoman coastal practices, coastal areas are considered as state property. With Code of Law numered 1858 coastal filling and private property ownership are allowed by the Empire. However, the Civil Code numbered 1876 says that the seas and lakes are collective property. According to Eke (1995), the coastal legislation is based on article 641 of the Civil Law numbered 643 that was issued in 1926. This article stipulates the principle that any unowned property belongs to the state and the coasts are public property belongs to the available for public use.

As Keleş (2002) states that considering coastal development in Turkey it is clearly noticeable that the Development Law of 1972 numbered 6785 is an important milestone. Where there was no decription regarding coastal areas prior to this date, coasts were considered under the state's possession. The Municipality, Structure and Raods Law numbered 2299 guided coastal development during the period where no Development Law was in force.

Turkey's shore law (4.4.1990, Amendment 1.7.1992) sets out principles for protection of the country's coastal and ocean areas. It defines the coastal landward boundry as an area at least 100 meters wide horizontally, starting from the shore edge line, which is defined as the natural limit of the sand beach, wetland, and similar areas, created by seawater motion. All construction is prohibited within the first 50 meters from the shore edge line; in the remaining landward part, only public facilities and recreational and tourism facilities may be built.

According to Coastal Law numbered 3830, Approved on July 1, 1992, construction of any buildings within the first 50 meters of the coastal band (except for any structures in the nature of an extension to the permissible buildings) is prohibited. This territory just can be used for pedestrian ways, jogging, leisure, and recreational purposes. Within the second 50 meters of the coastal band, construction of daily tourism structures and buildings, vehicular roads, outdoor car parking areas, treatment facilities, police stations, and similar security related buildings that do not include residence and accommodation can be made.

Also, there are several laws and institutions related to coastal areas and they have some objectives to determine protection- utilization balance for this areas.

Table 8: Institutions with Authority over Coastal Areas (Source: Özhan 2005, Durukan 1997)

Institution	**Mission**	**Related Legislation**
The Ministry of Environment and Forestry	The ministry's objectives include protecting the environment, determining strategies to prevent pollution, protecting the forest owned by the state, and improving the life standarts of the peasants living by the forests.	-The Environmental Law - National Park Law - Forestry Law
The Presidency of Special Environmental Protected Areas	The aim of the institution is to protect the environmental values in Special Environmantal Protected Areas determined by the Environmental	-The Environmental Law -Decree of the

	Law numbered 9, to eliminate the existing environmental problems, to determine the principles appropriate for protection- utilization balance and also to prepare, reexmanine, and approve developments plans for the Special Environmental Protected Areas.	Cabinet for Special Environmental Protected Areas.
The Ministry of Culture and Tourism	The purpose of this institution is to contribute to the development and marketing of tourism in order to maintain, develop, and spread cultural and historical values.	-Conservation of Cultural and Natural Assets Law
The Ministry of Development and Public Works	Organizations related to development are dependent upon this institution. Besides development, the coastal law and regulations charge this ministry with important tasks. The principles of settlement and the land use decisions which are implemented through the Master Plan approvals belong to this ministry.	-The Development Law -The Coastal Law
The Ministry of Transport	The ministry's responsibility regarding coasts is concerned with development of horbours and their management. This activities are conducted through The Ministry of Transport and General Directorate fort he construction of Railways, Seaports and Airports.	- Harbour Law - The Coastal Law
The Undersecreteriat of Maritime Affairs	The Undersecreteriat is responsible from the development and maintenance of the maritime system according to the needs of the people and interest of the country. It is also charged with observing each and every activity harming the sea's natural and ecological structure and resulting in pollution and determining vessel dismantling locations.	- The Harbour Law
The Ministry of Agriculture And Rural Affairs	The ministry's responsibility is to implement agricultural policies and manage agricultural lands in the country. Another mission of the ministry is to	- The Fisheries Law

Table 8 continued	audit deep sea fishing.	
Prime Ministry State Planning Organization (SPO)	The aim of this institution is to provide a balanced distribution of the economic development throughout the country. Besides economic responsibilities, the institution is authorized to prepare leading projects and strategies for regional planning and development.	-SPO Establishment Law -The Development Law

In summary, the existing legislation shows apparently the sectoral character of the present system, suffering from overlapping responsibilities, and from insufficient communication and cooperation among different state agencies on the one hand, and among central government and the municipalities on the other. The review of the various studies and developments distributed over a decade shows that there has been a significant interest in Turkey for improving the CZM practices and for 'integration' of the management.

An important national institution established in 1989, in connection with Turkey's ICM (Integrated Coastal Management) effort is the Environmental Protection Agency for Special Areas (EPASA), which considers the use of all kinds of measures in solving environmental problems. The Agency was initially part of the Office of the Prime Minister but is now part of the Ministry of Environment and Forestry.

Table 9: The Development of the Coastal Law in Turkey (Source: Durukan 1997, Büyükvelioğlu 1998)

Coastal Regulation	**Date Issued**
Civil Law numbered 643, Article 641	1926
Article 4/1 of the Municipality, Structure and Roads Law numbered 2293	1933/1957
Supplemantal article 7 added by the Law numbered 1605 to the Development Law numbered 6785	July 11, 1972
Directives of supplemantal articles 7 and 8 of Development Law	January 18, 1975
Article 43 of the Constitution of the Republic of Turkey	1982
Coastal Law numbered 3086	December 1, 1984
Directives pursuant tothe Coastal Law numbered 3086	May 18, 1985
Decree of the Constitutional Courts pertaining to the cancellation of several articles of the Law numbered 3086	July 10, 1986
Circular No 110	July 15, 1987
Coastal Law numbered 3621	April 17, 1990
Directives pursuant to the coastal law numbered 3621	August 3, 1990
Decree of the Constitutional Courts pertaining to the cancellation of several articles of the Law numbered 3086	January 23, 1992
Law numbered 3830 pursuant to the Amandment on the Coastal Law	July 11, 1992
Directives relating to Law numbered 3830	October 13, 1992
Revision of directives	March 30, 1994
Revision of directives	July 27, 1996

2.5.4. Assessment of Governmental Responses

According to Özhan, the emerging paradox between development in the coastal areas (e.g., tourism, urbanization, agriculture, and industrialization) and environmental sustainability (e.g., endangered species, water quality, natural richness and historical heritage) added a sense of urgency to the composing of an integrated strategy in Turkey.

By composing two broad classes of government agencies: development and investment agencies such as the Ministry of Tourism; and the conservation and environmental agencies such as the Ministiry of Environment and Forestry, Turkey's government responded. As Özhan states that because of the lack of an overall institutional and regulatory integrative collaborating scheme among these ministries, Turkey has, in some cases, suffered from overlaps and gaps in its administration and implementation of plans in coastal areas.

For example, about the Tourism Incentives Law (12.3.1982), the Ministry of Tourism ensured many economic incentives such as tax exemptions and low-interest loans for the investment of tourism facilities. Tourism nurtured successfully, especially along the coasts of the Mediterranean Seas. Yet, the Ministry of Tourism initially took for no consideration for the range and rigidity of the adverse environmental effects of tourism. In the 1990s, the Ministry of Tourism has discontinued several administrative incentives provided by the Tourism Incentives Law because of secondary housing problems and degradation of water quality and the aesthetic value of natural coastal features which conflicts with the Environmental Law (9.8.1983) (OECD 1992; METAP 1991; Ozhan 1996).

Although, shore laws of Turkey contain general directives and points, they fail to include specific points in considering the local environmental and natural characteristics. Threatening the natural and cultural environment, the tools used in Turkey's coastal area planning are urgently need for a new integrative and

collaborative planning approach both in institutional and implementation perspectives.

One of Turkey's most noteworthy institutional arrangements is the Environmental Protection Agency for Special Areas (EPASA). The agency's authority extends to land use management as well as environmental management within Special Environmental Protected Areas (SEPAs); therefore the agency takes on duties and prerogatives of all Ministries and municipalities relevant to SEPA management. A successful result of the SPA program is illustrated by the compromise between tourism development and nature conservation in Gökova Bay, on the eastern edge of the Mediterranean Sea. Tourism development along the entire coastline of Gökova beach, an important habitat for many biological species, posed serious threats to this natural ecosytem. With the support of the World Wide Fund for Nature (WWF), IUCN and SMAP, which is funded by the Europian Union, Gökova Bay was designated a SEPA in 1988.

CHAPTER 3

COASTAL PLANNING

This chapter of the thesis covers history of coastal planning and current coastal planning approaches. A brief history of coastal planning is described for two main reasons. Firstly, historical approaches indicate how coastal planning experiences have been improved from past to today both socialy and economically. Secondly, by investigating old experiences relevant to coastal planning, authorities can see possible future opportunities and difficulties of coastal areas. Certain planning theories i.e. Rational, Comprehensive Planning Theory, Values-based Planning, Ecosystem-based Management, Environmentalism, Participation, Consensus and Conflict will also take place in this chapter.

In order to find an answer the question of what a successful process of coastal planning should entail Integrated Coastal Management will be clearly identified in this chapter. Besides, Specially Protected Areas in Turkey will be analized to build an interaction between the case and the third chapter.

3.1. A Brief History of Coastal Planning

The deliberate effects of human being to influence the natural environment of the coast have been existing and long-lasting for thousands of years. Since the ancient civilizations built shelters, ports and seawalls; they also improved their fisheries, agricultural abilities, treated biological diversities and habitats. With the industrial revolution, coastal resources began to reduce in the mid-nineteenth century in Europe dramatically. As Kay & Adler (2005) state that the industrial revolution also altered the community's view of its resources. Viewing them as a tangible elements or objects of nature led to the use of the term 'natural resources' and planning now focused on supply and demand, and the options of these factors. Due to increasing

importance of economic factors, natural and ecological environment lost their significance. Currently, natural resources were perceived as limitless. However, this view began to alter as early as the late nineteenth century.

According to Kay & Adler (2005), deliberate human intervention in the coastal environment to preserve components of its natural character or ecological integrity is a much more recent activity. Coastal ecological management grew from the national park movement of the late nineteenth century. During this era, protected areas or parks were perceived as places or significant scenic or natural value set aside for the enjoyment of visitors or scientific pursuits (MacEwen and MacEwen, 1982).

Expansion of land-use planning in the late nineteenth and early twentieth centuries influenced coastal areas in terms of, ecological management, resource management, engineering, intervention and urban/industrial development. It was not until the 1960s and 1970s that all relevant disciplines were brought together under the concept of 'Coastal Zone Management' in the context of the Coastal Zone Management Act in the U.S.A. Sustainable development approaches gained considerable significance in the late 1980s and early 1990s.

Today, it is generally accepted that coastal resources can only be effectively evaluated and managed in the total context of the ecosystem and associated social and cultural environments (Ehler 1995; Agardy and Alder). As O'Riordan and Vellinga (1993) states that, in reviewing the history of coastal area planning up to the early 1990s summarised its development over the past forty years as a professional activity into four phases. Their analysis can be seen in Table 9.

Table 10: Phases in the development of coastal planning-management

Phase	Period	Key Features
I	1950-1970	- Sectoral approach - Man againts nature ethos -Public participation low -Limited ecological considerations - Reactive focus
II	1970-1990	- Increase in environmental assesment - Gerater integration and coordination between sectors - Increased public paticipation - Heightened ecological awareness - Maintenance of engineering dominance - Combined proactive and reactive focus
III	1990-2000	- Focus on sustainable development - Increased focus on comprehensive environmental management - Environmental restoration - Emphasis on public paticipation
IV	2000-2010	- Focus on tangible implementation of sustainable development principles - Ecosystem-based management becoming embedded in national legislation - Shared governance Emerging - Exploration of new coastal management approaches, including learning networks and adaptive management systems - Increased impact of globalization and the internet on management approaches and impacts - Emerging re-analysis of the basic tenets of coastal management
V	Future	- Integrated suite of theories and tools applicable with confidence overall scales, timeframes, locations and issues - Comprehensive ecosystem-based management - Connected coastal management communities of practice - Verified set of governance models.

Source: adapted from O'Riordan and Vellinga (1993).

3.2. Coastal Planning; Under the Light of International Commissions

In 1992 The United Nations Conference on Environment and Development (UNCED), known as the "Earth Summit", declared that the world was living beyond its ecological means and that speedy action was required to change future disaster (UNCED 1992). In 2002, ten years after the UNCED the World Summit for Sustainable Development (WSSD) which was held in Johannesburg, South Africa, to review the progress made over the past ten years toward providing actions for sustainable development of the global society. In its plan of implementation the WSSD stated that;

> "Ensuring the sustainable development of the oceans requires effective coordination and cooperation, including at the global and regional levels, between relevant bodies, and actions at all levels too:…
> Promote the implemantation of chapter 17 of Agenda 21 which provides the programme of action for achieving the sustainable development of oceans, coastal areas and seas through its programme areas of integrated management and sustainable development of coastal areas, including exclusive economic zones; marine environmental protection; sustainable use and conservation of marine living resources; addressing Critical uncertainties for the management of marine environment and climate change; strengthening international, including regional cooperation and coordination; and sustainable development of small islands (WSSD 2002)."

(Harvey, N. (2006) Global Change and Integrated Coastal Management).

Considering to these significances, because of an interrelated set of implementing and planning failures including information, economic mobility, loss of habitat, deteriorating environmental quality and policy intervention failures, coastal environments are under huge stress. Managing these ıssues will require a new paradigm-a new way of thinking. In other words, moves towards an integrated coastal planning are urgently required to guide the coevolution of natural and human systems.

3.3. Coastal Planning Approaches

Coastal Planning does not have a consistent set of theoretical concepts, but rather reflects a range of planning theories and practises which are inseparable from the culture, society and politics. So as a society changes, so will the attitudes to coastal planning.

Contemporary approaches to urban planning perceived coastal areas as ordinary terrestrial location and implement decisions to these areas regardless of sensivity. Although 1/1000 and 1/5000 scaled Action Plans consist of planning approaches used in the past these plans can not develop important decisions to the problems of coastal areas.

Considering the literature over the past thirty years from rational planning theories to more participative approaches, including adaptive, collaborative and consensual planning, mirrors the overall changes that coastal areas faced with.

It can be identified with King's (1996) study on old planning practises vs. new or emerging planning practices.

Old Planning Practises	**New or Emerging Planning Practices**
Mechanistic	Organic/ cybernetic
Imposed control	Self-organising/ adaptive
Compartmentalises	Interdisciplinary /holistic
Reductionist models	Complex /probabilistic
Closed systems	Open systems
Means-ends causality	(Sub) system functions (multiple causation)
Elimination of uncertainty	Accept and learn from uncertainty

Planning creates order	Order is there already –work with it
Hierarchal order	Market type coordination
Avoid overlap	Semi-autonomous systems need to overlap
Ends given	Goals developed within process
Fixed course	Flexibility and learning
Exploitation of nature	Participation with nature –sustainable use
Programming the future	Flexible frameworks for a changing future
Consistent goals	Consensus building
Neutral to politics	Planning is politics
Power for others	Power with others
Institutional control	Self help with government
Government monolithic	Government of many departments
Rational, linear	Intuitive and rational
Entrenched agencies	Experimentation encouraged
Either pragmatic or visionary	Pragmatic and visionary

Source: King (1996)

There are a number of theories to enhance the most appropriate coastal planning approaches used in the theoretical concept;

- Rational, comprehensive planning,
- Values-based planning,
- Ecosystem-based management,
- Environmentalism,
- Participation, consensus and conflict
- Pragmatism.

3.3.1. Rational, Comprehensive Planning Theory

Since the Renaissance era Rationality has been thought as the most promising way for western society. In its simplest terms, 'rationality is a way of choosing the best means to attain a given end' (Alexander, 1986). Rational planning theory needs wide and comprehensive knowledge to make logical decisions among the alternatives. That is why rational planning model is also called "comprehensive" model.

However truly, comprehensive goals tend to be too general to provide a basis for evaluating concrete alternatives. In fact, it is difficult to stir political interest in them. The theory includes a number of stages linking ideas to actions;

- Identification of problems,
- Defining goals and objectives,
- Identifying opportunities and constraints,
- Defining alternatives,
- Making a choice and implementing that choice.

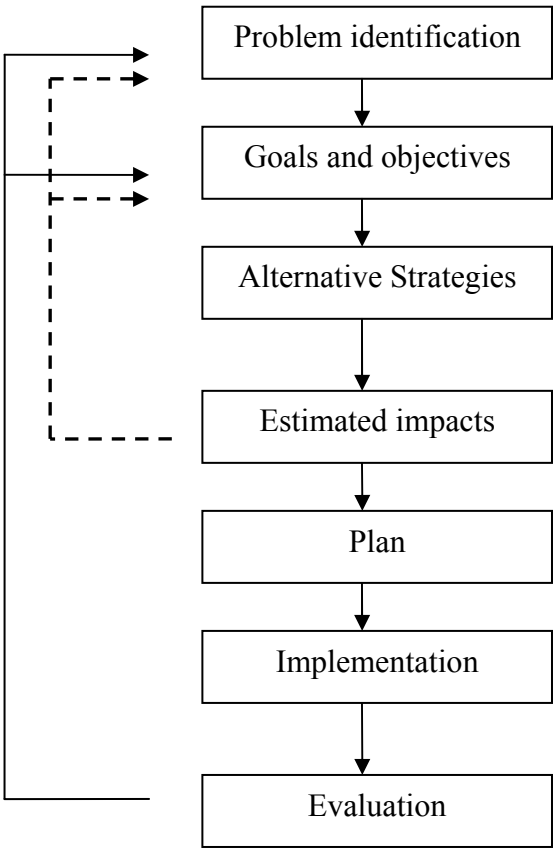


Figure 4: Rational (Comprehensive)model of planning and decision making (Smith, 1993)

3.3.2. Values-based Planning

Values-based planning concepts can be thought of as the opposite of rational-comprehensive planning (Kay and Christie, 2001; McKellar and Kay 2001). According to Kay and Alder (2005), while rational planning assumes that all participants in the planning process operate objectively, values-based planning assumes the complete opposite, or as Fekete (1988) cited in Guerrier et al. (1995:3) states:

"no to put too fine a point on it, we live, breathe, and excrete values. No aspect of human life is unrelated to values, valuations and validations."

People from different parts of the world, from different cultures, religions and from different socio-economic counturies will hold and express their values differently. However, value is an object that can be used to attain some value. For example, a coastal area is valuable in this sense because it is used for recreation, fishing, and so on.

As McKellar and Kay (2001) states that, potential elements of values-based coastal planning include;

- First, acknowledgement of the personal vulnerability implicit in value discussions, statement of the range of values and value holders, and exploration of any conflicts.
- Second, a clear link between values and vision, principles and strategic objectives and actions.
- Third, an assessment of the extent to which values would be and would not be served by the strategic objectives and actions.
- Finally, a discussion about how those values, which were not likely to be reflected in the plan, are to be honoured in other ways.

3.3.3. Ecosystem-based Management

Ecosystem-based management is a deliberate action of an entire regional ecosystem with the intention of maintaining ecological sustainability and integrity. Over the past decade, policy makers, management agencies, and academic scientists have shown increasing interest in ecosystem-based management. Although there are numerous defiitions of ecosystem, Wang (2004) summarises;

> "An ecosystem exists in a space with boundaries that may or may not be expilictly delineated. Ecosystems are distinguishable from each other based on their biophysical attributes, their locations and the spatial extent of their relations."

Several international and national authorities support the application of ecosystem-based management in coastal areas because of its unique characteristics. The Committee on the Scientific Basis for Ecosystem Management of The Ecological Society of America underlined the major elements of ecosystem management as:

- Intergenerational sustainability is a precondition;
- Goals are measurable for specific future ecosystem processes;
- Decision making relies on research performed at all levels of ecological organisation;
- Complexity and interconnectedness are integral to maintaining ecosystems;
- Ecosystems are dynamic;
- Context and scale are accounted for;
- Humans are a component of the ecosystem; and
- Approaches are adaptable and accountable.

3.3.4. Environmentalism

Kay and Alder (2005) states that environmentalism is the belief that humans are a part of nature and, as a result, they have responsibility to ensure their existence is considered within the context of their environmental impact. Environmentalism is the first ideology to be deeply rooted in the natural sciences. Especially the 1980s have shown this ideology gained significance interest in the United States. With growing importance of this ideology, environmentalists have produced remarkable sociological, political, economic and philosophical literature to many nations of the world.

O' Riordan (1981) has provided a view of how to classify environmental ideologies within the context of both ecocentricism and technocentricism:

Table 11: Classification of Environmental Ideologies

	Technocentric		Ecocentric	
	Cornucopian	Accommodation	Communalist	Deep ecologist
Green label	Resource explotative	Resource conversationalist	Resource preservationist	Extreme preservationist
Type of economy	Anti-green unfettered markets	Gren: markets guided by market instruments	Deep green: market regulated by macro-standarts	Very deep green: markets very heavily regulated to reduce 'resource take'
Management strategy	Maximise GNP: assumes human-environment resources are infinitely substitutable	Modified economic growth: infinitely substitutable resource rejected	Zero economic growth: complete protection of 'critical natural' capital	Smaller national economy: localised production (bio regionalism)
Ethical position	Instrumental (man over nature)	Extension of moralş considerability; inter and intra-generational equity	Further extension of moral considerability ton on-human entities (bio ethics)	Ethical equality (man in nature)
Sustainability level	Very weak sustainability	Weak sustainability	Strong sustainability	Very strong sustainability

3.3.5. Participation, Consensus and Conflict

During the past four decades 'consensus' participation model has been seeking to overcome governance of environmental problems. In other words, there is a growing call for greater public involvement in establishing natural sciences in line with democratic ideals. Therefore, a variety of public participation procedures exist that aim to consult and involve the public, ranging from the public hearing to the consensus meetings.

With its widespread use in the coastal planning, consensual and participatory planning use tools from dispute resolution and education which focus on the importance of learning communities and communicative rationality to effectively involve stakeholders. This planning approach is widely used in both developed and developing countries such as The United Kingdom, Australia and Indonesia.

3.3.6. Pragmatism

According to Kay and Alder (2005) state that, pragmatism in coastal management can be sum up as: "we will solve coastal problems using wathever tools and techniques are found to work". And also Maunter (1996), explains that pragmatism is the theory that a proposition is true if holding it to be so is advantageous or pramatically successful.

Maunter (1996) states that pragmatism is the theory that a proposition is true if holding it to be so is advantageous or pragmatically successful. As pragmatism is the philosophy of common sense, a pragmatist's pursuit of truth is through the analysis of action. Pragmatism provides a number of significant elements for coastal planning. Undoubtly, the most important of these is separation between theoretical analysis and practical action should not exist.

3.4. Marine and Coastal Protected Areas

Creating marine and coastal protected areas under certain type of protection is a conservation strategy that is implemented more and more. In 1989, for example, there were 977 marine and coastal protected areas around the globe covering some 211,406,000 hectares (The World Resources Institute 1994). According to United Kingdom environmental consultant Gubbay (1995), Marine Protected Areas (MPAs) have become the flagships of marine conservation programmes in many parts of the world.

Having a rich conservation history Americans started protecting "special places" back in 1872, when Congress designated Yellowstone National Park as the practice within a conservation approach. And also it was accepted one of the best ideas Americans ever had. U.S. National Marine Sanctuary Program, established in the 1972 as a part of the Marine Protection Research and Sanctuaries Act along U.S. coasts, was administered by the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration (NOAA).

After U.S. National Marine Sanctuary Program, European countries formulated two new efforts. First, options were created to protect small natural or semi-natural areas that were in danger of dissappearing. Second, efforts were undertaken to protect inhabited areas that have cultural, natural and historical value through protected zones. Since marine and coastal protected areas are important tools for sustaining ecosystems and conserving coastal values, the significance of these areas gain increasing interest. IUCN has classified certain types of protected areas with different management objectives.

Table 12: Certain types of Protected Areas with Different Management Objectives

Category	Type	Main mangement objective
I	Strict nature reserve / wilderness area	Preserve habitats ecesystems and species in as undisturbed a state as possible Ensure that Future generations have the opportunity to experince understanding and enjoyment of areas that have been largely undisturbed by human action over a long period of time.
II	National park	Protect natural or scenic areas of national or international significance for spiritual, scientific, educational, recreational or tourist purposes.
III	Natural monument	Protect or preserve in perpetuity specific outstanding natural features because of their natural significance.
IV	Habitat / species management areas	Secure and maintain the habitat conditions necessary to protect significant species, groups of species, biotic communities or physical features of the environment when these require specific human manipulation for optimum management.
V	Protected landscape / seascape	Maintain harmonious interaction of nature and culture through protection of Landscape or seascape, and the continuation of traditional land uses,

		building practices and social / cultural manifestations.
VI	Managed resource protected area	Protect and maintain the biological diversity, and other natural values of the area in the long term.

Source: IUCN 1994.

3.5. Specially Protected Areas in Turkey

Agricultural lands, manipulated forests and other human-managed ecosystems cover at least two-thirds of the terrestrial surface of the planet, whereas protected areas cover only about 8 percent. As human-managed ecosystem coastal areas contain an important segment of global biodiversity, with its growing interest in all over the world, certain regions called specially protected area have been practised in Turkey since 1989.

As a Specially Protected Area Gokova Bay's 1/25.000 scaled Environmental Relations Plan is a pioneering example for coastal planning experience in Turkey, since this planning study takes care of biological diversity protection and has cross-sectoral approaches toward coastal areas.

3.6. The Planning Objectives of the EPASA

The following general planning principles are considered for the protection of the environmental, cultural, and historical values of Specially Protected Areas as well as generating protection – utilization balance;

· To ensure the establishment of protective balances of use,
· To protect the limited agricultural areas with high performance,
· To prevent any actions that may result in the loss of watery and sandy areas,
· To establish a well planned protection – utilization balance for the regions of

recreational potential,

· To rehabilitate and develop the infrastructure of regional settlements,

· To ensure the protection of natural areas of protection previously determined and announced by the Conservation of Cultural and Natural Assets Councils,

· To ensure proper protection and development of archeological areas of protection,

· To generate balanced decisions on the existing tourism demands and to reflect such on the plans, and

· To protect and direct as well as to ensure the development of the present architectural texture and local features of the regions "(WEB_1, Özhan 2005)".

Special Environmental Protectection Areas (SEPA) established in accordance with the national superior policy, to conserve areas having special qualities with special approaches. Environmental Protection Agency for Special Areas responsible for the preparation and the approval of the plans of SEPAs has the task and responsibility of determining the Specially Protected Areas and suggesting them to the Cabinet with the authority given with a Decree Law.

The fourteen SEPAs determined in accordance with the aforesaid principles are Belek, Foça, Datça-Bozburun, Fethiye-Göcek, Gökova, Göksu Delta, Gölbası, Ihlara, Kekova, Köycegiz-Dalyan, Pamukkale, Patara, Tuz Gölü, and Uzun Göl. These areas are rich in terms of natural, historical, and cultural values; feature a good biological and ecological balance; are highly significant in terms of ecology and promising for the future both locally and worldwide. Some of the fourteen declared areas are situated on the coast. The features of the SEPAs on the coast are summarized below.

3.6.1. Belek

(Antalya, Population 27.235, Area 111,79 km2)

The area is hosting numerous well planned and regular regional observation projects and protection of the breeding areas for *sea turtles* that are under a

worldwide risk of extinction and is subject to the programs carried out according to the results of such observations (http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.6.2. Foça

(İzmir, Population 14.295, Area 27.6 km2)

The origin of the considerable portion of the region's importance comes from the seals that live in this region for over thousands of years and after which the area is named. Turkey is the second country where the *Mediterranean Seals (Monachus monachus)* facing the danger of extinction currently exist. The studies to be conducted in this region will ensure the continued health of the ecosystem in the vicinity of Foça and avoid any further damage to the species.
(http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.6.3. Datça-Bozburun

(Muğla, Population 21.165, Area 1443.68 km2)

In addition to the products such as thyme, sage, bay leaves, and carob fruits picked by the local residents for economical purposes, Bambus bees used for the insemination of the plants in the greenhouses and the mountain goats (Capra Aegagrus) about to go extinct are the most important biological assets of the region where the natural flora is consisting of Mediterranean plant species such as olives, red pines, sandalwood, and almonds.
(http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.6.4. Fethiye-Göcek

(Muğla, Population 73.206, Area 774.07 km2)

The southern coasts of Fethiye are surrounded with steep mountains. The sea becomes instantly deep. There are small bays and inlets along the coast. The Dead Sea Lagoon at the Belceğiz village offers an idyllic appearance. The regional flora

consists of maquis at the coast and pine (conifer) woods at higher areas. These woods contain black pines, (Pinus nigra), red pines (Pinus bruita) and Cedrus woods. The coasts feature moorlands, olives, oaks, and citrus.
(http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.6.5. Gökova

(Muğla, Population 7.615, Area 7576.9 km2)
The high quality forest areas become denser at the slope of Kıran mountains along the southern coast of the Gökova Bay. The Gökova savannah and the surrounding mountains are ecologically important in terms of a rich flora and fauna. Wild animals are available at the southern part of the Gökova Bay in particular EPASA. (2006). (*Gökova*. Retrieved 05 12, 2009, from Environmental Protection Agency for Special Areas: http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.6.6. Kekova

(Antalya, Population 1.165 , Area 232.36 km2)
Giving the region its name, Kekova is the largest island within the region. İç Ada, Toprak Adası, and Kınalı Ada are other important isles. The Sıcak Peninsula and Kekova Island situated parallel along the coast form the "Dead Sea" which is a closed sea. Fishery is the major means of living. The region also contains the remains of ancient city walls and fortress currently under water. This area is supposed to be the ancient city of Simena. In addition, there are numerous other sunken cities.
(http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.6.7. Köyceğiz-Dalyan

(Muğla, Population 29.129 , Area 461.46km2)
This region is among the most important breeding areas of the Mediterranean Sea Turtles (Caretta caretta). The most abundant vegetation at the Köyceğiz Special Environmental Protection Area comprises of red pine and sweetgum woods; as well as the grassy plants that grow in the wet and dry swamps surrounding the Köyceğiz Lake (http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13).

3.6.8. Patara

(Antalya-Muğla, Population 15.667, Area 189.18km2)
One of the most typical structures in this area is the moving dunes. With both archeological values and natural assets, Patara has managed to preserve its importance from ancient times until today. The coasts of Patara that form an unsurpassed beach of 18 kilometers long, sand-hills, archeological sites, wetlands, flora and fauna, the historical and cultural values along with the agricultural areas worth while to protect result in dense tourism activities in the region (http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13)

3.7. What is Coastal Planning and What is Coastal Management?

As widely known words “planning” and “management” have numerous vocabulary meanings depending on the context that they are used. Although in most cases their usage makes the meaning clear, it complicates some coastal programs from different side of the literature. Considering words with integration, both coastal management and coastal planning can be used in the similar meaning in some parts of the world.

While word planning can be used everyday, by everyone, management is a more formal term. For example, ‘planning’ is usually taken in everyday language but

'management' is generally used in business terminology. In this thesis, the terms coastal planning and coastal management are taken in similar meanings because, their usage in different countries represent similar meanings. In USA, for example, the term coastal management is prefered when authories define coastal programs. However, in Turkey in several published or non-published literature the term coastal planning is prefered in the same meaning

3. 8. What does the 'Integration' mean?

The term 'integration' is used differently by various disciplines. In the context of coastal management and planning, Cicin-Sain (1993) interpreted Underdahl's dimensions of policy integration, stressing that several groups of issues were important (Cicin-Sain 1993:25):

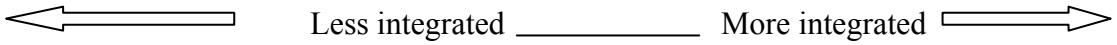
- Integration among sectors
    - among coastal/marine sectors (e.g. oil and gas development, fisheries, coastal tourism, marine mammal protection, port development)
    - between coastal/marine sectors and other land-based sectors such as agriculture.

- Integration between the land and the water sides of the coastal zone.
- Integration among levels of government (national, subnational, local)
- Integration between nations.
- Integration among disciplines (such as the natural sciences, social sciences and engineering).

Besides Cicin-Sain, Kenchington and Crawford (1993) cite the dictionary meaning of 'integrate' and 'coordinate' to define their usage in coastal management:

Integrate- to combine to form a more complete, harmonious or coordinated entity;

Coordinate- to bring into a common action, regulate or combine in harmonious action.



Degrees of integration in coastal management (from Olsen (2003) and Olsen et al, 1997)

3.9. Integrated Coastal Management

Traditionally, coastal environments dealt strictly with coastal areas (the land) by the coastal resource managers. On the contrary, marine biologists and oceanographers restrict their concern to nearshore and offshore waters (the sea). Nowadays, both scientists and resource managers are dealing with coastal issues with in an integrative approach.

Although there are numerous definitions about integrated coastal management, a basic definition is provided by Knecht and Archer (1993) as follows;

> "At minimum, any definition should include the integrating of programs and plans for economic development and environmental quality management, and more specifically the integration of cross-sectoral plans for fisheries, energy, transportation, waste disposal, tourism, etc. In addition, Integrated coastal management should be cross-disiplinary amoung the sciences, engineering (technology), economic, political science (institutions), and law.
>
> "Integrated Coastal Management is a continuous and dynamic process incorporating feedback loops which aims to manage human use of coastal resources in a sustainable manner by adopting a holistic and integrative approach between terrestrial and marine environments; levels and sectors of government; government and community; science and management; and sectors of the economy (Harvey N (2004) Integrated Coastal Management. In: Goudie AS Encyclopedia of Geomorphology. Volume 1. Routledge, London; New York p. 568)".

According to Olsen (1993),there are six stages in the development of ICM program; these are adapted, in part, from international guidelines prepared by the World Bank (1993). In this thesis just the second stage Program, Planning and Preperation will be investigated. Since it is more technical and closer to the concept of coastal planning, the second stage is assumed to be the best way to examine the Gökova SEPA 1/25.000 scaled Environmental Relation Plan Process.

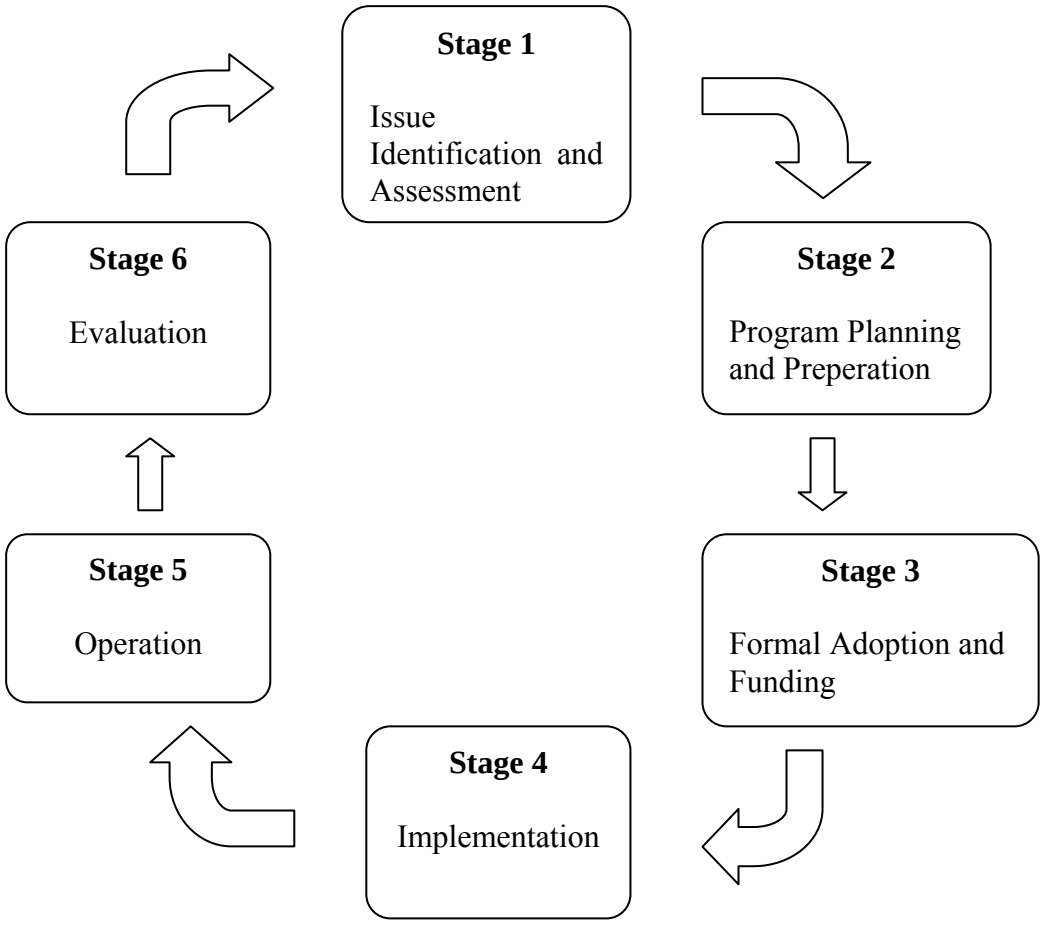


Figure 5: The Six Stages of an ICM Process

3.9.1. Stage 2. Planning and Preparation in ICM Process

Planning and Preparation in ICM process involves the following stages.

- Necessary information and data on the ***physical, economic, and social characteristics*** of the coastal zone, as well as on existing political jurisdictions and on governance issues, are assembled.
- Existing ***resource based management*** studies and vulnerable species are determined.
- A plan for ***public participation and consensus*** in the ICM process is developed.
- Priorities are set for addressing problems and opportunities, taking into consideration technical and financial feasibility.
- Feasibility of ***new economic development opportunities*** is assessed.
- Appropriate coastal area management and planning boundaries are considered. New planning decisions and any scaled planning studies are considered.
- ***Institutional integration***, intersectoral and intergovernmental coordination mechanisms are developed (The World Bank (2003).

3.10. Existing Theoretical Approaches to Coastal Planning and Management vs. Integrated Coastal Management

Past experiences of planning show that there is insufficient attempts toward coastal areas in terms of sectoral cooperation and integration. Without proper integration and sensitive efforts in coastal areas, all past theories can not fulfil their objectives. Although the planning approach that used for the coastal areas should contain old theories, this planning approach should firstly consider with coastal area management and with interaction among various resources and activities in coastal areas.

Table 13. Old Planning Theories vs. Integrated Coastal Management

Criteria	**Old Coastal Planning Theories**	**Integrated Coastal Management**
1-Relationship with both land and sea	*	*
2-Cross-sectoral planning approach both development and conservation	*	**
3- Economic development diversification	*	***
4- Institutional integration	*	***
5- Local participation and consensus	*	***
6- Maintenance of biodiversity	-	***
7-Local, regional and intergovernmental integration	*	**
8- Sustainable use of coastal areas and natural resources to meet the needs of current and future generations.	*	***
9-Continuous and dynamic	-	***

(* weak, **strong, *** very strong)

As this table shows, Integrated Coastal Management can be explained as a continuous and dynamic process by which decisions are made for the sustainable use, development, integration of local community and consensus, protection of coastal resources and biodiversity. In fact, integrated coastal management is a multipurpose process due to the fact that it promotes linkages and harmonization between sectoral, coastal and natural activities. On the other hand, old theories lack efficient multisectoral behaviours towards coastal areas. That is why currently old coastal planning approaches are not prefered for coastal areas.

CHAPTER 4

CASE STUDY: MUGLA-GÖKOVA SPECIAL ENVIRONMENTAL PROTECTION AREA (SEPA)

4.1. Introduction

In order to review of the tools and techniques of a successful coastal planning, two research questions are reviewed and hypotheses are tested through the case study of Gökova. As mentioned in the first chapter of the thesis, the research questions and hyphotheses of this study are:

The case study research questions:
1- Is the Gökova Bay's 1/25.000 scaled Environmental Relation Plan a successful coastal planning example?

2- Is there any deficiencies of this Plan in terms of ICM, in this case what would they be?

In relation to these research questions the case study hypotheses are as follows:
1- As a Special Environment Protection Area (SEPA) Gökova Bay's 1/25.000 scaled Environmental Relation Plan is a pioneering example for coastal planning experience in Turkey.

2- Although this planning study takes care of biological diversity protection and has cross-sectoral approaches toward coastal areas, there are certain deficiencies in this plan. An important deficiency of this Plan in terms of ICM is the lack of

efficient tourism carrying capacity study in order to prevent Gökova Region from increasing future tourism demand.

4.2. Description of Case Study Area

Gökova Bay and the Sedir Island are the two regions examined in terms of case study area. Since coastal areas should be considered both sea and land side of the territory, Sedir Island and Gökova Inner Bay are interconnected with their coastal relationships. Gökova Bay, the coordinates of which were defined in the Official Journal upon the Cabinet Decision dated 12.06.1988 and numbered 88/13019, which was published in the Official Journal dated 05.07.1988 and numbered 19863 and then put into force, were determined and declared as "Gökova Bay Special Environment Protection Area (SEPA)" in order to protect their natural, ecological, cultural and historical values against the environmental pollution and destruction and to assure their transfer to the next generations.

4.2.1. Inner Gökova Bay

The Inner Gökova Bay is located in the southwest of Turkey within the boundaries of Muğla Province, Ula District. It contains the settlements of Akyaka, Gökova, Akçapınar, Çınar, Çamlı, Gökçe, Çetibeli and Karacaköy. According to 2007 Address-Based Population Census, 8057 people live in the settlement areas of Akyaka, Gökova, Akçapınar, Çınar, Çamlı, Gökçe, Çetibeli and Kıran within the Inner Gökova Bay.

> There are two significant creeks within the project area. Kadın Creek is a meandering stream with a length of approximately 1.700 meters and depth of more than 6 meters in some part. While structuring is seen in the north section, the south section is largely covered by marshes. Throughout its journey from the source to the sea, the amount of water is increased by the contributions of small sources, especially from the northern side. Akçapınar Creek has a length of approximately 2.250 meters and an average depth of around 1,5-2 meters with a more meandering and regular structure. This creek has a lower discharge rate but a higher level of turbidity than the Kadın Creek.

> The area between these two creeks reaching the sea is quite diversified in terms of natural life and productive for man's use particularly in farming. The Inner Gökova Bay as well as the adjacent area is wetlands with a wide variety of waterfowls, mammals, reptiles, amphibians, insects and plants (SMAP,2008).

Thanks to natural and archeological heritage of the Sedir Island and, Inner Gökova Bay have been under protection through various national protection statuses by EPASA since 1988.

4.2.2. The Sedir Island

Being famous with Cleopatra Beach the Sedir Island is a unique part of the study area within the context of natural, historical and archeological aspects.

The island is visited by approximately 100.000 domestic and foreign tourists every year.

> There is no residential area on the Sedir Island. Only security guards stay on the island and tourists can pay a daily visit. Visitors also enjoy the services of beach chairs for resting, running water for taking shower and rest rooms. Visitors can use the famous Cleopatra beach (but not the sand) for swimming. In addition, they can visit the area of archaeological remains. Guidance service is not provided during these tours, as a result of which visitors wander around these archaeological remains without any control (SMAP,2008).

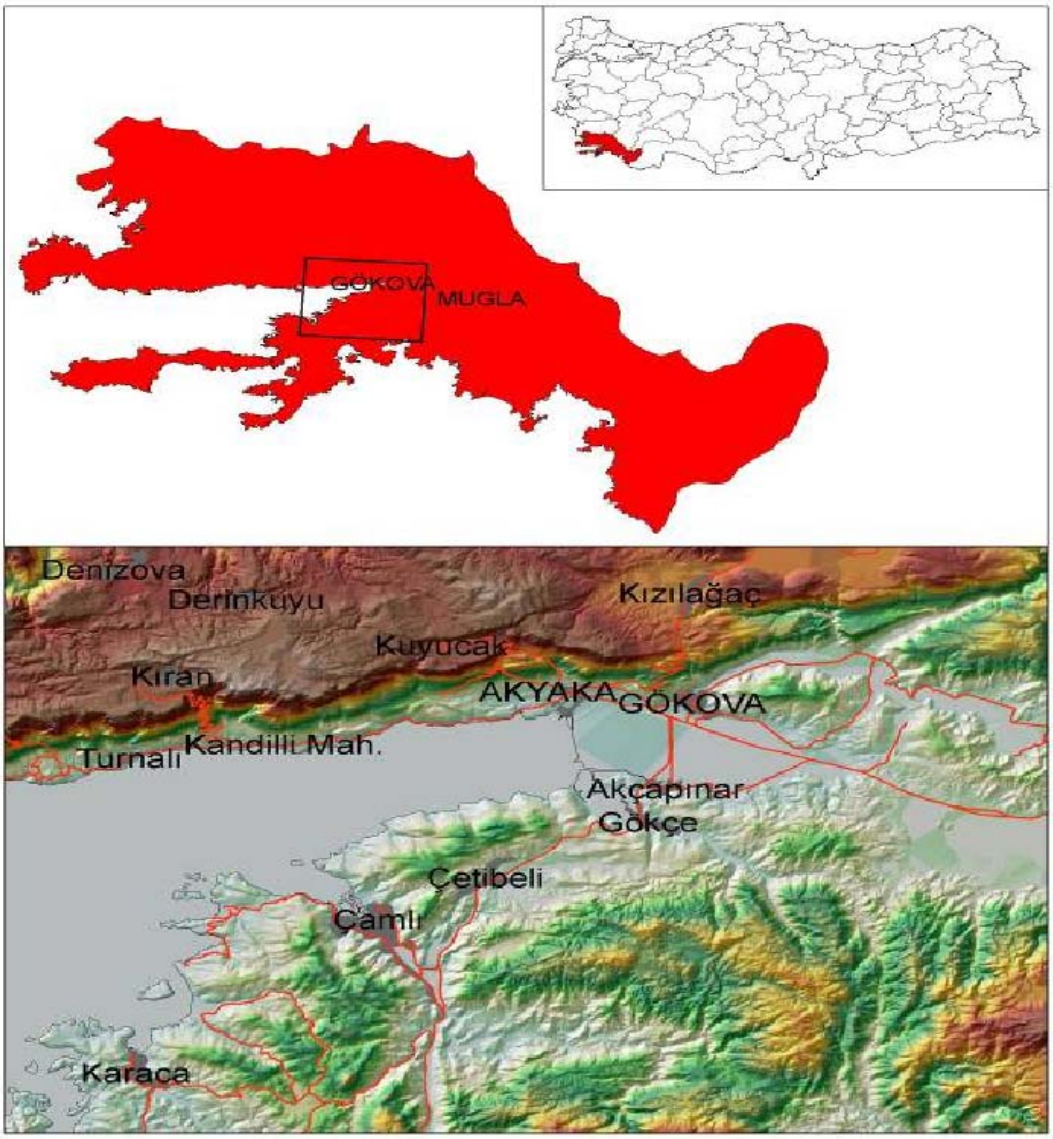


Figure 6: Location map of the area.

4.3 Environmental Characteristics of the Gökova Special Environment Protection Area

4.3.1. Biological Values of the Inner Gökova Bay

The coastal ecosystem, marine ecosystem and terrestrial ecosystem are interwoven with each other. This ecosystem diversity enhances the vulnerability of the area. Biological diversity of the region increases the diversification of the areas of usage. By means of this diversity, people may carry out many different activities such as

agriculture, tourism, fishery and settlement at the Gökova Bay. For rational use of biological diversity elements of the region, these values should be protected and sustained.

In order to examine the components of marine biodiversity in the study area, creek and sea researches have been carried out.

4.3.2. Region's Flora and Fauna

The fauna and flora richness of the region have been determined by SMAPS's periodical field studies between March – September in 2008. According to SMAP's biological diversity study, the flora of Gökova region is similar to the Mediterranean general coastal flora and vegetation.

As it is stated in the coverage of Gökova Project of SMAP III European Union, at the end of land studies held during 12.01.2008 and 29.11.2008, total 338 species belonging to 76 families and sub-species taxon were collected and five of them are endemic (SMAP, 2008).

The plants needing protection are listed Table 2 according to the book of "Red Book of the Plants of Turkey "*Türkiye Bitkiler Kırmızı Kitabı"* (Ekim ve ark. 2000).

Table 14: Plants in the danger category in the study area

Family	Specie	Danger Category	Locality
Hamamelidaceae	Liquidambar orientalis Mill.	VU.	Sideways to Gökova & Gelibolu
Apiaceae (Umbelliferae)	Ferulago humilis Boiss.	LR. (lc.)	Çınar picnic and beach zone, sideways, 10 m.
	Opopanax chironium (L.) W. Koch	VU.	Sideways on eucalyptus way to Akçapınar, inner fields, 10 m
Asteraceae (Compoitae)	Matricaria macrotis Rech	EN.	Sedir Island, olive fields, maki fields
	Onopordum caricum Hub. Mor	LR. (nt.)	On the way to Çınar beach, sideways, forests, 5 m., Gökçe Köyü, sideways, 10 m.
Campanulaceae	Campanula lyrata Lam. subsp. lyrata	DD.	Sedir Island, olive fields, Maki fields

The danger categories of expansion mentioned in Table 1.

1. **EX.** Extinct
2. **EW.** Extinct in the wild
3. **CR.** Critically endangered
4. **EN.** Endangered
5. **VU.** Vulnerable
6. **LR.** Lower risk

a. (**cd.**) Conservation dependent

b. (**nt.**) Near threatened

c. (**lc.**) Least concern

7. **DD.** Data deficient
8. **NE.** Not evaluated

Figure 7: Some samples belonging to fauna of study area

Figure 8: Rubus canesens DC.

Figure 9: Calystegia silvatica (Kit.) Griseb

Figure 10: Epilobium angustifolia L.

Figure 11: Ranunculus ficaria L.

4.3.3. Land Biyotops and Characteristics of Project Area

According to SMAP III European Union Biological diversity study, 10 different land biyotop are designated in the study area.

1. Localization places
   1.1. Roads
   1.2. Urban development area
   1.3. Urban Green areas
2. Sandy Areas
3. Riverbeds and drainage channels
4. Wet place
5. Saline Areas

6. Agricultural land

7. Maquis

8. Red Pine *(Pinus brutia Ten*) communities

9. Slope Debris

10. Inner forest open area

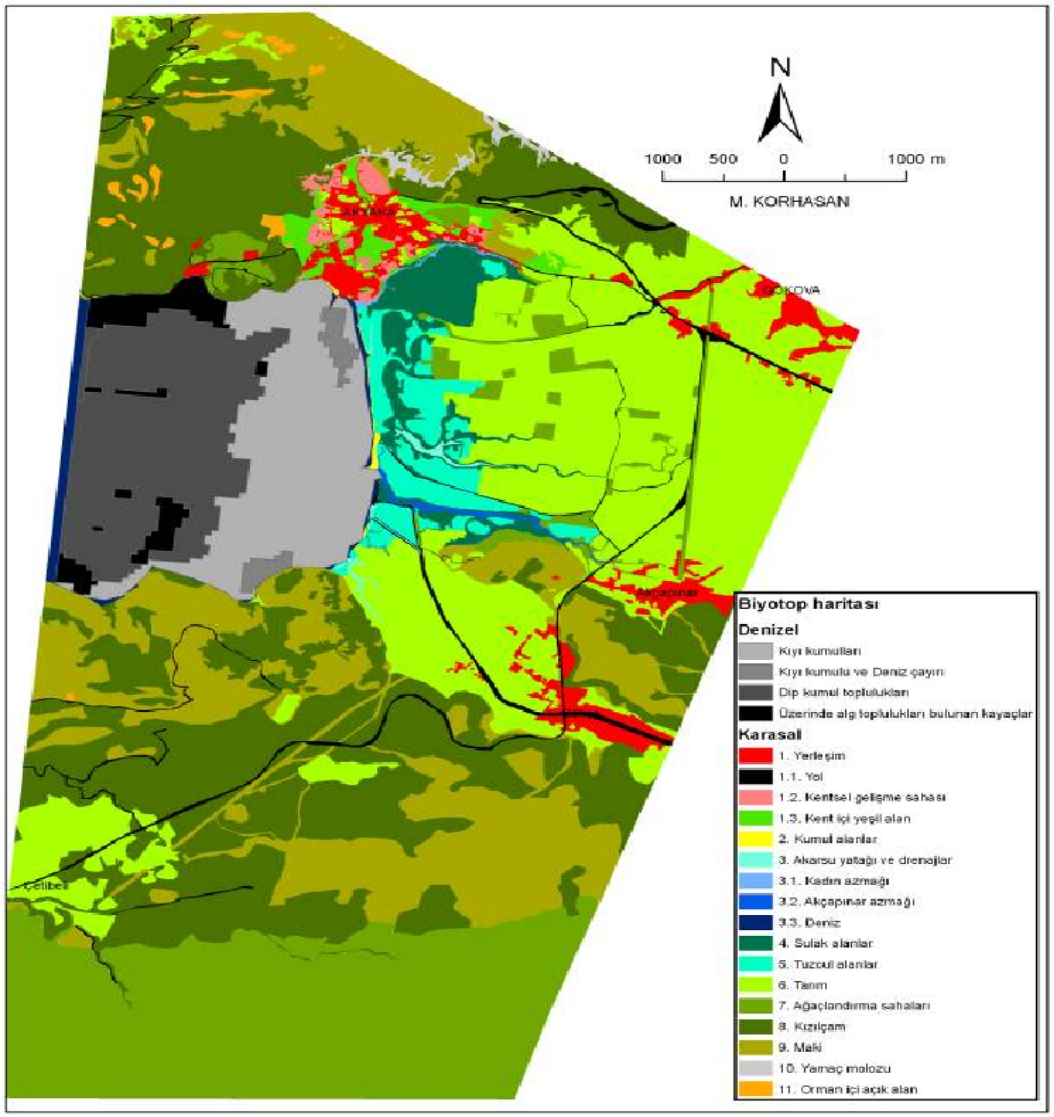


Figure 12: Biyotop Map of Case Study Area

4.4. Social Characteristics of Region

The population residing in the region where AB SMAP III Gokova Project was carried out is approximately 8.356 people according to the results of 2007 Address-Based Census. According to sociological research report along Gökova Bay various interest groups are determined. These are fishermen, boat owners, tourism agents, restaurants and hotel owners and small tradesmen. With this report along Gökova Bay, distribution of dwellings according to their income diversity is determined as follows:

- Agricultural production and stock farming %19
- Fishery %3
- Hotel and Hostel operation %7
- Tourism (Salaried) %33
- Small Tradesmen %6
- Retired %24
- Other %8

Sociological research report along study area shows that 62% of the regional people is under social security of the Social Security Organization (SGK), and 13% is under social security of the State Retirement Fund; the ratio of those with no social security was 20%. While there is an unemployment rate of 3% in the region, the unemployment rate at Akyaka is 8%.

Sociological research report also implies that 7 % of the population has moved into the region within the last 5 years. While the ratio of the population residing in the region to the total population is 15 % within the last 5-10 years period, the ratio of those who have lived in the region for a period of 11-15 years is 15 % and the ratio of those who have lived in the region for the last 16-20 years is 13 %. Those who have lived in the region for 20 years or more have a ratio of 49 %.

Except for Akyaka the common economic activity along the region is agriculture. Those who deal in agricultural works state that soil quality decreases every year and they can not gain enough to maintain agricultural activities. It has also been stated that the population dealing in agriculture is constantly getting old.

Those who maintain living with fishing mostly reside in Akyaka, Gökova and Akçapınar. Researches show that while the number of families in fishing at Akyaka is 40, it is 12 in Gökova and 15 in Akçapınar. People who deal in fishing activities have stated that their income is not sufficient and they have to find extra work.

At Akyaka, almost 25-30 boats obtain their incomes by organizing tours to Creeks, and 10-12 boats to Sedir Island and beaches in Inner Gökova Bay. 25 boats at Çamlı organize tours to Sedir Island. Most of the hotel and hostel operations in the region are residented at Akyaka. Tourism investors who have difficulty in meeting the accommodation demand in summer complain about the decreasing accommodation demand in winter (SMAP, 2008)

4.5. Economic Characteristics of Region

There is diversity of economic facilities depent on the geographical position of the settlements placed in Gökova. In other words, the economic profile of the local community changes along the region with different geographical characteristics.

For example, in Akcapinar the determining factor of the economy is fishing. Besides fishing; tourism, citrus growing, farming and animal husbandry are also practised. 70% of the population is engaged in fishing, 10% in animal husbandry, 10% in farming and 10% is working outside Akçapınar.

In Çamlı Village the main source of income is farming (strawberry), animal husbandry, beekeeping, fishing and tourism.

There are 20 boats used for tours to the Sedir Island. Main sources of income in Turnalı are farming (vegetable and olive), beekeeping and animal husbandry.

Sources of income in the Town of Gökova are farming, animal husbandry, service sector (paid work in Marmaris Aksaz), retirement pension (70% of town people are retired) and tourism.

Similarly, the main economic activity in the Gökçe Village is farming and animal husbandry. While the economies of Akyaka, Çamlı and Akçapınar mostly depend on fishing, Akyaka and Çamlı also organize daily boat tours for tourism in summers. Therefore, boat owning can also be accepted as an important source of income in these villages.

The local community earns additional income from tourism management, fishing and farming of agricultural products such as citrus. The choice of sector differs from one town or village to another according to the conditions. Economic diversity of local community can be summarized as follows: Fishing in Akyaka and Akçapınar, boat owning in Çamlı and Akyaka, agricultural production in Çetibeli, Çamlı and Gökçe Villages, and tourism in Akyaka.

Guesthouse running should be encouraged as the basic tourism income source for planning throughout the area. Taking into consideration the local differences, the plans should prioritize:
- tourism particularly guest-house running, boat owning and fishing in Akyaka,
- farming in Çetibeli,
- farming and fishing in Akçapınar and allowing the establishment of fish traps and fish hatcheries,
- guest-house running, fishing, farming and marine transportation in Çamli Village,
- Agricultural production in the Town of Gökova (Gökova Project of SMAP III European Union, 2008).

4.6. Current Legal Situation

For sustainable management of coastal resources at Gökova Region, the legal regulations determining the sectoral policies should be well introduced. There are many laws and regulations affecting the use of coasts in Turkey. Whole of legal regulations operating the Gökova Region is summarized under this section.

Table 15: National laws and authorities operating the management of coastal zones

NAME OF THE LAW	AUTHORITY
Provincial Administration Law No. 5442	Governorates and District Governorates
Special Provincial Administration Law No. 5302	Governorates
Coast Law No. 3621	Ministry of Public Works and Settlement
Urban Improvement Law No. 3194	Ministry of Public Works and Settlement
Tourism Encouragement Law No. 2634	Ministry of Culture and Tourism
Environmental Law No. 2872	Ministry of Environment and Forestry
Forest Law No. 6831	Ministry of Environment and Forestry
Municipality Law No. 5393	Ministry of Interior and Municipalities
Aquatic Products Law No. 1380	Ministry of Agriculture and Rural Affairs
Terrestrial Hunting Law No. 3167	Ministry of Environment and Forestry
Port Law No. 618	Undersecretariat of Maritime Affairs
Law No. 2863 **on the Protection of Cultural and National Assets**	Ministry of Culture and Tourism
Decree Law No. 383	Environmental Protection Agency for Special Areas

Source: (Gökova Project of SMAP III European Union, 2008)

4.7. Uses & Activities in Gökova Special Environment Protection Area

Gökova Inner Bay has a wealthy of uses because of its habitat and ecosystem diversity. Tourism, recreational sports, agriculture, beach use, use of creeks (azmak), boating, fishing, are the major coastal uses in the region.

4.7.1. Tourism in Gökova

According to SMAP's research, the number boarding establishments in the region is 122; and the bed capacity is 2500. In addition about 1500 camp in the nearby facilities. Restaurant capacity is 3500 seats. Tourism season starts in the second week of April. Muğla residents are the early starters for tourism. Muğla and neighbouring cities' residents, make daily visits to the region for recreational purposes and beach use especially on weekends as of April. The most intensive tourism season is during 4 months from June – September (SMAP, 2008)

Even though current carrying capacity of the region cannot meet demands of tourism investments, every year these demands automatically increase. With its small available residential area and insufficient personnel, technical and financial

infrastructures, Gökova region's tourism strategy should aim at a number of tourists that the resources of the region can carry.

4.7.2. Recreational Sports in Gökova

There are many sportive facilities held at Akyaka area nearly four seasons. With its wind condition, the beach of the Akçapınar town in the south of the region is very proper for recreational activities. Kite surfing, windsurfing, sea canoeing and sailing are among these activities. In addition, slope parachuting, walking, cycling, and rock climbing are also popular activities.

Kite surfing: . Gökova Wind Kite surf School *at Akyaka* offers opportunity to people who wish to do this sport. Each year, Akçapınar region hosts national and international organizations.

Wind Surfing: Gökova Bay is closed to all motorized water sports. This makes the inner bay, which has plenty of wind, an attractive and secure location for wind surfers. Months of May and November are ideal periods for windsurfing.

Sea Canoeing: Sea canoeing is one of the ways of observing the historical and natural beauties from the sea.

Sailing: The continous strong winds in the months of May-November make the water of the bay suitable for sailing.

Paragliding: Coming from Muğla towards Gökova passing a dirt road on the right side of Sakar Pass one reaches the fire observation post at an altitude of 900 meters. This track is a suitable area for paragliding.

Hiking: Both the villages and Akyaka and Gökova have walking routes consisting of very beautiful natural and cultural landscapes.

Biking: There are many routes for biking in the region provides a different perspective to see the natural beauties. Some villages and the downward road of Sakar Pass offer unique views to the bicycle lovers.

Rock Climbing: At the top of the rocky Çınar beach, there are many routes for the athletes who want to do rock climbing. This area is adequate for the beginners and the athletes who want to develop themselves. Every month of the year, it is possible to find facilities for this sport in Akyaka. Depending on the season the climbing course should be carefully selected (SMAP, 2008).

4.7.3. Agriculture in Gökova

In the context of the EU SMAP III Gökova Project, a study of the agricultural land has been completed including the determination of the status of already implemented agricultural activities together with suggestions for improvement.

There are sufficient water resources in Gökova Plain but the majority of the agricultural activities are dry agriculture. The main cultural plants are sesame, corn and citrus. Pomegranate production has started to become important in the region. However, when evaluated for climate and soil factors, the area is most suitable for citrus cultivation. Citrus, sesame and corn cultivation in the plain necessitate watering four-five times depending on seasonal temperature and water holding capacity of the soil. The watering method used is mainly free releasing. Releasing water causes increase of the salinity of soil, efficiency loss due to overwatering of plants and waste of water resources (SMAP, 2008).

Furthermore, there are wide olive groves on the slope of the hills, in the plain lemon, orange, grapefruit and bitterorange prevail. According to researches applied in the region, farmers complain that systematic and planned expert support is not sufficiently rendered by public organizations. Local producers prefer selling their lands because their income decreases. This exposes crucial sustainability problems for natural resources and the living conditions of the local community.

4.7.4. Use of Coasts/ Beaches in Gökova

Coasts within the project area are primarily used for tourism purposes. Recreational facilities, beaches and camps are situated on the coastal band. Although there are 6 natural beaches in the study area, Akyaka and Sedir Island beaches are mostly used by visitors. The beaches situated in the region:

1. Akyaka beach
2. Akçapınar beach
3. Gökçe beach
4. Çınar beach

5. Çamlı beach

6. Sedir Island beach

4.7.4.1. Akyaka Beach

The most widely used beach of the region is Akyaka beach with its "Blue Flag" and approximately 250 meters long and 25-30 meters wide beach.

The number of sun loungers sold in 2008 is about 38.000-40.000. If we add the non-users of lounges, (annual average 30,000), the number of people visiting Akyaka beach can be estimated as about 70,000. If we calculate the number of days for the season as 200 days, approximately 350 persons per day are using the beaches. Rainwater pollutes the beaches by carrying the dirt from the town. The Akyaka jetty which is used by fishing boats and tour boats have a negative effect on the coastal hydrodynamics. Especially because of the location and structure type of the jetty strong erosion is observed on the southern coast of the Creek (SMAP, 2008).

4.7.4.2. Sedir Island Beach

With its most important feature ‘sand’ Sedir Island Beach is a unique natural part of the Gökova Speacial Environment Protection Area. This ooid sand is found only in Sedir Island in Turkey.

Every year, about 100,000 local and foreign tourists visit the island. Due to the fact that the amount ooids is reduced every year, at the beginning of the project, it was decided to prohibit stepping or sunbathing on the sand of the beach. This limitation is still in effect. Visitors may only use the sea part of the beach for swimming. Visitors may also use chaise-lounges, showers, and toilets that are behind the beach (SMAP, 2008).

4.7.5. Use of Creeks and Boating in Gökova

Creek tour boats, fishing boats, restaurants, hotels and houses, daily visitors are the users of the Kadın and Akçapınar Creeks. The restaurants, hotels and houses along

the Creek are connected to the sewage system. However, in other respects they also act to threaten the biological structure of creeks.

4.7.6. Fishing in Gökova

There are two fishing cooperatives in the project area. Akyaka Fishing Products Cooperative was established in 1992 and has 40 registered members. 32 members are active. S.S Gökova and its district Akçapınar Fishing Products Cooperative was established in 1973 and has 30 registered members. 10 members are active. Fishing in the Inner Gökova Bay are one of the important factors shaping the economic activities in the region.

The main species are Lahos (Epinephelus aeneus), orfoz (Epinephelus guaza), gilt-head bream (Sparus aurata), sinagrit (Dentex dentex), Barbu (Mullus barbatus), mullet (Mullus surmuletus), but when the fishnet is extended to the composition paraketa breaking coral (Pagellus erythrinus), bakalyaro (Merluccius meluccius), kupes (Boops boops), gray mullet (Mugil sp.), octopus (Octopus vulgaris), cuttlefish (Sepia sp.), squid (Loligo vulgaris) and Akyan (Lichia amia).

4.8. Constraints as Drivers of Environmental Problems in Gökova

Coastal zones in Gökova Region continue to experience tremendous and rapid changes. They have been driven by various factors including tourism, population growth, demand for new constructions, solid and liquid wastes.

4.8.1. Tourism

Tourism is the most drastic of the driving factors in the region. Tourism activities in the region may be reviewed in three stages.

First is the areas visited by local and foreign tourists especially in Akyaka, almost the only provider of the tourist accommodations in the area; according to researches there are 122 hotels with 2500 beds capacity. There is also a camping site in the region. Among the other regions, there are only 3 hotels at Çamli village, and some apart villas at Gökçe.

The second type of tourism activity is, as Gökova Bay is the nearest seashore for Denizli and Muğla, conveniently accessible for daily excursions most of the other visitors come from for day tours. These daily visitors use Akyaka, Akçapınar and Gökçe beaches, picnic sites and forest camping and Sedir Island. These people hardly contribute to the area economy because they bring along their own food and drinks. On the other hand, they threaten and pollute the environment with their picknic disposals, charcoal remnants, plastic bags etc.

The third type of tourism activity in the region is second house owners coming to the area in summer. Mostly located at Akyaka, Gökova and Çamlı summerhouse owners have approximately 2100 residences and 1212 summerhouses in the region. With increasing tourism demand, the population of Çamlı in summer exceeds 2000, although officially the population is 969. At Akçapınar, Gökçe, Çetibeli villages on the way to Marmaris, there are some small-sized restaurants to take share from tourism. Due to this tourism potential, the populations of Çetibeli and Gökçe have recently increased, bringing some construction pressure (SMAP, 2008).

4.8.2. Population Growth

In calculation and evaluation of population qualifications in the project area, data compiled from three sources have been used. These are the census results produced by Turkish Institute of Statistics (TUIK), data provided by the Local Health Offices and the results of the surveys carried out for the project.

Except the years 1965 – 1970, there has been perpetual population increase in the area. It can be said that the increase in tourism activities is the main reason of the population growth.

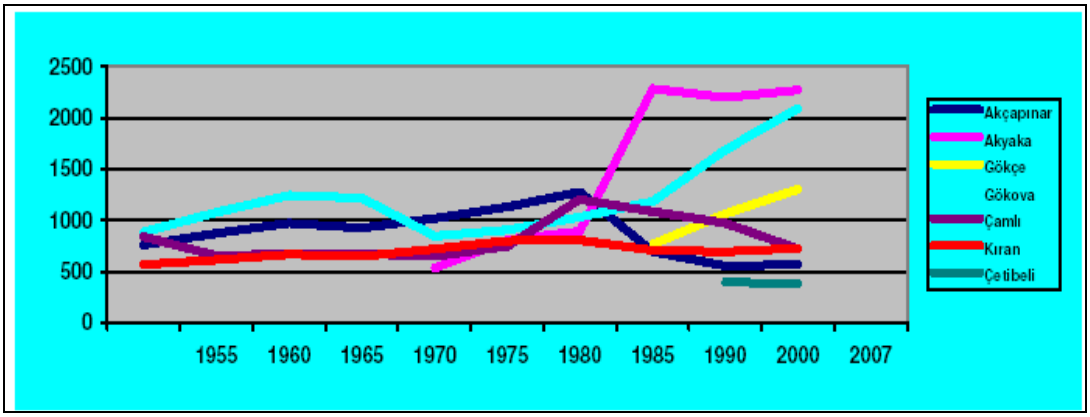


Figure 13: Population between years 1955 – 2007 in Gökova Region (SMAP III)

4.8.3. Demand for New Constructions

At Akyaka there are nearly 2100 houses and offices. the demand for newconstruction is affected by increase in the number of tourists, population increase and migration. At Akyaka, there is a pressure for more hotel and the other tourism constructions. However, although during winter months all hotels are empty or closed, during summer these hotels are full with tourists.

According to SMAP's research, instead of building more hotels and thus increasing the user pressure on the natural resources, arrangements could be done to attract tourists during winter months. By selling better quality at an expensive price, number of tourists in the area may be limited. While tourists get higher quality and diversified services, they will pay more money and the pressure on natural resources will decrease. In order to operate new construction demand in the region, taxes from summerhouse owners may be increased.

4.8.4. Solid and Liquid Wastes

The amount of both solid and liquid wastes in the inner bay of Gökova especially along the creeks increases considerably in summer months due to the increase in the number visitors. In other words, rapid growth of population and increasing demand of tourism activities has degraded environmental quality. In order to protect the area several precautions have been taken by the the institutions and organizations. The most important of them is the Solid Waste Regular Storage Plant in Ortaca built by the EPASA. In addition, Wastewater treatment plant operation was transferred to the municipalities in October 2008 by the protocol between Akyaka and Gökova municipalities and Environmentaly Protection Agency for Special Areas.

However, local community and the daily visitors leaving their solid waste in forests, picknic areas, and creeks are of particular concern, as collecting solid waste from natural environment is more difficult than urban solid waste collection.

4.9. The Studies Performing in Environmental Protection Agency for Special Area in Gökova

In accordance with the Decree Law 383, which was published in the Official Gazette dated 13 November 1989 and promulgated, The Agency carries out studies on to protect the environmental values, to remove the available problems, to protect and improve historical and cultural values and biological ecological beings in the areas that have been determined and declared as Special Environmental Protection Areas based on the Environmental Law number 2872 article 9 (EPASA 2008).

In this respect, the research projects on the following titles to be applied in the areas are prioritized:

- Research on biological diversity,
- Protection and development of environment,
- Determining socio-economic and socio-cultural status and development perspective,
- The developments in agriculture, industry and tourism and their relation with environment,

- Projects that are of specific importance and priority for a particular area,
- The exploration and protection of ground and above ground water sources.

4.10. Why ICM is Needed in Gökova SEPA?

Past experiences of Gökova SEPA 1/25.000 scaled Environmental Relation Plan show that there is lack off effective efforts toward coastal areas in terms of sectoral cooperation and integration. Without proper integration efforts in Gökova SEPA, all past theories can not achieve their objectives. Although the planning approach that used for the coastal areas should contain old theories, this planning approach should firstly consider with coastal area management and with interaction among various resources and activities in Gökova.

Since, coastal areas of Gökova need urgent and sensitive interventions, proper planning approaches are also required by authorities interested in coastal areas. Similarly, conflicts among different coastal uses can be prevented with effective and integrative coastal planning in Gökova SEPA. For the reasons mentioned above, it is important to determine the principles of Integrated Coastal Management (ICM) to ensure the rational use of coastal resources of the Gökova SEPA, which has not lost its natural balance.

As noted by L. F. Scura and colleagues, the coastal zone represents the interface between land and sea , "but concern and interest are concentrated on that area in which human activities are interlinked with both the land and both the marine environments"(Scura et al. 1992):

- Contains habitats and ecosystems (such as estuaries, coral reefs, sea grass beds) that provides goods (e.g. fish, oil, minerals)and services (e.g. natural protection from storms and tidal waves, recreation) to coastal communities,

- Characterized by competition for land and sea resources and space by various stakeholders, often resulting in severe conflicts and destruction of the functional integrity of of the resource system.
- Serves as the source or backbone of the national economy of coastal states where a substantial proportion of the gross national product depends on activities such as shipping, oil and gas development, coastal tourism, and the like.
- Usually is densely populated and is a preferred site for urbanization.

According to Cicin-Sain (1998), The major elements of ICM divided into 6 types:

I. **Area Planning:** Plan for present and future uses of coastal and marine areas; provide a long term vision.

II. **Promotion of Economic Development:** Promote appropriate uses of coastal and marine areas (e.g. marine aquaculture, ecotourism).

III. **Stewardship of Resources:** Protect the ecological base of coastal and marine areas; preserve biological diversity; ensure sustainability of uses.

IV. **Conflict Resolution:** Harmonize and balance existing and potential uses; address conflicts among coastal and marine uses.

V. **Protection public safety:** Protect public safety in coastal and marine areas typically prone to significant natural, as well as human-made hazards.

VI. **Proprietorship of public submerged Lands and Waters:** As governments are often outright owners of specific coastal and marine areas, manage government-held areas and resources wisely and with good economic returns to the public.

These 6 types can be compared with the studies that have been performed in Gökova SEPA to achieve ICM.

Table 16: ICM vs. Gökova SEPA

The major elements of ICM	**Studies performed in Gökova SEPA**
I. Area Planning	All scaled plans i.e. 1/1000, 1/5000, 1/25.000
II. Promotion of Economic Development	Agriculture, fishing, marine aquaculture, ecotourism; sustainable tourism, community based tourism, boating.
III. Stewardship of Resources	Biotop maps, biological researches, protecting the fauna and flora of the region.
IV. Conflict Resolution	Creating protection zones in the region
V. Protection public safety	Creating project partners and direct beneficiaries of the region (Public participation and consensus).
VI. Proprietorship of public submerged Lands and Waters	Planing decisions implemented by relevant municipality

As mentioned above, in order to create an integrated and successful coastal planning in Gökova, besides promoting economic development and preserving biological diversity, public participation, consensus and sustainable approaches should also be considered by the authorities.

4.11. Technical Tools Used in Gökova Special Environment Protection Area to Achieve ICM

In order to create an integrated coastal planning study, certain analysis are placed in the 1/25.000 scaled Environmental Relation Plan in Gökova SEPA. To find the answers of case study research questions, analysis studies consist of five phases. And each phase includes technical tools to achieve a succesful coastal planning process within the context of integrated coastal management approach in Gökova SEPA.

In order to answer the case study research questions; “Is the Gökova Bay’s 1/25.000 scaled Environmental Relation Plan a successful coastal planning example?” and “Is there any deficiencies of this Plan in terms of ICM, in this case what would they be?” 5 phases of Gökova SEPA 1/25.000 scaled Environmental Relation Plan process is clearly investigated.

4.11.1. Phase 1

Technical tools such as; Quickbird with 0.65 definition and satellite images have been gathered. In order to create definite boundries of the region, this method have provided significant benefits to the planning process. Furthermore, whole of small districts boundries have also been clarified with this method. In this process, high resolution satellite images and land domains have been overlaped by technical assistances. As a result of this study definite land data frames have been gathered for using in following phases (Kuşhan, D.,Yusufoğlu, A. *Gökova Özel Çevre Koruma Bölgesi* (2008), paper presented at Türkiye’nin Kıyı ve Deniz Alanları VII. Ulusal

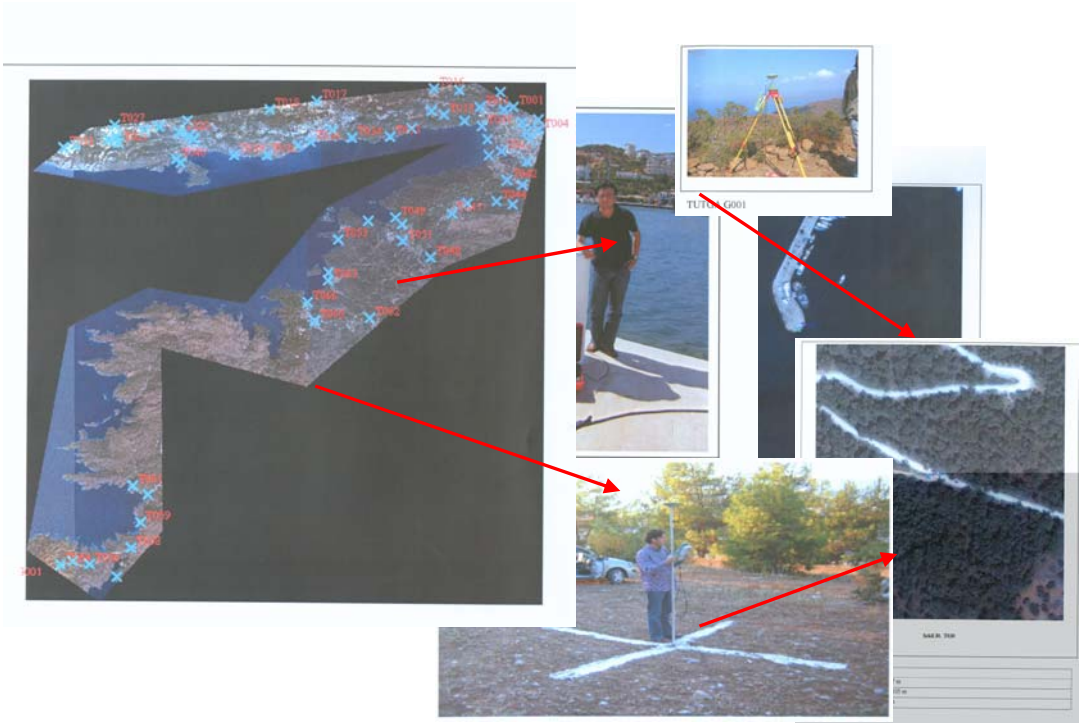


Figure 14: The Tools used in Gokova SEPA

Figure 15:The satellite image all of the region

Figure 16: The satellite image of pool of Standing water and creeks (azmak)

4.11.2. Phase 2

Arc GIS data frame and attribute tables have been developed for each building placed in the settlemets of Gökova Special Environment Protection Area. With this method, parcellation, real estate records and the other detailed building data have been gathered. Further more, using GPS coordinates detailed information have been obtained for each construction. Doing so, social, economic and cultural features of the local community have also been determined (Kuşhan, D.,Yusufoğlu, A. *Gökova Özel Çevre Koruma Bölgesi* (2008), paper presented at Türkiye'nin Kıyı ve Deniz Alanları VII. Ulusal Kongresi).

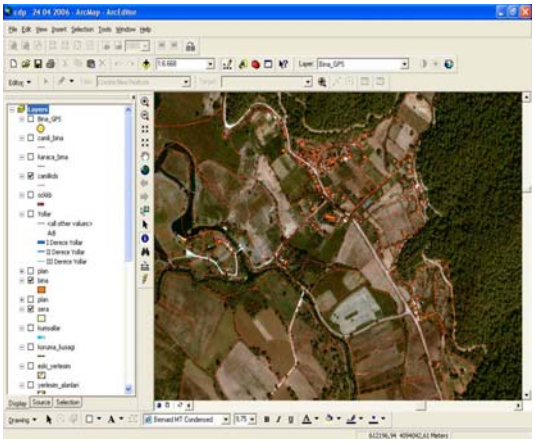


Figure 17: Çamlı Village's GIS data frame 1

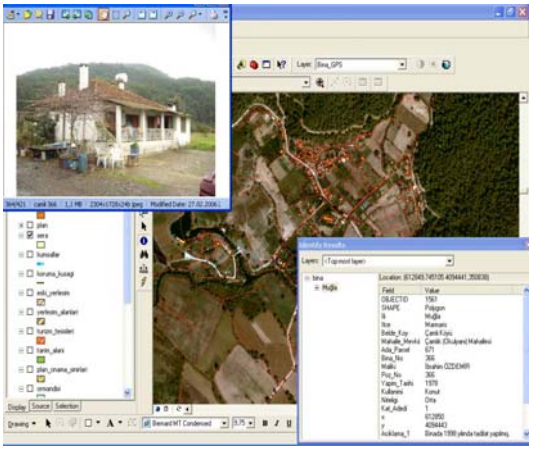


Figure 18: Çamlı Village's GIS data frame 2

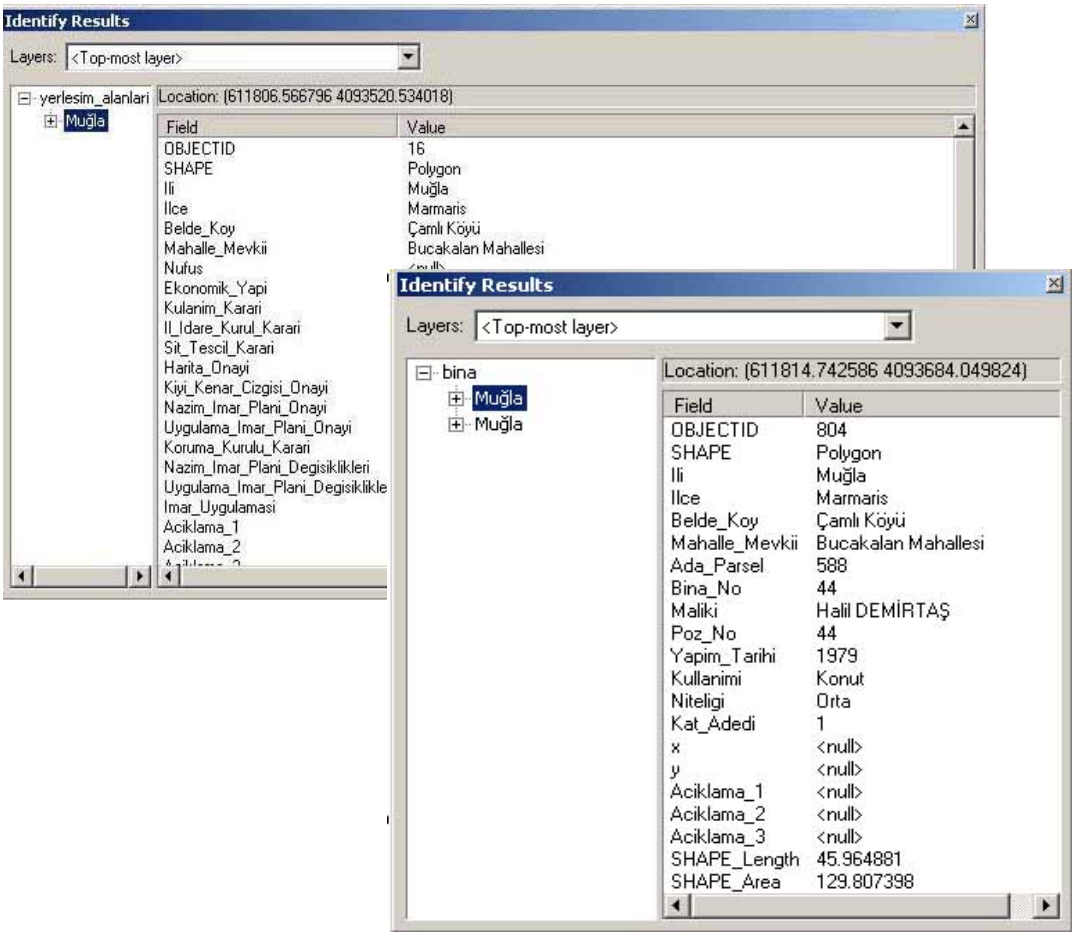


Figure 19: Çamlı Village's GIS data frame 3.

4.11.3. Phase 3

This phase's main aim is to overlap all data previously gathered. As a result of this work, whole buildings located in residential areas of the database created and in rural areas around the 1500 building in question in the study has been completed. With transfering attribute tables and photos for each building in the study field to GIS data frame, all data of the region have been updated (Kuşhan, D.,Yusufoğlu, A. *Gökova Özel Çevre Koruma Bölgesi* (2008), paper presented at Türkiye'nin Kıyı ve Deniz Alanları VII. Ulusal Kongresi).

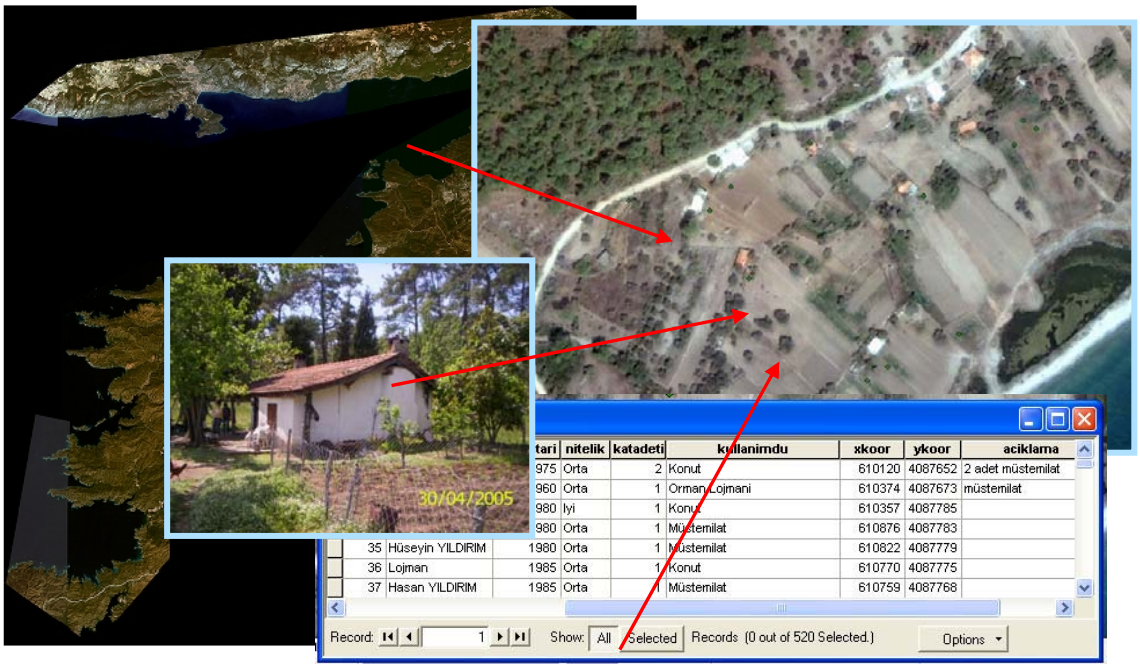


Figure 20: Integrating satellite image, attribute table and settlement image of Gokova SEPA.

4.11.4. Phase 4

This phase contains the detection of marine and coastal biodiversity of the study area. Research on biological diversity of study area is the main element to achieve an integrated coastal zone management and planning. With this study, biyotop and

batımetri maps are used in Gökova Special Environment Protection Area (SEPA). After determining biyotop maps, EPASA has used these databases to improve planning studies. Reflecting biological data into certain scaled plans (1/25.000 scaled Environmental Relation Plan), EPASA has created some vulnerable zones that authorities and coastal users should protect (Kuşhan, D.,Yusufoğlu, A. *Gökova Özel Çevre Koruma Bölgesi* (2008), paper presented at Türkiye'nin Kıyı ve Deniz Alanları VII. Ulusal Kongresi).

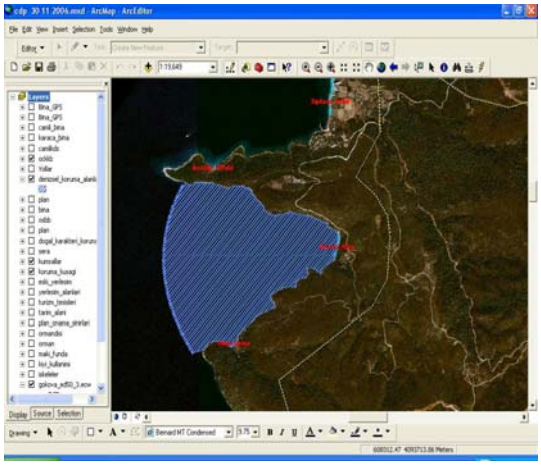


Figure 21: Boncuk Small Bay Sand Shark ovulating Area

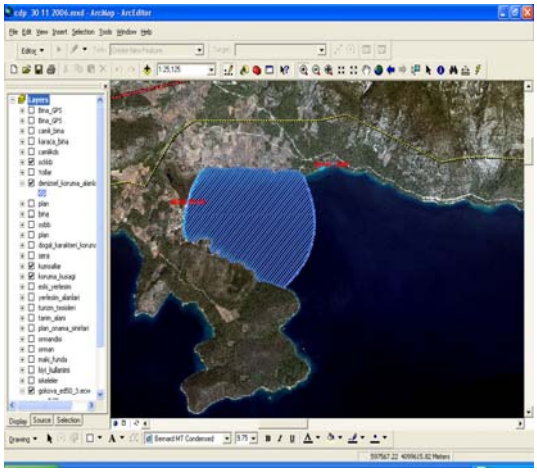


Figure 22: Akbuk Small Bay Local Fishering area (small scale Fishering)

Figure 23: Determining Project of biodiversity of coastal and offshore water areas (Batımetri Haritaları).

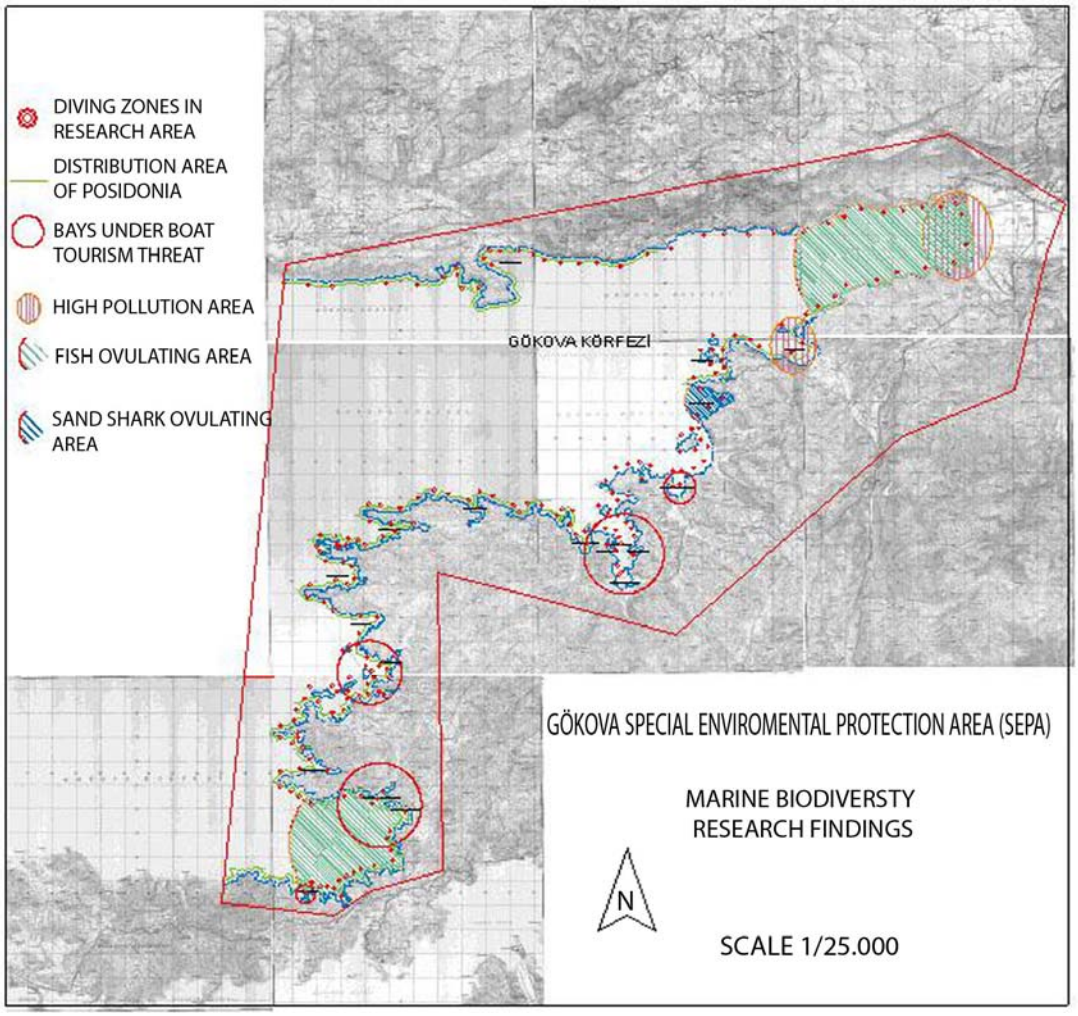


Figure 24: Gökova SEPA Biodiversity research findings on 1/25.000 scaled map.

4.11.5. Phase 5

Creating 1/25.000 scaled Gökova Special Environment Protection Area Environmental Relation Plan decisions is placed in this phase. In this context, distribution of posidonia, grasslands and coastal bays in Gökova coastal area have been identified. In addition, Boncuk Bay where hosts Sandbar Sharks every year from May to August has been determined in the environmental relation plan as a protection area of Sandbar Sharks. The reflection of plan decisions to the case study is included in the **Appendix 1** (Gökova Special Environment Protection Area 1/25.000 scaled Environmental Relation Plan).

In order to limit some harmful uses, there have been two significant protection zones determined in the plan. A and B zones shows where appropriate fishing takes place in the region (for sustainable family fishing certain bays i.e. Akbük Bay, Kargılı Bay, Bördübet Bay and Andız Bay have been determined). For example, while B zone represents the area where local people should not fishing with trawl and pinter, A zone represents the area where local people can only make sustainable family fishing activities. Both in A and B zones fishing by big boats (e.g., seine, trawl) is prohibited throughout the year (Kuşhan, D.,Yusufoğlu, A. *Gökova Özel Çevre Koruma Bölgesi* (2008), paper presented at Türkiye'nin Kıyı ve Deniz Alanları VII. Ulusal Kongresi).

Because, this sort of fishing, at high amounts and using bottom sweepers called trawl causes damage to the fish nursery and the stocks in the region.

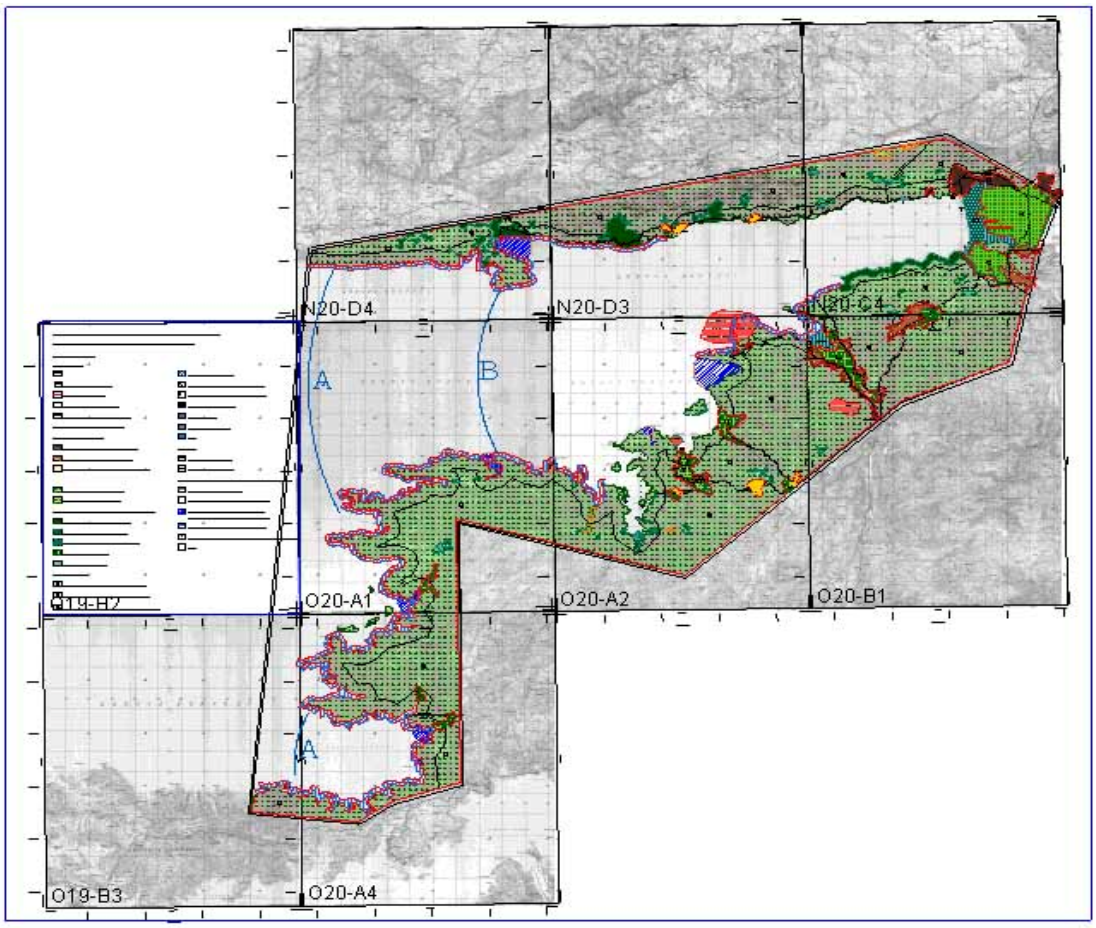


Figure 25: Gökova Special Environment Protection Area 1/25000 scaled Environmental Relation Plan.

Tourism Incentive Law No. 4957/2634 is not valid in Gökova Special Environment Protection Area because this region is not a Tourism Center or Culture and Tourism Protection and Development Region. However, tourism is one of the main elements shaping the economic activities in the region. Considering with tourism demand, certain zones have been determined in the study area. These zones, however, takes place only small parts of the region.

Consequently, the 2003 approved 1/25.000 scaled Gökova SEPA Environmental Relation Plan is still in effect and it has been the basic guiding document for the usage of the region. With the research and results of all phases mentioned previously, this plan has determined land use principles for Gökova by taking into account EPASA's Law No. 383, Muğla Regional Conservation Council's decrees, other relevant institutions' approaches, natural protection areas, valuable agricultural lands, archeological sites, water sources and creeks, rural settlements and their new development areas. As the first hypothesis of case study: *"*As a Special Environment Protection Area (SEPA) Gökova Bay's 1/25.000 scaled Environmental Relation Plan is a pioneering example for coastal planning experience in Turkey" is clearly uderstood from the result of 5 planning process phases of Gökova SEPA. With its protection zones, planning decisions, integrated and cross-sectoral approaches toward coastal areas, this plan can be pointed out as a successful coastal planning example.

4.12. Gökova SEPA from the Perspective of Integrated Coastal Management

Along with the global movement, several coastal countries have moved toward introducting and establishing ICM at both national and regional levels. Due to this global tendency, in Gökova SEPA different types of integrated coastal management tools with different concepts and technics are practiced. Through these practices each coastal region and each local community in Turkey will find the most relevant scheme to manage the valuable coastal resources of their regions. These practices also signal that the concept of ICM has been widely accepted by governments and regional organizations.

According to Cicin-Sain and Knecht (1998), integrated coastal management can be defined as a continuous and dynamic process by which decisions are made for the sustainable use, development and protection of coastal and marine areas and resources. Similarly, planning process of Gökova recognizes the distinctive character of the coastal area and the significance of conserving these resources for current and future generations. Gökova SEPA is both land and island based where land and sea meet that consists numerous features:

- Valuable ecosystems of marvelous productivity and biodiversity are present, such as posidonya grasslands, sand sharks ovulating areas, creeks and other wetlands, all of which provide serious nursery habitat for many marine species.
- The study area is characterized by dynamic and frequently changing physical features.
- Since Gökova SEPA is often highly desired by various users and populations, this area is a finite resource over which there are usually conflicts.
- Planning of the three sides of the study area –land, island and sea- poses difficult challenges and complexities based on the mixed public and private character of the whole area. These multiple uses also pose integrated management approaches.
- As a special protected area, Gökova Bay, is generally of great value to human populations as they seek to settle in, use, and enjoy coastal marine resources, such as fishing, tourism, agriculture, and the other economic benefits.

According to Kay and Alder (2005) coastal nations should be in a position to develop integrated coastal management structures uniquely suited to nature of its coastal areas, to its institutional and governmental arrangements. With its governmental responses and in terms of capacity building in integrated coastal planning, Turkey introduced various measures to further meet integrated coastal planning goals of protecting natural environments and achieving sustainable development in the coastal zone. Turkey's coastal planning efforts have been given financial sponsorship and technical assistance by international organizations such as

the UNEP-MAP Priority Action Programme's Regional Activity Center, the World Banks's METAP, and the OECD.

4.12.1 Gökova SEPA from the Perspective of Institutional Integration

There are certain existing conservation statutes try to prevent biodiversty loss in marine areas in Gökova. Besides A and B zones, there are also more protection zones and sites in the plan.

- Natural Site (1-2-3. degree)
- Archeological Site (1-2-3. degree)
- Urban Site (1-2-3. degree)

In order to meet the need of local community and to revise the borders of the natural site of the settlements, in 2005, with Decree No. 938 Muğla Regional Council analyzed and changed the certain borders of the sites. After the revision of the whole area, the Muğla Regional Conservation Council issued Decree No. 4305 in 2008. By this Decree the site degree for the some rural settlements was altered from 1st degree to 3rd degree. These settlements are; Turnalı, Kandilli, Çetibeli, Çamlı (Okulyanı, Ilıca, Gökbük, Köprüyanı, Değirmenyanı, Köylük, Bucakalan), Küçükbuzağıotu ve Taşbükü.

Gökova SEPA represents a succesful case study in terms of institutional integration in planning process. EPASA, Muğla Regional Conservation Council, Municipality of Akyaka, SMAP, WWF, UNEP-MAP, World Banks's METAP and the OECD are some of national and international organizations responsible for Gökova SEPA. However, Muğla Regional Conservation Council and EPASA are the most relevant bodies responsible for conservation of Gökova SEPA. Therefore, in order to sustain effective conservation for Gökova, these two institutions have to cooperate and integrate their activities. In addition, these two bodies have met and have taken certain conservation decisions together in recent years. Sharing responsibility, both Muğla Conservation Council and EPASA have taken relevant supporting in planning

process. According to Muğla Regional Council and EPASA's field work analysis Conservation Status of Gökova Region can be mentioned as follows:

- Kandilli, Turnalı and Söğüt settlements were declared as 1st. degree natural sites in 1986 with Decree No. 2753 of Muğla Conservation Council. The 1st. degree status of these settlements was amended to the 3rd. degree by Decree No. 4305 of the Muğla Conservation Council.
- İskele was declared as 1st. degree natural site in 2008 with Decree No. 4305 of the Muğla Conservation Council.
- Akyaka was declared as a 1st. degree natural site in 1986 with Decree No. 2753 of the Muğla Conservation Council. Its status of site was cancelled with Decree No. 4305 of the Muğla Conservation Council.
- Gökova, Akçapınar and Gökçe were declared as 1st. degree natural site in 1986 with Decree No. 2753 of the Muğla Conservation Council and Akçapınar and Gökçe's status was cancelled with Decree No. 4305.
- Bördübet Bay was declared a 1st. and 3rd. degree natural site in 2008 by Decree No. 4305 of the Muğla Conservation Council.

According to the Regulation for Determination and Registration of Cultural and Natural Properties:

- ***Natural site*** signifies sites and immovable natural properties having interesting characteristics and beauties rarely found, deserving to be conserved.
- ***Archeological site*** signifies sites where ruins of an ancient settlement or an old civilization have been found or sites known or found under water, deserving of conservation.
- ***Urban site*** signifies sites where cultural and natural environmental elements having architectural, local, historical, esthetichal and artistic characteristics are located together, including buildings, gardens, plants, settlements or walls

4.12.2. Gökova SEPA After 1/25.000 Scaled Environmental Relation Plan

In addition to announced protected areas in Gökova, EPASA started to form new zones which are forbidden to fishing in Datça SEPA which has smilar properties with Gökova SEPA. SAD (Underwater Research Society) advised to select the region which are closed to the zones in Gökova because Marine Protected Areas should be integrated into each other for the success of project.

Moreover, WWF Turkiye has plan to create new Marine Protected Areas which are closed to fishing within the context of Marine Protected Areas Project implemented in Kaş-Kekova. During the negotiations, experiences of SAD were transferred and some opinions are expressed for the roadplan.

Since the beginning of the project, the biggest challenge was to persuade the fishermen that the project will make a positive contribution to the future of fisheries. At first, they were all against the project because they don't accept their fault in the bad run of business. The fishermen whose education level is very low, stated that they have been convinced when they participated the meetings and noticed the positive changes supported by scientific datas. The management of fisheries is a very diffucult issue and very bad results had been obtained in Turkiye and even all over the world when we let it open to the interpretation of fishermen. So, the main condition of working with fishermen is conducting good relationships with them. Since their fishing season is not sufficient especially in the year 2009, The Gökova Fishermen don't want to go from bad to worse.

EPASA offered SAD a project proposal to monitor the biological diversity before and after in the whole area of "Gulf of Gökova, Special Environmental Protected Area, Marine Protected Areas which are closed to fishing." Such these 6 Marine Protected Areas will be the first places to determine the populations and diversities of species.

SAD has a plan for another project which can support and strength this project in Gökova SEPA. This new project is also aimed for identification and removing of lost fishing gears and also to eliminate the negative effects of ghost netting.

The project which has been started in May 2009 by Underwater Research Society (SAD) Ecology Research Group for creating Marine Protected Areas closed to fishing in Gökova has reached success.

The project including goals for cooperation with fishermen and to get fishermen to accept the necessity of Marine Protected Areas which have examples in the world for sustainable fisheries has been completed by Underwater Research Society (SAD) Ecology Research Group in July 2010. The instructive meetings with the fishermen have been held in the pilot region Gökova SEPA and the information obtained from the fishermen enlightened the following parts of the project.

The appropriate areas in the gulf enabling the fishermen to continue fishing are determined as a result of the scientific datas and meetings held with cooperative society presidents and independent fishermen representatives.

At the meeting organized in EPASA (ÖÇKKB) on 26 March 2010, 6 places which are appropriate for Marine Protected Areas have been offered to the authorities from Ministry of Agriculture and Rural Affairs, Turkish Coast Guard Command, Gendarmerie Headquarters, Undersecretariat of Maritime, Underwater Research Society (SAD) and fishery products cooperative societies in Gökova. Moreover, The authorities from these associations discussed new strategies in case of stopping the activities of the areas.

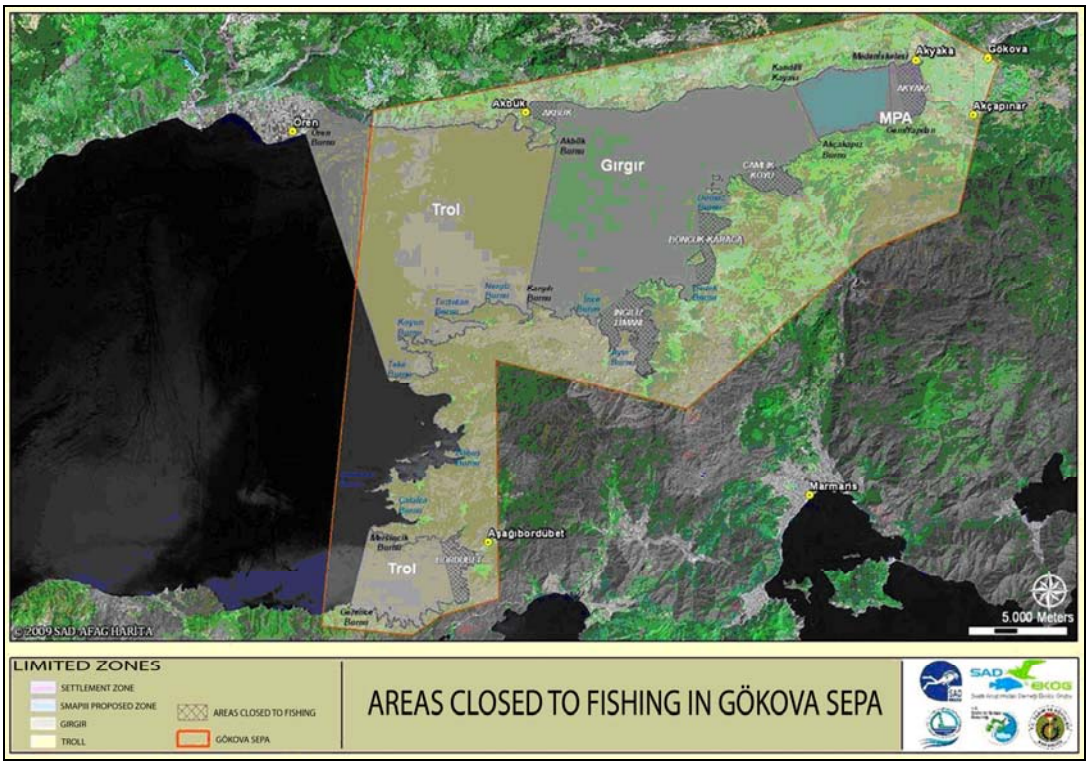


Figure 26: Areas Closed to Fishing in Gökova SEPA. (www.sad.gov.tr)

As can be seen on the map the coordinates of the areas closed to fishing areas published in official gazette by Ministry of Agriculture and Rural Affairs. On 10 July 2010 in Gökova SEPA as follows:

(a) Akbuk Bay; (37 ° 01, 431 'N - 28 ° 06.863' E) and (37 ° 02.108 'N - 28 ° 06.915' E) in the west of a line joining points of coordinates

(b) Akyaka, (37 ° 03.041 'N - 28 ° 18.600' E) and (37 ° 01.540 'N - 28 ° 18.600' E) in the east of a line joining points of coordinates,

(c) Çamlı Bay; Çapa nose (37 ° 00.044 'N - 28 ° 13.250' E) and (37 ° 00.240 'N - 28 ° 14.731' E) in the south of the line connecting the coordinate points,

(d) Boncuk Bay and Karaca Bay; (36 ° 59, 016 'N - 28 ° 11.828' E) coordinate point and the Dedek nose (36 ° 56, 967 'N - 28 ° 11.618' E) and the line joining the east,

(e) Ingiliz port (Değirmen Bükü) (36 ° 56, 170 'N - 28 ° 08.358' e) and (36 ° 56.812 'N - 28 ° 09.542' e) coordinate points of the line joining the south-east

(f) Bördübet Bay; (36 ° 49, 800 'N - 28 ° 02.649' E) and (36 ° 48.156 'N - 28 ° 03.176' E) in the east of a line joining points of coordinates.

4.12.2.1. Achieved Objectives So Far

Since existing conservation statutes are not able to prevent biodiversty loss in marine areas in Turkey, SGP Project in Gökova works toward tackling this emerging catastrophe in the east Mediterrenean Sea-bad by creation of a no take zone. There can be mentioned certain achieved objectives with the project which has been started in May 2009 by Underwater Research Society (SAD) Ecology Research Group for creating Marine Protected Areas closed to fishing in Gökova.

Table 17: Achieved Objectives So Far

	Definition of Achieved Objective	**Indicator**
The achievements in GEF Focused Areas (Biodiversity or Climate Change)	Main Objective of the Project: To create " A Marine Reserve which has a legal protection against fishing" for sustainable protection of biological diversity inside coastal ecosystem of Mediterranean and Aegean Regions of Turkiye.	6 "Marine Protected Areas" which are closed to fishing suggested for Gulf of Gökova by TKİB-KKGM are written to the official documents and they are ready to be published in the following circular.
Effect on Politics	To share information with public opinion about the corruptions of ecological parameters playing a key role on protection of biological diversity and sustainability of economic growth of the sea areas in the region.	EPASA has realized the importance of Marine Protected Areas on healing the ecosystem as a result of the positive ecosystem changes which are displayed by SAD. And then, EPASA has decided to form more

		Marine Protected Areas which are closed to fishing in other regions around Mediterranean and also to exercise its power coming from the law to regulate fishing in SEPA. Therefore, Gökova Project was a locomotive for EPASA within the context of GEF-4 project.
Institutional and human reinforcement	To increase the capacity of cooperation among NGOs, local fishermen, diving centers, local administrations and EPASA.	Project Final Meetings took place in Ankara with attendence of all stakeholders.
Other	To inform the target audience about the ecosystem parameters and changes which are belong to primary production in Gulf of Gökova.	The local fishermen who are the primary target audience are informed about the reasons of the progress. At the project closing meeting on June 2010, most of the fishermen stated that they are so pleased with the result.

4.12.3. Gökova SEPA from the Perspective of Public Participation

There are certain partners and stakeholders who use the resources in the Gökova SEPA and who will be directly affected by the decisions taken for the protection of the area as well as enjoying the resulting benefits. All the visitors to the Inner Gökova Bay and the Sedir Island, users and managers of similar coastal zones throughout Turkey and the Mediterranean Region are called indirect beneficiaries of the area. And all these participants should be inserted in the planning process in order to achieve an integrated coastal management in Gökova.

Table 18. Beneficiaries and the Partners of the Case Area

Direct Beneficiaries of the area	**Project Partners**
Fishing Cooperatives	The Governorate of Mugla Province (regional)
Motorboat Operators Cooperative	The Municipality of Akyaka (local)
Local – environmental non-governmental organizations	Environmental Protection Agency for Special Areas -EPASA (national)
People involved in farming	SMAP III (international)
People involved in tourism, managers of facilities/restaurants	Muğla University (national)
People living in the area	

Besides the national, local and international efforts authorities of the region are increasingly relying on community-based management of coastal zones which consists of local government, local enterprises, self-employed individuals and inhabitants often relate to coastal environment in terms of resource users (Mimura, N. (2006), *State of Environment in the Asia and Pacific Coastal Zones and Effects of Global Change*, Coastal Systems and Continental Margins).

According to Harvey (2005), the goal of participation is to sustain resources, such as fisheries, by modifying rates and patterns of harvest depending on local resource availability. This approach is consistent with modern concept of sustainability.

27 meetings, open to the participation of all partners and stakeholders, have been held throughout the region. In addition to these meetings, three National Project Workshops were held in the region. As result of these meetings, some expectations of the local people were identified (SMAP, 2008):

• Improvement of the economic income sources, especially higher share from tourism

• Creation of alternative income sources,
• Conservation of the natural and historical wealth of the region
• Development of the cooperation between corporations and users of the area.

With public participation, participants can determine the final form of the plan. That is why participation procedures should be integrated with the technical process and mechanisms clearly related to the style and purpose of the coastal planning. That is why an integrated coastal management should include public participation, and consensus.

Consequently, as main factor economic expectations are as important as sensitivity to environment and nature. In other words, local people expect to find solutions to problems related to agriculture and fishing, to receive practical knowledge and skills on technical issues and to get more income by implementing various projects in agriculture and fishing.

4.13. Gökova from the Perspective of Sustainable Tourism – as a Model "South Antalya Tourism Development Project - Çıralı Community Based Tourism "

As a significant part of the integrated coastal management sustainable or community-based tourism model can be improved to create diversity in economic facilities in Gökova like in the Çıralı.

Being one of the villages of South Antalya, Çıralı is a small coastal village on the Mediterranean coast of Turkey, backed by the high mountains of the Olympos National Park. Its natural and cultural richness was enjoyed by the locals and a few tourists. The town, which previously was based on an agricultural economy, moved towards tourism in the late '80s (http://www. nmfs.noaa.gov/species). Project area covers villages of Beldibi, Göynük, Çıralı, Kuzdere, Çamyuva, Tekirova, Ulupınar, Adrasan and Kemer. Many archeological sites including Phaselis, Olympos and Olimpos Beydağları National Park are within the boundaries of project area.

In Çıralı, a coastal community on the south-western Anatolian coast of Turkey, WWF has created a successful model of sustainable tourism with the local community actively participating in conservation activities and reaping economic benefits from their environment (http://www.peopeandplanet.net).

4.13.1. Gökova vs. Çıralı in Sustainable Tourism

Like Gökova, Çıralı is one of the most important settlement for nature in the Mediterranean and cities impacted by mass tourism development which could lead to the irreversible loss of its natural environment too. To avoid the illegal tourism construction and destruction of caretta caretta nesting sites Çıralı was chosen as a pilot project to implement sustainable tourism approach. Çıralı moved from an agricultural economy towards tourism in the late '80s.

Figure 27: Family Pension in Çıralı in terms of Sustainable Tourism

Figure 28: Bungalows in Çıralı

Figure 29: Sustainable tourism and organic agriculture in Gökçe Village of Gökova

Like Çıralı, Gökova has very much agricultural land that can be made organic agricultural activities. In additions, both in Çıralı and Gökova there can be created environmental-friendly economic opportunities such as family pensions, market for organic agricultural products in order to protect biodiversity and make local people guardians of regions natural heritage.

Ecotourism activities were started which can generate awareness and support for conservation, and create economic opportunities for the community. As part of the venture, nature guides were trained from among the community and trekking paths were identified. This activity has particularly attracted the young people of the community. This move was also facilitated from traditional agriculture, which previously polluted soil and water supplies, to organic agriculture. A co-operative was set up by the local community to produce market for organic agricultural products and to create a brand for Çıralı products (http://www.wwf.org). In their efforts to preserve the natural heritage of Çıralı and Gökova, responsible institutions

and organizations can also put in place several activities for the protection of natural habitats.

Furthermore, the community was actively involved in implementing the project. In the process of making Çıralı and Gökova a nature- and people-friendly tourism destination, the community can develop the awareness and responsibility needed for the long-term sustainability of the regions (http://www.wwf.org).

The creation of a network of sustainable tourism examples could pave the way to an application on a larger scale. Finally, viable alternatives to mass tourism could lead to a positive change in tourism trend. Çıralı, due to its natural characteristics, can be considered as an alternative to already destroyed tourism construction beaches in Antalya.

4.14. Case Study Evaluation

As noted in the former sections, coastal zones in the Gökova Bay continue to experience unprecedented environmental changes that are driven both by pressures of local society and increasing tourism demand. Given the plausible predictions for future growth in the region's populations and economies, in combination with increasing tourism demand, it appears that increasingly ominous consequences loom ahead. Being the home of Turkey's one of the richest biodiversity and a vast assortment of biogeophysical processes, the coastal environment in Gökova is a global and national heritage. Moreover, this environment also provides a common foundation for economic, cultural, aesthetic and recreative resources for local communities of the region. Hence, relevant management of the coastal zones is of essential significance for the region's sustainability.

In order to comprehend a convenient response, to the increasing pressures and threats facing coastal environment. The process to respond to this question may form of several elements. Primarily, understanding the past and ongoing

phenomena through scientific research on coastal areas is important. With this approach, it can be estimated that future changes and their impacts to establish response strategies and options for management policies. Developing practical and theoretical policies and actions necessitates collecting and aggregating scientific data and building the capacity to strengthen these activities. Finally, convenient responses and evaluate their effects must be implemented. And also responsibility for such endevaours is not limited to government, and these responses should be pursued at the regional, national and local levels of community. For example, according to Law code 383, the main responsibility of the Environmental Protection Agency for Special Areas is to sustain cultural and natural values by protecting them. As mentioned in the former sections EPASA has fulfiled the Gökova SEPA 1/25.000 scaled Environmental Relation Plan Revision to create a successful integrated coastal zone management example in Turkey.

The case study is conducted with reference to the research questions and the related hypotheses.

Case study question: Is the Gökova Bay's 1/25.000 scaled Environmental Relation Plan a successful coastal planning example?

Hypothesis: As a Special Environment Protection Area (SEPA) Gökova Bay's 1/25.000 scaled Environmental Relation Plan is a pioneering example for coastal planning experience in Turkey.

Case study question: Is there any deficiencies of this Plan in terms of ICM, in this case what would they be?

Hypothesis: Although this planning study takes care of biological diversity protection and has cross-sectoral approaches toward coastal areas, there are certain deficiencies in this plan. An important deficiency of this Plan in terms of ICM is the lack of efficient tourism carrying capacity study in order to prevent Gökova Region from increasing future tourism demand.

With the project called rescue the vanishing algae and healing the ecosystem in Eastern Mediterranean by creating “ A Marine Reserve which has a legal protection against fishing inside Gulf of Gökova ” Gökova Sepa represents a pioneering example in Turkey.

CHAPTER 5

CONCLUSION

Under the intense pressure of nature and people, coastal resources subject to diverse effects. And also coastal zones suffer permanent losses which are not possible to recover once the carrying capacity is over used. Hence, management of coastal areas has become more of an issue throughout the world and there has been a tendency to adopt integrated coastal management (ICM) approach in a number of countries such as the U.S.A, France. The case study of thesis that is from Turkey, Gökova Region has focused on the sustainable nature of ICM programs and has concluded that 1/25.000 scaled environmental relation plan of successful ICM programs. The definition of ICM used in this thesis emphasize on the importance of managing human use of coastal resources.

> Integrated Coastal Management is a continuous and dynamic process incorporating feedback loops which aims to manage human use of coastal resources in a sustainable manner by adopting a holistic and integrative approach between terrestrial and marine environments; levels and sectors of government; government and community; science and management; and sectors of the economy (Harvey 2004 p 568).

Along with the global tendency, several countries have moved toward introducting and establishing ICM at both national and regional levels. For example in the U.S.A. the government has developed a framework for ICM to respond the increasing pressures of population and economic development on the coastal areas. American Coastal Zone Management Act (CZMA) has served in some respects as a model for other countries considering coastal management initiatives. Several EU countries also have developed a framework for ICM that establishes an integrated coastal and ocean management system developed by legislative actions. These attempts show that the concept of ICM has been widely accepted by governments and regional organizations.

As a main factor forming the planning process in the coastal settlements of Turkey, EPASA is entitled to make, get other individuals and/or institutions to make and approve the plans at any scale within these Special Environment Protection Areas with the Decree in Law No. 383. There are also other regulations adopting the similar approach. For instance, the Ministry of Culture and Tourism is entitled to make, get made and approve the plans at any scale within the Culture and Tourism Protection and Development Regions and/or Tourism Centers in compliance with the Tourism Incentive Law No. 2634/4957. Besides, the Ministry of Environment and Forest is required to get prepare and approve Long Term Development Plans within the scope of National Parks.

5.1. Concluding Remarks

Consequently, the components of a successful coastal area planning process, in terms of planning techniques and tools, were discussed. Within this framework, the main target should be to clarify the components of a successful coastal area planning process. Here, the main point is to find out the measures that should be taken into account in order to achieve a successful coastal planning process.

- The maintance of biodiversity in the coastal areas,
- promoting cross-sectoral coastal planning approach focussed upon both development and conservation issues,
- fostering economic development and promoting diversification among coastal related uses such as tourism, aquaculture, fishering,
- local participation and concensus,
- underlining the major insufficies of legal regularities in coastal areas
- creating a development planning process which seeks the sustainable use of coastal areas and natural resources to meet the needs of current and future generations,

are the main issues that successful coastal planning process should entail.

In order to review the efficient tools and tecniques used in colastal planning process, as a case study Gökova SEPA and 1/25.000 scaled Environmental Relation Plan are well analyzed. According to this analysis, certain special features of Gökova SEPA are determined. These are:

• Relationship with sea, land and island (integration)
• Biodiversity sensitivity (biyotop maps, biological researches along land and sea side)
• Related coastal legislations (EPASA Law No. 383, Tourism Incentive Law No. 1634/4957, Muğla Regional Council Decree No. 938 and 4305)
• Economic development diversification (fishering, tourism, agriculture, aquaculture, boating)
• Institutional integration (local, regional, national, international)
▪ Public participation and consensus (up to now 27 meetings were held in Akyaka)

Reviewing of the efficient tools and techniques used in coastal planning within the context of integrated coastal management in Gökova SEPA is the subject matter of this thesis. In this respect, two case study resarch questions have been examined and hypotheses have been tested throughout the study. These are:

Case study questions
1- Is the Gökova Bay's 1/25.000 scaled Environmental Relation Plan a successful coastal planning example?
2- Is there any deficiencies of this Plan in terms of ICM, in this case what would they be?

Hypotheses
1- As a Special Environment Protection Area (SEPA) Gökova Bay's 1/25.000 scaled Environmental Relation Plan is a pioneering example for coastal planning experience in Turkey. Although this planning study takes care of biological

diversity protection, public partcipation and has cross-sectoral approaches toward coastal areas, there are certain deficiencies in this plan.

2- An important deficiency of this Plan in terms of ICM is the lack of efficient tourism carrying capacity study in order to prevent Gökova Region from increasing future tourism demand.

In order to answer these questions, the concept of coastal planning in literature was first reviewed, and then a survey of the main issues that a succesful coastal planning should entail were conducted. With finding results Integrated Coastal Management was identified. In this respect, Turkish laws and regulations regarding coastal areas were examined and in order to test the hypotheses, a case study method was used. And since the Gökova SEPA 1/25.000 scaled Environmental Relation Plan provides a good basis for the investigation of the thesis, this region was selected.

Consequently, the case of Gökova has been confronting with several attempts and ICM approaches based on Turkey's current coastal laws and the institutional framework in recent years**. As the second hypothesis of case study: Although Gökova Special Environment Protection Area 1/25.000 scaled Environmental Relation Plan is a pioneering sample of the ICM efforts in Turkey, the big deficiency of this planning study is the calculation and control of future tourism carrying capacity which has not been taken seriously by authorities, whether it is public or private in Gökova Special Environment Protection Area.** This has resulted in many cases in overcapacity within the protection areas, causing the destruction of the natural environment. Thus, it is necessary for the concept of tourism carrying capacity to be included in the planning for tourism as initiated by governments and other developers, in spite of difficulties in measurement.

5.2. Recommendations

Even though Gökova SEPA 1/25.000 scaled Environmental Relation Plan is a pioneering example of the ICM efforts in Turkey, existing accommodations in Akyaka cannot meet the tourism demand at especially certain periods in summer. This additional demand increases the pressure for more hotel construction in Akyaka on one hand. Also it raises the expectations of the people outside Akyaka to get their fair share from the tourism activities on the other hand.

It is essential that Gökova should be improved and continued the existing spatial pattern, in which both sea and land are the focus, by means of specific criteria. This approach constitutes the basis of the principle of integration. With so, detailed statistics about tourism such as number of tourists, duration of their stay and occupancy rates can be obtained.

- Since it is difficult to predict the efficiency of the existing acommodations and the future demand in Gökova SEPA, tourism carrying capacity in order to prevent Gökova Region from increasing future tourism demand should be created.

- Çıralı can be taken as an example case for integrating of tourism with the other sectors of the area so as to achieve an integrated coastal management.

- Infrastructure services should be developed in the area in order to support the family pensions and ecotourism in certain rural settlements in Gökova Akçapınar, Çınar, Gökçe, these areas like in the Çıralı.

- The Gökova SEPA 1/25.000 scaled Environmental Relation Plan, 1/5000 scaled and 1/1000 scaled Action Plans should be revised in order to make the coastal settlement acquire the quality of tourism as a whole instead of causing their coasts ending up as stereotype cases.

REFERENCES

Alexander, E. R. (1986) *Approaches to Planning: Introducing Current Planning Theories, Concepts and Issues,* Gordon and Breach, New York.

Beatley, T., Brower, D., Schwab, A. K. (1994) *An Introduction to Coastal Zone Management,* Island Press, California.

Büyükvelioğlu, E. 1998. "*Kıyı Alanlarında Sürdürülebilir Kalkınma Doğrultusunda Kıyı Yönetimi ve Planlaması Üzerine Bir Araştırma*", Unpublished master's thesis, (University of Gazi, Ankara).

Carter, R.W.G. (1988). *Coastal Environments: An Introduction to the physical, Ecological and Cultural Systems of Coastlines.* London-San Diego: Academic Press.

Cicin-Sain, B. (1982) *Managing the Ocean Commons:* US Marine Programs in teh 70s and 80s *Marine Technology Society Journal* 16 (4): pp. 6-18, New York.

Cicin-Sain, B. (1993) *Sustainable Development and Integrated Coastal Zone Management* Ocean and Coastal Management, 21, 11-44.

Cicin-Sain, B., Knecht, R. W. (1998) *Integrated Coastal and Ocean Management Concepts and Practices*, Island Press, California.

Durukan, M. 1997. "Kıyı Alanları Konusunda Ulusal Mevzuat ve İdari Yapı", Türkiye'nin Deniz ve Kıyı Alanları I. Ulusal Konferansı Bildiriler Kitabı, (24 June-27 June 1997), pp. 59-69.

Ehler, C. (1995) *Integrated Coastal Ocean Space Management: Challenges for the Next Decades,* in Coastal Ocean Space Utilization III, London.

Eke, F. (1992). *Türkiye'de Kıyı Kullanım Politikaları ve Mevzuatın Gelisimi (Bildiri), Kıyılarımız Semineri: Mevzuat-Planlama Uygulama.* Ankara: Bayındırlık ve Iskan Bakanlıgı, TAU Genel Müdürlügü.

Eke, F. (1995). *Kıyı Mevzuatının Gelisimi ve Planlama*, Bayındırlık ve Iskan Bakanlıgı, TAU Genel Müdürlügü, Ankara.

Eke, F. and Karaaslan, Ş. (1997) *Kıyı Mevzuatına ve Uygulamasına Eleştirel Bakış ve Bazı Öneriler*, Türkiye'nin Deniz ve Kıyı Alanları I. Ulusal Konferansı Bildiriler Kitabı, (24 June-27 June 1997), pp. 69-81.

Ekim, T., Koyuncu, M., Vural, M., Duman, H., Aytaç, Z., Adıgüzel, N. (2000) *Türkiye Bitkiler Kırmızı Kitabı,* Türkiye Tabiatı Koruma Derneği Yayınları, İstanbul.

EPASA. (n.d.). *Brief Historical Account of EPASA*. Retrieved 04 23, 2009, from Environmental Protection Agency for Special Areas: http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=119

EPASA. (2006). *Gökova*. Retrieved 05 12, 2009, from Environmental Protection Agency for Special Areas: http://www.ockkb.gov.tr/EN/Icerik.ASP?ID=13

EPASA (n.d.) *International Environment Convensions to which Turkey is a Party*. Retrieved 04 23, 2009, from Environmantal Protection Agency for Special Areas: www. ockkb.gov.tr/ EN/Icerik.ASP?ID=118

Ergüç, G. (2009) *The Role of Institutions in Promoting Pulic Interest Within the Context of Cultural and Natural Heritage Conservation: the Case of Gökova,* Master Thesis, City and Regional Planning Department, METU, Ankara.

Fekete, J. (1998) *Introductory Notes for a Postmodern Value Agenda,* in Life after Postmodernism: essay on Value and Culture, Macmillan, London.

Gökova Project of SMAP III European Union, 2008).

Gubbay, S. (1995) *Integrated Coastal Zone Management-Opportunities for Scotland, briefing fort he WWF, Scotland.*

Guerrier, Y. (1995) Values and the Environment: A Social SciencePrespective, J. Wiley, New York.

Güney Antalya Turizm Alanı, Çıralı Koruma Amaçlı Imar Planı Raporu, Ekim 2007, Antalya.

Harvey, N. (2006) *Global Change and Integrated Coastal Management*, Springer Publishers, Netherlands.

Harvey, N. (2004) *Integrated Coastal Management* In: Goudie AS Encyclopedia of Geomorphology. Volume 1. Routledge, London; New York, p. 568.

International Seminar Coastal Area Management: *Integrating Environmental Objectives into Regional Planning* (1998), Antalya.

Jones, V., Westmaccott, S. (1993) *Management Arrangements fort he Development and Implementation of Coastal Zone Management Programmes,* Noordwijk: Coastal Zone Management Centre The Netherlands, National Institute for Coastal and Marine Management.

Kay, R., Alder, J. (2005) *Coastal Planning and Management,* Taylor & Francis Group Publishers, New York.

Kay, R. C. and Christie, P. (2001) *Coastal Management and the Internet: A Status Report* Coastal Management, Brampton, U.K.

Keleş, R. (2002) *Kentleşme Politikası*, (İmge Kitabevi, Ankara).

Kenchington, R., Crawford, D. (1993) *On the Meaning of Integration in Coastal Zone Management Ocean and Coastal Management, Taylor and Francis Press, New York.*

King, G. (1996) *Directory of Coastal Planning and Management Initiatives in England* Maidstone: National Coasts and Estuaries Advisory Group.

Klee, G. A. (1999) *The Coastal Environment: Toward Integrated Coastal and Marine Sanctuary Management*, Prentice Hall Publishers, New Jersey.

Knecht, R. W. (1993) *A Perspective on the Relationship Between the Local and National Levels of Government in Coastal Zone Management* paper presented at MEDCOAST 1993, the first international conference on the Mediterranean Coastal Environment, Ankara.

Kuşhan, D.,Yusufoğlu, A. *Gökova Özel Çevre Koruma Bölgesi* (2008), paper presented at Türkiye'nin Kıyı ve Deniz Alanları VII. Ulusal Kongresi.

Ledoux, L. (2005) *ELOISE Research and the Implementation of EU Policy in the Coastal Zone in Managing European Coasts,* Springer Pres, Berlin.

MacEwen, A. and MacEwen, R. (1982) *National Parks: Conservation or Cosmetchics*, George Allen and Unwin, Sydney.

Maunter, T. (1996) Penguin Dictionary of Philosophy, London.

Meltzer, E. (1996) *International Review of Integrated Coastal Zone Management*, Vols. I-III. Consultancy report prepared by Meltzer Research and Consulting for the Canadian Department of Fisheries and Oceans, Halifax, to be published by Governmnet of Canada.

McKellar, R. and Kay, R. C. (2001) *Values Based Coastal Planning,* in first Western Australian Coastal Conference, Esperance, WA: WA Conference Coordinating Committee.

(Mimura, N. (2006), *State of Environment in the Asia and Pacific Coastal Zones and Effects of Global Change*, Coastal Systems and Continental Margins).

Miossec, A. (1996) Professor, Institut de Geographie et d'Amenagement Regional de I'Universite de Nantes (IGARUN), Nantes, France, *Reponse to ICM cross-nation-all survey* Newark: University of Delaware, Center fot the Study of Marine Policy.

Olsen, S. (2003) *Assessing Progress Toward the Goals of Coastal Management*, University of Rhode Island.

Organisation for Economic Co-operation and Development (1992). *Environmental Policies in Turkey* Proceedings from MEDCOAST, Washington, D. C., OECD Publishing.

Organisation for Economic Co-operation and Development (1993). *Coastal Zone Management, Integrated Policies*. Paris: OECD.
OECD (2008) *Territorial Reviews, İstanbul, Turkey,* OECD Publishing.

O' Riordan, T. (1981) *Environmentalism*, Pion, London.

O'Riordan, T. and Vellinga, P. (1993) *Integrated Coastal Zone Management: the Next Steps,* in World Coast '93, Noordwijk: Coastal Zone Management Centre The Netherlands, National Institute for Coastal and Marine Management.

Özhan, E. (1996)Coastal Zone Management in Turkey *Ocean and Coastal Management* 30 (2-3): pp.153-176.

Özhan, E. (1997) *Girişim: KAY Türk Milli Komitesi ve MEDCOAST*, Türkiye'nin Deniz ve Kıyı Alanları I. Ulusal Konferansı Bildiriler Kitabı, (24 June-27 June 1997), pp. 1-9.

Özhan, E. (2005) *Coastal Management in Turkey*, (Priority Actions Programme Regional Activity Centre, Split).

Report of the United Nations Conference on *Environment and Development, Rio Declaration on Environment and Development*, A/CONF. 151/26 (Vol. I) August 12,1992.

Saunier, R. E., Meganck, R. A. (1995) *Conservation of Biodiversity and the New Regional Planning*, IUCN, American States.

Scura, L. F., T.-E. Chua, M. D. Pido, and J. N. Paw. (1992) Lessons for Integrated Coastal Zone Management: The Asean experience in *Integrative Framework and Methods for Area Management*, ed. T. E. Chua and L. F. Scura, 1-70. ICLARM Conference Proceedings 37. Manila: International Centre for Living Aquatic Recources Management.

Smith, L. G. (1993) *Impact Assessment and Sustainable Resource Management*, Harlow, Longman.

Suarez de Vivero, J. (1992) *The Spanish Shore Act and its Implicationas for Regioanl Coastal Management*, Ocean and Coastal Management 18: 307-317.

Tekeli, İ. (1976) *Kıyı Planlamasının Degisik Boyutları*, Mimarlık Dergisi, 1976/2 Sayı:147

UNCED (1992) *Agenda 21-United Nations Conference on Environment and Development: Outcomesof the Conference,* Rio de Janeiro, Brazil, 3-14 June, New York.

Vallega, A. (1992) *The Management of the Mediterranean Sea: The Role of Regional Complexity, Ocean and Coastal Management* 18 (2-4): 279-290.

Vallega, A. (1996) *The Agenda 21 of Ocean Geography: The Epistemological Challenge, 28. International Geographical Union International Geographical Congress, Land, Sea and Human Effort,* August 4-10, The Hague, Netherlands.

Vallega, A. (1999) *Fundamentals of Integrated Coastal Management* Kluwer Academic Publishers, London.

Vermat, J., Bouwer, L., Turner, K., Salomons, W. (2005) *Managing European Coasts*, Springer Publishers, Berlin.

Wang, H. (2004) *Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law and Politics*, Ocean Development and International Law, 35:41-74, New York.

WCED (World Commission on Environment and Development) (1987) *Our Common Future,* Oxford University Press, Oxford.

WWF(World Wide Fund for Nature) (1995) *Integrated Coastal Zone Mangement: U.K. and European Initiatives Marine Update*, England.

Global Oceans and Sea, www.globaloceans.org/story/icm_coast.html, last visited on 1 April 2010.

Ocean and Coastal Management, www.editorial, oceanandcoastalmanagement, last visited on 17 September 2009

World Wide Fund for Nature, www.wwf.org, last visited on 12 May 2010.