



## The socio-economic overview and analyses of new income generation activities at Turkish Aegean MPAs



# **The socio-economic overview and analyses of new income generation activities at Turkish Aegean MPAs**

Project: Strengthening the system of the Marine and Coastal  
Protected Areas of Turkey

2011

Prepared by

Ekin Keskin, Esra Başak, Uğur Yolak, Lee Thomas, Camille Bann

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General Directorate of Natural Assets Protection (GDNAP)  
Alparslan Türkeş Cad. 31. Sok. No.10 06510 Beştepe/Yenimahalle/Ankara  
Tel: +90 312 222 12 34 Fax: +90 312 222 26 61  
<http://www.csb.gov.tr/gm/tabiat>

United Nations Development Programme (UNDP)  
Birlik Mahallesi 415. Cadde No. 11 06610 Çankaya/Ankara  
Tel: +90 312 454 1100 Fax: +90 312 496 1463 [www.undp.org.tr](http://www.undp.org.tr)  
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**Authors:** Ekin Keskin, Esra Başak, Uğur Yolak, Lee Thomas, Camille Bann  
**Cover and Layout Design:** Evren Çağlayan  
**Layout Design Corrections:** Harun Güçlüsoy, Güner Ergün & Gülden Atkın Gençoğlu

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# Foreword

**T**urkey is a country surrounded by the sea on three sides. Turkey's nature and climatic conditions adorn it with a significant biodiversity in its coastal areas. However, there are also problems that touch these regions and that become more imminent everyday. Urbanization, industrialization, tourism, other residential areas and activities alike that leads to irregular and unplanned development that have severe impacts on coastal and marine areas.

Developments, especially in the economy also increase marine transportation and dependency on the use of marine and coastal areas for development, housing, commerce, recreational activities and basic needs. Furthermore, the pressure of fast urbanization and settlement activities on coastal areas leads to many problems including loss of dunes, salt beds and marshes; marine and coastal pollution, deterioration and loss of coastal ecosystems. Biodiversity and fertility of coastal and marine areas are faced with this increasing pressure, leading to damages that cannot be undone.

These coastal and marine areas are one of the most precious assets we have and we must protect them. In order to alleviate these pressures and overcome these challenges, relevant structures and infrastructures for effective implementation and surveillance to ensure that these areas are sustainably managed, preserved and protected without being deteriorated and with a balanced approach between use and protection. In this regard, all related agencies and institutions have to go under a capacity building process to meet the demands of the required structures and infrastructures; cooperation and coordination between all parties have to be improved and an effective and efficiently operating work program and a model for financial resources have to be developed.

In its responsibility area covering a coastline that extends over some 8,592 km, General Directorate for the Natural Assets Protection carries out research activities for the protection and study of threatened and endangered species and habitats that are duly specified in the national legislation as well as in international conventions that Turkey is a party; carries out research activities on the biodiversity of marine and coastal environments; determines the marine surface vessel capacity of important bays and harbors; establishes

procedures and principles for use of protection and use of such areas; carries out other integral coastal management activities and strives to minimize risks that threaten such assets.

Protection of marine and coastal resources being a global priority, Marine Protected Areas are fast developing and expanding as a concept. Turkey is no exception to this rule where considerable awareness raising efforts are being carried out.

Through the large scale GEF Project entitled 'Strengthening Turkey's Marine and Coastal Protected Areas' covering the term between 2009-2013 and with the UNDP as the implementing partner, the General Directorate has taken a very first step for devising a long term solution for the protection of marine biodiversity in Turkish coastal waters; for the restructuring of marine and coastal protected areas database and to guarantee effectiveness and sustainability of ecological service functions.

A series of technical reports that are prepared as a part of the project on economic analysis, socio-economy of fisheries in coastal areas, together with other efforts on the identification of marine sensitive areas, integration of economic principles to planning processes, ensuring financial sustainability, mitigation of pollutants from marine vessels and determination of alternative livelihood resources are expected to yield the following project outcomes:

- Responsible institutions have the capacities and internal structure needed for prioritizing the establishment of new MCPAs and for more effectively managing existing MCPAs.
- MCPA financial planning and management systems are facilitating effective business planning, adequate levels of revenue generation and cost-effective management.
- Inter-agency coordination mechanisms in place to regulate and manage economic activities within multiple use areas of the MCPAs.

Documents covering the three main outcomes of the Project so far mentioned are submitted to your perusal.

Osman İYİMAYA  
Dep. Gen. Dir.

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The authors also wish to thank all the interviewees and contributors (listed in Appendix I) from different local and national level institutions, businesses and civil sectors, whose opinions, suggestions and materials have helped to shape this Study.

## Acronyms

EEME	Environmental Economy and Management Expert
EPASA	Environmental Protection Agency for Special Areas
FE	Finance Expert
GEKA	Southern Aegean Development Agency
GDNCNP	General Directorate for Nature Conservation and National Parks
IZKA	İzmir Development Agency
MARA	Ministry of Agriculture and Rural Affairs
MARTAB	Marmaris Turizm Alanı Altyapı Hizmet Birliği
	Marmaris Tourism Area Infrastructure Service Union
MCPA	Marine and Coastal Protected Area
MoCT	Ministry of Culture and Tourism
MoEF	Ministry of Environment and Forestry
MPA	Marine Protected Area
MRE	Market Research Expert
NTFPs	Non Timber Forest Products
ORKÖY	General Directorate of Forest-Village Relations
SEPA	Special Environmental Protected Areas
TSI	Turkish Statistical Institute

# Table of Contents

Foreword . . . . .	iii
Acknowledgements . . . . .	iv
Acronyms . . . . .	iv
Yönetici Özeti. . . . .	x
<b>INTRODUCTION . . . . .</b>	<b>1</b>
1.1 Main Sectors Analyzed in the Report . . . . .	2
1.2 Methodology . . . . .	3
1.3 Report Structure. . . . .	4
<b>INSTITUTIONAL OVERVIEW: STAKEHOLDERS . . . . .</b>	<b>5</b>
2.1 Environmental Protection Agency for Special Areas (EPASA) . . . . .	5
2.2 The Ministry of Environment and Forestry (MoEF) . . . . .	6
2.3 General Directorate of Forestry . . . . .	7
2.4 General Directorate of Nature Conservation and National Parks (GDNCNP) . . . . .	8
2.5 Ministry of Agriculture and Rural Affairs (MARA) . . . . .	8
2.6 Ministry of Culture and Tourism (MoCT) . . . . .	8
2.7 Turkish Coast Guard Command . . . . .	9
2.8 Chamber of Maritime Trade. . . . .	10
2.9 Development Agencies . . . . .	10
<b>INFORMATION ABOUT THE SIX AREAS. . . . .</b>	<b>11</b>
3.1 FETHİYE - GÖCEK SEPA . . . . .	12
3.2 KÖYCEĞİZ - DALYAN SEPA . . . . .	18
3.3 DATÇA-BOZBURUN SEPA . . . . .	21
3.4 G Ö K O V A SEPA. . . . .	29
3.5 FOÇA SEPA. . . . .	31
3.6 AYVALIK ISLANDS NATURE PARK. . . . .	35
<b>FINDINGS . . . . .</b>	<b>38</b>
4.1 FETHİYE - GÖCEK SEPA . . . . .	40
4.1.1 Agriculture. . . . .	40
4.1.2 Fishing . . . . .	43
4.1.3 Tourism . . . . .	43
4.1.4 EPASA Activities . . . . .	44
4.1.5 Possible New Income Generating Activities . . . . .	45
4.2 KÖYCEĞİZ - DALYAN SEPA . . . . .	47
4.2.1 Agriculture. . . . .	47

4.2.2 Fishing . . . . .	51
4.2.3 Tourism . . . . .	52
4.2.4 EPASA Activities . . . . .	52
4.2.5 Possible New Income Generating Activities . . . . .	53
4.3 DATÇA-BOZBURUN SEPA . . . . .	54
4.3.1 Agriculture. . . . .	54
4.3.2 Fishing . . . . .	58
4.3.3 Tourism . . . . .	58
4.3.4 EPASA Activities . . . . .	59
4.3.5 Possible New Income Generating Activities . . . . .	59
4.4 GÖKOVA SEPA. . . . .	60
4.4.1 Agriculture. . . . .	60
4.4.2 Fishing . . . . .	60
4.4.3 Tourism . . . . .	60
4.4.4 EPASA Activities . . . . .	62
4.4.5 Possible New Income Generating Activities . . . . .	62
4.5 FOÇA SEPA. . . . .	64
4.5.1 Agriculture. . . . .	64
4.5.2 Fishing . . . . .	65
4.5.3 Tourism . . . . .	66
4.5.4 EPASA Activities . . . . .	67
4.5.5 Possible New Income Generating Activities . . . . .	67
4.6 AYVALIK ISLANDS NATURE PARK . . . . .	69
4.6.1 Agriculture. . . . .	69
4.6.2 Fishing . . . . .	69
4.6.3 Tourism . . . . .	70
4.6.4 Current Activities . . . . .	71
4.6.5 Possible New Income Generating Activities . . . . .	71
4.7 LIMITATIONS OF THE STUDY . . . . .	72
CONCLUSION. . . . .	73
REFERENCES . . . . .	76
APPENDIX I . . . . .	78
APPENDIX II. . . . .	84
APPENDIX III . . . . .	85
APPENDIX IV . . . . .	89

## List of Maps

Map 1. Project implementation sites . . . . .	.11
Map 2. Boundaries of Fethiye-Göcek SEPA (source: EPASA) . . . . .	.12
Map 3. Köyceğiz-Dalyan SEPA boundaries(source: EPASA) . . . . .	.18
Map 4. The peninsulas of Reşadiye and Bozburun makes up the Datça SEPA (source: EPASA) . . . . .	.21
Map 5. Gökova SEPA boundaries(source: EPASA) . . . . .	.29
Map 6. Location of Foça SEPA (Source: EPASA) . . . . .	.31
Map 7. Ayvalık Islands Nature Park boundaries(Source: GDNCNP) . . . . .	.35

## List of Boxes

Box 1. Forest Village Relations – ORKÖY . . . . .	.7
Box 2. Blue Chip Card System in Göcek. . . . .	44
Box 3. Alternative holiday examples in Fethiye Huzur Vadisi (yoga holidays): . . . . .	45
Box 4. Silkworm raising in Köyceğiz Dalyan SEPA . . . . .	50
Box 5. Fisheries in Köyceğiz Lagoon system . . . . .	51
Box 6. Datça Organic Almonds in Datça-Bozburun SEPA . . . . .	57
Box 7. Sındı Agricultural Cooperative in Datça-Bozburun SEPA . . . . .	57
Box 8. Gökova Windsports . . . . .	61
Box 9. Club Med Foça French Holiday Village . . . . .	66
Box 10. Çöpmadam (Ayvalık) . . . . .	71



# List of Tables

Table 1. Fethiye – Göcek SEPA Regional Population (2009). . . . .	14
Table 2. Fethiye – Göcek SEPA Population Distribution According to Years (1970-2009) . . . . .	14
Table 3. Education Information in Fethiye 2009 . . . . .	15
Table 4. Fethiye - Göcek Socio-Economic Structure Summary . . . . .	16
Table 5. Fethiye - Göcek SEPA Municipality Residential Socio-Economic Structure Summary. . . . .	17
Table 6. Socio Economic Indicators . . . . .	19
Table 7. Datça - Bozburun SEPA Regional Population (2009). . . . .	23
Table 8. Datça - Bozburun SEPA Population Distribution According to Years . . . . .	24
Table 9. Education Information in Datça, 2009 . . . . .	25
Table 10. Datça Socio-Economic Structure Summary in Datça - Bozburun SEPA . . . . .	26
Table 11. Bozburun Socio-Economic Structure Summary in Datça - Bozburun SEPA . . . . .	27
Table 12. Socio-Economic Structure Summary in Marmaris Villages in Datça - Bozburun SEPA . . . . .	28
Table 13. Foça SEPA Population . . . . .	33
Table 14. Education Information Foça . . . . .	34
Table 15. Fethiye Field Crops Production (1991 - 2009) . . . . .	40
Table 16. Harvested Area in Fethiye (1991-2009) . . . . .	40
Table 17. Greenhouse Areas and Production in Fethiye -2009 . . . . .	41
Table 18. Fethiye Number of Fruit Trees . . . . .	41
Table 19. Fruit Production and Tree Numbers in Fethiye (1991-2009) . . . . .	42
Table 20. Fethiye Vegetable Production (1991 - 2009) . . . . .	42
Table 21. Animal Husbandry in Fethiye (1991-2009). . . . .	43
Table 22. Number of Tourists for Muğla . . . . .	43
Table 23. Rent incomes of Fethiye Göcek SEPA . . . . .	44
Table 24. Distribution of Products in Köyceğiz and Ortaca Area. . . . .	47
Table 25. Fruit Production in Köyceğiz and Ortaca . . . . .	48
Table 26. Field Crop Production in Köyceğiz and Ortaca . . . . .	49
Table 27. Honey Production in Köyceğiz and Ortaca . . . . .	49
Table 28. Animal Numbers in Köyceğiz and Ortaca . . . . .	50
Table 29. Milk Production in Köyceğiz and Ortaca . . . . .	50
Table 30. Rent incomes of Köyceğiz Dalyan SEPA . . . . .	53
Table 31. Harvested Area in Datça (1991-2009). . . . .	54
Table 32. Field Crops in Marmaris (1991-2009). . . . .	54
Table 33. Fruit Production and Tree Numbers in Datça (1991-2009) . . . . .	55
Table 34. Fruit Production and Tree Numbers in Marmaris (1991-2009) . . . . .	55
Table 35. Animal Husbandry in Datça (1991-2009). . . . .	56
Table 36. Animal Husbandry in Marmaris (1991-2009) . . . . .	56
Table 37. Number of Tourists for Muğla 2009 . . . . .	58

Table 38. Rent incomes from Datça-Bozburun SEPA . . . . .	59
Table 39. Rent incomes of Gökova SEPA . . . . .	62
Table 40. Foça Agricultural Land. . . . .	64
Table 41. Beekeeping in Foça . . . . .	64
Table 42. Animal Husbandry in Foça . . . . .	65
Table 43. Fish Types in Foça . . . . .	65
Table 44. Bed Capacity in Foça . . . . .	67
Table 45. Tourist Numbers, Nights, Length of Stay, Occupancy Rates (2001-2007) Foça . . . . .	67

## **List of Photos** (by Ekin Keskin)

Photo 1. Göcek İnce Beach Site Rental. . . . .	43
Photo 2. Kayaköy Carpets . . . . .	44
Photo 3. Women working on laurel in Toparlar Village . . . . .	47
Photo 4. Boat Tours in Dalyan. . . . .	52
Photo 5. Women cracking almonds in Datça . . . . .	57
Photo 6. Products of Sındı Agricultural Cooperative . . . . .	57
Photo 7. Different Types of Fishes from Akyaka Fishing Products Cooperative . . . . .	60
Photo 8. View of Çınar Beach (Site Rental) . . . . .	62
Photo 9. Persian monument in Foça. . . . .	66
Photo 10. Beach in Foça . . . . .	67
Photo 11. Fishing boats in Ayvalık harbour . . . . .	69
Photo 12. Handmade Products of Çöpmadam . . . . .	71

# Yönetici Özeti

“Türkiye’nin Korunan Alanlar Sisteminin Güçlendirilmesi: Deniz ve Kıyı Koruma Alanlarının Sürdürülebilirliğinin Kolaylaştırılması” Projesinin 3 ana hedefi bulunmaktadır:

- Mevcut Deniz ve Kıyı Koruma Alanlarının daha etkin yönetimi ve yeni Deniz ve Kıyı Koruma Alanlarının kurulmasının önceliklendirilmesi için sorumlu kurumların ihtiyaç duyduğu kurumsal yapı ve kapasite güçlendirilmesi
- Deniz ve Kıyı Koruma Alanları için finansal planlama ve yönetim sistemleri geliştirilmesi ve uygulanması ile etkin iş planlaması, yeterli gelir üretimi ve etkin yönetim maliyetinin sağlanması
- Deniz ve Kıyı Koruma Alanlarının çok amaçlı kullanım alanlarında, ekonomik faaliyetlerin yönetimi ve düzenlenmesi için kurumlar arası koordinasyon mekanizmasının uygulamaya konması

Yukarıdaki hedefler ışığında, bu rapor 6 uygulama alanında gelir getirici faaliyetler konusunda yapılmış bir ön çalışmadan oluşmaktadır. Proje Uygulama Alanları şöyledir:

1. Fethiye-Göcek ÖÇK Bölgesi
2. Köyceğiz-Dalyan ÖÇK Bölgesi
3. Datça-Bozburun ÖÇK Bölgesi
4. Gökova ÖÇK Bölgesi
5. Foça ÖÇK Bölgesi
6. Ayvalık Adaları Tabiat Parkı

Bu çalışmanın başında yerel uzmanlar tarafından masa başı araştırması ve alanlarla ilgili bir ön bilgi taraması yapılmıştır. Bir sonraki aşama saha çalışmaları ile devam etmiş ve sonrasında toplanan bilgiler sentezlenerek bu ön rapor ortaya çıkmıştır. Bu rapor 5 bölümden oluşmaktadır. Birinci bölüm giriş kısmıdır. İkinci bölümde sözkonusu alanlarda günlük aktivitelerde söz sahibi paydaşlar hakkındadır. Üçüncü bölümde alanlarla ilgili tanıtıcı ön bilgi sunulmaktadır. Dördüncü bölüm yapılan literatür taraması ve görüşmeler

sonucunda elde edilen bilgileri her alan için 3 ana başlık altında incelemekte; tarım, balıkçılık ve turizm alanlarında hâlihazırdaki gelir getirici faaliyetler hakkında bilgi sunmaktadır. Bu bölüm ÖÇKKB için halihazırda gelir getiren faaliyetler sunulmakta ve gelir getirici faaliyetler içerisinde potansiyeli olan ve sürdürülebilir olarak seçilen öneriler hem ÖÇKKB hem de diğer başlıklar altında verilmektedir. Son bölümde raporun bulguları özetlenmekte ve dikkat edilmesi gereken noktalar değerlendirilmektedir.

Yapılan saha çalışmaları kapsamında; Pazar Araştırma Uzmanı 11-25 Ağustos 2010 tarihlerinde Muğla iline bağlı 4 alanda ve Yerel Finans Uzmanı ile beraber (Datça, Gökova ve Göcek’de) görüşme ve gözlemlerde bulunmuştur. 13-17 Eylül 2010 tarihlerinde ise Yerel Çevre Ekonomisi ve Yönetimi Uzmanı ile birlikte Foça ve Ayvalık Adaları Tabiat Parkında görüşme ve gözlemler gerçekleştirilmiştir. 6 alanda yapılan toplam görüşme sayısı 132’dir. Görüşmelerde; bölgelerde yeralan hâlihazırdaki gelir getirici faaliyetlerin yanısıra potansiyel yerli ürün satışı, eko-turizm ve dalış turizmi gibi yeni ekonomik faaliyetlerden sağlanabilecek gelir artırıcı faaliyetler konusunda yerel paydaşlardan bilgi derlenmesi amaçlanmıştır. Yerel paydaşlar kamu sektörünün temsilcileri (tarım, turizm müdürlükleri, vb.), özel sektör (işletmeler), sivil toplum örgütleri, kooperatifler ve köy muhtarları şeklinde özetlenebilir (Ek I’de detaylı liste verilmektedir). Kısaca, adı geçen alanlarda temel gelir getirici faaliyetler üç ana başlık altında incelenmiştir; tarım, balıkçılık ve turizm. Bu ön raporda gelir getirici faaliyetlerin yanısıra kıyı kaynaklarının sürdürülebilir bir şekilde kullanılmasını sağlamak için pek çok konu ele alınmıştır (örneğin balıkçılık alanındaki sıkıntılar çok yoğun bir şekilde gündeme gelmiştir). Yapılan çalışma sonucunda aşağıdaki ana konular ve zorluklar ortaya çıkmıştır:

1. Farklı paydaşlar arasında daha iyi bir yatay ve dikey koordinasyonun sağlanması gerektiği

2. Denizcilik faaliyetleri: Balıkçılık açısından artan kirlilik ile beraber diğer tehdit ve zorluklar (örneğin azalan kaynaklar)
3. Kentleşme (göç) ve turizm gelişimi karşısında artan baskıyla başedebilme; (örneğin tarımsal üretim ile yerel kültürel ürünlerde azalış ve üretimde bulunanların azalması)
4. Kültürel ve tarihi miras alanlarının korunmasının önemi
5. Az gelişmiş altyapı sistemlerinin pek çok alanda çevresel ve sosyal bir tehdit oluşturması (karasal atıklar, atık sular, sanayi dahil)

Sonuç olarak, tüm bölgelerde görüşülen kişiler tarafından gelir getirici faaliyetler konusunda çok değişik öneriler teklif edilmiştir. Geleneksel deniz ve güneş turizminin çeşitlendirilmesi gerektiği yönünde çok fazla görüş alınmış ve bu yönde dalış alanlarının artırılmasından, ekoturizmin geliştirilmesi; trekking (yürüyüş) güzergahlarının belirlenmesi, tarihi ve kültürel yerler hakkında bilgi edinilmesi, kuş gözlemleri yapılması, agroturizmin geliştirilmesi; örneğin geleneksel yemek

pişirme ya da tarım yöntemleri, ya da yerel el sanatlarının nasıl yapıldığını görmek gösterilebilir. Farklı paydaşlar ile yapılan görüşmeler sonucunda bölgelerin Agroturizm ve Ekoturizm açısından zengin olduğu belirlenmiş ve ana fizibilite raporunda bunların daha detaylı bir şekilde analiz edilebileceği düşünülmektedir. Bu turizm çeşitliğinin hem tarımsal katkı hem de çevre bilincinin sağlanması anlamında alanlarda sürdürülebilir “Yeni Gelir Getirici Faaliyetler” sunabileceği öngörülmektedir. Ancak, bunun başarılı olabilmesi için aşağıdan yukarıya yaklaşımın (örneğin çiftçilerin katkılarının sağlanması) ve kurumlar arası işbirliği çok önemlidir. Son olarak, raporda ÖÇKKB için de yeni günü birlik alanlarının yapılması ve yeni iskele ile şamandıra ihtiyaçları belirtilmekte ve kurum için dikkat edilmesi gereken hususlara (kapasite eksikliği vb.) dikkat çekilmektedir. Bu raporun akabinde, yerel uzmanlar birlikte 6 proje alanı için “sürdürülebilir ve çevre dostu olan ortak veya bireysel ekonomik faaliyetlerin bir listesini” (aktivite 2.4.8) hazırlayacaklar ve öne çıkan konular fizibilite raporunda detaylı bir şekilde ele alınacaktır.

## INTRODUCTION



1

**W**ithin the marine areas bordering Turkey's lengthy coastline is found an abundant, highly diverse and globally significant biodiversity endowment (UNDP, 2009). However, Turkey's marine areas face major threats including habitat degradation associated with changes in coastal human populations and distributions, and associated sea/coast use pressures. Protected areas have a potentially significant, yet largely unrealized role to play in eliminating these threats to marine area biodiversity in Turkey (ibid).

In 2009, United Nations Development Programme (UNDP) and the Turkish Environmental Protection Agency for Special Areas (EPASA), in collaboration with the Ministry of Agriculture and Rural Affairs (MARA) and the General Directorate for Nature Conservation and National Parks (GDNCNP), have launched the "Strengthening the Protected Areas Network in Turkey: Catalyzing Sustainability of Marine and Coastal Protected Areas" Project in order to address the above mentioned issues. The long-term solution for marine biodiversity conservation in Turkey's territorial sea is seen as a reconfigured Marine and Coastal Protected Areas (MCPA) network designed to protect biodiversity while optimizing its ecological service functions through effective and sustainable adaptive management. An important aspect of this optimization is sustainable financial mechanisms, including income generation possibilities, to cover the costs of management.

Income generating activities in MCPAs are important not only for local economic development but also because the way they are used and managed have significant impacts on productive and valuable ecosystems. It is worth underlining that marine and coastal ecosystems are among the most productive in the world and that important socio-economic flows are obtained from these systems (UNEP, 2006). This study is part of the above-described larger project and its main goal is to identify sustainable income generating activities along the Western coast of Turkey, at 6 pilot areas of the project. These areas are Fethiye-Göcek, Köyceğiz-Dalyan, Datça-Bozburun, Gökova, Foça and Ayvalık Islands Nature Park.

The report focuses on income generating activities that introduce alternative livelihoods and/or add

value to existing activities. Overall, these activities are analyzed under three main headings; tourism, agriculture, and fishing. Furthermore, the report highlights revenue generating potential for EPA-SA and the Ministry of Environment and Forestry.

## 1.1 Main Sectors Analyzed in the Report

Tourism is currently one of the leading economic sectors in the study areas and has the potential to contribute further to income generating activities. Just as coastal tourism is one of the fastest growing sectors of global tourism (UNEP, 2006), in Turkey, starting from 1980's, it has seen an explosion. The majority of these touristic activities has concentrated on the Mediterranean and Aegean coastal areas (Ministry of Culture and Tourism, 2007). In 2009, among countries hosting most foreign visitors, Turkey ranked as the 7<sup>th</sup> with 25,5 million tourists; and the tourism-based revenues amounted to 21,3 million USD (World Tourism Organisation, 2009).

Blessed with unique natural and cultural attractions, all the study areas are well placed to become a leader of tourism in their respective areas. To date, the tourism industry has been relying primarily on natural features (coastal beaches, scenery, favorable weather conditions etc) as the major attraction, with most tourists visiting the areas for their summer holidays. Boat excursions operate in all six study areas with most of the tour companies offering similar daily outing options.

Marinas are also an important outlet for tourism related activities. According to Fethiye Socio Economic Report, serious investments have been made to the marinas in Turkey in recent years (Fethiye Socio-Economic Report, 2010). Yacht tourism demand has increasingly moved from Western Mediterranean to Eastern Mediterranean basin due to the relative unpolluted coastlines found in this region as well as the saturation with the well-known French, Italian and Spanish rivieras (Tandoğan, 2000). As such, Turkish coasts constitute important destinations for yacht and sailing tourism.

Another marine-based tourism activity of significance in the study areas is diving. The main

diving centers in Turkey concentrate on the Mediterranean, in Marmaris, Fethiye, Ölüdeniz and Ayvalık, all of which are within the project's pilot areas. The underwater scenery is varied with tunnels, caverns and rocky pinnacles providing divers with plenty to explore.

Recently, the need to diversify away from the sun and beach focused tourism which tends to lean towards unsustainability with distorted urban developments, environmental pollution and pressure on natural habitats and to develop other attractions has been recognized by both the public and private sectors (Ministry of Tourism, 2007). The view that there is a need for a niche or alternative activities to mass tourism was confirmed through the field work. The coastal areas in all six areas have untapped potential to attract a wider spectrum of tourism related activities such as nature-based outings/sports both on land and sea, agriculture-based farm visits, and culture/archeology-based visits.

Agriculture contributes significantly to the economy in the six coastal areas and also plays an important role in supplementing household incomes. Agriculture is among the driving forces of Turkey's economy with nearly 25% of the country's labour market depending on agriculture in rural areas (European Commission, 2010). In the Aegean region alone, agriculture contributes to 28% of incomes (GEKA, 2010). Furthermore, traditional agricultural practices that are still maintained in Turkish landscape contribute to tourism development as there is an increasing demand in rural tourism opportunities. The Southern Aegean Development Agency (GEKA) also identifies increased demand for organic agriculture and eco-tourism, among Muğla province's primary opportunities. The Aegean coast has a long history of traditional agriculture associated with the cultivation of pine nuts, olives, herbs, citrus and other fruits, and bees for honey. All the study areas have a history of cultivating olives for oil production. There may be potential for value-added agricultural outputs produced using organic farming methods, or specialty foods packaged as "gourmet" or "artisanal" foods.

Fishing is the third leading economic sector in the study areas. In South Marmara region alone, fish

products make up the third largest exported goods after manufacturing and mining (GEKA, 2010). Likewise in Muğla, where four of the MCPAs are located, the export of aquatic and animal products marks a volume of about 50 million USD according to 2009 data (ibid). Foça is estimated to provide 20% of the fish circulated in the Aegean region (IZKA, 2009). In Ayvalık, 25.000 fish has been collected in the first nine months of 2010 and the fish export out of Ayvalık in 2010 amounted to \$4.835.236 (Ayvalık Directorate of Agriculture, 2010).

In the six study areas fishing is still done on a small-scale by local fishermen. Small-scale fisheries provide food and drive the economies of these local communities. But the traditional fishing practices seem unable to compete with big trawlers that put increasing amounts of pressure on the resource base. Even though trawlers fish outside the legally defined marine protected zones, their impact on the food chain locally and regionally is not yet well-understood.

This report is relevant to a wide range of stakeholders, including decision-makers, private investors, local authorities and the funding agencies with an interest in sustainable income generating activities in coastal areas.

The limitations of data and subsequent ability to analyse the situation in detail should be acknowledged. While the document does not pretend to be a comprehensive treatment of the subject, it provides a broad assessment of the current status of the areas and identifies issues and needs that will be a starting point for the sustainable development of the activities in question. Neither a feasibility study nor a business plan had been conducted previously or developed for any of the potential income-generating activities proposed. Although there are some studies that are being conducted (in progress), they are not yet finished. It has not been possible for the project team to assess the project site business plans in the development of this report, but this will be done when they are finished. In this study, a number of activities are identified rather than a detailed assessment of one or two specific activities. As an outcome of this report, a more specific list of activities for each project area will be prepared. In the

final feasibility report, more concrete opportunities and risks will be identified, and opportunities will be sought to pilot recommended activities in order to inform future strategy and possible replication in other areas.

## 1.2 Methodology

This Interim Feasibility Study on income generation opportunities at selected marine and coastal protected areas (MCPA) was prepared over the period August 2010 – December 2010. The study comprised of the following main steps:

### 1- Review of existing laws and policies:

The local experts conducted a review of the existing regulations concerning EPASA's institutional income generation means, especially in terms of the authority's policy on site rentals' at coastal zones. Furthermore, EPASA's strategic plans and action plans were analyzed in order to perceive the revenue expansion possibilities.

### 2- Literature review:

The local experts researched and reviewed available primary and secondary sources of information. These included socio-economic reports of EPASA, İzmir and Muğla Development Agencies, scientific articles, conference proceedings and other documents concerning the project's pilot areas.

### 3- Solicitation of the opinions of a wide range of stakeholders:

Interim Feasibility Study was designed and undertaken by literature review and field work. Using issues and questions identified during the initial literature review, the local experts made field visits to all six areas to understand the perspectives of local authorities, representatives of public and private sectors, hotel and other business owners, tour operators, and to visit some of the villages in the regions.

In-depth face to face interviews were conducted with key stakeholders representing various posts in government, tourism and other relevant sectors in the project sites. Through open-ended questions prepared in advance for each stakeholder group,

a total of 132 interviews were conducted in all six areas between August 2010 and October 2010 (in total 19 days). Fethiye-Göcek, Köyceğiz-Dalyan, Datça-Bozburun, Gökova are located in Muğla province. In Muğla, all four areas were covered and 88 interviews were conducted and this was followed by 25 interviews in Ayvalık Nature Islands and lastly 19 interviews in Foça. Details of each interview are provided in Appendix I.

Interviews provided a practical insight into the type of activities that are being undertaken by the local stakeholders and their day to day experiences. Through the interviews, it was possible to record the factors and challenges/opportunities that may contribute to the success or failure of such initiatives.

The report was finally drafted in a collaborative manner, with all experts contributing to specific sections. As an outcome of this interim report, a list of sustainable and environmental friendly economic activities for each project area will be prepared both for increasing the revenues of EPASA and of the concerned local communities (Activity 2.4.8)<sup>1</sup>. The final report will also have a matrix of relevant stakeholders (public, private, etc.) for selected activities.

### 1.3 Report Structure

This report is organised into five chapters. Chapter One provides introductory information. Chapter Two presents an overview of the stakeholders that currently take part in or have a say in the activities and operations in the areas. Chapter Three gives a general overview of the areas - their location and main socio-economic and ecological characteristics. Chapter Four focuses on the findings of the interviews conducted in the areas and on key components of the activities related to agriculture, fishing and tourism. The final chapter concludes with an overview of the findings and highlights the important points for income generating activities to be successfully implemented in the areas.

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<sup>1</sup> *Activity 2.4.8*: Local experts prepare a list of sustainable and environmental friendly joint or individual economic activities with the local stakeholders at the meeting to be organized for the dissemination of the feasibility



# INSTITUTIONAL OVERVIEW: STAKEHOLDERS



**T**he current income generating activities on Turkey's marine and coastal stretch spread across many sectors including a number of governmental institutions which by the nature of their responsibilities have important roles to perform. The public sector plays an important role in creating an enabling environment for the sustainable development in the study areas. The information provided in this section is based on the field interviews and the internet pages of government organizations (provided in the references) and the other stakeholders.

Institutional responsibility for the establishment and management of MCPAs lies with four agencies: (i) the Authority for the Protection of Special Areas (EPASA); (ii) the Fisheries Department, Ministry of Agriculture and Rural Affairs; (iii) the General Directorate for Nature Conservation and National Parks (GDNCNP); and, (iv) the Ministry for Culture and Tourism (UNDP 2009).

In addition to the governmental institutions, there are many other agencies or institutions whose work is relevant<sup>2</sup>. These supporting agencies need to work together in a coordinated manner to ensure that tourism-agriculture and other development strategies are implemented properly. This section provides succinct information about some of the stakeholders in the areas. It is not a comprehensive list due to the diverse characteristics and large field of activities in the areas. This is also valid also for the villages in the areas.

Five of the 6 pilot areas, Fethiye-Göcek, Köyceğiz-Dalyan, Datça-Bozburun, Gökova and Foça are special areas under EPASA. Only Ayvalık and its islands have a different conservation status, that of a "Nature Park".

## 2.1 Environmental Protection Agency for Special Areas (EPASA)

EPASA is part of the Ministry of Environment and Forestry (MoEF) and is headquartered in Ankara. Based on "The Convention for Protecting the Mediterranean Against Pollution", signed in

<sup>2</sup> For details on the major categories of stakeholders and their involvement please refer to Table 4, p. 16 UNDP Project Document. <http://www.undp.org.tr/Gozlem2.aspx?WebSayfaNo=2193>

Barcelona in 1976, The Authority was temporarily established on 12 June 1988 by the Decree of Cabinet of Ministers (number of decision: 88-13019). EPASA was officially established on November 13, 1989 by the Decree Having the Force of Law (decision number: 383, published in Official Gazette no: 20341) pursuant to related protocol and to the article 9 of the Turkish Law of Environment no: 2872. This Decree granted the Cabinet of Ministers the power to determine and declare Special Environmental Protection Areas (SEPAs), and make the necessary regulations at sites which possess ecological value and which are threatened by environmental pollution and corruption; and also taking on measures needed to pass on areas of natural beauty to further generations. According to this Law, The Cabinet of Ministers also has the force to define the principles for the preservation of these sites and decide which ministry will conduct the plans and projects within the areas.

With Decree No: 383 “the authorities and the tasks for protecting environmental values of the areas, for taking all measures to solve the present environmental problems, for defining the principles for the preservation and usage of these areas, for developing the municipal construction plans of all scales within the area and also for approving these plans” are given to EPASA.

EPASA, which had been linked to the Prime Minister’s office from the very outset, was linked to the Ministry of Environment which was established on 21 August 1991 by the Decree Having the Force of Law ( number of decision 444/KHK). EPASA was linked to the Ministry of Environment and Forestry after these two Ministries were merged on May 1, 2003 (Law no: 4856). Environmental Protection Agency for Special Areas has been carrying its operations as a public institution and has a special budget.

The aim of EPASA is to:

- Protect areas of natural beauty, historical and cultural sources, biological diversity and, living and non-living entities both underwater and above-water;
- Pass these values onto future generations;

- Promote sustainable regional development; and. make society aware of environmental values.

The objectives of EPASA are to:

- Set the balance between protection and usage;
- Protect the limited and fruitful agricultural sites and qualified forest sites;
- Prevent underground and above ground water pollution;
- Protect wetland sites against extinction;
- Make the regions be used in an organized way;
- Improve the environmental infrastructure of the settlements in the regions; and
- Support economic sectors such as agriculture, tourism and fishery so that they do not harm the natural balance.

An important difference between SEPAs and other protected areas is that management authority within SEPAs is shared with many of the national and sub-national authorities that have responsibilities within the coastal zone (UNDP 2009).

## 2.2 The Ministry of Environment and Forestry (MoEF)

The Ministry of Environment and the Ministry of Forestry have merged under the Ministry of Environment and Forestry (MoEF) with the Law on Establishment and Duties of Ministry of Environment and Forestry No. 4856 (Official Gazette 2003). The main responsibilities of the MoEF are as follows:

- Protecting and improving environment,
- Using and protecting land and natural resources with the most appropriate and efficient way in urban and rural areas,
- Protecting and developing the flora and fauna and natural heritage of the country,
- Protecting every type of environmental protection,

- Protecting and developing forests and enlargement of forest areas,
- Helping development of villagers living in or near forests and to take the necessary precautions for this purpose,
- Meeting the requirement for forest products and developing of forest products industries.

## 2.3 General Directorate of Forestry

The General Directorate of Forestry, which acts under the Ministry of Environment and Forestry, is responsible for developing policies and regulations to ensure that forests and forest resources in Turkey are conserved and used in a sustainable manner. The Directorate's range of responsibilities include protection of Turkey's forests, management

of protected areas and national parks, forest management planning, silviculture, production and marketing of forestry products, afforestation and erosion control, and forest-village relations.

The Forest Law No. 3116 enacted in 1937 made first legal definition of forest and introduced the first set of forest policies in Turkey. The Forest Act has been subject to many amendments until the preparation of the new Forest Law (No 6831) in 1956. This Law has been under implementation since then, with numerous amendments. Forest and village relations are managed under the General Directorate of Forest-Village Relations (ORKÖY) explained in depth below. In some of the study areas, forest villages fall within SEPA boundaries which could imply EPASA's collaboration with the General Directorate of Forestry.

### Box 1. Forest Village Relations – ORKÖY

Forest resources provide vital socio-economic contributions especially for local communities, which comprise around 7-8 million people living over 20,000 forest villages in Turkey. Almost all energy needs of such communities are provided as fuel wood at highly subsidized prices from the state forests. In addition, significant amount of wood volumes are illicitly cut and utilized by the forest village dwellers. Timber needs of forest villagers are also provided at subsidized prices from the state forests which is around 400 000 m3 annually. Non Timber Forest Products (NTFPs) produced from forest areas also provide some important contributions to family diet and cash income to household budget in forest regions. Fodder provided by free grazing and by cutting and carrying away for winter feeding is by far the most important NTFP for the forest region communities for which livestock is one of the main source of income especially in remote mountainous areas

Based on the Constitution item 170, ORKÖY was founded with the aim of contributing to the economic, social and cultural development of rural people who live within or nearby forest areas to minimize their adverse effects on forests. The ORKÖY is financed through the sale of land excluded from forest by 2/B, 3 % of the revenues from wood sales, 3 % of the total amount of the projects of allocations and rentals from forest land, 10 % of the net profit of the forest districts and from other sources such as donations, credit interest returns etc.

The contributions of ORKÖY is generally categorized as 1) donation to village legal entity 2) low interest credits for social needs (841.171 units proposed) 3) low interest credits to individuals for economic investments 4) training services.

In terms of concept and methods applied ORKÖY used to be one of the success stories of Forestry in Turkey, but the effects of ORKÖY has been gradually declining. For the last decade for example, the annual average budget used for contributions was about 20-25 million US\$ which is far from the amount expected by villagers.

GDF's yearly contribution however is around 400 million US\$ including the wages and salaries paid for forest villages for employment. In 2003, for example, GDF has paid 150 million \$ for harvesting operations, 98 million \$ for other type employment, 84 million \$ for subventions (wood sales on low price), 75 million \$ for forest fire suppression teams (all composed of forest villages).

Besides, around 15.000 ton of NTFPs are collected by villagers at very low prices (yearly export value of these products is estimated to be over 100 million \$).

Contribution of forest sector from other activities such as plantation, nursery, protected areas, wild-life and game (through wages and others means) are not added here because of the lack of data. For the next 20 years it is expected that the contribution of GDF will continue at the same level, ORKÖY is likely to be downsized and integrated to the General Directorate of Rural Development, in either case the contribution of ORKÖY is not thought to be less than present level which is already low.

Source: Interview and webpage of ORKÖY (<http://www.ogm.gov.tr/english/FVillage.htm>)

## 2.4 General Directorate of Nature Conservation and National Parks (GDNCNP)

General Directorate of Nature Conservation and National Parks (GDNCNP) is responsible for the selection, designation, planning, conservation, and management of national parks, nature parks, natural monuments, and nature reserve areas under the provisions of the National Parks Law No. 2863. The GDNCNP manages each protected area through the regulations of its “long term development plan” (management plan) through a network of Park Directorates. The Directorate is also responsible for the conservation of game and wildlife species within their natural habitats by making necessary decisions on hunting control throughout the country.

The first national park in Turkey was established in 1958. Since then 39 national parks have been established. Some of these parks were initially established for archaeological and historical purposes but are at the same time rich habitats where biological diversity is being protected. Among the project’s 6 pilot areas, Ayvalık Islands Nature Park is the only site that is not under EPASA’s jurisdiction but rather the GDNCNP’s. In order to determine the activities in the park, a “Long Term Development Plan” (see Appendix II) has been developed according to Law No. 2873, which entered into force on 12.02.2004 for Ayvalık MCPA.

Unlike other governmental institutions, the GDNCNP can appoint field guides in the parks. The selection of the field guides, their training, the regulations concerning their works’ procedures and principles are laid out by law (Official Gazette, 2010).

## 2.5 Ministry of Agriculture and Rural Affairs (MARA)

The Turkish Ministry of Agriculture and Rural Affairs is the main authority responsible for agricultural production systems, from its regulation to practice.

The Departments of MARA consist of the following:

- General Directorate of Agricultural Enterprises (TIGEM);

- General Directorate of Agricultural Production and Development (TÜGEM);
- General Directorate of Protection and Control (KKGM);
- General Directorate of Organisation and Support (TEDGEM);
- General Directorate of Agricultural Researches (TAGEM);
- Provincial Directorates of Agriculture (in 81 provinces in Turkey).

With five general directorates and 81 provincial agricultural directorates and related directorates in each city, MARA directs agricultural production in Turkey. For example, TIGEM was established to provide the basic services and support for agriculture and agricultural industries. It is expected to carry out these activities following market-oriented principles and make a profit. It specialises in the provision of agricultural training and education to cooperative members. The routine programme of TEDGEM includes the organisation of cooperative activities and services, training of women in agriculture, and the improvement of the relationship between researchers, extension specialists and farmers. Although agricultural extension services are provided mostly by state organisations, the effectiveness of the state extension services has been impaired because of limited budget, low staff motivation and a reduction in the number of extension specialists within MARA.

MARA has an important role in fisheries. The Directorate of Protection and Control is responsible for the formulation of policies, development and management of the fisheries sector. This includes improving resource management and control, promoting efficient resource utilization and collecting and managing information relevant to fisheries resources.

## 2.6 Ministry of Culture and Tourism (MoCT)

The roles and responsibilities given to the Ministry of Culture and Tourism are quite vast and diverse, including policy work, monitoring and evaluation, human resources development, licensing, tourism attraction development and impact

assessments. This is formulated under Law No: 2634 which comprises provisions governing the tourism sector, including definitions of cultural and tourism preservation and development regions, tourism areas and tourism centres and means of establishment and development of such regions, areas and centres and of encouragement, regulation and inspection of tourism investments and facilities.

There are also Tourism and Infrastructure Unions that are being established in all the areas. These are published in the Official Gazette dated 03.01.2008 and numbered 26745 2007 / 13030 dated 5355 by the Council of Ministers of Local Government Associations Act No. 4. For example, one of these is named MARTAB (Marmaris Turizm Alanı Altyapı Hizmet Birliği- Marmaris Tourism Area Infrastructure Service Union) which covers the area not only in Marmaris but also from Gökova to Bozburun. MARTAB covers Marmaris, Armutalan, İçmeler, Beldibi, Gökova, Akyaka, Turunç, Bozburun municipalities as well as 15 villages. One of the aims of this union is to cooperate in national and international projects to designate the tourism policies and long term projects for sustainable tourism beside the domestic and international promotional activities. MARTAB acts as an public entity within its designated area of law, works together with local administrators, bureaucrats and representatives of the tourism sector to ensure realistic and permanent solutions to problems. MARTAB, providing these services will get its sanctioning power from Association of Local Authority Law No. 5355, revenues with the guarantee of same law along with contribution fees coming from the Special Provincial Administration which is a natural member of the Association Assembly, Municipalities, Village Headmen, certified touristic facilities, and the touristic facilities and businesses which are not members of the Association but within the borders of its area. The contribution fees are collected from all businesses in the region, local authorities and Special Provincial Administration with the reasons mentioned in the specified law.

Besides the above Ministries, there are other collaborating agencies, listed below.

## 2.7 Turkish Coast Guard Command

The mission of the Turkish Coast Guard Command is to enforce national and international laws and to ensure the safety of life and property within its area of maritime jurisdiction.

As a law enforcing armed force, the Turkish Coast Guard Command is responsible to the Ministry of Internal Affairs in terms of assigned duties and operations along the Turkish coastline, internal waters such as the Marmara Sea, İstanbul and Çanakkale Straits, seaports, bays, territorial waters, exclusive economic zones and all maritime areas that are under Turkish sovereignty and control in accordance with the national and international laws. Primary duties assigned by the Law (No: 2692) to the Coast Guard Command, as a law enforcement agency which has responsibility and authority over the sea, are as follows:

- to protect and provide the security in maritime jurisdiction areas of Turkey,
- to provide the safety of life and property at sea.
- to take necessary measures for untethered mines, explosives and suspicious material identified in the sea and on the coast and report them to the authorities concerned.
- to observe and inspect the operating conditions of the aids-to-navigation and report the deficiencies observed to the authorities concerned,
- to disarm the refugees entering into our territorial waters and deliver them to the authorities concerned.
- to prevent all kinds of smuggling carried out by way of the sea.
- to prevent the actions of the vessels and sea craft in violation of the laws on radio hygiene, passport, anchoring, mooring, fishing, diving and hoisting the flag.
- to inspect the fishing of aquatic products,
- to conduct inspections in order to prevent the marine pollution.
- to prevent the smuggling of antiquities by conducting inspections on diving activities.

- to perform search and rescue missions within the search and rescue area of Turkey, in conformity with the International Search and Rescue Convention and National Search and Rescue Regulations.
- to inspect the yacht tourism,
- to participate in the operations conducted for homeland security under the command of the Naval Forces, when necessary.

## 2.8 Chamber of Maritime Trade

Turkish Chamber of Maritime Trade is an important professional institution of the Turkish maritime sector established with a view to improving the maritime business for the public benefit in compliance with the national transportation and maritime policies as well as to meeting the mutual needs and ensuring the further development of this line of business.

The most important aim of the Turkish Chamber of Maritime Trade is to try to develop shipping in accordance with the national transportation and shipping policy and the public interest. Moreover, to promote the interests and provide the common requirements of its members, to arrange the development of the profession, to guide and facilitate the professional activities, to establish common rules and to inform the authorities on shipping matters and to keep the discipline, morals and solidarity of the shipping profession are the other major concerns.

The major activities of Turkish Chamber of Maritime Trade are to establish rules and practices as regards shipping, to undertake research and collect information on shipping, to ensure that sea trade is developing in accordance with the national policy of transportation, to supply information to foreign organizations on the possibilities and tariffs of the Turkish ports, to become members of and to follow activities of the international organizations concerned with shipping and to perform other functions stated in the law.

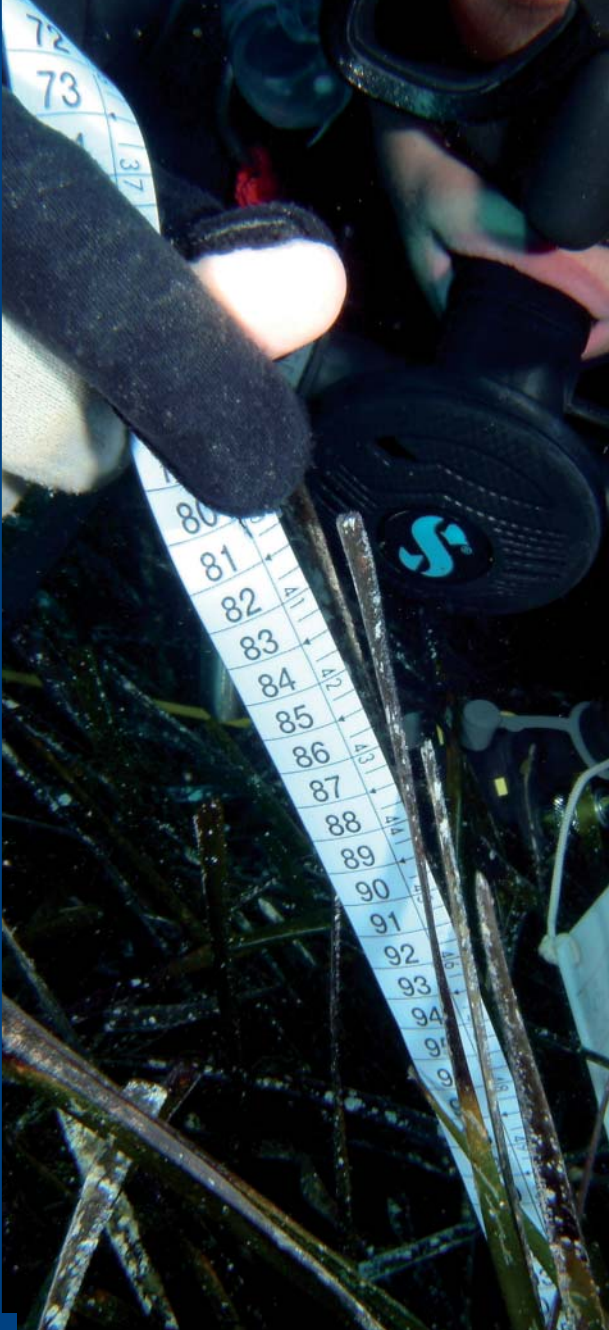
Among the members of the Turkish Chamber of Maritime Trade are; shipowners, ship operators, shipping agents, ship sale and purchase brokers, forwarders, stevedores, tally firms, classification societies, marine insurance companies, underwriters, marine surveyors and experts, auxiliary services such as salvage, rescue, pilotage, dredging and yachting and also ship chandlers and suppliers, port, marina operators, ship-yacht builders and shipyards, ship-yacht equipment and repair services, maritime training companies, sand extractors and fishermen.

## 2.9 Development Agencies

In recent years, development agencies, tied to the national State Development Agency, have started operating in different regions and provinces of Turkey. Objectives of the Agencies can be listed as the improvement of the cooperation among public sector, private sector and NGO's; ensuring effective usage of resources; stimulating local potential; fostering regional development and ensuring its sustainability; and decreasing the inter-regional development disparities. For example, İzmir Development Agency (İZKA) has been established by the Cabinet decision published in the Official Gazette no.26220 dated 6th of June 2006 in accordance with the Law on the Establishment, Coordination and Tasks of the Development Agencies no.5449 dated 25th of January 2006.

Fethiye-Göcek, Köyceğiz-Dalyan, Datça-Bozburun, Gökova are under Muğla province which belongs to Southern Aegean Development Agency. For Muğla, the province's strengths, weaknesses, opportunities and threats (SWOT) analysis was prepared by Southern Aegean Development Agency (GEKA) in Muğla in August, 2010. (This is provided in Appendix III-1) Ayvalık is under Southern Marmara Development Agency. These agencies are comparatively new to İzmir Development Agency (for Foça) which is one of the first agencies in Turkey (İZKA also prepared SWOT Analysis for different sector in Foça-Appendix III-2).

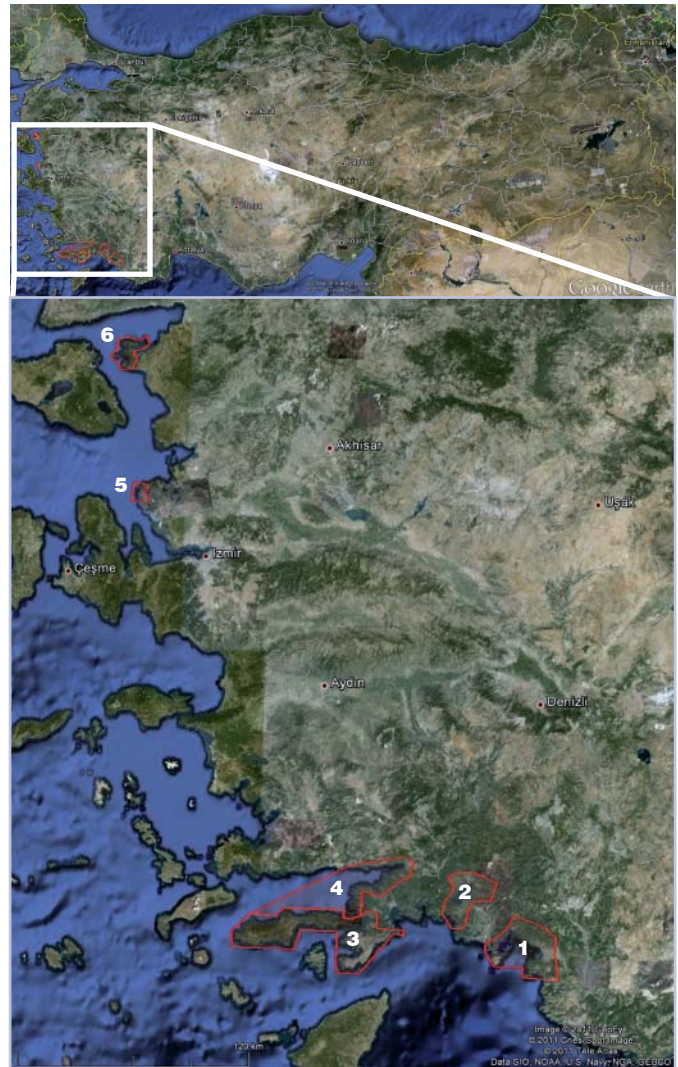
## INFORMATION ABOUT THE SIX AREAS



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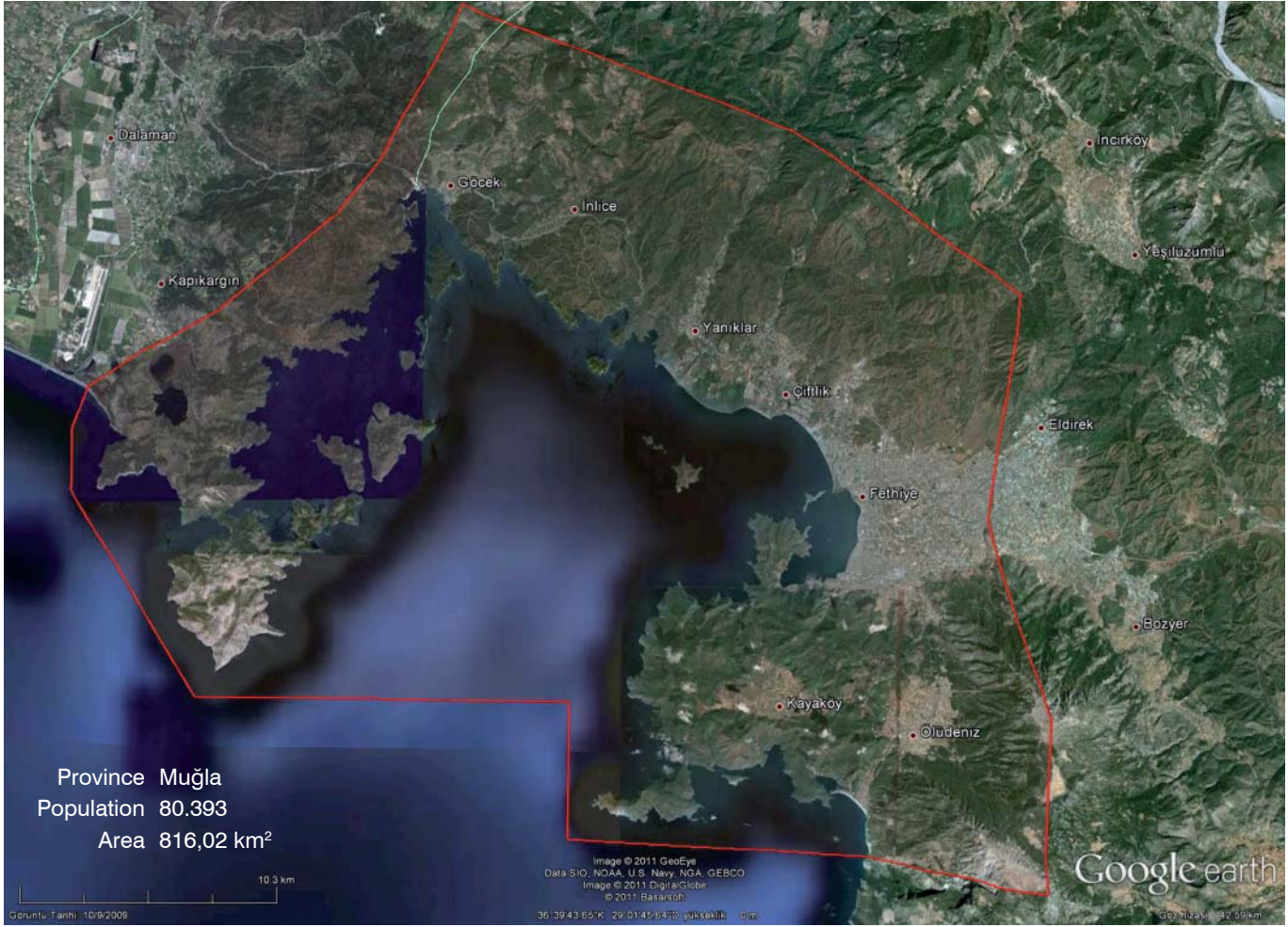
This chapter provides a brief overview of the project's pilot areas highlighting the ecological features and conservation priorities at each site as well as the current socio-economic baseline. Unless otherwise indicated with references, the general information pertaining to these areas has been taken from EPASA and MoFE's internet sites. It should be noted again that Ayvalık Islands Nature Park is the only area that is not under EPASA's control. Map 1 below shows the location of the project sites.

1. Fethiye-Göcek
2. Köyceğiz-Dalyan
3. Datça-Bozburun
4. Gökova
5. Foça
6. Ayvalık Islands



Map 1. Project implementation sites

### 3.1 FETHİYE - GÖCEK SEPA



**Map 2.** Boundaries of Fethiye-Göcek SEPA (source: EPASA)

#### Conservation Status

Determined and declared SEPA by the Decree of Cabinet of Ministers number 88/13019 on 12.06.1988.

#### Location

Fethiye-Göcek SEPA consists of Muğla, Fethiye town and 6 sub-districts and 6 villages. Fethiye-Göcek SEPA is located on the borders of the Mediterranean approximately 120 km away from the southeast part of Muğla city. It is situated in the outskirts of Mendos Mountain, in the east coast of the inlet. Fethiye town, which is in the West of Teke Peninsula, is surrounded by Köyceğiz Town in the northwest, Denizli and Burdur in the North and Antalya in the East.

#### Historical and Archeological background

It is assumed that Fethiye was first founded in the 16th century B.C. Fethiye, captured by Perikles in 362 B.C., was then conquered by Alexander in 130 B.C., and was annexed by Byzantine Empire in 130 B.C. and in 395 A.D. it stayed in Byzantine Empire. After Malazgirt War it was annexed to the Seljuk Empire. It was seized by Kemenos in the 1st Crusade, by Menteşe Bey in 1286 and in 1390 by Yıldırım Beyazıt.

There are ruins belonging to Hellenistic and Roman Ages in the coastal parts of the town. The ancient wall ruins of Ancient Telmessus Theatre and Algerian Mosque belonging to Ottoman Period are among the significant historical pieces.



## Geographic Features

The South coast of the area is covered with steep mountains that rise abruptly. The mass filling the Eşen Basin and subsidence extending to the land after Fethiye Bay and also covering Fethiye town is named as Babadağ and stretches along the coastline covered with forests. The intense tectonic movements through the end of the 3rd tectonic movement stage and in the 4th tectonic stage led to the occurrence of subsidence and elevations, and new bays and headlands. As a result of subsidence the valleys formed by watercourses were filled with sea water and they turned into intermediary and tributary valleys, bays and inlets extending greatly into the land.

In the region, there are bays and inlets along the coastline. The best example for this is Göcek Bay. Ölü Deniz Lagoon (Blue Lagoon) in Belceğiz Village has a tranquil landscape. Some of the bays that are worth seeing are Turunç Pınarı Bay, Kalemya Bay, Samanlık and Boncuklu Bays. All of the islands, small and big, extending to the West and Northwest of Fethiye Inlet are called Oniki Adalar (Twelve Islands). The major ones are; Şövalye (Chevalier) Island, Tersane (Shipyard) Island, Kızıl (Red) Island, Katrancı Island, Delikli Islands, Kızlanada, Hacı Halil Island, Yassıca Island and Domuz (Pig) Island.

## Climate

The region has a typical Mediterranean Climate. The main characteristics of the climate in the region are hot and dry summers and mild winters. The average temperatures in the region, which is in the hottest climate zone for Turkey, are rather high. The Mediterranean type climate characteristics can be experienced until 600-meter altitude. The average temperature is around 30°C. Due to the geographical position of the area (mountains' extending vertically to the

sea), the interiors receive more rainfall than the coasts. Humidity is lower than other coast towns.

## Ecological Features

The flora of the region consists of shrubs on the coast and conifer forests in the high lands. These forests are Black Pine (*Pinus nigra*), Red Pine (*Pinus brutia*) and Cedar (*Cedrus sp.*) forests. There are brushes, olive groves, oak groves and citrus on the coasts. Moreover, Oriental Sweetgum (*Liquidambar orientalis*) is one of the endemic species growing in streams, deltas and in the places where base water level is high. Sweetgum oil, obtained from oriental sweetgum trees, is used in cosmetic and pharmacologic industry. Important shrub tree species in the region are oaks, wild olives, wild pears, sandal, *P. Latifolia*, Pistachio terebinthus, carob, laurel, Chasteberry, Sweet Broom, China Berry, Arceuthos drupacea, willow, acacia, sumac, Caryophyllaceae. Oriental plane, poplar and alder are abundant along the streams and watercourses.

Important herbs of the region are catkins, thistles, efek, reed canary grass, Common couch grass, purple nut sedge, lambs quarters, wild oat, pennyroyal, sage, Orchis coriophora, bağdibi, sea urchin, *Atractylis gummifera*, and burdock.

Out of the 5 sea turtle species represented in the Mediterranean basin, 3 species (*Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*) are identified in the waters of Turkey. One of the nestling and reproduction areas for *Caretta caretta*, and *Chelonia mydas* species, which are protected under Bern Convention and CITES, is Fethiye Beach.

## Socio-Economic Baseline

Based on 2009 census, the relevant districts and villages that fall within the



Fethiye-Göcek SEPA have a total population of 102.109 people of which 51% is men and 49% women (Turkish Statistical Institute -TSI, 2010). (See Table 1 and 2)

**Table 1.** Fethiye – Göcek SEPA Regional Population (2009)

	TOTAL	MAN	WOMAN
Fethiye Merkez	72.003	36.225	35.778
Çamköy	3.940	2.027	1.913
Çiftlik	2.620	1.358	1.262
Göcek	4.039	2.118	1.921
Karaçulha	12.794	6.452	6.342
Ölüdeniz	4.532	2.383	2.149
Gökçeovacık	380	191	189
İnlice	830	431	399
Kargı	1.501	726	775
Kayaköy	680	351	329
Keçiler	193	99	94
Yanıklar	1.791	891	900
<b>TOTAL</b>	<b>105.303</b>	<b>53.252</b>	<b>52.051</b>

Source: Fethiye – Göcek Özel Çevre Koruma Bölgesi Sosyo-Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 2.** Fethiye – Göcek SEPA Population Distribution According to Years (1970-2009)

	1970	1975	1980	1985	1990	2000	2007	2008	2009
Fethiye Merkez	10.627	12.700	14.294	21.442	25.783	50.689	66.271	68.285	72.003
Çamköy	422	864	1.102	1.785	2.169	2.980	3.891	3.977	3.940
Çiftlik	**	**	**	**	1.022	2.005	2.217	2.720	2.620
Göcek	1.862	2.120	2.103	2.166	2.914	4.005	3.625	4.021	4.039
Karaçulha	3.317	4.123	4.477	5.291	5.656	8.574	13.063	13.114	12.794
Ölüdeniz	962*	1033*	956*	1241*	2527*	5.600	2.974	4.707	4.532
Gökçeovacık	445	382	360	375	334	356	334	377	380
İnlice	474	565	614	718	737	695	815	840	830
Kargı	871	962	1.272	1.587	1.110	1.163	1.431	1.426	1.501
Kayaköy	536	529	531	521	584	1.524	641	682	680
Keçiler	168	182	201	189	205	204	157	154	193
Yanıklar	985	1.143	1.200	1.240	1.470	2.598	1.792	1.806	1.791
<b>TOTAL</b>	<b>19.707</b>	<b>23.570</b>	<b>26.154</b>	<b>35.314</b>	<b>41.984</b>	<b>80.393</b>	<b>97.211</b>	<b>102.109</b>	<b>105.303</b>

Source: Fethiye – Göcek Özel Çevre Koruma Bölgesi Sosyo – Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

23 % of the total population of Muğla live in Fethiye. According to 2009 Population Census, city population increased to %39,4 in 2009 from %37,6 in 2008. On the other hand village population

decreased to %60,6 compared to %62,4 in 2008. (Fethiye Socio Economic Report, 2010). Education information in Fethiye is given in Table 3.

**Table 3.** Education Information in Fethiye 2009

		Ages	Sexes	Illiterate	Literate without schooling	Grad. Elementary School	Grad. (1-8 grades)	Grad. Middle School	Grad. High School	Grad. University	Grad. Masters	Grad. Doctorate
6-13	Man	3	11.683		232						38	11.956
	Woman	2	10.945		305						40	11.292
14-17	Man	14	475		5.266		33				89	5.877
	Woman	15	364		4.964		79				91	5.513
18-21	Man	24	80		1.580		1.937	83			245	3.949
	Woman	37	139		1.782		2.241	164			361	4.724
22-24	Man	23	51	534	845		1.288	321	1		778	3.841
	Woman	48	72	1.193	688		1.233	434	1		267	3.936
25-29	Man	45	75	2.582	509	618	1.887	741	25		979	7.461
	Woman	96	105	3.642	275	334	1.544	824	46		429	7.295
30-34	Man	56	81	3.861	123	554	1.666	901	23	3	619	7.887
	Woman	109	94	4.474	57	278	1.323	811	30	2	322	7.500
35-39	Man	72	79	4.928	48	598	1.227	801	27	7	368	8.155
	Woman	213	129	5.091	36	353	866	627	24	6	287	7.632
40-44	Man	53	59	4.647	31	578	920	738	32	11	242	7.311
	Woman	343	126	4.437	16	340	682	526	15	1	277	6.763
45-49	Man	68	58	4.170	11	504	1.028	688	17	6	314	6.864
	Woman	410	224	4.098	3	238	685	424	12	3	335	6.432
50-54	Man	67	58	3.206	3	296	632	669	13	3	323	5.270
	Woman	442	242	3.108	2	149	423	352	11	1	307	5.037
55-59	Man	62	81	2.557	2	247	378	532	13	9	258	4.139
	Woman	535	258	2.550		111	204	207	4	2	277	4.148
60-64	Man	80	90	2.166	1	174	201	345	4	5	221	3.287
	Woman	650	322	1.899		73	128	123	5		193	3.393
65 +	Man	648	688	4.685		192	250	278	12	4	354	7.111
	Woman	3.449	993	3.053		92	118	65	1	4	512	8.287
Total		7.564	27.571	66.881	16.779	5.729	20.973	10.654	316	67	8.526	165.060

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

Literacy rate is 95,5% for the district with, 66,881 of the residents having graduated from primary school, 9.526 from highschool and 6,7 % from university ((Fethiye Socio Economic Report, 2010). According to the same study, 8.400 people were employed in Fethiye in 2000. (6% in agriculture, 30% small-scale industries such as food, machinery, construction, energy sectors and

64% in commerce, tourism, communication etc. sectors.)

In a recent study conducted for EPASA, information about population, residence numbers, public buildings, infrastructure and income sources are provided as Socio Economic Structures given in Tables 4 and 5.

**Table 4.** Fethiye - Göcek Socio-Economic Structure Summary

	Place	2009 Population	Residences	Public Buildings	Infrastructure	Income Sources
	Gökçeovacık	380	120	Mukhtar, Mosque, House of Health, Transported Education	There is drinking water network. No sewer	Limited Agricultural Activity (Olive-Bee), Wage Labor, Tourism
	İnlince	830	290	Mukhtar Primary School (1-8 Year), Mosque	There is drinking water network. No sewer	Tourism Labour, Partial Agriculture
Village	Kargı	1501	400	Mukhtar, Mosque, Primary School Building	There is drinking water network. No sewer	Greenhouse and Citrus, Tourism-pensions
	Yanıklar	1791	962	Mukhtar, a mosque, school, health center	There is drinking water network (not enough in summer). No sewer	Farming-Green housing, tourism, fish production
	Kayaköy	680	250	Mukhtar, Health House	There is drinking water network. No sewer	Tourism, Partial Agriculture
	Keçiler	193	120	Mosque, Transported Education	There is drinking water network. No sewer	Tourism, Agriculture

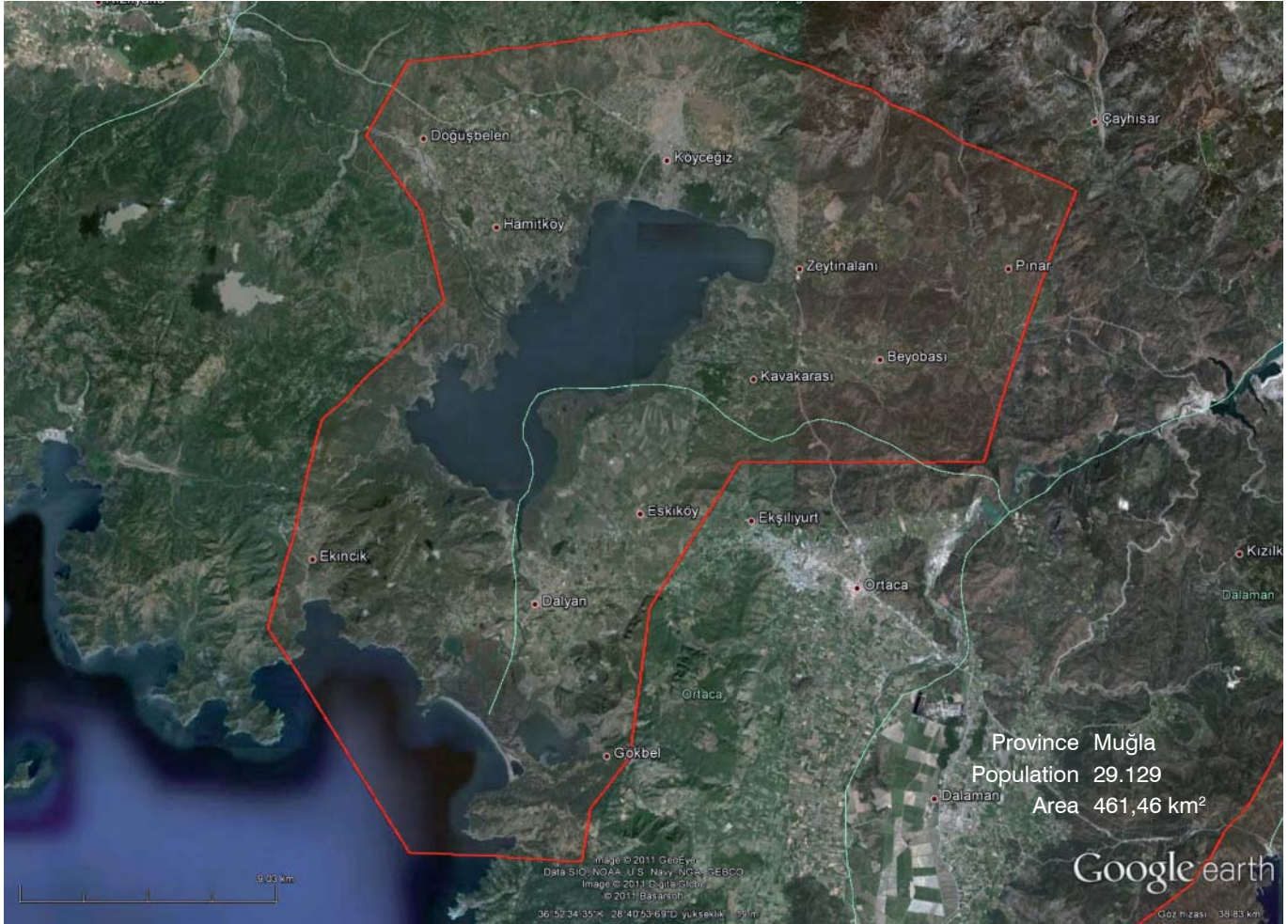
Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 5.** Fethiye - Göcek SEPA Municipality Residential Socio-Economic Structure Summary

	Place	2009 Population	Residences	Public Buildings	Infrastructure	Income Sources
Town- Belde	Fethiye Merkez	72.003	20572	Office of the governor and the mayor-related public institutions, public institutions under the Ministry of Home Affairs, other ministries and autonomous public institutions, offices, courthouse	Drinking water and sewage system available. Port is available as well as wastewater treatment system	Tourism, Agriculture, Commerce, Construction, Service Industry, Shipping
	Ölüdeniz	4532	1300	Municipality, 1 primary school, 1 health center, 4 Mosques	Sewer is lacking, Water Network is lacking	Tourism
	Karaçulha	12794	3973	Municipality, the vegetable market, 6 Primary School, 2 High School, Vocational High School, 6 Mosques, Health Center	No sewage, drinking water network is available	Agriculture, Greenhouse
	Çamköy	3940	1500	Municipal, School, 5 Mosques, Health Unit	No sewage, drinking water network is available	Greenhouse
	Çiftlik	2620	1120	Primary School, 2 Mosques, Municipality, Health Unit	No sewage, drinking water network is regenerated	Agriculture, Tourism
	Göcek	4039	2200	Municipality, 2 Mosques, Health Center, the Gendarmerie, Primary School, High School	Sewage, drinking water network is available	Tourism

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

### 3.2 KÖYCEĞİZ - DALYAN SEPA



**Map 3.** Köyceğiz-Dalyan SEPA boundaries(source: EPASA)

#### Conservation Status

Determined and declared SEPA by the Decree of Cabinet of Ministers number 88/13019 on 12.06.1988.

#### Location

Köyceğiz-Dalyan SEPA consists of Köyceğiz town, 4 sub-districts and 13 villages annexed to it in Muğla province. Köyceğiz is 75 km away from Muğla town center.

#### Historical and Archeological background

Current Muğla is the area which was called Caria in the ancient period. Starting from the 8<sup>th</sup> century B.C. Caria was dominated by Hellenistic, Lydian, Persian, Egyptian, Syrian, Bergamo and Byzantine civilizations respectively. It was added to Menteşe Principality in 1425 and to the Ottoman Empire in 1535.

**Table 6.** Socio Economic Indicators

	KÖYCEĞİZ	ORTACA
Population	29 196	35 670
Urbanization rate (%)	25,77	47,44
Population Growth Rate (%o)	12,22	19,71
Population Density	18	121
Population Density Ratio (%)	52,82	43,15
Average Household Size	3,81	3,51
Agriculture Sector Employees Ratio (%)	71,80	54,21
Industry Sector Employees Ratio (%)	3,16	5,04
Services Sector Employees Ratio (%)	25,04	40,75
Unemployment rate (%)	3,05	7,37
Ratio of literates (%)	89,65	92,01
Infant Mortality Rate (%)	39,58	36,12
Per Capita Income (YTL)	92 997	109 628
Share of Tax Revenues(%)	0,01414	0,02410
Share of Agricultural Production (%)	0,11266	0,15998

Source: Köyceğiz Dalyan SEPA Management Plan Final Report 2007

## Geographic features

The area is composed of terrestrial structures of various qualities around Köyceğiz Subsidence Lake. The lake is surrounded with plains in the northeast and southeast and hilly areas in other parts. The area between the Köyceğiz Lake and the sea is covered with 4 small lakes and numerous canals. The coastline consists of a 4.5 km-long coast arrow. In the south of the Köyceğiz Lake there is a fault line stretching along a northwest-southeast direction. Along the fault are various thermal water springs called Sultaniye, Çavuş (Rıza Çavuş) and Gel Girme (Kokar Girme).

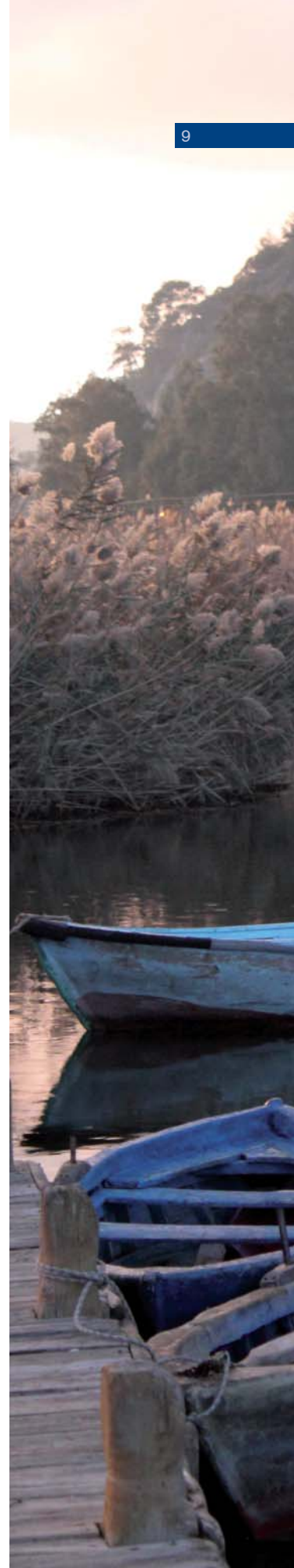
The dominant vegetation in Köyceğiz Special Environmental Protection Area consists of red pine and sweet gum forests, bushes and brush woods belonging to shrubs and “frigana” family; furthermore, the areas around the Köyceğiz Lake

are covered with grassy plants growing in wet and barren areas. Sand dune vegetation is dominant on the coast.

## Ecological features

The coastal sandunes are one of the most important reproduction areas for Mediterranean sea turtles (*Caretta caretta*). The turtles use İztuzu Beach as a reproduction area, and are protected as they are a highly threatened species facing extinction. The surroundings of the lake, canals and forests provide reproduction and sheltering places for other animals as well.

Various bird species such as Coot, Stark, White-breasted Kingfisher, Sparrow, Reed Warbler, The gull-billed tern, Short-toed Eagle, Bee Eater, Sea Gull, Glossy Ibis, and Little Egret use the area for wintering and incubation.





Dalyan and Köyceğiz, which are completely vulnerable, are of great natural, historical and ecological value. Dalyan is also a settlement where tourism investments are high. The Köyceğiz Lake, rivers, Dalyan Canal, Dalyan mouth and the sea are vulnerable in terms of pollution.

The expansion of Köyceğiz and Dalyan settlements in their development area, the intense structuring in these areas and especially soft tourism, traditional production, boarder house keeping, farm tourism, the recreational use of the Köyceğiz Lake, the improvement of spa tourism, protection of citrus protection are taken into consideration and planning decisions have been developed supporting these issues. An ideal project model has been developed in order to protect the sea turtles and their reproduction area in Dalyan

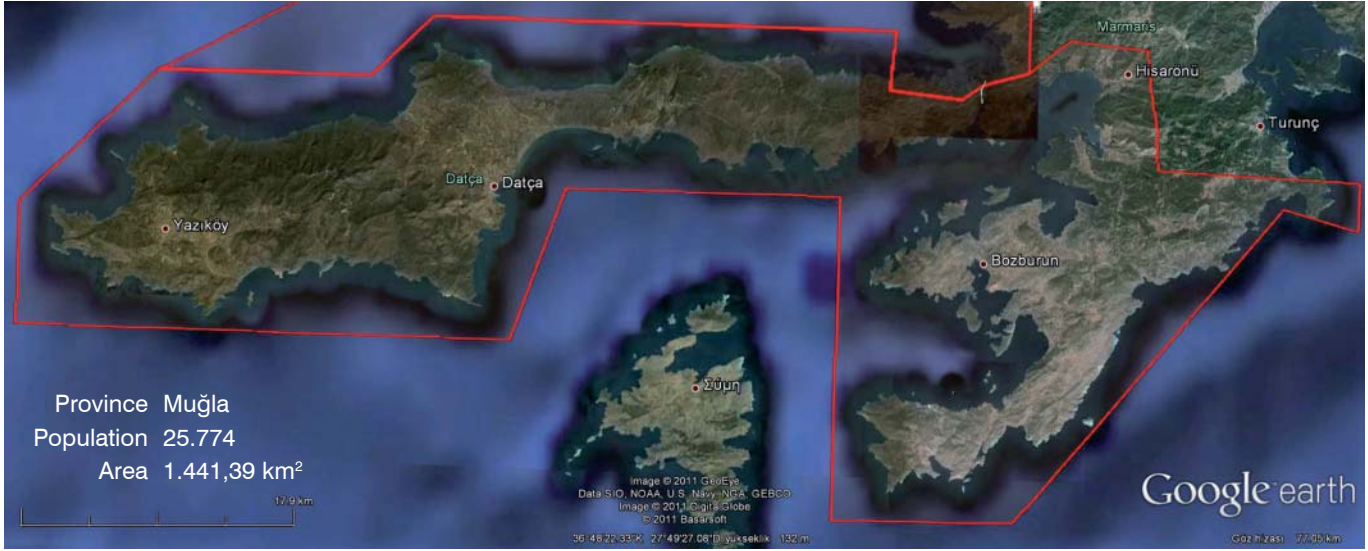
mouth / İztuzu location. Because the sea and the sand in the area are also intensely used by people, the project has suggested that the area be used by people in day time and by turtles at night. The areas out of the settlements, namely natural areas, sweet gum forests, reed areas on the banks of the lake and sand dunes, are under protection.

### **Socio-economic Baseline**

Based on 2009 census, the relevant districts and villages that fall within the Köyceğiz-Dalyan SEPA have a total population of 31.465 people which is equally distributed between women and men (TSI, 2010). Unemployment rate is 4,3%. Literacy rate is 98% for the town and villages. Socio Economic Indicators are provided in Table 6 for Köyceğiz and Ortaca Towns.



### 3.3 DATÇA-BOZBURUN SEPA



**Map 4.** The peninsulas of Reşadiye and Bozburun makes up the Datça SEPA (source: EPASA)

#### Conservation Status

Determined and declared SEPA by the Decree of Cabinet of Ministers number 90/1117 on 22.10.1990.

#### Location

Datça-Bozburun SEPA consists of 2 sub-districts and 17 towns with Datça and Marmaris counties in Muğla. Datça is located in the Southwest of Muğla, between Gökova Bay in the North and Hisarönü Bay in the South as a 70km extension to the west, to Aegean and Mediterranean Seas.

#### Historical and Archeological Background

The peninsula is protected in terms of its archaeological, urban, natural and historical aspects that reflect the social, economic, and architectural features of their time and that are the products of various civilizations from past to the present. These aspects are scattered all over the peninsula as highlighted below.

Amos is in Bahçealtı, in the South of Turunç. The area is strewn with ruins of ancient theatres and has been declared as an archaeological site.

Laryma Not enough information is available about when and by whom the Kocaman Hisar, known as Bozukkale, was built. The area has been declared as an archaeological site.

Bybassium is situated in the interiors of Turgutlu settlement.

Patakis: This area includes Kızılada at the inlet of Bozburun Bay and the surroundings where church ruins are strewn. The area has been declared as an archaeological site.

Soronda: Tymnos and Soronda archaeological sites consist of two adjacent sites surrounding Sögüt location.

Cnidos; Cnidos, which was one of the six Dor cities of the Ancient Ages was situated on Datça Peninsula. Ancient Knidos was founded in the environs of Datça town in 7th century B.C., and it was moved to Terki in the mid-4th century B.C. The reason why it was moved might have been the highly developed sea commerce in that era. Especially wine, vinegar and olive oil were exported then. Another reason was that the harsh winds impeded the ships coming from the south to cruise around the headland. According to historian and geographer Strabon, first, the city walls were built and then the streets and houses were constructed

based on grid plan (Hippodamos plan) by terracing; temples, theatres and other official buildings were included in the plan. Cnidos was an arts, medicine and culture center in the Ancient times. Eudoksos of Cnidos (409-355 B.C.) was not only a mathematician, physicist, geographer, philosopher and astronomer, but also a law maker. It's assumed that the laws he set for the city play an effective role in transition to democracy

### Geographic features

Datça-Bozburun Peninsulas generally possess rather steep slopes and the land is stony, in bad condition and under erosion risk. Approximately, the 95% of the 47.698 hectare-land is stony. The area that can be used efficiently for agriculture is not more than 10.000 hectares. The total forest area in the region is 110.359 hectares.

### Ecological features

**Sand Dunes:** The Gebekum sand dune area, located in the southern part of Datça Peninsula, constitutes of an area of special quality on account of its flora. *Maedicago marina*, *Eryngium maritimum*, *Euphorbia paralias*, *Pancreatium maritimum* and *Alkanna tinctoria* are the dominant species in Gebekum. Apart from Gebekum, the sand dune areas in Kızıldağ, Eksera, Hisarönü Çubucak, İnbükü, Karabük Headland, Periliköşk, Hayıtbükü, Mesudiye, Hisarönü Kocakür and Söğüt areas possess similar characteristics and are of similar quality.

**Forest Land:** Forest vegetation consists of only areas where red pine (*Pinus Buritia*) is common and dominant. Uncorrupted red pine forests are of great significance in terms of quality. *Arbutus andrachne* (Sandal tree) in the North-west also compose uncorrupted woods. In Değirmen Bükü, *Cupressus sempervirens* (cypress) are common all over the rocky valley steeps. This species patches in Sındı Village and

Bozburun Peninsula and between İçmeler and Bakırköy.

Datça Palm (*Phoenix theophrasti*) grows on valley floors. This species, which has limited expansion, expand in the steeps of Eksera Stream in the North and around Azganak Hill, Karacahapıbaşı, Yarımcabaşı Hill, Kovalıca Hill, Tanışman Hill, Lindasbaşı Hill, and Andızcıl Hill in the southern coastal area. Sweetgum tree (*Liquidambar orientalis*), which is endemic in the region, is seen in seasonal stream beds and in the valley interiors.

As a result, Gebekum area, red pine woods, sandal tree expansion areas, cypress groves (*Cupressus sempervirens*), sweetgum tree areas and Datça palm trees are of great significance when the plant species are taken into consideration.

**Marine Environment:** Except for land and sea based pollution, Datça-Bozburun Marine Environment is not under the direct pressure of intense peninsula based water pollution owing to the international position of the Mediterranean Sea. The situation on the peninsula does not require waste water collection and refinement system completion for the time being. The reason why the marine environment is unpolluted is that the region is not densely populated and the peninsula is not under intense pressure from tourism.

When Datça-Bozburun ecosystems are examined in terms of rarity and when Gebekum Sand Dune, Eksera Stream and the Southern Part, Kocadağ, Emecik and Hisarönü are examined in terms of the species, the examples of rare species are as follows: sand dune plant species such as *Maedicago marina*, *Eryngium maritimum*, *Euphorbia paralias*; plant species such as cypress (*Cupressus sempervirens*), red pine (*Pinus buritita*) and sandal tree (*Arbutus andrachne*), Datça palm (*Phoenix theophrasti*) and sweetgum tree



(*Liquidambar orientalis*). As for bird species, black falcon (*Falco elenoroae*), blue falcon (*F. Peregrinus*), small kestrel (*F. Naumanni*), Bonelli's Eagle (*Hieraetus fasciatus*), island gull (*Larus audouinii*) and Common Shag (*Phalacrocorax aristotelis desmarestii*); as for mammal species, Mediterranean monk seal (*Monachus monachus*) wild goat (*Capra aegagrus*) and otter (*Lutra lutra*); as for reptiles, *Testudo graeca*.

The environment has mainly preserved its natural conditions apart from the rural and urban settlements in Datça-Bozburun, agricultural areas and the present transportation network, sea transportation. This results from the fact that until recently the transportation in Datça-Bozburun highway has been operated on a winding road of insufficient width.

Datça-Bozburun is on the migration route of species such as *Hirunda rustica* (barn swallow), *H. Daurica* (redumped swallow), *Merops apiaster* (The European bee eater), *Apus apus* (Common Swift) and *Apus melba* (Alpine Swift). The peninsula is of great significance in this sense. The important bird species in the area are *Falco elenoroae* (black falcon- KD), *F. Peregrinus* (blue falcon-KD), *F. Naumanni* (small kestrel-KD), *Hieraetus fasciatus* (Bonelli's Eagle-KD), *Larus audouinii* (island gull-KD) and *Phalacrocorax aristotelis desmarestii* (Common Shag-KD). *Monachus monachus* (Mediterranean Seal-HD) expand around Datça Peninsula. *Capra aegagrus* (wild goat-HD) in Kocadağ has the expansion on the west end in Turkey. *Lutra lutra* (Otter-HD) expands in Hisarönü. *Liquidambar orientalis* (Sweetgum tree), being relic-endemic and *Phoenix theophrasti* (Datça palm), having limited expansion are of special significance.

Because of the peninsula characteristics, there are obvious differences between the northern and the southern parts of Datça-Bozburun. In the region 167 terrestrial spineless species, 110 fish species, 4 species with "two lives", 27 reptile species, 123 bird species and 45 mammal species are identified.

## Socio-economic baseline

According to the population census in 2009, the relevant districts and villages that fall within the Datça-Bozburun SEPA have a total population of 26.507 people of which 49% is women and 51% is men. The total population of Datça town center is 10.034 (TSl, 2010). (See Tables 7 and 8) :

**Table 7.** Datça - Bozburun SEPA Regional Population (2009)

		TOTAL	MAN	WOMAN
Datça	Datça Merkez	9.958	5.194	4.764
	Cumalı	719	370	349
	Emecik	866	428	438
	Hızırşah	482	238	244
	Kara	786	398	388
	Kızlan	1.039	526	513
	Mesudiye	564	277	287
	Sındı	365	192	173
	Yaka	577	283	294
Bozburun	Yazı	545	271	274
	Bozburun Merkez	2.121	1.101	1.020
	Bayır	716	378	338
	Selimiye	1.026	522	504
	Söğüt	1.750	873	877
	Taşlıca	526	281	245
Marmaris	Turgut	627	335	292
	Hisarönü	2.129	1.109	1.020
	Orhaniye	1.058	572	486
	Osmaniye	470	236	234
<b>TOTAL</b>		<b>26.324</b>	<b>13.584</b>	<b>12.740</b>

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010



**Table 8.** Datça - Bozburun SEPA Population Distribution According to Years

		1970	1975	1980	1985	1990	2000	2007	2008	2009
Datça	Datça Merkez	1.481	2.118	2.465	2.788	5.022	8.108	8.839	10.034	9.958
	Cumalı	620	455	654	659	689	712	750	764	719
	Emecik	425	355	595	874	1028	915	884	890	866
	Hızırşah	469	395	467	453	487	473	489	470	482
	Kara	458	538	645	671	760	795	804	780	786
	Kızlan	697	726	802	832	780	849	1.009	990	1.039
	Mesudiye	581	564	530	580	517	572	547	558	564
	Sındı	349	364	394	373	364	347	378	377	365
	Yaka	444	370	418	470	511	577	559	581	577
	Yazı	570	427	562	576	583	566	577	564	545
Bozburun	Bozburun Merkez	1.026	1.111	1.219	1.353	2.357	1.909	2.273	2.170	2.121
	Bayır	570	612	657	650	563	798	709	732	716
	Selimiye	522	610	649	715	765	1.029	955	999	1.026
	Söğüt	1.204	1.324	1.316	1.512	1.570	2.383	1.720	1.746	1.750
	Taşlıca	696	663	668	643	631	483	519	531	526
	Turgut	382	431	476	421	695	601	616	642	627
Marmaris	Hisarönü	664	779	893	985	1213	3.027	2191	2.131	2.129
	Orhaniye	503	592	618	733	746	1.006	1.017	1.071	1.058
	Osmaniye	494	462	466	531	647	624	465	477	470
<b>TOTAL</b>		<b>12.155</b>	<b>12.896</b>	<b>14.494</b>	<b>15819</b>	<b>19928</b>	<b>25774</b>	<b>25.301</b>	<b>26.507</b>	<b>26.324</b>

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

Education information in Datça is given in Table 9.

**Table 9.** Education Information in Datça, 2009

Ages	Sexes	Illiterate	Literate without schooling	Grad. Elementary School	Grad.(1-8 grades)	Grad. Middle School	Grad. High School	Grad. University	Grad. Masters	Grad. Doctorate	Unknown	TOTAL
6-13	MAN		610		1						3	614
	WOMAN		518		2						1	521
14-17	MAN	1	25		232						3	261
	WOMAN	1	16		215						5	237
18-21	MAN	1	6		85		147	1			12	252
	WOMAN	5	10		53		118	4			10	200
22-24	MAN	1	1	8	30		89	17			25	171
	WOMAN	3	2	25	23		93	22			7	175
25-29	MAN	2	4	81	27	33	131	62	6		54	400
	WOMAN	7	13	99	21	30	114	76	2		30	392
30-34	MAN	3		114	1	27	140	74	5		18	382
	WOMAN	10	8	172	3	25	129	62	6		20	435
35-39	MAN	1	6	170	2	48	153	96	2		19	497
	WOMAN	8	9	181	2	25	107	61	3	1	20	417
40-44	MAN	1	3	171	2	37	93	59	3	1	32	402
	WOMAN	6	5	144	1	30	96	43	1		15	341
45-49	MAN	1	3	147	1	32	98	58	2		37	379
	WOMAN	10	4	129		21	89	53	3	1	29	339
50-54	MAN	2	3	100		44	95	67	4	1	36	352
	WOMAN	10	3	100		21	68	59	2		24	287
55-59	MAN	3	1	76		27	61	76	3	1	26	274
	WOMAN	8	5	99		26	44	53	1	1	32	269
60-64	MAN		6	91		18	44	72	4	2	25	262
	WOMAN	12	4	101		18	39	41			36	251
65 +	MAN	16	9	207		33	77	95	5	3	62	507
	WOMAN	75	25	235		33	47	39	2		54	510
	TOTAL	187	1.299	2.450	701	528	2.072	1.190	54	11	635	9.127

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010



**Table 10.** Datça Socio-Economic Structure Summary in Datça - Bozburun SEPA

Place	2009 Population*	Residences**	Public Buildings**	Infrastructure**	Income Sources**
Datça Merkez	9958	3100	Office of the governor and the associated departments of Justice, Municipal, Hospital, Primary and secondary education, vocational high school, gendarmerie, police, Port and Customs, Post Office	There are drinking water system, sewage system, but these are not enough, there is waste water treatment	Tourism, Yachting, Agriculture (almond-olive-vegetable), fisheries, bee-keeping
Cumali	719	320	Mukhtar, a mosque, gendarmerie, Health House, Primary School (1-8)	No Sewer, Septic is present, there is drinking water network, No purification	Agriculture (Olive-Almond), Bazaar sales
Emecik	866	300	Mukhtar, a mosque, gendarmerie, Health House, Primary School (1-3) Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Agriculture (almond-olive-vegetable), Tourism, Animal Husbandry
Hızırşah	482	250	Mukhtar, a mosque, Transported Education	No Sewer, Septic there, there is drinking water network, although it is based treatment system is not active	Apiculture, Agriculture (almond-olive), Natural Plant, Tourism, Animal Husbandry
Karaköy	786	286	Mukhtar, mosque , Primary School (1-3) Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Agriculture (almond-olive-vegetable), Fisheries, Beekeeping, Natural Plant
Kızlan	1.039	400	Mukhtar, a mosque, Elementary (1-8) Health House is not active.	No Sewer, Septic is present, there is drinking water network, No purification	Agriculture (Olive-Almond), Bazaar sales
Mesudiye	564	220	Mukhtar, a mosque, Health House, Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Apiculture, Greenhouse, Tourism
Sındı	365	140	Mukhtar, a mosque, Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Apiculture, Agriculture (almond-olive), Tourism Services Sector
Yaka	577	250	Mukhtar, mosque , Primary School (1-3), Health House, Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Agriculture (almond-olive), Beekeeping, Tourism, Animal Husbandry, Fisheries
Yazı	545	250	Mukhtar, a mosque, Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Almond, Olive and Olive Oil Production, Fishing

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 11.** Bozburun Socio-Economic Structure Summary in Datça - Bozburun SEPA

Place	2009 Population*	Residences**	Public Buildings**	Infrastructure**	Income Sources**	
Bozburun Belde Merkezi	2.121	850	Municipal, Health Care Center, the Gendarmerie, a post office, primary school - Secondary Schools, Port Authority and Customs	There are drinking water network, no sewerage network, septic is present Waste Water Treatment does not exist	Yacht - Boat manufacture, tourism, agriculture (Almond - Olive) Bee-keeping	
Bozburun Beldesi ve Köyleri	Bayır	716	230	Mosque, House of Health, Primary school (1-8), Mukhtar	No Sewer, Septic is present, there is drinking water network, No purification	Apiculture, Greenhouse, Tourism
	Selimiye	1.026	510	no building for Mukhtar, a mosque, Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Apiculture, Tourism
	Söğüt	1.750	1.000	Mukhtar, Health House, a mosque, primary school (1-8), Post Office	No Sewer, Septic is present, there is drinking water network, No purification	Fishing, tours, tourism, bee-keeping
	Taşlıca	526	170	Mukhtar, a mosque is active, Health House and school is closed Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Fisheries, Livestock, Beekeeping
	Turgut	627	185	Mukhtar, Mosque, Primary School (1-3) Transported Education	No Sewer, Septic is present, there is drinking water network, No purification	Beekeeping, Tourism, Tours

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

The economy of the peninsula is based on the service sector. Tourism enhances also the other sectors in the region including trade, transportation, construction, small scale industry. The trade mainly focuses on merchandise such as daily consumption products, construction materials, furniture or catering and souvenirs that serve the tourism sector.

In a recent study conducted for EPASA, information about population, residence numbers, public buildings, infrastructure and income sources are provided as Socio Economic Structures for Datça, Bozburun and Marmaris Villages are given in Tables 10, 11 and 12.



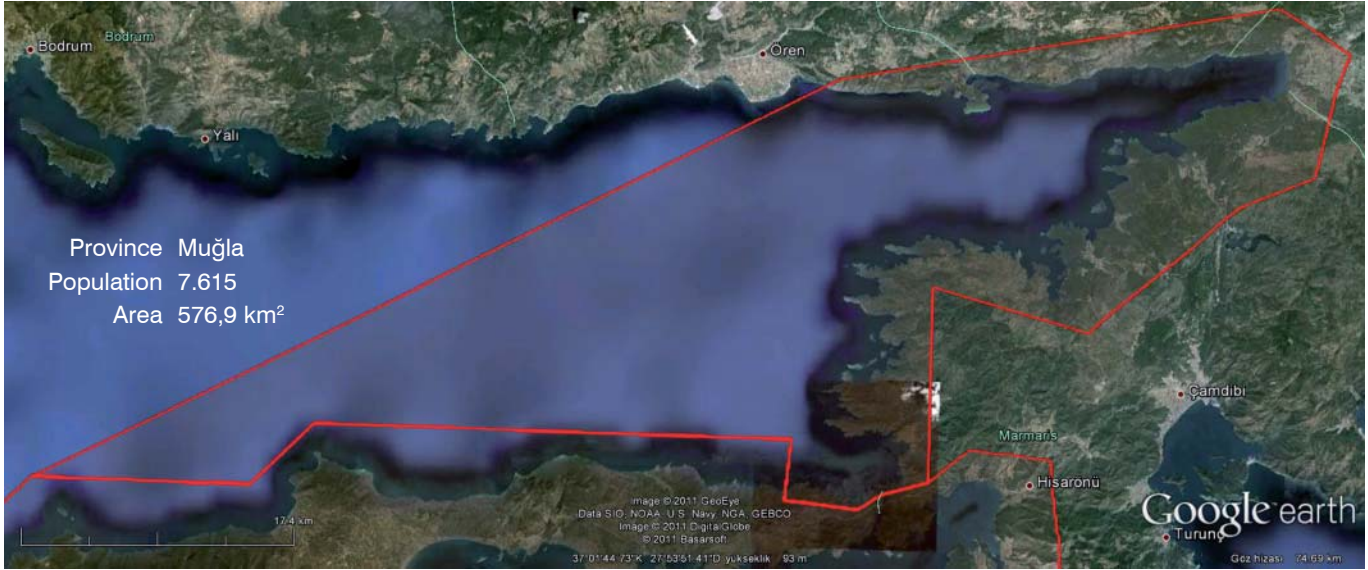
**Table 12.** Socio-Economic Structure Summary in Marmaris Villages in Datça - Bozburun SEPA

	Place	2009 Population*	Residences**	Public Buildings**	Infrastructure**	Income Sources**
Köy (Marmaris)	Hisarönü	2.129	1700	Mukhtar, Health House, 3 Elementary School	No Sewer, Septic is present, there is drinking water network, No purification	Beekeeping, Tourism, Fisheries
	Orhaniye	1.058	400	Mukhtar, Health House, Elementary School	No Sewer, Septic is present, there is drinking water network, No purification	Beekeeping, Tourism
	Osmaniye	470	158	3 Mousques, No building for mukhtar, health house and school.	No Sewer, Septic is present, there is drinking water network, No purification	Beekeeping, Tourism

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010



## 3.4 G Ö K O V A SEPA



Map 5. Gökova SEPA boundaries(source: EPASA)

### Conservation Status

Determined and declared SEPA by the Decree of Cabinet of Ministers number 88/13019 on 12.06.1988.

### Location

Gökova SEPA consists of Muğla city, Marmaris town and 3 sub-districts and 4 villages annexed to them. It includes Akyaka, Gökova, Akçapınar, Gökçe, Çamlı, Karacaköy and Çetibeli settlements. The important elevations of the region are West Menteşe Mountains, stretching to Gökova Bay and East Menteşe Mountains forming, Ula subsidence and Yaran Mountains, rising dominantly from Gökova Gulf. The agricultural land that is formed with the accumulation of alluviums in small valleys directly opening to the sea and the interior subsidence are called Gökova and Kızılkaya Prairies.

Akyaka District, which is in the SEPA and which is an important settlement, is in the Northeast of Gökova Gulf and 28 km away from Muğla. In the North of the district is abruptly rising mountain topography, covered with forests and in the east is an unequaled prairie between Kadın and Akçapınar

streams. As in the whole region, river beds open to the sea through a stream. Sedge groves, moors and meadows are adjacent and intermingled in these areas.

Another significant area in the region is Sedir Island, which is also known as Ketra, Setra, Sedir or Şehirlioğlu Island. The island is situated in the South of Gökova Gulf and it possesses tablets belonging to Hellenistic and Roman periods.

### Historical and Archeological Background

The area falling outside of Fethiye and Kınık towns in Muğla is an area known as Kayra in ancient times. The history of Kayra starts with Ionian settlements in the region. Dors, settled in the two edges of Gökova Gulf, founded Cnidos and Halikarnasos (*Bodrum*). Muğla city was annexed to Seljuk Empire in the 12<sup>th</sup> century; to Menteşe Principality in the 15<sup>th</sup> century and to Ottoman Empire in the 16<sup>th</sup> century.

### Ecological features

Gökova SEPA is of great value in terms of the rich fauna, flora and ecology; and its flora are dominated by Aegean and Mediterranean type flora features together. In addition to shrubs, olive

groves are also significant. Moreover, in the region red pine (*Pinus brutia*) and Oriental Sweet Gum forests (*Liquidambar orientalis*) are of great value. Following these, there are trees with needles such as Black Pine, Pistachio, Cedar and Juniper, and trees with leaves such as oak. Furthermore, there are sandal, heather, *P. Latifolia*, laurel, celtis and carob trees.

Base lands are generally lands with 1<sup>st</sup>-4<sup>th</sup> class soil's abilities. Apart from base lands, the hillsides, hilly and mountainous areas consist of 6<sup>th</sup> and 7<sup>th</sup> class soil types. Scars and moors are defined as 8<sup>th</sup> class soils.

The region also has a rich fauna. Among the winged animals seen in almost every part of the region are turtle doves, quails, crested wood partridges, pygmy cormorants, terns, swifts, swallows, woodpeckers, starlings, blackbirds, marsh sandpipers, crows, hawks, grey partridges, wild ducks, wild geese, rock sparrows, eagles, falcons, owls.

The coasts are rich in terms of marine fauna. Fish species of the region and other sea products (octopus, lobster and carabidae) are available in the waters of the region. Moreover, otters (*Lutra lutra*) in the coasts of Gökova and dolphins in the North parts are evident.

### Socio-economic Baseline

Based on 2009 census, the relevant districts and villages that fall within the Gökova SEPA have a total population of 8.412 people of which 49% is women and 51% is men.

According to Gökova SEPA ICZM Report (2009): "distribution of dwellings according to their sources of income was determined as follows:

*Agricultural production and stock farming* %19

*Fishery* %3

*Hotel and Hostel operation* %7

*Tourism (Salaried)* %33

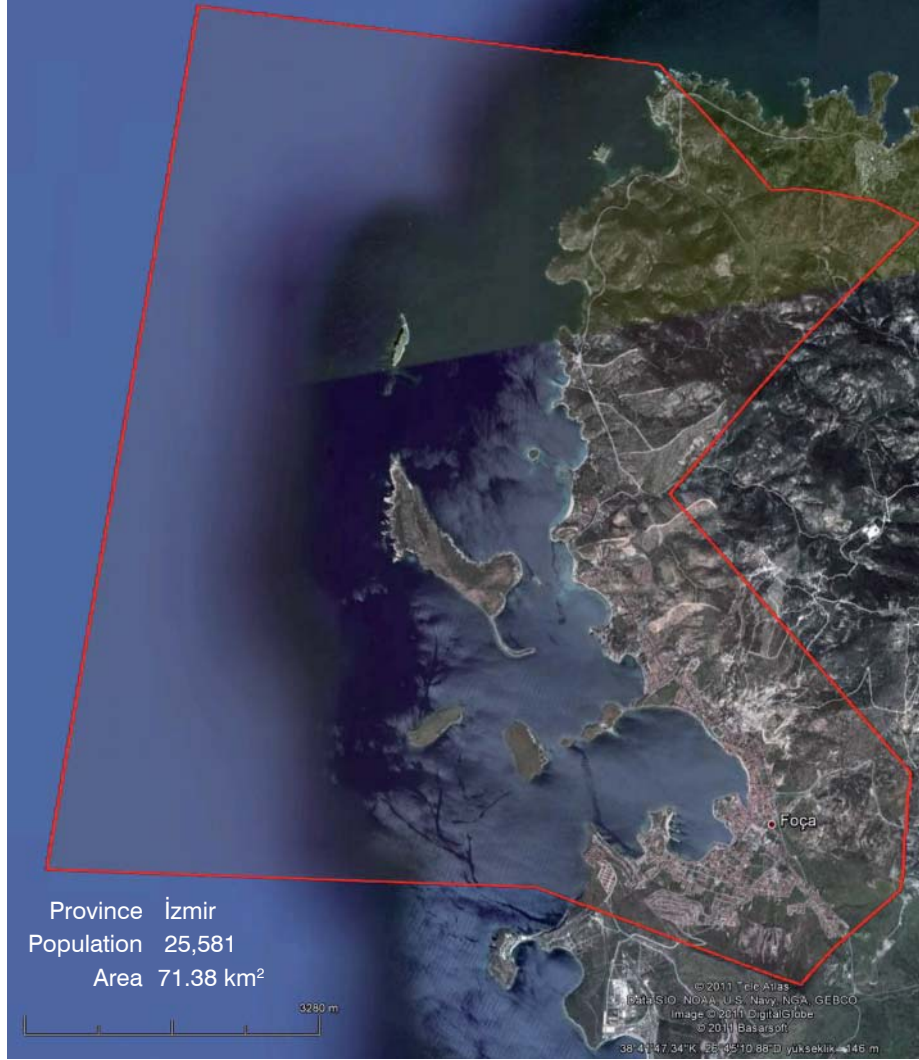
*Small Tradesmen* %6

*Retired* %24

*Other* %8

According to same study; of the 1737 people that were interviewed in the selected 7 district, 863 people have been living for more than 20 years in the Gökova Inner Bay, while %24 of them have settled in the area less than 10 years ago. %95 of the local people is illiterate. The education levels of the seven districts included in the survey are accordingly: Primary school (%45); high school (%25) and university or academy (%15). The age level of %84 of the participants is over the age group of 35, which indicates that the overall population is getting older in this district. As for the children, %76 of the participants has 1 or 2 children. The study for determining the socio-economic structure of the selected districts shows that %40 of the participants has a steady job. According to the socio-economic survey which consists of seven districts, the percentages of the jobs is like this: Self employment %7, tourism and restaurant owners %9, fishermen %4, laborer %6, white collar jobs %5 and farmers %5. Farming which consist of the %5 percentage of the overall is produced for market oriented intentions rather than for their own consumption.

### 3.5 FOÇA SEPA



**Map 6.** Location of Foça SEPA (Source: EPASA)

#### Conservation Status

Determined and declared SEPA by the Decree of Cabinet of Ministers number 90/1117 on 22.10.1990.

#### Location

Foça SEPA is located in the Aegean Region and encompasses an important part of the Foça district which is one of Izmir Province's 30 districts (İzmir Governorship 2010). Foça is surrounded by Izmir Bay in the West, Menemen county in the East, Çandarlı Bay in the North, and is located 70 km away from Izmir town center. One sub-district

and 5 villages are found in the administrative limits of the town.

#### Historical and Archeological Background

Foça has a 3,000 year history. The region was called "Phokaia" in the ancient times and it was one of the most important Ionian settlements in the 6th century B.C. Foça possesses monuments of historical and cultural importance that are inherited from Ionian, Persian, Roman, Byzantine and Ottoman civilizations. Some of these are: The Stone House (a tomb built in the 4th century B.C.), the ancient city of Kyme, Dışkale (built in 1678, Turkish bath ruins in the interiors can still be seen), Ağalar Residence

(Atatürk was accommodated in this residence dating back to the 19th century), Devil's Bath (a family grave built in ancient times), Sur and Beşkapılar (dating back to the Middle Ages), Fatih Mosque (1455), Ottoman Graveyard (1520-1566), Hafız Süleyman Mescid. Foça was a ceramic arts center in the ancient times. The ceramic findings belonging to the Greek and Roman periods in the archaeological excavations prove that ceramic arts are traditional to the region.

### Geographic Features

Foça Peninsula has a coastal line full of bays. These bays are embroidered with several islands; namely, Incir, Fener, Orak, Pite, Metelik, Hayırsız and Kartdere Islands and the Siren Rocks on the Western shores of Orak Island.

There are not many high mountains in the region; the highest mountain being Dumanlı Mountain (1098 m). Other mountains are Şaphane Mountain (416 m), Fula Mountain (200 m), Kapıkaya, Kızıldağ and Değirmentaş Mountains. The main prairies of the town are Ilıpınar, Gencelli, Gerenköy, Bağarası and Yenibağarası. The most important river of the town is Gediz, which forms the border between Foça and Menemen and Kışla Stream, which is a tributary of the Gediz.

The settlements in Foça resemble a bowl opening to the sea and take place with the least topographical slopes. The existence of archeological sites and military zones in the places where slopes are more frequent has prevented the rise of settlements in such a way as to affect the urban silhouette of the region to an extent. The areas in the eastern part of

the town are mostly covered with olive fields and most of these areas have been declared as 1<sup>st</sup> and 2<sup>nd</sup> degree natural sites<sup>3</sup>.

### Climate

The region is dominated by a typical Mediterranean climate. Winter in the region is warm and rainy and summer is dry and hot.

### Ecological Features

The region has been declared as MCPA mainly due to its seal population. Mediterranean Seals (*Monachus monachus*) have lived in Foça for thousands of years and the town takes its name from the species. There are only approximately 400 Mediterranean Seals in the world today and the species faces extinction. The number of Mediterranean Seals on Turkey's coasts is estimated to be less than 100. The species is of high global conservation concern and is listed under the Bern Convention (Council of Europe 1979).

The Siren rocks, which forms the western coast of Orak Island are of great significance as the seals use the caves to reproduce. The coasts in the region are known to be one of the most convenient habitats for seals due to the rich fish stocks and shallowness of the sea. Foça SEPA was chosen as the pilot project region for the protection of Mediterranean Seals by the Turkish National Committee for Seals under the coordination of The Ministry of Environment in 1991.

Islands that fall within the SEPA provide breeding grounds and refuge for the following bird species: little kestrel (*Falco*

<sup>3</sup> The Ministry of Culture and Tourism, General Directorate of Conservation of Cultural and Natural Assets assigns conservation status of varying degrees in Turkey based on the "The Law of Conservation of Cultural and Natural Properties" (dated 21.07.1983; No: 2863; amended by law no: 3386 and 5226). "First degree natural sites" are sites of exceptional natural characteristics that should be conserved and only used for scientific purposes. "Second degree natural sites" are conserved areas where some tourism-oriented construction can be allowed.



*naumanni*), shag (*Phalacrocorax aristotelis desmarestii*), peregrine (*Falco peregrinus*) and little stern (*Sterna albifrons*) (Eken et al 2006).

Approximately 50% of the land in Foça is covered with red pine forests. The flora is mainly composed of shrubs. The species occurring in the forests are pigs, wolves, foxes, jackals, martens, partridges, turtle doves and quails. Just to the South of the SEPA is the Gediz Delta, a globally

important wetland with Ramsar status, which is a stopover place for migrating birds and rich in the fish species. In the winter and autumn wild goose is seen in great numbers in the region.

### Socio-Economic Baseline

Based on 2009 census, Foça MCPA's population is 25,581 of which 62% is men and 38% women. (see Table 13)

**Table 13.** Foça SEPA Population

Year	Region	Total Population	City Population	Rural Population	Rate of City Population in Total (%)	Rate of Rural Population in Total (%)
1970	Foça	11784	3323	8461	28,20	71,80
1975	Foça	13185	7683	5502	58,27	41,73
1980	Foça	16505	10061	6444	60,96	39,04
1985	Foça	19197	12072	7125	62,88	37,12
1990	Türkiye	56473035	33687262	22785773	59,65	40,35
1990	İzmir	2694770	2138788	555982	79,37	20,63
1990	Foça	25222	12057	13165	47,8	52,2
2000	Türkiye	67803927	44006184	23797743	64,9	35,1
2000	İzmir	3370866	2732669	638197	81,07	18,93
2000	Foça	36107	14604	21503	40,45	59,55
2007	Türkiye	70586256	49747859	20838397	70,48	29,52
2007	İzmir	3739353	3175133	564220	84,91	15,09
2007	Foça	30549	13257	17292	43,40	56,60

Source : Aykom, 2008

**Table 14.** Education Information Foça

		LITERACY				SCHOOLING								
		TOTAL	LITERAT	ILLETERATE	UNKNOWN	NO SCHOOLING	PRIMARY	PRIMARY (1-8)	MIDDLE SCHOOL	VOCATIONAL	HIGH SCHOOL	VOCATIONAL HIGH	UNIVERSITY	UNKNOWN
TOTAL	TOTAL	34085	32229	1855	1	4070	11176	634	4257	99	6172	2521	3300	0
	MAN	22463	21932	531	0	1963	7181	337	3506	73	4655	2097	2120	0
	WOMAN	11622	10297	1324	1	2107	3995	297	751	26	1517	424	1180	0
CITY	TOTAL	13863	13602	261	0	1311	3912	235	1723	61	2962	1296	2102	0
	MAN	9471	9375	96	0	634	2743	135	1352	45	2092	1026	1348	0
	WOMAN	4392	4227	165	0	677	1169	100	371	16	870	270	754	0
VILLAGE	TOTAL	20222	18627	1594	1	2759	7264	399	2534	38	3210	1225	1198	0
	MAN	12992	12557	435	0	1329	4438	202	2154	28	2563	1071	772	0
	WOMAN	7230	6070	1159	1	1430	2826	197	380	10	647	154	426	0

Source : Aykom, 2008

The literacy rates for Foça is very high, ranking as 12th among Turkey's 872 districts. Ten primary schools and three highschools are found in Foça and half of the population is primary school graduate, followed by 30% highschool (Aykom, 2008). (see Table 14)

Among the thirty districts of İzmir, Foça ranks as the 23rd in terms of employment with 2,631 actively

working people in 2008 (IZKA 2009). About 500 companies operate in Foça, the majority of which are hotels and restaurants, followed by construction firms and wholesale businesses (ibid). Foça contributes to about 3% of the province's total export ratio with exclusively light metal industry (ibid).

### 3.6 AYVALIK ISLANDS NATURE PARK



Map 7. Ayvalık Islands Nature Park boundaries(Source: GDNCNP)

#### Conservation Status

Declared a Nature Park by the Decree of Cabinet of Ministers number 22265 on 21 April 1995.

#### Location

The MCPA is an archipelago around Ayvalık district of Turkey in Balıkesir Province in the North-eastern Aegean Sea (it is the southernmost district of the province). There are 22 islands and numerous rocks in the area, with Cunda Island, now a peninsula accessible by road, being the largest. Nineteen of these islands fall within the protected area; namely, Cunda (Alibey), Pınar (Mosko,

Kılavuz), Çıplak, Yellice (Poyraz), Güneş, Maden (Pirgos), Kız, Yumurta, Balık, Kara, Hasır, Küçükmaden, Güvercin, Maden, Taşlı (pileyit), Yelken (Ayyı alo), Yalnız (Petago), Kara, Yuvarlak, Göz Adası (Kalamapulo) and Yumurta Islands.

#### Historical and Archeological background

The historical background for Ayvalık has been taken from Wikidepia (Ayvalık, 2010): Various archeological studies in the region prove that Ayvalık and its environs were inhabited as early as the prehistoric ages. The Ayvalık Region was studied by Beksac in his survey of the Prehistoric and Protohistoric settlements on the Southern

Side of the Gulf Of Adramytteion. The survey showed different settlements near the centre of Ayvalık which appear generally to relate to the Early Classical Periods. However, some settlements near the centre of Altınova were related to the Prehistoric Period, especially the Bronze and Iron Ages. Kortukaya, identified by Beksac, in his survey project in the 1990s and early 2000s, aids understanding of the interaction between the peoples of the interior and of the coast. Kortukaya is one of the most important settlements, along with another settlement, Yeniyeldegini, near the centre of Altınova.

Traces of a hillfort were identified by Beksac on Ciplak Island or Chalkys. Some Late Bronze Age and Early Iron Age Pottery fragments related to the Aeolians were found on the same island. Two tiny settlements, near the centre of Ayvalık were settlements in the Peraia of Mytillini. The most remarkable architectural characteristic of Ayvalık and associated Cunda island is the presence of over 2100 registered Neo-Classical Greek building stock that is unique in Turkey (personal communication).

### Climate

Ayvalık is characterized by hot and dry summers, rainy and mild winters that are typical of the Mediterranean climate with average annual temperatures of 16,6 Celcius.

### Geographic features

Ayvalık Islands reflect a geomorphologic structure which has been formed by the collapse of the peaks in the Aegean as a result of the tectonic movements in the Pleistocene. The islands were formed following these early tectonic activities and the extension of the old mountains played an important role in their distribution. This distribution and form also

affected the underwater topography, and as a result rare landscape characteristics such as underwater channels were formed under the sea.

The Nature Park consist of 1930 ha forested zone belonging to the MoEF, 1179 ha of state-owned land, 872 ha privately-owned land and 13.969 ha marine protected area. Because of their lithological structure, some islands have a very thin plant cover, and some have no vegetation.

### Ecological features

The MCPA's habitat diversity provides a wide range of vegetation types that typify the general Mediterranean phytogeographic zone (maquis, *frigana*, meadows, forests dominated by *Pinus brutia*, coastal sanddunes, swamps). These varying vegetation types host 596 plant species 2 of which are endemic to the area and 6 species classified under varying threat categories (Long Term Development Plan, 2000). About 20% of bird fauna seen in Turkey (86 species) is encountered in the protected area (ibid).

Ayvalık Islands' marine conservation stands out especially due to the presence of red corals (*Gorgonia* species) that are only encountered also in Portofino, Italy within the Mediterranean (Gökdeniz et al, 2010). The fish fauna in the Nature Park amounts to 142 species (Long Term Development Plan, 2000).

### Socio-Economic Baseline

According to the 2009 census, Ayvalık town center's population is 35.986 and its surrounding villages' is 26.474 amounting to 62.460 people (TSI, 2010). Since the protected area is located near the nucleus of the main town center, it is more meaningful to analyse this section. Around 50,5% of the population is female while 49,5% is male (ibid).



The population of the town is told to increase two-folds during the summer period with tourism and secondary home-owners. The estimated population within the MCPA boundaries is 5.000 (personal communication) as very few permanent settlements exist inside the protected zone.

According to 2009 data, employment rate in Balıkesir Province is 41% and unemployment ranges around 9% (TSL, 2010). In Ayvalık,

according to 2000 data, 8.400 people are employed (6% in agriculture, 30% small-scale industries such as food, machinery, construction, energy sectors) and 64% in commerce and tourism, communication etc. (Ayvalık Tourism Master Plan, 2007). Literacy rate is 95% for the district with 47% of the town residents having graduated from primary school, 20% from highschool and 9% from university (ibid).

## FINDINGS



23

The economy of the areas depends mainly on smallholder farming, subsistence forestry, fishing, honey production, olive cultivation and livestock husbandry. The most common products grown in the study areas are olives and honey. Muğla ranks first in honey production in Turkey with 11,011 tons (out of 15,603 tons overall production in 2009) and 841 tons of honey wax (out of 1026 tons) (GEKA, 2010). 54% of the district being covered by forests, especially the flora necessary for the production of pine honey, makes transhumance beekeeping possible. In Muğla 218,170 people live in villages adjacent to the forest or in the forest (interview with ORKÖY). In both social and economic aspects forest villages in Turkey are part of the country's least developed areas (GEKA, 2010). In this context, there is a need for these forest villages (where there is no agricultural development) to diversify economic activities based on local resources (interview with Provincial Directorate of Agriculture in Muğla). Further, the daily struggle for food and household income keeps people from improving their situation. Addressing the issues associated with the small-scale, sustainable use of coastal resources is critical to poverty eradication and slowing rural to urban migration. This is closely linked with tourism and agricultural dynamics in the areas. Further, the interaction between crop production and animal husbandry is a key characteristic of the current agricultural systems in the Turkey. Most families in the coastal regions need to be involved in more than one economic activity so that if one source of household income, fishing for instance, fails, the family still has other sources of food and income.

Majority of aquaculture production in the Aegean region come from Muğla (TSI, Fisheries Statistics; MARA, 2004a). Most of the exports are made to Italy and the Netherlands (Muğla Provincial Directorate of Agriculture, 2010). There are total 58 fish and seafood wholesale traders in Aegean region and 38 of these are in Muğla province. Export revenue of these companies in 2009 amount to almost 15 million TL (GEKA, 2010). Muğla province leads in marine fish production. (MARA, 2006). In Turkey there are 349 marine enterprises and 223 of these enterprises are located in Muğla province. (interview with Provincial Directorate of Agriculture in Muğla). Thirteen fishing shelters are located in

Muğla and these play a key role in economic activities of the fishermen in the region. (MARA, 2004b).

Tourism-related job creation often occurs on an ad-hoc, or 'as needed' basis. Jobs in tourism are often seasonal in nature and can take skilled labour away from other sectors (e.g. agriculture). Unplanned development of tourist-related facilities and infrastructure can adversely affect the natural resource base that local populations depend on for their livelihoods. Tourism facilities can also exacerbate existing coastal resource problems. All the study areas are home to numerous hotels, ranging from small guesthouses catering mostly to resident tourists, to larger beach resorts, which attract both resident and international clientele.

Maritime activities related with tourism can be summarized under 3 headings : ports, diving and boat tours. In all the areas there are also many organised boat excursions, most of these tours are similar and travel to the same destinations. These are reasonably priced and offer an alternative activity to the tourists coming to the areas. There are diving centers in most of the study areas, offering try-dives and training for those who have never dived before. For more experienced divers, living on board and two-centre trips are viable options to encounter a wider range of dive sites. Most of the diving in Turkey is done around the Mediterranean resorts of Marmaris, Fethiye, Ölüdeniz and Ayvalık. For example, Ayvalık has 60 diving regions rich with coral reefs. Some areas are out-of-bounds to divers altogether. The underwater scenery is varied and interesting, with tunnels, caverns and rocky pinnacles providing divers with plenty to explore. There are also a lot of wrecks along the Turkish coast, both recent and ancient. However many of these sites are protected by law so cannot be dived on. There are many water sports centres in Marmaris. Akvaryum (Aquarium) Cove, Baca (Chimney) Sea Cave and reef area are the diving spots for domestic and foreign visitors.

There are 23 marinas in the province of Muğla. Marinas of the Mediterranean area has a capacity of 400,000 (Fethiye Socio Economic Report, 2010). At Turkish Coast the total capacity of the marinas are 13,573, and 8,967 of these are located by the sea

and 4,606 of them are on land (ibid). Blue Flag is an exclusive eco-label given to beaches and marinas and is currently being implemented in 48 countries around the world. The Blue Flag works towards sustainable development at beaches/marinas through strict criteria dealing with water quality, environmental education and information, environmental management, and safety and other services. In Turkey, 286 beaches and 19 marinas had a blue flag in 2009 (Blue Flag Programme, 2010).

Further, a number of beaches have already attracted tourism investments and site rentals (günübirlik) are important arrangements. There are 36 site rentals in Muğla (in the 4 areas) that are rented out by EPASA. However, these are not managed properly and there is a lack of control (for example, even the rents are not properly collected). In addition, capacity (due to lack of personnel and offices in the areas) of EPASA is another question related with this issue. During the field work, there was only one office located in Köyceğiz for the Muğla province. In Foça there is another office with only one personnel. In Ayvalık, again there is only one person in charge of the area. In December of 2010 however, EPASA has hired 57 staff for their local and central offices in order to fill these management gaps. It was also evident throughout the interviews, there are issues that needs coordination between different institutions. This is also through for vertical and horizontal relations meaning also inside EPASA (between Ankara and local offices). In order for these areas to have sustainable income generating activities, strong partnerships need to be developed amongst government sectors, and between the national and local authorities, the private sector and local communities.

Beginning of 2011, EPASA has started the implementation of new fees for different activities to take place in its areas (the list of activities and the prices are provided in Annex IV). However, this new implementation has not yet been tested on the ground.

In this chapter, the 6 areas are analyzed under three main headings: agriculture, tourism and fishing. Income generating activities of EPASA in the 5 relevant SEPAs such as site rentals are also provided and possible new income generating activities are made as suggestions<sup>4</sup> for each area.

<sup>4</sup> As mentioned earlier, lists will be prepared for each area as an other activity (2.4.8) of the project.

## 4.1 FETHİYE - GÖCEK SEPA

### 4.1.1 Agriculture

Most of the agriculturally fertile areas in Muğla are in Fethiye town. The town center is surrounded

with 1<sup>st</sup> class land convenient for irrigated agriculture (EPASA, 2010). Different types of field crops are produced in Fethiye (see table 15).

**Table 15.** Fethiye Field Crops Production (1991 - 2009)

		Cereals	Pulses	Industrial Plants	Oil Seeds	Tuber Plants	Forage Crops
1991	Harvested area(da)	186.910	40.670	26.390	30.980	11.590	650
	Production (tons)	46.162	1.503	20.025	2.247	24.068	30.604
1995	Harvested area(da)	181.830	49.930	192.220	107.410	37.950	710
	Production (tons)	43.439	3.766	39.605	15.329	90.563	75.290
2000	Harvested area(da)	204.670	65.010	150.840	71.500	47.120	520
	Production (tons)	54.267	6.183	29.956	10.337	110.535	100.235
2005	Harvested area(da)	250.230	53.000	82.370	74.000	50.500	38.320
	Production (tons)	58.997	8.140	21.926	10.725	125.500	123.897
2009	Harvested area(da)	248.429	18.020	15.821	30.152	5.200	39.700
	Production (tons)	67.807	2.656	4.511	2.637	16.560	79.250

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

About 22% of the SEPA (67.300 hectares) is agricultural land and 35.000 hectares of this is irrigated and this is harvested three times a year (ibid). Agriculture is prominent in Fethiye with %55 of

the population involved in agriculture. Number of farmers with land is 18.942 and without land is 1.700 which makes a total of 20.642 farmers (Fethiye Socio Economic Report, 2010).

**Table 16.** Harvested Area in Fethiye (1991-2009)

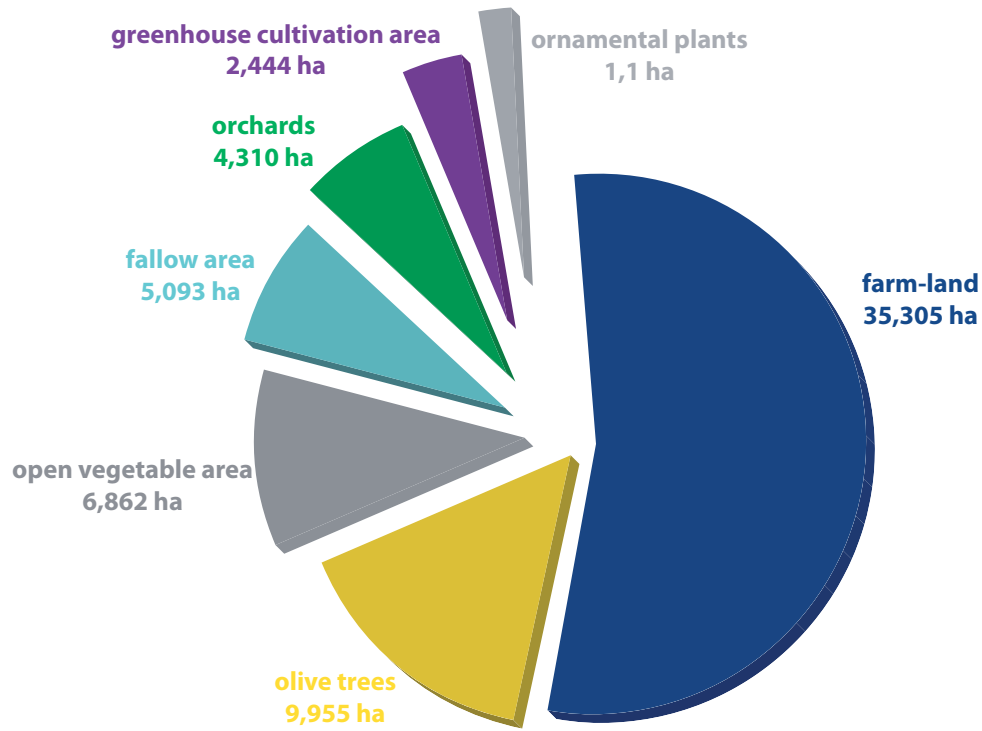
		Cereals	Pulses	Industrial Plants	Oil Seeds	Tuber Plants	Forage Crops
1991	Harvested area(da)	186.910	40.670	26.390	30.980	11.590	650
	Production (tons)	46.162	1.503	20.025	2.247	24.068	30.604
1995	Harvested area(da)	181.830	49.930	192.220	107.410	37.950	710
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	Production (tons)	67.807	2.656	4.511	2.637	16.560	79.250

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 17.** Greenhouse Areas and Production in Fethiye -2009

Green Houses		Total	Glass Greenhouse	Plastic Greenhouse	Low Tunnel: Alçak Tünel
Fethiye	Area (da <sup>5</sup> )	24.450	6.605	14.500	3.345
	Vegetable production (Tons)	376.340	114.430	245.850	16.060

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010



64,471 hectares of agricultural area consists of 35,305 hectares of farm-land, 6,862 hectares of open vegetable area, 2,444 hectares of greenhouse cultivation area, 4,310 hectares of orchards, 5,093

hectares of fallow area, 9,955 hectares of olive trees and 1.1 hectares is used for ornamental plants. The number of Fruit Trees are given in Table 18 and 19.

**Table 18.** Fethiye Number of Fruit Trees

	Pomes	Drupes	Citrus	Hard Shells	Grapes	Olives
1991	204390	84965	106550	35366	23210	625750
1995	209210	103945	112650	32750	20450	620850
2000	221150	120145	109550	34310	21780	820500
2005	222297	125840	125775	34550	38440	773100
2009	234104	168426	137600	128338	717109	1368924

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

<sup>5</sup> (da) is used for decare.

**Table 19.** Fruit Production and Tree Numbers in Fethiye (1991-2009)

		Pomes	Drupes	Citrus	Hard Shells	Grapes	Olives
1991	Fruit bearing tree number	138.640	67.960	104.600	33.930	23.210	589.800
	TOTAL tree number	204.390	84.965	106.550	35.366	23.210	625.750
	Production(tons)	7.537	2.211	7.137	341	1.042	6.489
1995	Fruit bearing tree number	163.540	84.860	109.700	30.850	20.450	588.300
	TOTAL tree number	209.210	103.945	112.650	32.750	20.450	620.850
	Production(tons)	11.024	3.419	8.601	420	1.222	7.648
2000	Fruit bearing tree number	173.050	102.200	101.350	20.930	20.430	621.900
	TOTAL tree number	221.150	120.145	109.550	34.310	21.780	820.500
	Production(tons)	9.554	4.686	8.899	405	1.873	12.280
2005	Fruit bearing tree number	176.500	105.790	116.170	21.250	20.790	680.000
	TOTAL tree number	222.297	125.840	125.775	34.550	38.440	773.100
	Production(tons)	7.871	5.167	10.529	462	2.018	15.591
2009	Fruit bearing tree number	194.025	118.770	111.010	41.500	105.004	935.000
	TOTAL tree number	234.104	168.426	137.600	128.338	717.109	1.368.924
	Production(tons)	6.977	4.756	9.915	1.137	3.432	9.109

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

The export of tomatoes have an important share (97%) in total exports of fresh vegetables and fruits in 2009 (ibid). About 115 million euros were earned in 2008 from exports of tomatoes (greenhouse production) in Muğla (Muğla Provincial Directorate of Agriculture, 2010). In greenhouse production, the farmers produce two different products yearly.

**Table 20.** Fethiye Vegetable Production (1991 - 2009)

Year / Vegetables	Edible Leaves (Tons)	Legumes (Tons)	Fruit Bearing Vegetables (Tons)	Bulb-tuber-Root Vegetables (Tons)
1991	6152	16096	236872	952
1995	6204	14315	311201	640
2000	6935	18985	408600	250
2005	7308	17790	541152	350
2009	13758	43815	525230	538

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

According to the Directorate of Agriculture, tomato, cucumber, eggplant, melon are the most produced vegetables in greenhouses. In 2009, 250,000 tons of tomatoes were produced in greenhouses. Cultivation of vegetables brings in total gross domestic income of 352,200,000 TL. Wheat is the most produced crop with 92,019 tons of production in 246,100 decares. In 2007, 75 tons, in 2008 100 tons, and in 2009 150 tons of organic goods were produced (Fethiye Socio Economic Report, 2010). Information about animal husbandry is given in Table 21.

**Table 21.** Animal Husbandry in Fethiye (1991-2009)

	Cattle			Small Ruminants			Poultry		Beekeeping			
	TOTAL	Number of Dairy Animals	Milk (Tons)	TOTAL	TOTAL	Number of Dairy Animals	Milk (Tons)	TOTAL	TOTAL	Number of Dairy Animals	Milk (Tons)	TOTAL
1991	28031	11583	10320	149890	48785	2330	84	143880	12600	57625	60	9
1995	30750	12580	11829	150850	49436	2360	86	175315	20011	66610	798	13
2000	21557	8604	11982	87905	27255	1289	59	208360	27000	80055	100	11
2005	24015	3240	9087	78600	18572	1550	59	143010	25000	54824	1371	375
2009	23060	8600	27835	75465	35968	3328	65	133380	21000	62000	1240	62

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

#### 4.1.2 Fishing

In the coast of Fethiye, 690 people work in 197 fishing boats. Also there are 4 drag-net (gırgır) vessels. 66 businesses (changing in sizes) are engaged in production of trout in Fethiye. Total capacity is 15,000 tons of trout / year (Fethiye Socio Economic Report, 2010). Trout is distributed and sold in many cities throughout Turkey.

#### 4.1.3 Tourism

In Fethiye There are 61 certified tourism businesses and 5 tourism investment certified facilities (interview with Directorate of Tourism in Fethiye). The number of facilities locally certified is 750. There are 20,723 rooms with bed capacity of 42,602. Total of 662,086 tourists visited Fethiye in 2009. Besides, 4 cruise ships brought 948 passengers to Fethiye in 2007. In 2008, 11 cruise ships brought 4156 passengers

and in 2009, 8 cruise ships with 2569 passengers came to the town (Fethiye Socio Economic Report, 2010).

**Table 22.** Number of Tourists for Muğla

		Foreign Visitors	Local Visitors
By Air	Dalaman Airport	1.451.214	25.828
	Mil-Bod Airport	936.033	29.994
By Sea	Marmaris Port	180.526	5.552
	Bodrum Port	200.292	10.818
	Fethiye Port	10.741	2.401
	Datça Port	10.778	1.462
	Güllük Port	161	2.499
	T.Reis Port	20.906	2.614
	Y.Kavak Port	258	281
<b>TOTAL</b>		<b>2.810.909</b>	<b>81.449</b>

Source: Fethiye - Göcek Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Photo 1.** Göcek İnlice Beach Site Rental

Total capacity of the marinas on coast of Fethiye is 2028; 1,593 of them are located by the sea and 435 of them are on land. Capacity of the marinas located at the coast of Fethiye is 15 % of Turkey. Göcek is popular with yachting boats which come here for its marina. Göcek has a range of sophisticated hotels and upmarket restaurants and boutiques. For example, in Göcek the boat tour includes the sights of islands, sailing on a private boat to 12 Islands, swimming and snorkeling in scheduled bays such as Cleopatra's Baths, the beaches of Yassica Island and the old settlement of Tersane are included.

## Box 2. Blue Chip Card System in Göcek

In Göcek, Blue Chip Card system has started to operate in July 2010. TURMEPA, which is also the technological subcontractor for Blue Chip Cards for the next two years, bought software for the system for 200,000 Turkish Liras and prepared 5,000 cards that are linked to computer systems at 15 marinas in Muğla. The Blue Chip Card system is unique in that it features a recorder both on shore and onboard registered vessels. The card transfers all the information to the computer and then to the main system so the amount of water taken by the boat can be accurately determined. If it has taken two tons of water, it has to pour out the same amount at the treatment facility. It should be noted that this system is new and there are some implementation problems. TURMEPA is a non-governmental organization founded in 1994 in collaboration with the Chamber of Shipping for the purpose of making the protection of Turkey's coasts and seas a national priority and leaving a habitable country embraced by clean seas to the future generations.

Source : Interview with Turmepa Representative in Göcek



Photo 2. Kayaköy Carpets

One of the highlights of Fethiye is Kayaköy, literally 'stone village'. Once the Greek town of Karmyllassos, it was abandoned in the 1920's. There are around 400 houses here together with churches and other public buildings. Despite a strong tradition of needlework (embroidery and rug making- i.e. Kayaköy carpets), pottery, and other handicrafts in Turkey, there appears to be only a very limited practice of handicrafts in all the regions (this is also very much related with rural-urban migration). Individuals interviewed said a "good" market exists for these items, however, it appears that only two or three families (in Kayaköy- especially skilled people being old ladies) still have the requisite skills to make such items. In the village discussions, it was emphasized that handicrafts (even some agricultural activities) are seen as time consuming activities by

young people for which they have limited interest. There is a tendency to choose tourism related jobs where they can earn money more easily.

### 4.1.4 EPASA Activities

There are 17 site rentals and 2009 and 2010 incomes are provided (when applicable) next to their names

Table 23. Rent incomes of Fethiye Göcek SEPA

Name	2009	2010
Kalemya Koyu	25.074 TL	26.560 TL
Belceğiz	660.000 TL	-
Babadağ	78.576 TL	-
Belceğiz-Kumburnu Lagoon	1.247.932 TL	-
Çalış Beach	61.600 TL	67.800 TL
Büyük Samanlı	7.700 TL	8.500 TL
Küçük Samanlı	6.600 TL	7.300 TL
Aksazlar	6.600 TL	7.300 TL
Kuleli	4.400 TL	4.800 TL
Gemile Bay	10.100 TL	11.100 TL
Göcek Public Beach	6.700 TL	7.400 TL
Göcek İnlice	11.800 TL	13.000 TL
Kargı Village	9.900 TL	10.900 TL
Sarsala Bay	12.300 TL	40.600 TL
Şat Burnu	38.500 TL	42.350 TL
Yanıklar Beach	7.700 TL	7.000 TL
Göcek Boynuzbükü Yacht Resting place	5.675 TL	8.953 TL which is 35% gross domestic income



One example to site rentals is Belçeğiz-Kumburnu Lagoon in Ölüdeniz, literally translated as 'dead sea'. There is a small entrance charge to use the lagoon beach and only non-motorised watersports are allowed.

Unlike other site rentals which are focused on renting out beaches, there is also paragliding in Babadağ. Babadağ is 30 min. from Fethiye, 2.5 hours from

Akyaka and 3 hours from Marmaris. Babadağ is 900 meter altitude with a spectacular view of Ölüdeniz. Launching and landing in paragliding depends on the wind. This activity is managed by MELSA. MELSA was founded jointly by the Directorate of Muğla Provincial Special Administration and the Muğla Development Foundation in 1995 for the purpose of contributing to the survival and

### **Box 3. Alternative holiday examples in Fethiye Huzur Vadisi (yoga holidays):**

Huzur Vadisi is the name of the farmhouse and of the mountain valley in which it is situated in Gökçeovacık village. The original farmhouse is the inspiration for the restoration and building at Huzur Vadisi. This place provides yoga holidays as a package to mostly foreign tourists. Special features are the natural stone swimming pool, the traditional wooden Köşk, the yurts (traditional tents) for sleeping.

#### **Pastoral Valley**

Pastoral Valley Organic Eco Farm is in Yanıklar Village near Fethiye. Its specialty is organic farming, an ecological lifestyle and offering holidays on the farm where all buildings are ecologically designed, constructed of stone, wood or mud-brick and available 12 months of the year. If the guests wish they can get involved in farm work, or take part in workshops based on local culture and handicrafts like kilim weaving, simple clay pottery making, basket making or producing a range of traditional preserves such as jams and pickles.

Source: Interviews with Owners

development of the local handicrafts of Muğla that were on the verge of extinction. MELSA has a division that manufactures hand-woven table cloths, tripod cloths, serviettes, bedding sets, pillow cases, furnishing fabrics, curtain fabrics and clothings of cotton and wool or embossed with silver or golden threads. MELSA also operates one of the site rentals in Ölüdeniz, Fethiye.

#### **4.1.5 Possible New Income Generating Activities**

- a. There is potential for value-added agricultural products produced using organic farming methods, or specialty foods packaged as "gourmet" or "artisanal" foods.
- b. It is clear that there are substantial opportunities in the agritourism sector. However, it will be critical to develop an agritourism/ecotourism strategy to unlock the potential.
- c. Control and monitoring of pollution (especially sewage waters) is a challenge that needs the collaboration of a number of authorities in order to ensure continuous tourism. In Fethiye Göcek SEPA- Blue Chip Card system is a good start and might be upscaled in other areas.
- d. Visitors' Centers are a great way to raise awareness and enlighten visitors as to local agritourism and ecotourism elements. These centers can provide information and showroom on how local handicrafts are made and also provide an outlet for locally produced goods such as jams, etc.
- e. Creating packages to attract more visitors, emphasizing the "grown locally" experience- there is one example to this in Fethiye, Pastoral Vadi. (restaurant + hotel + agritourism -organic farming- activity)
- f. There is a need to develop a wider range of activities that spreads tourism throughout the year. For instance, it was indicated that there is great potential for mountain biking, spa/wellness activities, hiking trails and cultural activities. Besides, providing an experience

that is a “package” will have more benefits. This could, for example, include offering farm animals (feed and pet), picnic area, garden center, food and produce (handicrafts) market, ample parking and rest rooms (For example, there are site rentals like Inlice without any activities and “a package” can also diversify the activities in site rentals which can also increase the income for EPASA. This can be joined up with educational tourism (eco, environmental etc.). For example, there are rich flora and fauna in the areas as well as cultural and historical places.

- g. Some interviewers felt that monitored diving in currently forbidden areas will also have a significant potential to boost tourism.
- h. Interviews with Fethiye Chamber of Maritime Trade raised the need of female personnel who can cook and serve the guests on the boats and yachts in the marina.
- i. Collaboration with existing marina operators (private sector) can help produce awareness raising materials on the marine environment and species of the protected areas.
- j. Opening new site rentals (Günübirlük).

## 4.2 KÖYCEĞİZ - DALYAN SEPA

### 4.2.1 Agriculture

Köyceğiz is a farming town producing citrus fruits, olives, honey and cotton. Unlike other areas, this region is also famous for its sweetgum (*Liquidambar*) trees which have economic value. Other economic activities include greenhouse farming and cattle-grazing. The region around Dalyan is a highly fertile and productive agricultural zone. Cotton is grown intensively along with many varieties of fruits and vegetables. In recent years, cotton is being replaced by pomegranates (especially in Dalyan) due to the fact that it is less labor intensive and has a higher economic value than other products. See below Table for distribution of products :

**Table 24.** Distribution of Products in Köyceğiz and Ortaca Area

Product	Ortaca İlçesi (da)	Köyceğiz İlçesi (da)	TOTAL (da)
Cotton	28763,2	940,2	29703,4
Lemon	20890,5	220,3	21110,8
Orange	10920,0	15102,3	26022,3
Wheat	5490,2	2370,3	7860,5
Corn(silage)	5328,8	1027,5	6356,3
Olive	3915,9	1989,0	5904,9
Corn (Grain)	1992,9	1017,2	3010,1
Pomegranade	2609,4	0,0	2609,4
Tomato	1532,3	55,0	1587,3
Watermellon	735,3	0,0	735,3
Sesame	608,9	1420,0	2028,9
Melon	370,8	0,0	370,8
Barley	316,6	151,4	468,0
Grapefruit	275,7	0,0	275,7
Lupine	183,3	0,0	183,3
Millet	155,7	0,0	155,7
Vetch	129,0	109,7	238,7
Eggplant	73,9	0,0	73,9
Clover	62,7	0,0	62,7
Beans	0,0	74,9	74,9
Mandarin	0,0	1307,1	1307,1
<b>TOTAL</b>	<b>84355,1</b>	<b>25784,9</b>	<b>110140,0</b>

Source: Köyceğiz Dalyan SEPA Management Plan Final Report 2007

64% of land in Muğla consists of forest and brush, 19% is agricultural land, the rest is non-farm area, pastures and meadows. (Interview with Muğla Provincial Directorate of Agriculture). Most of the villages in Muğla region are in forests and the villagers gather forest products either for trading or household use. The most important non timber forest products collected to augment cash incomes are honey and herbal products such as oregano and laurel leaves. There is one cooperative that collects oregano and laurel in Toparlar Village, Köyceğiz. However, due to mismanagement, the cooperative went bankrupt and is now trying to recover. There are 4 Agricultural Development Cooperatives, 2 Irrigation Cooperatives and 1 Fisheries Cooperative in Köyceğiz. There are 4 olive oil production facilities; 3 in Ekincik, 1 Zeytinalanı. In the production of field crops, corn is seen to be more prominent in the region. Sesame seeds are also produced in the region.



**Photo 3.** Women working on laurel in Toparlar Village

Köyceğiz is the largest producer of citrus in the Aegean region. Citrus fruits are one of the agricultural products that are mainly exported from the region. According to data obtained from the briefing reports of District Directorates of Agriculture of 2006, 58% of land in Köyceğiz is dedicated to the production of oranges. Pomegranate and tomato follow after lemon, orange, grapefruit and tangerine in agricultural exports. The Mediterranean climate dominant in the region is suitable for 41,630 tons of tomato production which is very significant in the production scale. Most exports are made to Russia, France, Germany

and Romania. Wheat, olives and sesame seeds follow after oranges. The agricultural production areas are 17% in Beyobası village and 13% in Toparlar and

Zeytinaları (Köyceğiz Dalyan SEPA Management Plan Final Report 2007). Types of fruits and field crop production are given in Tables 25.

**Table 25.** Fruit Production in Köyceğiz and Ortaca

Type of Fruit	KÖYCEĞİZ		ORTACA		BÖLGE TOPLAMI	
	Area (hectare)	Production (tons)	Area (hectare)	Production (tons)	Area (hectare)	Production (tons)
Pear	10	116	0	20	10	136
Medlar	0	0	0	20	0	20
Quince	6	23	0	0	6	23
Apple	58	237	0	0	58	237
Plum	21	242	0	21	21	263
Apricot	11	55	0	90	11	145
Cherry	4	4	0	0	4	4
Peach	0	83	0	17	0	100
Lemon	240	1938	2010	40088	2250	42026
Citrus	0	60	0	0	0	60
Grapefruit	5	178	0	0	5	178
Orange	2120	37980	755	16825	2875	54805
Mandarin	1675	20570	15	263	1690	20833
Walnut	25	42	0	4	25	46
Mulberry	0	0	0	35	0	35
Fig	0	26	0	10	0	36
Carnup	0	0	0	17	0	17
Pomegranade	0	28	85	504	85	532
Grape	9	82	1	4	10	86
Olive	1606	3051	473	2046	2079	5097
<b>TOTAL</b>	<b>5790</b>	<b>64715</b>	<b>3339</b>	<b>59964</b>	<b>9129</b>	<b>124679</b>

Source : Köyceğiz Dalyan SEPA Management Plan Final Report 2007

**Table 26.** Field Crop Production in Köyceğiz and Ortaca

Product Type	KÖYCEĞİZ		ORTACA		TOTAL	
	Area (hectare)	Production (tons)	Area (hectare)	Production (tons)	Area (hectare)	Production (tons)
OAT	35	91	0	0	35	91
MILLET	5	7	0	0	5	7
CORN	799	1792	343	1929	1142	3721
WHEAT (DURUM)	503	1232	331	1303	834	2535
WHEAT (OTHER)	1300	2934	0	0	1300	2934
BARLEY	151	339	0	0	151	339
CHICKPEA	10	12	0	0	10	12
BEAN	90	113	0	0	90	113
PEA	0	0	5	14	5	14
BLACK EYE BEAN	38	41	9	28	47	69
BROAD BEAN	0	0	3	9	3	9
COTTONS	89	105	1861	1979	1950	2084
SESAME	2051	1539	90	83	2141	1622
COTTONSSEED	89	142	1861	2664	1950	2806
PEANUT	0	0	20	61	20	61
ONION	25	250		0	25	250
POTATO	11	153	2	50	13	203
CORN (2)	86	697	69	1991	155	2688
VETCH (GREEN) (2)	290	0	290	0	580	0
VETCH(DRY) (2)	0	401	0	803	0	1204
CORN(SILAGE)	41	1800	303	16651	344	18451
<b>TOTAL</b>	<b>5613</b>	<b>11648</b>	<b>5187</b>	<b>27565</b>	<b>10800</b>	<b>39213</b>

Source : Köyceğiz Dalyan SEPA Management Plan Final Report 2007

Sweetgum forests cover 209 ha of private and 383 ha of state land. (19 ha in Ortaca, 200 ha in Köyceğiz, 16,5 ha in Sultaniye and 167,5 ha in Beyobası) and 19 tons of balsam were produced in 1980s; this has fallen to between 1-2 tons in the 1990s, 4198 kg in 1999 and 3286 kg in 2000 and 5284 kg in 2001. In 2002 and 2003 annual production was around about 2000 kg. (Köyceğiz Dalyan SEPA Management Plan Final Report, 2007). Honey and Wax production is given in Table :

**Table 27.** Honey Production in Köyceğiz and Ortaca

	HIVES (piece)	HONEY (tons)	WAX (tons)
KÖYCEĞİZ	68000	1224,000	25,000
ORTACA	14441	129,669	14,000
<b>TOTAL</b>	<b>82441</b>	<b>1353,669</b>	<b>39,000</b>

Source : Köyceğiz Dalyan SEPA Management Plan Final Report 2007

In addition to farm and resource-based production activities, several households are also involved in other income generating activities in the

form of merchandise/trading within the village, hiring out services (skilled labour) or additional work mostly in the tourism sector.

#### Box 4. Silkworm raising in Köyceğiz Dalyan SEPA

Silkworm raising is a source of income to locals in a village (Pınar, Köyceğiz – Köyceğiz Dalyan SEPA) via the efforts of the District Directorate of Agriculture to empower them at the grass-roots level. Intense mulberry trees around the Pınar village and the area's climate and physical conditions, cropping pattern were observed to be favorable for silkworm production by Köyceğiz District Directorate of Agriculture.

Besides being a historical and cultural value, sericulture (transformed into the product into a short period of 35-40 days) is an income-generating activity. In order to assess the potential for the production of a silk worm, the Public Education Center (Halk Eğitimi Merkezi) has opened with a course in sericulture in the region. In the 2010 production season, first-class cocoon production was 700 kg, as a result of 30.500 TL income was obtained from Koza Birlik, company from Bursa.

Source : Interview with Köyceğiz District Manager of Agriculture

Information about animal husbandry and milk production is given in Table 28 and 29.

**Table 28.** Animal Numbers in Köyceğiz and Ortaca

ANIMAL	KÖYCEĞİZ ORTACA		TOTAL (head)
	TOTAL (head)	TOTAL (head)	
SHEEP(NATIVE)	1695	310	2005
GOAT (HAIR)	11910	900	12810
CATTLE (CULTURE)	885	305	1190
HORSE	117	30	147
MULE	55	2	57
DONKEY	37	6	43
SHEEP(MERINOS)	0	440	440
CATTLE (CROSSBRED)	5300	3526	8826
CATTLE (NATIVE)	845	796	1641
TOTAL	20844	6315	27159

Source : Köyceğiz Dalyan SEPA Management Plan Final Report 2007

**Table 29.** Milk Production in Köyceğiz and Ortaca

ANIMAL	MILK PRODUCTION (tons)		TOTAL
	KÖYCEĞİZ	ORTACA	
SHEEP(NATIVE)	44,800	6,400	51,200
GOAT (HAIR)	514,602	31,188	545,790
CATTLE (CULTURE)	864,864	416,988	1281,852
SHEEP (MERINOS)	0,000	6,000	6,000
CATTLE (CROSSBRED)	7938,000	3288,600	11226,600
CATTLE (NATIVE)	490,320	337,776	828,096
TOTAL	9852,586	4086,952	13939,538

Source : Köyceğiz Dalyan SEPA Management Plan Final Report 2007

According to Köyceğiz Dalyan SEPA Management Plan Final Report (2007), areas which are suitable living environments for wild goats are specified as "Wild Life Protection Operation Class" ("Yaban Hayatını Koruma İşletme Sınıfı"). In the report it is highlighted that in the appropriate areas where the wild goats reproduce, hunting tourism could be allowed.

## 4.2.2 Fishing

According to available data, 34-year period between 1972 – 2005 in Köyceğiz Lagoon the total production of aquatic products was 8,768 tons. There was 52 tons of production in 1972, while the highest production was in 1994 with 444 tons. In general, a fluctuating trend is examined in catch statistics. Between 1972-1981 average production was 267 t/year, between 1982-1991, it was 271 t/year and from 1992 -2001 between 254 t/ year. 2002 – 2005 average of 211 t/ year production marked the lowest values (Köyceğiz Dalyan SEPA Management Plan Final Report, 2007).

### *DALKO Fisheries Cooperative*

SS DALKO Fishery Products Cooperative was established in 1971 in Dalyan. Members include fishermen from all villages on the edge of the town and they value the lake in terms of protection. The town and the region are faced with the rapidly growing tourism and concentrated boat traffic and the lake basin on the edge of the agricultural areas are under threat of agricultural

use of nitrogen fertilizers, chemical wastes, toxic drugs, rain water.

Fishing activities are carried out by DALKO in Köyceğiz Lagoon system. The lagoon system belongs to the State and is rented by DALKO through two year contracts. DALKO has 691 members and 49 personnel. Mullet is the main commercial fish on Köyceğiz Lagoon system. Eel is also an important fish species caught in the lagoon, most of the eels caught are exported because they are not often consumed by Turkish people. The cooperative also produces caviar and was awarded the International Slow Food Prize in 2000. However, this award has not been used for the promotion of this product and it is not widely known.

According to Köyceğiz Dalyan SEPA Management Plan Final Report, (2007) "total production of aquatic products was 172.2 tons. (January 1 to November 30 by 2006). The majority was mullet production with 155.7 tons, 6.5 tons of sea bass, 4.6 tons of sea bream, 2.4 tons of painted eel, 1 ton of eel and 2.9 tons were the other species. In

### **Box 5. Fisheries in Köyceğiz Lagoon system**

According to DALKO during the period 1972–2006, the commercial catch in Köyceğiz Lagoon ranged from 52.125 t in 1972 to 443.949 t in 1994. Another issue is the introduction of exotic species such as *Tilapia zillii*. According to fishermen in the area, after the introduction of this species, many native fish species have been affected, especially common carp, *Cyprinus carpio*.

#### **Recommendations**

The cooperative must be supported and use modern techniques for lagoon fishing. Fish caught in the lagoon should be evaluated in terms of their suitability to be marketed. The fisheries of the region are mainly dependent on the mullet fish that are caught in traps during the spawning migration period. The population should not be dominated by younger age classes that do not have the ability to breed. To prevent this, migration and breeding periods of mullet should be explained by seminars to the fisherfolk. Such seminars could also develop the knowledge of fishermen regarding the fish trap fishery, to understand geological, meteorological, hydrographical and hydrobiological data that affects productivity. This will help fishermen to determine the optimum fishing conditions (Yerli 1989). Scientific solutions must be developed for marketing and selling the fish caught in the lagoon.

Reed fields surrounding the lakes and lagoons provide a convenient habitat for many invertebrate and vertebrate species. These reed fields and the shallow canal bottom are also important resources for fish to feed on and use as a substrate to lay eggs upon. Boat traffic and the noise of boat motors affect fish migrations and damage these reed fields. The tourist-boat traffic on lagoon system must be regulated to reduce disturbances and support should be given to boats powered by solar energy or other sustainable resources. In 2007 one boat powered by solar energy took trips in the lagoon. The motors of boats must be assessed, less powerful motors should be allowed in the fishery as powerful motors can damage the bottom of canal. Boats must not discharge their bilge waters into the lagoon. The local people as well as visitors should be educated regarding the sensitivity of the Köyceğiz Lagoon System. Governmental and Non-Governmental organizations should play an active role in protecting the lagoon system. Ecological trips with educated guides should be arranged to promote the natural and ecological beauty of the region.

Source : Yorulmaz et al, 2008. "Fishing activities and pollution risk in the Köyceğiz Lagoon System"

addition, a total of 7.7 tons of culture fish were produced in net cages at Lake Sülüngür (2.6 tons sea bream and 5.1 tons of sea bass). Caviar production was 112 kg during the period.”

#### 4.2.3 Tourism

There is a total of 8,224 beds, of which 7,224 (87.8%) are in Dalyan. Natural resources and being at the edge of the channel are the main reasons for the development Dalyan region. (Köyceğiz Dalyan SEPA Management Plan Final Report, 2007)

Hiking trails used for recreation by tourists have been identified by guides (ibid). The 6 identified hiking trails are

- starting from the eastern end of the settlement in Köyceğiz and ending in Kaşıkçı neighbourhood
- starting from north of Zeytinalan through the mountains and ending at the beginning of river
- starting from Köyceğiz to Sandras Mountain,
- starting from the edge of Kargıcak Çayı creek, passing through the forest to the waterfall,
- starting from Sultaniye to Ülemez Hill and
- starting from Çandır to Ekincik

#### Dalyan Boat Cooperative

The cooperative was established in 1983 in Dalyan. 150 boats are licensed. All cooperative members and employees consist of local people. Cooperative started to organize alternative tours: Kaunos City, Rock Graves, hot springs and İztuzu coast are some of the areas visited by the boat tours. Not all boat owners belong to the cooperative, choosing instead to remain outside the framework and rules of the organization.

The cooperative wants to operate with fleet of solar powered boats that can sail on Köyceğiz Lake and the Dalyan canals. The solar boats do not create waves or ripples and therefore protect the shore and plants from erosion. The boats can sail for eight hours using batteries which store the solar power.

Attractive beaches can be found all along the coast and serve as one of the primary coastal tourism attractions. These beaches are home to numerous human activities, including tourism, fishing, mariculture, etc. İztuzu, Dalyan’s turtle beach, is a unique example. The beach is well known for the *Caretta caretta* (Loggerhead Sea Turtles). National and international nature conservation organizations monitor and protect the turtles’ nesting grounds in Turkey. The beach is closed during the period that the turtles lay their eggs. The beach is protected by strict regulations and is not accessible after dark. It can be reached by boat tours from Dalyan.



Photo 4. Boat Tours in Dalyan

In addition to the beaches and established reserves, other unique natural attractions can be found along the coast. For example, in Köyceğiz, the natural sulphur spring and the mud baths are interesting attractions.

There are 3 beaches in the area which are İztuzu beach (Dalyanağzı), Köyceğiz City beach and Ekincik beach.

#### 4.2.4 EPASA Activities

There are four site rentals currently in place. Below, 2009 and 2010 rent incomes (when applicable) are provided next to their names:



**Table 30.** Rent incomes of Köyceğiz Dalyan SEPA

Name	2009	2010
Ekincik Scaffold	3.600 TL	4.000 TL
Ekincik Bay	2.000 TL	2.118 TL
Dalyanağzı	400.000 TL	-
İztuzu	173.000 TL	183.258 TL

#### 4.2.5 Possible New Income Generating Activities

- a. Value adding to the existing natural herbs and medicinal plants in the long-run is an opportunity as it is expected that the demand for natural and medicinal products (e.g. laurel and oregano are collected in the villages) will increase in future (there is an increasing demand in Turkey for these type of products).
- b. There is an opportunity for adding value in the citrus industry by diversifying the products (i.e. juices & jams) in Köyceğiz.
- c. The development of a sweetgum oil industry in this area looks promising since a vast area is covered with the trees. Information is given about the area covered and on production in section 4.2.1.
- d. Adding value in the livestock industry seems to be an imperative for growth and the continued profitable livestock production. In this regard goat milk processing should be explored. There is currently also opportunity for goat meat processing in the area.
- e. There is potential for value-added agricultural products produced using organic farming methods, or specialty foods packaged as “gourmet” or “artisanal” foods.
- f. It is clear that there are substantial opportunities in the agritourism sector. However, it will be critical to develop an agritourism/ecotourism strategy to unlock the potential.
- g. Angling and carp fishing : there seems a number of potential venues where carp exist in numbers, most notably Köyceğiz Lake, and probably Dalaman Sic.
- h. Most villages are lacking sufficient hotels and guest lodging.
- i. Creating packages to attract more visitors, emphasizing the “grown locally” experience. In addition, creating an experience that is a “package” will have more benefits. This could, for example, include offering farm animals (feed and pet), picnic area, garden center, food and produce (handicrafts) market, ample parking and rest rooms (For example, there are site rentals without any activities and “a package” can also diversify the activities in site rentals which can also increase the income for EPASA.)
- j. Visitors’ Centers are a great way to raise awareness and enlighten visitors as to local agritourism and ecotourism elements. These centers can provide information and showroom on how local handicrafts are made and also provide an outlet for locally produced goods such jams, etc. For example, loggerhead turtles are a brand for Dalyan. These can be used as branding symbols for locally produced items and also information can be provided in the centers). Also, there is a group of women who produce hand made jewelry (necklaces and bracelets) and the Dalyan municipality has provided them with a stand to market their products without any rental cost.
- k. The areas also offer vast opportunities for educational tourism (eco, environmental etc.). For example, there are rich flora and fauna in the areas as well as cultural and historical places.
- l. Opening new site rentals (Günübirlık)

### 4.3 DATÇA-BOZBURUN SEPA

#### 4.3.1 Agriculture

Datça-Bozburun Peninsulas have a limited potential for agriculture due to the physical and natural

characteristics. There is little garden and field agriculture and the land is covered with almond and olive groves. Furthermore, there is not enough water for agriculture. Information for harvested area for Datça is provided in Table 31 and information on field crops in Marmaris is given in Table 32:

**Table 31.** Harvested Area in Datça (1991-2009)

		Cereals	Pulses	Oil Seeds	Tuber Plants	Forage Crops
1991	Harvested area(da)	9.430	1.760	450	600	40
	Production(tons)	1.665	141	90	833	457
1995	Harvested area(da)	8.210	870	110	910	20
	Production(tons)	1.396	61	11	878	60
2000	Harvested area(da)	—	—	—	—	—
	Production(tons)	—	—	—	—	—
2005	Harvested area(da)	860	70	30	410	—
	Production(tons)	206	7	3	701	—
2009	Harvested area(da)	3.921	72	—	—	—
	Production(tons)	819	8	—	—	—

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 32.** Field Crops in Marmaris (1991-2009)

		Cereals	Pulses	Industrial Plants	Oil Seeds	Tuber Plants	Forage Crops
1991	Harvested area(da)	9.210	650	—	2.800	490	20
	Production (tons)	1.602	80	—	458	464	110
1995	Harvested area(da)	7.690	650	—	2.420	520	30
	Production (tons)	1.311	95	—	414	785	101
2000	Harvested area(da)	6.560	390	—	2.300	420	40
	Production (tons)	933	66	—	435	792	168
2005	Harvested area(da)	8.290	240	20	370	130	10.880
	Production (tons)	1.295	44	2	56	360	1.815
2009	Harvested area(da)	6.948	—	—	220	—	2.810
	Production (tons)	773	—	—	37	—	2.770

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

Almond is a significant source of livelihood for the region, especially the income obtained from crude almond sales. About 1,343 ha of almond groves exist, forming 49% of the overall agricultural land (268.720 trees). This is followed by olive groves,

forming 30 % of the land (166.540 trees) (Datça Agricultural Structure, 2008). Recent numbers are provided in the Table 33 and 34 (for Datça and Marmaris) on fruit production and tree numbers.

**Table 33.** Fruit Production and Tree Numbers in Datça (1991-2009)

		Pomes	Drupes	Citrus	Hard Shells	Grapes	Olives
1991	Fruit bearing tree number	8.100	8.390	23.925	407.500	34.770	290.500
	TOTAL tree number	8.100	8.940	26.350	419.100	34.770	293.250
	Production(tons)	192	159	763	1.608	1.048	2.614
1995	Fruit bearing tree number	6.150	8.250	20.500	419.000	20.710	276.000
	TOTAL tree number	6.150	8.850	22.250	465.000	20.710	278.150
	Production(tons)	122	130	500	1.700	584	5.520
2000	Fruit bearing tree number	3.900	1.400	19.050	396.455	15.090	266.000
	TOTAL tree number	3.900	1.400	20.850	411.455	15.090	275.200
	Production(tons)	22	18	456	3.500	338	2.660
2005	Fruit bearing tree number	3.700	1.400	16.100	413.890	15.520	277.000
	TOTAL tree number	3.700	1.400	17.080	428.890	15.520	289.000
	Production(tons)	20	18	459	4.308	232	1.900
2009	Fruit bearing tree number	3.900	1.660	17.555	365.000	15.935	282.000
	TOTAL tree number	5.200	2.290	21.735	400.000	16.145	292.600
	Production(tons)	35	23	599	5.475	412	8.010

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 34.** Fruit Production and Tree Numbers in Marmaris (1991-2009)

		Pomes	Drupes	Citrus	Hard Shells	Grapes	Olives
1991	Fruit bearing tree number	7.350	12.400	39.000	51.000	3.410	122.100
	TOTAL tree number	7.350	17.950	39.400	53.000	3.410	128.400
	Production(tons)	108	183	781	277	176	611
1995	Fruit bearing tree number	6.790	12.050	39.450	52.500	4.230	120.800
	TOTAL tree number	6.870	13.180	40.200	53.000	4.580	124.900
	Production(tons)	106	251	794	158	346	483
2000	Fruit bearing tree number	6.970	13.480	12.850	50.000	10.920	125.000
	TOTAL tree number	7.170	14.110	14.700	52.000	11.220	131.990
	Production(tons)	132	243	306	500	706	625
2005	Fruit bearing tree number	4.250	10.260	12.450	51.000	11.230	132.300
	TOTAL tree number	4.263	11.060	12.450	52.200	11.455	142.800
	Production(tons)	56	220	502	51	415	460
2009	Fruit bearing tree number	3.750	10.460	13.750	48.600	10.894	132.300
	TOTAL tree number	5.240	12.440	13.750	49.750	12.959	144.940
	Production(tons)	53	271	700	488	439	1.287

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

Animal husbandry is also practiced in the forested zones, with 1250 cattle and 2.000 sheeps and goat (ibid). (See Tables 35 and 36)

**Table 35.** Animal Husbandry in Datça (1991-2009)

	Cattle			Small Ruminants				Poultry		Beekeeping		
	TOTAL	Number of Dairy Animals	Milk (Tons)	TOTAL	Number of Dairy Animals	Milk (Tons)	Mohair hair wool (tons)	Current number	Egg number ('1000 )	TOTAL beehive	Honey Productioni (tons)	Wax Productioni (tons)
1991	2426	640	694	4230	1434	70	1	8750	850	11555	173	1
1995	2375	704	544	4795	1385	67	1	9275	700	15500	388	2
2000	1540	520	588	2300	1095	53	1	1700	30	19000	62	6
2005	1407	360	667	1980	207	23	1			30000	600	0
2009	1177	384	741	2027	420	45	1			20150	650	0

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

**Table 36.** Animal Husbandry in Marmaris (1991-2009)

	Cattle			Small Ruminants				Poultry		Beekeeping		
	TOTAL	Number of Dairy Animals	Milk (Tons)	TOTAL	Number of Dairy Animals	Milk (Tons)	Mohair hair wool (tons)	Current number	Egg number ('1000)	TOTAL beehive	Honey Production (tons)	Wax Production (tons)
1991	6930	3350	3460	13996	5181	252	5	8748	680	96500	1158	19
1995	6702	3608	4162	15270	4995	243	6	3170	226	85000	1445	145
2000	6902	3747	4324	13865	4981	243	4	5000	750	80000	160	10
2005	3368	1700	3297	6975	1247	137	3	12232	816	100000	2000	200
2009	2826	1084	2088	10313	2592	280	5	2799	21	100000	2000	250

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

There are 3 agricultural development cooperatives and 3 water products cooperatives in Datça. Beekeeping and collection of NTFPs such as laurel, thyme carob etc. are other income generating activities regionally. As mentioned above, most of

the income comes from almonds (in 2006, 5.850.000 TL was raised from almonds, and 4,160.000 TL was raised from olive olive). This was followed by tomato production (3.750.000 TL) and honey (2.000.000 TL) (Datça Agricultural Structure, 2008).



**Photo 5.** Women cracking almonds in Datça

### **Box 6. Datça Organic Almonds in Datça-Bozburun SEPA**

Smallholder organic farmers of Datça are raising their incomes through the premium generated from the sale of organic almonds. This was a result of the initiative of the agricultural engineer who works in this village, with the aim of gaining better access to markets, increases in production and quality improvements. The improvement in the welfare of participating farmers resulted in arousing interest among non-practicing farmers. Three years ago District Directorate of Agriculture teamed up with Cumalı Villagers in order to cultivate organic almonds. This was started with a thousand 200 hectares and 20 producers were involved. An Agricultural engineer worked hard to persuade the farmers and completed the whole (value) chain by her own efforts from production to marketing (to organic bazaars in Istanbul). Farmers use organic fertilizers instead of chemical fertilizers. Audit and investigations will continue for three years. This is a successful case of the application of agricultural advisory in the villages. The volume of production has substantially increased for most organic almonds and there are more farmers who want to join.

Source : Interview with Agriculture Engineer in Cumalı Village

Datça has a considerable amount of mastic trees (*Pistacia lentiscus*), but in the interviews, it was emphasized that these are not being used. Mastic resin is a key ingredient in Turkish ice cream and puddings. As well as its culinary uses, mastic continues to be used for its gum and medicinal properties. The resin is used as a primary ingredient in the production of cosmetics such as toothpaste, lotions for the hair and skin, and perfumes.

Although it is generally believed that cooperatives provide the opportunity for poor communities to

raise their incomes, it was evident from the interviews (in all project areas) that most of the agricultural cooperatives in Turkey are not efficient as enterprises (due to mismanagement) and have very low capitalization from the members. However, there were a few successful examples which are provided throughout the report.

### **Box 7. Sındı Agricultural Cooperative in Datça-Bozburun SEPA**



**Photo 6.** Products of Sındı Agricultural Cooperative

The Sındı Agricultural cooperative was established in 2006 by the villagers of Sındı. It operates from a former elementary school in the village with 69 members. They produce pine, flower and thyme honey, and continuously develop its range of products. They also produce extra virgin olive oil. It is the first cooperative that has produced almond paste in the region. Making this product with honey instead of sugar is also one of its innovations. They have diversified their product range with caper, carob and herbs and also pollen from the region. All of these products have a production certificate. They have branded their name on every product. Head of the Cooperative, Ömer Ohan is hard working and dedicated to his work. His biggest complaint is “the informal activities in the region such as open vendors who sell without paying taxes. For example Nurlu almond entry price is 33 TL/kg with adding tax to it becomes 38 TL/unit. On the other hand, over the counter almonds sold elsewhere are unsupervised.”

Source : Interview with the Head of Sındı Agr. Cooperative

### 4.3.2 Fishing

Akyol and Ceyhan studied the activities of artisanal fisheries, target fishes, problems, characteristics of fishery co-operatives, fishing boats and the ports of Datça-Bozburun Peninsula (Akyol and Ceyhan, 2007). The samplings were carried out between 2005 and 2006 in two fishery co-operatives, Datça and Karaköy, and 8 fishing ports. There are total of 32 members in the co-operatives and about 170 vessels were recorded in the region. The biggest fishery co-operative was Datça in terms of members. The coastal fisheries in the region are densely carried out by longlining, gill and trammel netting. The fish and invertebrate species caught from set net or longline fishery were typical of those that inhabit coastal embayments in the Aegean and Mediterranean. *Mullus barbatus*, *Sphyræna sphyræna*, *Seriola dumerilii*, *Pagellus erythrinus*, *Dentex dentex*, *Mullus surmuletus*, *Sarda sarda*, *Xiphias gladius*, *Epinephelus aeneus*, *Loligo vulgaris*, *Octopus vulgaris* etc. are target species in the commercial catch. But fishery activities in the region are relatively found to be too weak due to short fishing season, low fishing capacity and a few fishermen.

### 4.3.3 Tourism

The site acts like a bridge between the Aegean and the Mediterranean Seas which is an important passage for yacht and sailing boats. The peninsula offers a key stopover for these touristic boats due to its climatic advantages and the fact that its coasts are embroidered with numerous bays as a result of its hilly topographic structure.

Interview with Datça District Tourism Office provided the below information :

“In 2009, 8,354 people arrived from 1,111 yachts to Datça. The first 7 months in 2010, 488 yachts brought 3,626 people. The people visiting Cnidos in 2009 was 26,244 and total of 197,560 TL entrance fee was collected. The first 7 months in 2010, 12,921 people paid a total of 95,576 entrance fee. A total of 5 hotels and boarding houses have the Ministry-certified operation schemes. The overall bed capacity of these establishments is 421. There are also 1,228 rooms and 2296 beds registered as local servers.”

**Table 37.** Number of Tourists for Muğla 2009

		Foreign Visitors	Local Visitors
By Air	Dalaman Airport	1.451.214	25.828
	Mil-Bod Airport	936.033	29.994
By Sea	Marmaris Port	180.526	5.552
	Bodrum Port	200.292	10.818
	Fethiye Port	10.741	2.401
	Datça Port	10.778	1.462
	Güllük Port	161	2.499
	T.Reis Port	20.906	2.614
	Y.Kavak Port	258	281
<b>TOTAL</b>		<b>2.810.909</b>	<b>81.449</b>

Source: Datça - Bozburun Özel Çevre Koruma Bölgesi Sosyo - Ekonomik, Tarihi ve Kültürel Değerler Araştırması, 2010

Accessibility to Datça was an issue that came up in the interviews. Improving access to tourism sites allows more visitors to come, and also allows those visitors to go to more places. As the tourism industry grows, limits of acceptable use can be exceeded if tourists are restricted to one or two areas due to the inaccessibility of other potential tourist attractions. For example, the difficulty in travelling to Datça, coupled with long travelling hours, came up in the interviews to be a hindrance to operations and thus popularity of the area. In Datça, Palamutbükü locality is a touristic spot supporting a group of villages known collectively as *Betçe* (the five villages). These are; Mesudiye, Sındı, Yakaköy, Yazıköy, Cumalı. Palamutbükü locality has a little pier which allows boats to moore.

Bozburun is famous for its boat building where the wooden Turkish Gulets are constructed according to old traditions. Along the Bozburun Peninsula there are over 100 private Gulets ranging from three cabins (for 6 people) up to 11 cabins (for 22 people). The collection of private and locally-built Gulets operates either from the Bozburun Peninsula or from Marmaris. Datça, Rhodes, Simi and Tilos are all close enough to include in the cruises.

#### 4.3.4 EPASA Activities

There are four site rentals currently in place. Below, 2009 and 2010 rent incomes (when applicable) are provided next to their names:

**Table 38.** Rent incomes from Datça-Bozburun SEPA

Name	2009	2010
Müskebi Bay	-	first year is free
Çiftlik Bay- Bayır Village	9.000 TL	9.900 TL
Kerdeme and Limanbaşı	site rentals are cancelled- there are problems of settlement	
Palamutbükü	5.600 TL	6.200 TL
Selimiye Village Scaffold	first two years are free	
Kürbaşı and Kumlu Mevkii	protocols are in progress	

#### 4.3.5 Possible New Income Generating Activities

- There is a substantial opportunity for adding value to mastic trees in Datça. A valuation must be done about the number of trees to see if this is a feasible suggestion.
- There is potential for value-added agricultural products using organic farming methods, or specialty foods packaged as “gourmet” or “artisanal” foods.
- It is clear that there are substantial opportunities in the agritourism sector. However, it will be critical to develop an agritourism/ecotourism strategy to unlock the potential.
- In Datça, most villages are lacking sufficient hotels and guest lodging. For example, Selimiye Village in Marmaris, Muğla is an exception in the areas. (The village has 9 hotels, 9 apart hotels and 11 restaurants with guesthouses, 8 restaurants, 10 guesthouses)
- Creating packages to attract more visitors, emphasizing the “grown locally” experience.
- Visitors’ Centers are a great way to raise awareness and enlighten visitors as to local agritourism and ecotourism elements. These centers can provide information and showroom on how local handicrafts are made and also provide an outlet for locally produced goods such jams, etc.

- There is a need to develop a wider range of activities that spreads tourism throughout the year. For instance, it was indicated that there is great potential for mountain biking, hiking trails and cultural activities in all areas.
- Datça also offer vast opportunities for educational tourism (eco, environmental etc.). For example, there are rich flora and fauna as well as cultural and historical places.
- MARTAB is interested in alternative tourism activities for Marmaris. 15 villages are in this area (most of them are also in EPASA), MARTAB wants to do a project that focuses on the villages to attract more tourists and show tourists the village life styles.
- Operation of new site rentals (*günübirlik*). According to the Agency’s planning department, suitable areas in Datça-Bozburun SEPA are as follows:

District	Proposed New Site/Beach
Datça	Knidos
	Mesudiye
	Hayatbükü
	Ovabükü
	Hızırşah Kızılbük
	Kargı
	Taşlı Shore
	Bebe Shore
	Kızlan Shore
	Perili Köşk
	Karaincir
	Aktur
	Hisarönü Orhaniye
Selimiye	Sığlımanı
Bozburun	Dirsekbükü
	Kocabahçe Cove
	Çiftlik Cove
	Serçelimanı
	Osmaniye
	Çaycağız Cove

## 4.4 G Ö K O V A S E P A

### 4.4.1 Agriculture

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 (Gökova SEPA ICZM Report, 2009) :

*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. Olive cultivation and processing activities represent another important agricultural activity in the region. The wild olive trees on slopes have been grafted with cultivated trees and olive growing has increased. However it is reported that the regional people do not obtain high income from olive growing; they only grow it for their own consumption. Villagers who do not earn sufficient income from citrus production turn to olive. Until 1980s tobacco growing was a popular activity, later this was replaced by sesame production. The most important reason for stopping tobacco production is the quota levied by the government. The sesame production is dry irrigation. The quality of sesame is quite good. The yearly capacity of the region is 500 tons.*

One of the findings of this study is that agriculture may contribute considerably to the region's economic development. In line with this result, the protocol "Good Agricultural Practices in the Special Environmental Protection Area" was signed between Environmental Protection Agency for Special Areas and Ministry of Agriculture and Rural Agricultural Production and Development General Directorate which became effective on 19.09.2008. According to this protocol, best agricultural practices will be implemented and it is expected that this will result in product quality improvement and rise in incomes of the farmers.

### 4.4.2 Fishing

There are 2 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 (Gökova SEPA ICZM Report, 2009).

The main target 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*) and many other types are also included in the target species.



**Photo 7.** Different Types of Fishes from Akyaka Fishing Products Cooperative

### 4.4.3 Tourism

The number boarding establishments in the region is 122; and the bed capacity is 2500 (Gökova SEPA ICZM Report, 2009). In addition about 1500 can camp in the nearby facilities. Restaurant capacity is 3,500 seats (ibid). Tourism season starts in the second week of April. 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.



### *Akyaka Boat Tours (& Azmak)*

Several boats offer daily boat trips to the many beautiful bays, islands and sheltered pools of Gökova Gulf. Their famous Blue Voyages are very popular with visitors. Trips to Akbük Bay and Sedir Island with its famous Cleopatra Beach and

the ancient island city of Kedraei (amphitheatre) and English harbour is another of the destinations offered. A typical itinerary takes in Gökova Gulf, Sedir (Cleopatra) Island (where Cleopatra is said to have bathed on sand especially imported from Egypt by Mark Antony), and the ancient city of Cedrae.

#### **Box 8. Gökova Windsports**

Gökova Windsports is one of Turkey's biggest kiteboarding schools.

Equipment such as Slingshot, Liquid Force, Crazy Fly, Under Ground are available. Being 3 km. long, with max 50 cm depth in 150 meters makes the sandy beach in Gökova suitable for kiteboarders' choice. They provide alternative activities. Daily activities include sailing and sea kayaking tours during which one paddles through ancient coasts of Gökova visiting ancient ruins of Carias and also the creeks of Gökova (Women's Creek and Akçapınar Creek). Multidaily activities include active tours and Seakayaking.

Source : Interview with Gökova Windsports

There are two boat cooperatives in Akyaka. The above mentioned tours are organized by SS. Akyaka Water Motors Carriers Cooperative (SS. Akyaka Deniz Motorlu Taşıyıcılar Koop). The other cooperative, Azmak River Boats Cooperative (Azmak Tur Tekneleri) runs smaller boats on the river. They organize alternative tours such as the riverboat trips available from the mouth of the river, or the half-day Azmak trip on the little boat -breakfast is served on board to a maximum of eight people, followed by a dash across the gulf to Çınar Beach for a spot of sunbathing. Çınar beach is one of the site rentals of EPASA (günübirlik). A cafe serves snacks along a pebble beach and offers sunbeds.

Nearly every season, many sportive activities are held at Akyaka area. Especially, the beach of the Akçapınar town in the south of the project area is very suitable for recreational activities because of its wind condition. Kite surfing, windsurfing, sea canoeing and sailing are among these activities. At the same time, slope parachuting, walking, cycling, and rock climbing are also popular activities (Gökova SEPA ICZM Report, 2009) :

“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 continuous 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 providing 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.”

Coasts within the project area are primarily used for tourism purposes. Recreational facilities, beaches and camps are situated on the coastal band. There are 6 natural beaches in the project area; namely, Akyaka, Akçapınar ,Gökçe, Çınar, Çamlı , Sedir Island beaches. The whole of Akyaka, Akçapınar, and Çınar beaches are leased by protocols to municipalities or headmen by the Environment Protection Agency for Special Areas. The main purpose of the protocols is to satisfy the requirements of the visitors and to protect the environment. The users of the two creeks are; Creek tour boats, Fishing boats, Restaurants, Hotels and houses, Daily visitors. There are about 135-140 boats in the creek and jetty at Akyaka (Gökova SEPA ICZM Report, 2009).



**Photo 8.** View of Çınar Beach (Site Rental)

#### 4.4.4 EPASA Activities

There are 8 active site rentals in the SEPA. Below, 2009 and 2010 rent incomes (if applicable) are provided next to their names:

**Table 39.** Rent incomes of Gökova SEPA

Name	2009	2010
Gökova Bungalows	324.345 TL	343.528 TL
Gökova Promenade	43.485 TL	46.064 TL
Akçapınar Village	First 3 years since 2008 is free	
Sarnıç Village	First 5 years since 2009 is free	
Akyaka Public Beach	16.000 TL	18.000 TL
Çınar Bay	7.700 TL	8.500 TL
Karaca Village Gemioturan Scaffold	16.500 TL	Free
İncekum Çamlı Village	3.900 TL	4.300 TL

#### 4.4.5 Possible New Income Generating Activities

- There is potential for value-added agricultural products produced using organic farming methods, or specialty foods packaged as “gourmet” or “artisanal” foods.
- It is clear that there are substantial opportunities in the agritourism sector. However, it will be critical to develop an agritourism/ecotourism strategy to unlock the potential.
- Creating packages to attract more visitors, emphasizing the “grown locally” experience.
- Visitors’ Centers are a great way to raise awareness and enlighten visitors as to local agritourism and ecotourism elements. These centers can provide information and showroom on how local handicrafts are made and also provide an outlet for locally produced goods such jams, etc.
- There is a need to develop a wider range of activities that spreads tourism throughout the year. For instance, it was indicated that there is great potential for mountain biking, hiking trails and cultural activities in all areas.
- Gökova also offer vast opportunities for educational tourism (eco, environmental etc.). For example, there are rich flora and fauna as well as cultural and historical places.

- g. In interviews in Söğüt village (in Gökova SEPA), the damages done by wild animals (e.g. wild pigs) were mentioned and the suggestion of interested villagers working as guides for foreign/local poachers and hunters came up.
- h. Some interviewers felt that monitored diving in currently forbidden areas will also have a significant potential to boost tourism.
- i. Sea kayaking (kayak done with paddling on open waters of Azmak river) and a need for sailboard (Yelken) school was suggested by GÖKOVA Windsports in Akyaka.
- j. Opening new site rentals(Günübirlik). The suitable areas are: Between Çınarlı-Akbük; East coast of Kadın Azmak; Kandilli; Turnalı

## 4.5 FOÇA SEPA

### 4.5.1 Agriculture

Even though no agricultural areas fall strictly within the borders of the SEPA, Eastern part of the

Foça settlement is surrounded by olive fields. In the Foça district in general, a wide variety of fruits, vegetables and citrus plantations can be found (IZKA, 2009). The agricultural repartition is as follows: 50% arable lands, 31% olive groves, 10% horticultural lands (Aykom, 2008). (see Table 40)

**Table 40.** Foça Agricultural Land

	Area		2006 (%)	Cumulative Change(%)
Total agricultural Land	46.600	51.985,5	100	11,6
Arable field	33.590	26.000	50	-22,6
Vegetable area	3.340	5.110,5	10	53
Fruit land	250	115	0	-54
Vineyard	210	260	0,5	23,8
Citrus area	100	30	0	-70
Olive area	7.400	16.070	31	117,2
Fallowing land	500	2.400	4,6	380
Empty area suitable for agriculture	1.210	2.000	3,8	65,3
Irrigated land	29.890	25.770,5	49,6	-13,8

Source : Aykom, 2008

Beekeeping information is provided in the Table 41.

**Table 41.** Beekeeping in Foça

Year	Place	Village Numbers	New Hives	Old Hives	Honey (tons)	Wax (tons)
2000	FOÇA	6	2000	0	14	0,4
2001	FOÇA	6	1900	0	19	0,5
2002	FOÇA	6	2660	0	18,3	0
2003	FOÇA	6	2660	0	18,3	0
2004	FOÇA	6	2600	0	22	0
2005	FOÇA	6	2700	0	17	1
2006	FOÇA	6	2660		15	0,5
2007	FOÇA	6	2200	0	5,7	0,3

Source : Aykom, 2008

Foça retains much of its traditional character, still depending on fishing and farming as a main source of income. Foça Wine is another brand that utilises the grapes of the region. Furthermore,

animal husbandry is active in the district with the operation of a successful milk products cooperative that produces the locally savoured Foça yogurt.

**Table 42.** Animal Husbandry in Foça

YEAR	PLACE	ANIMAL TYPE	ADULT	YOUNG ANIMALS	TOTAL
2007	FOÇA	SHEEP (LOCAL)	4650	3250	7900
2007	FOÇA	GOAT	800	300	1100
2007	FOÇA	CATTLE (CULTURE)	2310	750	3060
2007	FOÇA	HORSE	13	5	18
2007	FOÇA	KATIR	3	1	4
2007	FOÇA	DONKEY	29	7	36
2007	FOÇA	CATTLE (CROSS BRED)	1010	250	1260
2007	FOÇA	CATTLE (LOCAL)	28	15	43

Source : Aykom, 2008

#### 4.5.2 Fishing

Foça Peninsula has an advantageous position in terms of aquatic products because it has a coastal line formed by small and large scale bays, from Aliğa to the point where The Gediz River reaches the sea. This is why in the history of Foça fishing has always been a key sector. In fact, fishing in Foça makes up one of the key fishing zones in the Aegean with around thirty species of economic interest in its seas (Sualtı Araştırmaları Danışmanlık, 2008). Among these, Gilt head bream (*Sparus auratus*), sea bass (*Dicentrarchus labrax*), corals (*Pagellus mormyrus*), grey mullet (*Mugil sp.*), whiting (*Merlangius merlangus*), red mullet (*Mullus barbatus*), pilchard (*Sardina pilchardus*) are fish species which represent the livelihood of many families. Foça is estimated to provide 20% of the fish circulated in the Aegean region (IZKA, 2009).

**Table 43.** Fish Types in Foça

Types	%
Sardalya	15
Octopus and Squid	11
Hamsi (anchovy)	9
Grey mullet	8
Red mullet – striped red mullet	8
Isparoz	7
Kupes	6
Other types	36
Total	100

Source : Aykom, 2008

In total, 53 traditional fishing boats, 21 trawlers, 4 scoop-net boats and around 100 amateur fishing boats have been identified in the SEPA (ibid). According to 2001 data, the total amount of fish extraction in Foça amounted to 156.6 tons (Aykom 2008). The Decreasing stock populations is stated as one of the most alarming issues in Foça SEPA socio-economic report with 87.5% of respondents whose income has been affected (ibid).

#### Foça Fishery Products Cooperative

Foça Fishery Products Cooperative was established in 1992 with 17 members. Foça is characterised as multi-species and multi-gear fishing such as trawling, gillnetting, long lining, lift netting, purse seining. In terms of fish production and income contribution to the local and national economy, trawl fishery is the most important fishing method among the four fishing methods that are used in Foça. Therefore, trawlers dominate the fishing fleet. Red mullet, stripped red mullet and hake are the major fish species in trawl fisheries.

The cooperative complains about the damage done to fishing gear by monk seals. They also want artificial reefs for the purpose of promoting marine life in areas with generally featureless bottoms. The suggestion is that these can be built by deploying existing materials in order to create a reef. This can be done by sinking unused sewage structures that exist in Foça. This will also result in new fishing fields and offer new diving areas where divers will be able to see many fish types

together in the region, which has a high tourism potential.

#### 4.5.3 Tourism

Foça, is a traditional Turkish holiday resort town located 40 minutes north of İzmir. The population is close to 30,000 though it is thought to be doubled during the high season when predominantly Turkish citizens occupy their summer residences. The name Foça evolved during the end of the Ottoman era, from the name of the original settlement known as Phocaea – one of the 12 Ionian cities. The name ‘Foça’ is said to have derived from the Turkish word “fok,” which means “seal,” with area well known for its healthy Monk seal population. Since 1989, Old Foça is one of 13 districts across Turkey where Monk Seals are under government protection.

Boats make up an significant aspect of marine recreation in Foça. Especially the summer months make up the active season of the daily tour operators and yatches in the SEPA. According to the local Chamber of Maritime Trade, around 680 boats (not officially registered) and 102 private

boats were estimated in Foça in 2008 (Sualtı Araştırmaları Danışmanlık, 2008). One cooperative, named Mert-Fırat Excursion Boats Cooperative, consists of 25 commercial boats and range between 10-100 people capacity (personal communication). Three other excursion boats that are not members of the cooperative also exist, thus a total of 28 daily excursion boats operate in Foça.

The Foça SEPA Carrying Capacity Study found that the number of boats using the Foça harbor area exceeds the Real Carrying Capacity, determined as 373 per day. The amount of waste water leakage to Foça harbor area from the boats is estimated as 21m<sup>3</sup> (Sualtı Araştırmaları Danışmanlık, 2008).



**Photo 9.** Persion monument in Foça

Thirty-three touristic establishments offer accommodation in Foça with a total capacity of 2,412 (nationals) with an average of 1.6 overnight staying (Aykom, 2008). The bed capacity in Foça is given in Table 44.

#### **Box 9. Club Med Foça French Holiday Village**

Club Med Foça French Holiday Village had opened in 1967 as the first modern holiday resort in the Aegean region. It became the leader of modern tourism in Turkey. It served 900 tourists with 120 employees in the first five months. Club Med introduced water sports, animation shows and other types of entertainment. Foça Club Med, a business-tenant of the Turkish Retirement Fund since 1967, was taken over in 2005 due to privatization. The fund sold the facility to the highest bidder, for \$8.2 million, however the sale did not get approval, and the facility was handed over to the Finance Ministry. Since then this marvelous holiday village has been left to its fate, buildings have fallen into ruin and the garden has been overrun by weeds.

The locals believe that the facility has provided a great deal of contribution to Foça's tourism. Club Med, located five kilometers from Foça, had created job opportunities for the locals and had the opportunity to work at other Club Med facilities around the world. During summer seasons 10,000 tourists once came to Foça every year. Restaurants, drivers and other local businessmen were taking advantage of this tourist flow, therefore the investors are in urgent need to regain such a place. Interviews with the locals in Foça indicated that they have been worrying about this facility.

Source : Interview with Locals in Foça

**Table 44.** Bed Capacity in Foça

		Bed capacity
HOTEL	15	1178
HOLIDAY VILLAGES	4	432
GUEST HOUSES	16	362
APART HOTELS	8	481
BUTIQUE HOTELS	4	127
CAMPING	4	743

Source : Aykom, 2008

For example, in Foça the number of Greek tourists in 2009 was 625 and in 2010 for the first 9 months this number increased to 717. Turkish tourists are also visiting Greece with their favorites being Mykonos, Rhodes, Crete, Santoroni, Lesbos and Chios.

#### 4.5.4 EPASA Activities

There are currently no site rentals in Foça.

#### 4.5.5 Possible New Income Generating Activities

- There is potential for value-added agricultural products produced using organic farming methods, or specialty foods packaged as "gourmet" or "artisanal" foods.

**Photo 10.** Beach in Foça

- It is clear that there are substantial opportunities in the agritourism sector. However, it will be critical to develop an agritourism/eco-tourism strategy to unlock the potential. The following agricultural activities can provide additional income in agritourism since they have the potential to create new welfare in the agricultural as well as the tourism industry.
- Creating packages to attract more visitors, emphasizing the "grown locally" experience.
- Visitors' Centers are a great way to raise awareness and enlighten visitors as to local agritourism and ecotourism elements. Visitors coming to Foça show a keen interest on Mediterranean monk seals, which give the town its

**Table 45.** Tourist Numbers, Nights, Length of Stay, Occupancy Rates (2001-2007) Foça

YIL	TESİSE GELİŞ SAYISI			GECELEME SAYISI			ORTALAMA KALIŞ SÜRESİ			DOLULUK ORANI		
	Number of Arrivals			Number of Nights Spent			Average Length of Stay			Occupancy Rate %		
	YABANCI	YERLİ	TOPLAM	YABANCI	YERLİ	TOPLAM	YABANCI	YERLİ	TOPLAM	YABANCI	YERLİ	TOPLAM
	Foreigner	Citizen	Total	Foreigner	Citizen	Total	Foreigner	Citizen	Total	Foreigner	Citizen	Total
2000	11 348	11 929	23 277	98 661	27 283	125 944	8,7	2,3	5,4	23,75	6,57	30,32
2001	14 323	16 223	30 546	80 490	40 662	121 152	5,6	2,5	4,0	31,51	15,92	47,43
2002	41 445	15 956	57 401	127 549	38 863	166 412	3,1	2,4	2,9	40,71	12,41	53,12
2003	28 862	26 101	54 963	94 790	73 311	168 101	3,3	2,8	3,1	29,64	22,93	52,57
2004	1 406	24 885	26 291	9 409	59 573	68 982	6,7	2,4	2,6	2,44	15,47	17,92
2005	13 913	20 933	34 846	81 260	58 645	139 905	5,8	2,8	4,0	23,76	17,15	40,90
2006	10 003	17 899	27 902	73 239	58 326	131 565	7,3	3,3	4,7	30,91	24,62	55,53
2007	12 293	32 493	44 786	21 040	53 070	74 110	1,7	1,6	1,7	10,67	29,93	3,60

Source : Aykom, 2008

name in Turkish, however not enough information is given on the species encountered in the protected area. A visitor center focusing on monk seals, Foça's nature, history and archaeology can be initiated where local products and crafts can also be sold.

e. There is a need to develop a wider range of activities that spreads tourism throughout the year. For instance, it was indicated that there is great potential for mountain biking, spa/wellness activities, hiking trails and cultural activities in all areas.

f. Foça also offer vast opportunities for educational tourism (eco, environmental etc.). For example, there are rich flora and fauna as well as cultural and historical places.

g. Some interviewers felt that monitored diving in currently forbidden areas will also have a significant potential to boost tourism.

h. Opening new site rentals(Günübirlük). The area which is suitable is Kartderesi.



## 4.6 AYVALIK ISLANDS NATURE PARK

### 4.6.1 Agriculture

Agriculture is prominent in the region with olives dominating the agricultural landscape. Within the administrative borders of the district, about 16.200 ha of olive groves exist, forming 77% of the overall agricultural practice (Ayvalık Directorate of Agriculture, 2010). Ayvalık is inseparable from the notion of olive oil with 26.250 tons annual production from the region which recently has gained an “appellation” label (ibid). The interview with Ayvalık Chamber of Commerce indicated that under their leadership, the local producers have applied to acquire the geographical indication; a sign assuring consumers that produce originates from the area. Following olives, the largest agricultural surfaces are arable lands (mainly wheat) and horticultural lands (ibid).

Meadows are limited in the district but animal husbandry is also practiced in the forested zones, with 5.200 cattle and 2.000 sheeps and goats (ibid). Animal husbandry is, in principle, not allowed within the MCPA; however, about two-three sheep troops amounting to 500 animals graze within the park including Çıplak island where one troop is taken for grazing during the summer (personal communication). In Ayvalık district, around 18.708 tons have consequently been produced in 2010 (Ayvalık Directorate of Agriculture, 2010).

Bee-keeping is a widespread activity within the park due to the variety of plants and trees but it remains an on the side economic endeavor. Eighty people are registered as bee-keepers in the district and around seven thousand hives are estimated within the MCPA (personal communication). Bee-hives are often moved from one habitat to another during different seasons of the year and the majority of the bee-keepers are told to be outside of Ayvalık.

### 4.6.2 Fishing

Two fishing cooperatives are found in the district: one in town center and the other in Cunda island. These two cooperatives represent small-scale

fishermen and on average their membership is around 130 fishermen (interviews). The traditional fishing in Ayvalık was done in the past with a haul net known as “trata” locally but since these 7-8m boats were extracting and impacting the sea bottom close to the littoral, this practice has been banned since 2008. Trata is a traditional method that the fishermen in Ayvalık have been using for many years.<sup>6</sup> On the other hand, mussel harvesting through diving and/or hand-picking is permitted within the area during the season, and harvesting is permitted with set longlines no: 10 or smaller, outside the season 1<sup>st</sup> May – 31<sup>st</sup> August<sup>7</sup>.



Photo 11. Fishing boats in Ayvalık harbour

Another distinctive marine extraction in the MCPA concerns certain sea-shell species (predominantly *Tapes aureus* but also *Venus verrucosa* and *Ostrea edulis*) and this activity is conducted by 4-5 families living in Cunda island. The export of sea-shells from the MCPA in 2010 amounted to 217 tons (Ayvalık Directorate of Agriculture, 2010). There is one company, Artur Balıkçılık that exports veneridae and clams to Europe (especially to Italy and France) from Ayvalık (Cunda Island). These are collected by diving, or hand-picking by the fishermen and managed by the company according to their customers’ demand. The marine area is rented from the Special Provincial Administration as aqua production zone

<sup>6</sup> There are conflicting views on tratas : while the fishermen argue this is not a harmful practice, MARA does not agree.

<sup>7</sup> <http://www.kkgm.gov.tr/regulation/not/2007-43.html>

by the company. It was not possible to get clear data on the production amount, process and the overall sustainability of the harvest.

Bigger-scale fishing in Ayvalık exists for the past ten years and is carried out by people whose origin is often outside the MCPA (such as Black Sea region). There are three scoop-net boats of more than 12m long and seven trawlers of 40-50m (with sonar and light equipment). All in all, 25.000 kg of fish has been collected in the first nine months of 2010 and the fish export out of Ayvalık in 2010 amounted to \$4.835.236 (Ayvalık Directorate of Agriculture, 2010). Besides fishes, 23.000 kg of calamaries and 30.000 kg of octopus have been harvested in Ayvalık seas (ibid).

#### 4.6.3 Tourism

The closeness of the district to Izmir, Bursa and Balıkesir, the historical and archeological heritage of the town, the presence of long sandy beaches such as Sarımsaklı and Altınova to the South as well as the culinary reputation of Ayvalık has increasingly made it an important touristic destination. Between the close-by Greek Lesbos Island and Ayvalık passenger boats operate on a regular basis. In 2010, around 39.000 people have arrived by sea to the town (Ayvalık Gümrük Muhafaza Müdürlüğü, 2010).

A total of 185 touristic establishments are active in the district but only 20 of these have the Ministry-certified operation schemes (Ayvalık Kent Gezi Rehberi, 2010). The overall bed capacity of these establishments is around 15.000 (Ayvalık Turizm Master Planı, 2007). Average number of local tourists in 2006 staying overnight was 55.898 and foreign visitors 24.616 (ibid).

Yatch tourism has a significant place in Ayvalık's tourism flows. One private marina operated by Setur adheres to international standards and has 200 boat capacity on the sea and 100 boats on land. In 2010, a total of 899 docking contracts were made (Ayvalık Turizm Master Planı 2007 & personal communication). A smaller port without any extensive facilities is found in Cunda island and this is run by the local fishing cooperative. One private boat repair/construction/wintering site exists in Ayvalık, Sadan Yatçılık, whose capacity on land is 140 boats (personal communication).

There are a total of eighteen daily excursion boats that leave from Ayvalık center and anchor in various bays of the MCPA for swimming and exploring. The total capacity of these is 3.500 people per day (Ayvalık Directorate of Tourism, 2010). In recent years Ayvalık has also become an important point of attraction for scuba divers due to the underwater fauna of the MCPA. Five diving schools operate diving excursioning in over 60 spots in the archipelago (Ayvalık Turizm Master Planı, 2007). Unlike daily excursion boats which are limited to a season of about three months, the diving operators are active throughout the year. Each of these scuba schools has revenues of more than 50.000 TL annually (Gökdeniz et al, 2010).

The MCPA offers the possibility of access by land as well. The management plan of the park (called "Uzun Devreli Gelişme Planı" in Turkish - Long Term Development Plan is summarized in Appendix II), which was drafted in 2004 and revised in 2009 (with controversial changes of the conservation degrees in the strict zones), had foreseen five terrestrial entrance points. But these have not been implemented. Nevertheless, Şeytan Sofrası Viewpoint is a key observation zone in the Southern part of the park where the stretch of bays and islands offer a popular sunset point. The number of visitors to the viewpoint is not known.

As a result of a recent study about Ayvalık which is an important destination for domestic tourism, serious differences are noticed among the supply and demand of touristic services (Gökdeniz et al, 2008). For instance; the problems of supply consist of lack of educated staff, shortness of the season, infrastructure problems and the lack of tourism corporation organization. The problems of the supply include there not being enough hotels with 4-5 star or recreation facilities and transportation problems.

In recent years, there are many Greek tourists coming to Turkey and especially to Ayvalık, Foça and Datça by daily boat tours. These boat tours are relatively cheap (e.g. round trip to Ayvalık is 6 euros in 2010 from Greece) due to competition. The Greek tourists come to Turkey to shop because it is relatively cheap in terms of food and other items such as textile and other goods. There

### Box 10. Çöpmadam (Ayvalık)

Çöp (m)adam – the ‘garbage ladies’ (it is a play on words in Turkish) - is a venue for women who have never earned a salary before, to use their handwork skills to make items out of throw-away materials. Having started in August 2008, the project involves the women of the town taking wrappers and labels, cleaning them and then weaving them into handbags and the like. There are currently 3 workshops (the main one is in Ayvalık) and the products are finding their way into department stores and boutiques in other cities (e.g. İstanbul). Çöp Madam, is giving a chance to unemployed women to produce something in return for income, of which they were previously deprived. The project also gives these women a chance to improve their status while simultaneously contributing to the betterment of the environment.

Source : Interview with Manager



Photo 12. Handmade Products of Çöpmadam

is an increase in numbers in 2010 after the economic crisis in Greece.

#### 4.6.4 Current Activities

Ayvalık Islands Nature Park is under the management of the GDNCNP. As such, there are no site rentals and other income generating activities in Ayvalık Islands Nature Park.

#### 4.6.5 Possible New Income Generating Activities

- It is clear that there are substantial opportunities in the agritourism sector. However, it will be critical to develop an agritourism/ecotourism strategy to unlock the potential.
- Visitors' Centers are a great way to raise awareness and enlighten visitors as to local agritourism and ecotourism elements. These centers can provide information and showroom on how local handicrafts are made and also provide an outlet for locally produced goods such jams, etc.
- There is potential for value-added agricultural products produced using organic farming methods, or specialty foods packaged as "gourmet" or "artisanal" foods. In Ayvalık, venerides and clams are an example.
- Creating an experience that is a "package" will have more benefits. This could, for example, include offering farm animals (feed and pet), picnic area, garden center, food and produce (handicrafts) market, ample parking and rest rooms.
- There is a need to develop a wider range of activities that spreads tourism throughout the year. For instance, it was indicated that there is great potential for mountain biking, spa/wellness activities, hiking trails and cultural activities in all areas. (for example, Ayvalık Nature Park Development Plan has already determined potential hiking trails).
- The park also offers vast opportunities for educational tourism (eco, environmental etc.). For example, there are rich flora and fauna as well as cultural and historical places.
- Field guides were trained in Ayvalık Nature Park in 2008 however, they are not being used (due to bureaucracy). Nevertheless, this system can be reboosted and also adopted in other areas to provide information in the study areas (e.g. biological, archeological, natural and cultural information) and even on rare species (flora & fauna).
- Some interviewers felt that monitored diving in currently forbidden areas will also have a significant potential to boost tourism.
- Collaboration with existing marina operators (private sector) can help produce awareness raising materials on the marine environment and species of the protected areas.
- Opening site rentals(Günübirlik).

## 4.7 LIMITATIONS OF THE STUDY

The data limitations and subsequent ability to analyse in detail the socio-economic situation at the sites is a missing part of this document. Official requests have been made to relevant government organizations to gather up to date information on agriculture and tourism related data (with detailed questions such as the number of trees, boat tours with routes, diving areas etc.). However, these were not available while the document was being drafted. Thus, there was not sufficient data to be presented in tables or figures. Further, current income of EPASA was not up to date (the ones that were available were provided above). In addition, a comprehensive treatment of the subject (due to diversity) was not expected in this report. This was also due to limited time for field studies to cover large areas and the broad level issues in the areas that came across during the study. However, after the lists (activity 2.4.8) are prepared and the activities are narrowed down, a comprehensive study will be prepared as a final feasibility study.

After the first draft of this report, local experts prepared a draft for list of activities in November 2010 as indicated in Activity 2.4.8 : *Local experts prepare*

*a list of sustainable and environmental friendly joint or individual economic activities with the local stakeholders at the meeting to be organized for the dissemination of the feasibility".* The meetings could not be held within the specified time periods in the programme, local experts were told that they would be organized in near future. The initial draft lists for each area were presented in EPASA in December 2010 and these were criticized because of lack of data that would support the suggestions. As an outcome, requests were made by EPASA to different Ministiries concerning data on agriculture, tourism and marine activities in the areas. (As of February 2011, the requests about data have not been fulfilled.) At the end of the meeting, a couple of suggestions for the feasibility study were suggested by EPASA management are as follows:

- Boat Tours
- Beaches that are not being used
- Trekking routes
- Income generating activites for the local people in the areas

These suggestions and the lists will be discussed with other stakeholders for the dissemination of the feasibility study.

## CONCLUSION



24

The findings demonstrate the wide variety of activities and tourist attractions that are already available in the study areas. Numerous suggestions were offered by those interviewed in all the areas. In the interviews there were some additional points that could lead to new income generating activities and these were provided in the previous chapter as agriculture, fishing and tourism.

Agriculture is an essential part of the economic and social fabric of the pilot areas. The present economic situation presents new challenges to farming communities as well as to agricultural production. Further, it is important to protect the natural resources by utilizing new methods that reduce environmental damage and conserve resources, such as water. In the interviews, the above mentioned points about natural resources were underlined by different stakeholders and especially with fishing actors. For example, the trawls being non-selective, sweeping up both marketable and undesirable fish and fish of both legal and illegal size were mentioned almost in all the areas. This also causes small and baby fishes to be killed and discarded back to the sea. Also the fishing limits of the trawls often cause large volumes of catch to be discarded. Unfortunately, there are not enough monitoring and control systems to deal with the above mentioned problems.

All of the study areas face increasing pressure from tourism, industry and population growth. As new infrastructure such as roads and airports are developed, more quiet areas will be facing the same challenges as Bodrum or Marmaris (where there is mass tourism). Managing local resources will become increasingly challenging as the population grows and the number of investors, both foreign and domestic, increases.

Through effective packaging of tourism activities, it will be possible to attract tourists for longer periods to the region. It was evident from the interviews that all inclusive packages and mass tourism are seen as detrimental to the sector. There is very little coordination or even communication between tourists establishments in the areas. (This came up in interviews as “authorities racing for the same resources”) There is a lack of tourist packages that could for example include cultural

tourism, scenery drives, adventure, wellness etc. In this regard the establishment of a niche wine cellar, olive farm/s, cheese production, jam making, etc. processing and natural products could make a substantial contribution to increase agri-tourism, to keep people for longer periods in the region and to contribute to local economies. In relation with new income generating activities, it should be kept in mind that as with natural resources, cultural heritage sites and village attractions can be adversely affected if attention is not paid to the capacity for these sites and people to handle large amounts of tourists. All the areas are rich in cultural heritage attractions (as described in Chapter 3). The development and promotion of cultural heritage attractions can lead to the further protection of those attractions through self-sustaining financing mechanisms.

In order for these areas to have sustainable income generating activities, strong partnerships need to be developed amongst government sectors, and between the national and local authorities, the private sector and local communities. The inter-sectoral coordination and management of coastal activities, especially coastal tourism, is crucial to the sustainable use of the resources. A mechanism to ensure that all relevant stakeholders' voices to be heard and discussed is necessary so that actions are not taken in an isolated way.

In the areas visited, there was also a lack of civil society organizations. Unfortunately, there are not many cases like ÇöpMadam in other project areas. There were two active organizations (that were interviewed<sup>8</sup>); DAÇEV (Datça Environment and Tourism Association) in Datça-Bozburun SEPA and FETAV (Fethiye Tourism, Promotion, Education, Culture and Environment Foundation) in Fethiye-Göcek SEPA. Both NGOs aim to protect natural resources and to improve the environment and create an awareness on social, cultural, and historic values in their respective areas.

As a result of the interviews, a number of products of high value were identified in the areas. These are: scenic value (diversity of landscape- e.g. Babadağ), biodiversity (e.g. Datça), interesting forms of vegetation (endemic vegetations, e.g. Babadağ

& Ayvalık), uniqueness of species (e.g. Dalyan, Foça), or of topographical, geological elements, pristine quality of the ecosystems, opportunities for swimming (beach, lagoon), and nature-based sporting possibilities (rafting, diving, climbing). These products and more exist in the project sites, and their potential for supporting ecotourism development will need to be assessed more in-depth focusing on the steps required for their implementation, beneficiaries and benefactors, and potential negative impacts. It is important to be realistic and avoid overblown expectations.

Limitations should be considered in terms of human and technical resources, financial resources, knowledge and practical experiences. There is a particular need to strengthen EPASA's entity in the areas (e.g. EPASA structuring in the areas; at the time of the field work, for 4 protected areas in Muğla province there was one office based in Köyceğiz.) Furthermore, there is a need for more participatory ways of decision-making in the areas and substantial involvement of EPASA. Thus building local capacities for EPASA and raising awareness on the importance of protected areas are important.

The Interim Feasibility Study has identified the following main issues and challenges:

1. Ensuring better horizontal and vertical coordination between different stakeholders,
2. Maritime activities: Increasing pollution & threats and challenges in fishing (declining resources)
3. Managing pressures from urbanization (migration) and tourism development; (e.g. decline in local cultural products and agricultural production)
4. Importance of protecting cultural and historic heritage sites;
5. Reducing pollution from land based sources (including waste, wastewater, industry) underdeveloped sewages pose a threat in most areas.

The balance between conservation-protection messages and income generation activities should be

<sup>8</sup> In Ayvalık, there is also an association, namely "Yuva Derneği" which focuses on bird species and nature conservation.

planned very carefully. Furthermore, public organizations' income generation objectives need to be planned realistically. For example, any new income generated in Ayvalık Islands Nature Park goes to the central budget. (i.e. if a percentage is taken from boat tickets, this will go to the central budget, not to the protected area). EPASA has a different income structure than Nature Parks, for example site rentals, piers and buoys are some of the income generating activities. Nevertheless, new income generating activities (for EPASA) can be counterproductive because it may confuse the respective roles of the

market (private sector) and the role of EPASA, leading to the adoption of ineffective policies or interventions. Thus market-based approaches for EPASA should be considered carefully with varying degrees of government involvement. The desirability and relevance of an approach will largely depend on the prevailing socio-economic, competitive and political context. Another important issue is degree of excludability (extent to which the owner of the resource can exclude others from exploiting it) and rivalry for the service should be taken into account.

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## APPENDIX I

### PEOPLE INTERVIEWED

#### a. Muğla (4 Areas were covered during 11-25.08.2010)

##### Interviewers

	Name	Title	Telephone
			Muğla (252)
Muğla directorate of environment and forestry – ORKÖY	Metin YAZICI	Branch manager	223 0307
Muğla The Provincial Directorate Of Agriculture			214 1207
- Support Branch	Fatih ÇALOĞLU	Branch manager	214 1207
- Farmer Education Branch	Sevim KAVAK	Branch manager	214 1207
- Control Branch	Osman KURT	Technical clerk	214 1207
Muğla University			2111100
- Fishery Products	Prof.Dr.Ahmet Nuri TARKAN	Dean	2111100
- Fishery Products	Yrd.Doç.Dr.Nedim ÖZDEMİR	Dean Assistant	2111100
MARTAB Marmaris Tourism Area Infrastructure Service Union	Sedat KİRT	Coordinator	412 2876
.....MARTAB	Yılmaz YETER	Publisher	
Köyceğiz District Manager of Tourism	Neşet MENTEŞ	Manager	262 4703
Köyceğiz District Manager of Agriculture	Enver AYDIN	Manager	262 4667
Köyceğiz Organic Agriculture Cooperative	Neşet YENER	Ex. Manager	262 5600
Muğla University			2111100
Tourism Entrepreneurship	Prof.Dr.Metin KOZAK	Prof.	2111100
Ekincik Boat Cooperative	Feridun DALAMAN	Manager	532 331 5964
Ekincik Village	Sinan KAYA	Village headmen	532 564 4319
Dalyan Municipality Head	Arif SARI	Head of Mun.	284 2038
Dalko Water Products Cooperative	Muhammet AKTAŞ	Manager	542 271 4295
Dalko Tekne Cooperative	Atilla GÜLTEKİN	Manager	543 655 7198
Oruç Travel Ltd.	Ahmet ORUÇ	Entrepreneur	284 3277
	Ramazan ORUÇ	Entrepreneur	284 3277
Dalyan Sandals Hand Made	Ali YUKARI	Entrepreneur	284 3021
Natural Ahşap Oyuncak	Arda Burhan ORHAN	Entrepreneur	284 3096
Nar Danesi	Tarık KEÇECİ	Entrepreneur	
Sea Turtles Search Rescue and Rehabilitation Center	Sightseeing		
Gökbel Village	Mehmet ASLANPAY	Village headmen	542 583 2865

Farmer	Halil CEDİT	Farmer	
Dalyan Municipality Stands	Tolga MİLAT	Student	
Women City Counsel Handicrafts	Hüdakar ÇEVİRGEN	Woman craftsman	
Women City Counsel Handicrafts	Esin ÇEKİÇ	Woman craftsman	
South Aegean Development Agency GEKA	Mehmet AYDINER	Manager	258 371 8844
GEKA	Esin HEAD	Expert	505 436 8669
GEKA	Yeşim ESEN	Expert	258 371 8844
Blue Flag Program	Gürcan KAYA	Coordinator	3586902
Turkish Environment Education Foundation (TURÇEV)	Aydın ATICI	Board Member	533 431 7859
Muğla University			
Metallurgy Engineer	Yavuz GEZİCİOĞLU	Asst. Prof.	211 1749
Fishery Products	Mustafa ERDEM	Asst. Prof.	
Muğla Beekeepers Union	Sezai ERGİNOĞLU	Vet. Dr.	212 64 85
Ortaca Agriculture Chamber	Ayşe Öneri SOLTEKİN	Agr. Engineer	282 3962
Muğla Directorate of Tourism	Mine GÜNEY	Branch Manager	214 1261
Marmaris Chamber of Commerce	Eylem Miray APAK	Expert	4174373
Bilge Akgün Consultancy Firm	Bilge AKGÜN	Consultant	532 4947680
Ekincik Agricultural Development Cooperative	Zekai KILIÇ	Manager	532 510 1085
Köyceğiz Tourism and Environment Foundation	Ömer OFLAZ	Manager	262 1150
Marmaris Directorate of Tourism	Burhan COŞKUN	Manager	412 1035
Marmaris Directorate of Agriculture	Nazif ÇİFTÇİ	Manager	412 1011
Turgut Village	Naci İŞLER	Village headmen	537 324 55 18
Bozburun Municipality	Cemil ŞENER	Manager	456 2004
Selimiye Village	Osman COŞKUN	Village headmen	536 866 9367
Taşlıca Village	Sadi ALTINIŞIK	Village headmen	537 963 7774
Söğüt Village	Kemal KARACA	Village headmen	505 697 4266
Sardunya	Muhammet ÖZDEMİR	Entrepreneur	446 4003
Akyaka Municipality	Ahmet ÇALCA	Manager	243 5111
Yücelen Hotels	Nurullah GENCER	Entrepreneur	243 5108
SS. Akyaka Deniz Motorlu Taşıyıcılar Cooperative	Mehmet GÜMÜŞ	Manager	532 498 3821
Azmac Tur Tekneleri Cooperative	Hüseyin BAŞER	Member	535 499 5294
Beach of Çınar	Deniz ERKEN	Entrepreneur	
SS. Akbük Fishery Products Cooperative	Dursun KAYA	Member	
Akbük Daily Rental- Sarnıç Village	Osman BEKTAŞ	Employee	
“	Murat KAYA	Employee	
“	Ebru UYSAL	Employee	
Akyaka Kiteboard	Özgür CEYLAN	Entrepreneur	536 624 9198

Çamlı Village	Özkan KALKAN	Village headmen	506 627 0085
Directorate of Agriculture Datça	Servet KUTLU	Manager	712 3025
Directorate of Tourism Datça	Ercan BEYDAT	Manager	712 3546
Cumalı Village	Raziye KUZU	Agriculture Engineer	542 5425780
Cumalı Village Fishery Products Cooperative	Kıyas KARABOĞAN	Manager	541 8599744 village headmen / 726 1430 village headmen
Sındı Village Agricultural Development Cooperative	Ömer OHAN	Manager	5303126107
YakaVillage	Nazmi GÜLTEKİN	Village headmen	505 262 8966
Mavi Beyaz Hotels	Mehmet TEKBAÇAK	Entrepreneur	725 5555
DAÇEV	Melda Omay Özdamar	Manager	536 254 7837
Göcek İnce Public Beach	Bahri SÖĞÜT	Entrepreneur	535 276 6476
METU	Ahmet YALÇINER	Prof.Dr.	532 471 0006
TURMEPA	Nazif TÜRK	Manager	532 402 6329
MELSA Ölüdeniz	İbrahim AKOĞLU	Manager	535 776 1361
Babadağ	Sightseeing		
MELSA - Muğla	Nuray KURİ	Department Head	212 5638
Fethiye Chamber of Commerce and Industry	Akif ARICAN	Manager	532 384 1525
Fethiye Chamber of Sea Commerce Board	Şaban ARIKAN	Manager	533 481 8292
Compass Yachting Travel Agency	Mehmet S. ESKİCİ	Manager	612 5921
FETAV	Dilek DİNÇER	Manager	612 3366
Pastoral Valley- FETAV	Ahmet KİZEN	fetav_fetder	537 643 9121
National Education Board of Fethiye	Şenol KOYUNCU	Teacher	6141109
National Education Board of Fethiye	Zafer KAYA	Teacher	6141109
Directorate of Tourism Fethiye	Güler UYMAZ	Manager	6141527
Local Executive Council of Fethiye TÜRSAB	Salih TAŞÇI	Manager	6120974
Head Office of forestry Fethiye	Reşat TUNÇ	Manager	6141086
Kaya Village	Mustafa KARAGÖZ	Village headmen	0533625 9187
Kaya Village	Şakir KALAYCI	Farmer	
Kaya Village	Gonca KALAYCI	Carpet weaver	
Gökçeovacık Village	Mehmet KAVAK	Village headmen	0532 3245342
Huzur Valley	Ian WORRALL	Entrepreneur	644 0008

## b. Ayvalık (13-15.09.2010)

### Interviewers

	Name	Title	Telephone
			Balıkesir (266)
National Parks	Atasay TANRISEVER	Manager	0537 3627444
Cunda SS Fishery products Coop	Mehmet KIRAĞ	Board Member	0546 4216285
Cunda SS Fishery Products Coop.	İsmail GÜRAN	Vice Chairman	0546 2539616
Obsession Cunda Ahşap	Hakkı Deniz OKER	Entrepreneur	0542 5627199
Directorate of Agriculture Ayvalık	Nurullah ÖZDEMİR	Manager	312 2208
Directorate of Agriculture Ayvalık	Sema ÖZDEMİR	Engineer	312 2208
Directorate of Tourism Ayvalık	Mustafa TEKİN	Manager	0544 441 1820
Ayvalık Harbour Presidentship	Hüseyin DEMİR	Head	0505 6415910
Ayvalık Chamber of Commerce	Rahmi GENÇER	Head	0532 3143309
Entrepreneur	Ahmet SÜNEK	Entrepreneur	
ÇÖPMADAM	Tara HOPKINS	Head	312 1360
Çağdaş Yaşamı Destekleme Dr.	Ornella SINAV	Member	
Pelikan Fishery	Ömer AKMAN	Captan	
Veysel KAPTAN Ship	Zeki ÇANAK	Guide	
Ege University	Denizcan DURGUN	Master Student	0535 6504746
Körfez Diving Center	Mustafa YANA	Employee	
SETUR Marina	Serhat MAYA	+TURMEPA	0533 5616620
Yuva Association	Erdem VARDAR	Member	0533 5642880
Coast Guard	Alaaddin ATLI	Soldier	327 2828
Artur Fishery	Levent YILMAZ	Accounting Manager	331 0083
Jale Tour	Ali JALE	Entrepreneur	331 3170
Körfez Real estate	Hüseyin ÇALIŞKAN	Entrepreneur	0533 5220028
Körfez Real estate	Nilgün SÜSLÜ	Employee	0507 7455215
Free Lance	Firat AYKAÇ	Architect	0533 2216028
Free Lance	Gürcan ÜRGÜPLÜ	Entrepreneur	

### c. Foça (16-17.09.2010)

Interviewers	Name	Title	Telephone İzmir (232)
Organization of Young Businessmen of Foça FOGİAD	Taner ACAR	Entrepreneur	812 4277
İzmir Fishery Products Union	Hasan ESER	Manager	533 443 9978
Local Newspaper	“	Local Representative	
Hanedan Hotel	Bünyamin GÜLER	Entrepreneur	533 4489176
Foça Fishery Products Coop.	Ceyhan ÇETİN	Head	537 726 5530
Free lance architect	Metin ÖNGÜŞEN	Architect	554 7906838
LEMNOS Cafe	Şükrü ERCABAT	Entrepreneur	506 9133900
Boat Tours Coop.	Mert FIRAT	Head	532 744 7342
Entrepreneur (Thermal)	Ömer Faruk TUNCA	Entrepreneur	532 6276104
District Office of Agriculture-Foça	Raşit YAZICIOĞLU	Manager	542 4270550
Kula Oliveoil	Hakan KULA	Entrepreneur	532 7062302
APAMA Zeytinli Bahçe	SIGHT SEEING		
ACAR, KOSOVA	SIGHT SEEING		
MACAREL, PEOPLE CAMPING	SIGHT SEEING		
Municipality of Foça	Gökhan DEMİRAĞ	Head of Mun.	812 1127
Municipality of Foça	Osman GÜRSEVEN	Vice Chairman	812 1127
Disrict Office of Tourism Foça	Harun KOÇOĞLU	Clerk	812 5534
Fokai Otel _ TUROFED	Mehmet İŞLER	Entrepreneur	532 6905318
EGE UNIV. Fishery Products	Mesut ÖNEN	Dean	3883225
EGE UNIV. Fishery Products	Alper DOĞAN	Asst. Prof	532 492 6250
EGE UNIV. Fishery Products	Tuncer KADAĞAN	Prof. Dr.	533 4859415
EGE UNIV. Fishery Products	Melih ÇINAR	Dr.	
İzmir Development Agency	Ergüder CAN	Manager	489 8181

**Table .** Details Of Interviews

Stakeholders	Fethiye-Göcek		Köyceğiz-Dalyan		Datça-Bozburun		Gökova		Muğla		Foça		Ayvalık Islands NP	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
National parks														1
Min. Of Forestry (Orköy, etc)	1								1					
Min. Of Agriculture			1	1	1					2	1	1	1	1
Min. Of Tourism		1	1		1						1		1	1
Universities	1									5		4		
Villages	2		2		5	1	2							
Beekeepers Union										1				
Tourism Unions					2									
Fishery Unions												1		
Municipalities			1		1		1				2			
Chamber of commerce	1													1
Chamber of sea commerce	1													1
Public Education center	2													
Agr. Cooperatives			2		1									
Fishery Cooperatives			1		1		1				1		2	
Boat Cooperatives			2				2				1			
Development Agencies										1	2	1		
NGOs	2	1	1			1				2		1	1	3
Private businesses	4	1	5		2		2				5		8	
Farmers	1		1											
Local people		1	1	2			2	1	1	1	2		2	1
Site Rentals	1						1	1						
Coast Guard														1
Harbour														1
<b>Total</b>	<b>16</b>	<b>4</b>	<b>18</b>	<b>3</b>	<b>14</b>	<b>2</b>	<b>11</b>	<b>2</b>	<b>13</b>	<b>5</b>	<b>19</b>	<b>0</b>	<b>19</b>	<b>6</b>

132

## APPENDIX II

### Long Term Development Plan Decisions for Ayvalık and its Islands:<sup>9</sup>

1. The pressure and negative influences brought by constructions within the settlements located within the boundaries of natural park should be supervised-controlled and limited
2. The pressure brought by daily tourism activities performed within the boundaries of the nature park bring negative influence on the main sources of the nature park, therefore these activities performed within the nature park should be done according to a program
3. The damage & negative effects of aquaculture operating within the territorial waters of the nature park should be minimized-prevented with necessary arrangements
4. The asphalt roads within the boundaries of the nature park cause fast usage of motor vehicles. Necessary arrangements should be made on the roads to minimize the negative effects of these motorized vehicles used within the park
5. To prevent soil pollution caused by agricultural activities performed within the boundaries of the nature park, usage of chemical fertilizers and substances used against pests should be limited.
6. Summer homes and touristic facilities within the boundaries of the nature park should build biological treatment plants.
7. Churches, monasteries and historical architectural sites within the boundaries of the nature park suffer from deterioration and lack of maintenance therefore necessary steps should be taken to protect these values.
8. To protect and ensure sustainability of ecological and biological characteristics of the submarine biotas of the nature park necessary protective measures should be taken.
9. In order to protect the originality of naturel landscapes necessary measures should be taken.
10. Being one of the cultural resource values of the natural park, the traditional architectural style should be preserved and definitions of these traditional architectural structures should be applied to the new constructions to be built within the borders of the nature park.
11. Although it is outside of the boundaries of natural park, the main cause of water pollution within the nature park is the connection of gulf of Ayvalık and Cunda road. This connection road built by land filling causes circulation problem and shall be resolved.
12. Industrial enterprises polluting the Nikita creek should be prevented from giving their wastewater directly into creek.
13. The growing traffic of boat tours around islands should be taken under control. To preserve the underwater biota and prevent the pollution of the bay necessary steps should be taken.
14. Although it may seem for the summer period exceeds the carrying capacity of residential areas has caused water shortage : Carrying capacity should be evaluated in the Natural Park.
15. To avoid deterioration of the natural structure of the system, the prevention of inflow of foreign species is crucial.

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<sup>9</sup> AUTHOR's translation



## APPENDIX III

### 1. SWOT ANALYSIS (MUĞLA)<sup>10</sup>

For Muğla, the province's strengths, weaknesses, opportunities and threats (SWOT) analysis was done by Southern Aegean Development Agency (GEKA) in Muğla in August, 2010<sup>11</sup>.

#### STRENGTHS

- Alternative tourism potential: nature, culture, history, health, sports. Presence of existing tourism facilities: airports, marinas, national parks, historical and cultural products, natural assets and accommodation facilities
- Potential renewable energy sources: solar and wind energy potential of 282 days per year
- High potential of investment: agriculture, tourism, mining, aquaculture (fishery-country leader) and forestry, beekeeping and honey (world leader), olives, fresh vegetables and fruit (national leader)
- Education level is high
- Contribution to GDP is one of the highest regions

#### OPPORTUNITIES

- Increased demand for healthy lifestyles and culture in the world (eco-tourism, organic agriculture, culture and health tourism)  
Increased demand for natural resources (marble, white marble and other minerals)  
Depletion of energy resources in the world and the increasing demand for renewable energy sources (wind, geothermal and solar energies)  
Mega yacht demand  
World population growth and global warming increases the demand for on agriculture  
Internet, social networking and e-commerce expansion

#### WEAKNESSES

- Lack of Master plan, investment plans and projects  
Causing conflict between sectors  
Unplanned construction  
Infrastructure failure
- Lack of qualified and trained qualified staff in sectors (tourism, agriculture) and higher costs of these personnel
- Marketing and branding problem  
Everything included system: tourists staying all the time in the hotels prevent for tradesmen's income, decrease in quality, lack of competition,
- Lack of hospitals
- Lack of processing, storage, packaging, R & D facility
- Inadequate incentives

#### THREATS

- Global economic crisis  
Increased competition from  
EU agricultural policy  
Greece, Spain, and Italy's tourism activities  
China and India's cheap input prices  
Increase in the spread and effects of global environmental problems  
Demand for Low-budget tourism and from the less educated tourists  
Increase in terrorist incidents
- Delay in development plans  
Lack of vocational training, service quality degradation  
Export & Dependence on seed and seedling production  
Cultural Pollution

<sup>10</sup> AUTHOR's translation.

<sup>11</sup> AUTHOR's notes from the workshop.

## 2. SWOT BY IZKA<sup>12</sup>

For Foça town, the SWOT analysis was done by Izmir Development Agency (IZKA) for agriculture, industry, tourism, public, labor, social and cultural structure, environment and energy, natural cultural assets, infrastructure and urbanization aspects. These are given in below tables:

### Strengths in agriculture

- the vegetable, fruit and citrus farming and agricultural product diversity
- the presence of fertile plains in Gerenköy Bagasari towns,
- variety of agricultural products (cotton, tomatoes, onions, corn, wheat, vineyards) in the town Gerenköy,
- olive and wine production,
- olive production and handicrafts in the village of Kozbeyli,
- the famous red wine from Foça and indigenous natural pure olive oil,
- approximately 20% of fish distributed in the Aegean region,
- sheep, cattle, poultry and beekeeping potential

### Opportunities in agriculture

- the presence of local products that could have brands,
- the presence of suitable land in Yeniköy for olives and viniculture,
- fishing shelter has been tendered

### Strengths of the industry

- the presence of industries based on agricultural production,
- Foça yoghurt, Apama yoghurt
- Olive oil as a local brand

### Strengths of tourism

### Weaknesses in agriculture

- the branding of products and organic products,
- the lack of publicity and marketing

### Threats in agriculture

- hazardous wastes from industrial facilities to the environment around Ilipınar, Bagasari, Gerenköy valley,
- lack of irrigation water use policy,
- illegal fishing

### Weaknesses in the industry

- the agriculture and seafood processing plants are not available

### Weaknesses of tourism

<sup>12</sup> AUTHOR's translation from <http://izka.org.tr/files/gzftpdf/foca.pdf>

- the weekend tourism,
- endangered Mediterranean monk seal,
- wind surfing,
- being close to the Greek Islands and other tourist resorts,
- having good fish restaurants,
- the presence of İnciradası and İngiliz Burnu

- insufficient publicity for the Mediterranean monk seal,
- not enough transportation to this area,
- not enough bed capacity,
- lack of a marina,
- not enough tourism promotion,
- the French holiday village still being closed,
- military areas which can be used for tourism,
- only two tourism agencies,
- rental houses not being used as pension homes,
- investors not coming because of natural conservation areas are abundant,
- service quality failure,
- lack of facilities in the beaches,
- the problem of unemployment,
- only viability of seasonal work

#### Opportunities

- international and national recognition of environmentally friendly diversified approach to tourism,
- potentials for sea, culture and nature tourism

#### Threats

- considering the balance between protection and usage,
- the economic value is not developed in the Protected areas and the possibility of these to be opened for reconstruction and these areas as obstacles for the economy,
- the unemployment problem,
- seasonal jobs,
- migration due to unemployment

#### The weaknesses of energy and environment

- the untapped potential of wind energy (in terms of energy, tourism and sports),
- areas suitable for wind farm are determined 1 / 25000 plan,
- the potential for solar energy.

#### Threats

- waste water from the industry and businesses harmful for the environment,
- thermal power plant to be established in Aliğa Horozgediği village area, Gediz pollution,
- marine pollution,
- flue gases coming from Aliğa iron and steel plants causing air pollution in Ilıpınar Village and Yenifoça

#### Strengths of the natural and cultural assets

- the natural structure is preserved,
- the presence of ancient Byzantine campus in Kozbeyli village,
- endangered Mediterranean monk seal area of life,
- the presence of different types of birds,
- presence of historic windmills,
- the forest and the sea coast side by side in Foca-Yenifoça,
- protected areas due to environmental protection and conservation area,
- the presence of the old Greek houses and churches have been restored

#### Weaknesses

- Slow process of restoration or other works in historic places

#### Opportunities

- excavation work being carried out in the Temple of Athena

#### Strengths of infrastructure and urbanization

- the architecture and the settlements are preserved,
- the presence of a good treatment plant

#### Opportunities

- the potential for marine transport (Karaburun line, Izmir center, and others),
- mass housing areas.

#### Weaknesses

- the planned marina project is not tendered in Yenifoça,
- the existence of the problems of daily transportation, t
- the sewage system has not been completed in protected areas,
- the lack of the boulevard between Foça and Çanakkale,
- lack of housing

#### Threats

- construction that may occur with the increase of the population

## APPENDIX IV

### 2011 Prices for SEPAs determined by EPASA

data usage type	scale	unite price ( value added tax included
general data about regions(spaces,infrastructure etc.)except for region border and water quality	non-scale	per data layer 250 TL
environment plan,changes and plan articles (hardcopy or soft copy)	1/25000	per drawing 20 TL
environment plan,changes and plan articles(	1/25000	
research reports of environment plan(digital)	1/25000	per page 0.50 TL
research reports of environment plan(digital)	1/25000	
master plan,changes and plan articles(hardcopy or soft copy)	1/5000	per drawing 15 TL
master plan,changes and plan articles	1/5000	per drawing 200 TL
research reports of master plan (hard copy or soft copy)	1/5000	per page 0,50 TL
research reports of master plan	1/5000	
application master plan,changes and plan articles(hard copy or soft copy)	1/1000	per drawing 15 TL
application master plan,changes and plan articles(digital)	1/1000	per drawing 200 TL
application master plan plan research reports (hard copy or soft copy)	1/1000	per page 0,50 TL
geological and geotechnical investigation(digital)	1/25000, 1/5000, 1/1000	per drawing 15 TL
geological and geotechnical investigation (hard copy or soft copy)	1/25000, 1/5000, 1/1000	per drawing 15 TL
base map(hard or soft copy)	1/5000 veya 1/1000	per drawing 10tl
base map(digital)	1/5000 veya 1/1000	per drawing 150 TL
orthophoto and satellite image		-
all kinds of geotechnical investigation,infrastructure, etc project reports (digital)		
all kinds of research,protect,species monitoring (tracing) etc. Project reports (digital)		per page 0,50 TL
all kinds of research,protect,species monitoring,geological-geotechnical investigation,infrastructure etc. Project reports (hard or soft copy)		per page 0,50 TL
the maps of the regions established under the projects of all kinds of research, protect, species monitoring, infrastructure etc.(hard or soft copy)		per drawing 25 TL
the maps of the regions established under the projects of all kinds of research, protect, species monitoring, infrastructure etc.(digital)		per drawing 200 TL
water quality monitoring,water level studies		
trading film and video shooting in spa		per day 950 TL

trading photo shoot in spa	per day 90 TL
water surface sport activities price of marine space racetrack using	It is determined by related directorship of special environment protect according to area's property and type of activity
water surface sport activities price of marine space using (non race track)	It is determined by related directorship of special environment protect according to area's property and type of activity
water surface activities price of marine space using (per motor vehicle)	per day 200 TL
water surface activities price of marine space usage (per motorless vehicle)	per day 50 TL
price of diving area usage(more than one month)	It is determined by related directorship of special environment protect according to area's property
price of diving area usage (per day)	per day 150 TL
price of under water research in terms of defined time interval	It is determined according to area's property by related directorship of special environment protect
price of marine space usage for under water activities	It is determined by related directorship of special environment protect according to area's property and type of activity
	It is determined according to area's property by related directorship of special environment protect
price of paragliding and other air sports operating right	It is determined by related directorship of special environment protect according to area's property
price of wooden port-side usage	It is determined according to area's property and will be used area's large by related directorship of special environment protect
price of establishment for excursionists usage	It is determined according to area's property and will be used area's large by related directorship of special environment protect
price of tent and caravan site using	per square meter daily 4 TL
price of operating right for coastal structures and anchorage (port-side,marina,cruise,harbor,becket,buoy etc.)(except wooden port-side)	It is determined by directorship of special environment protect
price of coastal structures linkage	It is determined according to local of coastal structure and type of vehicle by related directorship of special environment protect
sunshade-sunbed usage (2 sunbed,1 sunshade)	per day 10 TL
sunshade (1)	per day 4 TL
sunbed (1)	per day 4 TL

sunshade-sunbed usage (2 sunbed,1 sunshade)	seasonal 250 TL
usage wc/shower at establishment for excursionist	free
carpark price	It is determined by related directorship of special environment protect according to area's property
right of way price	It is determined by related directorship of special environment protect according to area's property and will be used area's large
advertising board price(max 1 m <sup>2</sup> billboard area)	annual 100 TL
advertising board price(more than 1 m <sup>2</sup> billboard area)	
Other usage fees (use of the EPASA areas for any purpose)	It will assessed according to demand

Note:digital data can be delivered if it is available.EPASA isn't responsible for making digital data. (1) Agency logo will be added on every page of all kinds of research ,protect,species monitoring etc. project reports by directorate of personnel department, directorate of education,publication and information processing .it will be encrypt for preventing the occurrence of copying .

(2) Whatever the time of film and video record which doesn't exceed 1 day they will be considered as one full day. \_it will be (demand) double price that mentioned above from foreign entity and people. \_ photograph artists who are member of non governmental organization won't pay anything .(as long as bring into use by EPASA)

(3) EPASA has rights to demand price of tariff.(accede to a treaty by EPASA)

(4) The tariffs that mentioned above is valid on areas which there aren't a contract or a protocol with a third party made by EPASA.

(5) In case of detecting the usage which is not permitted, ten times of price mentioned above is demanded.

(6) According to revenue administration of treasury department , VAT is added to usage price..



## UNDER 5 HEADINGS

# “Strengthening the System of Marine and Coastal Protected Areas of Turkey”

## 1 Project Rationale and Project Aim

Some 3,000 plant and animal species have been identified along Turkey’s 8,500 km coastline. But Turkey’s marine biodiversity is under serious pressure by human kind. The major threats facing Turkey’s marine areas are the degradation of marine habitats and ecosystems, the overharvesting of marine resources and the conversion and/or destruction of coastal habitats. This Project aims to facilitate the expansion of the national system of marine and coastal protected areas and to improve its management effectiveness. The Project officially commenced in May 2009, and will end in October 2013.

## 2 Project Sites

The Project is being implemented at six sites in Turkey. The Project covers five SEPAs and one Nature Park. The project areas are:

- Foça SEPA
- Gökova SEPA
- Datça-Bozburun SEPA
- Köyceğiz-Dalyan SEPA
- Fethiye-Göcek SEPA
- Ayvalık Islands Nature Park

## 3 Project Outcomes

The Project will have achieved the following three outcomes:

- Responsible institutions have the capacities and internal structure needed for prioritizing the establishment of new Marine and Coastal Protected Areas (MCPAs) and for more effectively managing existing MCPAs
- MCPA financial planning and management systems are facilitating effective business planning, adequate levels of revenue generation and cost-effective management
- Inter-agency coordination mechanisms in place to regulate and manage economic activities within multiple use areas of the MCPAs





# 4 The Project's Contributions to Turkish Environmental Protection

- Contributions to the implementation of the Biological Diversity Convention Programme of Work on Protected Areas which Turkey has been a party will have been implemented.
- The country's system of Marine and Coastal Protected Areas will have been expanded by approximately 100,000 ha, or 44% as compared with baseline levels.
- Fisheries Restricted Areas (FRAs) will have been established within at least two Marine and Coastal Protected Areas and the sustainability of fisheries management achievements will be increased through the extension of a system of FRAs.
- The management capacities of local MCPA authorities will have been strengthened for effectively managing the existing Marine and Coastal Protected Areas.
- The Systems for sustainable Marine and Coastal Protected Area financing will have been strengthened.
- Inter-agency coordinating structures will have been strengthened.

- The agencies and other stakeholders will have been enabled to effectively address both land-based and marine-based threats to marine biodiversity.
- A national-level Marine and Coastal Protected Areas Strategy and Action Plan proposal will have been prepared.
- The sustainability of the MCPA system will have been ensured. The expected stream of positive, long-term impacts on marine biodiversity, and in particular those arising from a shift in current trends, is expected to be able to continue well beyond the Project's completion.

## What is a Marine and Coastal Protected Area?

Marine and Coastal Protected Areas (MCPAs) can be established for different purposes, can be designed in different types and sizes and can be managed in different ways. Therefore, there are many different definitions of an MCPA.

The simplest definition of an MCPA is "a mechanism for the conservation of any defined marine area, by means of its legal and physical protection from significant human pressure, thus reserving its inherent natural, historical and cultural features.

Such conservation is maintained by appropriately enacted laws and especially through the support and involvement of the local communities and stakeholders.

Thus MCPAs have a potentially significant role to play in eliminating threats to marine biodiversity in Turkey.





## 5 Who is conducting this project?

The project is funded by the Global Environment Fund (GEF) and executed by the General Directorate of Natural Assets Protection (GDNAP) of the Turkish Ministry of Environment and Urbanization, in partnership with the General Directorate for Nature Conservation and National Parks (GDNCNP) of the Ministry of Forestry and Water Affairs, together with the General Directorate of Fisheries & Aquaculture of the Ministry of Food Agriculture and Livestock. The United Nations Development Program (UNDP) in Turkey is the implementing partner of the project.

The Ministry of Foreign Affairs, the Turkish General Staff, the Ministry of Development, the Turkish Coast Guard Command, the Turkish Naval Forces Command, the Ministry of Transportation Maritime Affairs and Commu-

### Turkey's Marine and Coastal Protected Areas

- Turkey's Mediterranean, Aegean, Marmara and Black Sea coastline is 8,500 km long, excluding the islands. This wide marine and coastal fringe is home to a rich and valuable natural biodiversity. It is an immense and highly important zone, hosting some 3,000 plant and animal species.
- The majority of the existing marine and coastal protected areas are currently managed by GDNAP. In addition to these areas, the General Directorate for Nature Conservation and National Parks, the Ministry of Food, Agriculture and Livestock and the Ministry of Culture and Tourism are authorized to manage and plan the maintenance and careful development of some of the existing marine and coastal protection areas.
- An estimated 346,138 hectares of marine area is presently under legal protection within 31 Marine and Coastal Protected Areas. Currently, about 4% of Turkey's territorial waters is so protected.
- Turkey's marine biodiversity is presently under serious pressure by human kind. The major dangers threatening Turkey's marine areas are the degradation of marine habitats and ecosystems, the over-harvesting of marine resources and the destruction of coastal habitats.



nications, the Ministry of Culture and Tourism, the Marine and Coastal Management Department and Foreign Relations and EU Department of the Ministry of Environment and Urbanization, the Provincial Governors, together with such bodies as Local Authorities, universities, research institutes, national and local NGOs and other local representatives, are among the overall stakeholders of the Project.



**Ministry of Environment and Urbanization**  
**General Directorate of Natural Assets Protection**  
Alparslan Türkeş Cad. 31. Sokak No:10 06510 Beştepe/Yenimahalle, Ankara  
Tel: +90 312 222 1234/341 Fax: +90 312 222 2666  
<http://www.csb.gov.tr/gm/tabiat>

**United Nations Development Programme (UNDP)**  
Birlik Mah. 415.Cad. No:11 Cankaya/Ankara  
Tel: +90 312 454 1100 Fax: +90 312 496 1463  
[www.undp.org.tr](http://www.undp.org.tr)  
**Empowered Lives. Resilient Nations.**