

**CAMP Cyprus**  
**Diagnostic – Feasibility Report**

**Report prepared for MAP – PAP/RAC  
by**

**Glafkos Constantinides**

**June, 2002**

**Table of Contents**

- List of Boxes
- List of Figures
- List of Tables
- List of Acronyms

**Preface****Executive Summary****1.0 COUNTRY BACKGROUND**

- 1.1 Size and Physical Characteristics
- 1.2 Population
- 1.3 Economic and Social Development
- 1.4 Administrative Framework
- 1.5 Main Development Trends

**2.0 THE COASTAL ZONE**

- 2.1 A General Profile
- 2.2 Sub-areas and their Characteristics

**3.0 THE POLICY FRAMEWORK**

- 3.1 The Land Use Planning System
- 3.2 Land Use Planning in Coastal Areas
- 3.3 Coastal Protected Areas
- 3.4 Natura 2000 Network
- 3.5 Tourism Development and the Coastal Environment
- 3.6 Environmental Policy
- 3.7 The Administrative Framework of Environmental Policy
- 3.8 Summary of the Legal Framework for the Coastal Areas
- 3.9 Policies, Plans and Co-ordination Bodies

**4.0 IMPACTS AND CONFLICTS, PROBLEMS AND CAUSES**

- 4.1 Specific Problems
- 4.2 Underlying Causes
- 4.3 Case Studies

**5.0 NEED FOR CAMP CYPRUS**

- 5.1 Project Rationale
- 5.2 Concepts and Principles of CAMP
- 5.3 The CAMP Programme
- 5.4 CAMP Procedure
- 5.5 Goals and Objectives

**6.0 CAMP AREA**

- 6.1 Which is the Coastal Area?
- 6.2 CAMP Cyprus Area

**7.0 THE CAMP CYPRUS PROJECT**

- 7.1 Project Activities
- 7.2 Project Methodology
- 7.3 Project Organisation

- 7.4 Project Resources
  - 7.4.1 Database
  - 7.4.2 Manpower
  - 7.4.3 The Role of MAP and RACs
  - 7.4.4 Budget
- 7.5 Project Timeframe

## **8.0 CONCLUSIONS – Project Feasibility and Expected Project Benefits**

### **References**

### **ANNEXES**

- Annex I      Persons Interviewed
- Annex II     Cyprus Legislation concerning the Marine Environment and the Coastal Area
- Annex III    Responsibilities for Implementation and Enforcement of Environmental Legislation in Cyprus
- Annex IV    Development Expenditure by Ministry and Department, 1996-2000

**List of Boxes**

1. Extract from Habitat II National Report, Republic of Cyprus, 1996
2. Coastal Segments
3. Protected Coastal Areas
4. Natura 2000 sites
5. Summary of the Legal Framework concerning the Coastal Zone
6. Policies and Plans
7. Tools and Co-ordination Bodies
8. Co-ordination Bodies
9. Evolution of CAMPs
10. CAMP Cyprus – Project Summary

**List of Figures**

- Fig. 1 Map of Cyprus and Place Names  
Fig. 2 Development in the Coastal area

**List of Tables**

- Table 1 - Coastal Population Increase in Cyprus 1982-2002  
Table 2 - Urban-Rural Population Distribution by District 2002  
Table 3 - The Cyprus Economy: Gross Domestic Product, 1996-2001  
Table 4 - Main demand and supply components of the economy, 1996-2000  
Table 5 - Types of Local Government  
Table 6 - Central and Municipal Level Responsibilities  
Table 7 - Budget Expenditure of Coastal Municipalities 1997-2000  
Table 8 - Population growth and suburbanisation trends in Cyprus  
Table 9 - Urban and Suburban Population growth by Area, 1982 - 2001  
Table 10 - Coastal and Non-coastal Population Distribution, 2001  
Table 11 - Coastal Population Increase in Cyprus 1982-2002  
Table 12 - Development along the Coast (length of coastal land in km)  
Table 13 – Number of Tourist Beds 1974-2001  
Table 14 - Regional Distribution of tourist accommodation capacity at 31.12.2001  
Table 15 - Population and No of tourist beds in coastal areas by District, 2001  
Table 16 – Coastal Length, Population and Tourist Beds in Selected Coastal Areas

**List of Acronyms**

- CTO Cyprus Tourism Organisation  
CC Common Council  
CCC Cyprus Chamber of Commerce  
CU Coastal Unit (of the Ministry of Communications and Works)  
DF Department of Forestry  
DFMR Department of Fisheries and Marine Research  
DL Department of Labour  
DTPH Department of Town Planning and Housing  
ES Environment Service  
ETEK Technical Scientific Chamber of Cyprus  
GSD Geological Survey Department  
GF Game Fund  
MANRE Ministry of Agriculture, Natural Resources and Environment  
MCW Ministry of Communications and Works

MCIT Ministry of Commerce, Industry and Tourism  
FEEO Federation of Environmental and Ecological Organisations  
MF Ministry of Finance  
MLSI Ministry of Labour and Social Insurance  
MI Ministry of Interior  
MH Ministry of Health  
PB Planning Board  
PHS Public Health Services  
SGL State General Laboratory  
TCPL Town and Country Planning Law  
WDD Water Development Department  
UM Union of Municipalities

CAMP Coastal Area Management Programme  
CCA Carrying capacity Assessment  
EIA Environmental Impact Assessment  
GIS Geographical Information System  
ICAM Integrated Coastal Area Management  
RV Resource Valuation  
SEA Strategic Environmental Assessment

MAP Mediterranean Action Plan  
MEDU MAP Coordination Unit  
PAP/RAC Priority Actions Programme Regional Activity Centre  
RACs Regional Activity Centres  
UNEP United National Environment Programme

## PREFACE

This Report has been commissioned by the Priority Actions Programme Regional Activity Centre (PAP/RAC) of the Mediterranean Action Plan (MAP) – UNEP. Its purpose is to provide a focus to the preparatory phase for the implementation of CAMP Cyprus that commenced with the visit to Cyprus of Mr. I. Trumbic, Director of MAP-PAP/RAC, in September 2001, and the subsequent approval by MAP of the application of the Cyprus Government in November 2001, at the 12<sup>th</sup> Ordinary Meeting of the Contracting Parties to the Barcelona Convention, to proceed with CAMP Cyprus.

The Report has been prepared within the following Terms of Reference:

- To inspect the existing strategic, policy and institutional context encompassing the area where the CAMP activities will be carried out;
- To define the area of CAMP;
- To collect and present the available relevant information on the strategic, policy and institutional context;
- To define the activities from the point of view of the national and local interest;
- To assess the international context in which CAMP Cyprus will be implemented;
- To assess the possibilities for the implementation of CAMP Cyprus;
- To assess the possibilities for a long-term sustainability of the project.

For the purpose of preparing this Report, consultations were held with the Director and Officers of the Environment Service (focal MAP agency), with representatives of all relevant Government Departments, Local Authorities and private sector organisations, including:

Environment Service  
Department of Town Planning and Housing  
Planning Bureau  
Cyprus Tourism Organisation  
Ministry of Interior  
Ministry of Communications and Works (Coastal Unit)  
Water Development Department  
Forestry Department  
Department of Fisheries and Marine Research  
Geological Survey Department  
Department of Agriculture

Municipality of Larnaca  
Municipality of Paphos  
Municipality of Limassol  
Municipality of Polis  
Municipality of Yeroskypou  
Municipality of Ayia Napa

Federation of Environmental and Ecological Organisations  
Cyprus Hotel Association  
Cyprus Ports Authority  
Cyprus Association of Tourism Establishments

## **The Role of this Report in CAMP Procedure**

This **Feasibility – Diagnostic Report** is the first step in the formulation of the CAMP Cyprus Project. Its preparation follows the approval of the proposal put forward by Cyprus to MAP, and its purpose is to provide the overall framework in which CAMP Cyprus will be implemented. After approval of this Report by MAP and the Government of Cyprus, the second step envisages the development of a detailed programme in which the CAMP Activities will be specified in the form of **Terms of Reference** which will constitute the basis of the **Project Agreement** to be signed between the Government and MAP signifying the initiation of the CAMP Project. Following that, an **Inception Report** will be prepared, containing concrete proposals about how CAMP Cyprus will be implemented, which will be presented at the **Inception Workshop**, completing the overall Project formulation phase.

Based on the conclusions of the Inception Workshop, further refinements will be made (if any) to the Terms of Reference to detail the **Technical Specifications** for the work programme of the implementation of Project Activities, including the participation and contribution of the national and international experts. Finally, the results of Project Activities will be developed into **Specific Activity Reports and a Final Integrated Report**, which will be presented at a **Final Presentation Conference**, highlighting also the need for and focus of follow-up actions.

In brief, the major outputs of the CAMP include <sup>1</sup>:

### Preparation / formulation stage

- Feasibility – Diagnostic Analysis Report
- Project Agreement and Terms of Reference
- Inception Workshop
- Technical Specifications (work programme) for the individual CAMP Activities

### Implementation stage

- Final Reports on individual Activities
- Draft Integrated CAMP Report
- Final Integrated CAMP Report
- Final Presentation Conference
- Report on the Presentation Conference

### Follow-up stage

- Follow-up proposals and Investment Portfolio

## **The Structure of the Report**

The Report contains this Executive Summary and the Main Report. The Main Report includes two main Parts: **Part I** comprises 4 Chapters covering the general policy and institutional context in Cyprus, with particular emphasis on the coastal area, and **Part II** comprises another 4 Chapters covering the need for CAMP Cyprus, its activities, methodology, organisation and management, resources and the expected benefits.

## **Acknowledgements**

The author wishes to express his thanks to all the national experts and representatives of local authorities and private sector organisations who provided information and advice for the purposes of this Report. Specifically, to Mr. Andreas Ashiotis of the Ministry of Interior, Mr. Stéfos Papanicolaou,

<sup>1</sup> UNEP/MAP: Formulation and Implementation of CAMP Projects, Operational Manual, 1999

Mr. Ermis Klokkaris and George Hadjimichael of the Department of Town Planning and Housing, Mr. Michael Leptos, Ms. Erini Piki and Mr. George Georgiou of the Planning Bureau, Ms. Phoebe Katsouris, Ms. Athena Metaxa, Mr. Stelios Eleftheriou and Mr. Glafcos Cariolou of the Cyprus Tourism Organisation, Dr. Antonis Toumazis and Anthi Clerides of the Cyprus Ports Authority, Mr. Nicos Iacovou and Jason Sofos of the Ministry of Communications and Works (Coastal Unit), Mr. Takis Ioannou, Mr. Panicos Skordis, Mr. Nicos Tsourtis and Mr. Iacovos Iacovides of the Water Development Department, Ms. Lenia Morisseau and Mr. Chris Hadjigeorgiou of the Geological Survey Department, Mr. Alecos Christodoulou and Andreas Kyriakou of the Forestry Department, Mr. Gabriel Gabrielides and Mr. Loizos Loizides of the Department of Fisheries and marine Research. Also, Mr. Zacharis Ioannides of the Cyprus Hotel Association, Mr. Eleftherios Embedoklis of the Larnaca Municipality, Ms. Varvara Pericleous, Nicos Kallikas and Athos Georgiou of the Ayia Napa Municipality, Mr. Savas Savides of the Paphos Municipality, Mr. G. Gregoriou of the Yeroskypou Municipality and Mr. Yerolemos of the Polis Municipality.

Particular acknowledgement is due to the Director of the Environment Service and focal person for MAP Mr. Nicos Georgiades and his colleagues Ms. Myroula Hadjichrostoforou and Andonis Andoniou.

## EXECUTIVE SUMMARY

### General Country Profile

Cyprus (excluding the occupied part) has a total population of 689,500, 474,500 urban (69%) and 215,000 rural (31%). Between 1982-2001, the total population grew by 35%; the urban population grew by 45% and the rural population by 15%.

Cyprus has an open free-market economy, driven mainly by the **tourist and service sectors** as reflected in the contribution to the Gross National Product (GDP). GDP in constant 1995 prices has reached in 2001 just over 5 billion Cyprus Pounds. The broad Service Sector accounts for 75% of GDP. Cyprus' main trading partner is the European Union accounting for about 55% of imports and 40% of exports.

The main characteristics of the Cyprus economy include:

- Continuous economic growth
- A strong private sector
- A large tourism sector
- Openness to international trade

Cyprus is the 25<sup>th</sup> out of the 48 countries included in the “high human development” group with a HDI of 0.877, after Hong Kong with an index of 0.880 and before Singapore with an index of 0.876<sup>2</sup>. Life expectancy at birth stands at 77.9, adult literacy rate at 96.9 and GDP per capita at US\$19,000. The ratio of doctors to the population is 1:357 and that of nurses to the population 1:224 and there is one hospital/clinic bed for every 216 persons. 75% of the housing stock is owner-occupied and 96.6% of all rural houses are connected to the electricity and water supply system (99.3% in the urban areas). There are 61 telephone lines per 100 persons and one private car for every 2.4 persons.

The Republic of Cyprus was instituted as an independent sovereign country in 1960 with a presidential system of government. There are 11 Ministries each headed by a Minister. The Ministries are: Foreign Affairs, Finance, Interior, Defence Education and Culture, Communications and Works, Commerce, Industry and Tourism, Agriculture, Natural Resources and Environment, Justice and Public Order, Labour and Social Insurance, and Health. Administratively, Cyprus is divided into six Districts: Nicosia, Limassol, Larnaca, Paphos, Famagusta and Kyrenia (**Fig. 1**).

In 1974, the Republic of Cyprus was invaded by the Turkish Army imposing a division in the island, with the northern 38% of the territory (including the whole of Kyrenia District and the largest part of Famagusta District), remaining since then inaccessible. This Report is therefore concerned throughout with the territory under the control of the Government of Cyprus.

### Main Development Trends

The spatial development pattern in Cyprus is characterised by two dominant trends:

- **Sub-urbanisation, and**
- **Coastalisation**

Suburbanisation takes the form of rapid population growth and development sprawl in the suburbs located at the edges of the main urban areas. In this Report, the definition of “urban areas” follows that used in the recent Population Censuses and the Local Plans, under the Town and Country Planning Law (TCPL), referring to the areas including the towns and the surrounding expanding suburbs.

---

<sup>2</sup> Human Development Report, UNDP, 2001

The following figures showing the spatial distribution of population growth in the period 1982-2001 clearly illustrate the suburbanisation trend:

- 35% total population growth
- 46% urban population growth, of which the *suburban* population growth was more than twice that of the core urban population growth (68% and 26% respectively).

“Coastalisation”, a consequence of the rapid and sprawling pattern of coastal tourism development, is equally dominant in Cyprus. As much as 95% of all licensed tourism hotel accommodation capacity is on the coast (the rest is located in Nicosia and the mountain resorts). Of all coastal tourism accommodation capacity, 55% is concentrated in the suburban tourism centres around the towns of Limassol, Larnaca and Paphos and as much as 40% is located in rapidly growing coastal village communities that have grown into tourism centres, notable in the settlements of Ayia Napa and Paralimni in the southern Famagusta District, which, unlike the rest of the rural areas of Cyprus that remained dependent on agriculture, recorded in the period 1982-2001 a population growth of 57%, higher than the growth of the coastal urban areas themselves.

The following figures for population growth in the period 1982-2001 clearly illustrate the coastalisation trend:

- 35% total population growth
- 46% total urban population growth
  - 55% coastal urban growth
  - 35% inland urban growth
- 15% total rural population growth
  - 45% coastal rural growth
  - 8% inland rural growth

### **The Coastal Zone**

In Cyprus there is no single legal or functional (planning) definition of the “coastal zone” or “coastal area”. There are three main widely used geographical definitions referring to “coastal zone / area”, each one related to the purposes of a different law and institutional context.

1. The *Foreshore Protection Law* defines the “foreshore” as “all lands within 100 yards of the high water mark”. The foreshore area is public property falling under the jurisdiction of this Law.
2. The *New Tourist Policy* of 1990 (under the Tourism Hotel Accommodation Law and the TCPL) designated a “zone” of 3 km. from the coastline for the purposes of control of tourism development.
3. The *Coastal Protection Study* of the Coastal Unit of the Ministry of Communications and Works adopted for the purposes of the survey of coastal erosion problems a definition of the “coastal strip” as the area of 2 km. from the coastline.

The TCPL contains no specific definition of the coastal area. Local Plans and the Policy for the Countryside contain land use / development control zones that cover coastal and non-coastal areas within the same Plans.

Thus, in this Report, as in many other reports on Cyprus, the terms coastal area and coastal zone are used interchangeably. The small size of Cyprus and the close proximity of all areas to the coast, combined with the dominance of coastal tourism in building development and the economy, create a strong functional overlapping between the coastal area and other areas, blurring the coastal / hinterland distinction. For Cyprus, and particularly for the purposes of CAMP Cyprus and its integrated approach to coastal area management, an **issue-led** approach to coastal problems is adopted rather than a legal or physical definition.

The coastal zone that extends 2 km. inland from the coastline covers 23 percent of the country's total area, in which about 50% of the total population lives and works and 95% of the tourist industry is located generating by far the largest source of household income. The average population density is about 17.5 persons per hectare.

The Island has a total of 772 km. of shoreline, of which:

- 404 km. are in the occupied northern area (52%);
- 72 km. are within the British Military Bases (10%); and
- 296 km. are within the area under Government control (38%).

The shoreline overall is uneven and rocky (54%) with sandy beaches and many small coves (46%). The coastal zone is characterized by rich wildlife, long and small beaches, open areas, cliffs, capes, harbours, sand dunes, accumulations of pebbles, and, in general, marine and shore areas of prime ecological and scientific value.

The EU Programme MEDSPA Study <sup>3</sup>, carried out by the Coastal Unit of the Ministry of Communications and Works, that surveyed the physical characteristics of the whole length of the coastline of Cyprus (under government control), identified 12 coastal segments with broadly common geomorphologic and hydrodynamic characteristics, including:

Paphos District	<ul style="list-style-type: none"> <li>• Tylliria Area</li> <li>• Kato Pyrgos Bay</li> <li>• Krysochou Bay</li> <li>• Akamas Area</li> <li>• North Paphos Area</li> <li>• South Paphos Area</li> </ul>
Limassol District	<ul style="list-style-type: none"> <li>• Episkopi Bay</li> <li>• Akrotiri Area</li> <li>• Limassol Bay</li> </ul>
Larnaca District	<ul style="list-style-type: none"> <li>• Ziyi-Kiti Area</li> <li>• Larnaca Bay</li> </ul>
Famagusta District	<ul style="list-style-type: none"> <li>• Ayia Napa-Protaras Area</li> </ul>

## **The Policy Framework**

### **The Land Use Planning System**

Land use planning policy in Cyprus is carried out under the 1972 TCPL, which came into force on the 1<sup>st</sup> of December 1990. The coordination of land use planning policy is the responsibility of the Department of Town Planning and Housing of the Ministry of Interior. The TCPL provides for the preparation and enforcement of a hierarchy of Development Plans, the operation of a network of Planning Authorities with responsibilities for the exercise of Development Control through powers for issuing Planning Permissions on the basis of the provisions of the Development Plans. The Development Plans comprise a three-tier hierarchy, namely the Island Plan, the Local Plans and the Area Schemes:

**(a) The Island Plan**, the strategic spatial plan for the island that remains inactive since 1974 due to the division of the Island. In view of that, under the TCPL a “replacement” Development Plan was introduced, the **Statement of Policy for the Countryside**, which cover all the (mostly rural) areas outside the boundaries of Local Plans or Area Schemes.

**(b) The Local Plans**, the middle ties of Development Plans, cover the main urban areas together with their urbanised fringes experiencing pressures for expansion and population growth.

<sup>3</sup> Coastal Protection in Cyprus (1993-96)

**(c) The Area Schemes**, at the lower end of the hierarchy, cover specific smaller areas of particular interest, either within or outside the framework of a Local Plan, and detail site-specific development proposals on the basis of the strategic guidelines and policies of the Local Plans or the Policy for the Countryside.

### **Land Use Planning in Coastal Areas**

The coastal zone is not a unified planning area, there is no separate institutional or land use planning framework specifically pertaining to the coastal areas. Coastal land use zones form parts of several Development Plans applying to different local administrative areas. Each section of the coast is covered by land use zones together with those covering the wider inland planning area falling under either a Local Plan (such as Limassol, Larnaca and Paphos) or by the out-of-urban-areas Statement of Policy for the Countryside. The existing Development Plans are demarcated along the urban/rural rather than the coastal/inland dimension. Only a relatively small section of the coastal area development is still controlled under the provisions of the old Streets and Buildings Regulation Law (Cap. 96):

- (a)** the area of Paralimni Municipality, including the Protaras tourism area, and
- (b)** the parts of the coast that fall within the British Military Bases of Akrotiri, Episkopi and Dekelia of approximately 72 km.

The extent of the land use planning zones in place along the coast is as follows:

- The tourist zones cover approximately 103 km.
- the open areas/protected archaeological zones approximately 125 km.
- agricultural zones 36 km.
- residential zones approximately 17 km., and
- industrial approximately 9 km.

The greatest extent of coast under some form of protection is the Paphos District (62% of the coast) mainly due to the long stretch of the Akamas Peninsula, most of which is a national forest.

### **Coastal Protected Areas**

A hierarchy of Protected Areas, designated under the provisions of the Policy Statement for the Countryside, is in place in the coastal zone including the following categories and areas:

i) " <u>Nature Protection Shores and Areas</u> "	<ul style="list-style-type: none"> <li>• Cape Cavo Greco,</li> <li>• Makronissos,</li> <li>• Dasos Ranti and</li> <li>• Akamas Peninsula</li> </ul>
(ii) " <u>Protected Sites</u> "	<ul style="list-style-type: none"> <li>• Pomos Cliff</li> <li>• Liopetri River Estuary</li> <li>• Cavo Greco Cliffs</li> <li>• Pissouri Cliffs</li> </ul>
(iii) " <u>Areas of Outstanding Natural Beauty</u> "	<ul style="list-style-type: none"> <li>• Pegia</li> <li>• Kouklia</li> <li>• Pissouri</li> <li>• Maroni</li> </ul>
(iv) " <u>Archaeological Sites</u> "	<ul style="list-style-type: none"> <li>• Nea Dimmata</li> <li>• Aghios Georgios Pegias</li> <li>• Kiti</li> <li>• Tombs of Kings, Kato Paphos</li> <li>• Castle of Kato Paphos - Antiquities of Kato Paphos</li> <li>• Area of Maa - Paleokastro</li> <li>• Ancient Amathous</li> <li>• Kourio</li> </ul>

### **Tourism Development and Policy**

Tourism policy is formulated, promoted and co-ordinated by the Cyprus Tourism Organisation (CTO), a semi-Government Organisation under the Ministry of Commerce, Industry and Tourism. CTO has no spatial plan preparation and implementation powers but, through its involvement in the meetings of the Planning Board when discussing tourism issues, tourism policies are incorporated in the Local Plans and the Policy for the Countryside under the TCPL. In 2000 a Strategy for Tourism was prepared by the CTO containing the main strategic goals for Cyprus tourism up to the year 2010. However, on the basis of CTO legislation, several policies and measures are in force for the regulation of tourism development and the operation of tourism establishments.

In 1987 a special provision was incorporated in the Hotels and Tourist Accommodations legislation giving powers to the Council of Ministers to establish areas in which the type, class and degree of allowable tourist development would be regulated.

In June 1989, the Government adopted a *moratorium* on tourist development in the coastal areas in order to re-evaluate problems in tourist areas and allow the preparation of a new policy on tourism in conjunction with land use planning policy. The *moratorium* lasted for 18 months, for in December 1990, the Government proceeded to the adoption of a new policy, by which the construction of new tourist accommodation in the coastal zone and at a distance of 3 km. from the shore came under control. At the same time, the TCPL of 1972 was put into full effect.

### **Environmental Policy**

The overall responsibility for environmental policy (excluding land use planning) rests with the Minister of Agriculture, Natural Resources and Environment (MANRE) assisted by an inter-ministerial Environment Committee and a Consultative Environment Council, which includes private sector representatives and NGOs. The Environment Service (ES) of the Ministry co-ordinates programmes for the protection of the environment, advises on environmental policy formulation and its implementation, and is in charge of the environmental impact assessment process. The environmental management framework is interlinked and co-ordinated both with the land use / physical as well as with the tourism planning frameworks.

Implementation and enforcement of sectoral aspects of the environment is carried out in accordance with specific laws and regulations by a number of line Ministries, Departments and Services corresponding to the subject-matter areas of their respective responsibility. All line Ministries with executive responsibilities on environmental issues participate in the Environment Committee and the Environment Council. **Environmental policy is focused on the alignment with the EU *Acquis*, and current work priorities and work effort are geared to the legal transposition of relevant EU Directives into Cypriot legislation.**

Cyprus has accepted the environmental *Acquis* and declared to apply it by 1.1.2003 or at later dates in certain areas in which transitional periods were requested or for which the dates provided in the *Acquis* allow for later dates for implementation. A concrete programme for transposing Community environmental legislation is in place within the timeframe given to the Commission. The directives on Free Access to Environmental Information, Water Quality Intended for Human Consumption and on EIA have been fully transposed, while full transposition of the environmental *Acquis* will be effected through revisions to existing laws.

The draft comprehensive Bill for the Environment, prepared in 1997, has been subsequently decided to be split into a number of new bills, such as:

- Environmental management framework, Fiscal Instruments, General Obligations, International Issues (new Framework Bill on the Environment)
- Protection of Species and Habitats, Trade in Species
- Solid and Hazardous Waste Management
- Packaging and Packaging Waste Management
- Environmental Impact Assessment
- Free Access to Information
- Genetically Modified Organisms,
- Noise, etc.

### **The Administrative Framework of Environmental Policy**

At the national level, the Council of Ministers has the overall responsibility for the formulation of environmental policy. Environmental policy is co-ordinated through the MANRE, with the exception of land use / spatial planning, for which responsibility rests with the Minister of Interior.

An important component in the environmental management mechanism is the Council for the Environment, with a wide representation, which advises the Minister and through him, the Council of Ministers, on environment and sustainable development issues. To assist in the co-ordination and implementation of environmental policy, the government established an additional instrument, that of the Environment Committee, made up of representatives of all agencies involved in environmental issues. **Competencies are divided among several institutions, the competent authorities being primarily public bodies, Ministries, or Departments.**

The Environment Service of the MANRE is mandated to advise on environmental policy, ensure implementation and co-ordinate (in close co-operation with the Planning Bureau) the process for the adoption of the EU environmental policy and legislation. It also heads the Technical Committee on environmental impact assessment, oversees the enforcement of the Law on the Control of Water Pollution, promotes environmental awareness and training, and disseminates information on the environment. The Environment Service is also the administrative arm of the Environment Committee and the Council for the Environment. In addition, it is the National Focal Point for the CSD, MCSD, SMAP, INFOTERRA, UNEP and MAP, and the Conventions of CITES, Bern, Basel, Vienna, Biological Diversity, Desertification, Ramsar, Climate Change and Environmental Impact Assessment in a Transboundary Context.

Through its various Departments (mainly Agriculture, Forestry, Fisheries and Marine Research, Water Development and Geological Survey), the MANRE has a wide range of executive functions on environmental issues: Protection of the quality of surface and ground waters and the sea, management of water resources, aquaculture, meteorology, protected areas, soil conservation, fertilisers and pesticides, reuse of treated effluent, hazardous waste management, mines and quarries, control/monitoring and combating marine pollution, marine ecology, management of forests and public parks, herbaria and gene banks, organic farming, protection of flora and fauna, agricultural and animal husbandry waste, industrial waste treatment, rehabilitation of sites, health and welfare of animals, etc.

Agencies and other Ministries also have a wide range of executive responsibilities over various environmental issues, as follows:

- the **Planning Bureau**, is in charge of the preparation of the National Strategic Economic Development Plans and has responsibility for the broader co-ordination of the EU accession process,
- the **Ministry of Labour and Social Insurance**, is the competent authority for the administration and enforcement of the Atmospheric Pollution Control Law, the Safety and Health at Work Law, the Dangerous Substances Law, and the Asbestos (Safety and Health of Persons at Work) Law. It also administers part of the Water Pollution Control Law and has been assigned responsibility for the broader framework for radiation protection,
- the **Department of Town Planning and Housing** is responsible for the coordination of Land Use Planning Policy and the implementation of the TCPL,
- the **Ministry of Commerce, Industry and Tourism**, is responsible for industrial estates, energy conservation, exploitation of new and renewable sources of energy, industrial pollution prevention techniques and the management of a grants scheme which assists manufacturing industries in installing waste treatment systems,
- the **Cyprus Tourism Organisation** promotes tourism development, including agro-tourism and is the co-ordinator of the BLUE FLAGS scheme in Cyprus,
- the **Ministry of Communications and Works**, is responsible for shoreline defence, the implementation of International Civil Aviation standards on noise from aircraft, the regulations and international conventions on Merchant Shipping, motor vehicles inspection and Type Approval for vehicles,
- the **Cyprus Ports Authority** handles oily waters and refuse from ships in port areas,
- the **Ministry of Health** inspects landfills and drainage systems, is responsible for the control of drinking water and the microbiological monitoring of recreational waters and carries out research and analytical work on various aspects of pollution with its specialised laboratories in environmental chemistry, microbiology and virology, ecotoxicology and risk assessment, and
- the **Game Fund** is in charge of the enforcement of the Game and Wild Birds Law, which regulates hunting and game improvement.

### Summary of the Legal Framework concerning the Coastal Zone (Laws & Regulations)

<b>MARINE ENVIRONMENT</b>
Law Concerning the Control of Water Pollution (No. 69/91) Responsible authority MANRE
Consolidated Amending Regulations of 1990 (No. 273/90) adopted on the basis of Article 6 of the Fisheries Law. Responsible authority DFMR-MANRE
Amendment (No. 170 of 1990) of the Fisheries Law. Responsible authority DFMR-MANRE

<p>Ratification Law (No. 51 of 1979) of the Barcelona Convention regarding protection of the Mediterranean from pollution as well as its two Protocols:</p> <p>(a) Protocol for the protection against pollution of the Mediterranean by waste from ships or aircraft (Dumping Protocol),</p> <p>(b) Protocol for cooperation in the combating of pollution in the Mediterranean by petroleum products and other toxic substances (Emergency Protocol)</p> <p>Responsible authority DFMR-MANRE</p>
<p>Ratification Law (No. 266 of 1987). It ratifies another two Protocols of the Barcelona Convention:</p> <p>(a) Protocol for the protection of the Mediterranean from land-based sources</p> <p>(b) Protocol concerning protected areas of the Mediterranean</p> <p>Responsible authority MANRE</p>
<p>Consolidated Amending Regulations (No. 273/90) enacted under the Fisheries Law (Chapter 135)</p> <p>Responsible authority DFMR-MANRE</p>
<p>Ratification Law (No. 57 of 1989). It ratified the International Convention regarding prevention of pollution of the sea by ships of 1973 and the relevant Protocol of 1978 and the Amendments of 1984.</p> <p>Responsible authority DFMR-MANRE, DMS-MCW</p>
<p>Regulations concerning undersea pipelines for carrying oil and other products (No. 151/1995).</p> <p>Responsible authority MCW</p>
<p>Ratification Law (No. 63 of 1989), ratifying the International Convention concerning civil liability for damage from oil pollution of 1969, and its protocol of 1976 and provisions regarding related matters.</p> <p>Responsible authority DMS-MCW</p>
<p>Ratification Law (No. 14 (III) of 1997).</p> <p>Law Regarding the Ratification of the Protocol of 1992 which amends the international Convention regarding civil liability for damages from pollution.</p> <p>Responsible authority MCW</p>
<p>Ratification Law (No. 109 of 1989).</p> <p>Ratifies the International Convention concerning the establishment of an international fund for compensation for oil pollution of 1971 and its protocol of 1976 and provisions regarding related matters.</p> <p>Responsible authority MCW</p>
<p>Ratification Law (No. 9 (III) of 1995).</p> <p>Ratifies the Agreement related to the application of the part of the XI Convention for maritime justice of December 10, 1982.</p> <p>Responsible authority MFA and MANRE</p>
<p><b>LAND USE – SPATIAL PLANNING</b></p>
<p>The Town and Country Planning Law (No. 90/72, Amending Laws 56/82, 7/90, 28/91, 91(I)92, 55(I)/93).</p> <p>Responsible authority</p> <p>Mol (except for the portion of the law related to the Island Plan)</p> <p>MI has transferred his responsibilities to the Director of DTPH, the Local Councils in the large Municipalities and the Town Planning Board.</p>
<p>The Foreshore Protection Law (No. 22/61, and Amending Laws 17 of 1964, 8 of 1972, 52 of 1975, 21 of 1987, 126 of 1989, 11 of 1990, 251 of 1990, 40 of 1991, 87 of 1991, 234 of 1991, 15(I) of 1992, 41(I) of 1992, 61(I) of 1992, 103(I) of 1992, 7(I) of 1993, 19(I) of 1993, 27(I) of 1993, 37(I) of 1993, 4(I) of 1994, 34(I) of 1994, 51(I) of 1994, 75(I) of 1994</p> <p>Responsible authority DO, CCB, LA</p>
<p>The Piers Law (No. 39/73, 36(I)/94).</p> <p>Responsible authority MI</p>
<p><b>C. TOURISM DEVELOPMENT (Competent authority: Cyprus Tourism Organization)</b></p>
<p>Laws of Hotels and Tourist Accommodations of 1969 to 1995 (No. 40/69, 52/70, 17/73, 28/85, 42(I)93, 80(I)95).</p>
<p>The (General) Regulations concerning Hotels and Tourist Accommodations (No. 192/85, 205/93).</p>
<p>Regulations for Hotels and Tourist Accommodations (Organized apartments and tourist villages) (No. 206/93).</p>
<p>Regulations concerning Hotels and Tourist Accommodations (Groups of tourist villas regulations of 1993) (No. 207/93).</p>
<p>Regulations concerning Hotels and Tourist Accommodations (Traditional buildings) (No. 208/93).</p>

Regulations concerning Hotels and Tourist Accommodations (Camping sites) (No. 155/77).
Regulations concerning Hotels and Tourist Accommodations (Tourist apartments) (ARA 193/85).
The Laws of 1985 and 1991 concerning recreational establishments (No. 29/85 and 214/91).
Decisions of the Council of Ministers (based on Article 5 of the Law concerning Hotels and Tourist Accommodation)

## **Existing Policies, Plans, Tools and Co-ordination Bodies for Coastal Development**

### **(i) Policies and Plans**

In Cyprus, as in many other countries, there is no specific Coastal Zone Management Policy as a separate and self-contained document with a geographical focus on the coastal zone. Policies for the coastal zone are included in various sectoral policies which cover other areas including the coastal zone. The main policies include:

<b>Policy</b>	<b>Focus</b>
<b>Land Use (Spatial) Policy</b>	Expressed in the Development Plans prepared and implemented under the provisions of the TCPL (Local Plans, Area Schemes and Policy for the Countryside that regulate all forms of development residential, tourism, industrial, commercial, agricultural, infrastructure, etc.) and the designation of various categories of protected areas.
<b>Tourism Policy</b>	Expressed in the Strategic Plan for Tourism 2000-2010 prepared by the Cyprus Tourism Organisation. The Tourist Strategy defines the long-term vision and strategic goals guiding tourism development. Although it contains goals spanning across all policy areas that influence tourism performance, lacks its own spatial policy and implementation tools.
<b>Environmental Protection Policy</b>	Expressed in sectoral policies for various resources (land, foreshore, fresh water, sea water and marine environment, forests, etc.) prepared and implemented by the various competent authorities as outlined in 3.1.4 and in Annex I of this Report.

### **(ii) Management Tools and Co-ordination Bodies**

The existing tools and institutions for the protection and management of the coastal environment and the regulation of coastal development are likewise segmented in different sectoral policies and departments according to their specific sphere of competence.

<b>Tools</b>	<b>Focus</b>
Land use zones	Designated by the Development Plans and implemented through planning permissions
Protected areas	Designated by the Development Plans
Planning permissions	Issued on the basis of the provisions of the Development Plans and implemented through planning permissions
Natura 2000 sites	Identified by the provisions of EU Directive 92/43 expected to be incorporated in the Development Plans
Environmental Impact Assessment	Established by Law 57(I) 2001 applying to a large category of development projects in all areas including the coastal zone. Implemented by the Environment Service and enforced in relation to concrete projects by the Department of Town Planning and Housing through the issue of Planning Permissions.
Tourism Strategy	A broad strategic document approved by the Council of Ministers; its goals and objectives are expected to be

	incorporated in sectoral policies, particularly land use zones and the policies of the Development Plans.
Sectoral regulations	Provided in different sectoral Laws and Regulations applying to the protection of the coastal and marine environment from pollution, wastes, construction, etc. implemented by the various competent authorities as outlined in 3.1.4 and in Annex I of this Report

<b>Co-ordination Bodies</b>	<b>Focus</b>
Planning Board	Exercising delegated powers, responsible for the approval of Development Plans. It includes 10 members, 4 private members, including the Chairman, and 6 representatives of various key Ministries. Technical advice and coordination provided by the Director and Staff of the Town Planning and Housing. The Development Plans, as spatial plans, are expected to reflect the policy priorities and objectives of industrial, agricultural, commercial and particularly tourism policy.
Common Councils	Established by the TCPL and act as local advisory bodies to the Planning Board. Before Development Plans are presented to the Planning Board for adoption or change, are reviewed, and recommendations are made, by the relevant Common Councils. Participants include local municipal councillors and representatives of expert NGOs.
Technical Environmental Committee on EIA	The Committee is chaired by the Director of the Environment Service and functions under the provisions of the EIA Law 57(I) 2001. Reviews EIA studies submitted by applicants of development projects. The Committee's views and conclusions are addressed to the Environmental Service, which is the Environmental Authority, issuing statements to the competent Government Department that have to be taken very seriously into consideration prior to the issue of Planning Permission for the development. The Committee comprises representatives of all key Ministries and Departments related to the environment, as well as representatives of civil society.
National and Local Committee on Beaches	A two-level ad hoc inter-departmental committee set up under the Foreshore Protection Law advising on the use and management of land within the protected "foreshore area". The National Committee has 13 members, chaired by the Chairman of the Union of Municipalities, plus representatives of relevant Ministries, and NGOs. The District Committee has a similar role but at the local level, has 7 members, chaired by the respective District Officer and includes representatives of local authorities and relevant Ministries / Departments.

## **Conflicts, Problems and Causes**

### **Specific Problems**

**Sea pollution.** Cyprus has a very small industrial sector and therefore industrial production has been of very limited importance in its economic development. Coastal population growth and tourism pose a potential threat although actual impacts are limited due to the sewerage infrastructure in place in all coastal urban centres and coastal hotels. **Sea pollution problems are limited and geographically isolated.** Within the framework of MAP pollution is monitored, including the quantities of pollutants that enter the sea and the concentration of various substances in water, fish

and sediments. The central sewage systems (constructed and under way) will address the isolated sea pollution “hot spots” problem, particularly in the area of the Limassol wineries.

The main industrial plants on the coast are:

- The Limassol wineries,
- The *Moni* and *Vassilikos* cement plants (near Limassol),
- The Larnaca petrol refinery, and
- The power plants of *Moni* and *Dhekelia* (near Larnaca).

**Erosion.** Beaches attract nearly 3 million millions tourists each year. Poorly controlled coastal development prior to the implementation of the TCPL in 1990 and the extensive coastal development zones, are responsible for alterations and erosion impacts at least in some of the heavily built coastal tourist areas, mainly in Limassol, Larnaca, parts of Pahos and Paramini. Immediate causes include construction of tourist projects, quarrying of gravel (prohibited by law after the 1970’s) and the construction of breakwaters.

The pressure on the coastal environment is indicated by the following figures that show population and hotel beds in selected areas. The urban areas of Limassol and Larnaca have a large resident population per km of coast (7,550 and 5,020 respectively), while Ayia Napa and Paralimni, being rural municipalities, have a much lower resident population but twice as many tourist beds (1,352) per km of coast.

Area	Length of coast (km)	Population	No of beds	Population per km of coast	Beds per km of coast
Limassol LP Area	20	151,000	15,500	7,550	775
Larnaca LPA	15	75,300	8,200	5,020	547
Ayia Napa – Paralimni Municipalities	27	38,000	36,500	1,407	1,352

Note: LP = Local Plan

Source: CAMP Cyprus Project Research

**Land use conflicts.** Like in many other countries, the coastal is a fragile ecological system, while at the same time is the backbone of the economy. Tourism and holiday housing development attracted by the quality of the coastal landscape imposes its footprint on the landscape degrading its quality due to either over-development or development too close to sensitive ecosystems. Development pressures and coastal urbanisation are not only confined to the coastal urban areas but typically extend to the surrounding coastal urban-rural fringes or village areas included in the sprawling tourist zones. In many such areas (Paralimni and Ayia Napa in Famagusta, Meneou, Linadhia and Oroklini in Larnaca, Pissouri in Limassol, Yeroskipou, Kissonerga, Peyia and Neo Khorio, etc.) agricultural land is lost to building development, orchards and vegetable groves are rapidly converted into building land and in many cases agricultural land remains uncultivated. The main problems include:

- Loss of coastal landscape and degradation of the natural environment,
- The mixture of incompatible uses, heavy traffic and lack of open spaces and parking facilities for visitors,
- Erosion of the shore in several areas,
- Overuse of the beaches, often reaching the upper limit of the beach carrying capacity,
- Problems of beach access due to private infringements, and aesthetic pollution,
- Infrastructure deficiencies, poor landscaping and inadequate provision of basic facilities
- High building densities in the urban coastal areas, particularly in Limassol, and also in the villages that have been transformed into tourism centres, (Ayia Napa, Proraras, Oroklini, etc.)
- Inadequate protection of the “Salt Lakes” of Akrotiri (Limassol) and Larnaca and lack of adequate protection and management measures suitable to their “wetland’ status.

- Inadequate protection, promotion and exposure of archaeological sites, often visually blocked by development.

Solid wastes. Population and income growth, tourism and construction activity increase the volume of waste that needs to be disposed to landfill sites. The establishment of planned landfills is delayed due to local reactions and in some cases refuse are disposed in temporary sites near the coast. There have been no reported cases of serious threats to the ground water system or the sea from runoff.

---

Social disparities and loss of rural heritage. Cyprus was mainly rural until 1960. Village architecture and rural cultural heritage, being core characteristics of the social profile of rural Cyprus, are rapidly overwhelmed by urban sprawl and tourism facilities. Coastal urbanisation and coast-centred economic growth have overshadowed the importance of rural heritage and landscape as assets. A social transformation has occurred in the now economically prosperous tourist villagers that have evolved into “dormitory communities”. Old family homes in the village cores have been changed into tourist apartments, restaurants and discos, displacing village life to new low-density housing areas (like in Ayia Napa). An equally sad experience of loss of rural heritage, but in the opposite direction, is experienced in the declining non-tourist coastal villages (like in Akamas) where lack of economic opportunities and limited income from agriculture have caused the emigration of young people to tourism areas leaving behind a growing stock of empty village houses.

### **Underlying Causes**

There are many important economic facilities that compete for coastal locations relative to the limited size of the coastal area. In addition to the settlements and the infrastructure that serves them, other facilities include the Larnaca and Limassol Ports, the Larnaca and Paphos airports, marinas, hotels, holiday-homes, cement plants, several fishing shelters and the oil refinery in Larnaca (Fig. 2).

**This coastal bias in the spatial distribution of population and activity reflects the development pattern prevailing since 1974, but more importantly the limitations of the policy responses to influence the course of urbanisation and costalisation.**

Despite the extensive maze of highly developed legislation and control provisions on coastal development, they present two main significant problems with several ramifications:

- They are sectoral in their scope, following from the fragmentation of powers of the different agencies with responsibilities for regulating or initiating coastal development.
- They focus on protection rather than management, following from the lack of a proactive management strategy responsive to the diverse pressures on the coastal environment.

Although existing land use planning policies and environmental protection regulations are adequate in preventing major impacts on the coastal environment, development pressures, triggered by forces that underlie the Cypriot economic and social structure, span right across development sectors and departmental responsibilities, rendering policy implementation ineffective, particularly in policy areas where coordination is vital.

Some of the most salient factors that underpin the development process and overwhelm the existing fragmented approach to coastal area management include the following:

(i) Land ownership. Private land ownership and its strong constitutional protection are among the strongest social institutions in Cyprus. Land ownership is widely distributed among the population, carrying with it social expectations of future development, encouraged by past trends validated by

the operation of the permissive planning system and the expansion of development zones into countryside areas. The strong protection of land development rights by the constitution provides for the payment of compensation for anything above the minimum planning restriction of development rights.

(ii) Local community interests. The almost continuous growth of the Cyprus economy based on tourism generates deeply rooted community expectation that practically all land will (sooner or later) become ripe for urban or tourism development. The post-1974 tourism expansion of the coastal towns and many coastal villages (such as Ayia Napa, Paralimni, Kiti, Meneou, Pissouri, Peyia, etc.) have established a “development/growth culture” and an approach to local planning expected to pursue, in addition to spatial and environmental objectives, local development objectives and interests. As land ownership is a major element in local development, the notion of “social equity” underpins development pressures rather than resource conservation. Many coastal communities, notably the Akamas communities, point to the wealth created through coastal tourism in Ayia Napa and Paralimni as an argument for resisting coastal management and strict planning controls. The dialogue with local communities on coastal conservation management is clouded and often frustrated by local development ambitions and expectations for short-term income from land development, a conflict that the existing policy process straggles to reconcile.

(iii) National growth culture. Government decision-making is therefore sensitive (even vulnerable) to development pressures conveyed through the political process. Local representations are a regular element in the consultation process of policy-makers which, although necessary and useful in incorporating local concerns in the planning process, are often sympathetically received by Government due to the traditional growth-driven vision that continues to dominate economic and physical development policy. Despite the general concern for the environment in Cyprus and the exposure to EU approaches to sustainable development, development opportunities attract more attention than the longer-term consequences for the environment.

(iv) Limited environmental awareness. Concern for the environment is still a “minority opinion” in Cypriot society, as in many other societies. There is a specific issue related to environmental awareness that has concrete consequences for environmental policy. In the evaluation of development projects or proposals, the perception and assessment of the potential threats to the environment are limited to the local and direct effects, blurring the focus on the cumulative and long-term impacts of development projects on the environment arising from future traffic and waste generation, induced land uses, the additional infrastructure requirements, resource capacity limitations and other strategic considerations.

(v) Poor harmonisation of environmental and socio-economic objectives. The dual role of the coastal environment as an ecological **and** an economic system, although recognised as hard reality, is not integrated in the existing policy and **remains a source of conflicting priorities**. Protection of the environment through controls on land uses is often unsuccessful because of the financial impacts on the affected property owners are not balanced against the economic impacts of environmental degradation and the social benefits of conservation. Sustainable development requires that **both** private and social costs and benefits should be taken into account in development / conservation options. Although private gains and losses from land development are, rightly, a major concern in planning policy, social gains and losses and the economic value of the benefits of conservation are not identified and articulated in decision-making. Since the quality of the coastal environment is an economic resource, its contribution (and value) to the various economic sectors (tourism, recreation, water resources, etc.) that depend for their productivity on the environment should also be evaluated. The lack of harmonisation of environmental and socio-economic objectives exaggerates the costs of conservation leaving the benefits outside the planning process. Decision-makers often react against environmental policies because they perceive them as conflicting with economic development that Government is expected to promote.

## **Need for CAMP Cyprus**

### **Project Rationale**

Cyprus has a well-developed planning legislation. There are powers for the preparation of Development Plans that cover all types of land uses (residential, commercial, tourism, industrial, open space, protected areas, etc.) and the exercise of development control in all (accessible) parts of the island through the requirement for planning permission. The same applies to the environmental legislation.

**However, the overall planning and coastal management system is sectoral, site-specific. There is no integrated coastal management strategy or incorporated management tools for pro-active policies and sustainable use of resources.**

The existing mechanisms for policy co-ordination at national level are fragmented by the segregation of responsibilities and focused on short-term targets rather than fostering common environmental concerns, long term goals and agreed priorities. As illustrated by the case studies outlined in this Report, and many others, policy coordination across sectoral / departmental responsibility lines reflects conflicting objectives and divergent visions rather than a move towards a common direction. Particularly acute are the difficulty of reconciling local level development claims and expectations with national level planning objectives. The recurrent controversies associated with the revision of land use zones and density coefficients in coastal areas and around expanding villages are cases in point.

The **late introduction of the TCPL** (approved by the House of Representatives in 1972 but enforced in 1990) delayed also the development and incorporation of an integrated coastal area management framework. Equally, the delay in the enforcement of the planning legislation equally meant that key institutional and analytical aspects of coastal planning and environmental management continue to be in a stage of transition, **lacking in the application of tools of integrated assessment and resource management**. Coastal management remains tied to a sectoral approach with emphasis placed on building controls, crippled by problems concerning the “inclusion” of local authorities in the planning system.

The introduction of **Environmental Impact Assessment (EIA)** in Cyprus in 1993 was an important institutional mechanism for incorporating environmental considerations in development, introduced even later than the TCPL. EIA is operated by the Environment Service of the MANRE as a *secondary legislation* relying for its enforcement on the powers of two other main Ministries: the Planning Bureau, responsible for the budgets for public projects, and the Department of Town Planning and Housing, responsible for issuing planning permissions for private development, also calling upon the provisions of other legislation - the TCPL, the Control of Water Pollution Law and the Control of Atmospheric Pollution from Industrial Sources. Only in 2001 a new legislation was introduced (57(1)/2001) that made the EIA mandatory. However, the EIA system remains focused on project level assessment. The Development Plans themselves that determine allowable development and projects, fall outside the scope of EIA. Assessment of **strategic environmental impacts**, a specific requirement in the new EU Directive, remains fragmented without a systematic review within the broader planning process.

In summary the main problems that constrain effective coastal management include:

- Late introduction of planning legislation
- Sectoral approach to land use planning and nature conservation

- Fragmentation of responsibilities and difficulties in the operation of the existing policy coordination mechanisms
- Over-protected land development rights and compensation for development restrictions
- Lack of harmonisation between development and conservation
- Vulnerability of the planning system to local interests and the lack of a common national / local level vision (or language)
- Development-driven policies and low priority to conservation
- Low valuation of the economic benefits from the protection of environmental assets and their quality
- Lack of tools for integrated policies (such as carrying capacity assessment, resource valuation and strategic environmental assessment)

It is expected that Cyprus will join the EU during the next enlargement and will therefore need to close the existing gaps in the policy process, adopt or strengthen policy implementation tools and mechanisms in order to make plans and policies more effective in addressing pressing environmental problems, particularly in coastal zone management.

The CAMP Cyprus initiative will introduce a methodology for Integrated Coastal Area Management (ICAM) and promote the application of planning and management tools, which will contribute to the strengthening of the planning and coastal protection system **at the policy level**. It will not, by itself, solve all the problems. Its main contribution will be to initiate an on-going process of policy review based on the principles of integrated coastal management and the objectives of sustainable development. This will be achieved primarily through the demonstration and future application of tools of integrated planning and management that emphasise strategic environmental assessment, carrying capacity considerations and the multiple benefits of coastal resource management.

### **The Concept and Principles of CAMP**

CAMP is a MAP initiative aiming to introduce Integrated Coastal Area Management (ICAM) at local and national level, and institutional strengthening including capacity-building. It is a collaborative effort between MAP and its Regional Activity Centres, notably the Priority Actions Centre (PAP), national and local authorities and international funding institutions. CAMP is based on the principles of sustainable development and integrated planning and management of the Mediterranean coastal areas. Coastal areas are the focus of CAMP Projects; they recognise that coastal areas are areas of intense activity, areas of interchange within and between physical, biological, social, cultural and economic processes composed of multiple interacting systems: marine, terrestrial and riverine. Changes, at any point in any part of the systems can generate chain reactions far from their point of origin.

Chapter 17 of Agenda 21 concluded that “the Marine environment – including the oceans and all seas and adjacent coastal areas – form an integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development”<sup>4</sup>. It is now widely accepted that sectoral activities produce combined environmental impacts resulting in marine and fresh water pollution, loss of marine and natural land resources, land degradation and destruction of historic sites, and that policies based on a sectoral approach to reduce or address coastal degradation or resolve conflicts of uses have failed, ignoring the underlying causes of environmental degradation, transfer problems and conflicts to adjacent geographical or policy-making areas.

---

<sup>4</sup> Chapter 17 “Protection of the Oceans, all kinds of Seas, including Enclosed and Semi-enclosed Seas and Coastal Areas and the Protection, Rational Use and Development of their Living Resources”

The main principles of ICAM<sup>5 6</sup> include:

- The coastal area is a unique resource system which requires special management and planning approaches;
- The land-water interface is an integrating force in coastal resource systems;
- Land and sea uses, and their particular characteristics and requirements, should be planned and managed in combination;
- Coastal management and planning boundaries should be issue-based and adaptive;
- Institutional responsibilities for coastal planning and management should involve all levels of government;
- Economic and social benefit evaluation, and public participation form important components of coastal area management;
- Conservation is an important goal in sustainable coastal development;
- Multi-sectoral approaches are essential to the sustainable use of resources as they involve multi-sectoral interactions;

The main objectives of CAMP are to:

- Develop strategies for environmental protection and rational use of coastal and marine resources towards sustainable development of coastal areas;
- Identify, adopt and test methodologies, tools, practices of sustainable coastal management;
- Contribute towards the upgrading of relevant local / national institutional and human capacities;
- Secure a wider use of requirements contained in the Barcelona Convention and its protocols, at national and regional levels, and create appropriate conditions for follow-up activities.

CAMP objectives are mainly achieved through the following:

- Exchange of knowledge and experience;
- Work with local and international experts;
- Involvement of MAP RACs;
- Integration of activities and policies on concrete problems in coastal areas
- Application of integrating tools and methodologies cutting across institutional, thematic and spatial levels

### **CAMP Cyprus Area**

The problems affecting the coastal environment in Cyprus exhibit an overriding uniformity due to the small size of the island and the dominance of tourism development. In a sense, the coastal area of Cyprus, understood as the “*area affected by the proximity to the sea*” **is the whole of Cyprus**. The influence of the coastal environment is dominant in all of Cyprus. Not only the rapid pace of coastal development is the direct outcome of the proximity to the sea (which is obvious) but the economic and population decline of the hinterland areas are indirectly affected by the pull of resources to the coastal areas that offer diverse economic opportunities. Also, the **development pressures, implementation constraints and policy issues are common to all coastal areas** and underlie the development / environment interactions and the multiple threats to the quality of the coast. The pressures for the expansion of tourist zones, the loss of agricultural land, the transformation of village settlements into tourist centres, or the local reactions against various levels of coastal

---

<sup>5</sup> Guidelines for Integrated Management of Coastal and Marine Areas with Special Reference to the Mediterranean Basin, UNEP, Regional Seas Reports and Studies No. 161, Split, Croatia, PAP/RAC (MAP-UNEP), 1995, based on Clark J.R. 1992, Integrated Management of Coastal Zones. FAO Fisheries Technical Paper No. 327, FAO, Rome

<sup>6</sup> UNEP/MAP/PAP: White Paper Coastal Zone Management in the Mediterranean, Split, Priority Actions Programme, 2001

protection are uniform and **share a common relationship to the whole policy and institutional framework.**

Two possible options concerning the area of CAMP Cyprus are conceivable:

- To identify a particular geographical area (either a “hot spot” area or a newly developing area, or even an area including both cases), or
- To address CAMP Cyprus to the whole island in view of the common issues and policy challenges that affect the future management of coastal areas.

The first choice is considered inappropriate, because it will confine CAMP Cyprus to a section of the coastal environment and restrict its scope to only **part** of the wider development and policy issues. Most importantly, the proposal of the Government of Cyprus for the CAMP is based on the need to address **existing gaps in the policy framework** for coastal planning and management and to explore and introduce tools of integrated coastal area management with a view to strengthening and harmonising the policy process.

The second choice is therefore proposed for adoption based on considerations that include the following:

- Responding to the needs expressed in the proposal of the Cyprus Government to MAP
- Following up on the discussions held with PAP/RAC mission to Cyprus in September 2001
- Following the broad views and inclinations expressed by the national experts and representatives met during the preparation of this Report

Also,

- Ensuring greater relevance of CAMP Cyprus to the policy problems in Cyprus
- Increasing participation of a wider group of national and local authorities, and other stakeholders
- Broadening the future applicability of the results to the whole area and policy spectrum in Cyprus (including in the future the northern part of Cyprus)
- Generating lessons for similar policy problems encountered in other countries in the Mediterranean region
- Contributing to the improvement of ICAM by highlighting the applicability of decision-making tools pertaining to various spatial levels

### **Project Activities**

The activities proposed will concentrate on the elaboration and participatory application of three important tools of coastal zone management (Strategic Environmental Assessment, Carrying capacity Assessment and Resource Valuation) within the context of MAP’s Integrated Coastal Area Management (ICAM) methodological framework.

Two main core activities are proposed:

#### **I. Integrated Coastal Zone Management, and**

#### **II. Tools of Integrated Coastal Zone Management, comprising**

- (i) Strategic Environmental Assessment**
- (ii) Carrying Capacity Assessment**
- (iii) Resource valuation**

### **Project Methodology**

Project methodology will follow the broad framework of the guidelines of the UNEP/MAP <sup>7</sup> and the accumulated experience of the CAMP in several other Mediterranean countries <sup>8</sup> outlined earlier in this Report. In addition, CAMP Cyprus will follow a methodology aiming to address the specific problems in Cyprus, which will comprise the following main elements:

#### **◆ Participation**

- Participation of public sector experts as key resource persons in the Project Activities
- Active involvement of local authorities, private sector representatives and NGOs in the workshops.

#### **◆ Demonstration**

- Demonstration of the use, value and future development of tools of ICZM with reference to concrete issues in Cyprus.

#### **◆ Incorporation**

- Derivation of policy conclusions framed in terms of the requirements for incorporation into the Cyprus policy and institutional framework.

#### **◆ Follow-up**

- Formulation of future actions and proposals for immediate, medium term and longer term priorities.

### **Project Organisation**

The implementation of CAMP Cyprus project will be the responsibility of the Environment Service of the Ministry of Agriculture, Natural Resources and Environment. The organisation of the project will include two main functions:

- A. Project Management, and**
- B. Work Tasks**

#### **A. Project Management**

The management structure will include three main components:

- ◆ Overall implementation responsibility. Responsibility towards the executing agency (MAP-PAP/RAC) for the implementation of the project will be exercised by the Director of the Environment Service in his capacity as Project Director, assisted by his staff.
- ◆ Steering of project activities. Responsibility for the implementation of project activities will be exercised by a Steering Committee composed of representatives of the main participating Departments, Local Authorities and private organisations.
- ◆ Co-ordination of activities. Responsibility for co-ordination of project activities, links with the working teams and MAP-PAP/RAC, will be exercised by the MAP-PAP/RAC Project Co-ordinator.

#### **B. Work Tasks**

Work tasks will be carried out by working teams comprising two elements:

<sup>7</sup> PAP/RAC Guidelines for ICZM in the Mediterranean Basin, 1996, UNEP/MAP Formulation and Implementation of CAMP Projects, 1999

<sup>8</sup> UNEP/MAP Good practice Guidelines for ICAM in the Mediterranean, 2001, UNEP/MAP/PAP White Paper on CZM in the Mediterranean, 2001

- National experts drawn from the participating Departments / Organisations, and
- PAP/RAC international experts

There will be three such Working Teams, one for each Activity, headed by a Team Leader. For each Activity there will be an international PAP/RAC Consultant guiding, advising and carrying out the tasks assigned by the Project Director.

## **Project Resources**

### **(i) Database**

On the basis of the research carried out for this Report, adequate relevant database exists and will be drawn mainly from the following sources:

- Planning Bureau
- Department of Town Planning and Housing
- Cyprus Tourism Organisation
- Environmental Service
- Coastal Unit of the Ministry of Communications and Works
- Geological Survey Department
- Forestry Department
- Department of Fisheries and Marine Research
- Department of Lands & Surveys
- Department of Statistics Services

### **(ii) Budget**

Preliminary Outline of Budget Framework (in US\$)

	MAP		Cyprus Government		Total
	In cash	In kind	In cash	In kind	
MAP/PAP Consultants	100	-			100
National Consultants	30	-	-	80	110
International Travel	30	-	-	-	30
Travel in Cyprus	-	-	10	-	10
Workshops	60	-	10	-	70
Preparation of Reports	50	-	20	10	80
Hospitality	-	-	20	-	20
Contingencies	30	-	5	10	45
Total	300	-	65	100	465

Summary Budget

Source	Amount	%
MAP	300	65
Cyprus Government	165	35
Total	465	100

*Note: This is a tentative budget framework. All figures are subject to modification and approval, particularly the cash contribution by the Cyprus Government.*

## **Project Timeframe**

The project timeframe and calendar of proposed actions are as follows:

<b>Project Phase</b>	<b>Activity</b>	<b>Date</b>
<b>Project Preparation</b>	Approval of Diagnostic Report by Government	Oct – Nov 2002
	Signature of Project Agreement	December 2002
	Preparation of Project Inception Report	February 2003
	Activity Terms of Reference and Technical Specifications	February 2003
	Establishment of Coordination Committee	February 2003
	Project Inception Workshop	March 2003
<b>Project Implementation</b>	Working Teams Activities	April 2003– April 2004
	Preparation and submission of Project Activity Reports	July 2004
	Preparation of Draft Integrated Project Report	Sep – Oct 2004
	Project Presentation Conference	November 2004
	Preparation of Final Integrated Report (including follow-up proposals)	December 2004
<b>Post Project Activities</b>		January 2005

## **Project Feasibility and Wider Benefits**

### **Feasibility**

In the process of the preparation of this Report, in its role as the CAMP Cyprus Diagnostic – Feasibility Report, contacts have been established and exchanges held with a wide range of experts and representatives of relevant Departments and Organisations. In the context of these exchanges the objectives of CAMP Cyprus were explained relative to the respective area of expertise and the wider issues of coastal area management. The exchanges also focused on:

- The concerns for the existing problems
- The policy issues concerning the coastal areas
- The experiences in policy-making and coordination problems
- The need for effective cross-departmental links
- The merits and limitations of present policies and practices
- The perception of the need for improving the policy process
- The problems likely to be encountered in the future
- The need felt for exploring tools for strengthening integration in coastal management
- The wider benefits of coastal protection and the justification for CAMP Cyprus
- Data availability for CAMP Cyprus and willingness for participation

The conclusions that emerged from these exchanges confirm the need for CAMP Cyprus and highlight a common concern for pursuing the activities proposed. There is a common view that, despite the existence of legislation and high level expertise in planning and management, the fragmentation of responsibilities and the often divergent priorities on environmental management along national / local and departmental lines, need to be addressed within the broad framework of the institutional setting of Cyprus.

It also emerged that CAMP Cyprus will help towards the implementation of key aspects of the EU Environmental *Acquis* bringing issues of sustainable development within the coastal management process. In doing so, the results of CAMP Cyprus will be useful to other Mediterranean countries that share the concern for implementing sustainable development.

In addition, the key reflections and conclusions of this Report have been discussed with the Director of the Environment Service and his colleagues, who provided valuable insights and comments.

### **Project Benefits**

The launching and implementation of CAMP Cyprus achieve the following main benefits:

- Will fulfil the need for incorporating a policy direction for integrated coastal area management within the Cyprus institutional framework, as expressed in the proposal of the Cyprus Government to MAP;
- Will link Cyprus more closely to the network of CAMP in the Mediterranean and the activities of the MAP/RACs;
- Will respond to a widely felt need among national experts and private sector organisations to better manage and protect the coastal environment on which the economy of Cyprus depends;
- Will contribute towards environmental awareness in development policy and particularly the “inclusion” of local perspectives on the environment/development interactions currently missing;
- Increasing appreciation of cross-cutting implications of development/conservations options relative to capacity constraints, strategic considerations, long term benefits and the environment as a scarce resource;
- Will build up experience and readiness to apply tools of Integrated Coastal Area Management to all Cyprus, including in the future, when political circumstances will hopefully soon permit, to the northern part of Cyprus;
- Will generate lessons for similar policy problems encountered in other countries in the Mediterranean region;
- Will contribute to the improvement of ICAM by highlighting the applicability of decision-making tools pertaining to various spatial levels.

## 1.0 COUNTRY BACKGROUND

### 1.1 Size and physical characteristics

Cyprus is the third largest island in the Mediterranean with an area of 9,251 sq. km. It has a maximum length of 240 km from east to west and a maximum width of 100 km north south. It is situated at the north-western corner of the eastern Mediterranean basin at an equal distance of 380 km north of Egypt and west of the Greek island of Rhodes, 105 km west of Syria and 75 km from Turkey. The Greek mainland lies further at some 800 km to the west. Cyprus lies at the hub of three continents and close to the busy trade route linking Western Europe with the Arab world and the Far East. The latitude of Cyprus is 34 33 north and its longitude 32 16 - 34 37 east.

The island has two mountain ranges; the *Pendadaktylos* range which runs along the entire northern coast, and the *Troodos* massif in the central and south-western parts of the island. The coastline of Cyprus is indented and rocky in the north with long sandy beaches in numerous coves in the south. The northern coastal plain, covered with olive and carob trees, is backed by the steep and narrow *Pedadaktylos* limestone mountain range rising to a height of 1,042 m. In the south the extensive *Troodos* mountain massif is covered with pine, dwarf oak, cypress and cedar, culminating in the peak of Mount Olympus, 1,953 m. above sea level. Between the two mountain ranges the fertile *Mesaoria* plain (**Fig. 1**).

The island has a Mediterranean type of climate with a typical seasonal rhythm strongly marked by temperature, rainfall and other climatological characteristics.

The Republic of Cyprus was instituted as an independent sovereign country in 1960 with a presidential system of government. There are 11 Ministries each headed by a Minister. The Ministries are: Foreign Affairs, Finance, Interior, Defence Education and Culture, Communications and Works, Commerce, Industry and Tourism, Agriculture, Natural Resources and Environment, Justice and Public Order, Labour and Social Insurance, and Health. Administratively, Cyprus is divided into six Districts: Nicosia, Limassol, Larnaca, Paphos, Famagusta and Kyrenia.

In 1974, the Republic of Cyprus was invaded by the Turkish Army imposing a division in the island, with the northern 38% of the territory (including the whole of Kyrenia District and the largest part of Famagusta District) remaining since then inaccessible (**Fig. 1**). This Report is therefore concerned throughout with the territory under the control of the Government of Cyprus.

### 1.2 Population

Cyprus (excluding the occupied northern part) has a total population of 689,471, 474,417 urban (69%) and 215,054 rural (31%). As shown in the following table, the total population has grown by 35% between 1982-2002, compared to 45% growth of the urban population and 15% growth of the rural population.

**Table 1 - Coastal Population Increase in Cyprus 1982-2002**

Population	1982	1992	2002	1982-2002 Increase
Total	512,000	602,000	689,500	34.6%
Urban	325,500	407,000	474,500	45.8%
Rural	186,500	195,000	215,000	15.3%

Source: Population Census 1982, 1992 & 2002, Dept. of Statistical Services

Nicosia District, the only wholly inland District in Cyprus, has a population of 273,129 representing 40% of the population of Cyprus. As shown in the table below, the remaining population of 416,342 is distributed in the four coastal Districts of Limassol, Larnaca, Paphos and Famagusta, 66% in the urban areas and 34% in the rural areas.

**Table 2 - Urban-Rural Population Distribution by District 2002**

District	Total	Urban	Rural
Nicosia	273,129	200,459	72,670
Limassol	197,300	157,494	39,806
Larnaca	115,266	70,541	44,725
Paphos	66,038	45,923	20,115
Famagusta	37,738	0	37,738
<b>Total</b>	<b>689,471</b>	<b>474,417</b>	<b>215,054</b>

Source: Population Census 1982, 1992 & 2002, Dept. of Statistical Services

### **1.3 Economic and Social Development**

Cyprus has an open free-market economy, driven mainly by thriving tourist and service sectors. In terms of their contribution to the Gross National Product the three most important sectors of the economy are (a) trade, restaurants and hotels, (b) finance, insurance and business services, and (c) manufacturing. Cyprus' main trading partner is the European Union accounting for about 55% of imports and 40% of exports.

**Table 3 - The Cyprus Economy: Gross Domestic Product and Sectoral Distribution, 1996-2001** (in million Cy Pounds, constant 1995 prices)

Sector	1996	2000	2001
<b>Primary Sector</b>	<b>209 (5%)</b>	<b>206 (5%)</b>	<b>215 (5%)</b>
Agriculture	188	178	187
Fisheries	10	12	12
Mining & Quarrying	11	16	16
<b>Secondary Sector</b>	<b>883 (23%)</b>	<b>910 (20%)</b>	<b>935 (20%)</b>
Manufacturing	462	489	502
Construction	334	311	315
Electricity, etc.	87	110	118
<b>Tertiary Sector</b>	<b>2,731 (72%)</b>	<b>3,407 (75%)</b>	<b>3,562 (75%)</b>
Trade	530	612	631
Hotels & Restaurants	329	443	465
Transport	331	427	457
Banking & Finance	205	302	317
Professional Services	526	642	674
Public Administration	339	395	405
Education	184	225	234
Health & Social Welfare	129	146	151
Community Services	158	215	228
<b>Gross Value Added</b>	<b>3,823(100%)</b>	<b>4,523 (100%)</b>	<b>4,712 (100%)</b>
Minus Bank charges	131	186	199
Plus value Added Tax	391	492	518
<b>Gross Domestic Product in market prices</b>	<b>4,083</b>	<b>4,829</b>	<b>5,031</b>

Source: Economic and Social Indicators and Economic Review, 2000, Planning Bureau.

A closer look at the main demand and supply components of the economy shows the dependence of the growth of private sector consumption on imports financed by tourism receipts (since manufacturing and agriculture are small sectors).

**Table 4 - Main demand and supply components of the economy, 1996-2000 (annual percentage changes – at constant prices)**

	1996	1997	2000
<b>Demand components</b>			
Private consumption	3.5	4.0	7.0
Investment	7.4	-4.5	5.6
Exports of goods and services	4.1	0.8	8.9
Imports of goods and services	6.7	-0.5	12.5
<b>Supply components</b>			
Agriculture	-1.5	-13.4	-1.3
Manufacturing	-1.5	0.4	0.8
Trade	1.7	1.0	3.3
Transport	4.5	5.8	6.1
Banking & financial services	3.9	9.0	8.9
Business Services	8.4	5.4	7.8
Public Administration	3.5	4.1	3.8
<b>Real GDP</b>	1.9	2.5	5.1
Domestic savings ratio	17.0%	15.2%	15.3
Investment ratio	20.4%	19.0%	18.6%

Source: Derived from Economic and Social Indicators and Economic Review, 2000, Planning Bureau

The Cyprus economy is dominated by four important characteristics:

- Continuous economic growth
- A strong private sector
- A large tourism sector
- Openness to international trade

A recent report by the Commission of the European Communities<sup>1</sup> highlights the main features of the Cyprus economy including the following:

- Cyprus has enjoyed many years of robust economic growth. Between 1996-2000, the economy has grown by an average of 4% per year. The external sector, and in particular the tourism sector, has been the primary source of this impressive economic performance. During the last 12 months economic growth continued to be strong, largely as a result of tourism receipts.
- In 1999, the private sector produced around 80% of the GDP.
- Cyprus has a strong entrepreneurial culture, demonstrated by the large number of small and medium size enterprises, mostly found within the service sector, particularly within the tourism sector.
- Cyprus is a highly open economy. Trade openness (total exports plus imports as a percentage of GDP) stood at 97% of GDP in 2000. International trade is highly integrated with the European Union. At present the EU accounts for 48% of Cypriot exports and 56% of Cypriot imports. These trade figures understate the extent of Cyprus-EU integration; the majority of tourist arrivals come from the EU with around half coming from the United Kingdom alone. However, reflecting its regional location, Cyprus also has intense trade relations with the countries of Central and Eastern Europe and the Middle East.

The same Report emphasises also that “*The most important feature of Cyprus is the continuing north-south division of the island imposed since 1974 by the Turkish invasion that separated the southern area controlled by the internationally recognised Cyprus Government and the*

<sup>1</sup> Regular Report on Cyprus' Progress Towards Accession, SEC (2001) 1745, 13.11.2001

*northern Turkish-held area administered by a de facto Turkish-Cypriot administration recognised only by Turkey. The Turkish-held northern area has about one-fifth the population and one-third the per capita GDP<sup>2</sup>.*

Cyprus is the 25<sup>th</sup> out of the 48 countries included in the “high human development” group with a HDI of 0.877, after Hong Kong with an index of 0.880 and before Singapore with an index of 0.876<sup>3</sup>. Life expectancy at birth stands at 77.9, adult literacy rate at 96.9 and GDP pr capita at US\$19,006. The ratio of doctors to the population is 1:357 and that of nurses to the population 1:224 and there is one hospital/clinic bed for every 216 persons. 75% of the housing stock is owner-occupied and 96.6% of all rural houses are connected to the electricity and water supply system (99.3% in the urban areas). There are 61 telephone lines per 100 persons and one private car for every 2.4 persons. The average annual consumption of electricity is 4,500 kw.

### **1.4 Administrative Framework**

For administrative purposes, Cyprus is divided into six districts: Nicosia, Famagusta, Limassol, Larnaca, Paphos and Kyrenia. Nicosia is the capital city of Cyprus and the seat of Government. Each District is headed by an appointed District Officer who functions as the District representative of central Government, co-ordinates the activities of all Ministries and liaises between them at the district level. District Officers are part of the administrative structure of the Ministry of the Interior and report to the Minister and the Director-General.

The local administrative structure of Cyprus operates through a system of Municipalities, Improvement Boards and Village Commissions. These are elected and administratively independent bodies responsible for strictly local affairs. Municipalities constitute the form of local government in the six main towns (the district capital towns) and in a number of smaller towns mostly around the main towns. Any community may become a Municipality by local referendum, following an approval by the Council of Ministers, provided it has either a population of over 5,000 or a strong local economic base (like Ayia Napa, Paralimni, Athienou, Lefkara). Municipalities are headed by a Mayor. The remaining communities are administered as Improvement Boards and Village Commissions. Improvement Boards are headed by the respective District Officer, while the members of both Improvement Boards and Village Commissions are elected by the local population over the age of 18. Technical and administrative support to these bodies is provided by central Government.

**Table 5 - Types of Local Government**

	<b>Total Number</b>	<b>In Turkish-held northern area</b>
Municipalities	32	9
Improvement Boards	85	15
Village Commissions	352	151

Source: National Report of the Republic of Cyprus, The Second U.N. Conference on Human Settlements - Habitat II, 1996, Prepared by the Dept. of Town Planning and Housing

The following Table shows in broad terms the distribution of responsibilities between local and central Government and Municipal Authorities in Cyprus. Municipal Authorities have strictly local responsibilities for local roads, refuse collection and disposal, public health inspection and infrastructure improvements within their area. Development policy, education and infrastructure of national importance are determined by central Government.

<sup>2</sup> Op.cit.

<sup>3</sup> Human Development Report, UNDP, 2001

**Table 6- Central and Municipal Level Responsibilities**

Decision-making level	Central Government Level	Municipal Level
Economic and Social Development Policy	XX	0
Land Use Planning strategy	XX	X
Preparation of Development Plans	XX	X
Issues of Planning Permits *	XX	X
Issue of Building Permits		XX
Social Housing Schemes	XX	0
Main Urban Road Network	XX	0
Local Road Network	X	XX
Water Distribution and Sewerage Network	XX	0
Environmental Management	XX	X
Nature Protection	XX	0
Education and Health Services	XX	0

XX = Main responsibility, X = Some responsibility, 0 = No responsibility

\* Only the largest Municipalities have powers for issuing Planning Permissions (Nicosia, Limassol, Larnaca and Paphos)

The resources of Municipalities are limited to revenues from local property taxes (set at low rates) and fees from building licenses, which typically fall short of their increasing payroll, and Government grants amounting to 1% of total Government revenue allocated to all the Municipalities according to the population of each Municipality. Coastal Municipalities in tourist areas have significant revenues from taxes on hotels and restaurants. As shown below, Municipalities have low budgets compared to the development budget of "spending" Departments and Ministries.

**Table 7 - Budget Expenditure of Coastal Municipalities 1997-2000 (in thousand Cyprus Pounds)**

Municipality	1997	1998	1999	2000
Limassol Municipality	9,843	9,723	9,811	10,968
Yermasoyia	1,515	1,883	2,294	2,084
Larnaca	5,486	5,723	5,619	5,707
Paphos	5,097	5,592	5,675	6,383
Paralimni	4,193	4,510	4,490	4,827
Dherinia	511	628	676	675
Yeroskypou	796	714	830	920
Ayia Napa	2,721	3,224	3,422	3,713
Polis Chrysochou	401	453	521	532
Peyia	757	812	949	954
<b>Total of Coastal Municipalities</b>	<b>31,320</b>	<b>33,271</b>	<b>34,287</b>	<b>36,763</b>
Total of all Municipalities	55,713	59,734	61,907	65,844
<b>Share of Coastal Municipalities %</b>	<b>56%</b>	<b>56%</b>	<b>55%</b>	<b>56%</b>

#### Development Budget of Selected Expenditure Ministries, Departments and Organisations

<b>Ministry of Interior</b>	<b>25,000</b>	<b>32,000</b>	<b>33,000</b>	<b>51,000</b>
<b>Ministry of Communications &amp; Works</b>	<b>60,000</b>	<b>66,000</b>	<b>70,000</b>	<b>91,000</b>
<b>Department of Town Planning &amp; Housing</b>	<b>12,000</b>	<b>12,000</b>	<b>14,000</b>	<b>18,000</b>
<b>Cyprus Tourism Organisation</b>	<b>15,700</b>	<b>15,800</b>	<b>16,500</b>	<b>17,300</b>
<b>Cyprus Electricity Authority</b>	<b>80,000</b>	<b>82,000</b>	<b>98,000</b>	<b>145,000</b>
<b>Cyprus Ports Authority</b>	<b>12,200</b>	<b>12,000</b>	<b>15,400</b>	<b>17,000</b>

Source: Union of Municipalities & Development Budget, Ministry of Finance

### 1.5 Main Development Trends

The spatial development pattern in Cyprus is characterised by two dominant trends:

- **Sub-urbanisation, and**
- **Coastalisation**

**Suburbanisation** takes the form of rapid population growth and urban development sprawl in the suburbs located at the edges of the main urban areas.

This pattern is typical of all urban areas in Cyprus, although particularly evident in Nicosia due to Nicosia's specific problems as a "*divide city*" following the division of the island along a north-south split right across Nicosia itself. The transformation of Nicosia into a "border city" triggered a major population shift to the southern suburbs and to the outlying settlements, accentuating an earlier tendency for urban development sprawl. The growth of greater Limassol area, the second largest urban center, has followed a similar pattern partly resulting from in-migration from its own rural hinterland compounded by the settlement of displaced population from Famagusta town occupied since 1974.

**Table 8 - Population growth and suburbanisation trends in Cyprus**

	1982	1992	2002	Change 1982-2001
Total Population	512,000	602,000	689,500	34.6%
Total Urban population	325,500 (100%)	407,000 (100%)	474,500 (100%)	45.8%
Core urban population	171,500 (53%)	196,500 (48%)	215,300 (45%)	25.5%
Suburban population	154,000 (47%)	210,500 (52%)	259,200 (55%)	68.3%

Source: Population Census, 1982, 1992 & 2002, Nicosia, Limassol, Larnaca and Paphos Local Plans, 1996 & 1999, Dept. of Town Planning and Housing & CAMP Cyprus Project Research

The table above (and the figures below) show in summary the main pattern for the period 1982-2001.

- 35% total population increase
- 46% urban population increase, of which the suburban population increase was more than twice the core urban population increase (68% and 26% respectively).

The trend towards suburbanisation is shared by all urban areas, with population growth being much higher in the suburban settlements just outside the town boundaries compared with the growth rate in the towns themselves. The difference between Nicosia and the other urban Municipalities is that Nicosia loses population in absolute terms. As shown in the table below, Limassol Municipality increased its population by 26% since 1982, compared to a population increase in the Limassol Local Plan Area of 41% (which includes the suburbs) during the same period. There is a uniform trend of a decrease in the population share of the urban Municipalities and a corresponding increase in the suburban population in all the main Local Plan Areas. The tendency is roughly the same in all area, although stronger in Nicosia and Larnaca, and weaker in Limassol, and Paphos.

**Table 9 - Urban and Suburban Population growth by Area, 1982 - 2001**

Area	1982	1992	2001
Nicosia Local Plan Area	149,000 (100%)	177,400 (100%)	198,000 (100%)
Nicosia Municipality	48,200 (32%)	47,000 (27%)	47,800 (24%)
Limassol Local Plan Area	107,200 (100%)	136,800 (100%)	151,000 (100%)
Limassol Municipality	74,800 (70%)	87,200 (64%)	94,600 (63%)
Larnaca Local Plan Area	48,400 (100%)	60,600 (100%)	75,300 (100%)
Larnaca Municipality	35,400 (73%)	43,600 (72%)	46,700 (62%)
Paphos Local Plan Area	22,200 (100%)	35,600 (100%)	46,500 (100%)
Paphos Municipality	13,100 (59%)	18,700 (53%)	26,252 (56%)

Source: Population Census 2002, Local Plans, Dept. of Town Planning and Housing & CAMP Cyprus Project Research

Apart from the political problem and its transformation into a “border city” in 1974, Nicosia has another important characteristic that explains its population decline: **Nicosia is the only inland urban area in Cyprus**. The rest of the urban areas are **coastal**, with tourism accounting for a large part of their economic base and local development process.

“**Coastalisation**”, a consequence of the rapid and sprawling pattern of coastal tourism development is equally dominant. As much as 95% of all licensed tourism hotel and other accommodation capacity in Cyprus is on the coast, the rest is located in Nicosia and the mountain resorts. Of all coastal tourism accommodation capacity, 55% is concentrated in the suburban tourism centres around the towns of Limassol, Larnaca and Paphos and as much as 40% is located in rapidly growing coastal village communities that have grown into tourism centres, notable in the settlements of Ayia Napa and Paralimni in the southern Famagusta District which recorded, between 1982-2001, a population growth of 57%, higher than the growth of growth of the coastal urban areas themselves.

The table below shows the urban-rural and the coastal non-coastal population distribution in 2001. At present nearly 70% of the population is urban and just over 30% rural. Almost half of the population lives on the coast and the remaining in the inland parts of the island, of which 200,000 (over half) in Nicosia.

**Table 10 - Coastal and Non-coastal Population Distribution, 2001**

Total	689,500 (100%)
Urban	474,500 (69%)
Rural	215,000 (31%)
Coastal	324,600 (47%)
Non-coastal	364,900 (53%)

Source: Population census 2001 & CAMP Cyprus Project Research

The following table breaks down the urban and rural population growth between 1982-2001 into the coastal and inland areas to highlight the growth of **coastal population** in both urban and rural areas.

**Table 11 - Coastal Population Increase in Cyprus 1982-2002**

Population	1982	1992	2002	1982-02 Increase
Total	512,000	602,000	689,500	34.6%
Urban	325,500	407,000	474,500	45.7%
Coastal (Limassol, Paphos, Larnaca)	176,500	230,000	274,000	55.2%
Inland (Nicosia)	149,000	177,000	200,500	34.5%
Rural	186,500	195,000	215,000	15.3%
Coastal *	35,000	41,300	50,600	44.5%
In-land **	151,500	153,700	164,400	8.5%
Total Coastal	211,500	271,300	324,600	53.5%
Total Inland	300,500	330,700	364,900	21.4%

Source: CAMP Cyprus Project Research

Note:

\* Coastal rural communities include all the rural communities outside the Local Plan Areas of the Coastal towns fronting on the sea (Paralimni, Ayia Napa, Dherinia, Sotira, Liopetri and Phrenaros in Famagusta District, Xylophagou, Kiti, Pervolia, Alaminos, Zygi, Mari and Mazotos in Larnaca District, Pissouri in Limassol District and Peyia, Kissonerga, Polis, Neo Khorio and the Pomos Area in Paphos District – the Akamas Peninsula communities of Arodhes, Inia are included in the inland rural population)

\*\* All the remaining rural communities

The following main growth indicators concerning population increase between 1982-2001 are striking:

- Total population growth 35%
- Total urban population growth 46%
  - Coastal urban growth 55%
  - Inland urban growth 35%
- Total rural population growth 15%
  - Coastal rural growth 45%
  - Inland rural growth 8%

The coastal rural population growth is higher than the total population growth, nearly equal to the total urban population growth, three times higher the average rural population growth, six times the inland rural and as much as four fifths of the urban coastal population growth.

As has been illustrated by the above tables, urban and coastal sprawl has been for many years associated with the spatial pattern of building development. As regards urban development, a major part of each wave of development typically occurs at the fringes of the existing development boundary defined by land use plans, adding new neighbourhoods at the edges of the designated development zones served by infrastructure, leaving large stocks of vacant building land within the existing development envelope.

Actual data on development sprawl are not available for the whole of Cyprus. Patchy figures for Nicosia are perhaps indicative of the broad pattern. In 1963, the amount of vacant urban land in the Nicosia urban area was as much as 30% of the then total developed area. In 1982, the survey conducted by the UNDP *Nicosia Master Plan* Project showed a similar percentage of vacant urban land despite the expansion of the urban area by about 30%. An estimate carried out for this Report on the basis of the 1999 Nicosia Local Plan shows that between 1982 and 1999 the area zoned for urban development within the defined urban development boundary had increased between 60-66%, while the population increase was only about 38%. There are two main factors contributing to this:

- the tendency of the Planning Authority to over-zone for future development (much beyond projected development needs), and
- the social pressures exercised by local land-owners to include agricultural land in urban development for speculative gains. Despite the gross over-provision of urban and tourism development land, land prices continue to increase particularly in the fringes of core development areas due to the speculative demand for land, over and above the real demand for development, in anticipation of future land use change from agriculture to housing and tourism. A recent report reflecting on this issue stresses:

**Box. 1**

*“The most important characteristics of land use change arising from haphazard urban expansion are the shrinking of agricultural land in favour of residential land; fragmented settlements and isolated buildings, uncontrolled growth often coupled with insufficient services; and a spatial pattern of land use in the fringe areas that is heterogeneous and unstable. Parallel to rapid residential growth, the fringe areas have witnessed an influx of other urban uses such as industrial, commercial and institutional. All these have a very negative impact on the physical and human environment caused by industrial wastes, increased levels of traffic congestion, air and noise pollution, lack of open space, lack of adequate facilities and infrastructure, loss of agricultural land and visual deterioration”.*

*National Report of the Republic of Cyprus, Habitat II, 1996.*

**A broad conclusion** that should be underlined is that past and current development trends pose a threat to the environment, particularly in the coastal areas which are the main location of development activity. Cyprus is a small country relative to the rest of Europe with limited natural resources and coastline, yet the ratio of over 3 tourists per Cypriot citizen is the second highest in the Mediterranean (after Morocco, followed by Malta, Spain, Greece with less than 2 tourists per person).

Indicative of the pressures on the coastal environment is the almost continuous “development footprint” along the coast, comprising tourism development, second homes, shopping centres, etc. The following table provides some broad figures of the change of land use on the coast.

**Table 12 - Development along the coast (length of coastal land in km)**

Development type	1974	1991	2000
Undeveloped	150 (83%)	102 (56%)	72 (40%)
Suburban	9 (5%)	48 (27%)	74 (41%)
Urban	22 (12%)	31 (17%)	35 (19%)
Total length (Government controlled area)	181 (100%)	181 (100%)	181 (100%)

Source: Based on “World Bank, Environmental Review and Recommendations, Republic of Cyprus”, 1992. Figures for 2000 are preliminary estimates based on a rough assessment of new coastal development.

**Tourism development.** Government policy on development planning during the first years after the invasion of 1974, which was disastrous for the tourist industry, emphasised economic development and the revitalisation of the tourism industry.

By 1980, tourist arrivals had greatly surpassed the 1973 levels. Tourist arrivals were 423,563 in 1981, reached 1,561,479 in 1990 and 2,100,000 in 1995. The 1980’s are characterised by a very high rate of tourism development. The increased demand during that period led to new hotel beds, which from 12,524 in 1980 reached 84,259 in 1995, with an increase of approximately 20% per year. The pressures for development resulted in extensive building construction of buildings along the coast and evident deterioration of the visual and functional relationship between the coast and the inland area. The natural environment in the coastal areas, where tourist development has been concentrated, has been fundamentally transformed.

The lack of adequate building regulations and the absence of effective legislation on urban planning (until 1990), allowed rapid and poorly controlled development and a consequent decline in the quality of the built environment. Existing zoning regulations allowed high buildings and building densities on the coast and limited provision for organised open public spaces, with a resulting reduction of beach area in front of the buildings. The excessive population concentration in certain seaside areas increased sea pollution threats and pressures on the capacity of the beaches to accommodate recreation activity.

The removal of sand and gravel from the beaches for use in the construction industry resulted in the acceleration of erosion and the deterioration of beaches. The building of dams on the rivers resulted in the decrease of material carried to the coast, and therefore to a decreased rate of creation of natural sand on the shore. The need to protect sand beaches and in general the coastal area from erosion, to improve or even establish sandy beaches, to ensure a better quality of beaches and to increase their capacity in order to serve larger numbers of visitors, required the construction of breakwaters, either perpendicular or parallel to the shoreline, resulting in its alteration.

In June 1974, there were in Cyprus a total of 19,192 beds in tourist establishments (hotels, organised apartments, etc.). In 1975, a year after the 1974 invasion and the occupation of the

northern part of Cyprus, the number of beds in the southern part were only 5,445 beds. Since then, the total number of beds has been rapidly increasing, predominantly in the coastal areas.

**Table 13 – Number of Tourist Beds 1974-2001**

	Total No. of Beds	Coastal Areas		Inland Areas	
		No. Beds	Percent	No. Beds	Percent
30.6.74 (Pre-invasion all Cyprus)	19.192	15.006	78,19%	4.186	21,81%
31.12.75	5.445	1.919	35,08%	3.535	64,92%
31.12.80	12.524	8.622	68,84%	3.902	31,16%
31.12.85	30.375	26.191	86,23%	4.184	13,77%
31.12.90	59.271	55.012	92,82%	4.259	7,18%
31.12.95	78.427	73.715	94,00%	4.712	6,00%
31.12.2001	88.302	83.944	95,06%	4.358	4,93%

Source: Cyprus Tourism Organisation

The development of tourism concentrated in the coastal zone with a share of beds at 95% of the total, resulting in pressure on the coastal environment.

**Table 14 - Regional Distribution of tourist accommodation capacity at 31.12.2001**

District	No of tourist beds	Share in %
<b>Coastal Areas</b>		
Limassol	15,499	17.5%
Larnaca	8,222	9.3%
Paphos	23,768	27.0%
Famagusta (Paralimni & Ayia Napa)	36,455	41.3%
<b>Total Coastal Areas</b>	<b>83,944</b>	<b>95.1%</b>
<b>Inland Areas</b>		
Nicosia	2,237	2.5%
Hill Resorts	2,121	2.4%
<b>Total Inland Areas</b>	<b>4,358</b>	<b>4.9%</b>
<b>Total</b>	<b>88,302</b>	<b>100%</b>

Source: Cyprus Tourism Organisation

## 2.0 THE COASTAL ZONE

### 2.1 General Profile

In Cyprus there is no specific legal or functional (planning) definition of the coastal zone or area. There are three main geographical demarcations relating to the coastal zone / area, each one for the purposes of different laws.

1. The *Foreshore Protection Law* defines the foreshore as all lands within 100 yards of the high water mark. The foreshore area is public property falling under the jurisdiction of this Law.
2. The *New Tourist Policy* of 1990 designated a zone of 3 km. from the coastline for the purposes of control of tourism development.
3. The *Coastal Protection Study* of the Coastal Unit of the Ministry of Communications and Works adopted for the purposes of the survey of coastal erosion problems a definition of the coastal strip as the area of 2 km. from the coastline.

The TCPL contains no specific definition of the coastal area. Local Plans and the Policy for the Countryside contain land use / development control zones that cover coastal and non-coastal areas within the same Plans. Thus, in this Report, as in many other reports on Cyprus, the terms coastal area and coastal zone are used interchangeably.

**The small size of Cyprus and the close proximity of all areas to the coast, combined with the dominance of coastal tourism in building development and the economy, create a strong functional overlapping between the coastal area and other areas, blurring the coastal / hinterland distinction. For Cyprus, and particularly for the purposes of CAMP Cyprus and its integrated approach to coastal area management, an issue-led approach to coastal area problems is adopted rather than a legal or physical definition.**

The terrestrial width of the coastal zone (the area that extends 2 kilometres inland from the coastline) covers 23 percent of the country's total area. Its population density is 17.5 persons per hectare, and 47 percent of the total population lives and works in this zone, where 95% of the tourist industry is located, which is Cyprus's major source of revenue.

The country has a total of 772 kilometres of shoreline, of which:

- 404 kilometres are in the occupied zone (52%);
- 72 kilometres within the British military bases (10%); and
- 296 kilometres within the area under Government control (38%).

The shoreline overall is uneven and rocky (54%) with sandy beaches and many small coves (46%). The coastal zone is characterized by rich wildlife, long and small beaches, open areas, cliffs, capes, harbours, sand dunes, accumulations of pebbles, and, in general, marine and shore areas of prime ecological and scientific value.

At the northwestern part of the island, the shoreline is approximately 63% rocky and contains mainly the undeveloped areas of Tylliria, the Akamas peninsula, and Chrisochou Bay, which recently has begun to develop at a rapid pace. In various parts of this area, there are beaches (which are breeding grounds for sea turtles), isolated shores, islets, and sea caves.

In the southwestern part, the ratio of beaches to rocky shores is approximately the same, and includes Paphos, which is rapidly developing into an urban and tourist centre, as well as extensive shorelines with sea caves, rocky islets and sand dunes.

The southernmost (central) area includes the highly developed areas of Limassol and Larnaca, with 57 percent beaches, some isolated shores with cliffs, as well as the wetlands of the Akrotiri and Larnaca Salt Lakes ("Alikes").

The eastern part covers the most developed tourist areas of Ayia Napa and Protaras, of which only 23% of the shoreline consists of beaches.

Cyprus is characterized by rich and varied fauna, which includes land mammals, amphibians and reptiles, birds, insects, sponges, decapods, etc. The island is a crossroads for millions of birds during their autumn and spring migrations between Europe and Africa.

Regarding the flora, many of the endemic flowering plants, which are rare and very rare, with a very limited expansion area, are present in the coastal zone.

The coastal ecosystems provide habitats for such critically important species as the sea plant angiosperms, *Posidonia Oceanica* and the sea turtles *Chelonia mydas* and *Caretta caretta*. It has been estimated that the coastal area protected in one manner or another covers approximately 14% of the total.

The *Akamas Peninsula* in the northwest of Paphos is the most significant area of biodiversity in Cyprus. It covers an area of approximately 250 square kilometres, and most of it has remained untouched by development activities, supporting a natural wealth which consists of rich flora and fauna with their habitats, beautiful beaches and landscapes, interesting archaeological sites, historic and cultural elements. A cluster of 7 village communities with a population of about 1,800 people comprise the most important resource in the area but derive no benefit from being part of Akamas. The Akamas beaches, remain among the few that provide mating grounds for sea turtles, the green turtle (*Chelonia mydas*) and the Caretta (*Caretta caretta*), being species threatened by extinction in the Mediterranean. There are also reports of Mediterranean seals (*Monk seals*) in the sea of Akamas.

The only two extensive wetlands, those of the *Akrotiri Lake* (Salt Lake) which includes the Fassouri Marsh (fresh water) (approximately 2,000 hectares) and *Larnaca Lake* ('Alyki') (1,100 hectares) are of great importance for migrating birds, including the flamingos.

National forests are found near the shore along a length of 22 kilometres of the coastal zone (the coast of *Akamas*, *Petra tou Romiou*, between *Cape Zevgari* and *Gata*, near *Akrotiri*, *Pila*, and *Cape Greco*). Maquis forests and/or guarrigue, native species, predominate in non-cultivated regions, poorer and drier low coastal areas, at a length of shore of approximately 72 kilometres.

## **2.2 Coastal Sub-areas and their Characteristics**

A recent study<sup>4</sup> carried out by the Department of Public Works (Coastal Unit) of the Ministry of Communications and Works and other Government Services, in co-operation with a Dutch firm, within the framework of the EU Programme MEDSPA, surveyed the physical characteristics of the whole length of the coastline of Cyprus (under government control). The primary aim of the study was the establishment of criteria and methods both for the protection as well as for the improvement of the beaches of the area under government control.

Within the framework of the study, the coastline was divided into 12 areas with broadly common geomorphologic and hydrodynamic characteristics. The coastal classification has focused mainly on coastal engineering parameters but has also taken into account other criteria including location, shore geology, land use, construction activity, erosion etc. The study has, in

<sup>4</sup> Coastal Protection in Cyprus (1993-96)

addition, prepared General Plans for the protection and improvement of the foreshore in three areas: the Limassol Bay, Larnaca Bay, and the southern shore of Paphos. The General Plans are the first step in the effort to follow European objectives for the protection of the shoreline.

The 12 coastal segments identified by this study include:

<b>Box 2</b>	
Paphos District	<ul style="list-style-type: none"> <li>• Tylliria Area</li> <li>• Kato Pyrgos Bay</li> <li>• Krysochou Bay</li> <li>• Akamas Area</li> <li>• North Paphos Area</li> <li>• South Paphos Area</li> </ul>
Limassol District	<ul style="list-style-type: none"> <li>• Episkopi Bay</li> <li>• Akrotiri Area</li> <li>• Limassol Bay</li> </ul>
Larnaca District	<ul style="list-style-type: none"> <li>• Ziyi-Kiti Area</li> <li>• Larnaca Bay</li> </ul>
Famagusta District	<ul style="list-style-type: none"> <li>• Ayia Napa-Protaras Area</li> </ul>

A general description of the 12 areas, as identified in the above-mentioned study, and the present state of the coastal zones is presented below:

### **1. Tylliria area**

The area of Tylliria is in the northern region of Cyprus. It has a total length of 18 kms. It is bound by the Cape of Pomos on the west and by Petra Tou Limniti on the east, where the island's present division line begins at the western end.

The general characteristic of the shore is the high and rocky slope with steep inclines that cover most of its length, creating small coves. At the base of the slope there are narrow accumulations of pebbles and, more rarely, sand. The shore presents localised erosion problems mostly around the Bay of Kato Pyrgos, while in general the greatest length of shoreline appears to be in balance. Seasonally, on portions of the beach accumulations of dead *Posidonia* leaves can be found. The shore is exposed mostly to waves from the west, although during the winter northeastern waves are quite frequent and large.

Until now, the development of tourism in the area had been limited; however, a recent trend for such development is evident. The number of tourists is increasing, along with the construction of tourist facilities. There are two fishing harbours in the area, one at Pomos and the other at Kato Pyrgos.

### **2. The Kato Pyrgos Bay**

The Kato Pyrgos Bay is at the eastern end of the Tylliria area. It has a length of about 3 kilometres and is bound by two small promontories, each about 100 meters long. The central portion of the bay faces north and consists of a straight shoreline with pebbles and fine gravel, which form successive, mobile, mounds. The bay presents severe erosion along its entire length. The main cause of the erosion is the massive quarrying of shore material for use mainly in the construction industry, which took place over the last 50 years. Even though quarrying from beaches has been prohibited since the 1970's, some instances of illegal quarrying are still noted, especially in the eastern part of the bay. According to testimonies of local people, the shoreline has receded 20 to 30 meters over the last 40 years. Until the erosion appeared, the beach was mostly sandy.

In 1988, a fishing shelter at the western edge of the bay was constructed. In the same year and adjacent to the eastern edge of the shelter, five perpendicular breakwaters in the form of a “T” were constructed, intended to control the erosion in that portion of the shoreline at a distance of approximately 90 meters one from the other. The rate of erosion increased, especially in the portions of the shore between them. As a result of the construction of breakwaters large volumes of seaweed (dead *Posidonia* leaves) are trapped each year inside the fishing shelter and between the breakwaters. Thus, seaweeds were always present in the area, since fields of *Posidonia* cover the seabed.

### **3. Chrysochous Bay**

Chrysochous Bay is located in the northern part of the Paphos District, has a total length of approximately 38 kilometres, and is bound by the Cape of Arnaouti to the west and the Cape of Pomos in the east. Along the length of the bay there are six seaside villages and the town of Chrysochou. The bay faces north. The beach in the central part of the bay is made up mainly of dark-coloured gravel and pebbles, while at the two ends the shoreline is either rocky with high, steep slopes, or covered by a calcareous sandstone plaque with gentle slopes of the land. The only construction along the entire length of the bay consists of the breakwaters at the fishing harbour at Latshi. The portions of the shore adjacent to the refuge (east and west) are the only parts of the bay, which have demonstrated slight morphologic changes. Especially the portion of the shore east of the harbour periodically presents slight erosion. The rest of the bay appears to be in balance.

The 10 kilometres of the western edge of the bay to the Cape of Arnaouti are part of the Akamas Peninsula, where no development is permitted. In the remaining 28 kilometres of the bay, intense housing and tourism development has taken place over the past ten years. Pressure is becoming more intense both by individual landowners and by the local authorities to improve the quality of the beach, increase its capacity and create facilities in order to satisfy increased needs for recreational use.

### **4. The Akamas Peninsula Area**

The Akamas area begins at Cape Arnaouti and reaches Cape Drepano. Its length is 32 kilometres and the area lies exclusively within the Akamas Peninsula.

### **5. North Paphos City Area**

The area of North of Paphos extends over 26 kilometres in length and begins at Cape Drepano to the town of Paphos. The shore consists mainly of rocky hillocks, and in some places there are pebbles and sand. The area lack beaches for use by bathers. The pressure for holiday houses has been intensified in the past ten years due to the area's rural landscape.

### **6. South Paphos City Area**

The area of South of Paphos covers the shore from the town of Paphos in the west to Cape Aspro to the east and has a length of 35 kilometres. The area can be divided into three sub-areas:

(i) The first, begins from the town of Paphos up to the Ezousas River, has a length of approximately 5 kilometres, and is made up mainly of rocky beaches. In some places there are pebbles and sand. As a result of the rapid development of tourism, parallel and perpendicular breakwaters were constructed for the creation of sandy beaches.

(ii) The next 15 kilometres constitute the second sub-area. Here, there are no large development projects, except for the Paphos International Airport. The Ezousa, Diarizos and Xeropotamos rivers created small pebbly and sandy deltas at the shore. The remainder of the shore consists mostly of steep rocky hillocks. Due to the construction of many dams in the area, the enrichment of the shoreline with material has ceased or declined, resulting in erosion of the slopes at the shore.

(iii) For the last 15 kilometres up to Petra Tou Romiou, the shore is made up of steep rocky hillocks, and in some areas there are narrow pebbly beaches. As mentioned above, the main problem in this area is erosion due, mainly, to the lack of material from the rivers, as well as the removal of sand and gravel from the shore. The accumulation of seaweed in certain beaches constitutes the area's second largest problem.

### **7. Episkopi Bay Area**

The area is under the administration of the British Bases.

### **8. Akrotiri Area**

The area is under the administration of the British Bases.

### **9. Limassol Bay Area**

The area covers the shore from Cape Gata to Cape Dolos and has a length of approximately 35 kilometres. Beginning at Cape Gata, the first 9 kilometres are under the administration of the British Bases. The next 20 kilometres from the Limassol Port up to the Moni Power Station contain housing, industrial, and mainly tourist development. The last 7 kilometres are covered mostly by rock where there has been no human intervention.

The coastal zone of Limassol is an area of over-development where all the serious problems noted in the other coastal areas of Cyprus can be observed. The volume of constructions in the inland portion of the coastal zone as well as at the seafront is exceedingly large. The 12 kilometres of shoreline in Limassol contain 50 percent of the coastal construction in all of Cyprus. The construction of the Port is, as expected, a massive intervention in the area's entire morphodynamic system. The area has been constantly eroded, and thus the first perpendicular breakwaters were constructed by private initiatives. Thereafter, due to the increase of tourism, the necessity arose to protect and improve the beaches, resulting in the continued construction of illegal perpendicular breakwaters. In order to solve the problems of erosion and seawater quality that arose, the Cypriot Government, in co-operation with local authorities, adopted a policy for the construction of parallel breakwaters. Today, erosion problems are noted in certain areas, mainly those without parallel breakwaters. Many manmade interventions in the area of Limassol (Port, other works, breakwaters), along with the disposal of waste, have resulted in the alteration of the water quality and pollution risk in certain areas.

### **10. Zygi-Kiti**

The Zygi-Kiti area is located in the southern part of Cyprus, has a total length of 36 kilometres, and is bound by the Cape Dolos to the west and Cape Kiti to the east. The central portion of the shoreline, from Vassilikos to the Cape of Petounta, is relatively straight and faces south. Two bays are formed at the western and eastern edges of the area: the bay which includes 'Governors Beach', 7 kilometres in length, and bound by Cape Dolos and Cape Vassilikos, and the bay of Pervolia, 13 kilometres long, bound by Capes Petounta and Kiti.

The area is generally characterised by a low, loose, shore slope that demonstrates intense erosion over the past 70 years. It has been estimated that the shoreline has receded by approximately 25 meters over the period from 1920 to 1970, i.e. 0.5 meters per year (average), while after 1970 there appears to be a tendency toward a decreasing rate of erosion, to around 0.1 meters per year, a fact which demonstrates that the shore is tending to recover its dynamic balance. The main cause of erosion appears to be the massive quarrying of coastal materials for use in the construction industry. The bay of 'Governors Beach' is an exception to the erosion phenomenon. The cliffs in this area are rocky and very high, almost vertical, and at their base there is a narrow sandy beach. This area is mainly agricultural with the exception of a part of the Bay of Pervolia, the area of Zygi and 'Governors Beach', where there is increased tourism development. The development of tourism and housing along the length of the region's shoreline is foreseen in the near future. Already, the construction of small tourist developments scattered along the shoreline has been noted in the areas of Mazotos and Alaminos, and

pressure from individuals and local authorities to improve the quality of the shore and to restrain erosion has become more intense.

### **11. Larnaca Bay Area**

This area covers the entire Bay of Larnaca and extends for a length of 37 kilometres. The area can be divided into seven sub-areas:

(i) The first, begins at Cape Kiti and ends at the runway of the Larnaca International Airport. Development in this area is found mostly in the inhabited area of the village of Meneou.

(ii) The second sub-area covers Cape McKenzie up to the fishing harbour of Larnaca, where there are many homes and restaurants.

(iii) The third sub-area covers the area from the fishing harbour to the Marina. This area contains a flat sandy beach, which is the most popular tourist beach in Larnaca.

(iv) The fourth lies between the Marina and the new Port of Larnaca. This area has no natural beach and is almost undeveloped due to the above installations.

(v) The fifth area is between the Port of Larnaca and the Cyprus Petroleum Refinery. The area has no natural beach and there is almost no development mainly due to the above constructions/ industries.

(vi) The sixth sub-area begins after the Refinery and extends up to the area's tourist resorts where parallel breakwaters have been constructed. At certain locations there are erosion problems.

(vii) The last sub-area begins after the tourist zone and continues within the boundaries of the Military Bases up to Cape Pyla.

In the Larnaca Bay area, all types of coastal works (vertical and parallel breakwaters, Marina, Port, fishing harbour, etc.) have been constructed. All these constructions affected the area's entire morphodynamic system, and therefore the movement of sediment. In areas where protective coastal works were constructed, improvement and stabilisation of beaches was noted. In other areas where no protective works were undertaken erosion is noted. In Larnaca Bay, particularly in the area of the fishing harbour, there are seaweed closes the entrance.

### **12. Ayia Napa – Protaras Area**

(i) Ayia Napa Area has a length of approximately 7 kilometres. After the 1974 invasion the area developed at an intense rate with both housing and tourism facilities. It is one of the most favoured destinations of both local and foreign vacationers. The beach is mostly light-coloured sand, protected by natural islets and rocks that act as parallel breakwaters. As a result, there is no erosion problem in the area. Also, in the greater Ayia Napa Area, the shoreline is mostly rocky. The only coastal project existing in the area is the small port of Ayios Georgios. Also, to the southwest of Ayia Napa, in the area of Liopetri, there is inflow of seawater onto land, creating a natural harbour for fishing boats (Liopetri River). Mostly during the summer months and with the arrival of foreign visitors in some areas there is lack of space on the beaches.

(ii) The Paralimni-Protaras area lies at the southeastern coast of Cyprus. It covers the area from the cape of Cavo Greco up to the free parts of Famagusta and its total length is approximately 20 kilometres. Generally, the area is characterised by rocky slopes that cover most of the length of the coast, creating pocket beaches. In certain locations, there are sandy beaches, which attract intense tourist activity.

At the mid-point of this area is Protaras beach ('Fig Tree Bay') that is considered the best and most popular beach in Cyprus and is a continuation of the 'golden sands' of Famagusta.

Following the 1974 invasion, the area has undergone intense tourist development and is flooded every year by thousands of local and foreign tourists. The tourist industry is the largest source of income, and for this reason efforts are being continually made to expand and improve it. Pressure for tourism development has created conflicts with agricultural and the protection of the natural coastal environment.

**Table 15 - Population and No of tourist beds in coastal areas by District, 2001**

<b>District</b>	<b>Population</b>	<b>Beds</b>	<b>Ratio of population to beds</b>
Limassol	197,300	15,499	12.7:1
Larnaca	115,266	8,222	14.0:1
Paphos	66,038	23,768	2.7:1
Famagusta	37,738	36,455	1.03:1
Total	416,342	83,944	4.95:1

### 3.0 THE POLICY FRAMEWORK

#### 3.1 The Land Use Planning System

Land use planning policy in Cyprus is carried out under the 1972 Town and Country Planning Law (TCPL), which came into force on the 1<sup>st</sup> of December 1990. The coordination of land use planning policy is the responsibility of the Department of Town Planning and Housing. Prior to 1990 land use control was exercised under the old Street and Buildings Regulation law of 1946. The TCPL provides for the preparation and enforcement of a hierarchy of Development Plans, the operation of a network of Planning Authorities with responsibilities for the exercise of Development Control through powers for issuing Planning Permissions relating to the provisions of the Development Plans.

The Development Plans comprise a three-tier hierarchy, namely the Island Plan, the Local Plans and the Area Schemes:

**(a) The Island Plan**, at the top of the hierarchy, covers, as the name implies, the whole territory of the island. Its preparation is the responsibility of the Minister of Finance and its scope is to determine the long-term strategy for the distribution of population, employment and the location of the infrastructure of national importance, the utilisation of resources and the identification of future development opportunities. It is intended to function as a comprehensive strategic plan containing proposals for the overall direction of physical development, harmonised with the objectives set out by the national economic development strategy, providing the strategic context for the preparation of the Local Plans. The Island Plan presents the Government's intentions for the use and protection of land through policies including:

- The regional distribution of population;
- Regional level locational policies for major land uses and major infrastructure relating to economic and social policy (ports, airports, hospitals, etc.)
- The designation of areas of special historical, social, architectural, cultural and environmental value.
- The national and regional transportation network.

The Island Plan has remained inactive as a strategic planning instrument for the whole island since 1974 due to the division of Cyprus. In view of that, under the TCPL a "replacement" Development Plan was introduced, the **Statement of Policy for the Countryside**, which covers all the (mostly rural) areas outside the boundaries of Local Plans or Area Schemes.

**(b) The Local Plans**, the middle tier of Development Plans, cover the main urban areas together with their urbanised fringes subject to pressures for expansion and population growth. Local Plans are under periodic review, legally required at least every five years. They are prepared by the Department of Town Planning and Housing as adviser to the Minister but may also be prepared by the Municipalities (Local Authorities) for the area under their respective jurisdiction. The purpose of Local Plans is to guide, control and organise the pattern of urban development within the defined urban development areas, to indicate the general principles on which urban development will be promoted and controlled, to protect buildings and areas of historical and cultural interest, safeguard land for future major roads and other infrastructure and indicate phases of development. Local Plans comprise a Written Statement and a series of Maps showing:

- The allocation of land for the main land uses (agriculture, housing, commerce, industry, public open space, education, health centres, public buildings, etc.)

- The designation of site-specific land use zones and the applicable building coefficients (plot ratio), height limitations and site coverage;

Five such Local Plans are currently in force for the main urban areas of Nicosia, Limassol, Larnaca, Paphos, Polis, while four additional Local Plans are in the process of approval by the Minister for smaller expanding rural towns (Lefkara, Derynia, Athienou and Palekhor).

**(c) The Area Schemes**, at the lower end of the hierarchy, cover specific smaller areas of particular interest, either within or outside the framework of a Local Plan, and detail site-specific development proposals on the basis of the strategic guidelines and policies of the Local Plans or the Policy for the Countryside. They are prepared by the Department of Town Planning and Housing as adviser to the Minister but may also be prepared by the Municipalities (Local Authorities) for the area under their respective jurisdiction.

Despite the needs for preparation and implementation of Area Schemes in many parts of Cyprus, particularly in the coastal areas, no such Plans have actually been published and legally in force until now. However, two such Area Schemes have been prepared and approved (Central Area of Nicosia and Central Area of Limassol) while another four are under preparation (Central Area of Larnaca, the Area of the Old Village Core of the Nicosia suburb of Strovolos, the Area of Aglanjia around the University of Cyprus and the Area of the Paphos Seafront). The Nicosia Area Scheme is already being implemented piecemeal by the Nicosia Municipality, through specific interventions. The Nicosia Area Scheme has been prepared jointly by the Municipality of Nicosia and the Department of Town Planning and Housing under the UNDP bi-communal Nicosia Master Plan Project, the Limassol and the Cyprus University Area Scheme by the Department of Town Planning and Housing, while the other three are being prepared by commissioned planning consultants.

**Planning Authority.** The TCPL defines two planning authorities: the Minister of Finance as planning authority for the Island Plan and the Minister of Interior as planning authority for preparing, approving, publishing and amending the Local Plans, Area Schemes and the Statement of Policy for the Countryside, also exercising and enforcing Planning Control and issuing general Development Orders and Directives. Under the Law, the Council of Ministers has established the Planning Board to which the Minister of Interior, as Planning Authority, has delegated his power for preparing, approving and updating all levels of Development Plans except the Island Plan. The Board is composed of 10 members, 4 professionals from the private sector, 5 Director-Generals of relevant Ministries and the Director of the Department of Town Planning and Housing acting as the Board's technical adviser.

### **3.2 Land Use Planning in Coastal Areas**

The coastal zone is not a unified planning area, there is no separate institutional or land use planning framework specifically pertaining to the coastal areas. Coastal zone planning is part of the rest of the national and local land use planning system under which each section of the coastal zone is part of the wider inland planning area covered either by an urban area Local Plan (such as Limassol, Larnaca and Paphos) or by the out-of-urban-areas Statement of Policy for the Countryside. In other words, related but separate plans exist for each section of the coastal zone demarcated along the urban/rural rather than the coastal/hinterland dimension. Only a relatively small section of the coastal area development is still controlled under the provisions of the old Streets and Buildings Regulation Law:

- (a) the area of *Paralimni* Municipality, including the *Protaras* tourism area, and
- (b) the parts of the coastal zone that fall within the British military bases of *Akrotiri*, *Episkopi* and *Dekelia* of approximately 72 kilometres.

The delay in implementing land use planning legislation (the TCPL was voted in 1972 but only put into full effect in 1990) allowed many areas of the coastal zone which were under pressure for economic development to develop in a non-rational manner and their environment to be severely affected. Multi-story buildings were constructed along the length of and very close to the shore, resulting in the alteration of the area's natural characteristics, limiting and/or impeding the public's access to the shore, contributing to the risks of pollution of sea water and the alteration of traditional uses of the land, and in general affecting the development of certain areas without consideration being given to landscape and nature protection.

The TCPL has created the basis for a more rational use of the environment in general, and, therefore, also of the coastal zone. Nevertheless, the rapid pace of construction and development over the last two decades, with emphasis on tourism projects along the coast, has created irreversible damage to the environment in certain areas.

Now, designated land use planning zones are in place along almost the entire length of the shoreline as follow:

- The tourist zones cover approximately 103 kilometres of shoreline
- the open areas/protected archaeological zones approximately 125 kilometres
- agricultural zones 36 kilometres
- residential zones approximately 17 kilometres, and
- industrial approximately 9 kilometres.

The greatest extent of coast under some form of protection is found at Paphos (62% of the its coast) and more particularly in the area of Akamas. However, pressure for the establishment of new tourist zones is mounting.

### **3.3 Coastal Protected Areas**

A hierarchy of Protected Areas, designated under the provisions of the Policy Statement for the Countryside, is in place in the coastal zone including the following categories and areas:

<b>Box 3</b>	
i) " <u>Nature Protection Shores and Areas</u> "	<ul style="list-style-type: none"> <li>• Cape Cavo Greco,</li> <li>• Makronissos,</li> <li>• Dasos Ranti and</li> <li>• Akamas Peninsula</li> </ul>
(ii) " <u>Protected Sites</u> "	<ul style="list-style-type: none"> <li>• Pomos Cliff</li> <li>• Liopetri River Estuary</li> <li>• Cavo Greco Cliffs</li> <li>• Pissouri Cliffs</li> </ul>
(iii) " <u>Areas of Outstanding Natural Beauty</u> "	<ul style="list-style-type: none"> <li>• Pegia</li> <li>• Kouklia</li> <li>• Pissouri</li> <li>• Maroni</li> </ul>
(iv) " <u>Archaeological Sites</u> "	<ul style="list-style-type: none"> <li>• Nea Dimmata</li> <li>• Aghios Georgios Pegias</li> <li>• Kiti</li> <li>• Tombs of Kings, Kato Paphos</li> <li>• Castle of Kato Paphos - Antiquities of Kato Paphos</li> <li>• Area of Maa - Paleokastro</li> <li>• Ancient Amathous</li> <li>• Kourio</li> </ul>

### **3.4 NATURA 2000 Network** (Areas identified as “Special Protection Areas” for inclusion in the network of European Protection Areas according to Commission Decision No 27/266).

The Study funded by LIFE-Third Countries Programme, has been completed and a large volume of data have been collected and evaluated by an inter-departments committee of experts (Environment Service and the Departments of Forestry, Fisheries and Marine Research, Geological Survey, Game Fund and Town Planning) in the context of the EU prescribed Standard Data Form. The research has included all habitat areas and species which will be proposed for inclusion in Annex I and II of the Directive 92/43 (Habitats) and Annex I, II, and III of Directive 79/409 (Wild Birds).

The proposed list of Natura 2000 comprises the following 38 sites:

#### **Box 4**

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| 1. Ayia Erini – Kormakitis            | 19. Dhiarizos valley                  |
| 2. Pendaraktylos Mountain range       | 20. Vouni Panayia Area                |
| 3. Alakati                            | 21. Episkopi Morou Waters             |
| 4. Mammari-Dhenia Area                | 22. Moulia Area                       |
| 5. Alkos river – Ayios Sozomenos      | 23. Xeros River                       |
| 6. Mitsero Area                       | 24. Mavrokolymbos                     |
| 7. Makheras State Forest              | 25. Skoulli Area                      |
| 8. Madari-Papoutsia Area              | 26. Akamas Peninsula                  |
| 9. Paphos State Forest                | 27. Limassol Forest – Kyparissia Area |
| 10. Yiouti – Paheamos Area            | 28. Akrotiri Lake – Fassouri Wetland  |
| 11. Cape At. Andreas – Klides islands | 29. Episkopi Area (Limassol)          |
| 12. Cape Akrotiri Elias – Limnoudi    | 30. Troodos State Forest Park         |
| 13. Salamina – Famagusta Lakes        | 31. Cape Aspro                        |
| 14. Cape Greco                        | 32. Limnitis Valley                   |
| 15. Nissia Marine Area                | 33. Azgata Area                       |
| 16. Ahna Dam                          | 34. Cape Pyla                         |
| 17. Polis - Yialia Area               | 35. Larnaca Salt Lakes                |
| 18. Ha Potami Area                    | 36. Limbia-Ayia Anna Area             |
|                                       | 37. Stavrovouni                       |
|                                       | 38. Lefkara Area                      |

### **3.5 Tourism Development Policy**

Tourism policy is formulated, promoted and coordinated by the Cyprus Tourism Organisation (CTO), a semi-government Organisation under the Ministry of Commerce Industry and Tourism. CTO has no spatial plan preparation and implementation powers but, through its participation in the Planning Board, tourism policies are incorporated in the Local Plans and the Policy for the Countryside under the TCPL.

In 2000 a *Strategy for Tourism* was prepared by the CTO containing the main strategic goals for Cyprus tourism up to the year 2010. However, on the basis of CTO legislation, several policies and measures are in force for the regulation of tourism development and the operation of tourism establishments. In 1987, with the aim of limiting tourist development and protecting the environment, a special provision was incorporated in the Hotels and Tourist Accommodations legislation, by means of which power was vested to the Council of Ministers to establish areas in which the type, class and degree of allowable tourist development would be regulated.

In June 1989, the Government adopted a moratorium on tourist development in the coastal areas. This decision was considered necessary in order to provide opportunity for the re-

evaluation of problems and the preparation of a new, integrated, policy on tourism and the adoption of a holistic urban planning policy.

The moratorium had a duration of 18 months. In December 1990, the Government proceeded to the adoption of a new policy, by which the construction of new tourist accommodation in the coastal zone and at a distance of 3 kilometres from the shore, came under control. At the same time, all provisions of the Town and Country Planning Law of 1972 were put into effect.

During the preparation of this new policy regarding tourism, the following parameters were taken into consideration:

- The need for the maintenance and protection of the natural environment.
- The capacity of the coast.
- The need to ensure a more balanced tourist development in all areas of Cyprus.
- The improvement, upgrading, and enrichment of the tourist product, the improvement of infrastructure, the launching of new forms of tourism and the adequate protection of archaeological sites.

Within this 3-kilometer wide coastal zone, designated by this new policy, the policy measures included:

- No new hotel development would be permitted outside designated tourist zones.
- The “freezing” of hotel development in the areas of the Municipalities of Paralimni and Chrysochou, until Local Plans were prepared and approved.
- Tourist development is permitted only for special categories of accommodation establishments and under special provisions of approved Development Plans (Local Plans and the Policy Statement for the Countryside) under the TCPL.
- In the inland region, agro-tourism is encouraged by the conversion of existing traditional buildings into tourist accommodation.

In June 1995, at the suggestion of the Cyprus Tourist Organization, the Council of Ministers approved a new policy for the regulation of the establishment of new hotel beds. The new policy continued the controls and restrictions on hotel development due to the large supply of beds already existing in relation to the island’s limited natural and other resources, as well as the pressures on the natural environment. In addition, with the new regulation an attempt was made to minimize the differences and discrepancies between the provisions of the TCPL, the tourism policy and the legislation concerning Hotels and Tourist Accommodations.

Tourist development is at a stage where environmental quality and its enrichment by means of diverse forms of tourism activities are given high priority. The importance of sustainable development has already been established. In parallel, various forms of tourism are being encouraged in order to enrich Cyprus’ market position as a tourist destination, such as cultural tourism, agro-tourism, mild forms of tourism, athletic tourism, and convention tourism. The encouragement of specialised forms of tourism aims at lessening pressures on the coast as well as at making use of other activities or special features of the inland region.

In this context, the Cyprus Tourism Organisation has commissioned international consultants to prepare a Strategic Study for Tourism for the period 2000-2010. The Strategy was approved by the Council of Ministers in 2001 which focuses on the strategic vision of turning Cyprus into a quality tourism destination to satisfy the needs of the visitors with diverse interests and concerns and secure improvement in the quality of life of the population. This vision will be achieved by a sustainable development strategy capable of combining the protection of the natural environment with the quality of tourism development. The main goals of the Strategy include the maximisation of the socio-economic benefits from tourism through:

- Increase in tourist expenditure
- Improvement of the problem of seasonality
- Increase in arrivals
- Increase in the length of stay
- Increase in the repeat arrivals

### **3.6 Environmental Policy**

The overall responsibility for environmental policy, excluding land use planning, rests with the Minister of Agriculture, Natural Resources and Environment (MANRE), assisted by an inter-ministerial Environment Committee and a Consultative Environment Council, which includes private sector stakeholders (the business community, NGOs, etc.). The Environment Service of the Ministry co-ordinates programmes for the protection of the environment, advises on environmental policy formulation and its implementation, and is in charge of the environmental impact assessment process.

The environmental management framework is interlinked and co-ordinated both with the physical as well as with the tourism planning frameworks. Implementation and enforcement of sectoral aspects of the environment are carried out in accordance with specific laws and regulations by a number of line Ministries, Departments and Services corresponding to the subject-matter areas of their respective responsibility. All line Ministries with executive responsibilities on environmental issues participate in the Environment Committee and the Environment Council.

Protection of the Sea and Coastal Ecosystems. The Foreshore Protection Law covers the foreshore (all lands within 100 yards of the high water mark), controlling activities, public access and the use of the foreshore for the provision of services and facilities to bathers. Under the Game and Wild Birds Law permanent and temporary game reserves have been established, such as around the two large Salt Lakes (Akrotiri and Larnaca).

The State Forests are very well protected and managed under the Forests Law, whereas successful reforestation efforts are being undertaken. Coastal National Forest Parks have been designated at the Liopetri River (89 ha) and Cape Greco (325 ha) whereas the Akamas State Forest (7,140 ha.) is being managed as a National Forest Park, although not declared as such. The Compulsory Acquisition Law allows for the acquisition of land, with fair compensation, for public benefit purposes and it has been used to acquire land on the periphery of forests or enclaves within them either which are ecologically sensitive or indispensable for sustainable forest management.

The *Akamas Peninsula* has been accorded high priority for purposes of protection and conservation management. The most sensitive part in the south of the Peninsula remains designated as a "White Zone", where development is prohibited pending the implementation of the Akamas Conservation Management Plan, prepared in 1995 under METAP, aiming at the conservation and management of significant ecosystems, sites of cultural and landscape value and creation of a sustainable future for the area's village population.

Successful measures were taken since 1981 to control operations of commercial fishing. Seagrass beds are protected from trawling operations under the Fisheries Law, which prohibits trawling at less than 30 fathoms. The same law also protects a number of marine and riverine species and provides for the designation of marine and coastal protected areas. Management Plans as well as a monitoring system have been prepared for the two Salt Lakes (Larnaca and Akrotiri). The *Lara Beach* turtle protection and management area includes the nesting beach and a hatchery. Access is controlled in the summer and at night, at nesting, incubation and hatching. Fishing, sailing and driving on the foreshore are also controlled. The programme is

run by the Fisheries Department and is partly financed by the EU's MEDSPA. The hatchery releases between 6,000-7,000 hatchlings a year, adult females being tagged and recorded. The protected area where regulations apply extends along 9km. of the coast 20 m. into the sea and 90 m. inland.

Water Resources. A number of major water development projects have been implemented by the Water Development Department, in order to increase the availability of water. Particular emphasis has been given to the construction of dams, mostly in the mountainous area in the south and west of the island, and the conveyance of water to other parts of the island. *The Southern Conveyor Project* is a major trans-basin diversion that provides the facilities to balance water supply and demand throughout the southern coastal part of Cyprus and optimise the conjunctive use of surface and groundwater throughout the region. Two desalination plants are in operation, (Dhekelia in 1997 and Meneou in 2001, both in Larnaca) producing a total of 91,000 m<sup>3</sup>/day. A third is being planned for the production of an additional amount of 20,000 m<sup>3</sup>/day.

Wastewater management. The size of the urban population served by central sewerage systems is 17%; within the next 5 years it will increase to 31%. Rural population served by a sewerage system is only 2% and is expected to increase to 15% within the next 5 years. Limassol (the largest coastal town) and Larnaca are served by central sewerage systems and tertiary level treatment plants. Similar systems will soon operate to serve three important tourist centres of Paphos, Paralimni and Agia Napa. Practically all hotels, especially the new ones, in the coastal area have their own biological sewage treatment plant, until the operation of the central sewerage systems to which they will connect. Hotels use the safely treated effluent from their plants for watering lawns, trees and shrubs and other hotel amenity areas.

Almost all rural areas are served by traditional septic tanks/absorption pits. In a number of villages, central sewerage systems have been constructed. A comprehensive Rural Sanitation Study has recently been completed to provide comprehensive service coverage to all countryside areas according to collection and disposal methods appropriate for each area. At full implementation, the programme for centralised sewerage schemes and sewage treatment plants will produce treated effluent of high quality and the Government's policy is to use such effluent to irrigate agricultural crops, green spaces and sports grounds. Standards for treated domestic sewage effluent for use in irrigation, accompanied by a relevant code of conduct, are now in place.

Municipal solid wastes are managed by the various municipalities, which are responsible for the collection, transport and disposal of waste in sanitary landfills. A study to address the domestic solid waste problem, with a view to volume reduction and recycling has been commissioned and is now in its final stage.

Sea pollution. Under the Fisheries Regulations, standards have been adopted for effluent substances and the environmental quality of recipient seawaters. There are also prohibitions on the disposal of lubricating and other oils and on the use of organotin-based anti-fouling paints in the marine environment. In order to minimise local effects, aquaculture is now carried out "off-shore".

Under the *Law for Water Pollution Control*, industrial effluent standards are set, thus directly encouraging the minimisation of the generation of waste, waste reuse, recycling and treatment. The final drafts were prepared for water quality standards and an Order for the protection of the underground water resources from pollution was recently issued.

Pesticides are being registered according to the provisions of a comprehensive *Pesticides Law* and relevant regulations, which provide for the control of the import, manufacture, marketing, quality, labelling, toxicity classification, use and storage of pesticides. The *Dangerous Substances Law* imposes requirements on the import, manufacturing, classification, labelling/

packaging, use, storage, transport and supply of dangerous substances and the furnishing of required information.

To address problems of sea and beach pollution, Cyprus has introduced measures in compliance with MARPOL. An anti-pollution unit is in place, a national oil spill Contingency Plan has been implemented and regional oil combating arrangements has been established with Egypt and Israel.

Monitoring of pollution of the marine environment started in 1976, within the framework of the Mediterranean Action Plan (MAP), and by 1984 it evolved into a full-scale national pollution-monitoring programme. It involves the monitoring of land-based sources, of the concentrations of dissolved and dispersed petroleum hydrocarbons as well as of DDT, PCB's and other polychlorinated hydrocarbons in seawaters, of heavy metals in marine organisms, of pesticides in sediments and of macrobiotic parameters, i.e. faecal coliforms.

Groundwater is also monitored and a programme for the preparation of hydrochemical charts has been initiated.

Shoreline protection. There is currently a moratorium on breakwater construction while a study financed under MEDSPA has recently been completed in order to address coastal erosion problems. The study has made an assessment of current coastal problems and coastal dynamics and has built a body of knowledge for the design of effective and environmentally sustainable coastal protection and improvement measures, and proposed methods to protect the coastline and improve the quality of the beach where necessary. A follow-up Study is now underway, jointly undertaken by the Coastal Unit of the Ministry of Communications and Works and the University of Athens, covering three specific coastal strips: The Tylliria Area, the Chrysochou Bay Area and the Zygi-Kiti Area.

Cultural preservation. The protection of archaeological sites, under the responsibility of the Department of Antiquities, has long been recognised a priority and the Antiquities Act which protects the architectural heritage and historic monuments has been in place since the 1960s. The Department is under-funded and protection is often partial. A significant proportion of sites in the coastal area are identified as Ancient Monuments and they include a large number of valuable sites that are privately owned. Preservation Orders under the TCPL are also used to protect buildings or areas of architectural, social or historical interest, and transferable development rights and fiscal incentives are being used to preserve listed buildings. Budget allocations are not sufficient though to protect village heritage on a significant scale.

International Conventions. Cyprus has ratified all major environmental conventions with direct or indirect relevance to coastal areas such as the Barcelona Convention and its Protocols, the Convention on the Conservation of the European Wildlife and Natural Habitats and the Global Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal. A ratification law for the Biological Diversity Convention was recently approved by Parliament.

Environmental Impact Assessment. An Integrated System for Environmental Impact Assessment was approved by the Council of Ministers in 1991, based on the relevant European Union Directive and UNEP's methodology. In 2001 a new Law for EIA came into effect making EIA bounding on the Planning Authority for purposes of Planning Permission. Projects for which the procedure is applicable include tourist installations, aquaculture projects, ports, marinas, fishing shelters and breakwaters, wastewater treatment plants, solid and liquid disposal areas, dams, major roads, quarries, industrial areas, airports, etc.

Alignment with the EU Acquis. Environmental policy in Cyprus is focused on the effort towards alignment with the EU Acquis. Current priorities and work progress are geared to the legal transposition of EU Directives into Cypriot legislation. Cyprus has accepted the environmental

Acquis and declared to apply it by 1.1.2003 or at later dates in certain areas in which transitional periods were requested or for which the dates provided in the Acquis allow for later dates for implementation. Special arrangements have been requested in the following cases:

**Reduction of sulphur content of fuels** (a one-year transitional period).

**Habitats and Wild Birds** (technical adjustments to the lists of habitats and species).

**Packaging and packaging waste** (transitional period until end of 2005).

**Urban wastewater** (transitional period for full implementation until end of 2012).

A concrete programme for transposing Community environmental legislation is in place within the timeframe given to the Commission. The directives on Free Access to Environmental Information, Water Quality Intended for Human Consumption and on EIA were fully transposed. Full transposition of the environmental Acquis will be effected through revisions to existing laws, the new law on waste, the new law for the environment, and the drafting of a number of other new laws.

The draft comprehensive Bill for the Environment, prepared in 1997, has been subsequently decided to be split into a number of new bills, such as:

- Environmental management framework, Fiscal Instruments, General Obligations, International Issues (new Framework Bill on the Environment)
- Protection of Species and Habitats, Trade in Species
- Solid and Hazardous Waste Management
- Packaging and Packaging Waste Management
- Environmental Impact Assessment
- Free Access to Information
- Genetically Modified Organisms,
- Noise, etc.

The required amendments to the Water Pollution Control Law, the Atmospheric Pollution Control Law, the Waste Management Law and the ICPP Law are at an advance stage. By the end of 2002, the legislative framework will be in full compliance with the EU requirements.

### **3.7 The Administrative Framework of Environmental Policy**

At the national level, the **Council of Ministers** has the overall responsibility for the formulation of environmental policy. Environmental policy is co-ordinated through the **MANRE**, with the exception of land use planning, for which responsibility rests with the Minister of Interior.

An important component in the environmental management mechanism is the **Council for the Environment**, with a wide representation, which advises the Minister and through him, the Council of Ministers, on environment and sustainable development issues.

To assist in the co-ordination and implementation of environmental policy, the government established an additional instrument. This is the **Environment Committee**, made up of representatives of all agencies involved in environmental issues.

**Competencies are divided among several institutions, the competent authorities being primarily public bodies, Ministries, or Departments.**

The **Environment Service** of the MANRE is mandated to advise on environmental policy, ensure implementation and co-ordinate (in close co-operation with the Planning Bureau) the process for the adoption of the EU environmental policy and legislation. It also heads the Technical Committee on environmental impact assessment, oversees the enforcement of the larger part of the Law on the Control of Water Pollution, promotes environmental awareness and training, and disseminates information on the environment. The Environment Service is also the administrative arm of the Environment Committee and the Council for the Environment. In addition, it is the National Focal Point for the CSD, MCSD, SMAP, INFOTERRA, UNEP, MAP and the Conventions of CITES, Bern, Basel, Vienna, Biological Diversity, Desertification, Climate Change, Ramsar and Environmental Impact Assessment in a Transboundary Context.

Through its various Departments (mainly Agriculture, Forestry, Fisheries and Marine Research, Water Development and Geological Survey), the **MANRE** has a wide range of executive functions on environmental issues. They concern the protection of the quality of surface and ground waters and the sea, management of water resources, aquaculture, meteorology, protected areas, soil conservation, fertilisers and pesticides, reuse of treated effluent, hazardous waste management, mines and quarries, control/monitoring and combating marine pollution, marine ecology, management of forests and public parks, herbaria and gene banks, organic farming, protection of flora and fauna, agricultural and animal husbandry waste, industrial waste treatment, rehabilitation of sites, health and welfare of animals, etc.

Agencies and other Ministries also have a wide range of executive responsibilities over various environmental issues, as follows:

- the **Planning Bureau**, is in charge of the preparation of five-year Strategic Development Plans for the national, regional and balanced development of the island's economy and has responsibility for the broader co-ordination of the accession process,
- the **Department of Town Planning and Housing** is responsible for the implementation of the Town and Country Planning Law, and
- the **Ministry of Labour and Social Insurance**, is the competent authority for the administration and enforcement of the Atmospheric Pollution Control Law, the Safety and Health at Work Law, the Dangerous Substances Law, and the Asbestos (Safety and Health of Persons at Work) Law. It also administers part of the Water Pollution Control Law and has been assigned responsibility for the broader framework for radiation protection,
- the **Ministry of Commerce, Industry and Tourism**, deals with industrial estates, energy conservation, exploitation of new and renewable sources of energy, industrial pollution prevention

techniques and the management of a grants scheme which assists manufacturing industries in installing waste treatment systems,

- the **Cyprus Tourism Organisation** promotes agrotourism and is the co-ordinator of the BLUE FLAGS scheme in Cyprus,
- the **Ministry of Communications and Works**, is responsible for shoreline defence, the implementation of International Civil Aviation standards on noise from aircraft, the regulations and international conventions on Merchant Shipping, motor vehicles inspection and Type Approval for vehicles,
- the **Cyprus Ports Authority** handles oily waters and refuse from ships in port areas,
- the **Ministry of Health** inspects landfills and drainage systems, is responsible for the control of drinking water and the microbiological monitoring of recreational waters and carries out research and analytical work on various aspects of pollution with its specialised laboratories in environmental chemistry, microbiology and virology, ecotoxicology and risk assessment, and
- the **Game Fund** is in charge of the enforcement of the Game and Wild Birds Law, which regulates hunting and game improvement.

**3.8 Summary of the Legal Framework concerning the Coastal Zone**

<b>Box 5</b>	
<b>A. MARINE ENVIRONMENT</b>	
<b>Laws &amp; Regulations</b>	<b>Basic Provisions</b>
Law Concerning the Control of Water Pollution (No. 69/91).  Responsible authority MANRE	- establishes quality targets for waters, including coastal waters - appoints pollution inspectors for checking permits - prepares and publishes general terms and conditions of discharge permits.
Consolidated Amending Regulations of 1990 (No. 273/90) adopted on the basis of Article 6 of the Fisheries Law. Responsible authority DFMR-MANRE	-Prohibition of the disposal of litter in the marine environment. - Maximum limits permitted for the disposal of a series of substances or compounds into the sea.
Amendment (No. 170 of 1990) of the Fisheries Law. DFMR-MANRE	- Increased the fine for polluting the sea from £3.000 to £30.000. The Fisheries Department may impose an extra judicial fine of up to £5.000.
Ratification Law (No. 51 of 1979) of the Barcelona Convention regarding protection of the Mediterranean from pollution as well as its two Protocols:  (a) Protocol for the protection against pollution of the Mediterranean by waste from ships or aircraft (Dumping Protocol),	-General obligations of the signatory parties for the avoidance, reduction and combating of pollution in the Mediterranean. - Operational arrangements and mechanisms. - Systems of pollution monitoring.  - Permit requirements for the dumping of litter or other materials. - Establishment of competent authority for issuing permits and confidential file. -Record of substances whose disposal is prohibited

<p>(b) Protocol for cooperation in the combating of pollution in the Mediterranean by petroleum products and other toxic substances (Emergency Protocol)</p> <p>Responsible authority DFMR-MANRE</p>	<p>The Parties should maintain Emergency Plans and methods for combating pollution of the sea by petroleum products or other harmful substances either individually or through bilateral or multilateral cooperation</p>
<p>Ratification Law (No. 266 of 1987). It ratifies another two Protocols of the Barcelona Convention:</p> <p>(a) Protocol for the protection of the Mediterranean from land-based sources</p> <p>(b) Protocol concerning protected areas of the Mediterranean</p> <p>Responsible authority MANRE</p>	<ul style="list-style-type: none"> <li>- Establishment of the various types of waste covered by the Protocol.</li> <li>-Establishment of supplementary substances whose disposal must be discontinued and the limits and conditions governing those whose disposal is permitted.</li> <li>-Criteria for the establishment of protected areas.</li> </ul>
<p>Consolidated Amending Regulations (No. 273/90) enacted under the Fisheries Law (CHAPTER 135).</p> <p>Responsible authority DFMR-MANRE</p>	<p>They provide for the protection of turtles, seals, dolphins, as well as of the habitats of sea turtles during their breeding period (1/6 - 30/9 yearly).</p>
<p>Ratification Law (No. 57 of 1989). It ratified the International Convention regarding prevention of pollution of the sea by ships of 1973 and the relevant Protocol of 1978 and the Amendments of 1984.</p> <p>Responsible authority DFMR-MANRE, DMS-MCW</p>	<ul style="list-style-type: none"> <li>- Prohibition of the disposal of polluting substances from ships (wastes, sewage, litter).</li> <li>- Prohibition of the use of dispersants or other chemical detergents without a permit from the Fisheries Department.</li> <li>- Establishes the obligations of ships and tankers entering the Republic's ports.</li> <li>- Establishes the obligation, in the event of pollution, to report to the competent authority and the Fisheries Department.</li> <li>- Establishes the penalties in case of pollution.</li> </ul>
<p>Regulations concerning undersea pipelines for carrying oil and other products (No. 151/1995).</p> <p>Responsible authority MCW</p>	<p>Establishment of specifications, maintenance, and operational conditions for undersea pipelines.</p>
<p>Ratification Law (No. 63 of 1989), ratifying the International Convention concerning civil liability for damage from oil pollution of 1969, and its protocol of 1976 and provisions regarding related matters.</p> <p>Responsible authority DMS-MCW</p>	<ul style="list-style-type: none"> <li>- Establishment of the areas of application, i.e. Cypriot ships wherever they may be, and foreign ships sailing in Cypriot ports or territorial waters.</li> <li>- Establishes penalties for breaking the law.</li> <li>- Adoption of judicial measures to collect penalties.</li> </ul>
<p>Ratification Law (No. 14 (III) of 1997). Law Regarding the Ratification of the</p>	<p>Ratifies the amendments in the Protocol of 1992.</p>

Protocol of 1992 which amends the international Convention regarding civil liability for damages from pollution.  Responsible authority MCW	
Ratification Law (No. 109 of 1989). Ratifies the International Convention concerning the establishment of an international fund for compensation for oil pollution of 1971 and its protocol of 1976 and provisions regarding related matters. Responsible authority MCW	Establishes conditions for the creation of the Fund and the mechanisms for putting it into effect.
Ratification Law (No. 9 (III) of 1995). Ratifies the Agreement related to the application of the part of the XI Convention for maritime justice of December 10, 1982.  Responsible authority MFA and MANRE	The Agreement covers matters of protection and care of the marine environment.
<b>B. LAND USE – SPATIAL PLANNING</b>	
The Town and Country Planning Law (No. 90/72, Amending Laws 56/82, 7/90, 28/91, 91(I)92, 55(I)93).  Responsible authority MoI (except for the portion of the law related to the Island Plan) MI has transferred his responsibilities to the Director of DTPH, the Local Councils in the large Municipalities and the Town Planning Board.  The Foreshore Protection Law (No. 22/61, and Amending Laws 17 of 1964, 8 of 1972, 52 of 1975, 21 of 1987, 126 of 1989, 11 of 1990, 251 of 1990, 40 of 1991, 87 of 1991, 234 of 1991, 15(I) of 1992, 41(I) of 1992, 61(I) of 1992, 103(I) of 1992, 7(I) of 1993, 19(I) of 1993, 27(I) of 1993, 37(I) of 1993, 4(I) of 1994, 34(I) of 1994, 51(I) of 1994, 75(I) of 1994  Responsible authority DO, CCB, LA	Preparation of Development Plans for regulation, control and promotion of physical development through planning policy instruments including the issue of Planning Permission.  Based on the provisions of this law, a foreshore protection zone has been established in which it is prohibited to perform certain works, build or construct various structures and buildings, dispose waste, park vehicles or place articles on the beach. It also regulates the provision of services on the beach.
The Piers Law (No. 39/73, 36(I)94).  Responsible authority MI	Regulates the erection, extension, and use of existing and new piers.
<b>C. TOURISM DEVELOPMENT (Competent authority: Cyprus Tourism Organization)</b>	
Laws of Hotels and Tourist Accommodations of 1969 to 1995 (No. 40/69, 52/70, 17/73, 28/85, 42(I)93, 80(I)95).	- Regulation of the establishment and operation of hotels and other tourist accommodation. - Power given to the Council of Ministers

	<p>to establish areas of hotel development.</p> <ul style="list-style-type: none"> <li>- The Council of Ministers issues regulations for the application of the Law.</li> <li>- Issuing of a Certificate of Suitability.</li> <li>- Review of studies and plans based on provisions of the Regulations.</li> <li>- The competent Ministry (Ministry of Commerce, Industry and Tourism) establishes a committee to review studies.</li> </ul>
The (General) Regulations concerning Hotels and Tourist Accommodations (No. 192/85, 205/93).	Regulations issued for the application of the Law.
Regulations for Hotels and Tourist Accommodations (Organized apartments and tourist villages) (No. 206/93).	Provide for the establishment, classification, issuing of operating license and approval of prices of hotels and tourist accommodations.
Regulations concerning Hotels and Tourist Accommodations (Groups of tourist villas regulations of 1993) (No. 207/93).	Regulate relations with customers.
Regulations concerning Hotels and Tourist Accommodations (Traditional buildings) (No. 208/93).	Establish the sizes, approved uses, and functions of the buildings and facilities of hotels and tourist accommodations.
Regulations concerning Hotels and Tourist Accommodations (Camping sites) (No. 155/77).	Establish regulation for camping areas.
Regulations concerning Hotels and Tourist Accommodations (Tourist apartments) (ARA 193/85).	Regulate relations with customers
The Laws of 1985 and 1991 concerning recreational establishments (No. 29/85 and 214/91).	The Council of Ministers is given power to establish areas for the regulation of the type, category, class and number of recreational facilities.
Decisions of the Council of Ministers (based on Article 5 of the Law concerning Hotels and Tourist Accommodation	<ul style="list-style-type: none"> <li>-29.11.1990 Regulation of Tourist Development and the Supply of New Tourist Beds (Moratorium)</li> <li>-7.5.1997, 3.6. 1997 &amp; 1.6. 1999 Regulation of Tourism Development in all Districts</li> <li>-12.5. 1995 Regulation of Construction of Tourist Beds</li> <li>-8.1. 1997 Regulation of Hotel Development</li> </ul>

A more detailed list of the above Laws and Regulations, their basic provisions and the corresponding enforcement responsibilities is included in Annex I.

### **3.9 Policies, Plans, Tools and Co-ordination Bodies for Coastal Development**

#### **(i) Policies and Plans**

In Cyprus, as in many other countries, there is no specific Coastal Zone Management Policy as a separate and self-contained document with a geographical focus on the coastal zone.

Policies for the coastal zone are included in various sectoral policies which cover other areas including the coastal zone. The main policies include:

<b>Box 6</b>	
<b>Policy</b>	<b>Focus</b>
<b>Land Use (Spatial) Policy</b>	Expressed in the Development Plans prepared and implemented under the provisions of the TCPL (Local Plans, Area Schemes and Policy for the Countryside). Spatial Development Plans regulate all forms of development (residential, tourism, industrial, commercial, agricultural, infrastructure, etc.) and the designation of various categories of protected areas. Coastal Local Plans include those of Limassol, Larnaca, Paphos, Polis and Dherinia. Other main coastal development areas such as Ayia Napa, Sotera, Pissouri, Peyia, Oroklini, etc. are regulated by the Policy for the Countryside. Paralimni, a major coastal tourism area, remains a 'planning-excluded area' in which the planning legislation does not apply!
<b>Tourism Policy</b>	Expressed in the Strategic Plan for Tourism 2000-2010 prepared by the Cyprus Tourism Organisation. The Tourist Strategy defines the long-term vision and strategic goals which will guide tourism development over the next ten or so years. Although it contains goals spanning across all policy areas that influence tourism performance (tourist expenditure, arrivals, quality, etc.) lacks its own spatial policy and implementation tools, as many of these policies are formulated and implemented by Development Plans and land use zones under the TCPL, and other regulations in several environmental laws.
<b>Environmental Protection Policy</b>	Expressed in sectoral policies for various resources (land, foreshore, fresh water, sea water and marine environment, forests, etc.) prepared and implemented by the various competent authorities as outlined in 3.1.4 and in Annex I of this Report.

### **(ii) Tools and Co-ordination Bodies**

The existing tools and institutions for the protection and management of the coastal environment and the regulation of coastal development are likewise segmented in different sectoral policies and departments according to their specific sphere of competence.

<b>Box 7</b>	
<b>Tools</b>	<b>Focus</b>
Land use zones	Designated by the Development Plans and implemented through planning permissions
Protected areas	Designated by the Development Plans
Planning permissions	Issues on the basis of the provisions of the Development Plans and implemented through planning permissions
Natura 2000 sites	Identified by the provisions of EU Directive 92/43 to

	be incorporated in the Development Plans
Environmental Impact Assessment	Established by Law 57(I) 2001 applying to a large category of development in all areas including the coastal zone implemented by the Environment Service and enforced through concrete projects by the Dept of Town Planning & Housing through the issue of planning permissions.
Tourism Strategy	As a broad strategic document approved by the Council of Ministers, its goals and objectives are expected to be incorporated in sectoral policies, particularly land use zones and the policies contained in the (Spatial) Development Plans.
Sectoral regulations	Provided in different sectoral Laws and Regulations applying to the protection of the coastal and marine environment from pollution, wastes, construction, etc. implemented by the various competent authorities as outlined in 3.1.4 and in Annex I of this Report

<b>Box 8</b>	
<b>Co-ordination Bodies</b>	<b>Focus</b>
Planning Board	Exercising delegated powers, responsible for the approval of Spatial Development Plans. It includes 10 members, 4 private members, including the Chairman, and 6 representatives of various key Ministries (Interior, Planning Bureau, Finance, Agriculture, Natural Resources and Environment, Commerce, Industry and Tourism, Communications and Works. Observers include representatives of the Cyprus Tourism Organisation, the Environment Service and others according to the agenda, while technical advice is provided by the Director and Staff of the Town Planning and Housing. The Development Plans, as spatial plans, are expected to reflect the policy priorities and objectives of industrial, agricultural, commercial and particularly tourism policy.
Common Councils	They are established by the TCPL and act as local advisory bodies to the Planning Board. Before a Development Plan is presented to the Planning Board for adoption or change, proposed Development Plans are reviewed by Common Councils. Participants include local municipal councillors and representatives of NGOs.
Technical Environmental Committee on EIA	The Committee is chaired by the Director of the Environment Service and functions under the provisions of the EIA Law 57(I) 2001. It reviews EIA studies submitted by applicants of development projects. The Committee's views and conclusions are addressed to the Environment Service as Environment Authority that sends to the various competent Departments its conclusions that have to be taken very seriously into consideration prior to the issue of Planning Permission for the

	development. The Committee comprises representatives of all key Ministries and Departments related to the environment (Planning, Public Works, Health, Geological Survey, Water Development and Cyprus Tourism Organisation).
National and Local Committee on Beaches	A two-level ad hoc inter-departmental committee set up under the Foreshore Protection Law (enforced by the Ministry of the Interior) advising on the use and management of land within the protected foreshore area (some 90-100 meters from the high tidal point) such as coastal construction, beach recreation areas, fishing shelters, sea break waters, erosion protection works, etc. The National Committee has 13 members, is chaired by the Chairman of the Union of Municipalities and includes representatives of relevant Ministries, and NGOs. The District Committee has as similar role as the national Committee at the local level, has 7 members, is chaired by the respective District Officer and includes representatives of local authorities and relevant Ministries / Departments.

## 4.0 PROBLEMS, CONFLICTS AND CAUSES

### 4.1 Specific Problems

**Sea pollution.** Unlike some other countries in the Mediterranean, Cyprus has a very small industrial sector and therefore industrial production has been of very limited importance in its economic development. Coastal population growth and tourism pose a potential threat although actual impacts are limited due to the sewerage infrastructure in place in all coastal urban centres and hotels. This explains why sea pollution from land-based wastes is limited. **In Cyprus, sea pollution problems are limited and geographically isolated.** Within the framework of the United Nations Mediterranean Action Plan, sea pollution in Cyprus is monitored, including the quantities of pollutants that enter the sea and the concentration of various substances in water, fish and sediments. The central sewage systems (constructed and under way) will address the isolated sea pollution “hot spots” problem, particularly in the area of the Limassol wineries.

The main industrial plants on the coast are:

- The Limassol wineries,
- The *Moni* and *Vassilikos* cement plants (near Limassol),
- The Larnaca petrol refinery, and
- The power plants of *Moni* and *Dhekelia* (near Larnaca).

Generally, no untreated sewage flows into the sea and the few industrial units that pollute the sea are located mainly in Limassol and Vassilikos. Four wineries and one brewery in Limassol discharge their liquid wastes without any treatment in the sea between the old and the new ports of Limassol. These facilities discharge in the area an organic load in the order of 1,200 tons of BOD<sub>5</sub>, as well as airborne solids in the order of 350 tons per year. The contact between these wastes and the processing and cooling waters results in the microbiological pollution of the water of the area, which has become unsuitable for swimming<sup>5</sup>.

There are no liquid wastes from the two cement factories at *Vassilikos* and *Moni*. In addition to the above liquid wastes, there are also airborne discharges. From the two power stations, the cement factories at *Vassilikos* and *Moni*, and the petroleum refinery at Larnaca, 9,000 tons of NO<sub>x</sub> (NO), 31,000 tons of SO<sub>2</sub>, 1,000 tons of CO, and 3,500 tons of dust escape per year<sup>6</sup>. The liquid wastes from the Larnaca petroleum refinery are discharged after processing together with the cooling water into the marine environment of Larnaca. These wastes contain substances, which for their chemical oxidation require app. 100 tons of oxygen (COD<sub>5</sub>). At the same time, however, the accumulation of metals and hydrocarbons from petroleum are at low levels.

The liquid wastes from the two power stations at *Moni* and *Dhekelia* after chemical treatment are used for irrigation. Cooling waters from these units are discharged at a rate of up to 700.000 m<sup>3</sup>/day and 1.296.000 m<sup>3</sup>/day respectively, with a temperature 5-6 degrees Celsius higher than that of the marine environment.

In addition to the above point sources, large amounts of nutrient minerals, especially nitrates, end up in the sea as a result of leaching through the water table, basically due to intensive

---

<sup>5</sup> M. Hadjichristophorou and A. Demetropoulos, 1985 “Effects of pollutants on marine communities and ecosystems in Limassol Bay”. MED-POL Research Project

<sup>6</sup> L. Loizides, 1996, ‘Hot Spots and Sensitive Areas in Cyprus’, GEF/UNEP Project.

fertilisation in agriculture. One such area is the coastal zone of Dhekelia to Ayia Napa. In this area, it has been calculated that from aquifers of a total extent of 8.5 kilometres, approximately 150 tons of nitrates per year enter the sea <sup>7</sup>.

**Erosion.** Beaches attract nearly 3 million millions tourists each year. The Cypriot economy's dependence to a great extent on the tourist industry creates a constant and increasing pressure for the exploitation and expansion of coastal tourism zone. Partly due to poorly controlled coastal development in the past (since 1974 and prior to the implementation of the TCPL in 1990) and partly due to the extensive coastal development zones immediately after 1990, coastal development has burdened and negatively altered the coastal environment to a large extent. Erosion problems, as documented in the 1993 Study carried out by the Coastal Unit of the Department of Public Works of the Ministry of Communications and Works within the framework of the EU Programme <sup>8</sup>, are most serious in the heavily built sections of the coast of Limassol, Larnaca, parts of Pahos and Paramini. Major causes include construction of tourist projects, quarrying of gravel (prohibited by law after the 1970's) and the construction of breakwaters.

**Land use conflicts.** In Cyprus, like in many other countries, the coast is a fragile ecological system and, at the same time, the backbone of the economy. This conflict between effective protection and building development translates into pressures for tourism and associated land uses attracted by the coastal landscape that in term cause its quality to deteriorate due to over-development, and in some cases development too close to sensitive ecosystems. Development pressures and coastal urbanisation are not only confined to the coastal urban areas but extend to surrounding coastal urban-rural fringe areas which are included in the sprawling tourist zones. In many such areas (Paralimni and Ayia Napa in Famagusta, Meneou, Linadhia, Kiti, and Oroklini in Larnaca, Pissouri in Limassol, Yeroskipou, Kissonerga, Peyia and Neo Khorio, and other villages) agricultural land is lost to building development, orchards and vegetable groves are rapidly converted into building land and in many cases agricultural land remains uncultivated. The main problems include:

- Loss of coastal landscape and degradation of the natural environment due to the intensity of development,
- The mixture of incompatible uses, heavy traffic and lack of open spaces and parking facilities for visitors.
- Erosion of the shore.
- Overuse of the beaches, which in certain areas reach the upper limit of the beach carrying capacity.
- Problems of beach access due to private infringements and aesthetic pollution,
- Deficiencies in infrastructure, landscaping and the provision of basic facilities
- High building densities in the urban coastal areas, particularly in Limassol, and also in the villages that have been transformed into tourism centres, (Ayia Napa, Proraras, Oroklini, etc.)
- Inadequate protection of the "Salt Lakes" of Akrotiri (Limassol) and Larnaca and lack of adequate protection measures suitable to their "wetland" status.

The protection of the wetlands from urban encroachment is a major issue as demonstrated by the problems facing the Larnaca Salt Lake due to its proximity to the Larnaca International Airport, new housing development and the shooting range. The Local Plan of Larnaca has

---

<sup>7</sup> Baird J. & Muir J. 1990, "The Impact of the Telia Aqua Marine Fish Farm on the Coastal Environment at Liopetri in Cyprus"

<sup>8</sup> Coastal Protection Study (1993-96)

adopted the proposals of the Plan for the 'Protection and Management of the "Alikes" of Larnaca', which however remains unimplemented. There is also a proposed plan, but also not yet implemented, for the smaller wetland of Oroklini-Pyla (north of Larnaca town).

**Solid wastes.** Population and income growth, tourism and construction increase the volume of wastes that need to be disposed to landfill sites. The establishment of planned landfills is delayed due to local reactions and in some cases refuse are disposed in temporary sites near the coast. There have been no reported cases of serious threats to the ground water system or the sea from runoff.

---

### **Social disparities and loss of rural heritage**

Cyprus has been mainly rural until 1960. Village architecture and rural cultural heritage, being core characteristics of the social profile of rural Cyprus, are rapidly overwhelmed by urban sprawl and tourism facilities. Coastal urbanisation and coast-centred economic growth have minimised the importance and overshadowed the rural heritage and landscape of the island which could have been significant resources for a unique quality-based Cypriot tourism sector. Market-driven tourism development has instead almost exclusively concentrated tourism accommodation on expensive sections of the coast thus altering not only the coastal landscape itself but also the social profile of the previously rural coastal areas.

Two important impacts should be noted: The social polarisation between tourist and non-tourist coastal villages, and the transformation of the social structure in the tourist villages themselves.

A socio-economic polarisation exists between the prosperous tourist villages in the outskirts of Paphos, Limassol, Larnaca and in the Paralimni - Ayia Napa area (where tourism development has been encouraged by the planning policy) and the declining coastal villages those coastal areas are now under a more strict planning regime like in Akamas and the eastern coast of Paphos. A social transformation has occurred in the now economically prosperous tourist villagers that have evolved into "dormitory communities", in which old family homes in the village cores have been changed into tourist apartments, restaurants and discos, displacing the close-knit village housing area to new low density adjacent housing areas (like in Ayia Napa). An equally sad experience of loss of rural heritage, but in the opposite direction, is experienced in the declining non-tourist coastal villages (like in Akamas) where lack of economic opportunities and limited income from agriculture have caused emigration of young people to tourism areas and a growing stock of empty village houses.

## **4.2 Underlying Causes**

By far the most important cause of the pressures on the coastal environment is the twin process of urbanisation and coastalisation. As mentioned earlier in this Report, the coastal areas concentrate about 50% of total population and employment, and 95% of the tourist accommodation sector. The only inland growth centre is Nicosia which is the capital of Cyprus with a strong business and commercial base. If Nicosia is excluded from the population figures, the population of the coastal areas reaches 66% of the total population.

The following table presents a few indicative figures of the pressure on the coastal areas. The urban areas of Limassol and Larnaca have a large resident population per km of coast (7,550 and 5,020 respectively), while Ayia Napa and Paralimni, being rural municipalities, have a much lower resident population but twice as many tourist beds (1,352) per km of coast.

**Table 16 – Coastal length, population and tourist beds in selected coastal areas**

Area	Length of coast (km)	Population	No of beds	Population per km of coast	Beds per km of coast
Limassol LPArea	20	151,000	15,500	7,550	775
Larnaca LPA	15	75,300	8,200	5,020	547
Ayia Napa – Paralimni Municipalities	27	38,000	36,500	1,407	1,352

Source: CAMP Cyprus Project Research

This coastal bias in the spatial distribution of population and activity reflects the development pattern prevailing since 1974, and the limitations of the policy responses to influence the course of urbanisation and costalisation.

Despite the extensive mesh of highly developed legislation and control provisions on coastal zone development, they present two main significant problems with several ramifications:

- They are sectoral in their scope
- They focus on protection rather than management.

The sectoral issue arises from the fragmentation of powers of the different agencies with responsibilities for regulating or initiating coastal development. The emphasis on protection arises from the lack of a proactive management strategy capable of responding to the diverse pressures on the coastal environment to resolve conflict of uses within an integrated and long-term perspective.

As a result, coastal resource management, a task requiring an comprehensive assessment of resources and integrated actions, is carried out as a resource-specific activity under different legal contexts by different agencies, thus rendering co-ordination particularly difficult and ineffective in tackling pressures arising from the inter-relations of environmental resources and the conflicting arising from their interactions with the wider socio-economic forces.

There is a gap in the planning policy process that tends to reduce the effectiveness of policy responses to coastal pressures. While existing legislation and control measures are resource- and institution-specific, in contrast, development pressures, triggered by forces that underlie the Cypriot economic and social structure, span right across sectors and departmental demarcations and concerns. Although existing policies are successful in preventing major impacts on the coastal environment, there is a lack of an overall framework for integrated coastal zone management strategy capable of pulling together existing control measures and appropriate management tools to be incorporated into an on-going coastal management process.

The most important factors that underpin the development process and overwhelm the existing fragmented approach to coastal zone management include the following:

**(i) Land ownership.** Private land ownership and its constitutional protection are among the strongest social institutions in Cyprus. Land ownership is widely distributed among the population, carrying with it expectations of future development. The expectations are encouraged by past trends validated by the operation of the permissive planning system, the expansion of development zones into countryside areas, and the strong protection of land development rights by the constitution that provides for compensation for anything above the minimum planning restriction of development rights. In addition to this, the land market has traditionally been, and continues to be, an uncontested avenue of investment for social security and future capital gains fuelling a speculative holding of land. This explains why large stocks of land are withheld from development, the rising land values and pressures for expansion of

development areas, and particularly the reactions against planning restrictions and conservation measures. All these compound the difficulties encountered by the Planning Authority in containing development and defining zones according to carrying capacity criteria, planning goals and resource protection objectives.

**(ii) Local community concerns.** The almost continuous growth of the Cyprus economy based on tourism and the widespread expectation that practically all land will (sooner or later) become ripe for urban or tourism development is deeply rooted in local communities. The post-1974 tourism expansion not only at the fringes of all the coastal towns but notably in coastal villages (such as Ayia Napa, Paralimni, Kiti, Meneou, Pissouri, Peyia, etc.) have established a “development/growth culture” and an approach to local planning based on a notion of “social equity” supporting development rather than resource conservation. Many coastal communities, including the Akamas communities, point to the wealth created through coastal tourism in Ayia Napa and Paralimni as an argument, valid at the local level, for resisting coastal management and strict planning controls. The dialogue held with local communities on the planning objectives justifying the introduction of lower development densities, or land set aside, is clouded (and often frustrated) by local economic concerns associated with the social distribution of benefits from land development.

**(iii) Growth culture.** Government decision-making is therefore sensitive (even vulnerable) to development pressures conveyed through the political process. Local representations are a regular element in the consultation process of Ministers and policy-makers which, although necessary and useful in incorporating local concerns in the planning process, are often sympathetically received by government due to the traditional growth-driven vision that continues to dominate economic and physical development policy. Despite the general concern for the environment in Cyprus and the exposure to EU approaches to sustainable development, development opportunities attract more attention than the longer-term consequences for the environment.

**(iv) Limited environmental awareness.** Concern for the environment is still a “minority opinion” in Cypriot society, as in many other societies. There is a more specific issue related to environmental awareness that has concrete consequences for environmental policy. In the evaluation of development projects or proposals, the assessment of the potential threats to the environment is limited to the local and direct effects blurring the focus that deserves to be directed to the cumulative and long-term impacts from traffic generation, induced future land uses, need for additional infrastructure capacity and other strategic considerations.

**(v) Poor harmonisation of environmental and socio-economic objectives.** An important cause of environmental impacts is the fact that coastal resources are part of an active coastal economy, creating land use conflicts. The dual role of the coastal environment as an ecological **and** an economic system, although recognised as hard reality, is not integrated in the existing policy and **remains a source of conflicting priorities.** Protection of the environment through controls on land uses is often unsuccessful because of the financial impacts on the affected property owners are not balanced against the economic impacts of environmental degradation and the social benefits of conservation. Sustainable development requires that **both** private and social costs and benefits should be taken into account in development / conservation options. Although private gains and losses from land development are, rightly, a major concern in planning policy, social gains and losses and the economic value of the benefits of conservation are not identified and articulated in decision-making. Since the quality of the coastal environment is an economic resource, its contribution (and value) to the various economic sectors (tourism, recreation, water resources, etc.) that depend for their productivity on the environment should also be evaluated. The lack of harmonisation of environmental and socio-

economic objectives exaggerates the costs of conservation leaving the benefits outside the planning process. Decision-makers often react against environmental policies because they perceive them as conflicting with economic development that Government is expected to promote.

### **4.3 Case Studies**

#### **(i) Larnaca Salt Lake – Alikí : Airport extension and the protection of the wetland**

Larnaca Salt Lake, a Ramsar site, is one of the two main wetlands in Cyprus. It is adjacent to the Larnaca International Airport forming a wedge between the southern urban fringe of Larnaca and the northern edges of the expanding villages of Meneou and Dromolaxia. The main Larnaca-Airport road passes through the Lake dividing it into two parts; the main body of the Lake (Great Lake) on the west side of the road, and the small parts of the Lake that practically merge with the area of the Airport. On the southwest bank of the lake there is an archaeological Monument site (Um Harem) and a picnic site. To the north, it is surrounded by low-density housing development, including a refugee housing state (Makarios III), and a military camp. To the west there is an animal husbandry estate and near it a wholesale vegetable market.

Land ownership around the Lake is mainly public and institutional. Most of the land belongs to the Government, including forest land, with extensive areas around the Um Harem Mosque belonging to the religious organisation *Evkaf*. There is also private land most of which is surrounded by public land.

Although the water quality of the Lake has not been affected by the surrounding land uses, the ecological balance has been disrupted by the construction of the Airport which is sited on land that was part of the Lake. The area taken by the Airport has isolated the small parts of the Lake to the south which constitute an integral part of the ecosystem that functions, among other things, as habitat for various types of birds. "The area has been environmentally degraded to the greatest degree by the Airport and the coastal tourism development, and will be affected even more by the planned extension of the Airport"<sup>9</sup>

A management plan and programme have been prepared by the Department of Town Planning and Housing in 1997 in co-operation with several Departments of the MANRE, including Forestry Department, Agriculture Department, Fisheries Department, Water Development Department, Geological Survey Department and the Environment Service, and Municipality of Larnaca and the Larnaca District Administration. The plan has been approved "in principle" by the Council of Ministers in 1997 but has not yet been implemented.

The Plan proposes a comprehensive programme for the development of appropriate recreation facilities/leisure, infrastructure and management measures including proposal for the implementation of the programme by the Ministry of Agriculture, Natural resources and Environment.

The Report<sup>10</sup> includes a number of observations and conclusions concerning the causes of the problems in the area of the Lakes which are noted here as they depict a set of general issues constraining the effectiveness of planning policy and coastal zone management in particular.

- Indecision of the public sector to adopt and impose environmental protection measures.
- The widespread approach that the area of the Lakes is an open access resource, expendable and available for intrusion.

---

<sup>9</sup> "Protection and Management Programme of Larnaca Lakes", Department of Town Planning and Housing, 1997.

<sup>10</sup> Op. cit.

Also,

- Lack of an institutional framework specifically for the protection and management of the Lakes (wetlands).
- Lack of implementation tools, and
- The lack of a specialised agency responsible for the protection and management of the Lakes.

Recently, the debate about the Larnaca Salt Lake has been re-opened in response to the proposed reconstruction and extension of the Airport for which tenders have been invited by interested contractors to submit proposals for a BOT project. The site of the project includes part of the area of the smaller sections of the Lakes proposed for protection by the 1997 Plan. The expansion of the Airport is of vital importance to the economy of Cyprus, while the protection of the Lake is an issue of major environmental concern, posing a conflict of policies. The difficulty in resolving this policy conflict reveals the need for an integrated management framework in which priorities may be assessed in light of long-term objectives. The sponsors of the project is the Ministry of Communications and Works promoting a policy which, on this issue, is in conflict with the policy adopted by other Ministries in the context of the Larnaca Salt Lake management plan.

### **(ii) Akamas Peninsula Conservation Plan: Conservation and Local Development**

The Akamas Peninsula is located in the northwestern corner of Cyprus in Paphos District. It has an area of about 250 sq. km. and it is among the very few remaining undeveloped areas of biodiversity and natural beauty in Cyprus. It is noted for its diverse environmental profile combining coastal nesting areas for turtles (*chelonias medas and caretta caretta*), large forest areas, gorges, rock outcrops, extensive natural landscape areas and a cluster of 8 village settlements that remain isolated from the economic development process that generates the island's high-income level.

The Peninsula has been designated as *Nature Protection Shore Area* and remained undeveloped due to the strict zoning restrictions introduced in 1990 by the Policy Statement for the Countryside in the context of the TCPL. The local and other landowners in the area reacted strongly to the restrictions imposed on land development rights in the area and created a lobby to change the planning status through frequent representations to Ministers and Government Departments. In response to this and combined with the national and regional importance of the area, the Government included the Akamas Peninsula in the list of projects to be carried out under the World Bank/METAP programme. The Study<sup>11</sup> was completed in two stages in 1995 and, reaffirming the high environmental quality and importance of the area, proposed a sustainable management strategy combining environmental protection with an elaborate economic development programme to enable the local communities to participate and benefit from the proposed development opportunities based on the Peninsula's unique natural quality.

While the proposed strategy was approved by the World Bank, the Government postponed taking a decision to consult the local communities who objected to the management strategy because of the consequences of the land development restrictions for their economic future. The long-term management of the Akamas Peninsula is still undecided. Several factors contribute to this: The Government's sensitivity to local reactions, the protection of the forest area by the Forestry Department and the existing zoning regime on private land development, and the unclear policy commitment to environmental management. The difficulty in resolving this policy conflict between local development and conservation management reveals the need for an integrated management framework in which priorities may be assessed and reconciled in light of long-term objectives. While the area is protected from building development, there is not

---

<sup>11</sup> "Conservation Management Plan for the Akamas Peninsula", Phase I & II, World Bank / METAP, 1992 & 1995

as yet an integrated management process in place to safeguard sustainable development of the Peninsula as a whole based on the envisaged synergies of the environmental quality and community-based development.

### **(iii) The Limni area in Polis-Paphos: Coastal habitat conservation and Tourism Development**

The Limni area in Polis Chrysochou has been investigated and identified for inclusion in the Natura 2000 network of Special Conservation Areas on the basis of the EU Habitat Directive 92/43 as part of the wider area of Polis-Yialias extending east of Polis. The Limni site is a habitat for the *Caretta caretta* turtle falling into Annex II of the Directive and also the provisions of the Berne Convention. However, the site also falls within the area of the existing Polis Local Plan (under the TCPL) which designated Limni as a low density tourism development zone with a plot ratio of 1: 0.15.

At present the Polis Local Plan is in the process of being revised through a consultation process within the context of the Common Council under the provisions of the TCPL. Consultations involve several Government Departments and organisations represented in the Common Council and the Planning Board.

The current debate about the revision of the Polis Local Plan includes as a main issue the level of protection to be afforded to the Limni site, as plans are in preparation for the development of the site for tourism purposes. Differences emerged with regard to the proposals put before the Common Council and the Planning Board for the level of protection of the site, illustrating the conflicts that exist between tourism development and coastal conservation. Different priority is given to these objectives with local representatives favouring greater scope for tourism development and only limited coastal protection. The existing protection of the site is based on two important elements: The existing Local Plan provisions that allows tourism development but at a low density (1:0.15) and the 100 yards wide coastal protection setback line. The Municipality of Polis demand a higher tourism development density for the site, while the proposal of the Environment Service submitted to the Planning Board (questioned by some other Ministries and Departments) favours, as a minimum measure, keeping the existing development density for tourism development (since the existence of the tourist zone in the first place is a commitment that cannot easily be changed) and widening of the coastal protection setback line to 200 yards.

The fact that the debate has excluded widely opposite views of either abolition of the tourism zone or increasing the development density to the levels prevailing in other coastal areas (such as Paralimni and Ayia Napa), shows that there is some concern for the need for coastal protection. Equally, the reactions of the local municipality and some Government Departments against further development restrictions to tourism development on the site, show that coastal protection is accepted only to the extent that it does not conflict with immediate local economic concerns and land development interests.

### **(iv) The lack of a Local Plan for Paralimni – Conflict of local and national planning goals**

The Municipality of Paralimni with a resident population of 11,000 and some 20,000 tourist beds remains outside the scope of the TCPL. It remains the only area in Cyprus, besides the British Military Bases, in which the TCPL is not enforced. The Municipality resisted the enforcement of the Law applied to the rest of Cyprus in 1990. It is now an "island" in which building control continues to be carried out on the basis of rudimentary zoning provisions under the old Streets and Buildings Regulation Law. The existing zoning, designated in 1978 after long negotiations between the Department of Town Planning and Housing and the Municipality, allows high building density levels. When the TCPL was enforced in 1990, the Municipality demanded that

the Law should only be enforced after it drafts and adopts its own Local Plan, an exercise that started before 1990 and still continues.

The Ministry of Interior, the Department of Town Planning and Housing and the Planning Board regularly express their concern to the Municipality pressing for the final submission of the Local Plan which is now reported to be in its concluding stages. Underlying this irregularity, whereby a rapidly developing coastal Municipality chooses to delay the adoption of planning policy, is a divergence of visions between local and central Government concerning the development of the area and the exercise of powers of development control. Essentially, the Municipality wishes to promote tourism and other development with the minimum of controls believing that such development causes no real harm to the environment and at the same time promotes the economic interests of the local community and local landowners. This view is not shared by the Department of Town Planning and Housing, but there is no effective communication and common language to reconcile local/national conflicts over the use of land and the apparent divergence of development goals.

The Paralimni Municipality case is an extreme example of a more general issue concerning the lack of an overall management framework reflecting equally national long term planning objectives and local development concerns.

## 5.0 NEED FOR CAMP CYPRUS

### 5.1 Project Rationale

Cyprus has a well-developed planning legislation (TCPL) with powers for preparation of Development Plans and exercise of development control in all (accessible) parts of the island, including the coastal areas (with the exception of the area of Paralimni Municipality). Also, the Development Plans cover all types of land uses (residential, commercial, tourism, industrial, open space, protected areas, etc.) whose development is controlled through the requirement for planning permission.

**However, the overall planning and coastal management system is sectoral, site-specific and without support from instituted management tools to allow it to be pro-active and integrated.**

The existing mechanisms for policy co-ordination at national level are fragmented by the segregation of responsibilities and are focused on short-term targets rather than fostering common environmental concerns, long term goals and agreed priorities. As illustrated by the Case Studies outlined earlier, and many other cases like them, the operation of the policy coordination mechanisms across sectoral / departmental responsibility lines reflects conflicting objectives and divergent visions rather than a move towards a common direction. Particularly acute are the difficulties in reconciling local level development claims and expectations with national level planning objectives. The recurrent controversies associated with the revision of land use zones and density coefficients in coastal areas and around expanding villages are cases in point.

Several constraints exist which are commonly accepted as problems that need to be addressed.

The **late introduction of the TCPL** (approved by the House of Representatives in 1972 but enforced in 1990) meant that the zoning controls exercised under the basic building regulations were inadequate to cope with the mounting urban and coastal development pressures, particularly during the economic reactivation period that followed the 1974 invasion. By 1990 the main development pattern, characterised by the twin process of sub-urbanisation and coastalisation, has already gained momentum and produced its footprint on the environment. **The future management, quality and performance of coastal development will be at risk unless an integrated approach is established.** The delay in the enforcement of the planning legislation also means that key institutional and policy analysis aspects of planning continue to be in a stage of transition, **lacking in the application of tools of integrated assessment and resource management.** The environmental and planning policy process remains tied to a sectoral approach to coastal management, with emphasis placed on building controls in policy implementation, crippled by the strong protection of land development rights, conflicts of planning measures with local development interests, and problems concerning the lack of local level commitment to environmental protection that constrain the "inclusion" of local authorities as stakeholders in a constructive participation process.

The **fragmentation of responsibilities and the lack of effective policy integration tools** for coastal management contribute to recurrent difficulties in the operation of existing coordination mechanisms. Specifically, although Development Plans are prepared by competent professionals following consultations with all other relevant Ministries and Departments, and are approved by the Planning Board that includes representatives of all competent Ministries, plans and policies for areas that face cross-cutting management issues (such as the management of the Akamas Peninsula and the Larnaca Salt Lake) remain contentious and unimplemented.

Also, decisions concerning the management of environmentally sensitive areas (the Limni Lake site in Polis, the use of forest or public land for the development of golf courses, the location of the Paralimni marina, the location of landfill, sewage, and desalination plant, etc.) are beset by conflicts that reveal the **lack of harmonisation between development and conservation goals**. The imbalance that exists between the overpowering economic forces of building development, relative to the sectoral scope of land use policies, is not confined to the post-1974 period or to any particular location, as illustrated by the experience of the high density building development on the coastline in Famagusta town before 1974 (now unanimously identified as a grave planning mistake), a pattern repeated after 1974 in Limassol and in parts of Paralimni and Ayia Napa.

Equally, the tendency of all Development Plans to over-zone areas for tourism and housing development in excess of **carrying capacity limitations**, and the controversies created by abortive proposals to reduce the areas of extensive tourist zones inherited from the past, demonstrate the **vulnerability of the planning system to local interests** and the lack of a **common national / local level vision (or language)** for reconciling strategic planning objectives with sometimes legitimate local socio-economic pressures.

The vision underlying spatial planning is predominantly **development-driven**, partly because of historic and constitutional reasons, but also due to the insufficient incorporation of environmental objectives in the policy process and the **low valuation of environmental assets and the benefits of protecting their quality**. It is still not uncommon to consider protection of marine, coastal, forest or important public sites as a luxury rather than as an ecological priority with important long-term economic benefits.

The introduction of **Environmental Impact Assessment (EIA)** in Cyprus in 1993 (following the decision of the Council of Ministers to apply EIA to certain public development projects, CMD 33.485) was an important institutional mechanism for incorporating environmental considerations in development. It operated by the Environment Service of the Ministry of Agriculture, Natural Resources and Environment (MANRE) as a "secondary legislation" relying for its enforcement on the powers of two other main Ministries: the Planning Bureau, responsible for the budgets for public projects, and the Department of Town Planning and Housing, responsible for issuing Planning Permissions for private development. The EIA system also aimed to integrate, in addition to the TCPL, the Control of Water Pollution Law and the Control of Atmospheric Pollution from Industrial Sources. For this reason, the Technical Committee with members drawn from all relevant Ministries was set up to ensure implementation of the EIA system in conjunction with these existing laws. A detailed review of selected case studies (Development of the EIA process in Cyprus, Impact Assessment Project Appraisal, Vol. 19, No. 3, 2001) showed the difficulties and the progress in coordinating environmental / development issues. In 2001 a new legislation was introduced (57(1)/2001) that made the EIA mandatory, the Environment Service an Environmental Authority with powers to issue statements on proposed projects that have to be taken very seriously by the competent Departments.

However, the EIA system remains focused on **project level assessment** which means that Development Plans themselves, that designate areas and policy provisions for development and constitute the source of various categories of projects, fall outside the scope of present EIA system. Therefore, the assessment of **strategic environmental impacts**, that from part of the requirements of the new EU Directive, remains fragmented and without systematic review in the broader planning process.

In summery, the main problems that constrain effective coastal management include:

- Late introduction of planning legislation
- Sectoral approach to land use planning and nature conservation

- Fragmentation of responsibilities and difficulties in the operation of the existing policy coordination mechanisms
- Over-protected land development rights and compensation for development restrictions
- Lack of harmonisation between development and conservation
- Vulnerability of the planning system to local interests and the lack of a common national / local level vision (or language)
- Development-driven policies and low priority to conservation
- Low valuation of environmental assets and their quality
- Lack of tools for integrated policies (such as carrying capacity assessment, resource valuation and strategic environmental assessment)

It is expected that Cyprus will join the EU during the next enlargement and will therefore need to close the existing gaps in the policy process, adopt or strengthen policy implementation tools and mechanisms in order to make plans and policies more effective in addressing pressing environmental problems, particularly in coastal zone management.

The CAMP Cyprus initiative will introduce a methodology for Integrated Coastal Area Management (ICAM) and promote the application of planning and management tools, which will contribute to the strengthening of the planning and coastal protection system **at the policy level**. It will not, by itself, solve all the problems. Its main contribution will be to initiate an on-going process of policy review based on the principles of integrated coastal management and the objectives of sustainable development. This will be achieved primarily through the demonstration and future application of tools of integrated planning and management that emphasise strategic environmental assessment, carrying capacity considerations and the multiple benefits of coastal resource management.

## **5.2 The Concept and Principles of CAMP**

**What is CAMP?** CAMP is a MAP initiative aiming to introduce Integrated Coastal Area Management (ICAM) at local and national level, and institutional strengthening including capacity-building. It is a collaborative effort between MAP and its Regional Activity Centres, notably the Priority Actions Centre (PAP), national and local authorities and international funding institutions. CAMP is based on the principles of sustainable development and integrated planning and management of the Mediterranean coastal areas.

**Coastal areas are the focus of CAMPs** as areas of intense activity, areas of interchange within and between physical, biological, social, cultural and economic processes. They are composed of multiple interacting systems: marine, terrestrial and riverine. Changes, at any point in any part of the systems can generate chain reactions far from their point of origin. CAMPs also recognise that coastal areas attract population and economic activities faster than inland areas, experience competition for the allocation and use of coastal and marine resources and are subject to impacts due to their dual role as fragile ecosystems and economic systems.

Typical coastal development conflicts occur over:

- Access to the coastline for activities that require location on the sea-land interface, such as ports, marinas, hotels, etc.;
- Incompatible uses which cannot exist and function in harmony;
- Private land ownership that may prevent or restrict public uses or access to coastal resources;
- Long-term conservation goals inhibiting immediate economic interests;
- Under-valuation of coastal ecology relative to building development;

- Site-specific and dispersed impacts of private activities that remain on the coastal environment affecting the quality of public spaces and resources requiring subsequent public investment;
- Infrastructure deficiencies relative to the pace and geographical distribution of development.

Chapter 17 of Agenda 21<sup>12</sup> on *Protection of the Oceans, all kinds of Seas, including Enclosed and Semi-enclosed Seas and Coastal Areas and the Protection, Rational Use and Development of their Living Resources*, concluded that “the Marine environment – including the oceans and all seas and adjacent coastal areas – form an integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development”<sup>13</sup>.

It is now widely accepted that sectoral activities produce combined environmental impacts resulting in marine and fresh water pollution, loss of marine and natural land resources, land degradation and destruction of historic sites, and that policies based on a sectoral approach to reduce or address coastal degradation or resolve conflicts of uses have failed, ignoring the underlying causes of environmental degradation, transfer problems and conflicts to adjacent geographical or policy-making areas.

Sectoral approaches to the planning and protection of natural resource and the planning of development that stimulates resource utilisation levels and practices, can no longer meet the requirements of the management of complex systems such as coastal areas. It is within this context that the process of **Integrated Coastal Area Management** (ICAM) emerged as a response to the need for a flexible, integrated and proactive coastal resource management approach.

The main principles of ICAM<sup>14 15</sup> include:

- The coastal area is a unique resource system which requires special management and planning approaches;
- The land-water interface is an integrating force in coastal resource systems;
- Land and sea uses, and their particular characteristics and requirements, should be planned and managed in combination;
- Coastal management and planning boundaries should be issue-based and adaptive;
- Institutional responsibilities for coastal planning and management should involve all levels of government;
- Economic and social benefit evaluation, and public participation form important components of coastal area management;
- Conservation is an important goal in sustainable coastal development;
- Multi-sectoral approaches are essential to the sustainable use of resources as they involve multi-sectoral interactions;

---

<sup>12</sup> United Nations Conference on Environment and Development – Rio Conference, June 1992 -

<sup>13</sup> Chapter 17 “*Protection of the Oceans, all kinds of Seas, including Enclosed and Semi-enclosed Seas and Coastal Areas and the Protection, Rational Use and Development of their Living Resources*”

<sup>14</sup> Guidelines for Integrated Management of Coastal and Marine Areas with Special Reference to the Mediterranean Basin, UNEP, Regional Seas Reports and Studies No. 161, Split, Croatia, PAP/RAC (MAP-UNEP), 1995, based on Clark J.R. 1992, Integrated Management of Coastal Zones. FAO Fisheries Technical Paper No. 327, FAO, Rome

<sup>15</sup> UNEP/MAP/PAP: White Paper Coastal Zone Management in the Mediterranean, Split, Priority Actions Programme, 2001

The main objectives of CAMP are to:

- Develop strategies for environmental protection and rational use of coastal and marine resources towards sustainable development of coastal areas;
- Identify, adopt and test methodologies, tools, practices of sustainable coastal management;
- Contribute towards the upgrading of relevant local / national institutional and human capacities;
- Secure a wider use of requirements contained in the Barcelona Convention and its protocols, at national and regional levels, and create appropriate conditions for follow-up activities.

CAMP objectives are mainly achieved through the following:

- Exchange of knowledge and experience;
- Work with local and international experts;
- Involvement of MAP RACs;
- Integration of activities and policies on concrete problems in coastal areas
- Application of integrating tools and methodologies cutting across institutional, thematic and spatial levels

### **5.3 The MAP CAMP Programme**

The CAMP Programme was first introduced by the Mediterranean Action Plan (MAP) in 1985. MAP is one of the Regional Seas Programmes of the United Nations Environment Programme (UNEP) established in 1975. A year later, the Barcelona Convention (Convention for the Protection of the Mediterranean Sea against Pollution) was adopted by 20 countries fringing the Mediterranean Sea as well as by the EU<sup>16 17 18</sup>. MAP is co-ordinated by a Secretariat based in Athens. Its components are the MED POL Programme for the assessment and control of pollution, and six Regional Activity Centres (RACs), each with its own area of environmental and development expertise:

- Priority Actions Programme (PAP)
- Blue Plan (BP)
- Environmental Remote Sensing Centre (ERS)
- Clean Production Centre (CP)
- Specially protected Areas (SPA), and
- Regional Marine Emergency Response Centre (REMPEC)

The PAP/RAC constitutes the “actions arm” of MAP. It was established in 1978 and is based in Split – Croatia. The principle activity of PAP/RAC is Integrated Coastal Area Management (ICAM) within which a clear methodological approach, tools and analytical techniques have been developed. The multi-disciplinary nature of ICAM is carried out mainly through CAMPs

---

<sup>16</sup> Coastal Area Management Projects: Improving Implementation, MAP/METAP Workshop, Malta, January 17-19, 2002 – Key Note Paper, PAP/RAC

<sup>17</sup> UNEP/MAP/PAP: White Paper Coastal Zone Management in the Mediterranean, Split, Priority Actions Programme, 2001

<sup>18</sup> MAP Coastal Area Management Programme: Strategic Framework for the Future, PAP/RAC, Split, May 2001

and other projects dealing with specific natural resources. The wider CAMP Programme is shown in outline below:

<b>Box 9</b>		
<b>CAMPs</b>		
<b>CAMP Cycles</b>	<b>Locations</b>	<b>Characteristics</b>
<b>CAMP Pilot Projects</b> (1987-88)	Croatia Turkey Greece Syria	-Identification of problems, causes and impacts -Completion of data and information Introduction of methodology and tools -Training -Follow-up proposals
<b>CAMP First Cycle</b> (1989-93)	Croatia Greece Syria Turkey	-Multi-sectoral projects -Integrated coastal management -Individual resource management -Application of ICAM, tools and training -Pollution monitoring and control
<b>CAMP Second Cycle</b> (1993-98)	Albania Egypt Tunisia	-Involvement of all MAP RACs -Multi-sectoral and integrated projects -In-depth sectoral and integrated management actions -Follow-up plans and programmes
<b>CAMP Third Cycle</b> (1998-2001)	Israel Malta Lebanon	-Integrated management and implementation structures -Focus on sustainable development -Introduction of specific tools and actions -Post-project activities
<b>CAMPs in preparation</b>	Morocco Algeria Slovenia Cyprus	

Source: CAMP Rational and Benefits, PAP/RAC, Split, 2001

In the first period after it was established, MAP activities were mainly focused on marine pollution control and on actions defined by the MAP Contracting Parties. However, common experience confirmed that poor planning and management of development in coastal areas is the cause of pollution and many related environmental problems, and that lasting environmental protection requires a strong linkage with socio-economic development and the processes that underpins it. Consequently, the focus of CAMP gradually shifted from a sectoral approach to integrated coastal area management, including tools and methodologies that strengthen policy linkages and the incorporation of environmental concerns into the policy process. ICAM was confirmed as a key tool in seeking solutions for sustainable development.

#### **5.4 CAMP Procedure – The Role of this Report**

To qualify for a CAMP, selected areas need to face specific environmental problems whose study and solution is expressed by national or local government. Also, they must present typical problems or conflicts that also occur in other countries, so that the experience and lessons learned could be transferred and shared to benefit a wider group of countries and circumstances. Generally, CAMPs have succeeded in fulfilling their specific objectives.

After the proposal put forward by a country for the preparation of CAMP is accepted, a **Feasibility – Diagnostic Report** is prepared to:

- Inspect the existing strategic, policy and institutional context;
- Define the area for the CAMP;
- Collect and present the available relevant sources of information;
- Define the activities to be carried out
- Assess the opportunities and constraints for CAMP implementation
- Assess the possibilities for a long-term sustainability of CAMP

The second step is to develop a detailed programme in which CAMP activities are specified (**Terms of Reference**) forming the basis for a **Project Agreement** signed between the Government and MAP. Following this CAMP initiation phase, an **Inception Report** is prepared presented at the **Inception Workshop**, which completes the CAMP formulation phase.

After that, **Technical Specifications** are prepared concerning the concrete work and the participation of national and international experts in the proposed CAMP activities, and their integration within the institutional context of the country. **Specific Activity Reports and a Final Integrated Report** are produced on the results, finally presented at a **Final Presentation Conference**.

In brief, the major outputs of the CAMP include <sup>19</sup>:

- Feasibility – Diagnostic Analysis
- Project Agreement and Terms of Reference
- Inception Workshop
- Technical Specifications for the individual CAMP activities
- National Participation Programme
- Final Reports on individual activities
- Final Integrated CAMP Report
- Follow-up proposals and Investment Portfolio
- Final Presentation Conference
- Report on the Presentation Conference

## **5.5 Goals and objectives**

CAMP projects are country-driven initiatives. They are adaptable to national needs and priorities relative to the broad framework of the UNEP/MAP mandate for sustainable development in the Mediterranean. Therefore, CAMP Cyprus will be an opportunity for Cyprus to draw upon and adapt MAP-PAP/RAC experience in coastal area management and a vehicle for addressing pressing issues that relate to the constraints to the existing policy and institutional framework on coastal areas. It will also be an opportunity for Cyprus to contribute to the enlargement of CAMP methodology and expertise in light of the Cyprus experience. Based on the merits and limitations of present management practices, CAMP Cyprus will explore future policy directions and instruments for translating proposals for policy changes into useable coastal planning and management tools. In other words, CAMP Cyprus will be designed to incorporate into the coastal policy process approaches and tools for improving the integration of sectoral policies and the harmonisation of environmental considerations with development objectives.

---

<sup>19</sup> UNEP/MAP: Formulation and Implementation of CAMP Projects, Operational Manual, 1999

There is broad agreement among the national experts and NGOs in Cyprus that plans, policies and programmes for coastal protection are set back by insufficient institutional and policy coordination and lack of consensus on priorities. While good quality plans and policies exist for all aspects of the coastal environment, they are sectorally focused, have priorities that conflict with local visions or objectives for other sectors, and remain partially implemented or under long periods of review due to the fragmentation of visions and departmental responsibilities. Work pressure of daily tasks is also a contributing factor. The Case Studies presented above illustrate some of the salient problems.

**This preparatory diagnostic work for CAMP Cyprus records the growing awareness that attention should be addressed to these problems. How to tackle these problems and which approaches will be most successful are priority questions shared by all experts and representatives interviewed.**

In summary, the key objectives of CAMP Cyprus will include:

- Increase awareness of the need for integrated coastal area management
- Explore tools and approaches that strengthen the integration of policies on coastal management
- Expand the dialogue among national experts, local authorities and private sector representatives
- Identify institutional arrangements for establishing common coastal area management objectives and priorities
- Provide guidelines for incorporating in the policy framework tools for cross-sectoral assessment of coastal resource protection and development.

## 6.0 PROJECT AREA

### 6.1 Which is the coastal area?

The term “*coastal*” is in synonymous with the *land-sea interface*, in other words where land and water meet. A more widely accepted and most frequently used definition is the area that includes ***the land affected by its proximity to the sea and that part of the sea affected by its proximity to the land.***<sup>20 21</sup>

A few key conceptual issues should be clarified before going further to the identification of the CAMP Cyprus project area.

- A coastal area is primarily a **planning / management** rather than a geographical entity. Its definition and demarcation are intended to serve planning and management objectives.
- A coastal area is **broader** than a coastal zone or strip. A coastal area includes the coastal strip or zone but is not limited to the physical / morphological characteristics of the land-sea interface or the legal definition of a particular land use zone (tourist zone or foreshore protection zone). A coastal area covers the sources of pressures that create changes, problems and impacts on the land-sea interface resources.
- And more importantly, a coastal area is an **issue-led** policy component. The definition of a coastal area is an operational instrument aiming to provide a focus on significant development and environmental issues that point to the need for policy responses.

Given the multi-sectoral nature and multi-use significance of coastal resources and their problems, the need for an integrated coastal area management process means that the definition of a coastal area cannot be confined to the characteristics of any one resource or problem. The coastal area should be perceived in terms of the policy context for which it is defined.

The ICAM methodology, which underlies CAMP, as well as other integrated coastal area projects, is flexible and adaptable to the coastal problems prevailing in each particular country. CAMP initiatives in the Mediterranean exhibit this diversity as reflected in the focus and content of various projects, particularly with respect to the geographical, environmental, institutional and socio-economic emphasis in each one. Some selected examples<sup>22</sup> highlighting this point include the following:

- The National Master Plan for the Coast of Israel and CAMP Syria are initiatives at national level, where the emphasis is placed on integrated planning, institutional and policy reforms and investment planning.
- SDAGE in France is a regional level initiative and addresses mainly pollution and water resource management, relating coastal and river basin areas.

<sup>20</sup> UNEP: Guidelines for Integrated Management of Coastal and marine Areas – with special reference to the Mediterranean Basin, UNEP Regional Seas Report and Studies No. 161, Split, Croatia, MAP/PAP/RAC, 1995

<sup>21</sup> EU Demonstration Programme on Integrated Management of Coastal Zones (Thematic Study F), by J.P.Doody, C.F. Pamplin, C. Gilbert and L. Bridge, Dec. 1998

<sup>22</sup> UNEP/MAP/PAP: Good Practice Guidelines for Integrated Coastal Area Management in the Mediterranean, Split, PAP, 2001

- CAMP Malta and CAMP Rhodes are island level projects focusing on the complexity of the development / environment process that affects the whole territory and the whole policy spectrum.
- CAMP Kastella bay and CAMP Ismir are area-specific projects within a regional context, due to the linkages of the bays to the environmental threats from the hinterland settlements and economic activities.
- Venice Lagoon is a local level but multi-sectoral project due to the strong interactions of ecological, historical and tourism issues.

## 6.2 CAMP Cyprus Area

The problems affecting the coastal environment in Cyprus, notwithstanding local characteristics and differences of degree, exhibit an overriding uniformity due to the small size of the island and the dominance of tourism development that accounts for sub-urbanisation and coastalisation of the island's socio-economic development process. In a sense, the "area affected by the proximity to the sea" **is the whole of Cyprus**. Not only the rapid pace of coastal development is influenced directly by the presence of the sea, which is obvious, but also the economic and population decline of the hinterland areas are indirectly affected by the pull of resources to the coastal areas that offer diverse coast-based economic opportunities.

Also, the development pressures, implementation constraints and policy issues in Cyprus are largely common to all coastal areas and indeed underlie the development / environment interactions and the multiple threats to the quality of the coast. Despite occasionally different local manifestations, the pressures for the expansion of tourist zones, the loss of agricultural land, the transformation of village settlements into tourist centres, or the local reactions against various levels of coastal protection are uniform and share a common relationship to the whole policy and institutional framework.

Two possible options concerning the area of CAMP Cyprus are conceivable:

- To identify a particular geographical area (either a "hot spot" area or a newly developing area, or even an area including both cases), or
- To address CAMP Cyprus to the whole island in view of the common issues and policy challenges that affect current and particularly future management approaches to the coastal areas.

The first choice is considered inappropriate because it would confine CAMP Cyprus to a section of the coastal environment, restricting its scope to only **part** of the wider development and policy issues. Also, the results derived from a local CAMP Cyprus would, at best, apply primarily to the spatial context of the chosen area. Due to the small size of Cyprus, local lessons would be of limited regional (Mediterranean) importance however well studied and documented.

Most importantly, however, the proposal of the Government of Cyprus for the CAMP is based on the need to address existing gaps in the policy framework for coastal planning and management and to explore and introduce of tools of integrated coastal area management with a view to strengthening and harmonising the policy process. Therefore, notwithstanding the evident need to ensure a spatial component in CAMP Cyprus, through the structure of the proposed project activities, the selection of a specific CAMP Area would deviate from the project objectives of focusing on policy tools.

The second choice is therefore proposed for adoption based on considerations that also include the following:

- Responding to the needs expressed in the proposal of the Cyprus Government to MAP
- Following up on the discussions held with PAP/RAC mission to Cyprus in September 2001
- Following the broad views and inclinations expressed by the national experts and representatives met during the preparation of this Report.

Also,

- Ensuring greater relevance of CAMP Cyprus to the policy problems in Cyprus
- Increasing participation of a wider group of national and local authorities, and other stakeholders
- Expanding the future applicability of the results to the whole area and policy spectrum in Cyprus (including in the future, when political circumstances permit, the northern part of Cyprus)
- Generating lessons for similar policy problems encountered in other countries in the Mediterranean region
- Contributing to the improvement of ICAM by highlighting the applicability of decision-making tools pertaining to various spatial levels

## 7.0 THE CAMP CYPRUS PROJECT

### 7.1 Project Activities

The Activities proposed will concentrate on the elaboration and participatory application of three important tools of coastal zone management (Strategic Environmental Assessment, Carrying Capacity Assessment and Resource Valuation) within the context of MAP's Integrated Coastal Area Management (ICAM) methodological framework.

Two main core Project Activities are proposed:

#### **I. Integrated Coastal Zone Management, and**

#### **II. Tools of Integrated Coastal Zone Management, comprising**

##### **(i) Strategic Environmental Assessment**

##### **(ii) Carrying Capacity Assessment**

##### **(iii) Resource valuation**

All three tools have overlapping objectives and share common principles relating to policies and the practice of planning and management of coastal resources.

#### **I. Integrated Coastal Zone Management**

This will be the core framework Activity aiming to draw upon and elaborate the existing knowledge and practice in coastal planning and protection in Cyprus, enriched and expanded with reference to the UNEP-MAP and PAP/RAC cumulative experience in the Mediterranean. The primary aim of this activity is to provide a framework for presenting, analysing and critically evaluating the achievements and limitations of existing approaches, stimulating dialogue and deepening an understanding for future policy directions.

The core element in this Activity will be the active participation of national experts, spokesmen of relevant private sector organisations, local authorities and NGOs reviewing various constraints, needs and opportunities and identifying major areas of common concerns and avenues for co-operation.

This Activity will provide a meaningful context in which to explore the uses and limitations of existing coastal zone management tools and highlight the scope for and the contributions of additional or new tools suitable for Cyprus, to be elaborated in the second Activity described below, in light of the objectives for sustainable coastal zone management.

#### **II. Tools for Integrated Coastal Zone Management**

##### **(i) Strategic Environmental Assessment**

Strategic Environmental Assessment (SEA) is now a widely used tool for integrating environmental concerns into the preparation process of plans and programmes<sup>23</sup>. Its distinctive characteristic is the application of environmental assessment at the first strategic stage of policy-making, at the level of preparation of plans and programmes which form the context for subsequent individual projects that are reviewed by conventional EIA. In this sense, SEA is designed to broaden and deepen the scope of environmental assessment to include within its perspective the (strategic) choices and decisions associated with the early stage in the planning process (plans and programmes) that precedes proposals and designs of individual projects.

<sup>23</sup> Riki Therival, et. al. Strategic Environmental Assessment. Earthscan, London, 1994

The main advantages of SEA include the following:

- It is pro-active seeking to inform the development of plans and programmes;
- It identifies the environmental opportunities and constraints that should be reflected and addressed in plans and programmes;
- It highlights the environmental considerations and indicators consistent with sustainable development;
- It integrates cross-sectoral and cross-area problems;
- It takes into account cumulative effects and long-term expected changes;

SEA has recently been adopted by the EU in Directive 2001/42/EC. The Commission adopted in 1996 a Proposal on Environmental Assessment of certain plans and programmes. The proposal was amended by the Commission in 1999 after the European Parliament had its first reading, the amended text formed the basis for negotiations at Council level with the 15 Member States and in December 1999 the Environment Ministers reached agreement on a common text for the Directive adopted on 30/3/2000. The Directive states that *“the purpose of the SEA Directive is to ensure that environmental consequences of certain plans and programmes are identified during the preparation and before their adoption. Public and private authorities can give their opinion and all results are integrated and taken into account in the course of the planning procedure....and the national decision making process”*<sup>24</sup>.

Directive 2001/42/EC states in para 3 Contents: *“This Directive supplements the environmental impact assessment system for projects introduced by Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment.... This new Directive introduces a system of prior environmental assessment at the planning stage”...The Directive applies to plans and programmes liable to have significant effects on the environment and which are prepared and adopted by means of a legislative act; it also applies to amendments to such plans and programmes. Environmental assessment is automatically required for plans and programmes which are prepared for town and country planning, land use, transport, energy, waste management, water management, industry, telecommunications, agriculture, forestry, fisheries and tourism and which provide the framework for subsequent consent for specific projects listed in Annexes I and II to Directive 85/337/EEC. The same applies to the adoption of plans and programmes liable to affect sites protected by Directive 92/43/EEC and for which an assessment is required under that Directive.”*

Cyprus will have to adopt SEA within a period of two years of the publication of the Directive and therefore better knowledge, deeper understanding and implementation of this Directive is imperative. CAMP Cyprus will thus streamline this tool into its Activities.

Activities will aim to improve understanding of the importance, scope, institutional arrangements and expected results from the application of SEA and will include the following:

- Consultations of senior national experts and decision-makers in key public and private sector organisations whose actions affect the formulation and implementation of plans and programmes relevant to coastal zone management. Consultations will involve workshops at two levels: A workshop at the level of Departmental and Ministry experts, and two workshops at District level – one for Paphos and Limassol and one for Larnaca and Famagusta.
- Pilot application of SEA on a selected case study area by a group of national experts guided by an expert MAP consultant reporting on the results, lessons and experiences to the wider consultative group.

---

<sup>24</sup> SEA-Proposal (COM (96) 511 Final English version

- Preparation of a Report containing the institutional arrangements, responsibilities and procedures for instituting SEA in the planning process of Cyprus.

### **(ii) Carrying Capacity Assessment**

Carrying Capacity Assessment (CCA) has become one of the main techniques of tourism and recreational planning and management<sup>25</sup>. Its aim is to determine the upper desirable limited of development relative to defined planning objectives, i.e sustainable development. There are numerous examples of tourism areas where the carrying capacity has been exceeded with consequences for the quality of the natural, cultural and other resources that attract and support tourism activity<sup>26</sup>. The incorporation of CCA in tourism and land use planning results in a set of guidelines and instructions for assessing alternative development options and patterns, highlighting qualitative and quantitative indicators for identifying development thresholds on the basis of which to formulate and debate tourism and land use plans. The scope of CCA is of considerable interest to public and private sector equally given that sustainable development according to the carrying capacity of coastal resources enables and justifies the implementation of sound public sector planning measures and protects the resources on which the profitability of present and future private sector investment depends. In CCA, an integrated framework is established for consideration of development options and constraints with reference to (i) physical and ecological parameters, (ii) socio-demographic parameters, and (iii) economic and political parameters.

Activities will aim to improve understanding of the importance, scope, institutional arrangements and expected results from the application of CCA and will include the following:

- Consultations of senior national experts and decision-makers in key public and private sector organisations whose actions affect the formulation and implementation of plans and programmes affecting coastal zone management. Consultations will involve workshops at two levels: A workshop at the level of Departmental and Ministry experts, and two workshops at District level – one for Paphos and Limassol and one for Larnaca and Famagusta.
- Pilot application of CCA on a selected case study area by a group of national experts guided by an expert MAP consultant reporting the results, lessons and experiences to the wider consultative group.
- Development of a Report containing the institutional arrangements, responsibilities and procedures for instituting CCA in the planning process of Cyprus.

### **(iii) Resource Valuation**

The fundamental principle that underlies the entire approach of CAMP to CZM is integration. Integration is not limited to an approach that assesses all the resources of the coastal environment and all the pressures on them as a whole system, but should include the integration of the policies that are needed to address pressures and impacts. An area where integration is needed most is that between the physical environment and its components and the market economy which is particularly active in the coastal areas of Cyprus.

Resource Valuation (RV) is a tool that places monetary values on resources to incorporate in management decisions the main costs of environmental damage and the benefits of

<sup>25</sup> PAP/RAC Guidelines for carrying Capacity Assessment for Tourism in Mediterranean Coastal Areas, PAP-9/1997, Split. (Also in French, Directives pour l' evaluation de la capacite d' accueil en matiere de tourism dans les regions littorales mediterraneennes)

Also, PAP/RAC Methodological Framework for Assessing Tourism Carrying Capacity in Mediterranean Coastal Zones, 1990

<sup>26</sup> World Bank, Republic of Cyprus: Environmental Review and Recommendations, 1992

conservation. It contributes to a two-way closing of the gap between physical-environmental and economic assessment: introduces the parameter of *environmental quality* in economic assessment and that of *economic value* in environmental assessment.

RV contributes to coastal management in two important ways:

- It generates economic information for the design of appropriate coastal management policies taking into account the value of resources in conservation relative to the development value of resources so it will be possible to bring within the policy process the gains and losses of policy options to society<sup>27 28</sup>. Without such information it is difficult to know if we are over-protecting or under-protecting the environment. Decision-makers often react against environmental policies because they perceive them as conflicting with economic development that Government is expected to promote.
- It increases awareness of the economic losses of existing practices and builds up public support for implementation of coastal management measures designed to save resources that are economically valuable beyond their intrinsic ecological value, thus demonstrating national and local level benefits and justifying in economic terms increased investment in coastal protection and management.

The EU has recently completed a study of the benefits to the EU accession candidate countries (including Cyprus) of compliance with the environmental Directives and other related elements of the *Acquis*. The study was motivated by the need to identify, assess and measure the *benefits* of harmonisation with EU Directives thus bringing a balanced assessment of the consequences of harmonisation, which was previously focused on the *costs* of harmonisation<sup>29</sup>. Related recent EU initiatives show the increased emphasis of the EU on benefits assessment of environmental policies, including CZM<sup>30</sup>.

Activities will aim to improve understanding of the importance, scope, institutional arrangements and expected results from the application of RV and will include the following:

- Consultations of senior national experts and decision-makers in key public and private sector organisations whose actions affect the formulation and implementation of plans and programmes affecting coastal zone management. Consultations will involve workshops at two levels: A workshop at the level of Departmental and Ministry experts, and two workshops at District level – one for Paphos and Limassol and one for Larnaca and Famagusta.
- Pilot application of RV on a selected case study by a group of national experts guided by an expert MAP consultant reporting the results, lessons and experiences to the wider consultative group.
- Development of a Report containing the institutional arrangements, responsibilities and procedures that could be followed for instituting RV in the planning process of Cyprus.

---

<sup>27</sup> Cost Benefit of measures for the reduction of degradation of the environment from land-based sources of pollution in coastal areas: Case Study of the Bay of Izmir, T.I. Balkas & F. Juhasz, Case Study of the Island of Rhodes, Glafkos Constantinides, MAP Technical Reports Series No. 72, UNEP, 1993

<sup>28</sup> Economic Report, National Forestry Action Programme, Cyprus Department of Forestry / FAO, 1998

<sup>29</sup> DG Environment – Enlargement Unit & ECOTEC, Benefits of Compliance with the Environmental Acquis for the Candidate Countries, 2001. A summary of this Report was presented to the Green Spider (European Environmental Communication Network) Annual meeting in Nicosia 7-11 November 2001

<sup>30</sup> An Assessment of the Costs and Benefits of Integrated Coastal Zone Management, Final Report, EU Demonstration Programme on Integrated Coastal Zone Management, Nov. 2000

## 7.2 Project Methodology

Project methodology will follow the broad framework of the guidelines of the UNEP/MAP<sup>31</sup> and the accumulated experience of the CAMP in several other Mediterranean countries<sup>32</sup> outlined earlier in this Report. In addition, CAMP Cyprus will follow a methodology aiming to address the specific problems in Cyprus, which will comprise the following main elements:

### ◆ Participation

- Participation of public sector experts as key resource persons in the Project Activities
- Active involvement of local authorities, private sector representatives and NGOs in the workshops.

### ◆ Demonstration

- Demonstration of the use, value and future development of tools of ICZM with reference to concrete issues in Cyprus.

### ◆ Incorporation

- Derivation of policy conclusions on specific tools of CZM, framed in terms of the requirements for their incorporation into the Cyprus policy and institutional framework.

### ◆ Follow-up

- Formulation of future actions and proposals for immediate, medium term and longer-term priorities.

## 7.3 Project Organisation

The implementation of CAMP Cyprus project will be the responsibility of the Environment Service of the Ministry of Agriculture, Natural Resources and Environment as focal agency for MAP. The organisation of the Project will include two main functions:

- A. Project Management, and**
- B. Work Tasks**

### A. Project Management

The management structure will include three main components:

**Overall implementation responsibility:** Responsibility towards the executing agency MAP-PAP/RAC for the implementation of CAMP Cyprus as a whole will be exercised by the Director of the Environment Service in his capacity as Project Director, assisted by his staff. This will include:

- Approval of the Project Document and its contents
- Approval and authorisation of Project Activities
- Consultations with the Minister of Agriculture, Natural Resources and Environment
- Consultations with the project executing agency MAP-PAP/RAC
- Chairing the project Steering Committee

<sup>31</sup> PAP/RAC Guidelines for ICZM in the Mediterranean Basin, 1996, UNEP/MAP Formulation and Implementation of CAMP Projects, 1999

<sup>32</sup> UNEP/MAP Good practice Guidelines for ICAM in the Mediterranean, 2001, UNEP/MAP/PAP White Paper on CZM in the Mediterranean, 2001

**Steering of project activities:** Responsibility for the implementation of Project Activities will be exercised by a Steering Committee composed of representatives of the main participating Departments and Organisations (or “focal persons”). This will include:

- Advising the Project Director on all aspects of the Project
- Submitting proposals for specific actions within the framework of the Project Document
- Reviewing and commenting on work progress and project outputs
- Facilitating the uninterrupted implementation of Project Activities
- Providing technical information, experience and knowledge relevant to the project
- Providing links with respective Departments / Organisations and ensuring closer contact with their activities and concerns

**Co-ordination of activities:** Responsibility for co-ordination of Activities at the level of the working teams will be exercised by the MAP-PAP/RAC Project Co-ordinator. This will include:

- Working closely with the Project Director and his staff on project activities and administration
- Preparation of the Inception Report, Project Terms of Reference and Technical Specifications
- Maintain regular contact with PAP/RAC as CAMP Cyprus executing agency
- Providing technical support to the working teams
- Co-ordinating the work of the PAP/RAC Consultants
- Preparing Project progress reports
- Ensuring delivery of project outputs (Activity Reports and Draft Final Project Report)
- Participating in project activities and Steering Committee meetings

## **B. Work Tasks**

Work tasks will be carried out by Working Teams composed of two elements:

- National experts drawn from the participating Departments / Organisations, and
- MAP - PAP/RAC expert consultants.

There will be three such Working Teams, one for each Activity, headed by a Team Leader drawn from the staff of a relevant Department.

For each Activity there will be an international MAP - PAP/RAC consultant guiding, advising and carrying out the tasks assigned by the Project Director.

## **7.4 Project Resources**

### **7.4.1 Database**

On the basis of the research carried out and the contacts established with the relevant Ministries / Departments in the context of this Report, information has been collected concerning the available database, including the following:

#### **Planning Bureau (PB)**

- Current and recent National Accounts and Economic Indicators
- Current Economic Review of all Economic Sectors
- Current and recent Development Budgets
- Social Accounting Matrix for the Cyprus Economy (Input-Output Norms)
- GIS Socio-economic Database by village

#### **Department of Town Planning and Housing (DTPH) Ministry of Interior (MI)**

- Town and Country Planning Law (Greek and English)
- Local Plans for Nicosia, Limassol, Larnaca, Paphos, Polis, Dherinia
- Local Plan Reports (in Greek)
- Development Plans and Land Use-Density Zoning Plans for all Local Plan Areas (scale 1:25,000, 1:10,000, 1:5,000)
- Zoning Plans for all villages (scale 1:25,000, 1:5,000)
- Zoning Map and Protected Areas (scale 1:100,000)
- Register of Planning Applications (almost fully updated)
- Analysis of development trends and planning data for all Local Plan Areas (in internal departments documents)
- Departmental Reports (including Cyprus National Report: Habitat - UN Conference on Human Settlements, Vancouver 1976, Istanbul, 1996, Regional Planning in Cyprus, 1997)

#### **Cyprus Tourism Organisation (CTO)**

- National Laws on tourism, tourism accommodation and facilities
- National Tourism Strategy 2000-2010 (in Greek and English)
- Internal Reports on current and recent tourism policy issues
- Annual Tourism Statistics (Accommodation capacity by category and location, Arrivals, Expenditure, Receipts)

#### **Environmental Service (ES) Ministry of Agriculture, Natural Resources and Environment (MANRE)**

- Environmental data and GIS base maps for all the 31 Natura 2000 identified sites (7 sites are in the north of Cyprus)
- Progress Reports on the Alignment of National Environmental Legislation to the EU Acquis
- EIA Reports (about 125) on proposed development submitted for evaluation (in Greek)
- Draft Cyprus Framework Law for the Environment (in Greek)
- Law on EIA, Protection of Nature, Public Access to Information, Waste Management (in Greek)
- Various internal progress and position Reports (in Greek)

#### **Coastal Unit - Ministry of Communications & Works (CU – MCW)**

- Database on morphological conditions of the coastline of Cyprus (Coastal Protection Study)
- Detailed database of selected parts of the coastline (Tylliria bay, Chrysochou Bay and Zygi-Kiti Area)

- Various specialised reports and maps for specific coastal strips

#### **Geological Survey Department (MANRE)**

- Memoir Reports No. 1-9 (covering the geological profile of various areas of Cyprus)
- Bulletins No. 1-9 (covering specific geological issues in various areas of Cyprus)
- Geological Books No. 1-7 (covering various topics)
- Geological Map of Cyprus (scale 1: 250,000)
- Geological Maps for all areas of Cyprus (scale 1: 50,000, 1:25,000)
- GIS base geological maps
- Hydrological Map of Cyprus (scale 250,000)
- Boreholes Map of all areas of Cyprus (1:50,000)
- Mineral Resources Map of Cyprus (scale 1:250,000)

#### **Forestry Department (MANRE)**

- Maps of all National Forest Areas
- GIS maps of all *Natura 2000* sites
- Reports on aspects of Forestry Sector comprising the National Forestry Action Plan

#### **Water Development Department (MANRE)**

- Hydrological Maps for all areas of Cyprus (scale 1: 50,000. 1: 25,000, 1:10,000)
- Water Balance data for all coastal areas
- Technical Reports for all dams in Cyprus
- Comprehensive data and GIS maps to be released (September 2002) by the Cyprus Government / FAO Project "Reassessment of the Island's Water Resources and Demand"
  - Updated water resource database supported by GIS software and hardware
  - Hydrological study examining trends in recorded rainfall
  - Rainfall/runoff model, linked to the undated database, applied for water resources studies and user's manual to provide tools for evaluating implications of future water management and infrastructure.
  - Updated study of current and projected surface and groundwater resource availability.
  - Water use study supported by GIS technology. This will include domestic, tourist, industrial and agricultural water use.
  - Study of the performance and effectiveness of th existing water monitoring networks.
  - The water sector legal framework
  - Technical documentation on current and projected water supply and demand and management options

#### **Department of Fisheries and Marine Research (MANRE)**

- Data on fish stock and marine resources diversification
- Register on professional and sport fishing licenses
- Legal framework on fisheries, aquaculture and fishing shelters construction
- Seawater quality monitoring database
- Databank on aquaculture development
- Databank on marine ecology and biodiversity
- Oceanographic databank
- Satellite Vessel Monitoring System (VMS)
- Maps and reports on fishing shelters and coastal construction schemes

### 7.4.2 Manpower

The core manpower of the Project will be national experts representatives of the participating Ministries, Departments and Services. This will ensure a double objective: to bring within the Project current national and local experience and knowledge relevant to the problems and concerns of Project, and to maximise the benefit from the Project Activities for the national and local authorities. Work Teams will be supported by MAP International Consultants.

### 7.4.3 The Role of MAP and RACs

The Co-ordinating Unit of MAP (MEDU) will act as the overall International Project Co-ordinator and will be responsible for exercising guidance and supervision of the implementation of the Project, in co-operation with the Environment Service of MANRE as the National Project Lead Authority.

PAP/RAC will act as the MAP Project Implementing Centre and will be responsible for co-ordination, guidance and implementation of the Project, in co-operation with the Environment Service, as the National Project Lead Authority, and the MAP-PAP/RAC Project Co-ordinator. PAP/RAC will also co-ordinate the activities of the other RACs involved in the Project and will be responsible for the preparation of the Final Project Reports.

The RACs involved in the Project will be responsible for providing, under the logistical co-ordination of PAP/RAC and in co-operation with the relevant responsible national authorities, specific expertise in connection with Project Activities.

### 7.4.4 Budget

Preliminary Outline of Budget Framework (in US\$)

	MAP		Cyprus Government		Total
	In cash	In kind	In cash	In kind	
MAP/PAP Consultants	100	-			100
National Consultants	30	-	-	80	110
International Travel	30	-	-	-	30
Travel in Cyprus	-	-	10	-	10
Workshops	60	-	10	-	70
Preparation of Reports	50	-	20	10	80
Hospitality	-	-	20	-	20
Contingencies	30	-	5	10	45
Total	300	-	65	100	465

Summary Budget

Source	Amount	%
MAP	300	65
Cyprus Government	165	35
Total	465	100

*Note: This is a tentative budget framework. All figures are subject to modification and approval, particularly the cash contribution by the Cyprus Government.*

### 7.5 Project Timeframe

The project timeframe and calendar of proposed actions are as follows:

<b>Project Phase</b>	<b>Activity</b>	<b>Date</b>
<b>Project Preparation</b>	Approval of Diagnostic Report by Government	Oct – Nov 2002
	Signature of Project Agreement	December 2002
	Preparation of Project Inception Report	February 2003
	Activity Terms of Reference and Technical Specifications	February 2003
	Establishment of Coordination Committee	February 2003
	Project Inception Workshop	March 2003
<b>Project Implementation</b>	Working Teams Activities	April 2003– April 2004
	Preparation and submission of Project Activity Reports	July 2004
	Preparation of Draft Integrated Project Report	Sep – Oct 2004
	Project Presentation Conference	November 2004
	Preparation of Final Integrated Report (including follow-up proposals)	December 2004
<b>Post Project Activities</b>		January 2005

## **8.0 PROJECT FEASIBILITY AND PROJECT BENEFITS**

### **8.1 Feasibility**

In the process of the preparation of this Report, in its role as the CAMP Cyprus Diagnostic – Feasibility Report, contacts have been established and exchanges held with a wide range of experts and representatives of relevant Departments and Organisations. In the context of these exchanges the objectives of CAMP Cyprus were explained relative to the respective area of expertise and the wider issues of coastal area management. The exchanges also focused on:

- The concerns for the existing problems
- The policy issues concerning the coastal areas
- The experiences in policy-making and coordination problems
- The need for effective cross-departmental links
- The merits and limitations of present policies and practices
- The perception of the need for improving the policy process
- The problems likely to be encountered in the future
- The need felt for exploring tools for strengthening integration in coastal management
- The wider benefits of coastal protection and the justification for CAMP Cyprus
- Data availability for CAMP Cyprus and willingness for participation

The conclusions that emerged from these exchanges confirm the need for CAMP Cyprus and highlight a common concern for pursuing the activities proposed. There is a common view that, despite the existence of legislation and high level expertise in planning and management, the fragmentation of responsibilities and the often divergent priorities on environmental management along national / local and departmental lines, need to be addressed within the broad framework of the institutional setting of Cyprus.

It also emerged that CAMP Cyprus will help towards the implementation of key aspects of the EU Environmental *Acquis* bringing issues of sustainable development within the coastal management process. In doing so, the results of CAMP Cyprus will be useful to other Mediterranean countries that share the concern for implementing sustainable development.

In addition, the key reflections and conclusions of this Report have been discussed with the Director of the Environment Service and his colleagues, who provided valuable insights and comments.

### **8.2 Expected Project Benefits**

The launching and implementation of CAMP Cyprus achieve the following main benefits:

- Will fulfil the need for incorporating a policy direction for integrated coastal area management within the Cyprus institutional framework, as expressed in the proposal of the Cyprus Government to MAP;
- Will link Cyprus more closely to the network of CAMP in the Mediterranean and the activities of the MAP/RACs;
- Will respond to a widely felt need among national experts and private sector organisations to better manage and protect the coastal environment on which the economy of Cyprus depends;
- Will contribute towards environmental awareness in development policy and particularly the “inclusion” of local perspectives on the environment/development interactions currently missing;

- Will increase appreciation of cross-cutting implications of development/conservations options relative to capacity constraints, strategic considerations, long term benefits and the environment as a scarce resource;
- Will build up experience and readiness to apply tools of Integrated Coastal Area Management to all Cyprus, including in the future, when political circumstances will hopefully soon permit, to the northern part of Cyprus;
- Will generate lessons for similar policy problems encountered in other countries in the Mediterranean region;
- Will contribute to the improvement of ICAM by highlighting the applicability of decision-making tools pertaining to various spatial levels.

## List of References

### A. Government publications

- Ministry of Agriculture, Natural Resources & Environment, Adoption of the European Union Acquis Communautaire, Environment – Current State, 2001
- Ministry of Agriculture, Natural Resources & Environment, Environment Service & University of Athens, Marine Environment and Coastal Zones, MEDACT – Aphrodite Project, EU/LIFE-Third Countries, 1998
- Environment Service, Draft Framework Law for the Environment, 1995
- Natura 2000, Programme for Special Protection Areas, 2001
- Various internal policy review papers and information pamphlets, 1996-2001
- Environment Service & Dept. of Town Planning & Housing, Policies for Sustainable Development of Mediterranean Coastal Areas – Cyprus Report, (Paper presented at MAP/PAP/RAC Sandorini Workshop, 1996
- Dept. of Town Planning & Housing, Local Plans, Limassol, Larnaca, Paphos, Polis, 1996, 1999
- Statement of Policy for the Countryside, 1996, 1999
- National Report of the Republic of Cyprus, Habitat II + 5, 2001
- National Report of the Republic of Cyprus, Habitat II, Second UN Conference on Human Settlements, Istanbul, 1996
- National Report of the Republic of Cyprus, Habitat I, 1976, First UN Conference on Human Settlements
- Town and Country Planning Law, 1972
- Management Plan for the Larnaca Salt Lakes, 1997
- Various Departmental policy review papers, 1990-2000
- The Island Plan, Cyprus Planning Project, 1970
- (& Prof. Robert KcKie) Compensation and Betterment in Cyprus, 1972
- (& Prof. Robert MacKie) Land Values & The Cyprus Town Planning Law, 1973
- (& UNDP) Nicosia Master Plan Report, 1984, 1985
- (William Doebelle), Land Policy Measures – Nicosia Master Plan Review Report, 1994
- Ministry of Interior, Guidelines for the Revision of Local Plans, 2000
- Annual Reports, 1996-2001
- Union of Municipalities, Local Authorities in Cyprus in view of the Accession to the EU, 2000
- The Municipal Law of 1985 (Summary), 2000
- Planning Bureau, Economic Review, 2000
- Economic and Social Indicators, 2000
- Pre-Accession Economic Programme, 2001
- GIS Database, 2002
- Cyprus Tourism Organisation, Annual Reports, 1996-2001
- & Tourism & Leisure Partners, Preliminary Strategic Review, 1998
- Strategy of Tourism, 2000
- (Internal policy document) Nautical Tourism in Cyprus, 1998
- Dept. of Statistical Services, Population Censuses, 1982, 1992, 2002
- Forestry Dept. / FAO, National Forestry Action Programme, 1998

- Water Development Dept., Water Balance Reassessment Project Report, (forthcoming)
- Ministry of Communications and Works (Coastal Unit), Coastal Protection Study Report, 1996
- Inter-Departmental Report, Natura 2000 Sites, & Standard Data Forms, LIFE-Third Countries, 2001
- Public Information Office, 2000, The Almanac of Cyprus

## **B. UNEP- PAP/RAC Publications**

- Guidelines for Integrated Management of Coastal and Marine Areas with Special Reference to the Mediterranean, Regional Seas Report and Studies No. 161, 1995
- Guidelines for Carrying Capacity Assessment in the Mediterranean, 1997
- Formulation and Implementation of CAMP Projects – Operational Manual, 1999
- Good Practices Guidelines for Integrated Coastal Area Management in the Mediterranean, 2001
- White Paper: Coastal Zone Management in the Mediterranean, 2001
- Workshop Report on Policies for Sustainable Development of Mediterranean Coastal Areas, Technical Report Series No. 114
- CAMP: Improving the Implementation, Malta Workshop 2002 (Main Report forthcoming)
  - Summary Reports on:
    - CAMP Albania
    - CAMP Kastela Bay-Croatia
    - CAMP Fuka-Matruh-Egypt
    - CAMP Rhodes
    - CAMP Israel
    - CAMP Bay of Izmir-Turkey
    - CAMP Malta
- Th. Panayotou, 1994, Financing Mechanisms for Environmental Investment and Sustainable Development (Environment and Economics Unit)

## **C. METAP Programme**

- Environmental Review and Recommendations, 1992
- Assessment of Integrated Coastal Area Management Initiatives in the Mediterranean – Experiences of METAP and MAP (1988-96), 1998
- (& Cyprus Government) Conservation Management Plan for the Akamas Peninsula, I & II, 1993, 1995

## **D. EU-European Commission**

- Lessons from the European Commission's Demonstration Programme on Integrated Coastal Area Management 1997-99, 1999

-ESDP European Spatial Development perspective – Towards balanced and Sustainable Development of the territory of the EU, 1999

-(European Environment Agency – European Assessment Series No. 5) State and Pressures of the Marine and Coastal Mediterranean Environment, 1999

-(European Environment Agency – Domingo Jimenez-Beltran) Environment in the EU at the turn of the Century, 1999

-The EC Directive on The Assessment of the Effects of certain Public and Private Projects on the Environment (85/337/EEC)

-The EC Directive on The Assessment of the Effects of certain Public and Private Projects on the Environment (2001/42/EC- Strategic Environmental Assessment)

## **E. Other publications**

-M. Attalides, Urbanisation in Cyprus, 1972, Cyprus Social Research Centre

-Gl. Constantinides, Costs and Benefits of measures for the Reduction of Degradation of the Environment from Land-Based sources of Pollution in Coastal Areas – Case Study of the Island of Rhodes, MAP Technical Reports and Series No. 72

-J. Clark, 1992, Integrated Management of Coastal Zones, FAO Technical Fisheries Paper 327

-T.E. Chua et. al. (ed.), 1992, Integrative Framework and Methods of Coastal Area Management, ICLARM, Manila

-Gl. Constantinides, Cyprus Forestry Action Programme (Economic Report), Dept. of Forestry /FAO, 1998

-Gl. Constantinides, 2002, Economics in Coastal Area Management Programme, in CAMP Improving Implementation (forthcoming)

-Dept. of Environmental Affairs and Tourism, South Africa, 2000, Strategic Environmental Assessment, Guideline Document

-B. Glass, Development Perspectives in the Mediterranean for the year 2025, Les Cahier du Conservatoire du Littoral No. 10

-J. Glasson et. al., Introduction to Environmental Impact Assessment, University College London, 1994

-N. Hanley & C.L. Spash, 1995, Cost-Benefit Analysis and the Environment, London

-Imperial College London, 2001, SEA and Integration of the Environment into Strategic Decision-making, ICON Consultants

-F. Juhasz, Costs and Benefits of measures for the Reduction of Degradation of the Environment from Land-Based sources of Pollution in Coastal Areas – Case Study of the Bay of Izmir, MAP Technical Reports and Series No. 72

-Robert Kay & Jacqueline Alder, 1998, Coastal Planning and Management, Spon Press

- D.W. Pearce et.al., Blueprint for Survival, Earthscan, 1992
- D.W. Pearce, 1994, Introduction to Environmental Economics, London
- D.W. Pearce & D. Moran, 1996, The Economic Value of Biodiversity, London
- D.W. Pearce, 1992, The Economics of the Natural World, World Bank Background Paper
- J. C. Sorensen et. al., 1990, Institutional Arrangements for Managing Coastal Resources and Environments, USAID
- Brian Shipman, 2002, Increasing the Effectiveness of Coastal Zone Management: Optimal conditions vs. Practical Realities, paper presented at MAP/METAP Workshop CAMP Improving the Implementation
- R. Therival et. al., 1992, Strategic Environmental Assessment, Earthscan, London
- R. Therival et. al., 1995, Case Studies in Strategic Environmental Assessment, Earthscan, London
- A. Vallega, Fundamentals of Integrated Coastal Management, 1999, Kluwer Academic Press, The Netherlands
- OECD, 1993 Coastal Zone Management, Selected Case Studies, Paris
- UNCED (Rio Conference) 1992, Conference on Environment and Development

**ANNEX I Persons interviewed****Environment Service**

Mr. Nicos Georgiades, Director  
Mr. Andonis Andoniou, Senior Environment Officer  
Ms. Myroula Hadjichtistofotou, Environment Officer

**Department of Town Planning & Housing**

Mr. Stefos Papanicolaou, First Planning Officer  
Mr. Ermis Klokkaris, Senior Planning Officer  
Mr. George Hadjimichael, Senior Planning Officer

**Ministry of Interior**

Mr. Andreas Ashiotis, Kyrenia District Officer, (in charge of Town Planning affairs in the Ministry of Interior)

**Planning Bureau**

Mr. Michael Leptos, Director, Planning Department  
Mr. George Georgiou, Senior Planning Officer  
Mr. Ninos Savvides, Director Coordination Officer  
Ms. Erine Piki, Planning Officer

**Forestry Department**

Mr. Alecos Christodoulou, Chief Conservator of Forests

**Public Works Department**

Nicos G. Iacovou, Head Coastal Unit  
Mr. Jason Sofos, Engineering officer, Coastal Unit

**Department of Fisheries and Marine Research**

Mr. Zanettos Loucaides  
Mr. Liozos Liozides

**Geological Survey Department**

Dr. Lenia Morisseau, Senior Geological Officer  
Mr. Chris Hadjigeorgiou, Geological Officer

**Water Development Department**

Mr. Iacovos Iacovides, First Executive Engineer  
Mr. Takis Ioannou, Senior Executive Engineer  
Mr. Nicos Chourtis, Senior Water Engineer  
Mr. Panicos Skordis, Executive Engineer

**Cyprus Tourism Organisation**

Ms. Phoebe Katsouri, Director of Planning  
Ms. Athena Metaxa, Senior Tourism officer  
Ms. Despo Symeou, Senior Tourism Officer  
Mr. Glafkos Katiolou, Tourism Officer  
Mr. Stelios Elaftheriou, Technical Officer

**Cyprus Ports Authority**

Mr. Andonis Toumazis, Director General  
Ms. Anthi Clerides

**Union of Municipalities**

Mr. Athos Germanos, General Secretary

**Municipality of Larnaca**

Mr. Eleftherios Embedoclis, Municipal Town Planner

**Municipality of Ayia Napa**

Ms. Varvara Pericleous, Mayor

Mr. Nicos Kallikas, Town Clerk

Mr. Athos Georgiou, Municipal Architect

**Municipality of Paphos**

Mr. Savas Savides. Municipal Engineer

**Municipality of Yeroskypou**

Mr. G. Gregoriou, Municipal Engineer

**Association of Cyprus Hoteliers**

Mr, Zaharias Ioannides, General Director

**ANNEX II - CYPRUS LEGISLATION CONCERNING THE MARINE ENVIRONMENT AND THE COASTAL ZONE**

<b>Marine environment</b>				
<b>Laws &amp; Regulations</b>		<b>Basic Provisions</b>	<b>Competent Authority</b>	<b>Enforcing</b>
1. Law Concerning the Control of Water Pollution (No. 69/91).		The Ministry of Agriculture, Natural Resources and Environment has the following responsibilities: - establishes quality targets for waters, including coastal waters - appoints pollution inspectors for checking permits - prepares and publishes general terms and conditions of discharge permits.	Ministry of Agriculture, Natural Resources and Environment.	
2. Consolidated Amending Regulations of 1990 (No. 273/90) adopted on the basis of Article 6 of the Fisheries Law.		-The disposal of litter in the marine environment is prohibited. - Maximum limits permitted for the disposal of a series of substances or compounds into the sea were adopted.	Fisheries Department of the Ministry of Agriculture, Natural Resources and Environment.	
3. Amendment (No. 170 of 1990) of the Fisheries Law.		- Increased the fine for polluting the sea from £3.000 to £30.000. - The Fisheries Department may impose an extra judicial fine of up to £5.000.	Fisheries Department of the Ministry of Agriculture, Natural Resources and Environment.	
4. Ratification Law (No. 51 of 1979) of the Barcelona Convention regarding protection of the Mediterranean from pollution as well as its two Protocols:		-General obligations of the signatory parties are established for the avoidance, reduction and combating of pollution in the Mediterranean. - Operating arrangements and mechanisms are established. - Systems of pollution monitoring are established.	Fisheries Department of the Ministry of Agriculture, Natural Resources and Environment.	
a) Protocol for the protection against pollution of the Mediterranean by waste from ships or aircraft (Dumping Protocol),		- The dumping of litter or other materials requires a permit from the competent authority. - Establishment of competent issuing permits and confidential file. - The substances whose disposal is prohibited are enumerated.	Ministry of Agriculture, Natural Resources and Environment and Fisheries Department	
b) Protocol for cooperation in the combating of pollution in the Mediterranean by petroleum products and other toxic substances (Emergency Protocol).		The Parties inter alia should maintain Emergency Plans and methods for combating pollution of the sea by petroleum products or other harmful substances either individually or through bilateral or multilateral cooperation.		
5. Ratification Law (No. 266 of 1987). It ratifies another two Protocols of the Barcelona Convention:				
a) Protocol for the protection of the Mediterranean from land-based sources,		- The various types of waste covered by the Protocol are established.	Ministry of Agriculture, Natural Resources and Environment.	

b) Protocol concerning protected areas of the Mediterranean.	<ul style="list-style-type: none"> <li>- Establishes supplementary substances whose disposal must be discontinued and the limits and conditions that should govern those whose disposal is permitted.</li> <li>- Criteria for the establishment of protected areas.</li> </ul>	
6. Consolidated Amending Regulations (No. 273/90) enacted under the Fisheries Law (CHAPTER 135).	They provide for the protection of turtles, seals, dolphins, as well as of the habitats of sea turtles during their breeding period (1/6 - 30/9 yearly).	Ministry of Agriculture, Natural Resources and Environment/ Fisheries Department.
7. Ratification Law (No. 57 of 1989). It ratified the International Convention regarding prevention of pollution of the sea by ships of 1973 and the relevant Protocol of 1978 and the Amendments of 1984.	<ul style="list-style-type: none"> <li>- The disposal from ships of polluting substances (wastes, sewage, litter) capable of causing pollution is prohibited.</li> <li>- The use of dispersants or other chemical detergents without a permit from the Fisheries Department is prohibited.</li> <li>- Establishes the obligations of ships and tankers entering the Republic's ports.</li> <li>- Establishes the obligation, in the event of pollution, to report to the competent authority and the Fisheries Department.</li> <li>- Establishes the penalties in case of pollution.</li> </ul>	Fisheries Department, Ministry of Agriculture, Natural Resources and Environment. Department of Merchant Shipping, Ministry of Communications and Works.
8. Regulations concerning undersea pipelines for carrying oil and other products (No. 151/1995).	Establish the specifications, maintenance, and operational conditions for undersea pipelines.	Ministry of Communications and Works.
9. Ratification Law (No. 63 of 1989), ratifying the International Convention concerning civil liability for damage from oil pollution of 1969, and its protocol of 1976 and provisions regarding related matters.	<ul style="list-style-type: none"> <li>- Establishes the areas of application, i.e. Cypriot ships wherever they may be, and foreign ships sailing in Cypriot ports or territorial waters.</li> <li>- Establishes penalties for breaking the law.</li> <li>- Adoption of judicial measures to collect the penalties.</li> </ul>	Department of Merchant Shipping, Ministry of Communications and Works.
10. Ratification Law (No. 14 (III) of 1997). Law Regarding the Ratification of the Protocol of 1992 which amends the International Convention regarding civil liability for damages from pollution.	Ratifies the amendments in the Protocol of 1992.	Ministry of Communications and Works.
11. Ratification Law (No. 109 of 1989). Ratifies the International Convention concerning the establishment of an international fund for compensation for oil pollution of 1971 and its protocol of 1976 and provisions regarding related matters.	Establishes conditions for the creation of the Fund and the mechanisms for putting it into effect.	Ministry of Communications and Works.
12. Ratification Law (No. 9 (III) of 1995). Ratifies the Agreement related to the application of the part of the XI Convention for maritime justice of December 10, 1982.	Inter alia, the Agreement covers matters of protection and care of the marine environment.	Ministry of Foreign Affairs, Ministry of Agriculture, Natural Resources and Environment.

## City planning/Urban development and the coastal environment

Laws and Regulations	Basic Provisions	Competent/ Enforcing Authority
<p>1. The Town and Country Planning Law (No. 90/72, Amending Laws 56/82, 7/90, 28/91, 91(I)92, 55(I)/93).</p>	<ul style="list-style-type: none"> <li>- The aim of the law is the regulation, control and promotion of physical development. The Planning Authority regarding the part of the law relating to the Island Plan is the Finance Ministry, and regarding the remaining provisions of the law the Ministry of the Interior or any other authority to whom the formers responsibilities have been entrusted.</li> <li>- The Finance Ministry should prepare an Island Plan, establishing the policies to be followed regarding the promotion and control of development.</li> <li>- The Ministry of the Interior should prepare a Policy Statement for the development of areas where Local Plans are not in force.</li> <li>- The Planning Authority studies applications for any type of development and issues a Planning Permit or rejects the application.</li> <li>- The law provides for the preservation of buildings or groups of buildings or areas of special character, the preservation of trees and for the control of advertising.</li> </ul>	<p>The Minister of the Interior, except for the portion of the law related to the Island Plan. The Minister of the Interior has transferred his responsibilities to the Director of the Department of Town Planning and Housing, the Local Councils in the large Municipalities and the Town Planning Board.</p>
<p>2. The Foreshore Protection Law (No. 22/61, and Amending Laws 17 of 1964, 8 of 1972, 52 of 1975, 21 of 1987, 126 of 1989, 11 of 1990, 251 of 1990, 40 of 1991, 87 of 1991, 234 of 1991, 15(I) of 1992, 41(I) of 1992, 61(I) of 1992, 103(I) of 1992, 7(I) of 1993, 19(I) of 1993, 27(I) of 1993, 37(I) of 1993, 4(I) of 1994, 34(I) of 1994, 51(I) of 1994, 75(I) of 1994).</p>	<p>Based on the provisions of this law, a foreshore protection zone has been established in which it is prohibited to perform certain works, build or construct various structures and buildings, dispose waste, park vehicles or place articles on the beach. It also regulates the provision of services on the beach.</p>	<p>District Officers, Central Committee for the Beaches, Local Authorities.</p>
<p>The Piers Law (No. 39/73, 36(I)/94).</p>	<p>Regulates the erection, extension, and use of existing and new piers.</p>	<p>Ministry of the Interior to which the relevant powers have been granted.</p>

### Development of Tourism (Competent authority: Cyprus Tourism Organization)

Laws and Regulations	Basic Provisions
1. The Laws regarding Hotels and Tourist Accommodations of 1969 to 1995 (No. 40/69, 52/70, 17/73, 28/85, 42(I)93, 80(I)95).	<ul style="list-style-type: none"> <li>- The regulation of the establishment and operation of hotels and other tourist accommodations.</li> <li>- Power is given to the Council of Ministers to establish areas of hotel development.</li> <li>- The Council of Ministers issues Regulations for the better application of the law.</li> <li>- Issuance of a Certificate of Suitability.</li> <li>- Review of studies and plans based on provisions of the Regulations.</li> <li>- The competent Ministry (Ministry of Commerce, Industry and Tourism) establishes a committee to review studies.</li> </ul>
2. The (General) Regulations concerning Hotels and Tourist Accommodations (No. 192/85, 205/93).	The regulations were issued for the better application of the law.
3. Regulations concerning Hotels and Tourist Accommodations (Organized apartments and tourist villages) (No. 206/93).	Provide for the establishment, classification, issuing of operating license and approval of prices of hotels and tourist accommodations.
4. Regulations concerning Hotels and Tourist Accommodations (Groups of tourist villas regulations of 1993) (No. 207/93).	Regulate relations with customers.
5. Regulations concerning Hotels and Tourist Accommodations (Traditional buildings) (No. 208/93).	Establish the sizes, the necessary uses, and functions of the buildings and facilities of hotels and tourist accommodations.
6. Regulations concerning Hotels and Tourist Accommodations (Camping sites) (No. 155/77).	
7. Regulations concerning Hotels and Tourist Accommodations (Tourist apartments) (ARA 193/85).	
8. The Laws of 1985 and 1991 concerning recreational establishments (No. 29/85 and 214/91).	The Council of Ministers is given the power to establish the areas in which the type, category, class and number of recreational establishments can be regulated. The Ministry of Commerce Industry and Tourism appoints a Recreational Establishments Committee with duties to review, approve plans and issue operating licenses for the classification of facilities.
9. Regulations of 1986 concerning recreational establishments	The Cyprus Tourism Organisations is given powers to carry out inspections to ensure that establishments comply with the Law (classification and operating license, name of establishment, use, level of service and personnel).

Source: Marine Environment and Coastal Zones Report, 1998, MEDACT – Aphrodite Project, Ministry of Agriculture, Natural Resources and Environment – University of Athens.

**ANNEX III - Responsibilities for Implementation and Enforcement of Environmental Legislation in Cyprus**

<b>Sector / Directive</b>	<b>Legislative Development</b>	<b>Strategic Planning</b>	<b>Permitting</b>	<b>Monitoring</b>	<b>Enforcement</b>	<b>Reporting</b>
<b>Horizontal Legislation</b>						
Environmental Impact Assessment	MANRE (ES)		MoI (DTPH) for private projects MoF (PB) for public projects	MANRE (ES) through Technical Committee		
Access to Information	MANRE (ES)		Various responsible Ministries & Departments according to media (air, water, waste)			MANRE (ES)
European Environment Agency	MANRE (ES)		Not Applicable			MANRE (ES)
LIFE	MoF (PB)		MoF (PB) and MANRE (ES) screen proposals jointly			
Civil Protection (Marine Pollution)	MNRE (DFMR)		MANRE (DFMR) responsible for implementation			
C02 Monitoring	MANRE (ES)	MANRE (ES) is Focal Point Other agencies involved include MCIT and CEA				
<b>Water Quality</b>						
Framework	MANRE (WDD)		MANRE (ES) MANRE (WDD)	MoH (PHS) MoH (SGL) MANRE (ES)	MANRE (WDD) MANRE (ES)	MANRE (ES)
Surface Water Quality	MANRE (WDD)		MANRE (ES) MANRE (WDD)	MoH (PHS) MoH (SGL) MANRE (ES)	MANRE (WDD) MANRE (ES)	MANRE (ES)
Urban Waste Water	MANRE (WDD) MANRE (ES)	MoI (DTPH) MANRE (WDD) MSBs	MANRE (WDD), MANRE (ES) for environmental issues MoI (DTPH) for planning issues MSBs for implementation in municipalities			MANRE (WDD)
Nitrate Pollution from Agriculture	NANRE (DoA) MANRE (WDD) MANRE (GSD) MANRE (ES)		MANRE (DoA)	MANRE (WDD) MANRE (ES) MANRE (GSD) MANRE (DoA) MANRE (DFMR)		MANRE (ES)
Drinking Water	MoH (PHS) MANRE (WDD)		MoH (PHS) MoH (SGL)	MoH (PHS) MoH (SGL)		MoH (PHS)
Bathing Waters / Fish Waters / Shellfish Waters	MANRE (ES) MANRE (DFMR)		MoH (PHS) MoH (SGL) MANRE (DFMR)	MoH (PHS) MoH (SGL) MANRE (DFMR)		MoH (PHS) MANRE (DFMR)

Groundwater	MANRE (ES) MANRE (WDD) MANRE (DFMR)	MoH (PHS) MANRE (WDD) MANRE (GSD)	MoH (PHS) MoH (SGL) MANRE (WDD) MANRE (GSD)	MANRE	
<b>Water Management</b>					
Framework Directive	MANRE (ES)	MANRE (ES) as competent authority MoI (DTPH) & MANRE (ES) for planning aspects MCIT for industrial aspects			MANRE (ES)
Landfill of Waste	MANRE (ES) MoI (DTPH)	MANRE (ES) MoI (DTPH)	MANRE (ES) MLSI (DLI) MoI (DTPH)	MANRE (ES) MLSI (DLI) MoH (PHS)	MANRE (ES) MLSI (DLI)
Waste Oils /PCBs/PCTs	MANRE (ES)	MANRE (ES) as competent authority MLSI (SLI) for incineration MANRE (GSD) for PCB decontamination			MANRE (ES)
Hazardous Wastes	MANRE (ES)	MANRE (ES) as competent authority MLSI (SLI) for incineration			MANRE (ES)
Use of Sewerage Sludge in Agriculture	MANRE (ES)	MANRE (DoA) MANRE (ES)	MANRE (DoA)		MANRE (ES)
Shipments of Wastes	MANRE (ES)		MANRE (ES) as competent authority MoF (CED) for enforcement		MANRE (ES)
<b>Nature Protection</b>					
Habitats	MANRE (ES) as coordinator MANRE (DoF) for forests MANRE (DFMR) for marine areas MoI (DTPH) for spatial planning MoI (GF) for hunting areas		MANRE (DoF) for forests MANRE (DFMR) for marine areas MoI (DTPH) for spatial planning MoI (GF) for hunting areas		
Wild Birds	MoI (GF) for hunting areas MANRE for wildlife management		MoI (GF) for hunting areas MANRE for wildlife management		

Source: Based on Implementation and Enforcement capacities in Cyprus, Final Report to DG Environment, 2001, ECOTEC Research and Consulting in association with IEEP and WSA EnviroQuality Engineering Consulting Ltd. and CAMP Cyprus consultant research with national authorities.

#### Acronyms

MANRE = Ministry of Agriculture, Natural Resources and Environment

ES = Environment Service

DA = Department of Agriculture

WDD = Water Development Department

DFMR = Department of Fisheries & Marine Research

DF = Department of Forestry

GSD = Geological Survey Department  
MoL = Ministry of Interior  
DTPH = Department of Town Planning & Housing  
GF = Game Fund  
MH = Ministry of Health  
PHS = Public Health Services  
SGL = State General Laboratory  
MoCIT = Ministry of Commerce, Industry and Tourism  
MLSI = Ministry of Labour & Social Insurance  
MoF = Ministry of Finance  
PB = Planning Bureau

### Box 10 CAMP Cyprus: Project Summary - Management, Activities and Project Work Teams

<b>Project Management</b>		
Focal Agency for CAMP Cyprus: Environment Service (MAP Focal Agency)		
<b>Project Steering Committee</b>		
Ministry of Interior (MI) Department of Town Planning and Housing (DTPH) Cyprus Tourism Organisation (CTO) Planning Bureau (PB) Ministry of Communications & Works - Coastal Unit (CU) Department of Fisheries and Marine Research (DFMR) Forestry Department (FD)	Water Development Department (WDD) Union of Municipalities (UM) Union of Rural Communities (URC) Federation of Environmental and Ecological Organisations (FEEO) Chamber of Commerce and Industry - Cyprus Hotel Association (CCC) Cyprus Scientific Technical Chamber (ETEK) MAP/ PAP Project Coordinator (PC)	
<b>Project Activities</b>		
<b>Activities</b>	<b>Main Objectives</b>	<b>Lead Agencies and Project Teams</b>
<b>Integrated Coastal Area Management (ICAM)</b>	To provide the methodological framework and the context for the issue-based project Activities	Lead Agency: Environment Service  National Project Work Team: All members of the Steering Committee MAP/PAP International Project Consultant
<b>Strategic Environmental Assessment (SEA)</b>	To explore, develop and propose guidelines for the application and institutionalization of SEA	Lead Agency: Environment Service  National Project Work Team: All members of the Steering Committee MAP/PAP International Consultant
<b>Carrying Capacity Assessment (CCA)</b>	To explore, develop and propose guidelines for the application of SEA	Lead Agency: Department of Town Planning and Housing  National Project Work Team: MI, CTO, CU, FD, DFMR, WDD, DGS, DA, CCC, UM, URC MAP/PAP International Consultant
<b>Resource Valuation (RV)</b>	To explore, develop and propose guidelines for the application of RV	Lead Agency: Planning Bureau  National Project Work Team: DTPH, CTO, FD, DFMR, WDD, UM, CCC MAP/PAP International Consultant

Note: Detailed Terms of Reference will be developed in the Inception Report

**ANNEX IV Development Expenditure Budget 1999-2002 (in thousands of Cyprus Pounds)**

<b>Ministry and Department</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>Agriculture, Natural Resources &amp; Environment</b>	<b>25,917</b>	<b>33,720</b>	<b>33,720</b>	<b>44,675</b>
Department of Agriculture	7,916	8,360	8,300	9,110
Veterinary Services Department	517	832	750	1,061
Forestry Department	3,351	3,554	4,000	5,553
Water Development Department	9,768	16,936	15,000	22,781
Meteorological Department	57	36	20	25
Geological Survey Department	1,121	1,077	1,200	1,121
Land Consolidation Service	869	509	900	1,159
Agricultural Research Institute	1,109	1,246	1,300	1,462
Fisheries and Marine Research Department	727	691	1,350	999
<b>Ministry of Commerce, Industry &amp; Tourism</b>	<b>10,760</b>	<b>11,453</b>	<b>11,850</b>	<b>15,782</b>
<b>Ministry of Labour &amp; Social Insurance</b>	<b>4,134</b>	<b>4,096</b>	<b>4,720</b>	<b>5,394</b>
Department of Labour	88	73	100	127
Social Welfare Services	3,580	3,591	4,000	4,467
Productivity Centre	109	108	150	165
Higher Hotel Institute	71	35	100	105
Higher Technological Institute	272	237	250	331
Department of Labour Supervision	0	0	20	86
<b>Ministry of Interior</b>	<b>26,187</b>	<b>31,906</b>	<b>32,750</b>	<b>50,917</b>
District Administration	5,824	7,468	2,700	3,807
Department of Town Planning and Housing	6,716	9,523	10,000	19,077
Department of Lands & Surveys	0	0	50	50
Civil Defense	0	0	0	100
Other Services	2,143	2,246	2,500	3,587
<b>Ministry of Finance</b>	<b>20,928</b>	<b>19,606</b>	<b>19,350</b>	<b>14,005</b>
<b>Planning Bureau</b>	<b>3,780</b>	<b>4,024</b>	<b>11,000</b>	<b>52,775</b>
<b>Ministry of Education &amp; Culture</b>	<b>29,865</b>	<b>31,924</b>	<b>34,500</b>	<b>47,081</b>
School Administration	15,929	16,161	16,500	18,216
Education	11,506	12,919	14,500	21,993
Cultural Services	2,429	2,843	3,500	6,732
Science Research Centre	0	0	0	140
<b>Ministry of Communications &amp; Works</b>	<b>63,970</b>	<b>66,760</b>	<b>70,250</b>	<b>91,028</b>
Administration	2,080	3,173	4,000	1,010
Public Works	1,094	1,171	1,700	2,366
Development of Road Network	43,257	42,320	40,000	50,990
Airport Development	9,934	8,747	9,000	2,822
Public Buildings	5,516	7,908	12,000	22,885
Antiquities Department	1,703	2,501	3,000	3,847
Civil Aviation	0	25	0	70
Commercial Shipping Department	170	136	150	180
Postal Services	213	704	400	538
Road Transport Department	0	70	0	1,120
Electrical & Mechanical Services	0	0	0	5,200
<b>Ministry of Health</b>	<b>11,177</b>	<b>12,824</b>	<b>15,690</b>	<b>23,364</b>
<b>Total Development Budget</b>	<b>197,556</b>	<b>217,578</b>	<b>234,560</b>	<b>347,622</b>