# Incorporating environmental economics into the planning policy framework, southern Larnaca - CY

## 1. Policy Objective & Theme

- SUSTAINABLE USE OF RESOURCES: Sound use of resources and promotion of less resource intensive processes/products
- SUSTAINABLE ECONOMIC GROWTH: Balancing economic, social, cultural development whilst enhancing environment

## 2. Key Approaches

- Ecosystems based approach

## 3. Experiences that can be exchanged

This Case Study brings the issue of the socio-economic assessment of environmental benefits to the forefront of the planning process. It provides methodologies for generating information on the benefits of coastal resource conservation; it uses economic instruments to correct distributional effects and increase financial resources in implementing spatial planning and environmental management strategies and it justifies setting limits to development (and to conservation) in pursuing coastal management strategies that seek to harmonize development and conservation objectives. Environmental economics can generate important information particularly useful for coastal erosion situations.

## 4. Overview of the case

This case evaluates, objectively, the impact of coastal economic growth on environmental and resource degradation and measures the economic and social benefits of the coastal resources to the economy and growth of this area.

## 5. Context and Objectives

### a) Context

Coastal over-development and resource degradation, emerging from urbanisation and the drive for economic growth, are central environmental concerns in many countries. Of equal concern is the loss of open coastal areas for enjoyment and recreation available to the wider public. Often the responsible Government authorities, faced with pressing obligations to pursue development objectives and job creation policies are constrained in implementing effective environmental protection measures by the need to ensure that development commitments are not compromised. ICZM can be supported by several tools including environmental economics to deal with the interactions of the coastal environment and socio-economic forces. The use of environmental economics is not, and should not be, usedfor the analysis of the economy of coastal areas in terms of theirproduction, consumption and employment. Instead it should analyse the value of environmental quality for the sustainable development of coastal areas to ensure long term production, consumption and employment objectives. Environmental economics informs policy making and offers justification for combining regulation with economic instruments to correct for undeserved losses and unearned gains inherent in the use of zoning. The use of economic instruments, apart from correcting distributional issues will generate revenues available for coastal management investment which will ultimately benefit the whole area.

This case study focuses on part of the Southern Larnaca Coastal Area, in Cyprus, and includes the communities of Pervolia, Meneou and Kiti. This area includes a fairly flat coastal plain of 9km with a salt lake complex, a region of major environmental

value and low density of housing that currently blends well with wide open agricultural land and with substantial land for both development and agriculture as well as the presence of important archaeological and cultural sites. Over the period 1982-2002, Pervolia, Meneou and Kiti have experienced a population growth of 57% which significantly exceeds the registered growth rates for Cypriot urban and rural areas.

### b) Objectives

To show how environmental economics are applied in practice at the local level (southern Larnaca) detailing, among other issues, the data requirements, measurement techniques, the policy issues involved and the lessons learned in order to facilitate the incorporation of tools in the planning process.

## 6. Implementation of the ICZM Approach (i.e. management, tools, resources)

### a) Management

The project was managed by the Environment Service of the Ministry of Agriculture, Natural Resources and Environment of the Republic of Cyprus.

### b) ICZM tools

The starting point is the estimation of the size of a local economy as reflected by its estimated Local Gross Domestic Product. The size of a local economy is measured by the total estimated value of the goods and services it produces and its structure by the sectors that produce that product. The next step is to show and highlight the importance of the coastal environment using that economic information. This is done mainly by identifying and measuring the value of the coastal environment as reflected in the economic and social activities that draw “services” (economic or social) from the coastal environment. This brings into a policy context the fact that loss of environmental quality is an economic and social loss. It stresses that land use changes should be decided on the basis of a balanced assessment of the short term interests of the landowners favoured by the change, and the long term interests of society as a whole for maintaining environmental quality.

Three important issues have to be considered at the outset of any application of environmental economics: definition of the main problem and choice of the appropriate economic assessment approach; definition of the scope and limits of the analysis and the information required for the chosen assessment approach; and definition of the data collection method and valuation techniques. Having decided on the above, the next step is to work on the following three main areas to identify and measure the value of environmental resources so that it will be a useable tool in decision-making: 1. A focused, information-gathering survey to identify the locations and size of economic activities. This will provide an understanding of the economy of the area and the sectors that comprise it (tourism, agriculture, construction, trade, etc.) and the sources of impacts, if any, on the coastal environment to allow preliminary conclusions about the geographical focus of resource use conflicts. 2. A socio-economic assessment of the main economic and social activities whose “productivity” depends directly or indirectly on the quality of coastal resources. 3. Formulation of development/conservation options based on (1) and (2) to enable a balanced and integrated approach to such options for policy making. The valuation approach applied to this study attempts to capture the most important benefits of the coastal environment and those benefits for which numerical data have been obtained and are considered important to analyze.

## 7. Cost and resources

No costs are available.

## 8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)

The economic dimension of coastal protection/management, and specifically the economic value of environmental resources, is not yet an integral part of the formulation and implementation of spatial plans and policy provisions for coastal protection. In the case of southern Larnaca, the total social and environmental benefits per year can be estimated at €51 million. This figure

reveals both the extent of direct economic benefits generated by the coastal environment (often but not measured in policy making) and the extent of indirect social benefits (local and non-local) typically ignored. This derives from a coastal area of only 9 km length. If this were applied to the whole coast of Cyprus with similar environmental features (roughly about 100 km) it would imply a level of benefits of €565 million.

## 9. Success and Fail factors

To decide on the net benefits of development/conservation options, the type, extent and value of the benefits of both development and conservation needed to be considered. While information about the gains from development were obvious and easily measured in terms of income and employment, information about the possible gains from conserving that part of the coast was missing. This information gap often leads to gaps in the policy framework within which environmental regulation decisions are taken and enforced. While development opportunities were perceived and acted upon, usually within a short term horizon, environmental quality losses/damages often manifest themselves over the long term. A long term perspective of the benefits of conservation is often missing creating a bias towards development.

Valuing environmental resources entails several challenges including the problem of “partial information” i.e. information on the value of the environment identified by its contribution to economic activities is missing or hidden. This, again, leads to a bias towards development. There is also the problem of ignoring “non-use” values i.e. environmental resources are valuable and provide benefits not only through their direct production and consumption uses (tourism, agriculture, etc.) but also in their natural form (nature protection, enjoyment, education, etc.), a value which is often under-estimated or even ignored in policy making. The problem of “institutional sectoralism” is also important viz. ICZM is often administered by ministries/departments with little or no influence on financial and investment decisions. The problem of “putting a value on the priceless” is being overcome by environmental economists valuing people’s preferences (demand) for environmental quality in similar terms to the way people’s preferences (demand) for any other good or service is expressed in their expenditures

## 10. Unforeseen outcomes

The structure of the tourism sector has led to a reduction of the accessible beachfront and has obstructed the sea view along the coastal road from Meneou to Pervolia. The sector’s long term sustainability is also questionable due to its dependence on available coastal, tourist land for development and the likely risk of “overcrowding” in the tourist zones. As tourist and housing development advances, the area is losing its agricultural scenery, a trend that may well distort the environmental balance of the area. The current structure of economic growth may not necessarily lead to an equitable distribution of resources that can maximise social welfare across the area’s population.

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## 13. Sources


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