



«Strategic management of beach protection measures for the sustainable development of Mediterranean coastal areas »

#### MEASURE 4.1



**ObsEmedi: Regulations and Promotion of a European Observatory for the Defence of the Mediterranean Coast**

## **Questionnaire on the planning requirements for Beach Defence Strategies in European margins of the Mediterranean Sea**

To: Mr. ....

Organisation:

## INTRODUCTION

Sub-project Obsemedi was born as part of Opération Beachmed-e in response to a diffused awareness of the need to monitor coastal erosion in all its aspects, as a territory-based phenomenon on a continental scale which has a structural nature. This need is addressed in the present phase as a survey conducted through this second Questionnaire.

The need to monitor coastal evolution, the identification of what we expect and wish to observe, and the instruments that we will use for achieving that, are related to the scope of the monitoring activities. **The main goal of such monitoring is territorial planning**, therefore the **morphological changes of the coast in the medium and long scales** (5-10-20 years) must be observed and the instruments to be developed and applied should be **tools capable of analysing erosion on a territorial scale** (regional, national, international).

The reason for a Mediterranean-scale approach is linked to the peculiarities of this area, which is surrounded by three continents, combined with the morphological, climatic, environmental and social aspects of these coasts, which distinguish them from the Atlantic coasts of Europe.

In order to maintain its necessary flexibility and overall applicability, the feasibility study should not concern only "an observatory" but a whole "**Observatory system**" which must find its basic foundations in current, potential or existing organisational assets.

An **organisational nucleus** which already holds some experience in coastal morphological monitoring is of primary importance, especially if it is already **integrated within existing administrative structures** or has competences in terms of coastal defence.

In fact, the strategy of supporting or highlighting existing administrative structures or networks is favoured instead of using technical-scientific institutions or structures that are not directly involved in beach protection and management; indeed, the connection between the "observatory system" and actual land planning systems should be favoured for both structural and financial reasons. Technical-scientific institutions, however, should remain fundamental partners of the public administration for the research, development and implementation of innovative methods and instruments necessary for the development of coastal monitoring activities.

## AIMS OF THE SECOND QUESTIONNAIRE

This second questionnaire follows a first questionnaire which was applied in the second semester of 2006 during Phase A of Project Beachmed, and is based on the analysis of its results. The first questionnaire ("State of art of structures and technical services for the defence of the coast") had the scope of screening pre-existing European public regional structures that worked and/or had institutional competences on coastal monitoring and defence, and of evaluating their effective operability level.

This second questionnaire follows the first, and aims at evaluating the financial resources that these interested public regional structures would be willing to dedicate to the prospected technical services related to coastal defence, without the availability of any pre-existing specific engagements in that regard. This questionnaire seeks to evaluate the availability of resources of the public regional structures contacted, regarding the creation and/or improvement of the corresponding offices/structures in order to allow the development of services and activities - or the possibility to contract them externally - aspiring at the final goal of creating an **European Interregional Observatory for the Mediterranean Coastal Defence (EURIOMCODE)**. The new European financial programming period 2007-2013 will be an important source for the necessary budgets, since the theme of coastal management is one of the priorities of most European programs.

Please tick the appropriate box (in the right) to express your regional structure's preference for all the **Operative Services** indicated below.

For technical and economic details see annexed schemes.

### GENERAL INFORMATION

1	<b>System for the acquisition and organisation of coastal data</b> on the <u>state of beaches</u> (acquisition and informatisation of basic and thematic cartographical elements, land use, use of the sea, urbanization, etc.), <b>emergencies</b> of the territory (alerts from public administration, public and private operators, etc) <b>Rough cost: see page 3 of technical annex</b>	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>

### DATA ACQUISITION

2	<b>Periodic surveying of the shoreline at a local scale</b> using topographical or remote sensing techniques (webcam, airborne photography, satellite imagery) <b>Rough cost: € 200/km/year</b> (conventional methods) € 6000/km/year + €16500/km initial installation costs (Video systems)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
3	<b>Periodic surveying of the shoreline at a regional scale</b> , using topographical or remote sensing techniques <b>Rough cost: € 300/km every 3-5 years</b>	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
4	<b>Sedimentological and mineralogical characterisation</b> , with periodic sampling of the emerged and submerged beach. <b>Rough cost: € 5500/km/year</b> (rapidly changing coasts) € 5500/km every 5 years (slowly changing coasts)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
5	<b>Presence of topo-bathymetric coastal control points:</b> ad hoc network or acquisition of data from existing network <b>Rough cost: € 500/km</b> (once) + € 500/km every 10 years (periodic checks)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
6	<b>Topographical and bathymetric surveying of littoral morphology</b> (dune, emerged and submerged beach) through high precision survey systems (multibeam, singlebeam, RTK GPS, etc.) <b>Rough cost: € 6000/km</b> (initial survey) + €2000/km/year	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
7	<b>Acquisition of sedimentological and stratigraphic data of the seafloor</b> (geophysics, cores, etc)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>

	<b>Rough cost:</b> €23000/km (initial survey) + €8000/km every 1 to 3 years (actively changing coasts) or €8000/km every 5 to 10 years (relatively stable coasts) Part of the costs may be shared with Op.Serv. 6 (see annexed technical schemes)	Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
8	<b>Data acquisition for evaluation of subsidence in the coastal zone</b> (such as from GPS, radar surveys) <b>Rough cost:</b> €300/km every 5 years (Minimum cost - See , page 24 of technical annex )	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>

#### LANDUSE AND DEFENCE STRUCTURES

9	<b>Census of defence structures and strategies</b> that affect the coast <b>Rough cost:</b> €100.000/year (regional scale)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
10	<b>Acquisition and updating of information</b> on land use and use of the sea near the coastal zone. <b>Rough cost:</b> Creation of initial Data Base and Digital Map of territory: 10.000 / 20.000 € Annual updating of Data Base: 1000-3000 €/year	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
11	<b>Elaboration of thematic cartography</b> for land planning regarding shoreline evolution scenarios. <b>Rough cost:</b> €5000/km every 10 years	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>

Comments on the questions above

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Additional comments:

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Please tick the appropriate box (in the right) to express your regional structure's preference for all the **Consultative Services** indicated below.

For technical and economic details see annexed schemes.

1	<b>Use of indicators</b> for monitoring the morphological state of the coast (under erosion or accretion, etc.)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
2	<b>Use of indicators</b> for monitoring the social-economic development in the coastal zone	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
3	<b>Data sharing</b> with other structures and with stakeholders	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>
4	<b>Specific actions for public sensitisation, communication, and query processing</b> , regarding coastal zone stakeholders (such as information windows dedicated to public relations regarding uses and conflicts in the coastal zone - including telematic)	Availability for creation of this service	<input type="checkbox"/>
		Availability for maintaining/improving of this service	<input type="checkbox"/>
		Not interested	<input type="checkbox"/>
		Other	<input type="checkbox"/>

Comments on the questions above:

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Additional comments:

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## ANNEXED TECHNICAL SCHEMES