



# Report Phase B

## Partner 4

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Keywords: coastal risk perception, public policies assessment, Integrated Coastal Zone Management(ICZM).

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## Phase B technical report

### 3.1 – La bande côtière : récupération de la bande côtière et sa gestion territoriale – urbaine. Sub-project MEDPLAN

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## 1. Phase B objectives

This phase of the program refers to the definition of the methodological tools regarding the field investigations. This relates primarily to the selection of the pilot sites, the design of the surveys by questionnaire, and the strategy of sampling. The field investigations result in preparing common surveys by questionnaire for sub-measure 3.1 (MEDPLAN) and sub-measure 3.2 (ICZM-MED) on the perceptions of coastal erosion, ICZM, and marine floods. This also makes it possible to compare the perceptions of coastal practitioners and users regarding coastal erosion and marine floods.

Two investigations are designed on two target groups:

- the “Stakeholders and coastal practitioners” intervening in the policies of beach management;
- the local “Users of the beaches” and tourists.

These two types of investigations correspond to two logics with a broad sample (around 300 investigations) and a short time of investigation (15 minutes) for the users, and a guide to carry out the interviews (approximately 2 hours and around 40 interviews).

These investigations aim at assessing the perception which the populations and the stakeholders have of the beaches and the risks of marine floods, and at assessing the public policies implemented to prevent these coastal risks. One of our objectives is to assess if these public policies refer to the requirements of Integrated Coastal Zone Management (ICZM) in terms of dialogue between the stakeholders, institutional partnerships, transversality, information, etc.

## 2. Research protocol and choice of the pilot sites

### 2.1. Choice of the pilot sites

Three sites were selected:

- Valras-Plage with the districts of Orb Hérault and Orb Aude;
- the Sète – Marseillan-Plage lido;
- Palavas-les-Flots to which one added the beach of Villeneuve-lès-Maguelone to have a sample of natural beaches.

Rather than the sedimentary cell, the scale selected refers to the administrative mapping of the municipalities which is the most accurate to take into account users' perceptions of the beaches, of the collective infrastructures and services as well as of the practices of the institutional stakeholders intervening in coastal management. Table 1 makes it possible to locate the selected sites (in bold in the Table) according to the sedimentary cells and the technical studies. It appears that Sète and Palavas-les-Flots are located within a wider sedimentary cell while Valras-Plage is located within two sedimentary cells.

**Table 1: Diagnosis framework and studies at the sediment cell scale**

	<b>Aigues-Mortes Gulf</b>	<b>Sète – Marseillan-Plage lido</b>	<b>Orb Hérault district</b>	<b>Orb Aude district</b>
<b>Shoreline length</b>	30 km	11 km	13 km	6 km
<b>Municipalities</b>	<b>Palavas-les-Flots</b> , Carnon, Grande-Motte, Grau du Roi – Port Camargue, Saintes-Maries de la Mer	<b>Sète</b> , Marseillan-Plage	Agde, Vias, Sérignan, Valras-Plage, Portiragnes	Valras-Plage, Vendres
<b>Leader institution (MO)</b>	SIVOM, municipalities	Sète	Communauté d'Agglomération Hérault Méditerranée	Valras-Plage
<b>Leader Assistant Institution (AMO)</b>	SMNLR / DRE-SEL	SMNLR / DRE-SEL	SMNLR / DRE-SEL	SMNLR / DRE-SEL
<b>Institutions that implemented the preparatory studies</b>	SOGREAH	BCEOM	SOGREAH	BCEOM
<b>Period of the studies</b>	2002-2003	2000-2001	On going process	2003

Source: arranged from Fourier (2005)

The selection of these municipalities was also carried out by crossing the criteria on the significance of coastal erosion and marine floods, and on the perception of these processes according to past crises and compared to other local sites (see Table 2).

**Table 2: Local population awareness of coastal risks on each pilot site**

Pilot sites	Awareness of coastal risks
Palavas-les-Flots	Low ( <i>especially regarding marine floods</i> )
Valras-Plage	High
Sète – Marseillan-Plage lido	Work in progress with a recent public pool

Furthermore, we have selected the pilot sites regarding the issue of strategic withdrawal policies implementation, which is the case of the Lido de Sète where the littoral road should be moved and of Palavas-les-Flots where a fishfarming company should be built. Finally, in order to assess the conciliation procedures, one also took into account of the diversity of the uses especially between leisure activities and traditional activities such as agriculture, fishing or fishfarming (see Table 3) according to the extent of these uses.

**Table 3: Extent of the uses and activities in our pilot sites**

	Aigues-Mortes Gulf	Sète – Marseillan-Plage lido	Orb Hérault and Orb Aude districts
<b>Fisheries</b>	1	3	1
<b>Agriculture and industry</b>	1	3	0
<b>Habitat and infrastructure</b>	1	1 and 3	1
Coastal erosion	3	3	3
Marine floods	2	2	2
Sea-level rise	1	1	1
<b>Flora and fauna</b>	0	3	1
<b>Landscape</b>	0	3	2
Cultural heritage	0	0	0

Source: *Fourrier (2005)*

## 2.2. Layout of the field investigations

The analysis of the perception of marine floods and their related public policies requires field investigations. The “Stakeholders and coastal practitioners” survey will be carried out between March and June 2007, while the “Users of the beaches” survey will be carried out between April and August 2007 according to a sampling per site crossing three criteria:

- changes in population frequenting the beaches for each site;
- seasonal users of the beaches and implied changes;
- the weekly distribution of the days (week days and weekend).

The surveys will be balanced according to the age and the types of profile of the population (family, group, couple, etc.). Approximately 100 investigations will be carried out for each site.

Within the “Stakeholders and coastal practitioners” surveys, three main categories of actors were identified:

- participants in the public policies managing coastal erosion and marine floods;
- stakeholders belonging to the steering and technical committees;
- stakeholders dealing with coastal management that are not directly concerned with coastal erosion and marine floods issues.

Moreover, the local and regional scales were assessed to select the stakeholders, whilst associating ten actors per site (local actors) and about fifteen global key actors concerned with the regional scale.

### **3. Survey motivations and questionnaires**

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Let us recall that the two surveys aim at assessing the representations which the stakeholders and the populations have of the process of marine floods, the stakes, and the public policies. It should be stressed that these perceptions are revised according to the stakes and the memory of past crises. The historical analyses on the long term of these types of risks, such as flood risk (Picon et al., 2006) or the hydro-sedimentary coastal risk (Pichard, 2006) which is more comparable with the current question of marine floods, testify to analyse the diagnoses as for the causes of these processes and the undergone damages. From a long-term point of view, Dupuy (2005) also puts in debate the concept of natural disaster and insists on the fact that it is the social vulnerability which transforms an event into catastrophe and by there, raises the question of the limits of the human action. Climate change about which the populations intend currently much to speak on could accentuate their perceptions of marine floods.

#### **3.1 The Stakeholder and coastal practitioner questionnaire**

The questionnaire appears as a guide for conducting the interview. It makes it possible to gather:

- the institutional presentation of the interviewee;
- the analysis of the role and the stakes of the institution of the interviewee through the analysis of the policy cycle, the meetings of the various committees, the scales of management, the consultation and the communication towards local populations;
- the analysis of the representations of coastal erosion, marine floods, and policies managing the beaches as well as sustainable development and ICZM;
- the access and the level of information with collected information, the sources of information and the indicators of management;
- possible prospects for beach management.

The qualitative survey aims especially at assessing the stakeholder perception of the interest and the feasibility of the strategic withdrawal policies implementation. One also questions them on their perception of the risks related to the sea-level rise and the consequences which these risks could have for the beaches and for the local economies. They are then brought to identify which are the beaches of their municipality (or the region for the stakeholders working at the regional level) who would be exposed to the risk of marine floods. Finally, one collects their opinion on the possibility of intervening to protect themselves from these risks.

#### **3.2 The Beach user questionnaire**

The questionnaire covers successively:

- the identification of the users with socioeconomic features;
- the type of residents by separating people as local residents from coastal municipalities, local residents from non-coastal municipalities / daily visitors, owners of second homes, and tourists;
- the representations associated with the coastal zone and the uses of the beaches, and goods and services associated with the beaches;
- the perception of coastal erosion processes;
- the public policies dealing with coastal erosion processes;
- the perception of the marine floods processes and required policies;
- the Willingness To Pay (WTP) as the daily maximum amount that people would be willing to pay to protect the beaches or the maximum surplus of additional fees which they would be willing to pay.

The part allows describing several issues. Firstly, the assessment of the range of perception by the population of marine floods, in particular in a context of sea-level rise. Is it a short-term or long-term risk, and a realistic or an illusory risk? One assesses then the knowledge that the users of the

beaches have of the consequences associated with sea-level rise, in terms of aggravation of the consequences of storms (floods of the houses in front line and floods related to the heavy rains), of disappearance of the beaches by covering of the sea, of immersion of the grounds at low altitude, of overflow of the lagoons and the impacts on the biodiversity, etc.

Then, the survey considers the degree of relevance granted to policy measures aiming at protecting itself from this phenomenon and how the individuals would react if their dwellings were directly threatened, or more generally which types of policy measures and infrastructures they plan to protect the dwellings and constructions carried out in front line.

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