

MARINE-TERRESTRIAL BEACH MONITORING FACILITY



FIELDWORK CAMPAIGN DEFINITION

| | |
|----------------------------|---|
| Issue: | PLATJA DE PALMA, JUNE 2012 |
| Date: | 21.07.2012 |
| Description: | This document summarizes the field campaign definition, preparation and development of the campaign PLATJA DE PALMA – JUNE 2012 |
| Authors: | Lluís Gómez-Pujol, Amaya Álvarez & Carlos Castilla |
| Involved personnel: | Alejandro Orfila, Carlos Castilla, Irene Lizarán |

DOCUMENT VERIFICATION LIST

| Date: | Checked by (name) | SOCIB division | Ref. |
|-------|-------------------|----------------|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

DOCUMENT DISTRIBUTION LIST

| Date: | Distribution to: |
|-------|------------------|
| | |
| | |
| | |
| | |
| | |
| | |

CHANGE RECORD

| # | Date | Description | Author | Checked by |
|---|----------|--------------------|--------|------------|
| 0 | 21.06.12 | Creation of report | LGP | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

TABLE OF CONTENTS

| | |
|--|-----------|
| A. Scientific objectives | 4 |
| B. Participants and logistics | 4 |
| B.1. Participants | 4 |
| B.2. Logistics | 5 |
| B.2.1. Dates | 6 |
| B.2.2. Material | 7 |
| B.2.3. Harbour needs | 8 |
| B.2.4. TMOOS-IMEDEA resources | 8 |
| B.2.5. Navigational warnings and sea-works authorization | 8 |
| C. Fieldwork campaign definition | 9 |
| C.1. Environmental properties | 9 |
| C.2. Fieldwork campaign specifications | 10 |
| C.3. Data sampling | 11 |
| C.3.1. Profile surveys | 11 |
| C.4. Contacts information | 12 |
| | 13 |
| D. Fieldwork economic issues | 14 |
| | 15 |
| | 16 |

A. SCIENTIFIC-TECHNOLOGICAL OBJECTIVES

The fieldwork campaign is prepared to address three major scientific-operational issues according to SOCIB implementation plan:

- (a) to provide a continuous dataset on beach topography-bathymetry evolution
- (b) to provide a continuous dataset on beach sediment budget evolution

B. PARTICIPANTS AND LOGISTICS

B.1 Participants

| Name | Division | Filiation | Contact details |
|--------------------------------|------------------|-----------------|---|
| Casas Pérez, Benjamín (BCP) | Support division | IMEDEA SOCIB | bcasas@socib.es 629 006 192 |
| Castilla Álvarez, Carlos (CCA) | Support division | SOCIB | carlos.castilla@uib.es 971 610 508 |
| Lizarán Esperilla, Irene (ILE) | Support division | IMEDEA | ilizaran@imedeia.uib- csic.es 971 610 508 |
| Álvarez Ellacuría, Amaya (AAE) | Beach monitoring | SOCIB | a.alvarez@uib.es 649 626 039 |
| Gómez-Pujol, Lluís (LGP) | Beach monitoring | SOCIB | lgomez-pujol@uib.es 661 728393 |

List of the people involved in fieldwork campaign by tasks

| # | Task | People | Dates | Observations |
|---|---|-------------------|--------------------------|----------------------|
| 1 | Sea equipment preliminary works | ILE CCA | 22 jun 2012 | |
| 2 | Bathymetry profiles | ILE CCA | 25 jun 27 jun 2011 | |
| 3 | RTK survey | LGP AAE | 25 jun 26 jun | |
| 4 | Sediment sampling | ILE CCA LGP | 28 jun 2012 | |
| 5 | Sea material cleaning and storage | ILE CCA | 29 jun 2012 | |
| 6 | Terrestrial material cleaning and storage | AAE LGP | 29 jun 2012 | |
| 7 | Terrestrial survey pre-process | AAE | 02 jul 2012 | |
| 8 | Profiles and bathymetry pre-process | ILE | 02 jul 2012 | |
| 9 | Profiles post-process | LGP | 05 jul 2012 | Need from task 7 & 8 |

B.2 Logistics

B.2.1. Dates

| | | | |
|------------------|--|---|---|
| Monday | 18 | 25 | 02 |
| | | S1: Bathymetry and profiles (CCA, ILE) T1: Dry beach survey (AAE, LGP) | Terrestrial survey pre-process (AAE) Bathymetry post-process (ILE) |
| Tuesday | 19 | 26 | 03 |
| | | S2: Bathymetry and profiles (CCA, ILE) T2: Shallow beach survey (AAE, LGP) S3-T3: echosound-rtk calibration | |
| Wednesday | 20 | 27 | 04 |
| | | S4: Bathymetry and profiles (CCA, ILE) | |
| Thursday | 21 | 28 | 05 |
| | Harbour needs and contact (LGP) | S5: sediment sampling (CCA, ILE, LGP) T5: dry beach sediment sampling (AAE, MD) | |
| Friday | 22 | 29 | 06 |
| | Sea material preliminary works (CCA, ILE) Terrestrial material preliminary works (AAE, LGP) | Sea material cleaning and storage (ILE, CCA) Terrestrial material cleaning and storage (CCA, LGP) | |
| Saturday | 23 | 30 | 07 |
| | | | |
| Sunday | 24 | 01 | 08 |
| | | | |

B.2.2. Material

| ECHOSOUNDER | |
|----------------------|---|
| Description | BioSonics Inc DT-X Scientific Echosounder |
| Configuration | |
| Responsible | BCP |
| Catalogue | TMOOS, IMEDEA (CSIC-UIB) |
| Location | IMEDEA, TMOOS warehouse, Floor -2 |

| RTK SURVEY STATION | |
|---------------------------|-----------------------------------|
| Description | Leica Viva GS15 |
| Configuration | |
| Responsible | AAE |
| Catalogue | ICTS SOCIB |
| Location | IMEDEA, TMOOS warehouse, Floor -2 |

| COASTAL SAMPLING RUBBER BOAT | |
|-------------------------------------|-----------------------------------|
| Description | Valiant DR650 (6m) |
| Configuration | |
| Responsible | BCP |
| Catalogue | TMOOS, IMEDEA (CSIC-UIB) |
| Location | IMEDEA, TMOOS warehouse, Floor -2 |

B.2.3. Harbour needs

For fieldwork campaign purposes the pneumatic boat should remain and operate few days at CM Sant Antoni de la Platja (Can pastilla). Contact details are:

CM Sant Antoni de la Platja

C/. Virgilio, 27
07610 Can Pastilla

Telf. 971 745976
Fax. 971 261638
E-mail: cmsap@cmsap.com

B.2.4. TMOOS-IMEDEA resources

Material and equipment from TMOOS-IMEDEA used for fieldwork campaign:

- SOCIB Sprinter van
- TMOOS Valiant DR650

B.2.3. Navigational warnings and sea-works authorization

Sea-works authorization application to:

Demarcación de Costas en Islas Baleares

c/ Ciudad de Queretaro s/n

07007 Palma

Telf. 971 774 949

C. FIELDWORK CAMPAIGN DEFINITION

C.1 Environmental properties

The study area is a seaside tourist resort located in the western part of Mallorca, at the Bay of Palma. Waves approaching from SW and SE come into THE BAY. Meteorological and wave observations from Puertos del Estado (<http://www.puertos.es>) show mean significant wave height is around 1 m and periods of 4-6 s. Forcing by tides is almost negligible in the Mediterranean with a spring tidal range of less than 0.25 m, although combined changes between tides, atmospheric pressure and wind setup can account for sea level elevations close to 1 m.

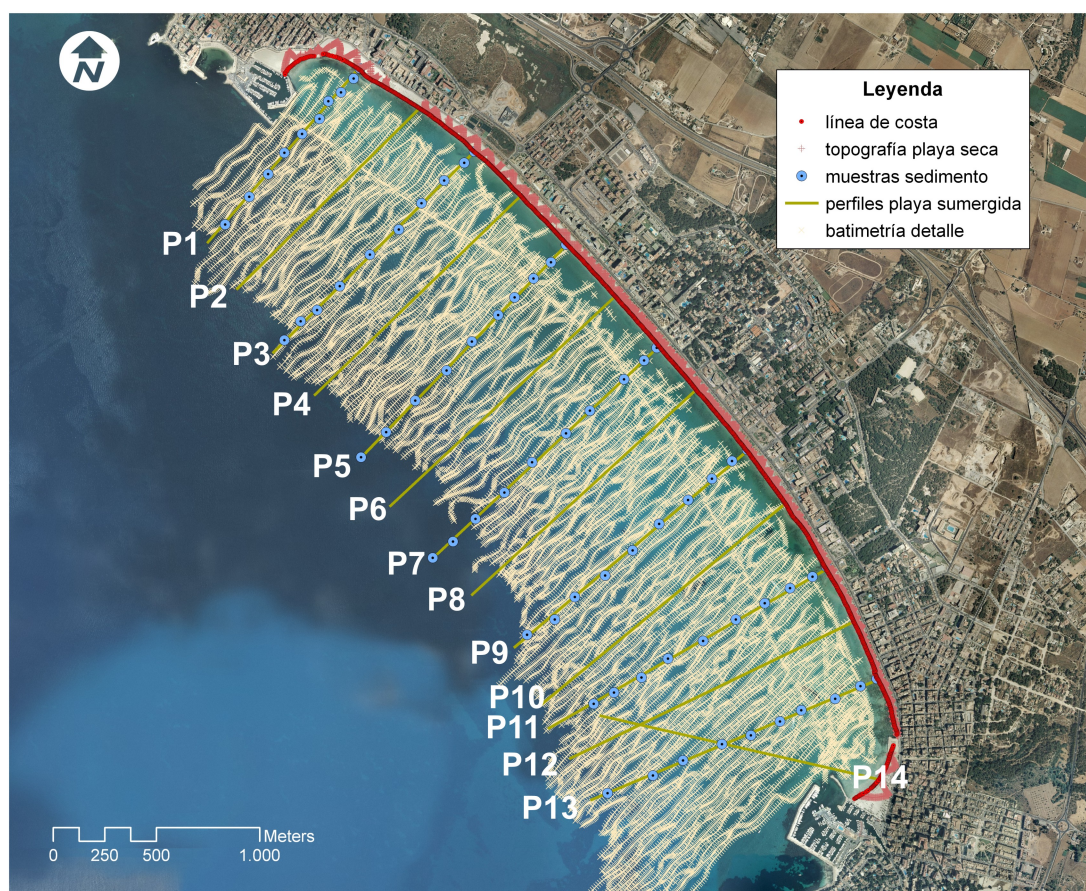
Platja de Palma is a beach backed by a boulevard, hotels and residential houses, and bounded by two rocky headlands. It is a sandy beach near 5000 m long with a concave shape. From a morphodynamic point of view, Platja de Palma is an intermediate beach with shallow bars. The sediment consists of medium carbonate bioclastic sands, being the median sediment size (D50) on the beach around 2.81 phi. *P. oceanica* meadows appear at 8 m in depth nearly a hundred meters from the shoreline.

C.2 Fieldwork campaign specifications

The aim of the fieldwork campaign at Platja de Palma consists on providing the annual dataset described at SOCIB - MTBMF implementation plan. Main products would be

- 14 subaerial - submerged beach profiles
- 1 bathymetry
- 59 sediment samples

C.3 Data sampling



C.4 Contact information

CM Sant Antoni de la Platja

C/. Virgilio, 27
07610 Can Pastilla
Telf. 971 745976 (Amador)
Fax. 971 261638
E-mail: cmsap@cmsap.com

Demarcación de Costas en Islas Baleares

c/ Ciudad de Queretaro s/n
07007 Palma
Telf. 971 774 949

C. FIELDWORK CAMPAIGN ECONOMIC ISSUES