

MARINE-TERRESTRIAL BEACH MONITORING FACILITY



FIELDWORK CAMPAIGN DEFINITION

Issue:	CALA MILLOR, JULY 2012
Date:	04.06.2012
Description:	This document summarizes the field campaign definition, preparation and development of the campaign CALA MILLOR – NOVEMBER 2012
Authors:	Lluís Gómez-Pujol, Amaya Álvarez
Involved personnel:	Alejandro Orfila, Benjamín Casas, 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	30.10.12	Creation of report	LGP	

TABLE OF CONTENTS

A. Scientific objectives	4
B. Participants and logistics	5
B.1. Participants	5
B.2. Logistics	6
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.4. Contacts information	12
D. Fieldwork economic issues	13

A. SCIENTIFIC-TECHNOLOGICAL OBJECTIVES

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

- (a) to maintain the mooring for wave and currents monitoring,
- (b) to provide a continuous dataset on beach topography-bathymetry evolution and sediment characteristics.

B. PARTICIPANTS AND LOGISTICS

B.1 Participants

Name	Division	Filiation	Contact details
Casas Pérez, Benjamín (BCP)	ETD	IMEDEA SOCIB	bcasas@socib.es 629 006 192
Castilla Álvarez, Carlos (CCA)	ETD	SOCIB	ccastilla@uib.es 971 610 508
Lizarán Esperilla, Irene (ILE)	ETD	SOCIB	ilizaran@socib.es 971 610 058
Orfila Fórster, Alejandro (AOF)	Beach monitoring	IMEDEA SOCIB	a.orfila@uib.es 971 611 834
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
Balaguer Huguet, Pau (PBH)	SIAS	SOCIB	pablo.balaguer@socib.es 616819878

List of the people involved in fieldwork campaign by tasks

B.2 Logistics*B.2.1. Dates*

Monday	29	5	12
		S1: echosounding boat works (CCA+ILE) S2: profiles (CCA+ILE)	Terrestrial survey post-process (AAE) Bathymetry post-process (ILE)
Tuesday	30	6	13
		S1: profiles (CCA+ILE) S2: AWAC maintenance (CCA+ILE+BCP) T1: Beach survey (AAE+LGP+PBH)	
Wednesday	31	7	14
	Harbours needs and contact (LGP) Hotel reservations (LGP)	T1: Terrestrial material cleaning & storage (AAE) S1: Sea material cleaning and storage (CCA)	
Thursday	1	8	15
Friday	2	8	16
	Sea material preliminary works (CCA, ILE) Terrestrial material prel. works (LGP)		
Saturday	3	10	17
Sunday	4	11	18

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

ADCP PROFILER	
Description	Nortek ACDCO profiler - Aquadopp
Configuration	
Responsible	BCP
Catalogue	ICTS SOCIB
Location	IMEDEA, TMOOS warehouse, Floor -2

SEDIMENT DRAG	
Description	Ekman drag
Configuration	20 x 20 x 40; 8 kg
Responsible	BCP
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 Cala Bona Port. Contact details are:

Port Cala Bona

c/ Explanada port s/n

Telf. 971 586 256

Fax. 971 586 256

E-mail: port.calabona@portsib.es

Contact people:

Rafi Ros (administrative; p0600@portsib.es) and Pedro Fiol (administrator)

B.2.4. TMOOS-IMEDEA resources

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

- TMOOS Nissan Pick-up
- TMOOS Valiant DR650
- TMOOS diving equipment

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 eastern coast of Mallorca, at the Bay of Son Servera. The Bay is characterized by a maximum depth of around 25 m at 7 km from the coastline which reduces to 8 m at 300 m from the coastline. Water clarity is high around the Balearic ramp because there is virtually no fluvial input from the island and continental sedimentation is minimal. Waves approaching from NE and ESE come into the bay through northern and southern mouths, respectively. Meteorological and wave observations from Puertos del Estado (<http://www.puertos.es>) show that waves with significant height over 1 m act on the beach just during the 2% of the days of a year. 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.

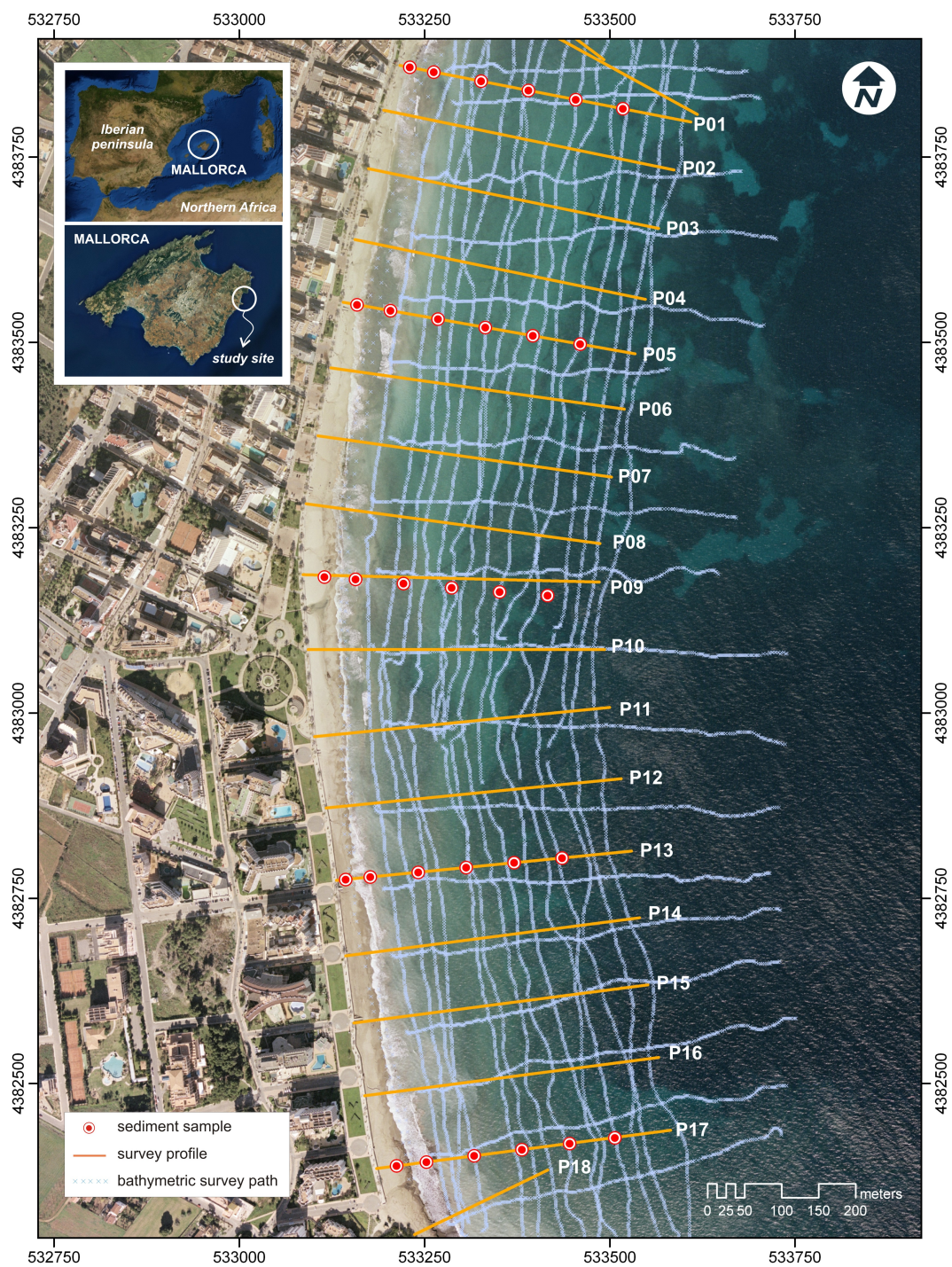
Cala Millor is a beach backed by a boulevard, hotels and residential houses, and bounded by two rocky headlands, Cap Pinar northwards and Punta de n'Amer Southwards. It is a sandy beach near 1700 m long with a concave shape. From a morphodynamic point of view, Cala Millor is an intermediate beach with a configuration of transverse and crescentic bars. The sediment consists of medium carbonate bioclastic sands, being the median sediment size (D50) on the beach around 0.34 mm. *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 Cala Millor consists on providing the annual dataset described at SOCIB - MTBMF implementation plan. Main products would be:

- a high resolution bathymetry from 0 to 5 m depth and lower resolution bathymetry from 5 to 10 m depth.
- 18 subaerial - submerged beach profiles
- ADCP maintenance

C.3 Data sampling



C.4 Contact information

Port Cala Bona

c/ Explanada port s/n

Telf. 971 586 256

Fax. 971 586 256

E-mail: port.calabona@portsib.es

Demarcación de Costas en Islas Baleares

c/ Ciudad de Queretaro s/n

07007 Palma

Telf. 971 774 949