

MARINE-TERRESTRIAL BEACH MONITORING FACILITY



Balearic Islands
Coastal Observing
and Forecasting
System

FIELDWORK CAMPAIGN DEFINITION

Issue:	SON BOU 2012
Date:	01.10.2012
Description:	This document summarizes the field campaign definition, preparation and development of the campaign SON BOU – OCTOBER 2012
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A. SCIENTIFIC-TECHNOLOGICAL OBJECTIVES

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

- (a) to provide a continuous dataset on beach topography-bathymetry evolution and sediment characteristics.
- (b) to improve georeference points for 1 SIRENA camera
- (c) to modify network external access to SIRENA station
- (d) to update the SIRENA software and timespan for images captures
- (e) AWAC maintenance
- (f) Weather station calibration

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	carlos.castilla@uib.es 971 610 508
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
Lizarán Esperilla, Irene (ILE)	ETD	IMEDEA	ilizaran@imedea.uib-csic.es 971 610 508

List of the people involved in fieldwork campaign by tasks

#	Task	People	Dates	Observations
1	Sea equipment preliminary works	ILE CCA	5 oct 2012	
2	Terrestrial and sediment sampling preliminary works	LGP AAE	5 oct may 2012	
3	Beach survey	AAE AOF LGP	09 oct 2011	
4	Profiles	ILE CCA	09-10 oct 2012	
5	Georeferencing works	LGP AAE	10 oct 2012	
6	SIRENA software modifications and maintenance	AAE LGP AOF	10 oct 2012	
7	AWAC maintenance	AAE ILE CCA	10 oct 2012	
8	Weather station calibration	AAE LGP AOF	10 oct 2012	
9	Sea material cleaning and storage	CCA ILE	11 oct 2012	
10	Terrestrial material cleaning and storage	AAE LGP	11 oct 2012	
11	Bathymetry pre-postprocess	ILE	15 - 18 oct 2012	
12	Terrestrial survey pre-postprocess	AAE	15 - 18 oct 2012	
13	Bathymetry and beach DEM postprocess	LGP	22 – 25 oct 2012	

B.2 Logistics

B.2.1. Dates

Monday	O01	O08	O15 Profiles pre-process (ILE) Terrestrial survey pre-process (AAE)
Tuesday	O02	O09 S1: profiles(ILE+CCA) S2: ECO calibration (ILE+CCA+AAE) T1: Wet Beach survey (AAE+AOF) T2: Dry beach survey	O16
Wednesday	O03 Harbours needs and contact (LGP) Hotel reservations (LGP)	O10 S1: profiles (ILE+CCA) S2: AWAC maintenace (ILE+CCA+AAE) T1: Georeferencing works (AAE+LGP) T2: SIRENA maitenance (AAE+LGP) T3: weather station calibration (AAE+LGP)	O17
Thursday	O04	O11 S1: boat works (CCA+ILE) S2: Sea material cleaning and storage works (CCA) T1: Terrestrial material cleaning and storage works (LGP, AAE)	O18
Friday	O05 Sea material preliminary works (CCA, ILE) Terrestrial material prel. works (LGP, AAE)	O12	O19 Profiles postprocess (LGP, AAE)

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 - AWAC
Configuration	Profile interval 1800 sec Number of cells 7 Cell size 200 cm Average interval 300 sec Measurement load 50 % Transmit pulse length 2.22 m Blanking distance 0.50 m Compass update rate 1800 sec Wave measurements ENABLED Wave - Powerlevel HIGH Wave - Interval 3600 sec Wave - Number of samples 1200 Wave - Sampling rate 1 Hz Wave - Cell size 1.80 m Wave - Cell position min pressure 90 % Analog input 1 NONE Analog input 2 NONE Powerlevel HIGH Coordinate system ENU Sound speed MEASURED Salinity 37.0 ppt Distance between pings 93.72 m Number of beams 3 Number of pings per burst 2 Software version 1.41 Deployment name BM-CM Wrap mode OFF
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 Galdana Port. Contact details are:

Xec Riera Pons

Associació Amics des Riu de Cala Galdana
Telf. 971 374 231

B.2.4. TMOOS-IMEDEA resources

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

- SOCIB van
- 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

Son Bou is a 2,6 km lineal beach located in the southern coast of Menorca. It's a classical beach-longitudinal barrier that separates a lagoon of from the sea. From a morphodynamic point of view, Son Bou 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 (D_{50}) on the beach around 0.22 mm. *P. oceanica* meadows appears at 8 m in depth nearly a hundred meters from the shoreline. Beach rocks and other reef structures appear close to the coastline.



C.2 Fieldwork campaign specifications

The aim of the fieldwork campaign at Son Bou consists on providing the annual dataset described at SOCIB - MTBFM implementation plan. Main products would be:

- a high resolution 12 profiles from 0 to 5 m depth and lower resolution bathymetry from 5 to 10 m depth.
- Cameras extrinsic geometric correction
- SIRENA station maintenance
- AWAC maintenance
- Weather station calibration

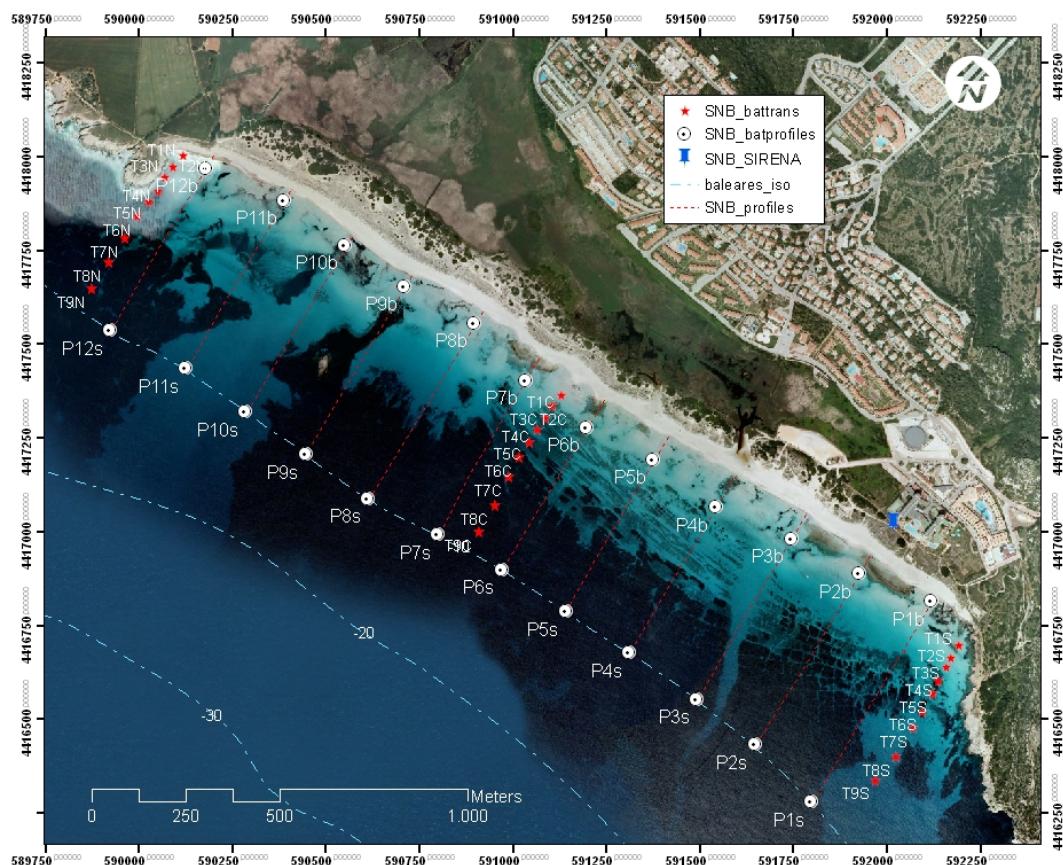
C.3 Data sampling

C.3.1. Profile surveys

Profile	Initial sea point		Final sea point		Initial land point	
	X (deg)	Y (deg)	X (deg)	Y (deg)	X (UTM)	Y (UTM)
1	4.05502	39.907	4.05199	39.9032		
2	4.05746	39.9062	4.05433	39.9022		
3	4.05936	39.9051	4.05618	39.9011		
4	4.0612	39.9041	4.05804	39.9001		
5	4.06337	39.9032	4.05998	39.899		
6	4.06494	39.9018	4.06215	39.8981		
7	4.06684	39.9007	4.06413	39.8973		
8	4.0689	39.8999	4.06611	39.8963		
9	4.07084	39.8987	4.06809	39.8952		
10	4.07318	39.8979	4.07019	39.8941		
11	4.07528	39.8971	4.07197	39.893		
12	4.07754	39.8964	4.07372	39.8916		

C.3.2. Bathymetric survey

Aprox. 40 km of bathymetric survey path



C.4 Contact information

Associació Amics d'Es Riu de Cala Galdana

Avda. Verge del Tori, 12. Ferreries
Telf. 971 37 42 31

Contacte: Francesc (Xec) Riera
E-mail: xec@ccriera.com

Mariner Cala Galdana: Joan, 650 58 57 37