

Report on Activities for MONGOOS 2013

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1. Contacts

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2. MONGOOS purpose and members

The Mediterranean Operational Network for the Global Ocean Observing System (“MONGOOS”) Memorandum of Agreement (MoA) was established in 2012 with the signature of the MONGOOS MoA. MONGOOS is joining the effort of MOON and MEDGOOS networks and respective Memorandum of Understanding (MOU).

The purpose of the MONGOOS MOA is for the Members to:

- (a) collaborate to further develop operational oceanography in the Mediterranean Sea by integrating their activities under the name of MONGOOS;
- (b) supplant the MOON and MedGOOS MoUs, building on and integrating their core mandates;
- (c) promote partnerships and capacity building for GOOS in the Mediterranean Sea; and
- (d) elaborate a continuous working framework with EuroGOOS and GOOS Africa in order to define common roles and activities in the Mediterranean Sea, and foster collaboration with Black Sea GOOS and global ocean GOOS initiatives.

The Table below contains the MONGOOS Members list.

Index	Acronim	Complete name	Country
1	AMGI	Andrija Mohorovičić Geophysical Institute, University of Zagreb	Croatia
2	IOF	Institute of Oceanography and Fisheries	Croatia
3	RBI	Rudjer Boskovic Institute	Croatia
4	OC-UCY	Oceanography Cente University of Cyprus	Cyprus
5	Ifremer	Institut Français de Recherche pour l'Exploitation de la Mer	Francia
6	Mercator Ocean	Mercator Océan	Francia
7	Météo-France	Météo-France	Francia
8	HCMR	Hellenic Centre for Marine Research	Greece
9	UoA/IASA	University of Athens/ Institute of Accelerating Systems and Applications	Greece
10	UoA/IASA	University of Athens/ Institute of Accelerating Systems and Applications	Greece
11	University of Thessloniki	Aristotle University of Thessaloniki	Greece
12	IOLR	Israel Oceanographic & Limnological Research	Israel
13	CMCC	Centro Euro-Mediterraneo sui Cambiamenti Climatici	Italy
14	CNR-IAMC	Istituto per l'Ambiente Marino Costiero	Italy
15	CNR-ISAC	Istituto di Scienze dell'Atmosfera e del Clima	Italy
16	CNR-ISMAR	Istituto di Scienze Marine	Italy
17	CNR-ISSIA	Istituto di Studi sui Sistemi Intelligenti per l'Automazione	Italy
18	ENEA	Italian National Agency for new Technologies, Energy and Sustainable Economic Development	Italy
19	INGV	Istituto Nazionale di Geofisica e Vulcanologia	Italy
20	OGS	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale	Italy
21	UNIBO	Alma Mater Studiorum Università di Bologna	Italy
22	UMT-IOI-POU	University of Malta - The International Ocean Institute, Malta Operational Centre - Physical Oceanography Unit	Malta
23	IMB	Institute of Marine Biology, University of Montenegro	Montenegro
24	INRH	Institut National de Recherche Halieutique	Morocco
25	University Mohamed V	University Mohamed V-Agdal	Morocco
26	ARSO	Slovenian Environment Agency	Slovenia
27	NIB	National Institute of Biology Marine Biology Station	Slovenia
28	CSIC	Consejo Superior de Investigaciones Cientificas	Spain
29	IEO	Instituto Español de Oceanografía	Spain
30	LIM/UPC	Laboratorio de Ingeniería Marítima/Universidad Politécnica de Cataluña	Spain
31	PdE	Puertos del Estado	Spain
32	SOCIB	Balearic Islands Coastal Observing and Forecasting System	Spain
33	IMS/METU	Middle East Technical University Institute of Marine Sciences	Turkey

3. Objectives of MONGOOS

MONGOOS shall engage in activities related to the production and use of operational oceanography services (“Services”), as set forth in Annex II of the MOU (Activities), in furtherance of four principal objectives:

- (a) Improved Fitness for Purpose. Continuously advance the scientific understanding and technological development upon which the Services are based.
- (b) Greater Awareness. Promote the visibility and recognition of the Services with governmental agencies and private companies, encourage their integration at national, regional, European and global levels.
- (c) Increased Downstreaming. Enhance the usability of the Services and their usefulness for policy implementation, societal needs and science.
- (d) Improved Capacity. Support the planning and implementation of international initiatives involving operational oceanography and promote the participation of non-EU Mediterranean countries in producing the Services.

4. Main achievements during the last year

During 2013 MONGOOS has organized the annual meeting in Madrid in October 2013. In 2013 MONGOOS partners have set up the working groups (data, modelling). The new MONGOOS website has been launched.

MONGOOS working groups have carried out a review of existing operational observing and forecasting systems.

Main results of the review are presented below.

Forecasting systems

73 forecasting systems are run operationally in the Mediterranean by MONGOOS partners, the systems include: ocean general circulation models, wave models, storm surge models, biogeochemical flux models and oil spill models.

The full list of operational MONGOOS forecasting systems is provided in Annex 1.

In situ Observing systems

182 in situ observing systems are identified in the Mediterranean. These systems are run by MONGOOS partners and they include: buoys (open ocean and coastal) and tide gauges.

The full list of operational MONGOOS in situ observing systems is provided in Annex 2.

Remote sensing products

The review of existing remote sensing products is still on going and for the moment being the following products have been indentified:

GOS-SST-HR
GOS-SST-UHR
GOS OCOS-L3
GOS OCOS-L4
SSALTO/DUACS
CYCOFOS-Ground HRPT station

a. Main activities

MONGOOS was established in 2012 with the signature of the MONGOOS MoA on the basis of the activities and MOU of MOON and MEDGOOS. During 2013 the Secretariat was established with the two co-chairs, Enrique Alvarez Fanjul (Puertos) and Giovanni Coppini (CMCC) and Susana Perez (Puertos). The MONGOOS bureau constituted by the previous MOON and MEDGOOS co-chairs and secretariat (Nadia Pinardi, Pierre Bahurel, Kostas Nittis, Aldo Drago) was consulted for strategic decisions.

MOONGOOS became a GRA in 2013, Decision IOC-XXVII/Dec.5.3.2 stated: " The Assembly,...Recognizes the Mediterranean Operational Network for the Global Ocean Observing System (MONGOOS) as a GOOS Regional Alliance, as a merger of the former Mediterranean GOOS Regional Alliance (MEDGOOS) and the EuroGOOS Mediterranean Operational Oceanography Network."

The MONGOOS website was launched www.mongoos.eu

During 2013 MONGOOS main activities were the following:

- Improve and implement the operational MyOcean Core Service
- Consolidation and upgrade of MyOcean Mediterranean In Situ TAC
- Further development of the MyOcean Cal/Val service with support of MOGOOS members
- Further development of MyOcean OC TAC
- MonGOOS Members annual assembly join with Jerico workshop 2-3-4 October 2013, Madrid
- Contribution the ECOMF development
- Consolidate the NICOSIA declaration
- Implementation of EUMETNET-MOON MoA
- Consolidation of the MEDSLIK-II consortium and model development
- Contribute to the EEA GMES In Situ data program and start the discussion on the EEA&EUROGOOS agreement
- Contribution of MOON to EEA indicators for EEA
- On going projects: MyOcean II, Perseus, MEDESS4-MS project, Ionio, TESSA, GMES Pure, ETC-ICM,
- Implement EMODNET projects.

- Prepare the new proposals: EUCISE2020 (approved), Defishghear (Approved), Arges (Approved), etc..
- Contribute to the Marine Research Infrastructure initiative
- Consolidate the relationship with IOC, WMO and JCOMM
- Consolidate the relationship with EUROGOOS: MONGOOS co-chairs have contributed to the EUROGOOS development and have participated to the EUROGOOS board meetings
- Participate to the Sixth Session of the GOOS Regional Alliance Forum (Hawaii, USA, 14-16 May 2013) and contribute to the preparation of the GOOS Regional Policy 2013”, approved by the IOC-XXVII Assembly.
- Contribute to the Interaction with JPI Oceans

b. Agreements

The rights and obligations of each Member under pre-existing MOON and MEDGOOS agreements shall survive the effectiveness of MONGOOS MoA, in particular MOON DEA, REMPEC-MOON and MOON-EUMETNET.

MONGOOS operational partners have continue to use the governance system built on the Data Exchange Agreement (DEA). The DEA has the aim of harmonising and securing the flow of data within this network in order to deliver regular and systematic products on the state of the Mediterranean Sea and its sub-regional areas. MONGOOS DEA continues in consolidating the operational functioning of MONGOOS MCS and Member State services. MONGOOS DEA partners exchange data and products in operational mode.

MONGOOS and REMPEC established a collaboration agreement in April 2009. MONGOOS partners and REMPEC entered into the Agreement with a view to ensuring maximum coordination of the work and activities of REMPEC and MONGOOS in respect of oil spill activities in the Mediterranean. The MONGOOS-REMPEC agreement has been in force during 2011 and partners are:

MONGOOS-REMPEC agreement partners constituted the Emergency Response Office (ERO) to support REMPEC in responding to emergencies and carried out MOON-REMPEC agreement activities. During 2012 MONGOOS Italian partenrs have provided support to the Italian Coast guard and Civil protection during the Costa Concordia Accident and relevant information and daily bulleting have been regularly sent to REMPEC.

MONGOOS-REMPEC agreement will be renewed in 2014.

A new MONGOOS&EUMETNET MoA has been approved where the MONGOOS Members will endeavour to:

a) share information and outputs of their respective activities for the purpose, and within the scope, of this Agreement, subject to arrangements as may be necessary for safeguarding confidential information;

- b) utilise the MONGOOS Members' expertise in the activities which are regularly carried out by EUMETNET (e.g. training, organization of workshops and conferences);
- c) collaborate in the development of projects for the implementation of the MOON/E-SURFMAR Science and Strategy Plan (Annex B);
- d) cooperate to disseminate MONGOOS data in the GTS in real-time through the network of national meteorological centres and receive GTS data from them;
- e) collaborate to improve observational data quality control systems and improve the existing network: E-SURFMAR should make available Quality Control tools to MOON members to monitor in near real-time the quality of measured parameters by each platforms.

The MONGOOS-EUMETNET Science and Strategy Plan has also been written in support of the MoA.

The MONGOOS-EUMETNET agreement entered into force in 2013.

5. Plan for next year

- Establish the Executive board and consolidate the working groups.
- Keep update the MONGOOS website.
- Manage entrance of private companies into MONGOOS as associate members
- Consolidate the relationship with ECOMF
- Contribute to Copernicus in situ and EMODNET physics
- Consolidate and expand the MoA between EUMETNET and MONGOOS Members
- Promote the exchanges with UNEP/MAP to contribute to the UNEP/MAP future reports
- Consolidate the DEA
- Renew the MONGOOS-REMPEC agreement and consolidate it : enhance the relationship between MONGOOS partners and National oil spill monitoring and forecasting systems also with the support of MEDESS4MS project.
- Consolidate the relationship with EMSA
- Continue the activities with EEA both for indicator development and for GMES in situ activities.

6. Relation to major projects

MONGOOS partners are participating to the following projects:

- SEADATANET-II
- PERSEUS
- ETC-ICM
- EuroSITES
- EuroARGO

- MyOcean2
- JERICO
- EMSO
- MEDESS4MS
- IONIO
- TESSA
- EMODNET
- GMES Pure
- RITMARE

7. Challenges and problems

- Clearly understand and quantify uncertainty is the next frontier: ensemble methods should be used, as well as comparison with independent data
- The relationship between the European Service (ECOMF) and the national services must be consolidated (Nicosia declaration)
- Consolidate the ECOFM plan
- Consolidate the Copernicus in situ activities
- MONGOOS observing system should be continuously upgraded and sustainability should be ensured.
- Entrainment and collaboration with North African countries should be a focus

8. Annex 1

Forecasting systems

	Institution	Operational forecasting system name	Modelled variables
1	CNR-IAMC	Sicily Channel Regional sub-Model Forecasting System	Temperature, Salinity, Sea surface height, Currents, Waves
2	CNR-IAMC	Western Mediterranean sub-Regional Model Forecasting System	Temperature, Salinity, Sea surface height, Currents, Waves
3	CNR-IAMC	Bonifacio Oil Spill Operational Model	Waves, Currents
4	CNR-IAMC	Oristano coastal Model	Waves, Currents
5	CNR-ISMAR	Kassandra - Mediterranean Sea	Sea Level, Waves
6	CNR-ISMAR	Kassandra - Balck Sea	Sea Level, Waves
7	CNR-ISMAR	Nettuno - Mediterranean Sea	Waves
8	CNR-ISMAR	Henetus - Adriatic Sea	Waves
9	CNR-ISMAR	RISKMED - Mediterranean Sea	Waves
10	ENEA	Tyrrhenian Sea Forecasting	Temperature, Salinity, Sea surface height, Currents
11	HCMR	POSEIDON	Temperature
12	HCMR	POSEIDON	Chlorophyll
13	HCMR	POSEIDON	Temperature, Salinity, Sea surface height, Currents
14	HCMR	POSEIDON	Waves

	Institution	Operational forecasting system name	Modelled variables
15	HCMR	POSEIDON	Sea Level
16	HCMR	POSEIDON	Waves
17	HCMR	POSEIDON	Temperature, Salinity, Sea surface height, Currents
18	HCMR	POSEIDON	Waves
19	IFREMER	PREVIMER-MENOR	Temperature, Salinity, Sea surface height, Currents
20	IMS-METU	NLEV (POM)	Temperature, Salinity, Sea surface height, Currents
21	IMS-METU	NLEV (ROMS)	Temperature, Salinity, Sea surface height, Currents
22	IMS-METU	LEV (ROMS)	Temperature, Salinity, Sea surface height, Currents
23	IMS-METU	BLACK (POM)	Temperature, Salinity, Sea surface height, Currents
24	INGV	MFC-Currents	Temperature, Salinity, Sea surface height, Currents
25	INGV-CMCC	AFS	Temperature, Salinity, Sea surface height, Currents
26	IOLR	SELIPS	Temperature, Salinity, Sea surface height, Currents
27	IOLR	Mediterranean_Sea-W	Waves
28	IOLR	Levantine_Basin-W	Waves
29	IOLR	Israeli_Coast-W	Waves
30	IOLR	Haifa_Bay-W	Waves
31	LIM/UPC	Wave forecast at the NW Medirettanean basin	Waves
32	MERCATOR	PSY2	Temperature, Salinity, Sea surface height, Currents
33	MERCATOR	PSY3	Temperature, Salinity, Sea surface height, Currents
34	MERCATOR	PSY4	Temperature, Salinity, Sea surface height, Currents
35	NIB-MBS	North Adriatic Princeton Ocean Model (NAPOM)	Temperature, Salinity, Sea surface height, Currents
36	OC-UCY	CYCOFOS NE	Temperature, Salinity, Sea surface height, Currents
37	OC-UCY	CYCOFOS Levantine	Temperature, Salinity, Sea surface height, Currents
38	OC-UCY	CYCOFOS NE - Glider temperature, salinity assimilation	Temperature, Salinity, Sea surface height, Currents
39	OC-UCY	CYCOFOS Levantine	Waves
40	OC-UCY	CYCOFOS Cyprus	Waves
41	OC-UCY	CYCOFOS Med & Black Sea	Waves
42	OC-UCY	CYCOFOS Med & Black Sea	Sea Level
43	OC-UCY	CYPPOM Aegean-Levantine	Temperature, Salinity, Sea surface height, Currents
44	OGS	MFC-Biogeochemistry	Chlorophyll
45	OGS	MFC-Biogeochemistry	Chlorophyll
46	PdE	SAMPA	Temperature, Salinity, Sea Level, Currents
47	PdE	PdE Waves Forecast for the Med Sea	Waves
48	PdE	Nivmar	Sea Level
49	PdE	SAPO Alicante	Waves
50	PdE	SAPO Almeria	Waves

	Institution	Operational forecasting system name	Modelled variables
51	PdE	SAPO Almeria-Carboneras	Waves
52	PdE	SAPO Barcelona	Waves
53	PdE	SAPO Cartagena	Waves
54	PdE	SAPO Valencia	Waves
55	PdE	SAPO Tarragona	Waves
56	PdE	SAPO Algeciras	Waves
57	PdE- Mercator	IBI-MFC model	Temperature, Salinity, Sea Level, Currents
58	PdE-SOCIB	SAPO Palma de Mallorca	Waves
59	RBI	ROMS Adria 2km	Temperature, Salinity, Sea surface height, Currents
60	RBI	ROMS Kvarner nest 500m	Temperature, Salinity, Sea surface height, Currents
61	RBI	ROMS West Istria nest 500m	Temperature, Salinity, Sea surface height, Currents
62	RBI	WWM Adriatic	Waves
63	SOCIB	Western Mediterranean sea OPerational system (WMOP)	Temperature, Salinity, Sea surface height, Currents
64	UMT-IOI- POU	MARIA/WAM Central Med	Waves
65	UMT-IOI- POU	ROSARIO	Temperature, Salinity, Currents
66	UoA	ALERMO	Temperature, Salinity, Sea surface height, Currents
67	UoA	North Aegean Forecasting	Temperature, Salinity, Sea surface height, Currents
68	UoA/IASA	SKIRON, Global	Waves
69	UoA/IASA	SKIRON	Waves
70	UoA/IASA	SKIRON	Waves
71	UoA/IASA	SKIRON	Waves
72	UoA/IASA	SKIRON	Waves
73	UoA/IASA	SKIRON	Waves

9. Annex 2 In situ Observing systems

	Institution	Station name	Type	Measured variables
1	CETMEF	Nice	Buoy	Waves,SST,Salinity
2	CETMEF	Le Planier	Buoy	Waves,SST,Salinity
3	CETMEF	Leucate	Buoy	Waves,SST,Salinity
4	CETMEF	La Revellata	Buoy	SST, Waves
5	CETMEF	Espiguette	Buoy	Waves,SST,Salinity
6	CETMEF	Sète	Buoy	Waves,SST,Salinity
7	CETMEF	Banyuls	Buoy	Waves,SST,Salinity
8	CETMEF	Marseille	Buoy	Waves
9	CETMEF	Porquerolles	Buoy	Waves
10	CNR-ISMAR	S1	buoy	Wind speed, Air Pressure, Air Temperature, SST, Salinity, Currents
11	CNR-ISMAR	COR	mooring	Currents, SST, Salinity
12	CNR-ISMAR	C01	mooring	Salinity, SST, Currents
13	CNR-ISMAR	C02	mooring	Salinity, SST, Currents
14	CNR-ISMAR	PTF Acqua Alta	platform	SST, Salinity, Sea Level, Waves, Currents, Wind speed, Air Temperature, Air Pressure
15	CNR-ISMAR	PALOMA	mast	Waves, SST, Salinity, Air Temperature, Wind
16	CNR-ISMAR	Molo Sartorio Molo Fratelli	tide gauge	Sea Level
17	CNR-ISMAR	Bandiera	shore station	SST, Air Temperature, Wind
18	CNR-ISMAR	BB	mooring	Salinity, SST, Currents, Sea Level
19	CNR-ISMAR	DD	mooring	Salinity, SST, Currents, Sea Level
20	CNR-ISMAR	E1	buoy	Wind, Air Temperature, Air Pressure, SST, Salinity, Currents
21	CNR-ISMAR	Meda Senigallia	buoy	Wind, Air Temperature, SST, Salinity, Currents, Sea Level
22	CNR-ISMAR	Meda Gargano	mast	SST, Salinity, Air Temperature, Wind, Air Pressure
23	CNR-ISSIA	W1M3A	Buoy	Air Pressure, Wind, Air Temperature, SST, Salinity
24	HCMR	Zakynthos	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
25	HCMR	Santorini	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
26	HCMR	Mykonos	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
27	HCMR	Lesvos	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
28	HCMR	Athos	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
29	HCMR	Pylos	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
30	HCMR	E1-M3A	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
31	HCMR	Skyros	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents

32	HCMR	Kalamata	Buoy	Wind, Air Pressure, Waves, Air Temperature, SST, Salinity, Currents
33	HCMR	Saronikos	Buoy	Currents, Waves, SST, Wind, Air Pressure, Air Temperature, Salinity
34	Hrvatski Hidrografski Institut	Dubrovnik	Tide Gauge	Sea Level
35	Hrvatski Hidrografski Institut	Ploče	Tide Gauge	Sea Level
36	Hrvatski Hidrografski Institut	Split	Tide Gauge	Sea Level
37	Hrvatski Hidrografski Institut	Vis	Tide Gauge	Sea Level
38	Hrvatski Hidrografski Institut	Zadar	Tide Gauge	Sea Level
39	Hrvatski Hidrografski Institut	Mali Lošinj	Tide Gauge	Sea Level
40	Hrvatski Hidrografski Institut	Bakar	Tide Gauge	Sea Level
41	Hrvatski Hidrografski Institut	Rovinj	Tide Gauge	Sea Level
42	IEO, Instituto Español de Oceanografía	Cádiz	Tide Gauge	Sea Level
43	IEO, Instituto Español de Oceanografía	Tarifa	Tide Gauge	Sea Level
44	IEO, Instituto Español de Oceanografía	Ceuta	Tide Gauge	Sea Level
45	IEO, Instituto Español de Oceanografía	Algeciras	Tide Gauge	Sea Level
46	IEO, Instituto Español de Oceanografía	Málaga	Tide Gauge	Sea Level
47	IEO, Instituto Español de Oceanografía	Palma de Mallorca	Tide Gauge	Sea Level Wind, Air Pressure, Air Temperature, SST,
48	IFREMER	Mesurho	Buoy	Salinity, Currents, Waves
49	IMS-METU IOLR, Israel Oceanographic & Limnological Research	Tasucu	Tide Gauge	Sea Level
50	IMS-METU IOLR, Israel Oceanographic & Limnological Research	Hadera	Marine Station	Waves, Currents, SST, Salinity, Wind, Air Pressure, Sea Level
51	IMS-METU IOLR, Israel Oceanographic & Limnological Research	Ashkelon	Marine Station	Waves, Currents, SST, Salinity, Wind, Air Pressure, Sea Level

52	IOLR, Israel Oceanographic & Limnological Research IBM,Inst.of hydromet.and seism.of	Tel Shikmona	Shore Station	Wind, Air Pressure, Air Temperature, Relative Humidity, Solar Radiation
53	Montenegro IBM,Inst.of hydromet.and seism.of	Bar	Tide Gauge	Sea Level
54	Montenegro	Koter	Tide Gauge	Sea Level
55	ISPRA	Cagliari	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
56	ISPRA	Catania	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
57	ISPRA	Civitavecchia	Tide Gauge	Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
58	ISPRA	Crotone	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
59	ISPRA	La Spezia	Tide Gauge	SST, Air Pressure, Sea Level, Air Temperature, Relative Humidity
60	ISPRA	Ponza	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
61	ISPRA	Venezia	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
62	ISPRA	Gaeta	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
63	ISPRA	Carloforte	Tide Gauge	Sea Level, SST, Air Temperature, Relative Humidity, Air Pressure, Wind, Ph, Redox
64	ISPRA	Ginostira	Tide Gauge	Sea Level, SST, Air Temperature, Relative Humidity, Air Pressure, Ph, redox
65	ISPRA	Imperia	Tide Gauge	Sea Level, SST, Air Temperature, Relative Humidity, Air Pressure, Wind, Ph, Redox
66	ISPRA	Napoli	Tide Gauge	Sea Level, SST, Air Temperature, Relative Humidity, Air Pressure, Wind
67	ISPRA	Otranto	Tide Gauge	Sea Level, SST, Air Temperature, Relative Humidity, Air Pressure, Wind, Ph, Redox
68	ISPRA	Trieste	Tide Gauge	Sea Level, SST, Air Temperature, Relative Humidity, Air Pressure, Wind, Ph, Redox
69	ISPRA	Ancona	Tide Gauge	Wind, Air Pressure, Sea Level, Air Temperature, SST, Relative Humidity
70	ISPRA	Bari	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
71	ISPRA	Genova	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
72	ISPRA	Lampedusa	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity, Ph, Redox
73	ISPRA	Livorno	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
74	ISPRA	Marina di Campo	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
75	ISPRA	Ortona	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
76	ISPRA	Palermo	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity

77	ISPRA	Palinuro Porto	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity, Ph, Redox
78	ISPRA	Empedocle	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
79	ISPRA	Porto Torres	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
80	ISPRA	Ravenna Reggio	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
81	ISPRA	Calabria	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
82	ISPRA	Salerno	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
83	ISPRA	Taranto San Benedetto	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Wind, Relative Humidity
84	ISPRA	del Tronto	Tide Gauge	SST, Wind, Air Pressure, Sea Level, Air Temperature, Relative Humidity
85	ISPRA	Sciacca	Tide Gauge	SST, Air Pressure, Sea Level, Air Temperature, Relative Humidity
86	ISPRA	Strombolicchio	Tide Gauge	Wind, Air Pressure, Air Temperature, Relative Humidity
87	ISPRA IZOR, Inst. of Oceanograhpy and Fisheries,	Vieste	Tide Gauge	Sea Level, SST, Air Temperature, Air Pressure, Relative Humidity, Wind, Ph, Redox
88	Croatia IZOR, Inst. of Oceanograhpy and Fisheries,	Kastela Bay	Buoy	SST, Wind, Air Pressure, Currents, Air Temperature, Salinity
89	Croatia	Punta Jurana	Marine Station Meteo- oceanographic	SST, Wind, Air Pressure, Air Temperature
90	LIM/UPC NIB, National Institute of Biology,	Badalona Pier	Station	Wind, Air Pressure, Air Temperature, Relative Humidity, Rain, Waves, Sea Level
91	Slovenia	Vida	Buoy	Waves, SST, Wind, Currents, Air Temperature, Salinity, Humidity
92	ARSO	Koper- Kapitanija	Tide Gauge & Met Station	Sea Level, SST, Air Temperature, Wind, Air Pressure, Solar Radiation
93	OC-UCY	CYCOFOS-OCB	Buoy	Salinity, SST, Sea Pressure
94	OC-UCY	Paphos	Tide Gauge	SST, Sea Level, Air Pressure
95	OC-UCY	Larnaca	Tide Gauge	Sea Level, SST
96	OC-UCY	Zygi	Tide Gauge	Sea Level, SST
97	OC-UCY	Paralimni	Tide Gauge	Sea Level, SST
98	OC-UCY	Limassol - LCL06094	Multi- parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
99	OC-UCY	Limassol - LCL06093	Multi- parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
100	OC-UCY	Limassol - LCL06096	Multi- parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
101	OC-UCY	Limassol - LCL06088	Multi- parametric	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox

102	OC-UCY	Paphos - LCL06090	Multi-parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
103	OC-UCY	Paphos - LCL06089	Multi-parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
104	OC-UCY	Vasiliko - LCL06091	Multi-parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
105	OC-UCY	Vasiliko - LCL06092	Multi-parametric probes	Sea Pressure, SST, Salinity, pH, Dissolved Oxygen, Turbidity, Redox
106	OGS	E2-M3A	Buoy	Air Pressure, Wind, Air Temperature, Hr, Short-Wave Radiation, Long-Wave Radiation, SST, Salinity, Oxygen, Currents
107	OGS	MAMBO 1	Buoy	Wind, Air Pressure, Air Temperature, Air Humidity, Solar Radiation, SST, Dissolved Oxygen, pH, Fluorescence, Turbidity, Radiance; SST, Conductivity, CO2
108	OGS	MAMBO 2	Buoy	Wind, Air Pressure, Air Temperature, Air Humidity, SST, Dissolved Oxygen, Conductibility, pH, Redox Potential, Fluorescence, Hydrostatic Pressure, Currents, Bottom Water Temperature and Water Pressure
109	OGS	MAMBO 3	Buoy	Wind, Air Pressure, Air Temperature, Air Humidity, SST, Dissolved Oxygen, Conductibility, pH, Redox Potential, Fluorescence, Hydrostatic Pressure, Currents, Bottom Water Temperature, Water Pressure
110	OGS	MAMBO 4	Buoy	Wind, Air Pressure, Air Temperature, Air Humidity, Current, Bottom Water Temperature, Water Pressure
111	OGS	DWRG-1	Buoy	Waves
112	OGS	DWRG-2	Buoy	Waves
113	OGS	DWRG-3	Buoy	Waves
114	OGS	CORR_ISO	River Station	Currents, Water Temperature, Water Pressure
115	OGS	CORR_TAG	River Station	Currents, Water Temperature, Water Pressure
116	PO-Unit, IOI-MOC, University of Malta	Portomaso	MedGLOSS Station	Air Pressure, SST, Sea Level
117	PO-Unit, IOI-MOC, University of Malta	Marsaxlokk	Meteo Station	Wind, Air Temperature, Air Pressure
118	PO-Unit, IOI-MOC, University of Malta	Msida	Heat Flux Station	Air Temperature, Air Pressure, Net Radiation, Solar Radiation, Humidity
119	Puertos del Estado	Dragonera	Buoy	Waves, SST, Currents, Wind, Air Temperature, Air Pressure

120	Puertos del Estado	Cabo Begur	Buoy	Waves, Wind, Air Temperature, Air Pressure
121	Puertos del Estado	Tarragona	Buoy	Waves, SST, Salinity, Currents, Wind, Air Temperature, Air Pressure
122	Puertos del Estado	Valencia	Buoy	Waves, SST, Salinity, Currents, Wind, Air Temperature, Air Pressure
123	Puertos del Estado	Cabo de Palos	Buoy	Waves, SST, Salinity, Currents, Wind, Air Temperature, Air Pressure
124	Puertos del Estado	Cabo de Gata	Buoy	Waves, SST, Salinity, Currents, Wind, Air Temperature, Air Pressure
125	Puertos del Estado	Golfo de Cadiz	Buoy	Waves, SST, Salinity, Currents, Wind, Air Temperature, Air Pressure
126	Puertos del Estado	Capdepera	Buoy	Waves, SST
127	Puertos del Estado	Barcelona	Buoy	Waves, SST
128	Puertos del Estado	Tarragona	Buoy	Waves, SST
129	Puertos del Estado	Valencia	Buoy	Waves, SST
130	Puertos del Estado	Alicante	Buoy	Waves, SST
131	Puertos del Estado	Melilla	Buoy	Waves, SST
132	Puertos del Estado	Malaga	Buoy	Waves, SST
133	Puertos del Estado	Ceuta	Buoy	Waves
134	Puertos del Estado	Punta Carnero	Buoy	Waves, SST
135	Puertos del Estado	Tarifa	Buoy	Waves, SST
136	Puertos del Estado	Cadiz	Buoy	Waves, SST
137	Puertos del Estado	Mahon	Tide Gauge	Sea Level
138	Puertos del Estado	Alcudia	Tide Gauge	Sea Level
139	Puertos del Estado	Palma de Mallorca	Tide Gauge	Sea Level
140	Puertos del Estado	Ibiza	Tide Gauge	Sea Level
141	Puertos del Estado	Formentera	Tide Gauge	Sea Level
142	Puertos del Estado	Barcelona	Tide Gauge	Sea Level
143	Puertos del Estado	Tarragona	Tide Gauge	Sea Level
144	Puertos del Estado	Sagunto	Tide Gauge	Sea Level
145	Puertos del Estado	Valencia	Tide Gauge	Sea Level
146	Puertos del Estado	Gandia	Tide Gauge	Sea Level
147	Puertos del Estado	Almeria	Tide Gauge	Sea Level

148	Puertos del Estado	Melilla	Tide Gauge	Sea Level
149	Puertos del Estado	Motril	Tide Gauge	Sea Level
150	Puertos del Estado	Malaga	Tide Gauge	Sea Level
151	Puertos del Estado	Algeciras	Tide Gauge	Sea Level
152	Puertos del Estado	Tarifa	Tide Gauge	Sea Level
153	Puertos del Estado	Bonanza	Tide Gauge	Sea Level
154	Puertos del Estado	Huelva	Tide Gauge	Sea Level
155	SHOM	Ajaccio-Aspretto	Tide Gauge	Sea Level
156	SHOM	Centuri	Tide Gauge	Sea Level
157	SHOM	Fos-sur-Mer	Tide Gauge	Sea Level
158	SHOM	Marseille	Tide Gauge	Sea Level
159	SHOM	L'île Rousse	Tide Gauge	Sea Level
160	SHOM	Port-Ferréol	Tide Gauge	Sea Level
161	SHOM	La Figueirette	Tide Gauge	Sea Level
162	SHOM	Nice	Tide Gauge	Sea Level
163	SHOM	Monaco-Port Hercule	Tide Gauge	Sea Level
164	SHOM	Monaco-Fontvieille	Tide Gauge	Sea Level
165	SHOM	Port-Camargue	Tide Gauge	Sea Level
166	SHOM	Port-La-Nouvelle	Tide Gauge	Sea Level
167	SHOM	Port-Vendres	Tide Gauge	Sea Level
168	SHOM	Sète	Tide Gauge	Sea Level
169	SHOM	Solenzara	Tide Gauge	Sea Level
170	SHOM	Toulon	Tide Gauge	Sea Level
171	SOCIB	Buoy Bahia de Palma	Buoy	Waves, SST, Salinity, Currents, Air Temperature, Air Pressure, Wind, Hr, Chlorophyll, Oxygen
172	SOCIB	Station Parc Bit	Weather Station	Air Temperature, Air Pressure, Wind, Humidity
173	SOCIB	Station Salines	Weather Station	Air Temperature, Air Pressure, Wind, Humidity
174	SOCIB	Station Galfi	Weather Station	Air Temperature, Air Pressure, Wind, Humidity
175	SOCIB	Mobims Cala Millor	Coastal Station	Air Temperature, Air Pressure, Wind, Humidity, Waves
176	SOCIB	Mobims Playa de Palma	Coastal Station	Air Temperature, Air Pressure, Wind, Humidity, Waves
177	SOCIB	Mobims Son Bou	Coastal Station	Air Temperature, Air Pressure, Wind, Humidity, Waves
178	SOCIB	Station La Mola	Coastal Station	Currents, Air Pressure, SST, Water Pressure, Salinity

179	SOCIB	Station Sa Rapita	Sea Level	Sea Level
180	SOCIB	Station Pollensa	Sea Level	Sea Level
181	SOCIB	Station Andratx	Sea Level	Sea Level
182	SOCIB	Buoy Canal de Ibiza	Buoy	Air Temperature, Air Pressure, Wind, Humidity, Waves