Outline of GRA Information

Name of GRA: MONGOOS

A. BASIC INFORMATION

1. Principal Goals of the GRA (Please outline):

The Mediterranean Operational Network for the Global Ocean Observing System ("MONGOOS") was established in 2012 with the signature of the MONGOOS MoA. MONGOOS was established on the basis of the activities and MOU of MOON and MEDGOOS.

MONGOOS shall engage in activities related to the production and use of operational oceanography services 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.

2. Who is affiliated with the GRA?

- ***Countries (Please list):***

  Croatia, Cyprus, France, Greece, Israel, Italy, Malta, Montenegro, Morroco, Slovenia, Spain and Turkey

- ***National/Federal Agencies per Country (Please list):***

n	Country	Institute
1	Croatia	Intitute of Oceanography and Fisheries, Croatia
2	Croatia	University of Zagreb
3	Cyprus	OCY- University of Cyprus
4	France	Ifremer
5	France	Mercator Ocean
6	France	Météo-France
7	Greece	HCMR
8	Greece	Univ. Athens
9	Greece	Univ. Thessloniki
10	Greece	IASA
11	Israel	IOLR
12	Italy	CMCC
13	Italy	CNR-ISSIA
14	Italy	CNR-ISMAR
15	Italy	CNR-IAMC
16	Italy	CNR-ISAC
17	Italy	ENEA
18	Italy	INGV
19	Italy	OGS
20	Italy	Dipartimento di Fisica, Università di Bologna
21	Malta	IOI-MOC
22	Montenegro	IMB
23	Morroco	INRH
24	Morroco	ICZM Mohamed V Univ
25	Slovenia	EARS- Environment Agency of the Republic of Slovenia
26	Slovenia	NIB
27	Spain	IEO
28	Spain	Puertos del Estado
29	Spain	CSIC
30	Spain	SOCIB
31	Spain	Universitade Polytecnica de Catalogna UPC
32	Turkey	IMS/METU

- ***Consortia for Thematic Functions (Please list – includes GRA collaborative working groups or consortia):***

    - Modeling working group
    - Data Working Group

    The basic terms of reference of the working groups are as follows:

- One or two year duration
- Flow of information coordinated with Eurogoos (special focus on modeling WG and in WG of other ROOSes)
- Update state of the art (starting on MOON documents and other existing sources of information). Create main document and short executive summary.
- Update general future needs. Information same format and integrated in previous document
- Create a mechanism for future updates of the previous documents
- Assessment for establishment of MONGOOS priorities and strategies to contribute to the implementations of actions defined in the MoA

- ***International and Regional Associations – Comprised of Countries, State, Local and Indigenous Governments, Academia, Industry, and NGOs (Please list):***

  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:

  - MOON DEA: 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. MOON DEA partners are the following: INGV, MERCATOR OCEAN, IFREMER, CNRS-POC, University of Athens, Hellenic Center for Marine Research (HCMR), IOLR, Cyprus Oceanography Center, University of Malta – (IOI-MOC), ENEA-Santateresa, La Spezia, OGS, CNR-ISAC, IASA, Puertos del Estado, CSIC, LIM-UPC, NIB, CNR-IAMC, IMS-METU

  - REMPEC-MOON : 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: Istituto Nazionale di Geofisica e Vulcanologia, Cyprus Oceanography Center, University of Cyprus, Hellenic Centre for Marine Research, Institute of Oceanography, MERCATOR OCEAN, International Ocean Institute-Malta Operational Centre, Physical Oceanography Unit, Institut français de recherche pour l'exploitation de la mer, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Consejo Superior de Investigaciones Científicas, Ente per le Nuove Tecnologie, l'Energia e l'Ambiente, Dipartimento Ambiente, Cambiamenti Globali e Sviluppo Sostenibile, University of Athens, Division of Physics of the Environment – Meteorology, Consiglio Nazionale delle Ricerche, Istituto di Scienze dell'Atmosfera e del Clima, Israel Oceanographic & Limnological Research, Institute of Accelerating Systems and Applications, Atmospheric Modelling and Weather Forecasting Group

(IASA/AM&WFG), Consiglio Nazionale delle Ricerche and Istituto per l'Ambiente Marino e Costiero, Institute of Marine Science – Middle East University. 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.

- MOON-EUMETNET: 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) Utilize 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.

- ***Sources of external support (Please list the Country and associated Donor Agencies):***

None

3. Governance and Management:

a. ***What are the governing bodies of the GRA? (Please describe – include details of the GRA Coordinator, Chair, and Steering Committee Members, etc).***

The governing bodies are the Assembly, the Executive Board, the Chairpersons and the Bureau and Secretariat:

- The Member's Assembly, composed of each Member Representative:
  - The Assembly shall meet at least once each year, and shall hold additional meetings at the request of any Member. Decisions shall be taken by consensus or, if necessary, by a 2/3 supermajority.
  - The Assembly shall be responsible for:

    i. defining MONGOOS strategies and initiatives;

ii. approving new Members and Associate Members;
iii. ratifying Executive Board decisions;
iv. electing the two Chairpersons;
v. approving amendments to this MoA;
vi. Establish its internal rules and procedures.

- *Executive Board*: Composed of one Member Representative from each country, to be nominated by other Member Representatives from that country, and by the Bureau and the Secretariat. Board members shall each serve two-year terms, renewable for one additional two-year term only. Relevant International bodies shall be invited to attend Board meetings as observers:
  - The Board shall be responsible for, *inter alia*:
    i. executing Assembly decisions, in consultation with the relevant advisory group(s);
    ii. (organizing the implementation of MONGOOS projects, initiatives, and other activities;
    iii. proposing candidates for Chairpersons;
    iv. resolving disputes between Members; and
    v. proposing MoA amendments to the Assembly.
  - The Board shall meet at least every six months. All decisions of the Board shall be taken by consensus.

- The (two) Chairpersons: shall carry out the following duties, jointly or individually according to expertise:
  i. calling, setting the agenda for, and conducting Board meetings;
  ii. following up on decisions taken at Board meetings;
  iii. receiving requests and notices from Members and communicating them to the Board, for information or action as appropriate;
  iv. acting as spokesperson for the Members' activities under this MoA at international meetings; and
  v. informing the Assembly on the progress achieved and the decisions taken under this MoA.

- Bureau and Secretariat:
  - A Bureau shall be established to support the Chairpersons in carrying out their duties. Each Bureau shall comprise the Chairpersons of the immediately preceding term. The initial Bureau shall be composed of (i) the Co-Chairs of MOON and (ii) the Chair and Executive Secretary of MedGOOS who are in office when this MoA comes into effect.
  - A Secretariat shall be organized by the Chairpersons to facilitate implementation of MONGOOS activities by, among other things, supporting preparations for meetings and workshops, including invitations, logistical arrangements and publicity; keeping and distributing minutes of meetings to all Members; and acting as focal point for relations with other institutions and agencies, the press, government ministries, and other entities that may request or provide relevant information.

b. Please list the Agencies directly involved in the Governance of the GRA:

- **Chairpersons*:*** CMCC and Puertos del Estado
- **Bureau**: Mercator, INGV, University of Malta and HCMR

c. Please list Management meetings, dates and supporting documentation if possible:

First MONGOOS meeting13-14 September 2012: find the agenda at:

http://www.moon-oceanforecasting.eu/index.php?option=com_content&task=view&id=18&Itemid=39

4. What documents guide the GRA? (Please list Titles and Date of most recent updated version, and html access if possible)

GRA is ruled by the MoA between all partners. There is still not an HMTL version available, since the GRA web page is under construction.

5. Communications:

a. Is there a GRA Website and if so, what is it, and who is primary contact for web site support?

Since the GRA has started activities recently, there is no still a web site. It is expected to be launched in April 2013. In the meanwhile, The MOON web page serve as a temporal reference:

http://www.moon-oceanforecasting.eu/

b. Does it have links to other websites?

Does not apply

c. Does it link to the IOC HQ website and vice versa?

Does not apply

d. Is there a GRA Newsletter and if so, how is it distributed, how often and to whom in the GRA?

No newsletter available.

e. Are the newsletters distributed to:

	Yes or No	**If Yes, how? (eg email?)**
Other GRAs?		
IOC Head Office?		
The GOOS SC Chair?		
The GOOS Steering Committee Members?		

B. SOCIETAL GOALS AND OBSERVING REQUIREMENTS

6. Chart of priority areas and sustained observing requirements – Please complete the Table and add as many columns required for the types of observation technologies used in your GRA.

	Societal Benefit Areas and/or Phenomena of Interest	How mature is the expression of the requirement [low/medium/ high]?	Types of Observation Technologies Operating in the GRA											Capacity Building - Note whether Capacity Building efforts relate to any specific SBA/Phenomena of Interest, and whether it is affiliated with any observing technology (eg. Argo and SEREAD)
			Argo Floats	Ships of Opportunity	Buoys	Ocean Gliders	Water Level Network	Drifters	Ocean Radar HF Radar	Animal Tagging & Monitoring	Water Quality Gauges	Satellite Remote Sensing	Ocean Acidification Sensors	
	Weather and Climate Change	High	**x**	**x**	**x**	**x**	**x**	**x**				**x**		
	Marine Operations	High	x	x	x	x	x		x			x		IOC capacity building program for tide gauge in North African Countries
	Natural Hazards	High	x	x	x	x	x	x	x			x		
	National Security	Medium	x	x		x	x					x		

	Public Health Risk	Low	x	x	x	x	x					x		
	Healthy Coastal Ecosystems	Medium	x	x	x	x	x		x			x		
Country Lead	*(e.g. – which Country is predominantly leading the observing activity)*													

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			Argo Floats	**Ships of Opportunity**	**Buoys**	**Ocean Gliders**	**Water Level Network**	**Drifters**	**Ocean Radar HF Radar**	**Animal Tagging & Monitoring**	**Water Quality Gauges**	**Satellite Remote Sensing**	**Ocean Acidification Sensors**	
	Sustain Living Marine Resources	Medium	x	x								x		
	Loss of Benthic Habitats & Ecological Buffers to Coastal Inundation	Low										x		
	Eutrophication & Hypoxia	Medium		x	x						x	x		
	Toxic Phytoplankton	Medium		x	x							x		

	Food Security	Low												
	Ocean Acidification	Medium											x	
Country Lead	*(e.g. – which Country is predominantly leading the observing activity)*													

C. OBSERVATIONAL ARRANGEMENTS AND CAPACITY

7a. What is the estimated overall 'readiness level' [eg 100% = Ready to use and/or already in full use, 50% = Partly Ready to use, and 0% = Nonexistent] of the GRAs' observation network and capacity:

50%

7b. Describe the rational for your assessment of 'readiness level' (no more than 500 words):

In the Med Sea there are several state of the art operational networks and monitoring systems, for example:

- Basin scale:
  - The real time satellite observations;
  - The Ship Of Opportunity Program (SOOP) providing profiles of temperature, now being evolved into a VOS for the surface meteorological measurements;
  - The ARGO program in the Mediterranean (MedArgo);
  - The Mediterranean Moored Multi-sensor Array (M3A) i.e. the network of moored Eulerian observatories, now coordinated under OceanSITES project.
  - The Glider operations under the European Gliding Observatories (EGO) initiative

- The Iberian-Balearic region
  - Puertos del Estado observational real-time networks (Deep water buoys, coastal buoys, tide gauges and HF radars)
  - SOCIB monitoring system (buoys, tide gauges, HF radars and Gliders)
  - XIOM (Buoys)
  - MeteoFrance Buoy of Gulf of Lyon
  - ISPRA Buoys
  - Shom tide gauges
  - CETMEF Buoys

- The Adriatic Sea
  - The ADRICOSM Partnership has developed a observing system composed of buoys, VOS, CTD networks and One deep ocean station (E2-M3a).

- The Aegean Sea
  - The Poseidon netowork of buoys

- The South-eastern Levantine
  - MedGOOS 3 buoy, drifters and gliders.

Even assuming these systems are working properly, the whole basin is strongly under-sampled, especially in the African coast, where the situation is dramatic. Therefore a 50% seems to be a good descriptor.

D. DATA MANAGEMENT ARRANGEMENTS AND CAPACITY

8a. Does the GRA have a Data Management Portal that is accessible to the GRA stakeholders? If so, please describe, and include links to sites where data can be retrieved.

Not a specific one, but one in the framework of EuroGOOS and MyOcean strategy.

The strategy is coordinating data interchange through MyOcean in-situ TAC and provide the service via the EMODNET portal: http://www.emodnet-physics.eu/

8b. What is the estimated overall 'readiness level' [eg 100% = Ready to use and/or already in full use, 50% = Partly Ready to use, and 0% = Nonexistent] of the GRAs Data Management Portal:

100%

E. INFORMATION GENERATION ARRANGEMENT AND CAPACITY

9. Modeling Capacity – Describe the operational modeling capacity in your GRA (no more than 500 words):

- Circulation modeling: It is stablished according to the MyOcean-EuroGOOS strategy, with a central system (the Mediterranean Ocean Monitoring and Forecasting System – Myocean) and a series of downstream nested systems:

Model Name	Institute	Country	Resolution	**Web site**
MFS (basin scale)	INGV	Italy	5-7 Km	http://gnoo.bo.ingv.it/mfs
OGS-OPATM (basin scale)	OGS	Italy	10-12 Km	http://poseidon.ogs.trieste.it/cgi-bin/opaopech/mersea
PAM (basin scale)	Mercator	France	6-8 Km	http://www.mercator-ocean.fr/

POSEIDON (basin scale)	HCMR	Greece	8-10 Km	http://www.poseidon.ncmr.gr/
Western Mediterranean Sea	IMEDEA-CSIC-Puertos	Spain	5 Km	http://www.eseoo.org/servicios/oceano/eng/ESEOMED.html
NW Mediterranean	IFREMER	France	3 Km	http://www.previmer.org/en/previsions/courants
Sicily Strait	CNR-IAMC	Italy	3 Km	http://www.imc-it.org/progetti/mfstep/mfs_SCRMresults.htm
ADRICOSM (Adriatic Sea)	INGV	Italy	2 Km	http://gnoo.bo.ingv.it/afs
POSEIDON (Aegean Sea)	HCMR	Greece	2 Km	http://www.poseidon.ncmr.gr/
ALERMO (Aegean-Levantine)	UAT	Greece	3 Km	http://pelagos.oc.phys.uoa.gr/mfstep/bulletin/
Malta Shelf area	PO-Unit IOI-MOC	Malta	1.5 Km	http://www.capemalta.net/MFSTEP/results.html
Cyprus Coastal Ocean Model	Oceanogr. Center Cyprus	Cyprus	1.5 Km	http://www.oceanography.ucy.ac.cy/cycofos/forecast.html
Cilician Basin and Northern Levantine basin	IMS	Turkey	1.5 Km	http://linux-server.ims.metu.edu.tr/kilikya/ http://linux-server.ims.metu.edu.tr/klevant/
SE Levantine Shelf	IOLR	Israel	1.5 Km	http://isramar.ocean.org.il/ShelfModel/default.asp
SOCIB Forecast system	SOCIB	Spain	2 km	http://www.socib.es/?seccion=modelling
Strait of Gibraltar Sampa System	Puertos del Estado	Spain	200 m	http://sampa-apba.puertos.es/ http://www.puertos.es

- Sea level forecast: there are several operational sea level forecast systems based on barotropic 2D models

    - Puertos del Estado Nivmar system (Nivmar)
    - Meteofrace system for westerm Med Sea.
    - Institution Centro Previsioni E Segnalazioni Maree (Adriatic)

- Wave forecast:

    - IOLR wave forecast
    - Poseidon Wave forecast
    - SOCIB Wave forecast
    - Puertos del Estado Wave forecast
    - Previmer Wave forecast
    - Cyprus Oceanography center Wave Forecast

F. DEVELOPING CAPACITY TO DELIVER

10. Capacity Building (Does the GRA have a Capacity Building Strategy and if so, is it implemented effectively across the entire GRA Region? Please describe (and include whether donor assistance is used and/or required).

11. Gaps – Identify gap areas

12. 3 Top success stories – (Optional. See Success Story Template).