

# AN OVERVIEW OF THE MEDGLOSS 2000 COORDINATION MEETING AND PROGRESS UPDATE

Dov S. Rosen<sup>1,2</sup>

<sup>1</sup> MedGLOSS coordinator and chairman of the IOC and CIESM Joint Group of Experts on MedGLOSS

<sup>2</sup> Israel Oceanographic and Limnological Research, Haifa, Israel

## Abstract

This paper provides a summary of decisions and recommendations of the Joint IOC and CIESM Workshop and Coordination Meeting of the MedGLOSS Pilot Monitoring Network of Systematic Sea Level Measurements in the Mediterranean and Black Seas held during May 15-17, 2000 in Haifa, Israel and of the progress made since then. The full proceedings were published in IOC meeting report 176 (1).

## Introduction

The Workshop and Coordination Meeting of the MedGLOSS Pilot Monitoring Network of Systematic Sea Level Measurements in the Mediterranean and Black Seas, was held at the Israel Oceanographic & Limnological Research (IOLR) headquarters at the Tel Shikmona promontory hill in Haifa, during May 15 through May 17, 2000. It was jointly sponsored by the International Commission for the Scientific Exploration of the Mediterranean Sea (CIESM) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO. Participants representing the following organizations in 12 countries bordering the Mediterranean and Black seas attended the meeting: Morocco (Institut National de Recherche Halieutique), United Kingdom (Proudman Oceanographic Laboratory), Spain (Puertos del Estado and Instituto Espanol de Oceanografia), France (EPSHOM and CLS Space Oceanography), Italy (Istituto Talassografico CNR and Universita Degli Studi di Bologna), Malta (Malta Council for Science & Technology), Croatia (National Hydrographic Institute), Greece (Hydrographic Service of Hellenic Navy), Romania (Romanian Marine Research Institute), Ukraine (Marine Hydrophysical Institute), Turkey (General Command of Mapping and Hydrographic Service of Turkish Navy), Israel (Israel Oceanographic & Limnological Research and Survey of Israel). Due to unforeseen personal problems four countries which expressed wishes to participate and commitment to join MedGLOSS did not participate in the meeting (Russia, Egypt, Bulgaria, Cyprus). The Cyprus delegate arrived just after the meeting at IOLR and received a copy of the draft documents prepared. The Russian organization (HydroMeteoCentre of Russia) submitted written presentation. The MedGLOSS sponsoring organizations CIESM and IOC were represented at the meeting by Dr. Frederic Briand, CIESM Director General and by Dr. Philip Woodworth, Chairman of the IOC GLOSS Group of Experts. This meeting was a further step advancement of the earlier initiatives taken by CIESM and IOC for the study of the sea level in this region. Responding to these forecasts on sea level rise due to global warming by the the "greenhouse effect", a worldwide sea-level monitoring network named Global Sea-Level Observing System (GLOSS), itself a component of the Global Ocean Observing System (GOOS), was initiated by the Intergovernmental Oceanographic Commission (IOC) of UNESCO in 1985. Among its monitoring stations one of its categories includes regional densified subset networks, which can provide quality sea-level data at GLOSS standards which will strengthen data reliability, fill data gaps at neighboring stations and add boundary conditions information for regional studies of regional sea-level changes, water circulation and air-sea interaction processes.

The main meeting objectives were (a) To bring together professionals involved and interested in the operation of the MedGLOSS pilot network for a discussion of the present state and future active operation of the MedGLOSS sea-level pilot network; (b) To exchange and update knowledge on sea-level and sea level benchmark monitoring equipment and data analysis; (c) To discuss the present state of the MedGLOSS pilot stations and their historic data availability and the needs for data rescue; (d) To decide upon the active implementation and operation of the MedGLOSS pilot network; (e) To coordinate the data transfer and utilization among the MedGLOSS members as well as with other international projects and bodies such as the MFS, the MEDGOOS and BLACKGOOS.

## MedGLOSS meeting decisions

The following constitute the major decisions unanimously agreed:

a. The MedGLOSS programme initiated by IOC and CIESM is considered very important to the national and international society for monitoring of sea-level rise due to forecasted climate change, for monitoring of long term plate tectonic movements and for providing boundary conditions and ground-true data to operational oceanography modeling and nowcasting in the Mediterranean and Black Seas.

b. The participants agreed that the MedGLOSS pilot network will consist of 40 selected monitoring stations (2 additional stations to be installed in Morocco and in Cyprus). Of these 21 will operate in near real time mode providing at least twice a day data for operational oceanography (strait fluxes, surges, satellite altimetry calibration, etc.), while 32 of them (with long historic records) will act in delayed mode, providing data at least every 6 months for long term monitoring and prediction (Table 1 and Fig. 1).

**Table 1 – List of Proposed MedGLOSS stations pilot network and their operation status**

*MDL-modeling, PRE-prediction, LT-long term monitoring, SF-strait fluxes, XEV-extreme events, NRT-near real time, DLY-delayed mode*

No.	StationName	Latitude deg	Longitude deg	Main Objective	Operation Mode
1	Ceuta	35.900	-5.317	SF	NRT / DLY
2	Gibraltar	36.117	-5.350	SF, LT	NRT
3	Malaga	36.900	4.433	LT	DLY (NRT)
4	Alicante	38.210	-0.290	LT	DLY
5	Barcelona	41.385	2.177	Storm Surges	DLY
6	Palma	39.583	2.633	seiches	NRT
7	Marseille	43.300	5.350	LT	NRT
8	Aspetto	41.933	8.817	Altim. Calib.	DLY (NRT)
9	Genova	44.400	8.900	LT	DLY (NRT)
10	Napoli	40.833	14.250	LT	DLY
11	Otranto	40.133	18.500	SF	DLY
12	Brindisi	40.633	17.933		DLY
13	Ravenna	44.500	12.283	LT	DLY
14	Medicina	44.478	11.632	LT	-
15	Trieste	45.650	13.750	LT, XEV,PRE	DLY (NRT)
16	Split	43.507	16.442	LT,XEV	NRT
17	Dubrovnik	42.667	18.067	LT	NRT
18	Porto Empedocle	37.283	13.533	Sicily SF	DLY
19	Cagliari	39.200	9.167	LT	DLY
20	Porto Maso	35.909	14.519	SF,seiches, LT	DLY
21	Alexandropolis	40.850	25.883	LT	NRT
22	Thessaloniki	40.617	23.033	LT	DLY
23	Skopelos	39.132	23.723	LT	DLY
24	Chios	38.376	26.140	MDL, PRE	DLY
25	Piraeus	37.940	23.639	MDL, PRE	NRT
26	Rhodos	36.433	28.233	MDL, PRE	NRT
27	Souda	35.500	24.050	MDL, PRE	NRT
28	Kalamata	37.017	22.133	MDL, PRE	NRT
29	Preveza	38.950	20.767	MDL, PRE	NRT
30	Antalya	36.833	30.617	MDL, PRE	NRT
31	Bodrum	37.036	27.429	LT	NRT
32	Mentes	38.414	26.732	LT	DLY
33	Erdek	40.383	27.850	LT	DLY
34	Istanbul	41.004	28.976	SF	DLY
35	Burgas	42.501	27.487	LT	DLY
36	Constanta	44.167	28.667	MDL, PRE	NRT
37	Katcively	44.416	34.050	MDL, PRE	NRT
38	Tuapse	44.100	39.067	LT	DLY (NRT)
39	Paphos	34.783	32.401	LT, MDL	DLY
40	Hadera	32.467	34.917	LT, MDL	NRT
41	Ashdod	31.811	34.635	LT	NRT
42	Alexandria	31.217	29.917	LT	DLY
43	Nador	35.167	2.950	MDL, PRE	DLY (NRT)

c. All MedGLOSS stations have to measure and provide data according to the international standards defined for GLOSS stations. Minimum data will include hourly averaged values of sea-level and atmospheric pressure.

d. All near real-time stations need to have their reference bench marks measured by GPS missions at 1-2 year intervals, while those selected also or only for long term monitoring, need installation of permanent GPS monitoring stations at or near the bench marks.

e. Rescue of existing historic sea-level data (digitization) at the pilot stations should be given assistance and considered of high priority.

f. The participants expressed their appreciation to IOC and CIESM for supporting the meeting, and to CIESM also for funding upgrading of