

2nd MEDAR/MEDATLAS II
 Oceanographic Workshop
 Nicosia, Cyprus
 December 12-15, 2000

REPORT

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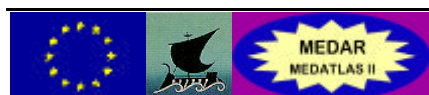
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2nd MEDAR/MEDATLAS II Annual Workshop Nicosia, Cyprus

AGENDA

Tuesday December 12

Introduction Session - International Links of MEDAR/MEDATLAS

08h30 People meet

09h00 Welcome from the Cyprus Government Officials - Mr. Costas Themistocleous, Minister of Agriculture, Natural Resources and Environment

09h10 Mr Gabriel Gabrielides, Director of the Department of Fisheries and Marine Research

09h20 MEDAR/MEDATLAS Project Overview- Dr. Catherine Maillard, project co-ordinator

09h40 New IOC Oceanographic initiatives in the Mediterranean and Black seas -
Dr. Iouri Oliounine, UNESCO/IOC official

10h00 IODE/IOC activities -Dr. Efstathios Balopoulos, vice-president of IODE

10h20 MFSPP - Marco Zavatarelli

10h40 IOC/IODE/GODAR Global Ocean Data Archaeology and Rescue, R. Gelfeld

Workpackages Reports

11h30 MEDAR/MEDATLAS Inventory - Report for WP1- N. Mikhailov

11h50 Western Mediterranean Data Management - Report for WP11-WB- MJ. Garcia

12h10 Central Mediterranean Data Management - Report for WP11-CB- B. Manca

12h30 Eastern Mediterranean Data Management -Report for WP11-EB- E. Balopoulos
Discussion

14h00 Black Sea Data Management - Report for WP11-BS - A. Kuznetsov

14h20 Integration and Pre-processing of Benchmark 3 - Report for WP11- M. Fichaut

14h40 Climatological Analysis - Report for WP11- M. Rixen

Discussion

Regional Data Management Reports - Western & Central

Spain, MJ. Garcia

Algeria, R. Boukourt, B. Boudjellal

Morocco, J. Larissi

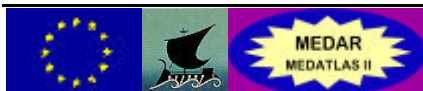
France, G. Ricou

Italy, A. Giorgetti

Malta, A. Drago

17h45- End of the plenary

18h00 - 20h00 pre-Steering Committee (members)



Wednesday December 13

Regional Data Management Reports - Eastern Mediterranean

09h00

Croatia, V. Dadic
Greece, S. Iona
Cyprus, G. Zodiatis
Lebanon, S. Lakkis
Egypt, S. El Agami
Israel, I. Gertman, Y. Tsehtik

Regional Data Management Reports - Black Sea

Russia, N. Mikhailov
Ukraine, A. Suvorov, A. Khaliulin
Bulgaria, G. Kortchev
Georgia, K. Bilashvili, Z. Savaneli
Romania, V. Diaconu

Reports for Quality Assurance

12h15 Report for WPV, H. Dooley

12h35 New developments in quality assessments of temperature and biochemical data
G. Manzella

12h45 QC assessment for objectively analysed bio-chemical data
M. Zavatarelli

International Links of MEDAR/MEDATLAS (Continuation)

14h00 - Data Management in the Fifth Framework programme-Information on the "European Research Area", E. Lipiatou

14h30 MEDGOOS, Aldo Drago

14h50 Which climatology for what use ? Exemple with an operationnel oceanic forecast system, D. Jourdan

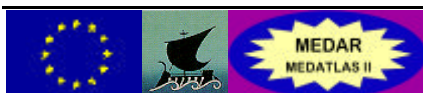
15h10 Promotion and IODE links, I. Oliounine

Round Table

15h10 Discussion

Pending problems for data processing

Review of the tasks deadlines:



Thursday December 14

Steering Committee

9h Steering Committee (members)

Workshop Conclusion - Plenary Session

14h00 Working Groups

15h30- 16h00 Coffee break

16h00 Report of the Steering Committee

Presentation of the revised working schedule

Discussion of further actions to enhance the network and the circulation of information and data

The contributions of the participants are reported in details in the annual report. All these contributions and the resulting BENCHMARK 3 have been reviewed positively by the project advisers. The work schedule has been revised by the Steering Committee to insure the timely implementation of the project.

18h Closure of the Meeting

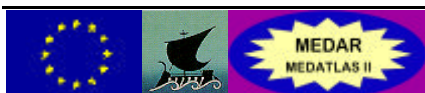


Friday December 15

08h15-19h00 Cultural excursion to the outstanding archaeological sites of Kourion and Paphos kindly offered by the Department Fisheries and Marine Research of Cyprus.

Acknowledgements

The MEDAR/MEDATLAS Group thanks very much the Ministry of Agriculture, Natural Resources and Environment and the Department of Fisheries and Marine Research and the Cyprus National Oceanographic Data Centre of the Oceanography Section for their kind support to the European MEDAR/MEDATLAS project by hosting the Second Annual Workshop. We thank particularly Mr. Costas Themistocleou, Mr. Michael Costantinides, Mr. Gabriel Gabrielides and Dr. George Zodiatis for their contribution to the meeting and the excellent organisation and facilities they have provided. This has greatly contributed for the success of our meeting, as this important turning point of the project.



**2nd MEDAR/MEDATLAS II Annual Workshop
Nicosia, Cyprus**

WELCOME ADDRESS

**by the Minister of Agriculture, Natural Resources and
Environment, Mr. Costas THEMISTOCLEOUS**

Ladies and Gentlemen,

Allow me first of all, to welcome all of you and avail myself of this opportunity to extend on behalf of my Government and myself, warm thanks and appreciation to you who have gathered here to participate in this important oceanographic meeting.

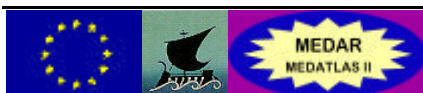
Mediterranean is a very special sea indeed and there is perhaps no other area where nature has so lavishly bestowed its gifts to man. I believe that the oceans despite of whatever the differences among the States bordering them, are a unifying factor and play a vital role in their economic and social development and are of great importance for everybody. For this reason any scientific attempt to provide more information about the oceanographic characteristics and behaviour of the Mediterranean Sea, has the full support of the Cyprus Government.

We consider the European Union Marine Science and Technology programme (MAST) and the Intergovernmental Oceanographic Commission (IOC) activities in the Mediterranean Sea as one of the flagship marine research initiatives in the region not only because the sea plays such an important role in our country's everyday life, but also because of the great role played by the Intergovernmental Oceanographic Commission and the EU in promoting oceanographic research, monitoring, capacity building and recently operational oceanographic forecasting. By way of our geographical position, its past history and political standing, Cyprus recognises the key role which is ready to play in favour of an enhanced co-ordination between Mediterranean countries for sustainable utilisation of the marine resources of the sea.

To achieve this goal there is a need for strong oceanographic data collection and management infrastructure. In this regard, Cyprus promoted during the last five years, several oceanographic campaigns in the South East Levantine Basin, Eastern Mediterranean Sea, the establishment of the Cyprus National Oceanographic Data Centre and the development of close links of cooperation between various IODE/IOC National Oceanographic Data Centers and the other Oceanographic and Marine Research Centers in Europe and the countries bordering the Mediterranean and the Black seas.

I would like to take this opportunity to point out that the Ministry of Agriculture Natural Resources and Environment renders great importance to scientific initiatives like the present joint European MEDAR/MEDATLAS project, whose main objective is to provide an updated oceanographic database for the Mediterranean and the Black seas. I can assure you that we will spare no efforts or expenses for the success of such scientific endeavour, particularly when it is initiated by the EU, which Cyprus hopefully will soon join.

The improvement of capability for marine environmental management, operational oceanography, both monitoring and forecasting and data management and dissemination will support a better management of the marine environment, reducing the arising environmental



problems coming from industrial development. The improvements of these oceanographic systems would enable a continued sustainable development mitigating the effects of disasters and would benefit the economy connected to the marine sector.

The Department of Fisheries and Marine Research through its Oceanography section carry out research, monitoring, forecasting and data management. There is however a request for upgrading that certainly should be met in order to serve the needs from the necessary implementation of the oceanographic research activities in line with the ongoing establishment of the related European research programs, enabling a sustainable development of the maritime sector in Cyprus. The development of the existing oceanographic infrastructure, will assist to :

- improve capability of managing marine accidents, such as accidental oil spills,
- improve oceanographic forecasting capability, again supporting the search and rescue operations in the sea,
- improve oceanographic research indirectly supporting fisheries,
- improve management efficiency of aquaculture plants,
- improve planning capability in the coastal and offshore areas,
- support with important design data for construction purposes, especially within the offshore oil and gas industry,
- assist in improving the safety of navigation,
- support the tourist industry.

Finally I feel indebted to express our warm thanks to the EU for financing this project and to, congratulate the personnel of the Department of Fisheries and Marine Research and especially of the Oceanography Section for the organization of this meeting.

I wish you all every success in your work and a happy stay in Cyprus.

Fourth MEDAR/MEDATLAS II Steering Committee Nicosia, Cyprus

STEERING COMMITTEE REPORT

Participants

Presents : Efstathios BALOPOULOS, Harry DOOLEY, Maria-Jesus GARCIA, Jamila LARISSI, Elisabeth LIPIATOU, Catherine MAILLARD, Beniamino MANCA, Nickolay MIKHAILOV, Michel RIXEN, George ZODIATIS

Excused : S. EL AGAMI, M. FICHAUT, I. OLIOUNINE, Mustafa OZYALVAÇ

The steering Committee had a preliminary meeting on Tuesday 12 18h-20h, where M. FICHAUT and I. OLIOUNINE participated in addition to the present list, and the formal meeting on Thursday 14 morning.

The Steering Committee and MEDAR advisers recognised positively the work made at the national and regional levels to compile and process the Benchmark 3, the preliminary version of the MEDAR database. The next key step for the successful implementation of the project is the timely preparation of Benchmark 4, the final data set. The other tasks and priorities are related to the preparation of the products (general inventory, climatology, Cdrom), the training and the sustainable development of the data management capacities. Accordingly, the following decisions and actions have been decided.

1 Benchmark 4 Preparation

The following milestones are critical:

- 1) End of January : the National Coordinators will send their final data sets, including requested corrections if the quality check procedure failed (especiallay for position errors) to the Regional Data Centres the later by the end of January.
- 2) End of March : the Regional Coordinators will transmit the full regional data sets at the Assembling centre no later than end of March.

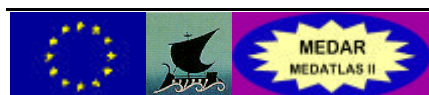
Further Specifications for historical salinity:

If the salinity in the data sets is SSAL (data collected with the pre-1978 formula and not recomputed later on), it will not be converted to PSAL. As the difference in salinity is smaller than the overall accuracy of the historical data, these values will QC will the same values as PSAL and be extracted within the same files.

- 3) End of May: the Assembling Coordinator will transmitt the full assembled Benchmark 4 data set at the Analysis Centre no later than end of May, and copies to the Regional Data Centres.

Further Specification for assembling:

- include MFSPP values



- include MEDOC Discovery cruise from ICES
- include data under confidentiality that have the author agreement for the climatological computation (only) to improve the resulting climatology and the QC methodology

2 MEDAR/MEDATLAS Inventory

2.1 Tasks of the National Coordinators

It is requested to the National Coordinators to:

1. submit the ROSCOP forms (cruise summary report at the international IOC format)
The Steering Committee strongly insists that partners of MEDAR/MEDATLAS organise the submission of ROSCOP forms of the **recent cruises** provided to MEDAR, to ICES by the end of March. ICES will transmit copies to the World Data Centres (WDC).

The model of ROSCOP form can be downloaded from the ICES web site :

www.ices.dk/ocean/roscop

2. send information on cruises with missing data to WDCB for preparing the exhaustive Inventory level-2 (cruise without data available in MEDAR database)

- cruise headers at the MEDATLAS format
- + ROSCOP files if available

2.2 Task of MEDAR co-ordinator

IFREMER will send to WDCB the full Benchmark3 for preparing Inventory level 1 = cruise with data available

2.3 Task of the Inventory Co-ordinator and International Data Centres

1) WCDA and ICES will send their inventory of the Mediterranean and Black Sea for cross check to WDCB

2) WDCB will prepare the 2 levels inventory :

1. Cruises with data available in the MEDAR database

- cruise header at the MEDATLAS format
- station positions
- ROSCOP form when available; the link between ROSCOP and MEDAR meta-data subset will be made through the cruise reference
- new key word (ex : "ROSCOP CRUISE SUMMARY REPORT AVAILABLE") will be added in the comment line

2. Other cruises with data not yet available in the MEDAR database will include the mandatory information of the cruise header (cruise reference, cruise name, ship, ship code, date of beginning and end date, region, data types collected) and when available, chief scientist, laboratory and project names.

3 Climatology

3.1 Standard Levels

The first computations have been made at the MEDATLAS 97 levels. The choice of standards levels will be adjusted if necessary, but it does not seem useful to increase the vertical resolution. For the nutrients, the number of standard levels may be reduced, depending on the data availability. GHER will propose the new selection by email to the Steering Committee.

3.2 Data Selection

The discussion has been very animated on whether:

- 1) the climatology should be an objective analysis of the data published in the MEDAR/MEDATLAS Database, in order to allow the potential reviewers to remake the computations in exactly the same conditions
- or
- 2) compute the best of climatology by using all available data including those of restricted access, not to be published in the 2001 database release.

Considering that the initialisation of models and the data qualification requires the best of climatology, especially for nutrients, the second option has been adopted. To encompass the possible inconsistencies between the observational data set and the climatologies released, it should be clearly advertised that this is a MEDAR product, prepared with the data of the Cdrom and a few more recent data. It will be also be added that MEDAR/MEDATLAS strongly encourages scientists to submit their data to their national data centres within one year according to the IOC/IODE policy. In that way, the data will be cross-checked and safeguarded.

4. Revision of the protocol

4.1 Content and milestones

The present version (June 2000) will be revised by ICES. It will include the following (existing + new) chapters:

- 1) Format description by IFREMER
- 2) QC of meta-data/Inventory by RIHMI/WDC
- 3) QC of observation data (ICES)
- 4) QC of gridded data (ENEA)

A revised version will be disseminated to the Steering Committee for end of March for acceptance of the final version at the next Steering Committee

4.2 Discussion of protocol for QC of Observations

Salinity

The historical data with SSAL (pre-1978 definition) will be left as it is. Due to the small difference with the 1978 definition, the QC is made with the same values as PSAL. SSAL data will be extracted with PSAL for the computation of the climatology.

Data with erroneous positions

It is very dangerous to publish data with obviously erroneous positions, even with a flag=4 (bad) as some users may not pay attention to the flag. The following actions will be made in this priority order:

- 1) Originators of these data will be requested one more time to check the cruise logs to correct these positions.
- 2) When this information cannot be retrieved, the data will be interpolated/extrapolated from the best estimate of the ship tracks and the position flag = 5. The original location will be archived as a comment.
- 3) If neither 1 or 2 can be applied, the data will not be included in the database.

Defintion of Cruise and data sets

Cruise are meta-data, data sets are data. Many data sets (files) can be attached to a unique cruise, identified by a unique cruise identifier and name. This is what has been done up to now.

The cruise reference refers to the CRUISE (one ROSCOP cruise summary per cruise) and not the data set. The header refering to the cruise is used to compile the cruise Inventory, but we DO NOT MULTIPLY the number of cruises by the number of data sets. Each data set will include this unique cruise reference in the header.

There is a possibility in the station numbers (5 digits) to include a prefix or suffix to indicate what kind of data are collected, or in the last ("cast") digit to indicate stations made at the same point. Letters are accepted.

A data set is one file (or several if the number of profiles is high) of data of the SAME DATA TYPE made during the SAME CRUISE. So the cruise reference should be the same in each data file.

So many data sets have the same cruise reference.

cruise number NNNN1995NNNN1

- data set xbt --> one file (two files are acceptable)
- data set bottle profiles
- data set CTD
- other data sets ...

Data of different types should not be merged in the same file.

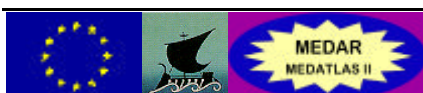
The cruise header at the beginning of a data set file included some lines that indicates (ROSCOP codes) the type of following data. These may not indicate all the data type collected during the cruise. However in the final inventory, these lines will be completed when additional information is available from several data sets files of the same cruise or from other sources.

The file names can be anything, but in general a subset of the cruise number is included (with 2 digits of the year) and a suffix that indicates the data type:

.xbr
.ctd
.bot
.mbt

QC of coastal stations

Any parameter can be constant over the vertical in coastal stations (sometimes only 2 or 3 data points on the vertical)



QC of nutrients

- Nutrients have a lot of spikes; only rough (visual) broad range and climatology check can be done.
- New estimates of the Redfield ratio should be included in the protocol for future work (visual checks), even if the present QC procedure cannot take it into account.

5. Content of the final Cdrom

The content of the Cdrom will be discussed further at the next Steering Committee. It will at least include:

- Documentation
- MEDAR Inventory
- Observational Data with retrieval software (IFREMER) for data extraction and vertical plots
- Gridded data + selection of maps + software
- QC medar IEO
- Any other documented software that is interfaced with MEDATLAS and made available by the participants or collaborators.

6. Networking

All the workpackage websites have been opened and linked with the other sites. IOC web site should be updated and hyperlinked to the other MEDAR WWW sites.

7. Additional contract for data dissemination

MEDAR/MEDATLAS Group recognised regional, national and local data centres established within IOC/IODE may electronically copy transform and/or perform any data management procedure on the content of the MEDAR CD-ROM, at their discretion. These data centres may also distribute data or data product originating from the MEDAR CD-rom to third parties under the free and open access rules pertaining to individual data centres, and required by the IOC data policy.

Copyright

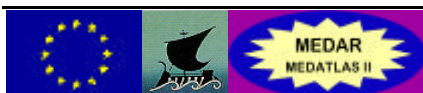
Copyright should be MEDAR/MEDATLAS Group

Reference

EU support should be explicitly referenced.

8. Publications

- Publications should preferably mention names explicitly rather than "MEDAR Group".
- Specific publications made during the project implementation and using MEDAR data should acknowledge the project, but doesn't necessary be cosigned by all the participants.
- The brochure should include contact coordinates and web sites and be published by IOC after improvement of the design.
- Send the paper for the Elsevier Data Journal



- It may be considered to send a synthetic paper for presentation or poster to the CIESM Congress that will take place in Monaco, 24 to 28 September 2001 (deadline for submission 31 January).

9. Future of the MEDAR/MEDATLAS Network

The presentations made during the plenary workshop show very promising results in quality and quantity thank to the cooperation of the network. The usefulness of keeping it alive is important for the benefit of all, so submitting a new proposal has to be done for the October 2001 call for tender. The analysis of the EU document should be first analysed in detail to insure to meet the objectives of the infrastructures requirements in data and information. Accordingly innovation will be the priority, even if more data, more parameters and more data products are continuously requested from the users. Also the coordination will rotate to facilitate the input of new ideas and to enhance the network as a whole. The Steering Committee agrees to propose HNODC as the next coordinator, that would be coherent with the present international responsibilities taken by HNODC for the Mediterranean at the IOC. The Steering Committee will work by email to prepare a first draft to be discussed at the next Steering Committee meeting, to be revised later on by email by the new extended consortium.

10. Second Annual Report

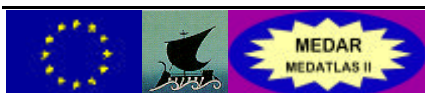
Scientific reports and cost statements should be received by IFREMER, the latest for January 10th, 2001.

11. Next meetings

Steering Committee
25-26 June 2001, Madrid

Final workshop
10-14 December 2001, in Trieste
The final workshop cannot be postponed beyond the end of the project. Accordingly it will take place in December. According to the technical annex, the workshop will be organised by IOC. It will include 2-3 days of training in climatological analysis.

Liège conference
6-10 May 2002
A special session of the Liège Conference May 6-10 2002 will be devoted to objective analysis and climatologies. Even if this important event takes place after the end of the project, the Steering Committee recommends that the MEDAR participants send papers to the conference and try to attend the conference.



12. Conclusion - Milestones

January 10 :

- all reports have been sent by the participants to IFREMER
- Steering committee minutes approved and disseminated
- Additional contract for data copyright and dissemination redisseminated after correction requested by the Steering Committee.
- IOC website hyperlinked to the other MEDAR WWW sites

January 31 :

- II annual report and cost statements sent to EC
- Brochure corrected for the publication
- Dead line for sending papers to CIESM

March 3 :

- Benchmark 4 observation data sent to and received by IFREMER for integration and final checks
- Protocol revised version circulated

May 31:

- Benchmark 4 data, observations and interpolated data at the standard levels at the Analysis Centre in Liège

June 25- 26

- Design of the data product
- Design of the WWW distributed server
- First Draft of future action
- 6 month report
- Preparation of the final workshop

July 1:

- The printed brochure and/or a flyer should be distributed at the IOC Assembly to the about 400 high level attendants.

This report of the Steering Committee has been presented and discussed at the final Plenary Session of the meeting, December 14 afternoon.

2nd MEDAR/MEDATLAS II Workshop
Nicosia, Cyprus , December 12-15, 2000

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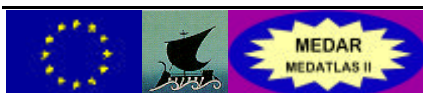
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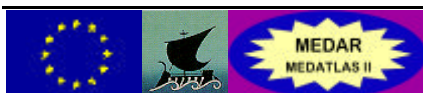
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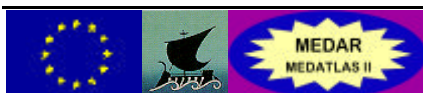
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