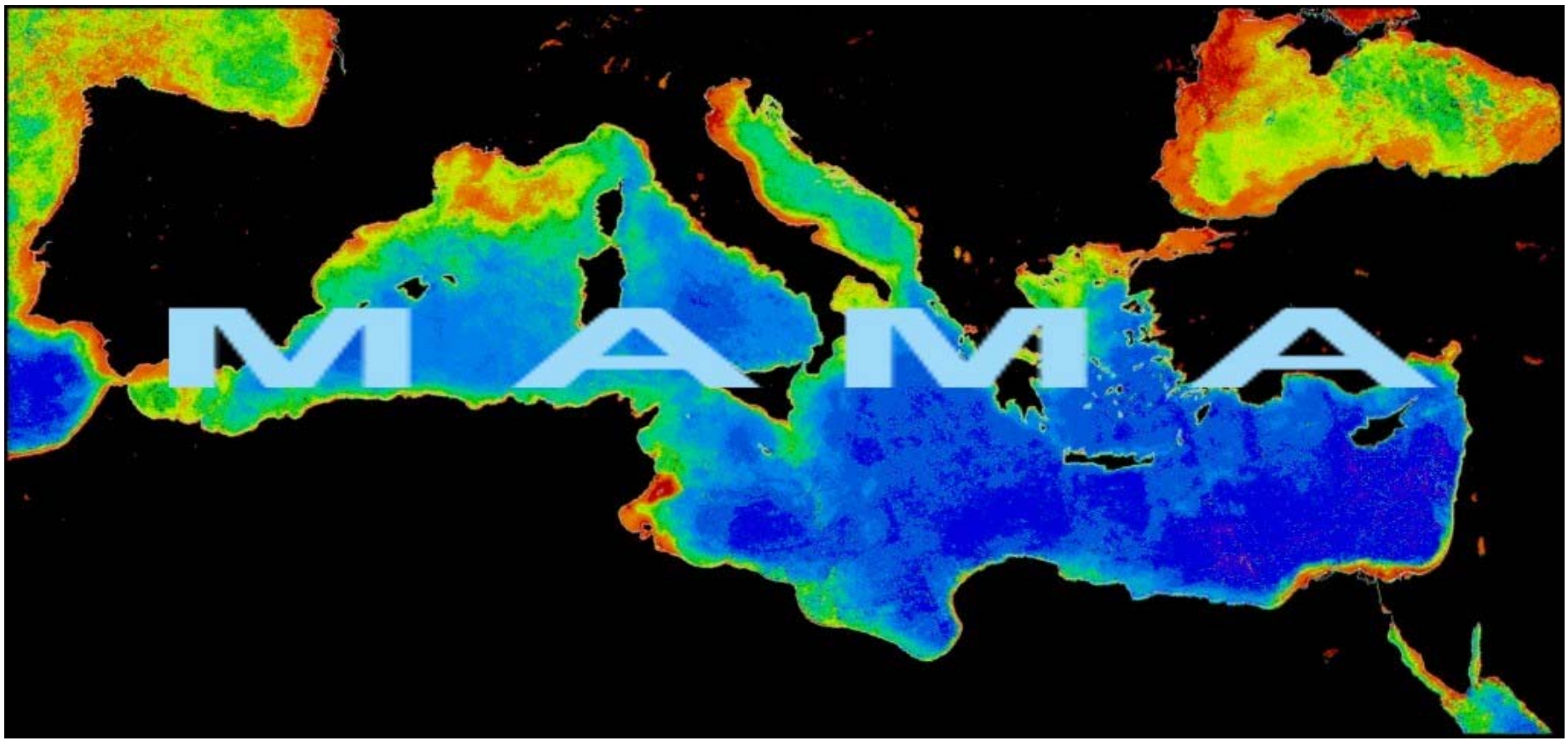
Mediterranean network to **A**ssess and upgrade **M**onitoring and forecasting **A**ctivity in the region



Silvana Vallerga

MAMA co-ordinator

Chairperson of the MedGOOS &

of the Intergovernmental Committee for GOOS

IMC - International Marine Centre &

CNR - Consiglio Nazionale delle Ricerche,

Oristano, Italy

why ....

to contribute to sustainable development of the Mediterranean marine environment

- ***preserving the marine ecosystem***
- ***protecting the coastal zone***
- ***minimising the impacts of the human use of resources and of climate change***

how....

implementing operational ocean monitoring based on:

- ***sound science***
- ***reliable assessments***
- ***efficient co-operation between coastal nations***

operational ocean monitoring is...

- **systematic and long-term measurements of the seas**
  - ✓ *currents, waves, storm surges, temperature, salinity, nutrients, pollutants, living resources…*
- **numerical modelling to predict of the future state of the marine environment**
- **rapid interpretation and dissemination of results as:**
  - ✓ *accurate description of the state of the sea,*
  - ✓ *continuous forecast of the future condition of the sea for as far ahead as possible,*
  - ✓ *long term data sets needed to understanding climate trends and changes.*

……GOOS

some GOOS history ….

- 1990 meeting of WMO-CBS: John Woods mentioned for the first time the need for a ”global ocean observing system”
- 1990 2nd World Climate Conference: John Woods presented the vision for a GOOS
- 1992 UNCED: Agenda 21, Chapter 17 called for the establishment of the GOOS - global ocean observing system

GOOS organisation….

- **GOOS is sponsored by:**
  IOC/UNESCO, UNEP, WMO & ISU
- **Countries provide guidance through the Intergovernmental Committee I-GOOS**
- **Experts assist through the Steering Committee GSC**
- **The implementation is planned by the Joint Committee for Marine Meteorology JCOMM**

regional implementation...

EuroGOOS

- established in 1994
- 31 partners from 17 countries
- well devised strategy, plan, science and technology base
- ongoing projects in the regional seas, funded by the European Commission

The MedGOOS steps

- *Malta November 1997:* **IOC-UNESCO initiates MedGOOS as a regional GOOS activity**
- *Rome March 1999:* **15 Institutions from 13 countries sign the MoU**
- *Rabat November 1999:* **Mediterranean nations approve the MedGOOS strategy**
- *Oristano 2000:* **MAMA, the MedGOOS network, designed**
- *Brussels May 2001:* **MAMA approved**

MAMA

- **Thematic network** to support research infrastructures
- **31 partners** all Mediterranean countries and international organisations
- **Funding** 2 370 000 €
- **Duration** 2002 – 2004
- **Co-ordinator** IMC - International Marine Centre

project management

Objectives

- Monitor of the proceeding of the work programme
- Timely production of expected deliverables
- Harmonisation of members' work
- Optimisation of resources
- Establishment of a strong network

project management

The co-ordinating Institute - IMC

Has a sound experience of managing large projects.

The IMC management is dealt by the General Director (Renato Covacci), and Scientific Director (Silvana Vallerga), the Steering Committee, Accounting Office and Board of Auditors, scientific advice is provided by the international Scientific Committee.

IMC - International Marine Centre

- **Non profit international Association,** NGO of UNEP-MAP, accredited at GEF – Global Environment Facility - World Bank.

- **Associates** CNR, MBL (Woods Hole), Italy-Japan Biological Society, University of Nantes, Russian Academy of Sciences, MARE Sas, Oristano Municipality.

- **Established in 1989** 30 researchers, over 100 scientific publications, 14 international conferences and schools.

management structure

- **co-ordinator** Silvana Vallerga (IMC & CNR, MedGOOS and I-GOOS chair & EuroGOOS Officer),
- **assistant co-ordinator** (IOI-MOC Aldo Drago, MedGOOS Secretariat)
- **advisory board**
- **project team**
- **full group committee**.

advisory board

John Woods (EuroGOOS President), **Geoff Brundit** (Africa GOOS Chair), **Hans Dahlin** (EuroGOOS Director), **Philippe Marchand** (EuroGOOS Officer)

- advise on the scientific and technical quality of the work
- assist the Project Team in the biannual evaluation of the project
- assess the progress and quality of the work,
- foster links with related international activities, and adherence to GOOS strategy.

project team

Co-ordinator (chair), EC representative and Assistant Co-ordinator, WPs co-ordinators and ANPA (end-user) to:

- **carry the responsibility for the execution of the project**
- **co-ordinate the activities and integrate the results**
- **review the workpackage scientific reports and prepare yearly reports;**
- **take care of the financial administration and prepare cost reports to the EC.**

MAMA objectives

1. build the basin-wide network for ocean monitoring and forecasting linking all the Mediterranean countries, broadening the network MedGOOS members;

MAMA objectives

2. **identify the gaps** in the monitoring systems and in the capability to model and forecast the ecosystem;

3. **build capacities** for the setting up and running observing platforms, for managing data, for modelling and forecasting the ecosystem;

MAMA objectives

4. design the initial forecasting system from the basin scale down to the coastal zone;

5. raise awareness on the benefits of ocean forecasting.

MAMA is building on…

RTD projects as

- MFSPP
- MEDAR/MEDATLAS
- MFSTEP

other international and national projects

MAMA organisation

FULL GROUP COMMITTEE - ALL PARTNERS + ADVISORY BOARD

Provide a forum to exchange ideas and monitor the progress of activity

MAMA Secretariat

ntacts between partners
he organization of meetings

Project Team

- Assist the coordinators in the project execution
- Coordinate the activities
- Review the reports

Advisory Board

- Assess the scientific quality of the work
- Ensure the links and benefits from related regional and global programmes

WP0 - COORDINATION

- Management of the project
- Harmonization of activities

WP1 - NOW	WP2 - OBS	WP3 - CAP / BUILD	WP4 - MODEL	WP5 - NET	WP6 - WWW	WP7 - AWARE	WP8 - DISS&PROP
Assess the present capabilities and identify gaps	Design of the initial observing system	S&T capacity building	Capacitate in numerical modeling	Pilot internet interagency network	Web pages links & MeDir	National meeting, Brochures, CDs	Demonstration tools and products

MAMA workpackages

0. MAMA-CO project integration and co-ordination, harmonisation of member's work, optimisation of resources, planning of future steps ***(Silvana Vallerga, IMC & CNR).***

1. MAMA-NOW identification of the current situation to monitor and assess the state of coastal waters and viable forecasting techniques ***(Aldo Drago, IOC-MOC).***

MAMA workpackages

2. **MAMA-OBS** scientific assessment of existing ocean observing systems to design a cost effective real time initial coastal data acquisition system, fully integrated to the basin scale system *(Giuseppe Manzella, Enea).*

3. **MAMA-CAP/BUILD** development of the basic expertise required to participate in the GOOS, 30 person/months training *(Silvana Vallerga, IMC & CNR).*

MAMA workpackages

4. **MAMA-MODEL** development of numerical modelling and data assimilation capabilities for the design of local forecasting systems, test cases *(Marco Zavatarelli, UniBo).*

5. **MAMA-NET** initiate a prototype data and information management system to support an end-to-end process: from the data/meta-data flow, up to the viewing and exploitation by users *(Kostas Nittis, NCMR).*

MAMA workpackages

6. **MAMA-WWW** establish the MAMA WWW as a tool to harmonise activities, enhance exchanges, and as a mean of visibility *(Guy Herrouin).*

7. **MAMA-AWARE** set up an awareness campaign addressing a full hierarchy of stakeholders to promote the understanding of the benefits of ocean forecasting in the Mediterranean *(F. Saverio Civili, UNEP-MAP).*

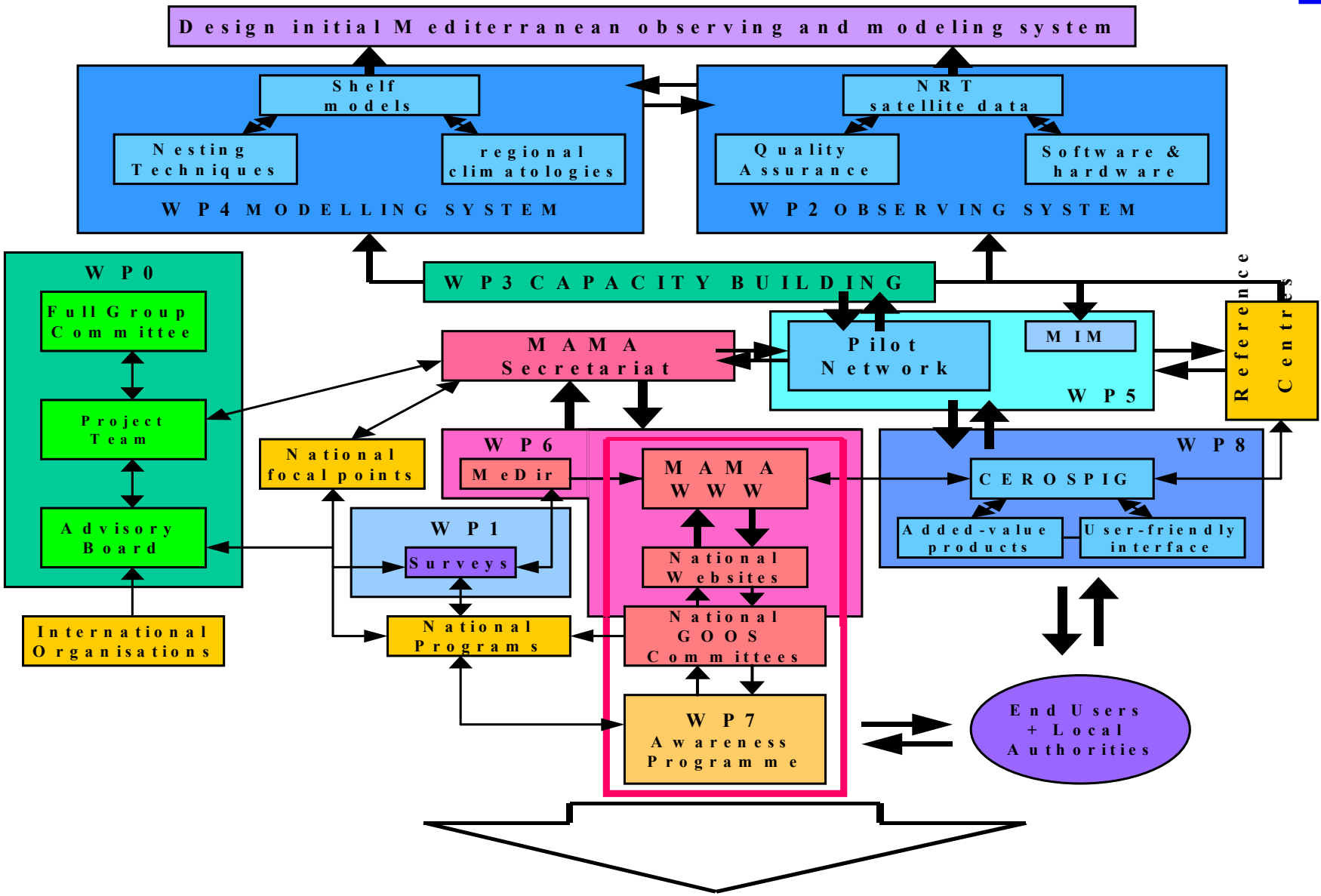
MAMA workpackages

8. MAMA-DISS&PROD

- Establish links with the end-user communities to identify their needs and priorities.
- Prove the usefulness of MAMA through a demonstration tool for information on coastal erosion protection and user friendly products.

(Colin Summerhayes, IOC-UNESCO).

Graphical presentation of the project's components



Novelty of MAMA

- **first network** of all the Mediterranean countries for ocean monitoring and forecasting;
- **integration of the knowledge base** to design the initial NRT observing and forecasting system;
- **working together** research Institutions, agencies, intergovernmental organisations;
- **basin wide coverage** of observations;
- **large transnational** pooling of scientific and technological resources.

MAMA's partnership

Co-ordinator IMC, Italy

- Albania, IHM
- Algeria, LEM
- Bosnia - Herzegovina, HEIS
- Croatia, IOR
- Cyprus, DFMR
- Egypt, UA
- Egypt, NIOF
- France, IFREMER
- Greece, IMBC
- Greece, NCMR
- Israel, IOLR
- Italy, ANPA
- Italy, CNR
- Italy, ENEA
- Italy, UniBo
- Lebanon, CNRS - NCMS
- Libyan Arab Jamahiriya, EGA
- Malta, IOI - MOC
- Morocco, FSR
- Palestine Authority, GU
- Slovenia, MBS
- Spain, CSIC
- Spain, IEO
- Syria, HIMR
- Tunisia, INSTM
- Turkey, METU
- Yugoslavia, IMB
- EuroGOOS
- IOC - UNESCO
- UNEP - MAP

MAMA

….the vision

A permanent operational forecasting and nowcasting system for European Seas by 2020

- **Benefits for safety at sea, shipping, offshore industry, coastal protection, fisheries, pollution control, recreation.**

- **Spanning European EEZs Arctic, Baltic, North Sea, Mediterranean and Black seas and the Atlantic seaboard.**

…preparing the way

Need to focus R&D on

- ➪ Developing new technology
- ➪ System integration
- ➪ Pre-operational trials

The vision is achievable by 2020

Consistent with lead time for launching new observing, data and modelling systems

by 2008…

GMES:

a European Capacity for Global Monitoring of Environment and Security

joint EC and ESA initiative

by end 2003…

Report on actions needed to implement GMES

Actions to cover scientific, technical, socio-economic, organisational and institutional aspects

USEFUL ADDRESSES

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FocalPoint

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