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MEDITERRANEAN ACTION PLAN

Meeting of MAP Focal Points

Athens, Greece, 21 - 24 September 2005

DEVELOPMENT OF MEDPOL INFORMATION SYSTEM

SUMMARY

UNEP/MAP
Athens, 2005

EP

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Meeting of the MED POL National Coordinators

Barcelona, Spain, 24 – 27 May 2005

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Table of contents

RATIONALE

MEDPOL is generating data and information through its different components as follows:

1. Coastal Water monitoring programme:

The Coastal water monitoring programme consists of the next applications:

- Data Management and Administration Module
- Map Module for desktop database
- Internet Module
- Map Module for Internet

Data Management and Administration module is essential part of the *MED POL Database*. This is desktop application, which starts automatically when MEDPOL.mdb file is opened. It implements next functionality:

- Data loading
- Data browsing
- Data editing
- Selection of data on different criteria
- Visualization of data

Data Management and Administration module consists of set of MS Access forms, queries, reports and VBA modules. Special Switchboard form is developed for quick selection of necessary module component.

Map Module for desktop database (map.dll) is a special application for displaying a map of Mediterranean with positions of database stations. Map Module requires configuring of System Data Sources for connecting to proper .mdb file. Description of functionality of the Map Module is done in section.

Internet Module is set of static HTML files and dynamic ASP files, developed for presentation of the *MED POL Database* information in Internet. The Database Snapshot is used for publishing Database information in Internet. Database Snapshot and Internet Module files have to be copied and installed on Web Server for publishing.

Map Module for Internet (MEDPOLMap.dll) is an ISAPI application designed for dynamical generation of images with map of Mediterranean and position of stations on it. Images are generated on request of Internet user and sent for displaying in user's Web Browser.

2. Strategic Action Programme

This software is aimed to help the MEDPOL Program classify the data related to NBB (National Budget Baseline) in electronic forms to enable MEDPOL and national experts to easily retrieve the necessary information to develop and assess the status of marine environment of the Mediterranean Sea.

The software is programmed by using the **VB.NET** as a programming language and the **Access** for the database system in a way to guaranty the compatibility with the other database used in the MEDPOL.

This software has the following functions:

- Entering the data of the **NBB** and **municipal wastewater treatment facilities** received reports, sent by different Mediterranean countries and classifying it in the same format.

- Browsing and display the entered data at many levels (Mediterranean, national, regional) and for any chosen year or specified group of pollutants.

- Printing reports with the previous selection criteria (country, year...) by using **Crystal Reports Tools** which have many capabilities including export the report to many types of files.

- Browsing the tables of the database (countries, pollutant sources, and pollutants) by using .NET grids not directly the Access table and modify these tables.

- Display the MED map.

- Simple management for the database by: loading, exporting and clear the database we deal with.

The program help to assess the progress in the contaminants' reduction made by the involved nationals

Thus, there is need to develop and information system, which fulfil the following key features:

- System must manage all types of MED POL information and data and be able for including of new data types,

- It must be GIS-based system,

- System must have modular structure and be able for easy upgrading with new functionality,

- System must be accessible via Internet
- System may and should contain distributed components: databases, geographical data sources, modelling and data processing centers (nodes).

In order to properly develop MEDPOL information System, the secretariat gathered an expert meeting to develop the elements of the information system needed by MEDPOL.

Description of the proposed system

To achieve this goal – integrated MED POL Information System – it is proposed to create a MED POL Internet Portal. It is most practical and modern way to combine all types of MED POL information, data, tools, and results and make them available to decision-makers, scientists and wide public.

The portal will consist on next modules (with possibility for extension):

- Informational Support and Inventory module
    - Information on MED POL activities
    - Information on legislation, environmental policy, agreements, indicators, criteria, etc
    - Access to Inventory catalogues/databases (Responsible bodies, Institutions, Scientists involved into the program)
    - Access to MED POL library
- GIS module
    - Management of the background geographical information including:
        - Basic GIS layers (countries, administrative boundaries, rivers, roads, cities, social-economic data, land use, soil erosion, hydrographical network, harbours, airports, etc)
        - Sources of pollution
    - Live connection to distributed historical, monitoring, remote sensing, and modelling databases for retrieving required data
    - Spatial presentation of environmental and monitoring data in conjunction with information on land based activities/inputs, satellite images, models, etc
    - Spatial presentation of environmental changes (reduction of inputs; pollution trends)
    - Hot links to national and regional GIS
- Data retrieving module
    - Convenient query system
    - Retrieving data/metadata from distributed historical, monitoring, remote sensing, and modelling databases
    - Data transformation (mapping) using XML-based technologies
- Remote sensing module
    - Access to Coastal Remote Sensing data archives managed by international and national centers
    - Presentation of satellite images from archives
- Operational Oceanography module
    - Access to modelling center(s)
    - Presentation of modelling and forecast results

- Simulation (modelling) module
    - Tool for simulation of response of marine environment on pollution inputs using different models
    - Possibility to obtain scenario for environmental changes in coastal zone in case of hazardous pollution

Road Map for implementation

In order to concretely put in place the MEDPOL information systems , the secretariat negotiated with ERS/RAC to provide the necessary technical support. The cooperation issue was discussed in a joint meeting between MEDPOL and ERS/RAC in March 2005 during which it was agreed on the following road map for implementation.

Activity	**Time Frame**	**Responsibility**
1. Updating the concept paper prepared by MEDPOL	Second week of April 05	ERS/RAC
2. Proposal for a Research Project	First week of April 05	ERS/RAC
3. Short multi media presentation about MEDPOL Inf. Sys	End of April 05	ERS/RAC
4. Draft structure of the interface and Inf. Sys for decisions Makers	End of May	ERS/RAC
5.Verification of 3.	June to October 05	MEDPOL-ERS/RAC
6. Realization of 2.	April to October 05	MEDPOL-ERS/RAC
7. Presentation to the CPs meeting of 3.	November 05	MEDPOL-ERS/RAC
8. Updating 3. and operation system	November 05	MEDPOL-ERS/RAC
9. Structure of the Inf. Sys from the stakeholders	February 06	ERS/RAC
10. Preparation of MEDPOL web site	April 05-January 06	MEDPOL-ERS/RAC
11. Test of the web site	February –June 06	MEDPOL-ERS/RAC
12. Experts Meeting on Information needs and use / Presentation of MEDPOL Web Site	June - 06	MEDPOL-ERS/RAC