

Kick-off meeting – Athens – 19, 20 October, 2011



SeaDataNet

*PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT*

WP4 - Metadata directory services overview

Sissy Iona (HCMR)

Outline

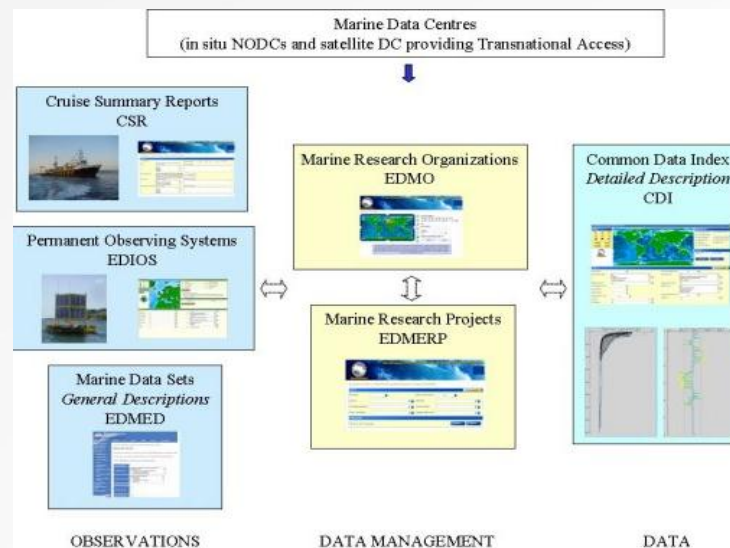
- Background information
- Current Status
- System upgrade towards an operational infrastructure
- Expected new entries

Metadata Services Objectives

- One of the SDN Online Services to facilitate the marine data searching, location and retrieval.
- The objectives are to:
 - Maintain and expand the national metadata-bases
 - Standardize the information using common vocabularies and references (as Web Services)
 - Interconnect the national inventories in a common Pan-European directory

Metadata Services Structure

- It is composed of several thematic inventories of different levels:
 - High Level Directories** – EDMED, CSR, EDIOS (for describing observational datasets collected by ships, by laboratories, by continuous observing systems)
 - Common References** - EDMERP, EDMO and Common Vocabularies (available as **Web Services**) that interconnect the directories
 - The **Common Data Index** (CDI) that gives access to the data distributed by the data platforms



Current Status

Catalogue	Total number of entries
EDMO	2094
<i>CSR (upgrade old CSRs to V1)</i>	32 113
EDMED	3 813
EDMERP	2 338
<i>EDIOS (content update-EUROGOOS)</i>	-
CDI : Data	1 053 706
Number of data centres connected	65

Metadata Format

- The directories are fully harmonized in use of syntax, semantics and tools
- The ISO 19115 content model is the basis for the XML formats and exchange schemas (XSD) in current SeaDataNet project.
- For each directory it has been defined:
 - Description of the format and XML tags
 - XML Schema
 - XML examples files



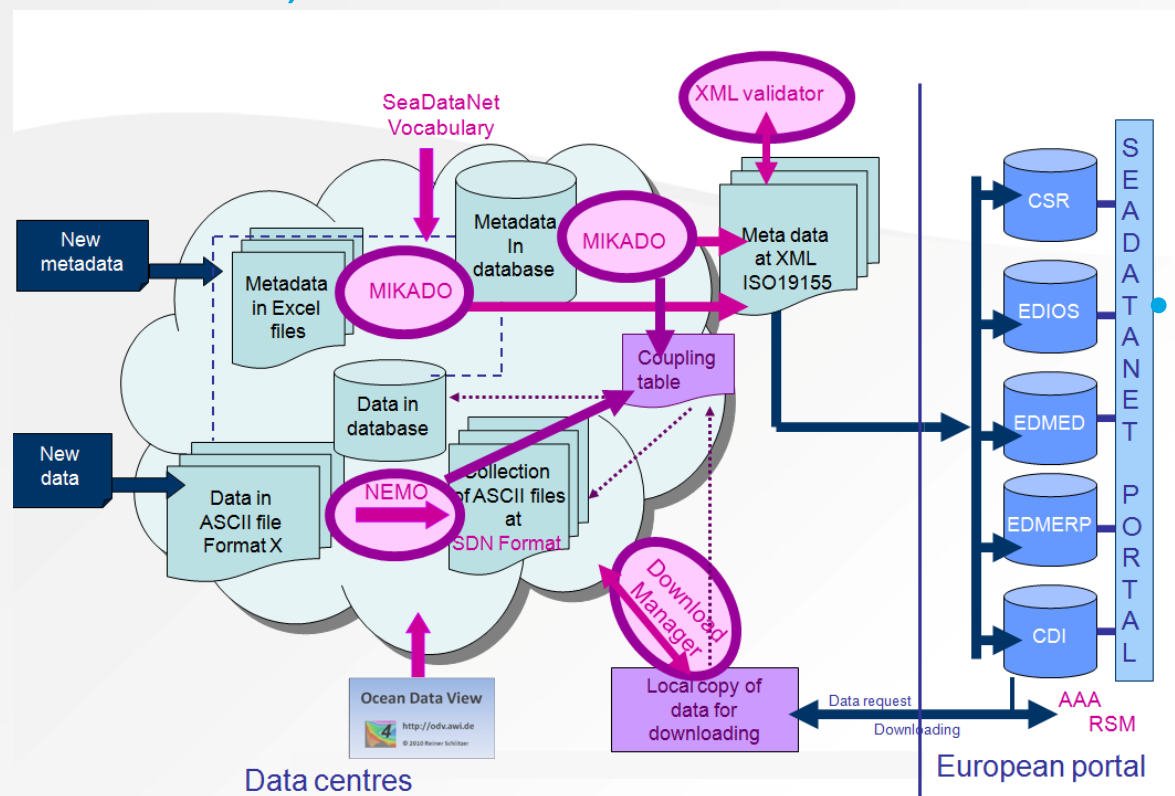
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Maintenance

- Upgraded and harmonized central interfaces (with web interfaces for humans, with SOAP Web Services for machines)



Maintenance
workflow

Governance

By the SDN national nodes using on-line (like **CMS** forms) and off-line tools (**MIKADO**) that produce XML ISO 19115 compliant exchanges

Directory + pan-European coordinator	Format info	Online CMS	XML exchange from national to pan-European level	XML validation service (Managed by RNODC and BODC http://www.seadatanet.org/validator/)
EDMED (coordinator BODC)	Check EDMED format	No	Mikado	Online
EDMERP (coordinator MARIS)	Check EDMERP format	Online	Mikado	Online
CSR (coordinator BSH)	Check CSR format	Online	Mikado	Online
EDIOS (coordinator BODC)	Check EDIOS format	No	Mikado	Under development
EDMO (coordinator MARIS)		Online	No	Not applicable
CDI (coordinator MARIS)	Check CDI format	No	Mikado	Online

SeaDataNet Cruise Summary Reports (CSR) - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://seadata.bsh.de/csr/retrieve/V1_index.html

Most Visited file:///C:/Documents%...

SeaDataNet Cruise Sum... SeaDataNet Cruise Summar...

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SeaDataNet Cruise Summary Report Inventory (CSR)

XML Download | [VQ](#) | [New Query](#) | [Results](#) | Found 398 | Show 395 | [Previous](#) | [Next](#)

Details of BIO Hesperides Cruise ZEE 2008 (BSH Ref-No.: 20083075)

GENERAL INFORMATION	
Platform/Ship	BIO Hesperides
Cruise begin	29.08.2008
Cruise end	13.09.2008
Port of Departure	Cartagena, Spain
Port of Return	A Coruña, Spain
Chief Scientist(s)	Manuel CATALAN - Royal Institute and Observatory of Navy
Responsible Laboratory	Royal Institute and Observatory of Navy
LOCATION	
General Ocean Areas	North Atlantic Ocean
Marsden Squares(S, N, E, W)	
Bounding Box(es)	
Specific Geographic Areas	Northwest Iberia Margin Biscay Abyssal Plain and continental shelf at the northwestern corner of Iberia (478;1 marsden square)
Link to Track Charts	Track chart
PROJECT	
Project Title	
Coordinating Body	
OBJECTIVES	
Description	The overall objective of the cruise was to perform a systematic geophysical survey. The principal aim is to obtain complete bathymetric sea-floor coverage. There are other geophysical data obtained during the cruise, whose acquisition is compatible with the navigational requirements of the multibeam survey, such as gravity, geomagnetic and ultra-high resolution seismic data (TOPAS system). This is the result of a cooperation between the Instituto Hidrográfico de la Marina (IHM, Hydrographic Institution of the Spanish Navy) and the Observatorio de la Armada (ROA, Royal Observatory of the Spanish Navy), under the control of the Secretaría General Técnica del Ministerio de Defensa (SEGENTE, General Technical Secretary of the Spanish Defense Department), with the collaboration of several institutions and universities. The cruise started on August 29th at Cartagena and finished at La Coruña on September 13th. It was intended to cover two bathymetric charts (G17 and G18) to the NW of Galicia, but the bad weather led to complete only bathymetric chart G17 partially G18.
ADDITIONAL INFORMATION	
Parameters measured	
Instruments used	
Linkage / Report / Station list	
PRINCIPAL INVESTIGATORS	
A	C.F. Daniel GONZALEZ - Hydrographic Institute of the Navy
B	Dr. Jose Martin DAVILA - Royal Institute and Observatory of Navy
C	Dr. Andres CARBO - Universidad Complutense de Madrid, Departamento de Zoología y Antropología físicas (UCM)
D	Jose Ramon DE ANDRES - Instituto Geológico y Minero de España, Servicio de Geología Marina (IGME)
Summary of measurements and samples taken	

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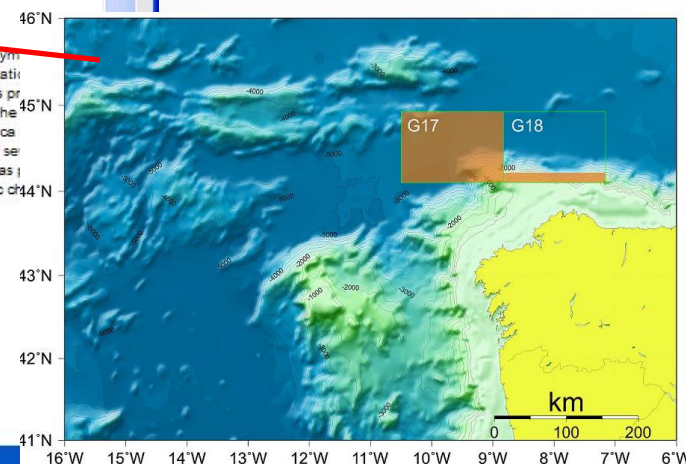
CSR V1 Query and Retrieval

http://seadata.bsh.de/csr/retrieve/V1_index.html

POGO/Ocean going RV database link

EDMO link

Track chart



SeaDataNet Cruise Summary Report(CSR) CMS - Mozilla Firefox

http://seadata.bsh.de/Cgi-csr/online_V1/CSRPartA.pl

Adhamas, Greece

Adhamas, Greece

Responsible Laboratory *

select Laboratory - Agricultural University of Athens, Faculty of Animal Production, Laboratory of Applied Hydrobiology (LAH/AUATH), Greece

If laboratory is not in the selection list, please first make an entry in EDMO

Chief Scientist(s)*

Enter name and laboratory of the person in charge of the scientific work (chief of mission) during the cruise

Name of chief scientist(s) - Schreiber, F.
- unknown

GREECE

Aristotelian University of Thessaloniki, Laboratory of Hydraulics (LHD/AUTH)

Christopoulos, Dr. S. - Aristotelian University of Thessaloniki, Laboratory of Hydraulics (LHD/

If scientist is not in the selection list please enter the name and laboratory of the person in charge

Surname Name

Laboratory Please select laboratory from EDMO

Department

Email

Telephone

Telefax

Objectives and brief narrative of cruise (not more than 4000 characters)*

test

Project (if applicable)

If the cruise is designated as part of a larger scale cooperative project (or expedition or programme) please select the name of the project

Project(s) Please select Project(s)

ALBANIA

- HMLA -2007, Hydrometeorological Monitoring and Researches in the lagoons of Narta and Karavasta

- MCA -07, Marine Monitoring in the Coastal Zone of Albania

Additional information on parameters measured/instruments used during the cruise

Parameter(s) measured Please select Parameter(s)

Bacterial consumption in the water column

Bacterial growth

Bacterial production in the water column

Instrument(s) used Please select Instrument(s)

radiometers

optical backscatter sensors

transmissometers

Any other information / attachment?

NEW! Link / URL

NEW! [upload Station List](#) [upload Report](#) [upload Track Chart](#)

save Part A

Please save every section explicitly! When your report is completed please submit to DOD

edit mooring edit measurement edit area save and submit to DOD

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CSR V1 CMS for on-line entry

http://seadata.bsh.de/csr/online/V1_index.html

Upload station list

Upload reports

Upload track charts



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European Directory of Marine Environmental Data (EDMED)

With this search interface you are able to query data sets. The search option hover over the "?" button in each data set.

Toggle : Query EDMED data sets / Query EDMED data sets

Search

Free search

Begin year

End year

Location

Northernmost latitude

Westernmost longitude

Southernmost latitude

Easternmost longitude



European Directory of Marine Environmental Data (EDMED)

Search results

- Host
- (CIPS/ICWB) SEA - an extensive multi
 - 13C/12C ratios in Mediterranean ben
 - 16S rRNA diversity in the surface and biomarker distribution
 - 2D models of tides, water quality and
 - 36 North Project oceanographic data
 - 3D models of tides, water quality and
 - A study of the Biota of Mearl Beds from
 - AARI 10 - day sea ice total concentration
 - Aberdeen Bay Coastal Processes (11
 - Aberdeen Beach Front - Level and Ph
 - Abiotic Parameters Data Set for the B

Data set information

| New query | Results | Found 2813 | Show 28 | Previous | Next |

General	
Data set name	Acoustic Survey Haul Stations
Data holding centre	Marine Institute
Country	Ireland
Time period	Acoustic Survey has been taken
Ongoing	Yes
Observations	
Parameters	Date and time, Fish and shell
Instruments	Pelagic trawl nets
Description	
Summary	Acoustic surveys are general season many pelagic species methods. A cruise track is followed by fishermen and fishing industry
Originator	Marine Institute

European Directory of Marine Environmental Data (EDMED)

Data centre information	
General	
Centre name	Marine Institute
Address	Marine Institute Rinville Oranmore Co. Galway Ireland
Country	Ireland
Description	The Marine Institute is a non-commercial semi-state body that was formally established by Statute (Marine Institute Act, 1991) in October 1992. Under the Act the Marine Institute was given responsibility: "to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to marine research and development, that in the opinion of the Institute will promote economic development and create employment and protect the marine environment." The Institute works in conjunction with the Department of the Marine & Natural Resources, other Government Departments, semi-state agencies and various national and international marine based bodies.

EDMED User Interface

- Search interface (by time, geographical box)




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EDMERP Web Interface - Retrieval

http://seadatanet.maris2.nl/v_edmerp/search.asp



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European Directory of Marine Environmental Research Projects (EDMERP)

Search

Free search

Sea-area

Coordinating organisation

Metadata collating centre

Listing results

20 50 100 records

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European Directory of Marine Environmental Research Projects (EDMERP)

Results

Edmerp ID	Project title
393	Variation in space and time of cod and other gadoids : the effect of climate and density dependence on popul dynamics
703	Review of Environmental Projects of the Caspian Sea for the Planning of Future Activities
704	Development of Black Sea Integrated Coastal and Shelf Zone Monitoring and Modeling (INCOM) Program Science Plan
705	Black Sea Ecosystem Processes And Forecasting / Operator Database Management System
836	Black Sea Global Ocean Observing System
838	Particulate Matters in the Eastern Mediterranean. Atmosphere Properties Related to Health Effects
839	The Influence of atmospheric Saharan dust on phytoplankton dynamics in Eastern Mediterranean
840	Determination of the sedimentological mineralogical and geochemical properties of the atmospheric dust of Northeast Mediterranean
841	Determination of pigment markers of the phytoplankton composition in the Northeastern Mediterranean
842	Evaluation of biogeochemical impact of African dust deposition on the East Mediterranean basin by satellite remote sensing

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European Directory of Marine Environmental Research Projects (EDMERP)

[New query](#) | [Results](#) | [Found 67](#) | [Show 9](#) | [Previous](#) | [Next](#)

Details

GENERAL INFO

Project title: Sea-Search
Project acronym: Sea-Search
Project reference: EVR1-CT-2002-20009 SEA-SEARCH
Associated programme: 5Th Framework of EC DG Research
Begin date: 2002-12-01
End date: 2005-11-30

LOCATION

Geographic coverage: All European oceans and seas
Sea area (C16): Baltic Sea, Barents Sea, Black Sea, Celtic Sea, English Channel, Irish Sea and St. George's Channel, Mediterranean Sea, North Atlantic Ocean, North Sea, North West Atlantic Ocean (limit 40W), Norwegian Sea

DESCRIPTION

Data-themes (P081): Biological oceanography, Chemical oceanography, Environment, Marine geology, Physical oceanography
focus on providing online access to data itself.

COORDINATOR

Contact organisation: [Marine Information Service \(MARIS\)](#)
Contact name: D.M.A. Schaap
Title: Managing director
Phone: +31 (0)70 3904710
Fax: +31 (0)70 3902546
Email: dick@maris.nl

PROJECT PARTNERS

Other partners:
[Alt-Russia Research Institute of Hydrometeorological Information - World Data Centre \(RHHM-WDC\)](#), [National Oceanographic Data Centre \(NODC\)](#), [British Oceanographic Data Centre \(BODC\)](#), [Bulgarian National Oceanographic Data Centre \(BODC\)](#), [Institute of Oceanology](#), [Center of Marine Research](#), [Cyprus Oceanographic Data Center](#), [Oceanography Center](#), [Finnish Institute of Marine Research \(FIMR\)](#), [German Oceanographic Data Centre \(GODC\)](#), [Hellenic Centre for Marine Research](#), [Hellenic National Oceanographic Data Centre \(HNOCHCMR\)](#), [ICD Oceanographic Centre of Canary Island](#), [FRENCH / EDVUSMER](#), [IPTI](#), [Hydrographic Institute](#), [Institute of Marine Research](#), [Institute of Meteorology and Water Management](#), [Maritime Branch in Gdynia \(MWM MB\)](#), [Institute of Oceanography and Fisheries](#), [International Council for the Exploration of the Sea \(ICES\)](#), [International Ocean Institute](#), [Mediterranean Operational Centre \(University Of Malta\) / Physical Oceanography Unit](#), [Irish Marine Data Centre \(ISDAMAR\)](#), [Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS](#), [Dipartimento di Oceanografia](#), [Instituto de Oceanografia](#), [Jawahar Institute of Marine Research](#), [Joint Research Centre \(JRC\)](#), [Centre of Relations with UNESCO Oceanological Research Centre and GeoDNA \(UNESCO\)](#), [Latvian Institute of Aquatic Ecology](#), [Management Unit of the North Sea and Scheldt Estuary Mathematical Models](#), [Belgian Marine Data Centre \(BMM-BMDC\)](#), [Marine Hydrophysical Institute](#), [Marine Institute](#), [Marine Research Institute \(MRI\)](#), [Marine Systems Institute](#), [Moscow State Technical University](#), [Department of Civil Engineering](#), [National Environmental Research Institute](#), [University of Aarhus](#), [Department of Marine Ecology](#)

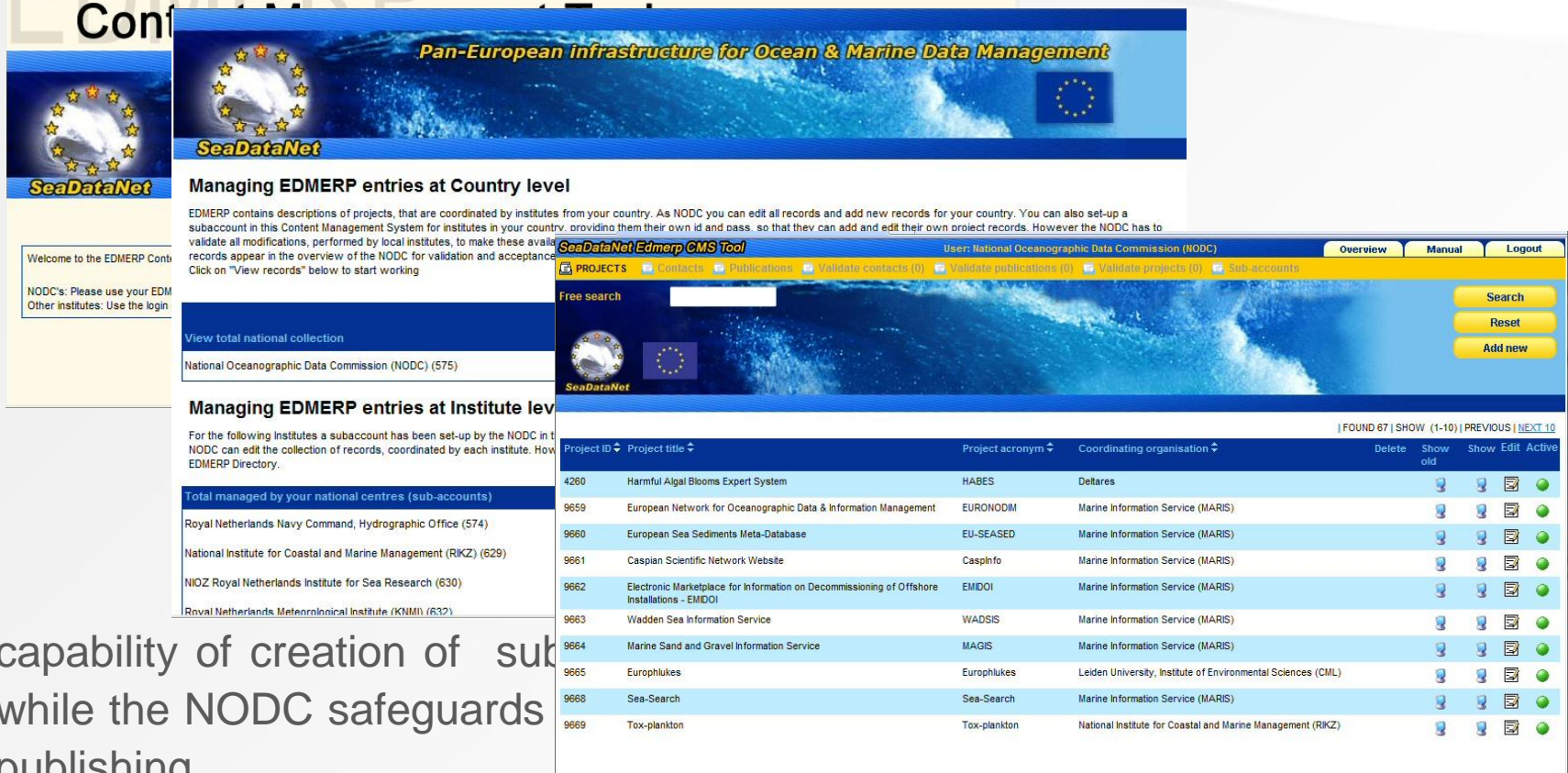
Browse list

Additional details

❖ EDMERP CMS

• http://seadatanet.maris2.nl/vu_edmerp/welcome.asp

Conf



The screenshot displays the SeaDataNet EDMERP CMS interface. The header features the SeaDataNet logo and the title "Pan-European infrastructure for Ocean & Marine Data Management". The main content area is titled "Managing EDMERP entries at Country level" and includes a welcome message from the NODC. A sidebar on the left provides navigation options, including "View total national collection" and "Managing EDMERP entries at Institute level". The main table lists various projects, including "Harmful Algal Blooms Expert System", "European Network for Oceanographic Data & Information Management", and "European Sea Sediments Meta-Database".

Managing EDMERP entries at Country level

EDMERP contains descriptions of projects, that are coordinated by institutes from your country. As NODC you can edit all records and add new records for your country. You can also set-up a subaccount in this Content Management System for institutes in your country, providing them their own id and pass, so that they can add and edit their own project records. However the NODC has to validate all modifications, performed by local institutes, to make these available. Records appear in the overview of the NODC for validation and acceptance. Click on "View records" below to start working.

Welcome to the EDMERP Content Management System

NODC's: Please use your EDMERP login
Other institutes: Use the login

View total national collection

National Oceanographic Data Commission (NODC) (575)

Managing EDMERP entries at Institute level

For the following Institutes a subaccount has been set-up by the NODC in the EDMERP CMS. NODC can edit the collection of records, coordinated by each institute. However, the NODC has to validate all modifications, performed by local institutes, to make these available. Records appear in the overview of the NODC for validation and acceptance. Click on "View records" below to start working.

Total managed by your national centres (sub-accounts)

Royal Netherlands Navy Command, Hydrographic Office (574)

National Institute for Coastal and Marine Management (RIKZ) (629)

NIOZ Royal Netherlands Institute for Sea Research (630)

Royal Netherlands Meteorological Institute (KNMI) (632)

SeaDataNet Edmerp CMS Tool

User: National Oceanographic Data Commission (NODC)

Overview Manual Logout

PROJECTS Contacts Publications Validate contacts (0) Validate publications (0) Validate projects (0) Sub-accounts

Free search

Search Reset Add new

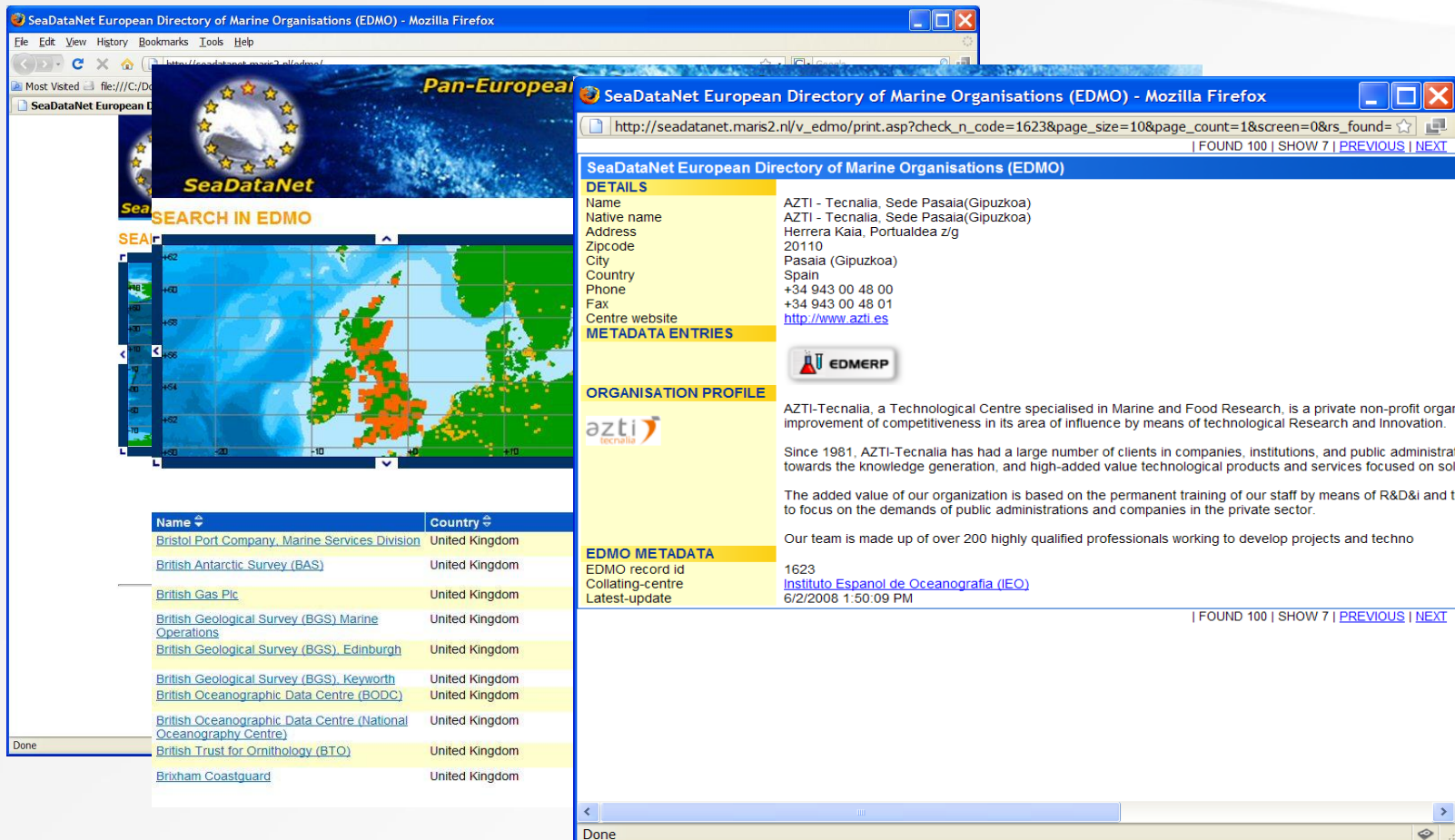
Project ID	Project title	Project acronym	Coordinating organisation	Delete	Show old	Show Edit	Active
4260	Harmful Algal Blooms Expert System	HABES	Deltares				
9659	European Network for Oceanographic Data & Information Management	EURONODIM	Marine Information Service (MARIS)				
9660	European Sea Sediments Meta-Database	EU-SEASED	Marine Information Service (MARIS)				
9661	Caspian Scientific Network Website	CaspInfo	Marine Information Service (MARIS)				
9662	Electronic Marketplace for Information on Decommissioning of Offshore Installations - EMIDOI	EMIDOI	Marine Information Service (MARIS)				
9663	Wadden Sea Information Service	WADSI	Marine Information Service (MARIS)				
9664	Marine Sand and Gravel Information Service	MAGIS	Marine Information Service (MARIS)				
9665	Europhlukes	Europhlukes	Leiden University, Institute of Environmental Sciences (CML)				
9668	Sea-Search	Sea-Search	Marine Information Service (MARIS)				
9669	Tox-plankton	Tox-plankton	National Institute for Coastal and Marine Management (RIKZ)				

FOUND 67 | SHOW (1-10) | PREVIOUS | NEXT 10

- capability of creation of subaccounts while the NODC safeguards publishing

EDMO V1 search and retrieval

<http://seadatanet.maris2.nl/edmo>



SeaDataNet European Directory of Marine Organisations (EDMO) - Mozilla Firefox

http://seadatanet.maris2.nl/edmo/print.asp?check_n_code=1623&page_size=10&page_count=1&screen=0&rs_found=

SeaDataNet European Directory of Marine Organisations (EDMO)

DETAILS

Name: AZTI - Tecnalia, Sede Pasaia(Gipuzkoa)
 Native name: AZTI - Tecnalia, Sede Pasaia(Gipuzkoa)
 Address: Herrera Kaia, Portualdea z/g
 Zipcode: 20110
 City: Pasaia (Gipuzkoa)
 Country: Spain
 Phone: +34 943 00 48 00
 Fax: +34 943 00 48 01
 Centre website: <http://www.azti.es>

METADATA ENTRIES

ORGANISATION PROFILE

EDMERP

EDMO METADATA


EDMO record id: 1623
 Collating-centre: [Instituto Espanol de Oceanografia \(IEO\)](#)
 Latest-update: 6/2/2008 1:50:09 PM

| FOUND 100 | SHOW 7 | [PREVIOUS](#) | [NEXT](#)

Name	Country
Bristol Port Company, Marine Services Division	United Kingdom
British Antarctic Survey (BAS)	United Kingdom
British Gas Plc	United Kingdom
British Geological Survey (BGS) Marine Operations	United Kingdom
British Geological Survey (BGS), Edinburgh	United Kingdom
British Geological Survey (BGS), Keyworth	United Kingdom
British Oceanographic Data Centre (BODC)	United Kingdom
British Oceanographic Data Centre (National Oceanography Centre)	United Kingdom
British Trust for Ornithology (BTO)	United Kingdom
Brixham Coastguard	United Kingdom

EDMO CMS

welcome.asp



The screenshot displays the SeaDataNet EDMO Content Management System interface. The top navigation bar includes links for 'Manual', 'Manual', and 'Logout'. The main content area is divided into several sections:

- Free search:** A search bar with a 'Search' button, a 'Name' dropdown menu set to 'All', and a 'Country' dropdown menu set to 'Greece'. There are also 'Reset' and 'Add new' buttons.
- EDMO Content Management System:** A section with a 'Free search' bar and a 'Name' dropdown menu set to 'All'. It also includes a 'Country' dropdown menu set to 'Greece' and 'Search', 'Reset', and 'Add new' buttons.
- Table of EDMOs:** A table listing various EDMOs with columns for 'N_code', 'Name', and 'Last update'. The table includes entries for Hellenic Centre for Marine Research (HNCMR), Hellenic National Institute of Marine Research (HNIMR), and Hellenic Centre for Oceanographic Data Centre (HCODC).
- Map:** A Google Map showing the location of the Hellenic Centre for Marine Research (HNCMR) in Athens, Greece. The map includes a 'Map' button and a 'Satellite' button.
- Form:** A form for updating the EDMO information, including fields for 'N code', 'Last update', 'Name', 'Address', 'Zipcode', 'City', 'State', 'Country', 'Latitude', and 'Longitude'. There are 'UPDATE' and 'RESET' buttons at the bottom.

EDMO CMS geo-locator via Google maps

EDIOS – Current status – March 2011

- The system is technically ready
 - Only UK inputs
- Input received from:
 - France and Greece
 - Germany and Sweden have prepared their entries
- At present >10000 entries
- Overall update will be done in cooperation with EuroGOOS
- Lesley will present the current status at the end of this presentation

SeaDataNet 2 Objectives

- The overall objective of the SeaDataNet II project is to **upgrade the present SeaDataNet infrastructure** into an **operationally robust and state-of-the-art** Pan-European infrastructure for providing up-to-date and high quality access to ocean and marine metadata, data and data products by :
 - setting, adopting and promoting common data management standards
 - realizing technical and semantic interoperability with other relevant data management systems and initiatives on behalf of science, environmental management, policy making, and economy.

WP4 Action

- **Operational** upgrade of the SeaDataNet catalogues and transfer to the central directories
 - (at present done on an ad-hoc basis by mailing and uploading packages of XML entries of CDI, EDMED, EDMERP, EDIOS, CSR)

WP4 - How

- By the development and adoption of a **OGC CS-W harvesting mechanism** catalogue which:
 - Will not require human intervention to trigger and handle transfers
 - Will allow the directories to be more up-to-date

Requirements for OGC based CS-W mechanism

- In order to adopt that mechanism, three actions need to be taken:
 - upgrading of the MIKADO XML editor used at local level by all SeaDataNet partners
 - upgrading of the central Directory services (EDMED, EDIOS, EDMERP, CSR), used at central level by NERC-BODC, MARIS, and BSH-DOD
 - applying ISO19139 schema format (the technical transport format for ISO 19115 content model based entries) for XML files so as to be INSPIRE compliant

New Mikado Software

- The new MIKADO software for updating EDMED, EDMERP, EDIOS and CSR, with OGC CS-W harvesting capabilities, must be installed and configured at each data centre.

Implementation Plan for New Mikado Software

- This plan will offer:
 - Instructions for the installation and configuration guide of Mikado software with the new harvesting capabilities
 - Instructions for upgrading and testing the new Mikado software efficiently
- This will be done:
 - by distributing to all data centers a documentation of these instructions
 - by offering help to any problems encountered

Installation & Configuration of the upgraded Mikado tool

- This will be done gradually in a test mode in order to be able to control initial problems and errors. We will start with pilot group of data centres and after the successful installation of Mikado we will improve our installation guides.
- We will continue with the other data centres and after the agreement with the respective central directory manager, Mikado will be switched to operational status.

WP4 deliverables

Deliverable Title	Nb	Leader	Deliver y month
User manual for updating metadata catalogues	6	HNODC	2
Implementation plan for the gradual installation of upgraded services	1	HNODC	9
Pilot group of SeaDataNet nodes operational with upgraded delivery services	4	HNODC	11
Revised set of instructions and doc for installation of upgraded services	4	HNODC	12

New entries

- Partner's new entries will be monitored by indicators defined under WP2 and will be reported to the annual metrics reports
 - *We must keep metrics high !*
- The new partners (PANGAEA-MARUM) will be bring new data in the system
- By the cooperation with related projects and initiatives (UpgradeBSS, Eurofleets, JERICO, EuroARGO, EMODNET PP)