

SEMIDE
EMWIS



Feasibility Study on the development of a regional water observation mechanism in the Mediterranean region

The Maltese Case

MEDWIP EMWIS workshop
3rd/4th July 2007



Overview

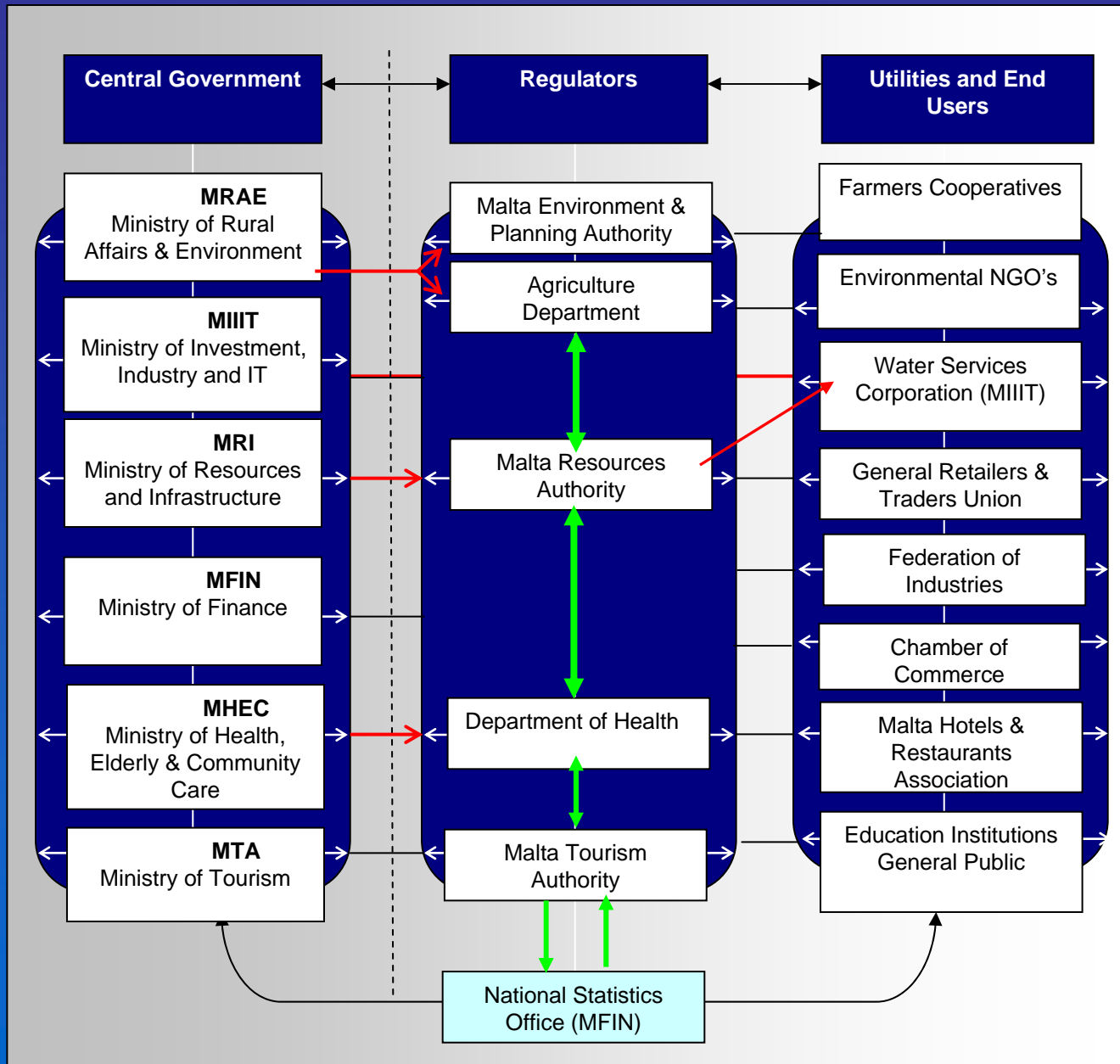
- Water resources management
- Analysis of the information production processes
- The National Water Information System for Malta
- Analysis of the needs and expectations of the stakeholders on:
 - The use of indicators
 - The formation of the Regional Water Observation Mechanism



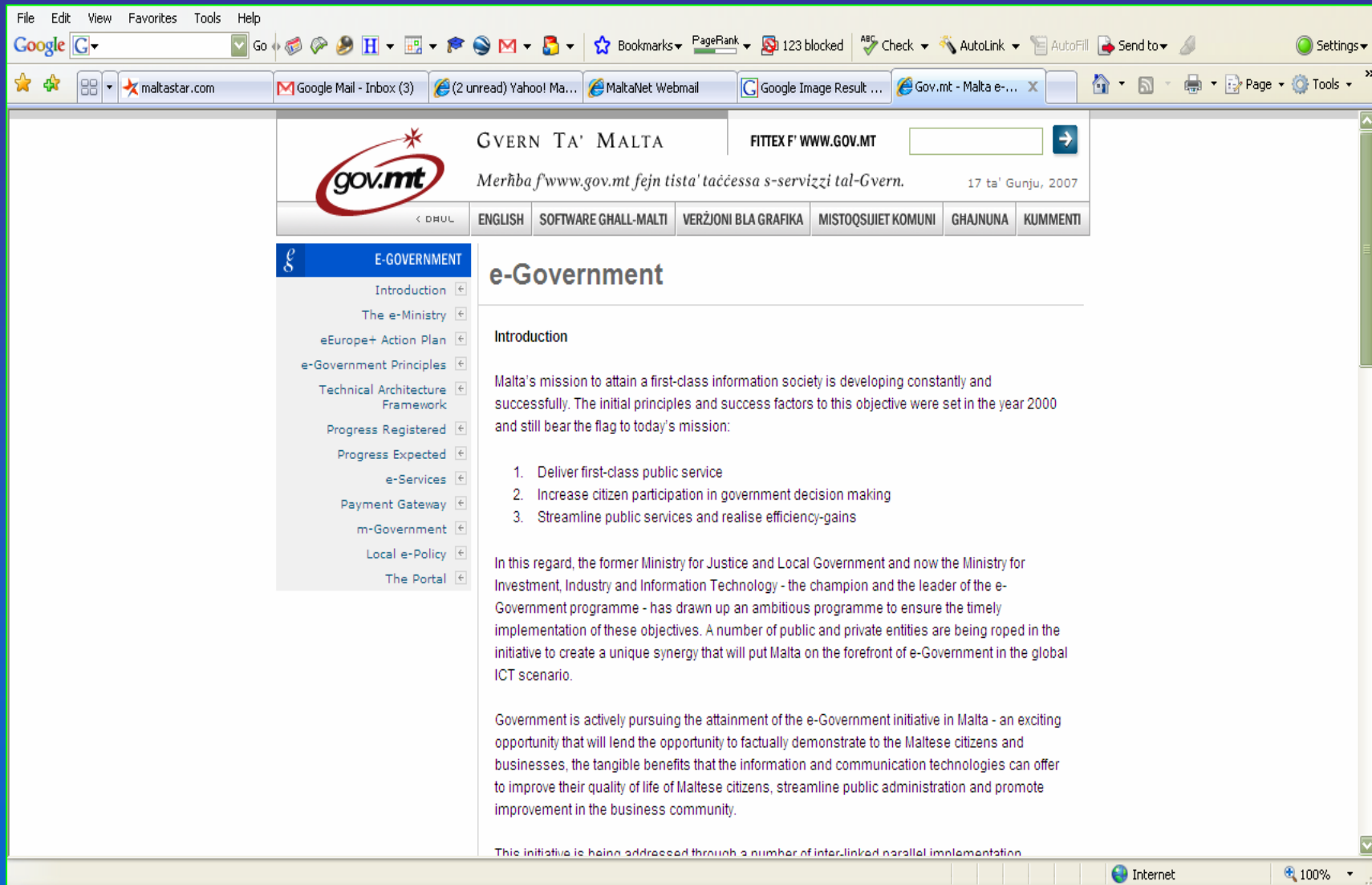
**Water resources management
and
Institutions that manage
water/water related data**



The Management of water resources in the Maltese Islands



Public access - E-Government



The screenshot displays the Malta Government website (gov.mt) in a web browser. The browser's address bar shows the URL "gov.mt - Malta e-...". The website header features the "gov.mt" logo and the text "GVERN TA' MALTA" and "FITTEK F' WWW.GOV.MT". Below the header, there is a navigation menu with options: "ENGLISH", "SOFTWARE GHALL-MALTI", "VERŻJONI BLA GRAFIKA", "MISTOQSJIET KOMUNI", "GHAJNUNA", and "KUMMENTI". The main content area is titled "e-Government" and includes an "Introduction" section. The introduction text states: "Malta's mission to attain a first-class information society is developing constantly and successfully. The initial principles and success factors to this objective were set in the year 2000 and still bear the flag to today's mission:" followed by a list of three objectives: 1. Deliver first-class public service, 2. Increase citizen participation in government decision making, and 3. Streamline public services and realise efficiency-gains. Below the list, there is a paragraph explaining the government's commitment to the e-Government initiative, mentioning the former Ministry for Justice and Local Government and the current Ministry for Investment, Industry and Information Technology. The browser's status bar at the bottom shows "Internet" and "100%".

File Edit View Favorites Tools Help
Google Go 123 blocked Check AutoLink AutoFill Send to Settings
maltastar.com Google Mail - Inbox (3) (2 unread) Yahoo! Ma... MaltaNet Webmail Google Image Result ... Gov.mt - Malta e-...
GVERN TA' MALTA FITTEK F' WWW.GOV.MT
Merħba f'www.gov.mt fejn tista' taċċessa s-servizzi tal-Gvern. 17 ta' Gunju, 2007
< DRUL ENGLISH SOFTWARE GHALL-MALTI VERŻJONI BLA GRAFIKA MISTOQSJIET KOMUNI GHAJNUNA KUMMENTI
E-GOVERNMENT
Introduction
The e-Ministry
eEurope+ Action Plan
e-Government Principles
Technical Architecture Framework
Progress Registered
Progress Expected
e-Services
Payment Gateway
m-Government
Local e-Policy
The Portal
e-Government
Introduction
Malta's mission to attain a first-class information society is developing constantly and successfully. The initial principles and success factors to this objective were set in the year 2000 and still bear the flag to today's mission:
1. Deliver first-class public service
2. Increase citizen participation in government decision making
3. Streamline public services and realise efficiency-gains
In this regard, the former Ministry for Justice and Local Government and now the Ministry for Investment, Industry and Information Technology - the champion and the leader of the e-Government programme - has drawn up an ambitious programme to ensure the timely implementation of these objectives. A number of public and private entities are being roped in the initiative to create a unique synergy that will put Malta on the forefront of e-Government in the global ICT scenario.
Government is actively pursuing the attainment of the e-Government initiative in Malta - an exciting opportunity that will lend the opportunity to factually demonstrate to the Maltese citizens and businesses, the tangible benefits that the information and communication technologies can offer to improve their quality of life of Maltese citizens, streamline public administration and promote improvement in the business community.
This initiative is being addressed through a number of inter-linked parallel implementation

Internet 100%

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Analysis of the information production processes

Ministry for Rural Affairs & Environment

MINISTRY for RURAL AFFAIRS and the ENVIRONMENT

Waste Mgmt | Agriculture | Veterinary | Afforestation | Environment | Fisheries

The Ministry | Laws & Treaties | Communications | Initiatives | **Statistics** | Fact File | Links | **Downloads** | Contact Us

Welcome Note

Welcome to the website of the Ministry for Rural Affairs and the Environment.

Information is the best tool with which the public can gauge the government's performance. Our aim is to offer you a constantly updated site that will serve as an electronic resource centre for agriculture, fisheries and environment.

It-Talba għal inkjesta dwar il-permess fuq is-sit ta' fejn illum hem I-Ulysses Lodge

Il-Gvern jirreferi għal rapporti fil-media li jitolbu għal inkjesta dwar il-permess fuq is-sit ta' fejn illum hemm il-Ulysses Lodge.

Il-Gvern jinnota li dawn ir-rapporti, u din it-talba, mhumiex jinnutaw fatt importanti.

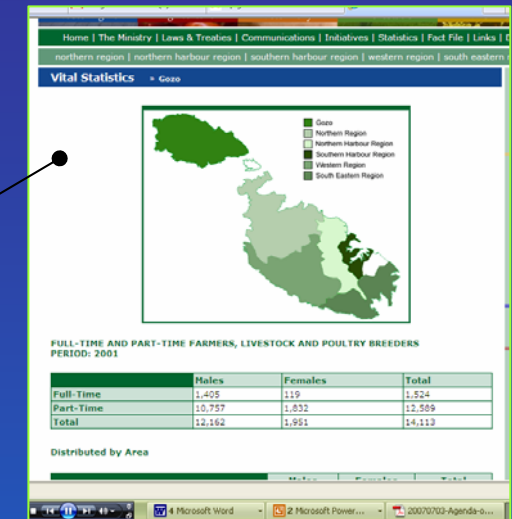
» **Read more**

Iffinanzjati 39 proġett favur l-ambjent urban f'21 lokalita

Illum gew iffirmati b'kemm jiswew Lm410,000 (€955,043) f'kuntratti bejn l- Awtorità ta' Malta dwar l-Ambjent u l-Ippjanar u 21 Kunsill Lokali li bejniethom wettqu, jew qed iwettqu

Call for Tender
Ex-Ante Evaluation of the Rural Development Programme for Malta: 2007-2013. Documents may be viewed from the downloads area.

Vacancies



Statistics on agriculture by region

Downloads

Environmental...
Agriculture...
Fisheries...
Call for Tender...
Call for Tender...
Call for Tender...

Downloads – official pdf. Documents on waste/agric. and environmental education

Malta Env. & Planning Authority (MEPA) GIS

4 Tools

Zoom in/out, Information box, legends

Search Criteria

- Locations
- Planning Applications
- Enforcements
- Dev. Notifications
- Scheduled Property

Place

Council: SAN PAWL IL-BAHAR

Place:

Search

Map Content

- Environmental Data - Terrestrial
- Corine Landcover 2000
- Elevation Map
- Environmental Protection - Terrestrial
- Terrestrial Habitats

Map Content: Corine Landcover 2000

Search criteria

e.g. Planning applications

Locality/
street/valley

Map content

e.g. Environ.
Data, land use
elevation

MEPA GIS server

Information –
attribute table

MEPA Geographic Information System - Windows Internet Explorer

http://mapserver.pa-malta.org/malta_geoinfo/neapolis.htm?Skin%3Dneuskin+Lang%3DENGLISH+Resolution%3Dbig+

MEPA

Zoom (m) 250

Maghluq

Tal-Baħar

TRIG TAL-BAROLEI

TRIG IS-SACCUR

Search Criteria

Locations

- Planning Applications
- Enforcements
- Dev. Notifications
- Scheduled Property

Place

Council: MARSASCALA

Place: Maghluq

Map Content

Planning Data

Please, select Map Content

- Planning Data with Base Map
- Planning Data with Orthophoto Map

Map Content: Planning Data with Orthophoto Map

Done

start

MEPA Geographic Inf...

QuestExp-EN_MEPA_...

report vs1.1 - Micros...

ID	Name	
1
2

Orthophoto

Planning data
/per
application
type

MEPA as a source of water data

MEPA is the competent authority for coastal waters and inland waters as far as NATURA 2000 sites are concerned

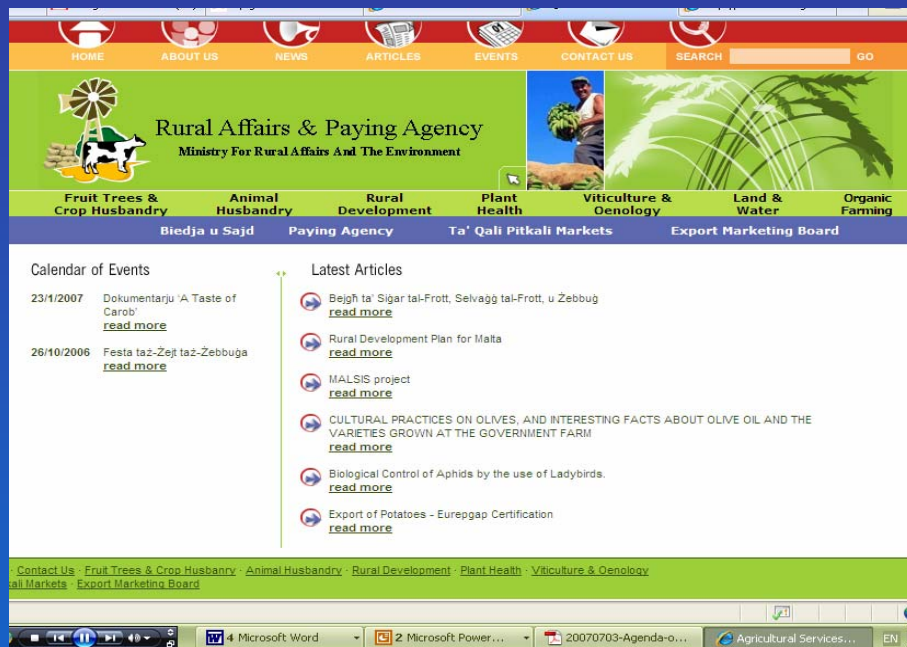
The screenshot shows the MEPA website's 'WATER QUALITY' page. The header includes 'WATER QUALITY' and 'contact us'. Below the header is a large image of a coastal landscape with the text 'Water Quality Studies & Monitoring Programs'. A text block states: 'Water quality monitoring is an invaluable means to assess the effectiveness of policy implementation and to establish long-term trends in water quality.' Below this, there are sections for 'Short-term studies' and 'Final report June 2004'. The 'Final report' section describes an assessment of the marine environmental quality of coastal waters exposed to the Maghlab Solid Waste Disposal Site, mentioning a survey from 2003-2004 and a final report submitted to MEPA by Prof. Vitor Anisk in June 2004.

The screenshot shows the MEPA website's 'waters' page. The header includes 'waters' and 'contact us'. Below the header is a large image of a sunset over water. A table lists various indicators and datasets with links to view them.

Category	Item	Action
Sub-report	SOER Waters Sub-report	View sub-report
Indicators	W1 Water consumption by source	View indicators
	W2 Nitrate and chloride levels at abstraction boreholes	View indicators
	W3 Groundwater quantitative status	View indicators
	W4 Bathing water quality	View indicators
Datasheets	Estimates for sectoral water consumption by source	View datasheets
	Nitrate and chloride levels at abstraction boreholes	View datasheets
	Quantitative status of Malta's aquifer systems	View datasheets
	Importation of pesticides for agricultural use	View datasheets
	WSC billed consumption	View datasheets
	Bathing water faecal coliform data	View datasheets

It is also responsible for the compilation of the State of the Environment Report

MRAE Agricultural Department



Rural Development Plan 2007 – 2013

Contributes to, amongst others, the implementation of the Water Framework Directive objectives and the Kyoto Protocol targets for climate change.

MALSIS Database (A Maltese Soil Information System)

Still in development phase. Such an information system deemed necessary in water management.

Ministry for Resources and Infrastructure



The MRI is not a direct data provider. It is responsible for major infrastructural works, public cleansing, and major construction projects that are carried out throughout the Maltese Islands :

Works division – Data which is provided is limited to cost data on the amount spent on storm water management projects and even on the restoration or embellishment of hydrological-heritage related infrastructure.

The Service Division – Data on reservoir capacity and clean up is only available on request.

Environment Health Department

Public Health Services in Malta - EFU Homepage - Windows Internet Explorer

http://www.health.gov.mt/dph/ehhome.htm

DEPARTMENT PUBLIC HEALTH
ENVIRONMENTAL HEALTH UNIT

Home | Bathing Areas Monitoring Programme | Bathing Water Reports | **Other Activities** | Websites

Latest Updates - [22/6/07] [Week 4 Bathing Report](#) | EU Commission Bathing Report

THE ENVIRONMENT

The Environmental Health Unit was set-up in 1994 to promote public health. This was in compliance with the Helsinki Declaration of June 1994 to which Malta is a signatory. The Unit's main duties are to monitor, assess and control environmental health hazards.

Mission Statement -

The main duties of the Unit are:

- To co-ordinate programmes for the monitoring, assessing and controlling environmental parameters which pose a threat to human health.
- To provide reliable and standardised information for those concerned with further development of various environmental health measures which may affect public health.
- To monitor and evaluate suitable environmental health measures guidelines and legislation.
- To provide relevant national, regional, and global environmental health programmes and initiatives.
- To generate the general public awareness of environmental health hazards.

Navigation menu items:

- Service Water Programme
- Indoor air monitoring programme
- Pest Control
- Investigations of Waterborne Diseases
- Environmental Impact Assessments
- Private Water Supplies
- Swimming Pools Regulations
- Legionella Control Regulations

Left sidebar links:

- Cooling Towers Register 2006
- European Guidelines for Legionella Control
- Legionella Control Regulations
- Application for Registration of Cooling Tower System & Evaporative Condensers
- Guide on Registration of Cooling Towers and/or Evaporative Condensers L.N. 6/2006

3D Bar Chart: Malta - Graph 1. Results from 1990 to 2006

Registered Private Water Suppliers as per L.N. 357 of 2004

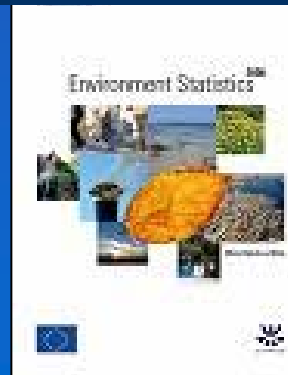
Supplier Name	Address	Category	Registration Date	Water Type	Volume (m³)	Value (€)	Notes
...

- **Bathing areas** Monitoring reports (bathing water quality and investigations of water-borne diseases)
- **Registration of private water supply and licensed pools**
- **EU Commission reports on bathing water**

National Statistics Office

The screenshot shows the homepage of the National Statistics Office (NSO) of Malta. At the top, there is a navigation bar with links for 'Login', 'Register', 'Request Form', 'Site Map', and 'Text Only Version'. The NSO logo is prominently displayed on the left. Below the logo, there is a sidebar menu with categories such as 'About NSO', 'Products and Services', 'Surveys & Questionnaires', 'StatDB', 'Sources and Methods', 'Selected Indicators', 'European Statistics', 'External Links', 'Census 2005', 'Press Information Notices', and 'Job Opportunities'. The main content area is divided into several sections: 'Latest News Releases' with a list of recent articles (e.g., 'Population & Social Conditions: At 6,580 persons, registered unemployed in May 2007 decreased by 567 persons...'), 'Browse by Theme' with a list of categories (e.g., 'General Statistics', 'Economy & Finance'), and 'Publications' with a featured article 'Perceived obstacles to the participation of women in decision-making positions'. The footer contains logos for 'gov.mt', 'EUROSTAT', and 'MIT&I', along with contact information and copyright details.

A very wide range of data provided through news releases, reports and so on. Also have on-line statistical database.

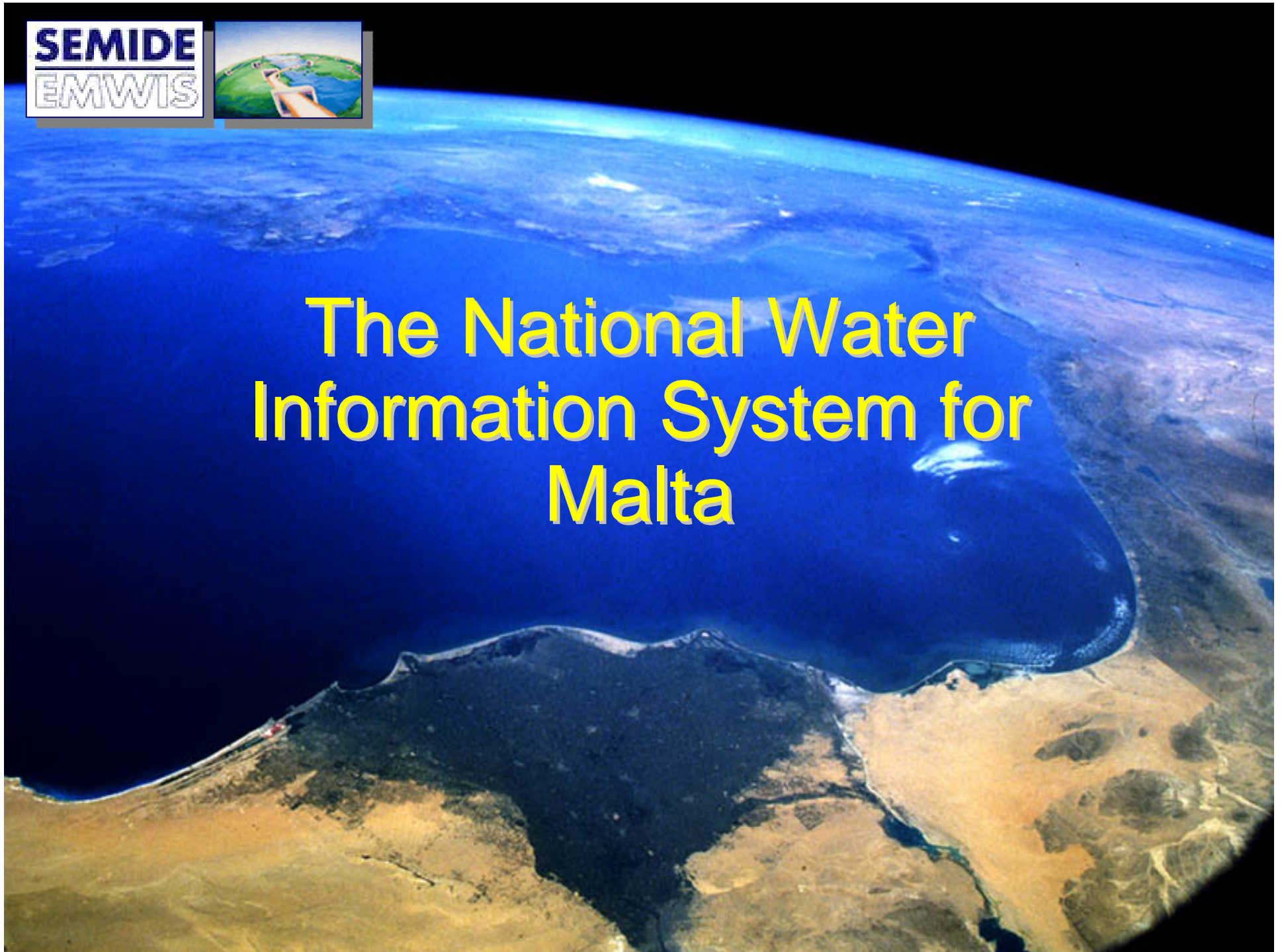


Environmental statistics on climate and water

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The National Water Information System for Malta



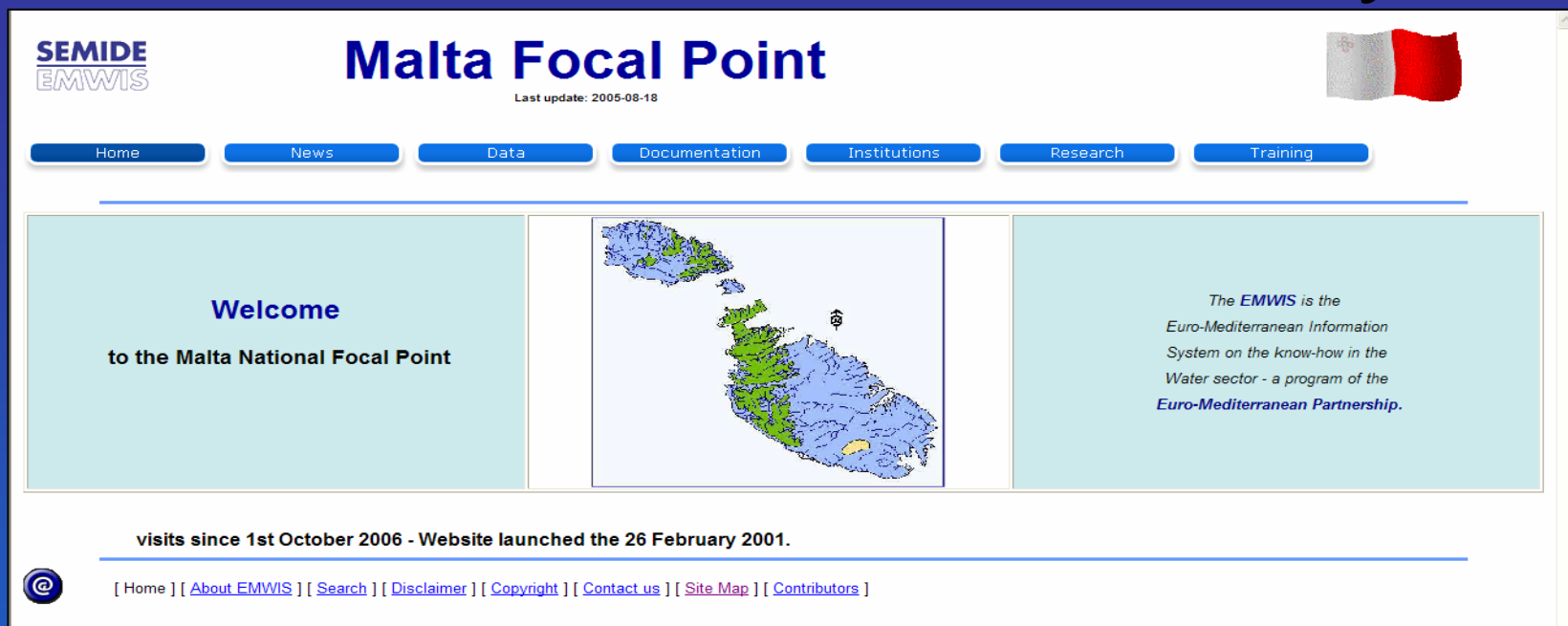
National Water Information System

There still remain difficulties in the exchange of water information due to:

- ❖ lack of standard operation procedures for the collection of information across authorities,
- ❖ unclear roles and responsibilities,
- ❖ no standard data exchange formats and structures,
- ❖ the unavailability of computerised information systems,
- ❖ the lack of human resources
- ❖ problems related to data readiness, availability and reliability.

Despite the fact that the NWIS report stated that all stakeholders were eager to establish a NWIS in Malta, several authorities raised the point that an **Environmental Information System** should be set up instead.

National Water Information System



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EMWIS

Malta Focal Point

Last update: 2005-08-18

Home News Data Documentation Institutions Research Training

Welcome
to the Malta National Focal Point

The EMWIS is the
Euro-Mediterranean Information
System on the know-how in the
Water sector - a program of the
Euro-Mediterranean Partnership.

visits since 1st October 2006 - Website launched the 26 February 2001.

[Home] [[About EMWIS](#)] [[Search](#)] [[Disclaimer](#)] [[Copyright](#)] [[Contact us](#)] [[Site Map](#)] [[Contributors](#)]

The NWIS has not been fully developed. The main Water Regulators, MRA and MEPA upload their information on the WISE Information system due to WFD commitments and thus the NWIS is not an immediate priority.

Future development - Plans to integrate NWIS within the MRA website. However the expertise required is absent.

We have to also consider other information systems at the Euro-Med scale.

Could euro-med countries be integrated into European union water information system [wise]?

Proposed Set up of the NWIS

Water resources	Main Pipe line	End User	
Natural resources Surface, Inland and coastal – MEPA groundwater – MRA Water Service Corporation - abstraction and production	Professional services Private Consultants	Agriculture Command and Control Environmental control – MEPA/ MRAE Irrigation systems Water treatment – WSC, Health department MRA	
Desalination Water Services Corporation MRA	Water Distribution Command and control / infrastructure/ System integrators WSC	Industry Command and control Infrastructure Water treatment System Integrators Waste water Treatment Sewage	
wastewater reuse WSC MRA HD	Research and Development University of Malta NSO NGOs	Municipality Command and control infrastructure Drinking water Water treatment Sewage treatment	Home User and tourism Infrastructure Drinking water Desalination Lesiure



Analysis of the needs and expectations of the stakeholders





Expectations

Indicators Stakeholders agree that:

Indicators facilitate the simplification of complex scientific information.

Help to translate a wide variety of environmental data and information into a simple system that can be easily communicated and show trends over time.

Indicators used must be scientifically sound and easily understood by the interpreters and end users.

They must be sensitive to the transformations that they intend to measure and must be measurable to the extent that they are capable of being updated regularly without the problems of data collection.

Indicators in themselves are valid benchmarks of performance at local, national and even at regional level.

Indicators: identified limitations

- Inaccurate statistical description of national water-quality conditions and trends because reliable national data does not exist for many aspects of water resource management.
- Lack of quality related data since water-quality monitoring is technically demanding and expensive. In Malta a strong monitoring network for groundwater is only lately being developed.
- As monitoring programs have evolved over the past 20 years, ideas have changed about which water-quality indicators are important and how to measure them. Data collection did not remain consistent through the years. [in conducting a statistically based analysis of water-quality trends, as many as 10 consecutive years of water-quality data commonly are needed to help distinguish short-term variability from long- term changes]

Expectations

Regional Water Observation Mechanism

Problem with too many water information systems – need to be integrated into one whole

Can't commit to a regional observation mechanism if national data management is poor

Attention has to be paid to users' rights and access

Priority topics of a RWOM:

- essential topics which require comprehensive data systems and coherent data structures
- experiences in non conventional water sources
- climate change adaptation.

Particular attention has to be paid to the means by which data is presented to the public since ideally the RWOM should be a Decision Support Tool to different entities and a mechanism whereby different countries can share experiences in different fields of water management

Sharing the development of processing tools and experiences

An aerial photograph of Earth from space, showing a large body of water (the Indian Ocean) and surrounding landmasses (Africa and Asia). The text "Thank you" is overlaid in the center of the image.

Thank you