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EUROPEAN REGIONAL DEVELOPMENT FUND
MALTA2007-2013

SEIS-MALTA Geoportal: Malta's Shared Enviromental INSPIRE GeoInformation System

SEIS
Shared environmental information system

SEIS MALTA

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22η Πανελλαδική Συνάντηση Χρηστών Γεωγραφικών Συστημάτων Πληροφοριών ArcGIS

Operational Programme I – Cohesion Policy 2007-2013
Investing in Competitiveness for a Better Quality of Life
Project part-financed by the European Union
European Regional Development Fund (ERDF)
Co-financing rate: 85% EU funds; 15% National Funds
Investing in your future

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EUROPEAN REGIONAL DEVELOPMENT FUND SEIS

Presentation Outline

- What is SEIS?
- SEIS Concept
- GeodataBase Design
- SEIS Data Themes
- Geoportal

SEIS
Shared environmental information system

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EUROPEAN REGIONAL DEVELOPMENT FUND MALTA 2007-2013 SEIS

What is EU-SEIS?

- SEIS is a collaborative initiative of the:
  - European Commission (EC) and
  - European Environment Agency (EEA)
- It is aimed to establish a shared EU-wide environmental info system
- Member States obligations, Malta

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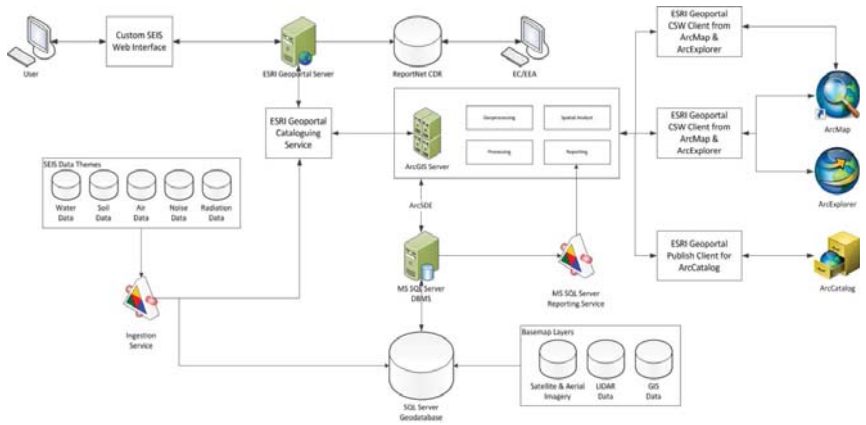
SEIS Concept



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Geodatabase

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The SEIS Geodatabase includes:

- INSPIRE elements for which a correspondence with the source data has-been found
- Additional elements not existing in the INSPIRE data model but present in the source data
- INSPIRE elements not existing in the source data
- All elements existing in the EEA reporting schemas

Database creation via ESRI technology (Feature Classes, Tables, Coded Value Domains, etc.).

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Geodatabase

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User requirements

- The MEPA (Malta Environment & Planning Authority) overall system architecture is based on an ArcGIS Server platform and ArcSDE have been employed to manage the underlying geospatial data that will be stored in Microsoft's SQL Server RDBMS.

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GeodataBase Design

- A 6 steps methodology:
  - Step 1: Analysis of the target Data Model (INSPIRE Data Specifications and EEA reporting schemas)
  - Step 2: Analysis of the Source Data (MEPA)
  - Step 3: Conceptual design of the geodatabase
    - to include all the INSPIRE elements for which a correspondence with the source data has-been found
    - to include all the additional elements not existing in the INSPIRE data model but present in the source data
    - to include the INSPIRE elements not existing in the source data
    - to include all the elements existing in the EEA reporting schemas

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GeodataBase Design

- A 6 steps methodology:
  - Step 4: Preparation and filling-in of the matching table (MT)
  - Step 5: Creation of the geodatabase structure, using different tools, according to the theme concerned
  - Step 6: Import of the geodatabase in SQLServer (provided also an ESRI geodatabase for each theme, as an additional resource available)

Conceptual design of the geodatabase

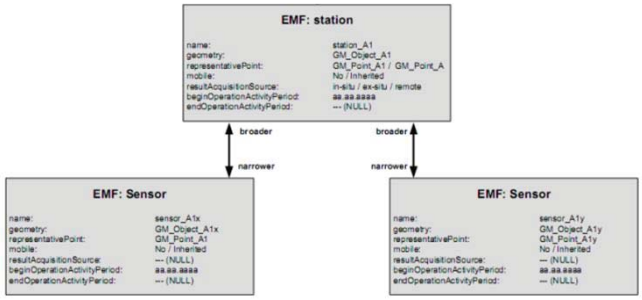
The INSPIRE Environmental Monitoring Facilities data model has been structured in order to be adapted to the modelling of different typologies of data.

In the AIR data modelling the following structure has been used:

- EnvironmentalMonitoringNetwork Feature Type, for the modelling of the measuring networks
- EnvironmentalMonitoringFacility Feature Type, for the data modelling of the Air Monitoring Stations
- EnvironmentalMonitoringFacility Feature Type, for the data modelling of the sensors installed on the stations

Conceptual design of the geodatabase

The data model provides the possibility to use the same feature type to model objects at different levels with the possibility to take into account the hierarchy, as in the case of stations and sensors.



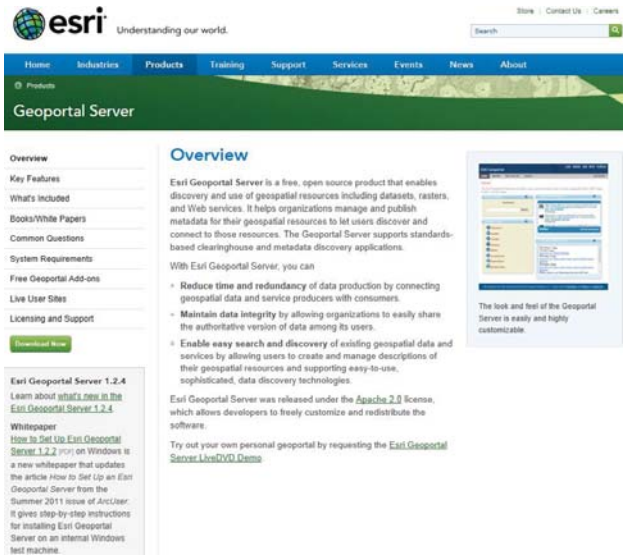
SEIS Data Themes

SEIS Malta features 5 enviro-themes:

1. Air
2. Water
3. Noise
4. Radiation
5. Soil

Other can be added (e.g. Nature)

Geoportal



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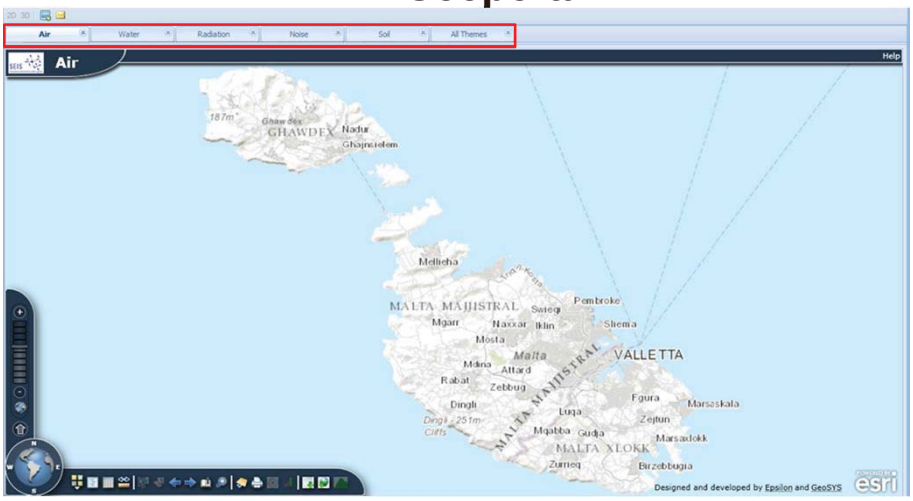
MEPA Geoportal



MAP WITH THEMES

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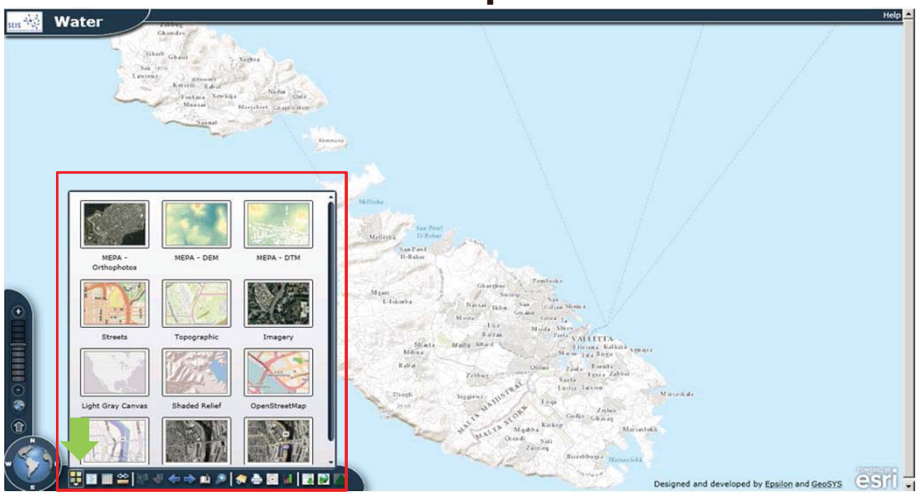
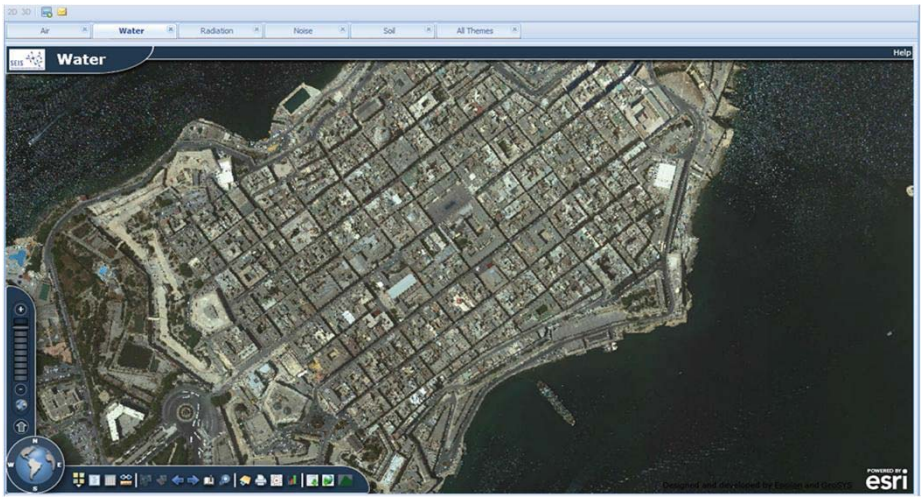
MEPA Geoportal



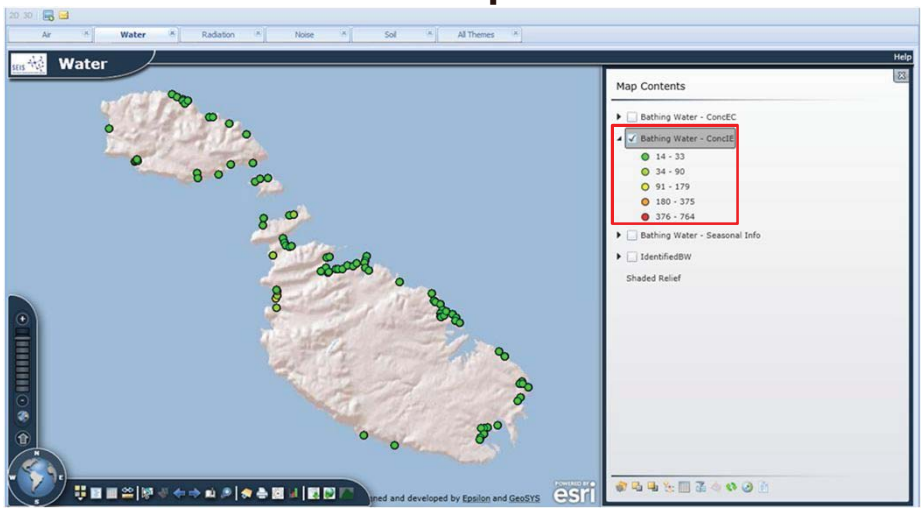
CHANGE BASEMAPS

MEPA Geoportal



ORTHOPHOTO BASEMAP (ZOOMS TO 1:500)

MEPA Geoportal



DISPLAY DATA LAYERS WITH LEGENDS

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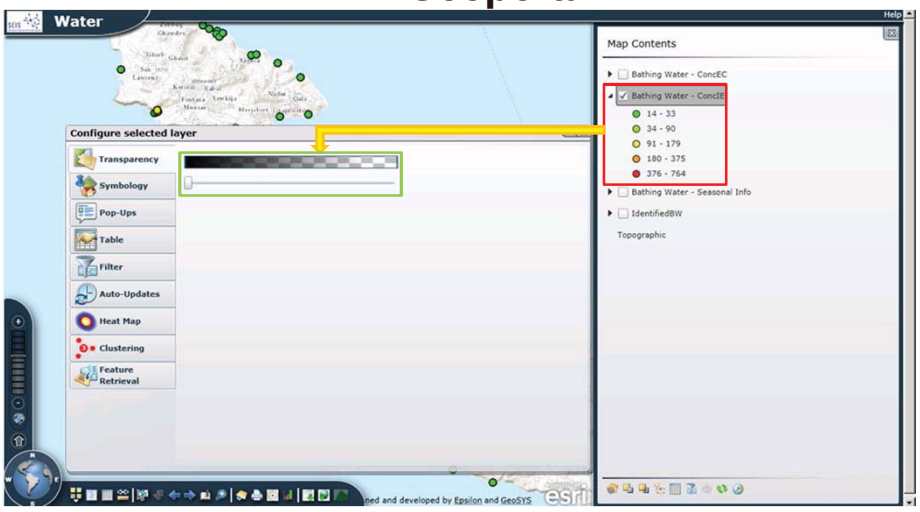
MEPA Geoportal



LAYER PROPERTIES - TRANSPARENCY

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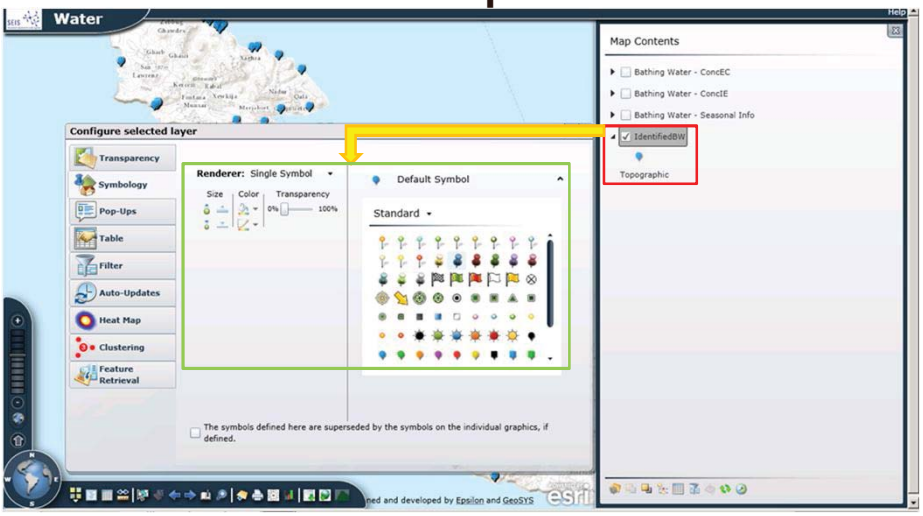
MEPA Geoportal



LAYER PROPERTIES - SYMBOLOGY

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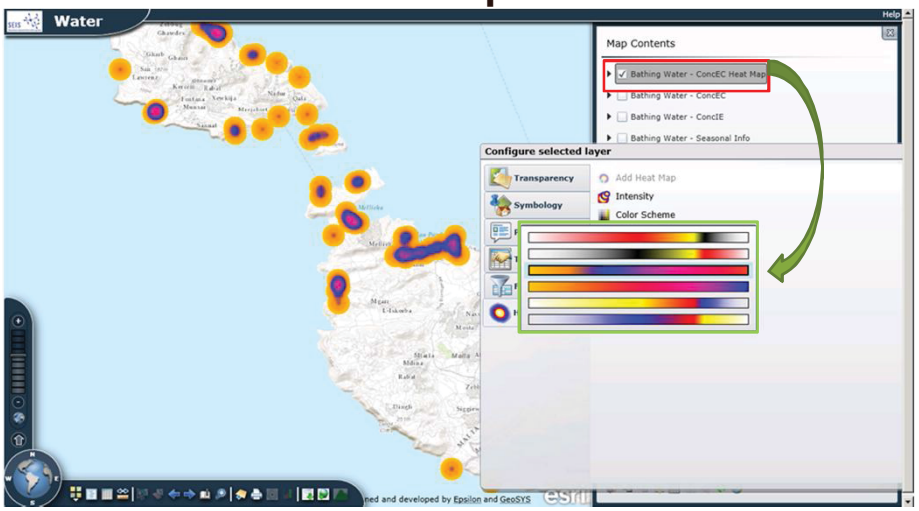
MEPA Geoportal



LAYER PROPERTIES – HEAT MAPS

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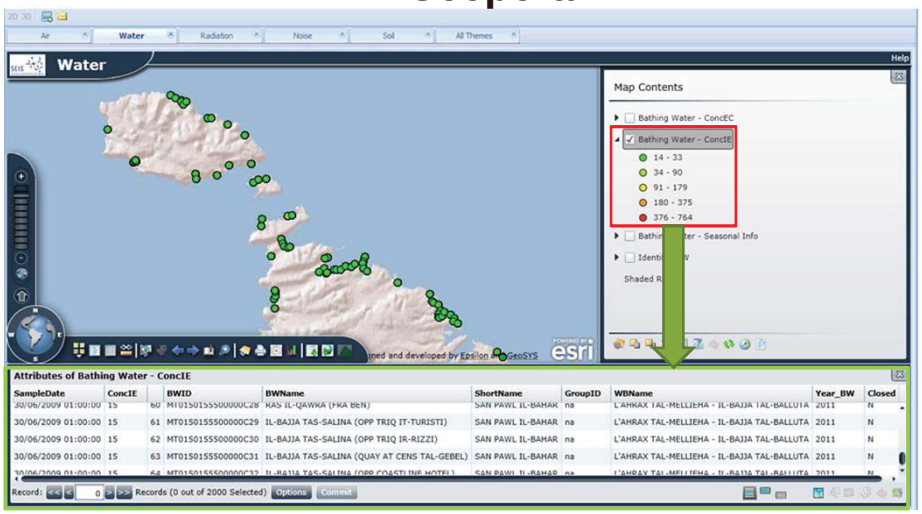
MEPA Geoportal

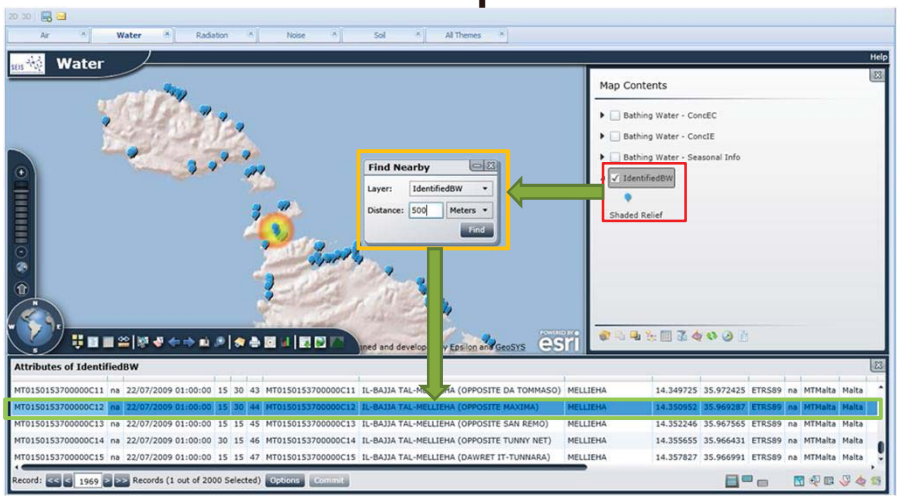
LAYER PROPERTIES - CLUSTERING

MEPA Geoportal



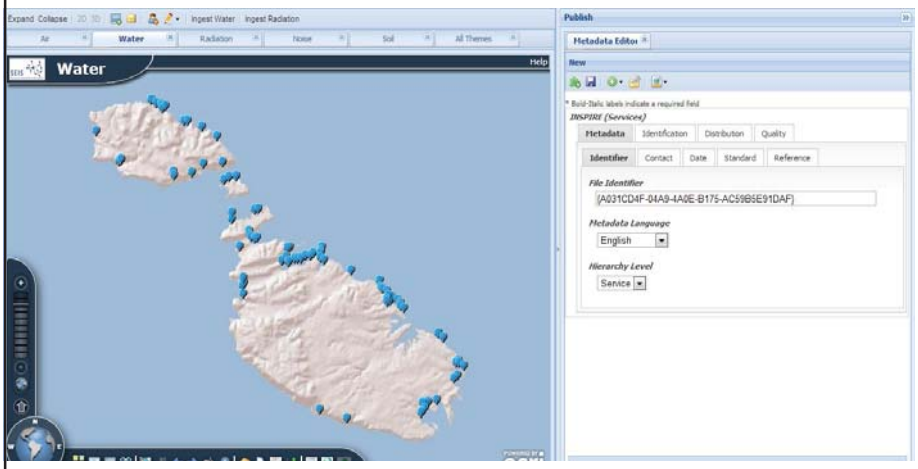
ATTRIBUTE TABLE – WITH TABULAR DATA EDITING

MEPA Geoportal



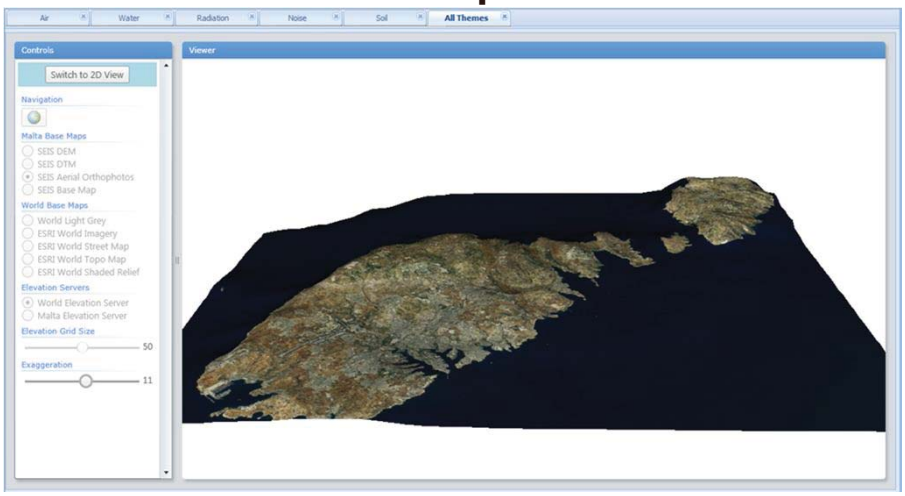
TOOLS TOOLBAR – FIND NEARBY

MEPA Geoportal



METADATA EDITOR

MEPA Geoportal



3D TOPOGRAPHIC VIEWER

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EUROPEAN REGIONAL DEVELOPMENT FUND MALTA 2007-2013 SEIS

SEIS-Malta in the EU

- True support from MEPA staff
- Technologically state-of-the-art
- Ahead of most EU MS
- Only AT, DE, FR, CZ and some other more advanced
- Flexible “tailoring” to expansion
- Easy to use
- Support from ESRI per se
- INSPIRE based and other

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Thank You

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