



Implementing the INSPIRE Directive through the Creation of a GeoServer

*Plan4all Stakeholder Conference
12th September 2011
University of Malta, Malta*

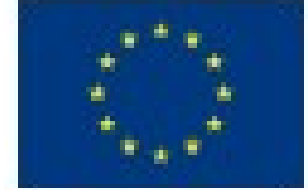
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University of Malta*



Co-funded by the
Community programme
eContentplus



Full title: *European Network of Best Practices for Interoperability of Spatial Planning Information*

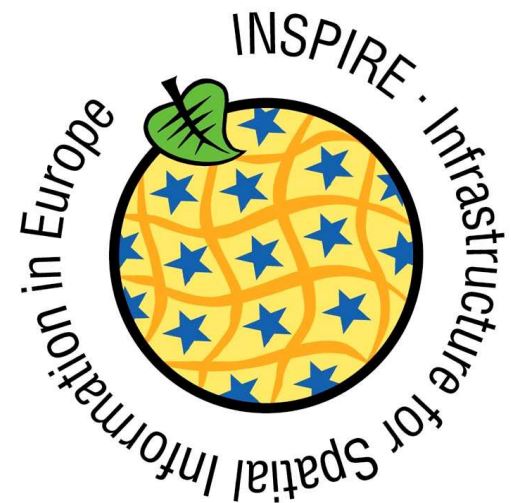


A **Community programme** to make digital content in Europe more **accessible**, usable and exploitable.

INSPIRE: The Information Highway Solution?

INSPIRE is a Framework Directive

- lays down general requirements
- detail provided through Implementing Rules



Conceptual process

Data – Information – Knowledge – Action

The Data Cycle is suffering from DRIPS

Data – Rich – Information - Poor Syndrome

Will INSPIRE alone help the lay the way?

Access is still restricted but has to change – various legislations have been enacted or are coming into force – Århus-DP-FoIA, INSPIRE

INSPIRE Directive

- Implementation rules – standardisation
- National Data Infrastructure
- Metadata
- Spatial Structures
- Data Services
- Discovery Services



Why INSPIRE for the Domains: Space, Environment & Social?

Environmental Needs

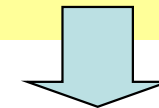
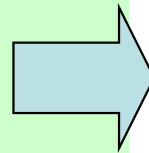
- Better information needed to support policies
- Improvement of existing information flows
- Revision of approach to reporting and monitoring, moving to concept of sharing of information

Situation

- Lack of co-ordination across borders and between levels of government
- Lack of standards incompatible information and information systems
- Existing data not re-usable fragmentation of information, redundancy, inability to integrate

Environmental data

90% is linked to geography



INSPIRE

The INSPIRE Infrastructure

"infrastructure for spatial information" means

- **metadata**, spatial data sets and spatial data services;
- **network services** and technologies;
- **agreements on sharing, access** and use;
- coordination and **monitoring mechanisms**, processes and procedures.

Two Categories of Data

The first category (annex I and II data):

- **geo-referencing data**
- have the status of "multi-purpose" spatial or basic data
- place high demands on harmonisation

The second category (annex III data):

- **environmental data**
- are needed in order to monitor and improve the state of the environment, including air, water, soil and ...
- limited demands on harmonisation

Annex I

Coordinate reference systems
Geographical grid systems
Geographical names
Administrative units
Transport networks
Hydrography
Protected sites

Annex II

Elevation
Addresses of properties
Cadastral parcels
Land cover
Orthoimagery

Annex III

Statistical units census
Buildings
Soil
Geology
Landuse
Human health and safety
Governmental services and environmental monitoring facilities
Classified sites (industry and agriculture)
Population distribution – demography
Area management and zones
Natural risk zones
Atmospheric conditions
Meteorological geographical features
Oceanographic geographical features
Sea regions
Bio-geographical regions



DATA-SHARING AND RE-USE

Discovery services	free of charge
View services	free of charge
Download services	charging is possible
Transformation services	free of charge
E-commerce services	to be available
Additional services	charging is possible

Community portal	The Commission
National portals	The countries (not mandatory)

based on a service oriented architecture	

Metadata: Progress – MEPA and other Agencies

- Malta is highly advanced in the implementation of the metadata process:
 - There are two processes being employed:
 - Using an excel-based input tool
 - Using an online editor created by JRC
 - <http://www.inspire-geoportal.eu/inspireEditor.htm>
 - Going one step further...
 - The metadata tool is also being used for non-spatial datasets (Tabular)

	A	B	C	H	I	J	K
1	INSPIRE METADATA ELEMENTS						
2							
3							
				MEPA Spatial Dataset			
4		Guideline IR	Component	AgriculturalLandTechRep	Agriculture Gozo	Agriculture Maltese Islands	Malta Agriculture Final
5	2.2.1	B1	Identification				
6	2.2.1.1	B1.1	Resource Title	Agricultural Fields Technical Report	Agricultural Fields in Gozo by type	Agricultural Fields in the Maltese Islands	Agricultural Fields in the Malta
7	2.2.1.2	B1.2	Abstract	Agricultural Fields extracted from Agricultural land within the Maltese Islands and used in Technical Report	Agricultural Fields in Gozo shown by type - manually digitised from hard copy	Agricultural Fields in the Maltese Islands by merging digital datasets of Gozo and Malta	Agricultural Fields in the Maltese Islands digitised from hard copy map
8	2.2.1.3	B1.3	Resource Type	Spatial dataset	Spatial dataset	Spatial dataset	Spatial dataset
9							
10							
11	2.2.1.4	B1.4	Resource locator	n/a	n/a	n/a	n/a
12	2.2.1.5	B1.5	Unique Resource Identifier	n/a	n/a	n/a	n/a
13	2.2.1.6	B1.6	Coupled Resource				
14	2.2.1.7	B1.7	Resource language	eng	eng	eng	eng
15							
16	2.2.2	B2	Classification of spatial data and services				
17	2.2.2.1	B2.1	Topic category	Farming	Farming	Farming	Farming
18	2.2.2.2	B2.2	Classification of spatial data services				
19							
20	2.2.3	B3	Keyword				
21	2.2.3.1	B3.1	Keyword value	Agriculture	Agriculture	Agriculture	Agriculture
22	2.2.3.2	B3.2	Originating controlled vocabulary	GEMET Thesaurus version 1.0	GEMET Thesaurus version 1.0	GEMET Thesaurus version 1.0	GEMET Thesaurus version 1.0
23							
24	2.2.4	B4	Geographic location				
25	2.2.4.1	B4.1	Geographic bounding box	TR 14.5778973 - 36.0898801 LL 14.1812058 - 35.7812906	TR 14.5778973 - 36.0898802 LL 14.1812058 - 35.7812907	TR 14.5778973 - 36.0898803 LL 14.1812058 - 35.7812908	TR 14.5778973 - 36.0898804 LL 14.1812058 - 35.7812909
26							
27							
28	2.2.5	B5	Temporal reference				
29	2.2.5.1	B5.1	Temporal extent	1997	2001-09	1997	1997
30	2.2.5.2	B5.2	Date of publication	2003-02-05	2003-02-05	2003-02-05	2003-02-05
31	2.2.5.3	B5.3	Date of last revision	2007-04-05	2005-02-14	2004-12-17	2003-02-05
32	2.2.5.4	B5.4	Date of creation	2002-12-16	2003-02-05	2002-12-16	2003-02-05



Identification

Resource title: Agricultural fields technical report

Resource abstract: Agricultural fields extracted from agricultural land within the Maltese islands and used in the technical report 2001

Resource Type: dataset

Resource Locator: http://www.mepa.org.mt/IR/dataset.html

Unique resource identifier: Code, Namespace, n/a n/a

Resource language: English

Implementation Phase: where are we now?

- • Preparatory phase (2004-2006)
 - Co-decision procedure
 - Start of preparation of Implementing Rules
- • Transposition phase (2007-2009)
 - Directive entered into force **15 May 2007**
 - INSPIRE committee starts its activities **26 June 2007**
 - Continuation of preparation of Implementing Rules
 - 2nd meeting of the INSPIRE committee on **14 May 2008**
 - Transposition into national legislation **by 15 May 2009**
 - Adoption of Implementing Rules by Comitology
- • Implementation phase (2009-2013)
 - Implementation and monitoring of measures
 - Continuation of preparation of Implementing Rules
 - Adoption of Implementing Rules by Comitology



Excerpt from Roadmap (adoption)

Milestone date	Article	Description
2007-05-15		Entry into force of INSPIRE Directive
2008-05-15	5§4	Adoption of IR for the creation and updating of metadata
2008-11-15*	21(4)	Adoption of IR for monitoring and reporting
2008-11-15*	16	Adoption of IR for discovery and view services
2009-05-15*	16	Adoption of IR for download services
2009-05-15*	16(a)	Adoption of IR for coordinates transformation service
2009-05-15*	17(8)	Adoption of IR governing the access rights of use to spatial data sets and services for Community institutions and bodies
2009-05-15	9(a)	Adoption of IRs for the interoperability and harmonisation of spatial data sets and services for Annex I spatial data themes
2009-05-15	24§1	Provisions of Directive are brought into force in MS
2010-11-15*	16	Adoption of IR for schema transformation and “invoke spatial data services” services
2012-05-15	9(b)	Adoption of the IR s for the interoperability and harmonization of spatial data sets and services for Annex II and III

* = date proposed by Commission

Excerpt from Roadmap (Implementation)

Milestone date	Article	Description
2010-05-15	21§1	Implementation of provisions for monitoring
2010-05-15	6(a)	Metadata available for spatial data in Annex I and II
2010-11-15*	15	The EC establishes and runs a geo-portal at Community level
2010-11-15*	16	Discovery and view services operational
2011-05-15*	16	Download services operational
2011-05-15*	16(a)	Coordinates transformation services operational
2011-05-15	7§3, 9(a)	Newly collected/ restructured Annex I spatial data sets available
2012-11-15*	16	Schema transformation and “invoke spatial data services” services operational
2013-05-15	6(b)	Metadata available for spatial data corresponding to Annex III
2014-05-15	7§3, 9(b)	Newly collected/restructured Annex II/III spatial data sets available
2016-05-15	7§3, 9(a)	Other Annex I spatial data sets available
2019-05-15	7§3, 9(b)	Other Annex II and III spatial data sets available

* = date proposed by Commission

Metadata Implementing Rules

- Result of extensive collaborative work between Drafting Team, Commission, and stakeholders through 2005-07
- Proposal for a Regulation unanimously approved by INSPIRE Regulatory Committee on 14/5/2008
- European Parliament completed its scrutiny on 18/6/2008
- Adoption Summer 2008

IRs on Network services

- An INSPIRE Architecture is proposed to integrate INSPIRE services, e-commerce and DRM components,
- INSPIRE services shall be Web Services (W3C) using the SOAP protocol to exchange messages, and WSDL language to describe the services

INSPIRE Services	Based on:	IR Status
Discovery services	OGC Catalogue service, with the ISO Application Profile : OGC CS-W 2.0 ISO AP	Draft IR has been reviewed by SDIC / LMO
View services	Web Map Service : ISO 19128 WMS 1.3	=> Final draft: July 2008
Download services	- OGC Web Feature Service (ISO 19142), - OGC Web Coverage Service, - HTTP File download	Draft IR to be reviewed by SDIC / LMO => Final draft: TBD
Transformation services	Functions of a Web Processing Service (OGC WPS): - Coordinate transformation services - Schema transformation services	Draft IR for a SDIC / LMO review 2008 => Final draft: TBD First draft in 2008
Invoke services	- Chaining services : BPEL (Business Process Execution Language form OASIS)	First draft in 2008

Data and service sharing

Directive:

- Discovery, View (excluding large dynamic data) free of charge [Article 14]
- Data exchange for reporting obligations at most cost recovery + 'reasonable' ROI [Recital 23]
- Other charges between public authorities kept to a minimum (to ensure quality and supply) + 'reasonable' ROI [Article 17(3)]

“compatible with the general aim of facilitating the sharing of spatial data sets and services between public authorities”

What does it all mean?

- INSPIRE is a Directive which mandates Member States to provide their public authority datasets and services so that they can be used more easily by other public organisations in the country concerned, in adjacent countries if required, and by the EC itself for policy making, reporting and monitoring.
- It is a set of principles and rules that each country must now choose how to implement - it will not necessarily need legislation.
- Datasets will, by set dates, be capable of being discovered, viewed, and downloaded (where allowed) through common interfaces. Exactly how these services should be provided (other than the EC's own geo-portal) is left to individual countries.
- There is no requirement for new data collection, though it will be necessary for future data collection to comply with standard specifications now being drafted.
- It is required that metadata and, for the most part viewing services, will be available free of charge, but there is specific allowance for intra-governmental agreements for the use of data – even if they involve a charging regime.
- There is a general aspiration to 'remove obstacles'
- it will be achieved by public authorities following Implementing Rules (IRs) that will specify standard metadata, data specifications, data sharing, and interoperable services. Member States will monitor and report on progress

The INSPIRE transposition - Malta

- Member State Report 2010 – Source: Matthew Gatt - MITA
- The Directive has been transposed into Maltese Legislation under the provisions of the Development Planning Act and brought into force by Legal Notice on the 22nd December 2009.
- The Malta Information Technology Agency (MITA) has been designated as the competent Authority in terms of the implementation of the Directive and the National Spatial Data Infrastructure in Malta.
- The administrative implementation of the Directive will be largely driven by the existing ICT governance structures of MITA.
- The technical implementation of the Directive is based on accelerating the preparatory work carried out by the Malta Environment and Planning Authority through the commissioning of an INSPIRE compliant geoportal with associated services.

INSPIRE Spatial Data Themes



Annex I

- Coordinate reference system
- Geographical grid systems
- Geographical names
- Administrative units
- Addresses
- Cadastral parcels
- Transport networks
- Hydrography
- Protected sites

Annex II

- Elevation
- Land cover
- Orthoimagery
- Geology

Plan4all

Annex III

- Statistical units
- Buildings
- Soil
- Land use
- Human health and safety
- Utility and Government services
- Environmental monitoring facilities
- Production and industrial facilities
- Agricultural and aquaculture facilities
- Population distribution – demography
- Area management/restriction/regulation zones and reporting units
- Natural risk zones
- Atmospheric conditions
- Meteorological geographical features
- Oceanographic geographical features
- Sea regions
- Bio-geographical regions
- Habitats and biotopes
- Species distribution
- Energy resources
- Mineral resources



Work done by FTZ

- **Metadata - Plan4All, INSPIRE phases**
- **Data Specification - Plan4All, INSPIRE phases**
- **Network Services – Used Plan4All**
- **Monitoring and Reporting - Ongoing**
- **Data and Service Sharing - Geoserver**

Design spatial planning metadata profile

Deliverable number	<i>D 7.1</i>
Dissemination level	<i>Public</i>
Delivery date	<i>30 April 2011</i>

Tools available:

INSPIRE Metadata Editor availability of an xml tool that read the outputs was created through a project entitled "Institution Building in the Environment Sector", (Transition Facility Programme for Malta - 2006).

The metadata search facility was made available through <http://www.ambjent.org.mt/>.

INSPIRE Metadata Editor

<http://www.inspire-geoportal.eu/index.cfm/pageid/342>

Metadata profile



Design spatial planning metadata profile

Deliverable number	<i>D 7.1</i>
Dissemination level	<i>Public</i>
Delivery date	<i>30 April 2011</i>

Tools available:

Plan4All Metadata Documentation

Plan4All Portal – for both creation and storage

<http://www.plan4all.eu/catalogue/>

Created both an xml and an xls version

Plan4All metadataprofiles guidance document

(D3.2.2_Plan4all_Metadata_Profile_-_Final_version_revised.doc)

Metadata profile



Component	Description	Input cells
Resource title	Name by which the	CLC2006_MALTA
Resource abstract	Brief narrative	The land cover project 2006 is part of the CORINE programme and is
Resource type	"dataset" or	Dataset
Resource locator	Mandatory if a	http://www.mepa.org.mt/IR/dataset.html
Unique Resource Identifier	Value uniquely	n/a
Resource language	Mandatory if the	eng
Topic category	Main theme(s) of	planningCadastre

Home Metadata Map Simplecms Gehosting Logged as: ftz_malta Logout

All **Data** Services Applications Documents

malta Advanced search

co-funded by the community programme eContentplus

Search Manager Create Import Extract

Plan4all (31) LV ZPR (0) CZ Cenia (0) IT Treviso (0) FR Geocatalogue (0)

Revised_CLC2000_Malta_StrippedUTM
The land cover project 2000 is part of the CORINE programme and is intended to provide consistent localized geographical information on the land cover of the 12 Member States of the European Community. The land cover for the whole of the islands was inclu ...

CLC2006_MALTA
The land cover project 2006 is part of the CORINE programme and is intended to provide consistent localized geographical information on the land cover of the 12 Member States of the European Community. The land cover for the whole of the islands was inclu ...

CLC2006_MALTA
The land cover project 2006 is part of the CORINE programme and is intended to provide consistent localized geographical information on the land cover of the 12 Member States of the European Community. The land cover for the whole of the islands was inclu ...

Urban Boundaries
Urban Boundaries ...

nace_nuts1_WGS84_region
Main occupation of population aged 15 years and over by district data gathered as per Census of Population and Housing of Malta 2005. Attributes include main occupation of population aged 15 years and over by district ...

T15_popdens_WGS84_region
Population Density data gathered as per Census of Population and Housing of Malta 2005. Attributes include population, population density and population density change for Census 1995 and 2005. Data at NUTS5 level ...

T28_privatehh_WGS84_region

1 - 25 / 31

Source	Represents the	Census Data used for Spatial Planning, Sources include Census2005, S

Open

CLC2006_MALTA

Identifier	2bb27f00-51ba-11e0-b9eb-02f2dee9a393
Identifier	http://www.plan4all.eu/extractor/fileReader.php?file=metadata-clc2006-p4a.xls
Title	CLC2006_MALTA
Abstract	The land cover project 2006 is part of the CORINE programme and is intended to provide consistent localized geographical information on the land cover of the 12 Member States of the European Community. The land cover for the whole of the islands was included with the data layer covering all the European member states.
Subject	Land Cover
Format	application/vnd.ms-excel
Date	2011-03-19
Creator	FTZ
Publisher	FTZ

Component	Description	Input cells
Resource title	Name by which the cited resource is known.	CLC2006_MALTA
Resource abstract	Brief narrative summary of the content of the resource(s).	The land cover project 2006 is part of the CORINE programme and is intended to provide consistent localized geographical information on the land cover of the 12 Member States of the European Community. The land cover for the whole of the islands was included with the data layer covering all the European member states.
Resource type	“dataset” or “series” should be used	Dataset
Resource locator	Mandatory if a URL is available to obtain more information on the resource, and/or access related services.	http://www.mepa.org.mt/IR/dataset.html
Unique Resource Identifier	Value uniquely identifying an object within a namespace.	n/a
Resource language	Mandatory if the resource includes textual information.	eng
Topic category	Main theme(s) of the dataset.	planningCadastre
Keyword	Commonly used word(s) or formalised word(s) or phrase(s) used to describe the subject.	land cover, CLC,
Geographic bounding box	Geographic position of the dataset expressed by the smallest bounding rectangle.	14.410231 - 35.8399576, 14.5751157 - 36.0841138

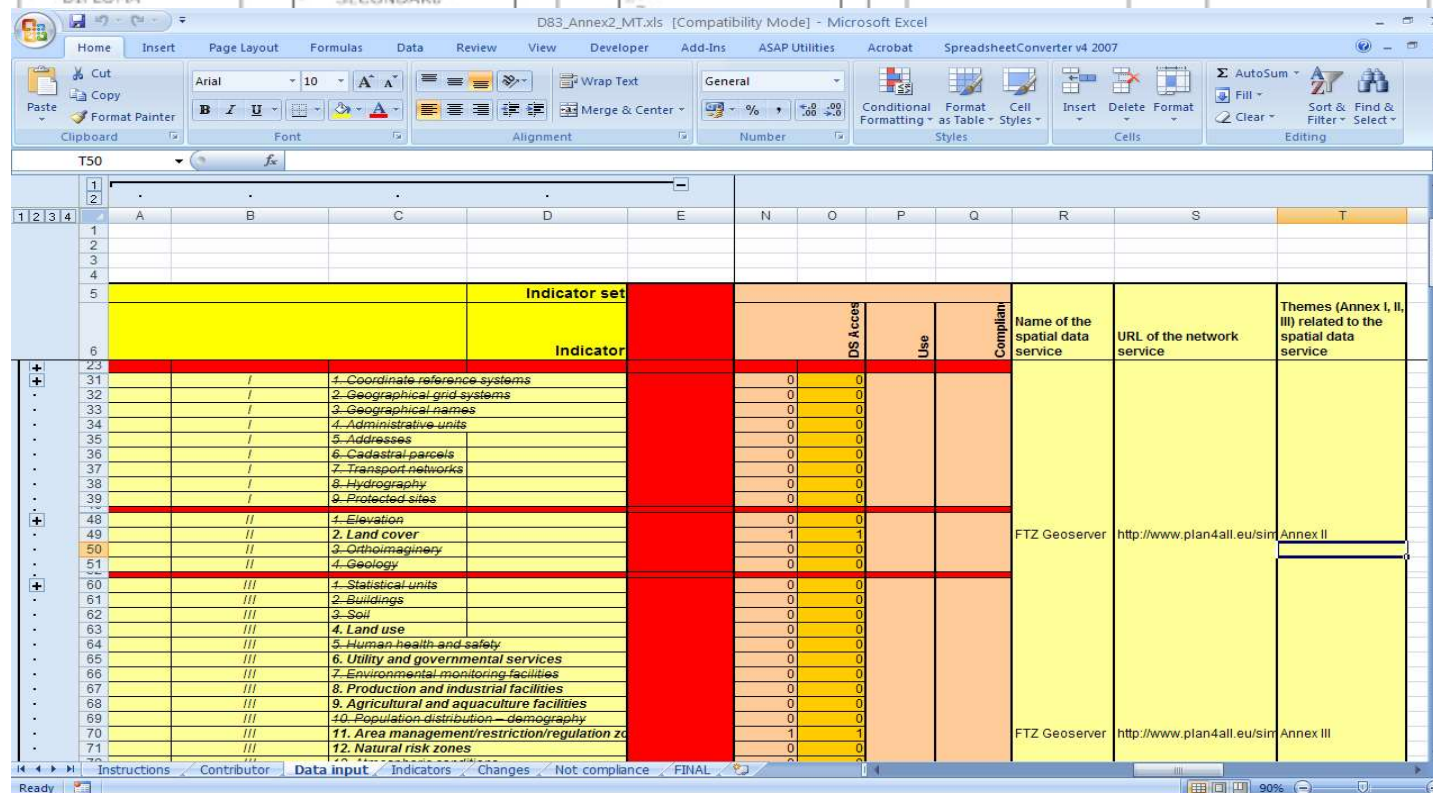
Data Models

Design data models were created by the Consortium

- Feature Catalogues
- UML Models
- Plan4all Glossary



- Verification & Testing Processes were carried out:
 - Data input
 - Indicators
 - changes



Indicator set	Indicator	DS Access	Use	Compliance	Name of the spatial data service	URL of the network service	Themes (Annex I, II, III) related to the spatial data service
	1. Coordinate reference systems	0	0		FTZ Geoserver	http://www.plan4all.eu/sin	Annex II
	2. Geographical grid systems	0	0				
	3. Geographical names	0	0				
	4. Administrative units	0	0				
	5. Addresses	0	0				
	6. Cadastral parcels	0	0				
	7. Transport networks	0	0				
	8. Hydrography	0	0				
	9. Protected sites	0	0				
	1. Elevation	0	0				
	2. Land cover	1	1				
	3. Orthomagnery	0	0				
	4. Geology	0	0				
	1. Statistical units	0	0				
	2. Buildings	0	0				
	3. Soil	0	0				
	4. Land use	0	0				
	5. Human health and safety	0	0				
	6. Utility and governmental services	0	0				
	7. Environmental monitoring facilities	0	0				
	8. Production and industrial facilities	0	0				
	9. Agricultural and aquaculture facilities	0	0				
	10. Population distribution - demography	0	0				
	11. Area management/restriction/regulation zones	1	1				
	12. Natural risk zones	0	0				

Geoportal - Deployment



Deploy data and metadata on local and regional level

Publication

Plan4all Geoportal and Regional Geoportal

<http://www.plan4all.eu/>

<http://ftzgeo.org:8080/geoserver/web/>

Deliverable number	<i>D 7.2</i>
Dissemination level	<i>Public</i>
Delivery date	<i>30th April 2011</i>

Deploy data and metadata on local and regional level

General description of source data

Land Cover Mapping in Malta : 1990 – 2000 – 2006

The layer used for Plan4All is based on the CLC2006 map
includes 19 categories landcover types

The mapping exercise was based on the analysis of different data sources,
mainly remotely-sensed data employing Landsat TM7
data pertaining to the National Mapping Agency at MEPA including base maps,
orthoimagery, thematic data and insitu surveys.

Document creation and metadata; available from the EEA CDR website .

Deployment



Deploy data and metadata on local and regional level

Scheme

The scheme used for Land Cover was that identified by the Plan4All guidelines and the Application Schema was the “Land Cover” Schema.

As most of the attributes were not included in the original CLC2006 map, new datasets had to be integrated in order to follow this schema.

Object type

Object type was in Mapinfo (.tab) polygon format which had been verified by the EEA LandCover Topic Centre validation team on 22/6/2007.

Deployment



Deploy data and metadata on local and regional level

Code list *as per Plan4All schema*

Note that the attribute names are truncated due to the transformation from MapInfo (.tab) to ESRI (.shp) format.

Attributes	Schema Codelist
INSPIREID	<i>InspireID</i>
GEOMETRY	<i>Geometry</i>
SOURCE	<i>Source</i>
CLASSIFICA	<i>Classification</i>
BEGINLIFES	<i>beginLifespanVersion</i>
ENDLIFESPA	<i>endLifespanVersion</i>
CLASSIFIO	<i>classificationLink</i>

Deployment

Deploy data and metadata on local and regional level

Code list as per new INSPIRE Data Specifications
V2. June 2011

Attributes	Schema Codelist
INSPIREID	<i>InspireID</i>
GEOMETRY	<i>Geometry</i>
SOURCE	<i>Source</i>
CLASSIFICA	<i>Classification</i>
BEGINLIFES	<i>beginLifespanVersion</i>
ENDLIFESPA	<i>endLifespanVersion</i>
CLASSIFIO	<i>classificationLink</i>

Attribute
beginLifespanVersion
coverageName
endLifespanVersion
inspireID
classificationMosaic
classificationValue
parameterDescription
embeddedDescription
onlineDescription
source
count_
observationDate
value
valueId
coveredPercentage
present

Deployment



Deploy data and metadata on local and regional level

Transformation method

Note that the attribute names are truncated due to the transformation from MapInfo (.tab) to ESRI (.shp) format.

All data was already in a spatial format and additional features not in the original dataset were added through SQL querying in order to conform to the data requirements for the Plan4All transformation output.

The main problem envisaged in the transformation was that most attributes had to be given a “string” type. In addition, during conversion to shp format, the attribute headings were truncated due to ANSI conversion protocols.

Deploy data and metadata on local and regional level

Spatial transformation process

The spatial transformation was more complex due to the fact that Malta holds all its data in a truncated ED50 format which required the following steps in order to be converted to the final required projection:

- Restoration of the truncated 4 in Northings and 39 in Eastings;
- Reprojecting to WGS84: EPSG: 36233;
- Conversion to shp format from .tab format;
- Colour schemes are lost in the transition and need to be recreated in the geoserver.

Deploy data and metadata on local and regional level

Transformation scheme

The transformation scheme used was based on the following process:

- Data is gathered from the agency serving as custodian for that layer;
- The metadata provided was analysed;
- The attributes were reviewed for their compatibility with the Plan4All requirements;
- New attributes were added and the cells were populated as per Plan4All codelists;
- The layer was then converted to conform to the spatial requirements for eventual uploading to a geoserver.

Deployment

Deploy data and metadata on local and regional level

Source Attribute		Attributes	Schema Codelist
Code2006	—	INSPIREID	<i>InspireID</i>
Description	—	GEOMETRY	<i>Geometry</i>
Area	—	SOURCE	<i>Source</i>
Perimeter	—	CLASSIFICA	<i>Classification</i>
Comment	—	BEGINLIFES	<i>beginLifespanVersion</i>
Error	—	ENDLIFESPA	<i>endLifespanVersion</i>
Done	—	CLASSIFI0	<i>classificationLink</i>

Deploy data and metadata on local and regional level

Web Map Client

The webmap client used was geo server (<http://ftzgeo.org:8080/geoserver/web>)

The following steps were employed:

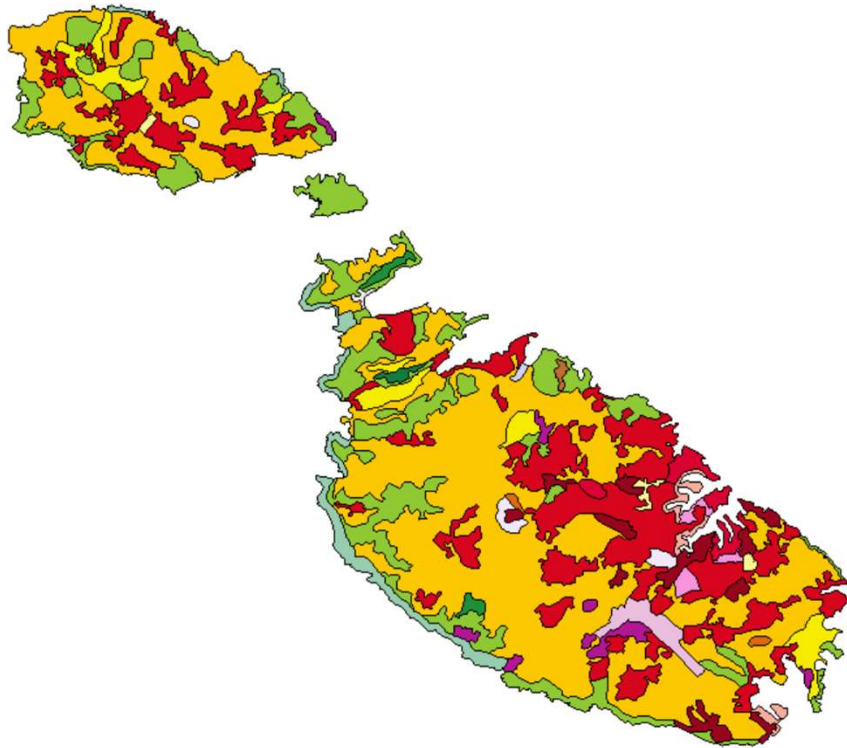
- Data was saved in the relevant folder through ftp transfer;
- Maps were structured through Stores, Layers and colour schemes;
- Since all maps lost their fill content (colour) during the transformation process, two colour schemes were created using sld for use through the map portal.

Web Services

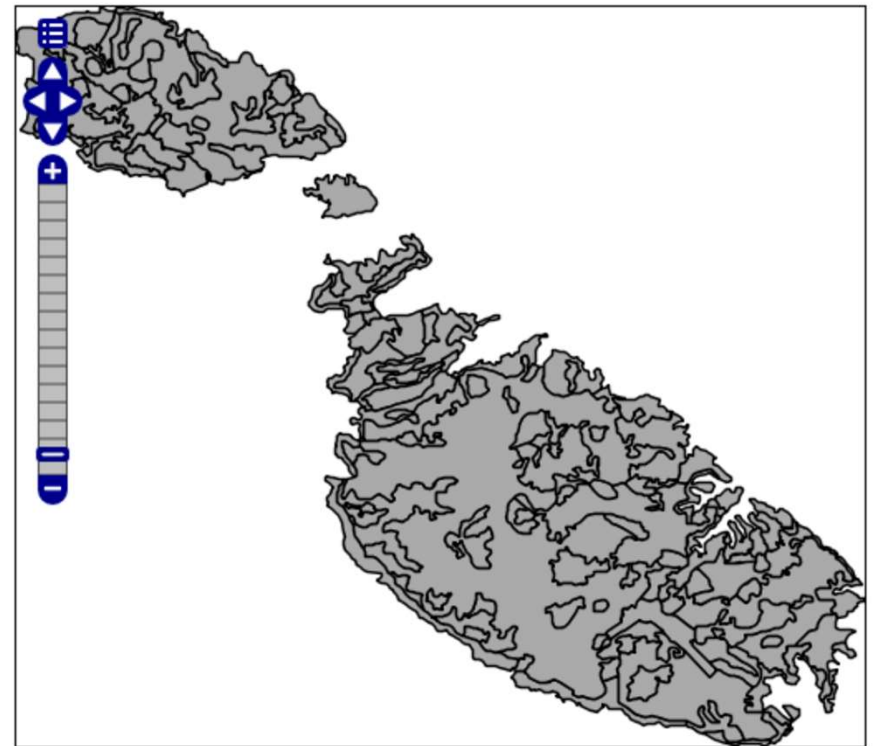
The services offered by the system are WMS, WFS, whilst metadata services are provided through a link to the Plan4All metadata service where these files were stored in both xml and xls formats.

Deployment

Deploy data and metadata on local and regional level



Original CLC Colour Scheme

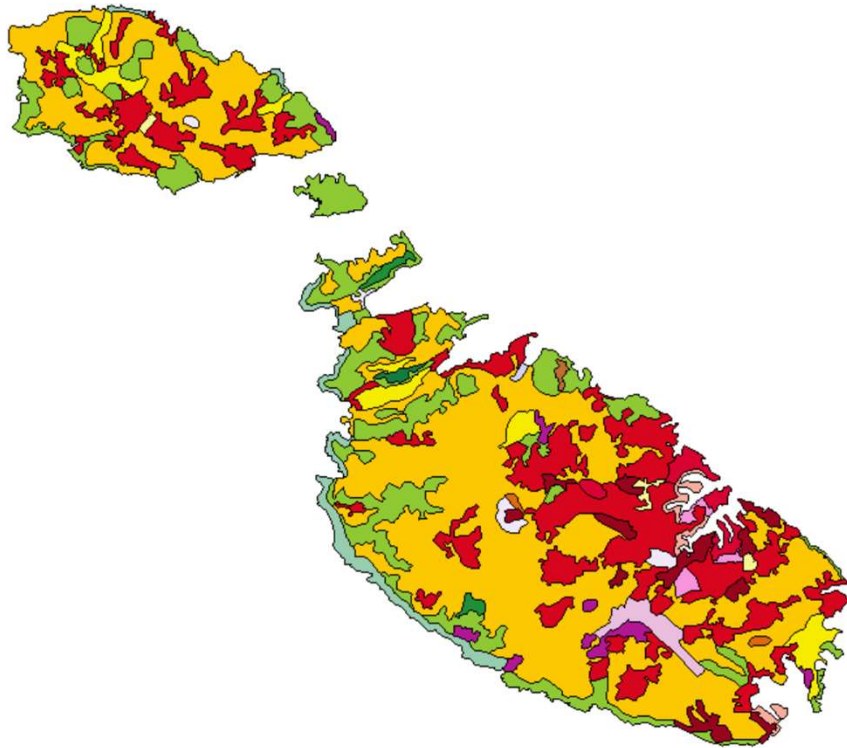


Scale = 1 : 246K
Click on the map to get feature info
431873.57386, 3984481.51518

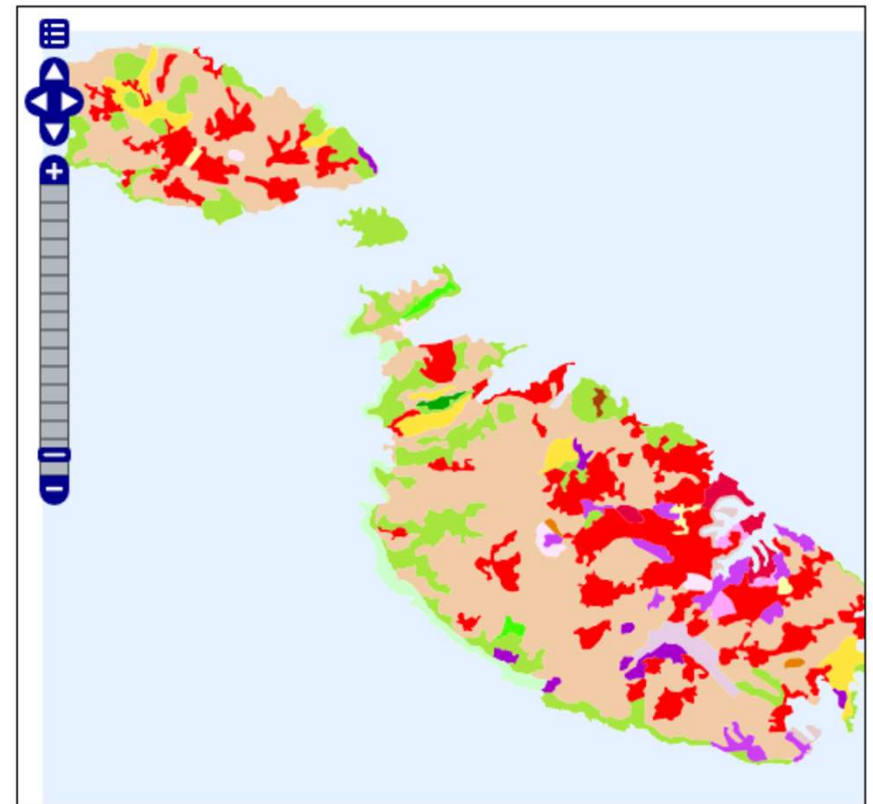
Initial GeoServer Output

Deployment

Deploy data and metadata on local and regional level



Original CLC Colour Scheme



Scale = 1 : 251K 457289.06250, 3988531.25000

CLC2006_MALTA_REGION

FID	INSPIREID	GEOMETRY
CLC2006_MALTA_WGS84_region.34	323.0	GM_MultiPolygon http://cdr.eionet.europa

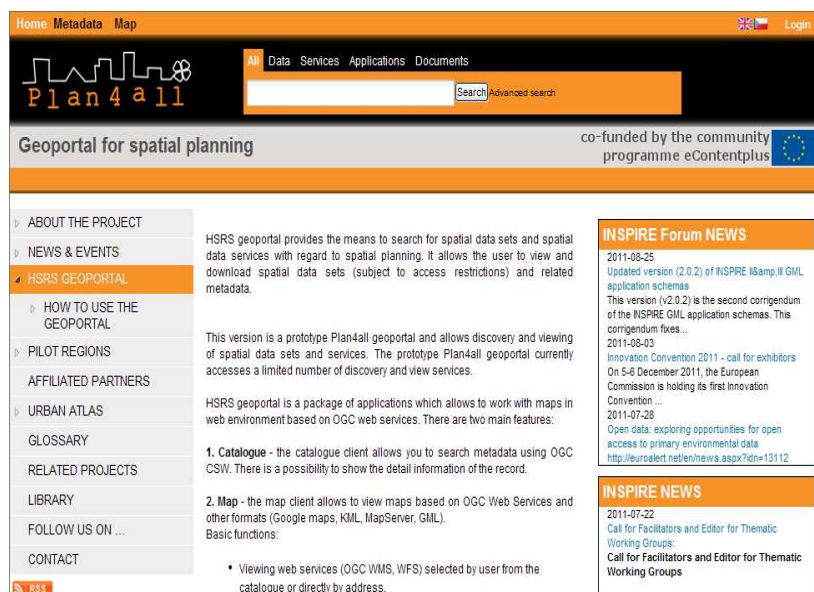
Final GeoServer Output

Publication

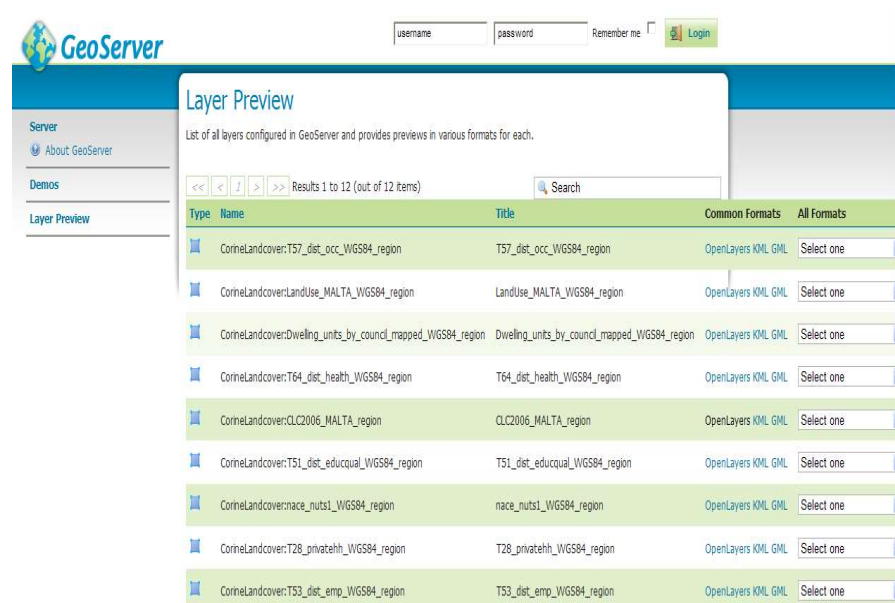
Plan4all Geoportal and Regional Geoportal

<http://www.plan4all.eu/>

<http://ftzgeo.org:8080/geoserver/web/>



The screenshot shows the Plan4all Geoportal website. The header includes navigation links for Home, Metadata, and Map, along with a search bar and a login button. The main content area is titled "Geoportal for spatial planning" and is co-funded by the community programme eContentplus. The left sidebar contains a menu with categories like "ABOUT THE PROJECT", "NEWS & EVENTS", "HSRS GEOPORTAL", "HOW TO USE THE GEOPORTAL", "PILOT REGIONS", "AFFILIATED PARTNERS", "URBAN ATLAS", "GLOSSARY", "RELATED PROJECTS", "LIBRARY", "FOLLOW US ON ...", and "CONTACT". The main content area features "INSPIRE Forum NEWS" and "INSPIRE NEWS" sections, providing updates on INSPIRE application schemas and thematic working groups.



The screenshot shows the GeoServer Layer Preview interface. It displays a list of layers configured in GeoServer, with columns for Type, Name, Title, Common Formats, and All Formats. The layers listed include:

Type	Name	Title	Common Formats	All Formats
CornelLandcover:T57_dist_occ_WGS84_region	T57_dist_occ_WGS84_region	T57_dist_occ_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:LandUse_MALTA_WGS84_region	LandUse_MALTA_WGS84_region	LandUse_MALTA_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:Dwelling_units_by_council_mapped_WGS84_region	Dwelling_units_by_council_mapped_WGS84_region	Dwelling_units_by_council_mapped_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:T64_dist_health_WGS84_region	T64_dist_health_WGS84_region	T64_dist_health_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:CLC2006_MALTA_region	CLC2006_MALTA_region	CLC2006_MALTA_region	OpenLayers KML GML	Select one
CornelLandcover:T51_dist_educqual_WGS84_region	T51_dist_educqual_WGS84_region	T51_dist_educqual_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:nace_nuts1_WGS84_region	nace_nuts1_WGS84_region	nace_nuts1_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:T28_privatethh_WGS84_region	T28_privatethh_WGS84_region	T28_privatethh_WGS84_region	OpenLayers KML GML	Select one
CornelLandcover:T53_dist_emp_WGS84_region	T53_dist_emp_WGS84_region	T53_dist_emp_WGS84_region	OpenLayers KML GML	Select one

Thank You



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<http://www.plan4all.eu>