

eENVUplus and INSPIRE

from the Data Harmonization standpoint

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What is the eENVplus ?

We aim to unlock huge amounts of environmental data, managed by Environment Agencies and other environmental stakeholders, through the integration and harmonisation of existing services.

Starting from the results of previous European experiences, eENVplus integrates existing infrastructures into an operational framework able to overcome cross-border and language barriers.

12

Countries involved

10

Pilot applications

18

Innovative services

The aim of this European Commission funded project is to **integrate a large amount of environmental data** provided by the National/Regional Environmental Agencies and other public and private environmental stakeholders involved. This is necessary to **answer to the requests for environmental monitoring and reporting** requested by the European, national and local policies.

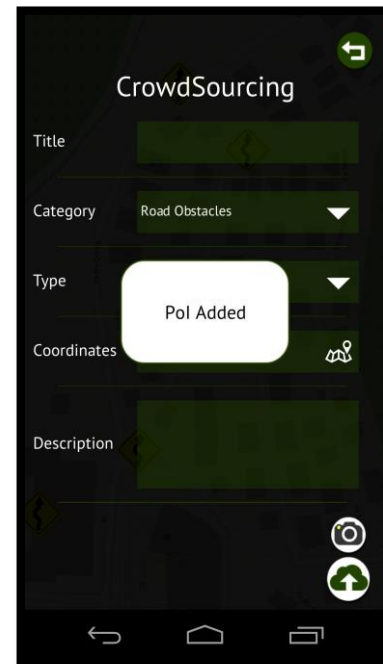
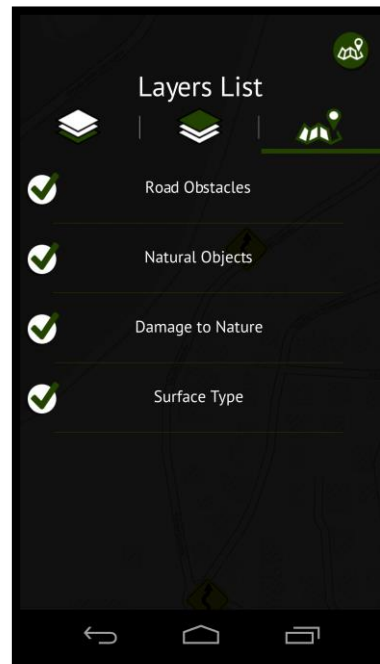
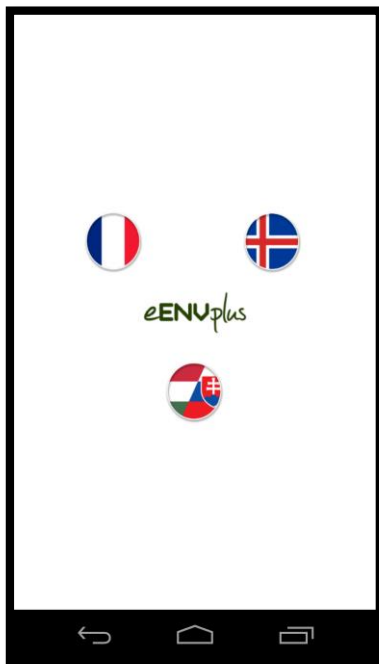
This will be achieved through the **harmonisation and integration, within an operational framework, of existing services** resulting from previous European initiatives (funded projects, good practices, EU/national/local experiences) and it will allow overcoming of cross-border/languages barriers.

Project status: month 22 of 36 (60%)

Our role in the eENVplus

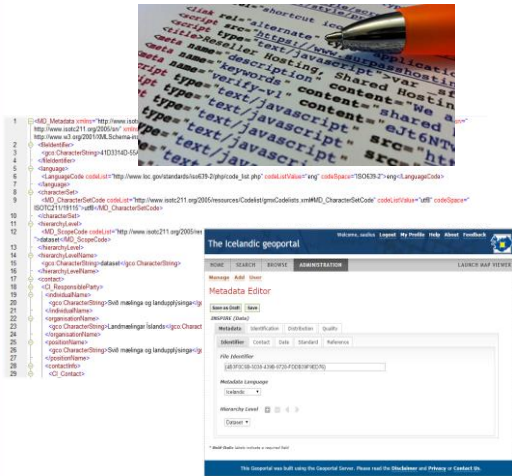
The National Land Survey has two Use Cases in the eENVplus:

- Discovery and Viewing – INSPIRE compliant services for nature conservation purpose;
- Mobile application (developed by Italian technical partner GRAPHITECH);



Our initial objective in the eENVplus is... INSPIRE.

Metadata



Data



Services (sharing)



LANDMÆLINGAR
ÍSLANDS



The focus of this presentation is ...

Data Transformation



The Data Transformation consists of...

Locating the data



Mapping it

Configurations			DCI Information	
Transmission Mode	NumOCWs	RNTI	DCI Format	Resource Allocation Type
TM1	1	C-RNTI	1A	Type 2
		C-RNTI	1	Type 0
		C-RNTI	1	Type 1
TM2	1	C-RNTI	1A	Type 2
		C-RNTI	1	Type 0
		C-RNTI	1	Type 1
TM3	1	C-RNTI	1A	Type 2
		C-RNTI	2A	Type 0
		C-RNTI	2A	Type 1
	2	C-RNTI	2A	Type 0
		C-RNTI	2A	Type 1
		C-RNTI	1A	Type 2
TM4	1	C-RNTI	2	Type 0
		C-RNTI	2	Type 1
	2	C-RNTI	2	Type 0
		C-RNTI	2	Type 1
TM5	1	C-RNTI	1A	Type 2
		C-RNTI	1B	Type 2
TM6	1	C-RNTI	1A	Type 2
		C-RNTI	1B	Type 2
TM7	1	C-RNTI	1A	Type 2
		C-RNTI	1	Type 0
		C-RNTI	1	Type 1

Transforming and validating
(harmonizing)



Example of mapping table (AU)

Application Schema 'AdministrativeUnits' (version 3.0rc3)										Source Location of information					
Attribute Association role Constraint	Attribute / Association role / Constraint documentation	Data Type / Values / Code List -Enumeration	Multiplicity	Voidable / Non-Voidable	Data Type Attribute	Data Type Attribute documentation	Data Type / Values / Code Lists / Enumerations	Multiplicity	Voidable / Non-Voidable	"File name" or URL	Name of attribute	Example of one data source value	Example of one data target value	Void Reason	
country	-- Name -- country	CountryCode	1							EuroBoundaryMap_v81_IS.gdb/AdministrativeUnits/AdministrativeUnit_2	ICC	IS	IS		
beginLifespanVersion	-- Name -- begin lifespan version	Date Time	1	voidable							beginLifes	13/03/04	Thu Mar 13 00:00:00 GMT 2014		
endLifespanVersion	-- Name -- end lifespan version	Date Time	0..1	voidable										unpopulated	
geometry	-- Name -- geometry Geometric representation of spatial area covered by this	GM_MultiSurface	1							EuroBoundaryMap_v81_IS.gdb/AdministrativeUnits/AdministrativeUnit_2	SHAPE	polygon			
inspireId	-- Name -- inspireId External object identifier of the spatial object	Identifier	1		localId	A local identifier	CharacterString	1		EuroBoundaryMap_v81_IS.gdb/AdministrativeU	SHN	IS3000	IS3000		
					namespace	Namespace uniquely	CharacterString	1						IS.AU.LMI	
					versionId	The identifier of the	CharacterString	0..1	voidable						
name	-- Name -- name	GeographicalName	1..*		See Geographical name data type					See Geographical name data type					
nationalCode	-- Name -- national code	CharacterString	1							EuroBoundaryMap_v81_IS.gdb/AdministrativeU	SHN	3000	3000		
nationalLevel	-- Name -- national level Level in the national	AdministrativeHierarchyLevel	1							EuroBoundaryMap_v81_IS.gdb/AdministrativeU	USE	2nd order	http://inspire.ec.europa.eu/codelist/AdministrativeHierarchyLevel/2ndOrder/		
nationalLevelName	-- Name -- national level name	LocalisedCharacterString	1..*	voidable							DESN		Sveitarfélag		
residenceOfAuthority	-- Name -- residence of authority	ResidenceOfAuthority	1..*	voidable	See ResidenceOfAuthority data type					EuroBoundaryMap_v81_IS.gdb/AdministrativeU					
condominium	-- Name -- condominium	Condominium	0..*	voidable	See condominium feature type									not applicable	
boundary	-- Name -- boundary	AdministrativeBoundary	1..*	voidable	See Administrativeboundary feature type									unpopulated	
lowerLevelUnit	-- Name -- lower level unit	AdministrativeUnit	0..*	voidable	See AdministrativeUnit feature type										
upperLevelUnit	-- Name -- upper level unit	AdministrativeUnit	0..1	voidable	See AdministrativeUnit feature type								http://inspire.ec.europa.eu/codelist/Administ		
administeredBy	-- Name -- administered by	AdministrativeUnit	0..*	voidable	See AdministrativeUnit feature type									not applicable	
coAdminister	-- Name -- co administer	AdministrativeUnit	0..*	voidable	See AdministrativeUnit feature type									not applicable	

Example of HALE mapping (PS)

Source data

Target

HALE Mapping

Schema Explorer

Source

type filter text

- Export_eENVplus ×120
 - dagsheimil (0..1) ×120
 - filename ×120
 - IUCNCAT (0..1) ×120
 - km2 (0..1) ×120
 - nafnFitju (0..1) ×120
 - natturuv_1 (0..1) ×120
 - nrGildandi (0..1) ×120
 - Shape_Area (0..1) ×120
 - Shape_Leng (0..1) ×120
 - SITE_ID (0..1) ×120
 - siteID (0..1) ×120
 - the_geom (0..1) ×120

Target

type filter text

- DesignationType
- ProtectedSite ×120
 - location (0..1)
 - boundedBy (0..1)
 - description (0..1)
 - descriptionReference (0..1)
 - geometry ×120
 - id
 - identifier (0..1)
 - inspireID ×120
 - legalFoundationDate ×120
 - legalFoundationDocument ×120
 - metaDataProperty (0..n)
 - name (0..n)
 - siteDesignation (1..n) ×120
 - DesignationType ×120
 - designation ×120
 - designationScheme ×120
 - codeSpace (0..1) ×120
 - percentageUnderDesignation (0..1)
 - nilReason (0..1) ×120
 - siteName (0..n) ×120
 - siteProtectionClassification (1..n) ×120
 - nilReason (0..1)

Alignment

Export_eENVplus ×120 Retype ProtectedSite ×120

Source Type	Operation	Target Type
Export_eENVplus	Retype	ProtectedSite
dagsheimil	Rename	legalFoundationDate
nafnFitju	Rename	siteName
nrGildandi	Rename	...undationDocument
siteID	Rename	...eID.Identifier.localId
the_geom	Rename	geometry
	Assign	...entifier.namespace
	Assign	...Identifier.versionId
	Assign	...tion.date.nilReason
	Assign	...ation.title.nilReason
	Assign	...onType.designation
	Assign	...Scheme.codeSpace
	Assign	...signation.nilReason
	Assign	...icalName.language
	Assign	...pellingOfName.text
	Assign	...ectionClassification

Why HALE?



An example of transformed data

```
<base:localId>4438</base:localId>
  <base:namespace>IS.PS.UST</base:namespace>
  <base:versionId>unpopulated</base:versionId>
</base:Identifier>
</ps:inspireID>
<ps:legalFoundationDate>1978-04-12T00:00:00+00:00</ps:legalFoundationDate>
<ps:legalFoundationDocument>
<gml:featureMember>
  <ps:ProtectedSite gml:id="_f0710fde-912d-414b-8f8b-63ffb19b784d">
    <ps:geometry>
      <gml:Polygon gml:id="_15be695f-9e21-4de3-83e0-f7d5f69d5090">
        <gml:exterior>
          <gml:LinearRing>
            <gml:posList>291246.40322579443 488170.43942492455 0.0 291250.03451421857 488160.31598868966 0.0
291254.65600983053 488152.2833000384 0.0 291257.6270120889 488145.57099338993 0.0 291262.6886984855
488136.98809798807 0.0 291264.77938262373 488129.0654253103 0.0 291268.3005916253 488122.02307074517 0.0
291272.48202335835 488113.44017534703 0.0 291275.67312099785 488106.28767791763 0.0 291280.514775455
488101.996293664 0.0 291291.3222267926 488102.2023039609 0.0 291298.04887232184 488105.3335716985 0.0
291301.8508948758 488114.36338319257 0.0 291308.50451365113 488120.06638529897 0.0 291313.7323025912
488122.9179815203 0.0 291322.28677402437 488124.34368446097 0.0 291335.59388468415 488122.44270490855 0.0
291344.14848300815 488119.1158955209 0.0 291351.2773149535 488112.46240364015 0.0 291358.0106223449
488105.3963201381 0.0 291364.0960790515
```

Thank you

Questions ?..