

Session 1 – Short Demo

Data Specifications
Andrej Abramić



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EMODnet-INSPIRE technical workshop
7-8 December 2015, Brussels

Research and Technology to enhance excellence in maritime development under an Ecosystem approach





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Short demo

The screenshot shows a web browser window displaying the EMODnet Seabed Habitats application. The browser's address bar shows the URL www.emodnet-seabedhabitats.eu/default.aspx. The page header includes the EMODnet logo (European Marine Observation and Data Network) and the MESH MESH ATLANTIC logo. Below the header, there are navigation links: [map help](#), [new map query](#), [metadata search](#), [metadata catalogue](#), and [download map data](#).

The main interface is divided into a left sidebar and a central map area. The sidebar contains the following sections:

- Welcome** | **Map Layers** | **Key**
- Refresh Map** | **Remove Filters**
- Add layer(s) from other mapping portals**
- EUSeaMap: 2012-13 official top copies**
 - Habitat maps (EUNIS-based)**
 - Baltic Sea by energy (2012)
 - Baltic Sea by salinity (2012)
 - Biscay, Iberia, Azores & Eire (2013, MESH Atlantic)
 - Celtic & Greater North Seas (2012)
 - Western Mediterranean (2012)
 - Habitat maps (simplified classification)**
 - Categorised input physical data**
 - Confidence in boundaries (quantative)**
 - Confidence in boundaries (qualitative)**
- EUSeaMap: 2014-15 draft interim products**
- EUSeaMap: input physical data**
- EUNIS habitat maps from surveys**
- Other habitat maps from surveys**
- Modelled maps of specific habitats**

The central map area displays a satellite-style map of the Western Mediterranean region. A semi-transparent overlay shows a habitat map with a color gradient from green to yellow to red, indicating different habitat types or confidence levels. The map includes a scale bar (500 km / 300 mi) and a toolbar on the right with the following options: **Pan**, **Zoom In**, **Zoom Out**, **Full Extent**, and **Download**.

At the bottom of the browser window, the status bar shows: **Scale = 1 : 28M** | **Right click on the map to query an object** | **30.83445, 59.47213** | **EPSG:4326**



- Download file and documentation- EUSeaMap Habitat Shapefile User Guide document - data model of the EUNIS Habitat maps
- done in the January of the 2015

EUSeaMap Habitat Shapefile User Guide: Habitat Map West Mediterranean Sea

1 Layer files

The layer file (20110209_EUSeaMap_WMediterranean_Habitats.lyr) associated with the shapefile (20110209_EUSeaMap_WMediterranean_Habitats.shp) uses the field "EUNISCombD" to plot the detailed habitat distribution in the Baltic Sea using the energy class as top level structure.

The layer file (20110209_EUSeaMap_WMediterranean_Habitats_grouped.lyr) associated with the shapefile (20110209_EUSeaMap_WMediterranean_Habitats.shp) uses the field "Grouped" to plot the simplified habitat distribution in the Baltic Sea.

2 Attribute table field description

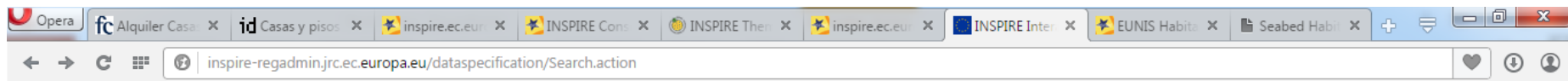
Table 1: Description of fields in the attribute table. The values in the last column are examples from the West Mediterranean Sea shapefile.

3	Shapefile heading	4 Description	5 Values/Reference	6 Example row from shapefile
	EUMRegion	EUSeaMap region	M for Mediterranean (see)	M
	AICode	Numerical code assigned by the model, by combining the following codes: BioCode, EnergyCode, BioCode, subcode and SalCode. This code could then be matched to a habitat type that is applicable to all EUSeaMap regions. (not used in this version.) #EnergyCode for the West Mediterranean is always 0.	For more details see Technical Appendix on Modeling.	40216
	ModelCode	Numerical code assigned by the model, by combining the following codes: BioCode, subcode and SalCode. This is then matched to a habitat type.	For more details see Technical Appendix on Modeling. See Table 2 for corresponding EUNIS Habitat codes and names.	210
	CodeX	In this shapefile it is the same as ModelCode	For more details see Technical Appendix on Modeling.	210
	biogreg	Biogeographic Region	Mediterranean	Mediterranean
	BioCode	Biogeographic Region Code – used in construction of AICode (1 st digit)	4	4
	substrate	Substrate type as used in the EUNIS (EUNIScombD) and detailed (Alcombdes) habitat names.	See Table 3	Rock or other hard substrate
	subcode	Substrate type code – used in construction of ModelCode (3 rd digit)	See Table 3	1
	SubGroups	Broad substrate type	bedment, Rock and biogenic reef or Sealed. See Table 3	Rock or biogenic reef
	SubGrpPlu	Substrate type as used in construction of the simplified habitat names (Grouped)	See Table 3	Rock or biogenic reef
	biozone	Biological zones as used in the EUNIS (EUNIScombD) and detailed (Alcombdes) habitat names.	See Table	Upper Circalibral



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The search engine looks in the labels, definitions and descriptions of existing INSPIRE objects.

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Application schemas

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habitat

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(feature) Matching table

Application Schema 'Habitats and Biotopes' (version 4.0)						
Type	Documentation	Attribute Association role Constraint	Attribute Association role Constraint documentation	Vaues/ Enumerations	Multiplicity	Voidable/ Non-voidable
Habitat	-- Definition -- Geographical areas characterised by specific ecological conditions, processes, structure, and functions that physically support the organisms that	inspire Id	External object identifier of the spatial object.	Identifier	0..1	
		geometry	The extent of the habitat based on natural boundaries.	GM_Object	1	
		habitat	The identifier for a habitat class, defined and described in an international, national or local habitat classification scheme.	HabitatTypeCoverType	1..*	
		habitat Species	List of species which occur in or constitute a certain habitat at the time of mapping.	HabitatSpeciesType	0..*	voidable
		habitat Vegetation	List of vegetation types which constitute a certain habitat.	HabitatVegetationType	0..*	voidable

- Feature and attributes
- Annex – complex features
- Code lists



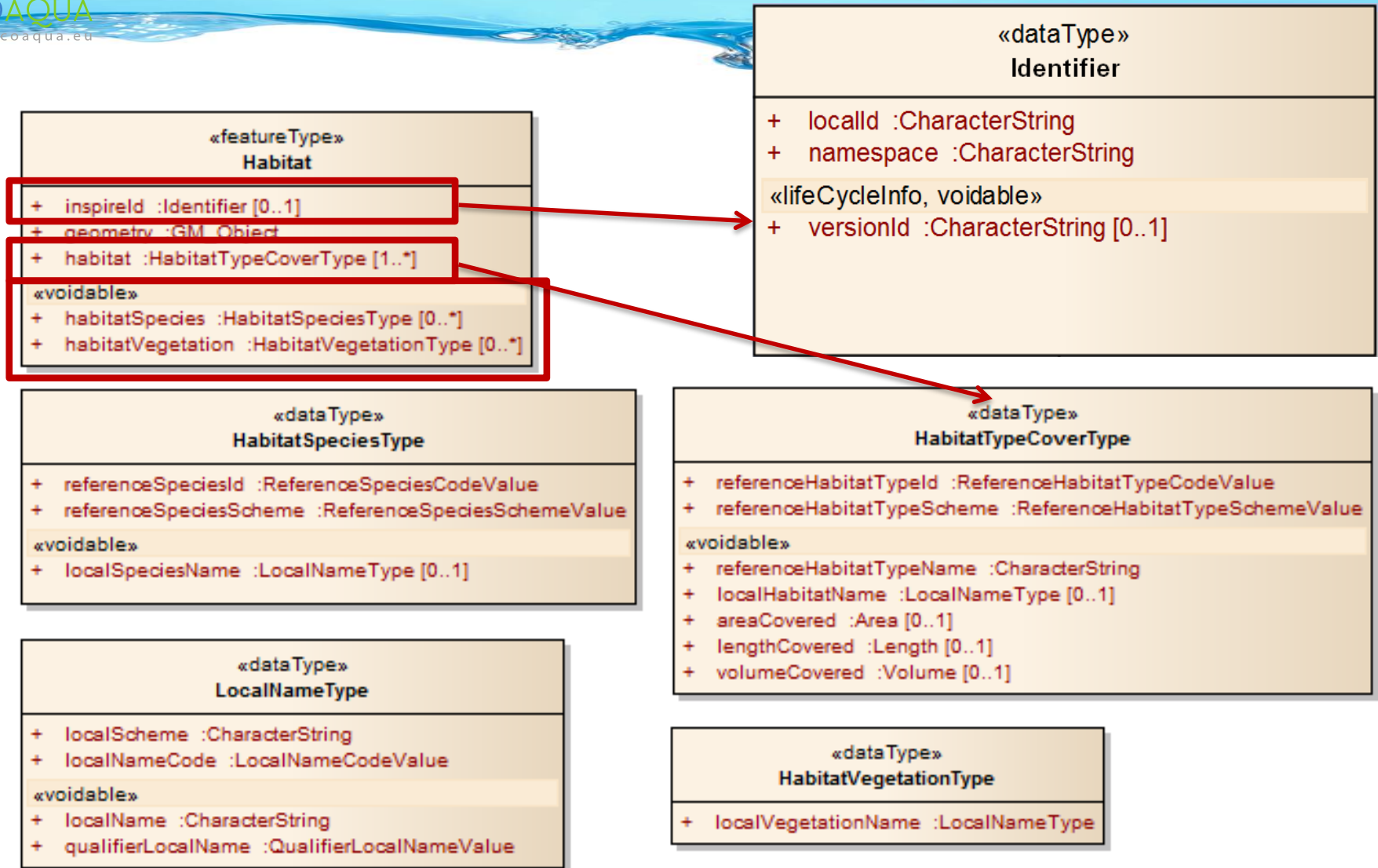
(application schema) Matching table

Application Schema 'HabitatsAndBiotoques' (version 3.0)								Application Schema <provide name of source schema>											
Type	Documentation	Attribute role	Association Constraint	Attribute / Association role / Constraint	Values / Enumerations	Multiplicity	Voidable / Non-Voidable	Type	Documentation	Attribute role	Association Constraint	Attribute / Association role / Constraint	Values / Enumerations	Multiplicity	Voidable / Non-Voidable	Status	Remarks		
HabitatTypeCoverType	-- Name -- habitat type cover type. Habitat type according to an international, national or local habitat classifications scheme. Includes additional information on covered area, covered length, or containing volume.	referenceHabitatTypeId	-- Name -- reference	ReferenceHabitatTypeCode	1			HabitatTypeCoverType	code list provided with source data not shown	Level4			code				If Level4 is not populated in the data set		
		referenceHabitatTypeScheme	-- Name -- reference	ReferenceHabitatTypeScheme	1			HabitatTypeCoverType	Enum	no association with source data set									
		referenceHabitatTypeName	-- Name -- reference	CharacterString	1		voidable		HabitatTypeCoverType	Level4_dis									
		localHabitatName	-- Name -- local habitat	LocalNameType	0..1		voidable		HabitatTypeCoverType	A simplified classification a Grouped									
		areaCovered	-- Name -- area covered	Area	0..1		voidable												
		lengthCovered	-- Name -- length	Length	0..1		voidable												
		volumeCovered	-- Name -- volume covered	Volume	0..1		voidable												
HabitatSpeciesType	-- Name -- habitat species type. Species which occurs in a certain habitat at the time of mapping.	referenceSpeciesId	-- Name -- reference	ReferenceSpeciesCodeV	1			habitatSpeciesType											
		referenceSpeciesScheme	-- Name -- reference	ReferenceSpeciesScheme	1			habitatSpeciesType											
		localSpeciesName	-- Name -- local species	LocalNameType	0..1		voidable	habitatSpeciesType											
Habitat	-- Name -- habitat. Geographical areas characterised by specific ecological conditions, processes, structure, and functions that physically support the organisms that live there. Includes terrestrial and aquatic areas distinguished by...	inspireId	-- Name -- inspire id	Identifier	0..1			20110209_EUSeaMap_W	Numerical code assigned	AllCode				1	non-voidable				
		geometry	-- Name -- geometry	GM_Object	1			20110209_EUSeaMap_W	the_geom										
		habitat	-- Name -- habitat type	HabitatTypeCoverType	1..*			HabitatTypeCoverType	complex feature										
		habitatSpecies	-- Name -- habitat species	HabitatSpeciesType	0..*		voidable	habitatSpeciesType	no values provided										
		habitatVegetation	-- Name -- habitat vegetation	HabitatVegetationType	0..*		voidable	HabitatVegetationType	no values provided										
HabitatVegetationType	-- Name -- habitat vegetation type. Vegetation type which...	localVegetationName	-- Name -- local	LocalNameType	1														
		localScheme	-- Name -- local	CharacterString	1														
LocalNameType	-- Name -- local name type. Name according to a local classification scheme.	localScheme	-- Name -- local	CharacterString	1														
		localNameCode	-- Name -- local name	LocalNameCodeValue	1														
		localName	-- Name -- local name	CharacterString	1		voidable												
		qualifierLocalName	-- Name -- qualifier local	QualifierLocalNameValue	1		voidable												

- Mapping with Habitat & biotopes application schema



UML model de Habitat





HALE Demo with habitat

HUMBOLDT Alignment Editor 2.9.3 - EMODnet_Habitat_substrate - C:\Users\Andrej\Dropbox\Marine pilot\EMODnet\HALE project\EUSeaMap_habitats.halez

File Transformation Edit Map Window Help

Schema Explorer

Source

- EUNIScomB (0..1) ×31
- EUNIScomBD (0..1) ×31
- EUSMRegion (0..1) ×31
- filename ×31
- Grouped (0..1) ×31
- Level2 (0..1) ×31
- Level2_des (0..1) ×31
- Level3 (0..1) ×31
- Level3_des (0..1) ×31
- Level4 (0..1) ×31
- (Level4) (0..1) value <> " ×7
- (Level4) (0..1) value = " ×7

Target

- Habitat
 - location (0..1)
 - boundedBy (0..1)
 - description (0..1) ×31
 - descriptionReference (0..1) ×31
 - geometry ×31
 - habitat (1..n) ×31
 - habitatSpecies (0..n) ×31
 - habitatVegetation (0..n) ×31
 - id
 - identifier (0..1)

Source Data

20110209_EUSeaMap_WMediterranean_Habitats

20110209_EUSeaMap_WMediterranea...	1	2
20110209_EUSeaMap_WMediterr...	+	+
AllCode	40116.0	40126.0
AllcomB	A3	A5.13
AllcomBdes	A3: Infralittoral rock and other hard subs	A5.13: Infralittoral coarse sediment
BioGcode	4.0	4.0
biogeog	Mediterranean	Mediterranean
BioZcode	1.0	1.0
BioZgroup	Shallow photic	Shallow
biozone	Infralittoral	Infralittoral
CodeX	110.0	120.0
combenergy	NA	NA
EnergyCode	0.0	0.0
EUNIScomB	A3	A5.13

Properties Alignment Map

Data, imagery and map information provided by MapQuest, OpenStreetMap and contributors, CC-BY-SA

Source data

Transformed Data

Habitat

Habitat	1	2
Habitat	+	+
location	no value	no value
boundedBy	no value	no value
description	Infralittoral rock and other hard substrat	Infralittoral coarse sediment
descriptionReference	+	+
geometry	+	+
habitat	+	+
habitatSpecies	+	+
habitatVegetation	+	+
id	EMODnet1WMS	EMODnet2WMS
identifier	no value	no value
inspireId	+	+
metaDataProperties	no value	no value

EPSG:4326 - 26.8945 / 39.1641

315M of 538M

CST



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Up-dated INSPIRE data set

- How to update INSPIRE data set with HALE
- Show on the habitats – how the alignment developed for the Mediterranean HABITAT (EUNIS maps) can be applied for the Baltic and east Atlantic habitat products



Thank you for your attention



....and patience