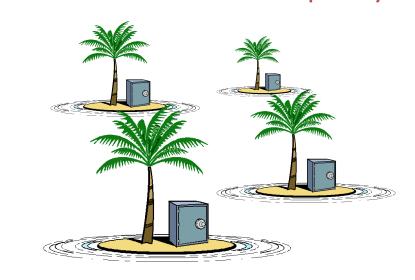
Following INSPIRE: spatial data harmonization from a European perspective

Nicola Ferrè - IZSVe

Why INSPIRE?

The general situation on spatial information in Europe is one of fragmentation of datasets and sources, gaps in availability, lack of harmonisation between datasets and duplication of information collection. These problems make it difficult to identify, access and use data that is available (INSPIRE undated)

EU has islands of data of different standards and quality...



Source: European Spatial Planning and Territorial Cooperation Duhr S., Colomb C., Nadin V. Taylor & Francis, 2010

Why INSPIRE?

Data policy restrictions

pricing, copyright, access rights, licensing policy

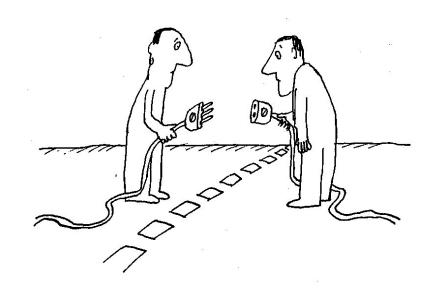
..in summary: no infrastructure!

Lack of co-ordination

across borders between levels of government

Lack of standards and their use

incompatible information incompatible information systems fragmentation of information redundancy



Lack of data

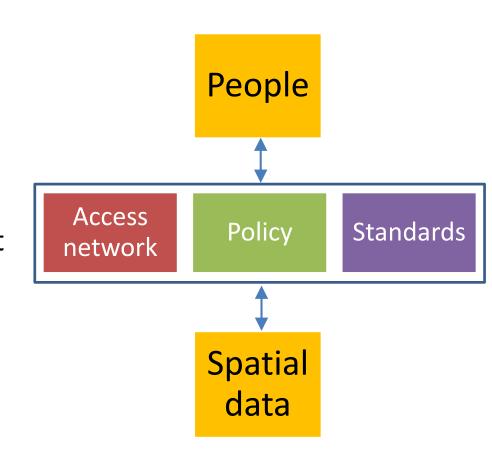
Source: Implementing strategy for the Infrastructure for Spatial Information in Europe - INSPIRE Smith P.

Proceedings ISO/TC211 – Standard in action, Berlin 29/10/2003

Spatial Data Infrastructure

Spatial Data Infrastructure (SDI)

a framework of policies, institutional arrangements, technologies, data and people that makes it possible to share and reuse effectively geographic information



Source: Assessing the Impacts of Spatial Data Infrastructures: Methods and Gaps Craglia M., Johnston A.

Proceedings 7th AGILE Conference on Geographic Information Science, Greece 2004

Directive 2007/2/EC - INSPIRE

- Data should be collected once and maintained at the level where this can be done most effectively.
- It must be possible to combine seamlessly spatial information from different sources across Europe and share it between many users and applications.
- It must be easy to discover which geographic information is available, fits the needs for a particular use and under what conditions it can be acquired and used.



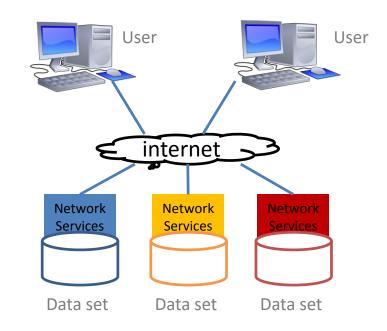
Source: Data Policy & Legal Issues - Position Paper Environment Agency for England and Wales INSPIRE DPLI PP v12-2 en.pdf

http://inspire.ec.europa.eu/



..how it works...

- Datasets used in Member States may stay as they are
- Data or service providers have to provide a transformation between their internal data model and the harmonised data specification
- Provide access to spatial data via network services and according to a harmonised data specification to achieve interoperability of data



Source: INSPIRE Network Services Architecture
Network Services Drafting Team
D3 5 INSPIRE NS Architecture v2.0.doc

..why INSPIRE and ungulates?

ANNEX: 1 Addresses Administrative units ANNEX: 3 Cadastral parcels Coordin Area management / restriction / regulation Agricultural and aquaculture facilities Geographical grid systems Geograp zones & reporting units Bio-geographical regions Atmospheric conditions **Hydrography** Protecte **Buildings Energy Resources** Transport networks Environmental monitoring Facilities Habitats and biotopes ANNEX: 2 Human health and safety Land use Geology Meteorological geographical features Mineral Resources Land cover Orthoim Natural risk zones Oceanographic geographical features Population distribution and demography Production and industrial facilities Sea regions Species distribution Statistical units

Utility and governmental services

..why INSPIRE and ungulates?





D2.8.III.19 Data Specification on Species Distribution -**Technical Guidelines**

D2.8.III.19 INSPIRE Data Specification on Species Distribution - Technical

INSPIRE Thematic Working Group Species Distribution Creator

2013-12-10

Subject INSPIRE Data Specification for the spatial data theme Species Distribution

Publisher European Commission Joint Research Centre

Type Text

This document describes the INSPIRE Data Specification for the spatial data theme Description

Contributor Members of the INSPIRE Thematic Working Group Species Distribution

Format Portable Document Format (pdf)

Source

Rights Public

Identifier D2.8.III.19_v3.0

Language

Relation Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007

establishing an Infrastructure for Spatial Information in the European Union

(INSPIRE)

Coverage Project duration Species Distribution is a biodiversity theme focused on geographical distribution of occurrence of biological organisms aggregated by grid region or any administrative or analytical unit.[..] To achieve harmonization EU Nomen is the preferred reference list for species taxon names to be used the second choice is **European Nature Information** System and finally Natura 2000

..why INSPIRE and ungulates?





D2.8.III.19 Data Specification on Species Distribution -**Technical Guidelines**

Title D2.8.III.19 INSPIRE Data Specification on Species Distribution - Technical INSPIRE Thematic Working Group Species Distribution Creator Date 2013-12-10 Subject INSPIRE Data Specification for the spatial data theme Species Distribution Publisher European Commission Joint Research Centre Text Type Description This document describes the INSPIRE Data Specification for the spatial data theme Contributor Members of the INSPIRE Thematic Working Group Species Distribution Portable Document Format (pdf) **Format** Source Rights Public Identifier D2.8.III.19 v3.0 Language

Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007

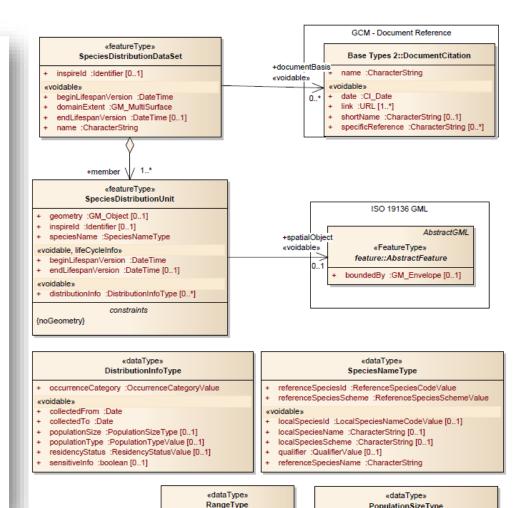
establishing an Infrastructure for Spatial Information in the European Union

Relation

Coverage

(INSPIRE)

Project duration



+ lowerBound :Integer [0..1]

+ upperBound :Integer [0..1]

PopulationSizeType

countingMethod :CountingMethodValue

countingUnit : CountingUnitValue populationSize :RangeType

..implementation..

Ricerca Corrente - IZS VE 08/2012 RC

Prioritising infectious diseases, their early detection and control scenarios, in the ungulate populations of the North-Eastern Italian Alps.

Work package: GIS and data harmonisation
.. to define a way to harmonies the data provided by
various authorities involved in the wild life control.

the step wise process

identification

• identification of the datasets that are of "wide use" among researchers

policy

 definition of a framework in order to define the set of policies, strategies and initiatives for increasing access, sharing, and use of identified information among the research community and beyond

metadata

 harmonisation of documenting existing datasets (metadata) and on the necessary tools to make this documentation accessible

harmonisation

• definition of agreed-upon data specifications. This will allow to map existing datasets to a common set of models.

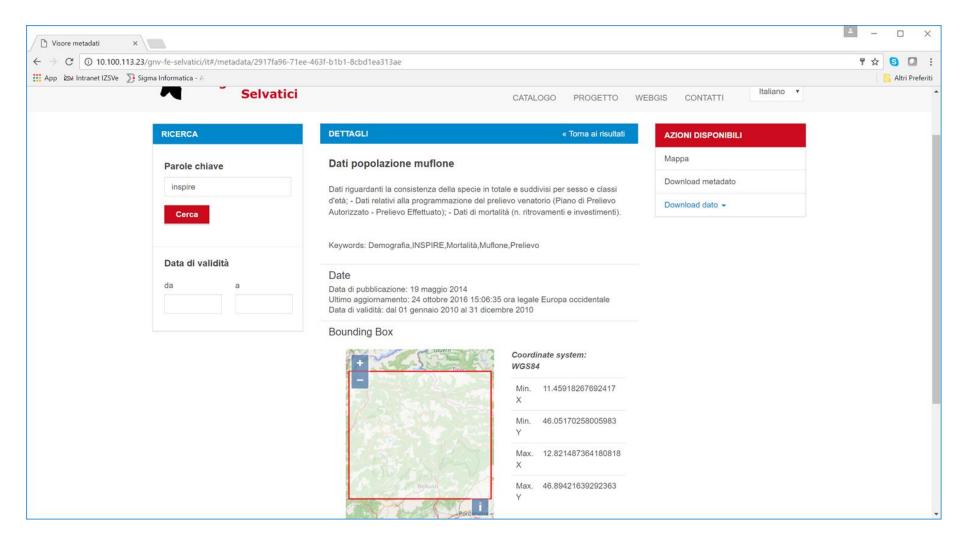
technology

- for any internet platform implementation, technology is a must
- setting up W3C-compliant services for discovery, view, and access

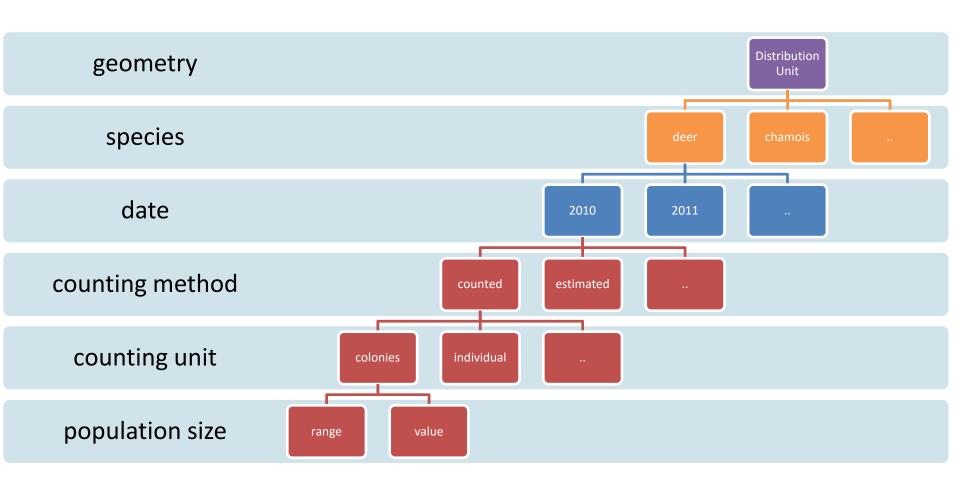
coordination

- strategic function necessary to maintain political support and ensure policy integration
- capacity building, education and training, and technical implementation

The data catalogue

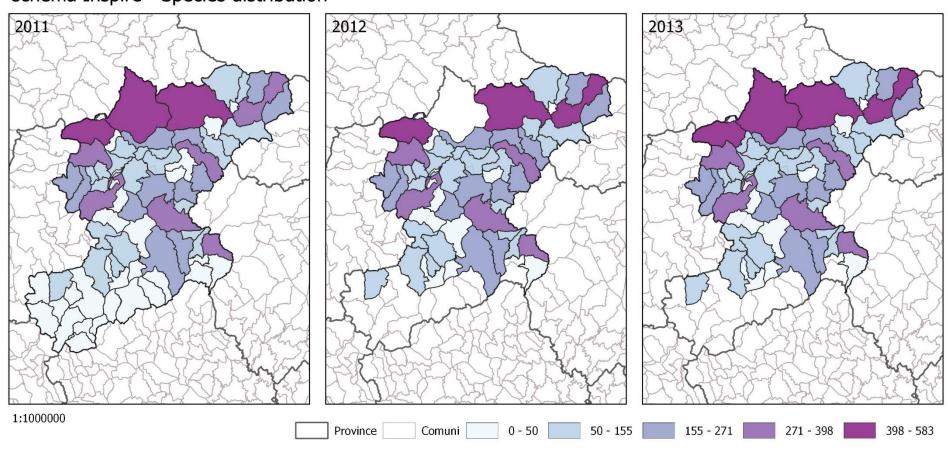


Nested data



Examples

Distribuzione geografica del camoscio per dati calcolati e per annualità derivata dai dati definiti secondo lo schema Inspire - Species distribution



Following INSPIRE: data harmonization for research activity from a European perspective

Nicola Ferrè

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