Open data portals as part of the open data ecosystem: lessons learned from geoportal research

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KENNISCENTRUM OPEN DATA

Overview

- Spatial data ecosystem
- Access network: geoportals
- Comparing geoportals and web search performance (2010 research)
- Comparing geoportals and open data portal performance (2016 research)
- Reflection
- Testing two portals of the EU

Spatial data ecosystem (formerly known as spatial data infrastructure)

- network-based solutions which enable easy, consistent and effective access to geo-information and services offered by public agencies and others

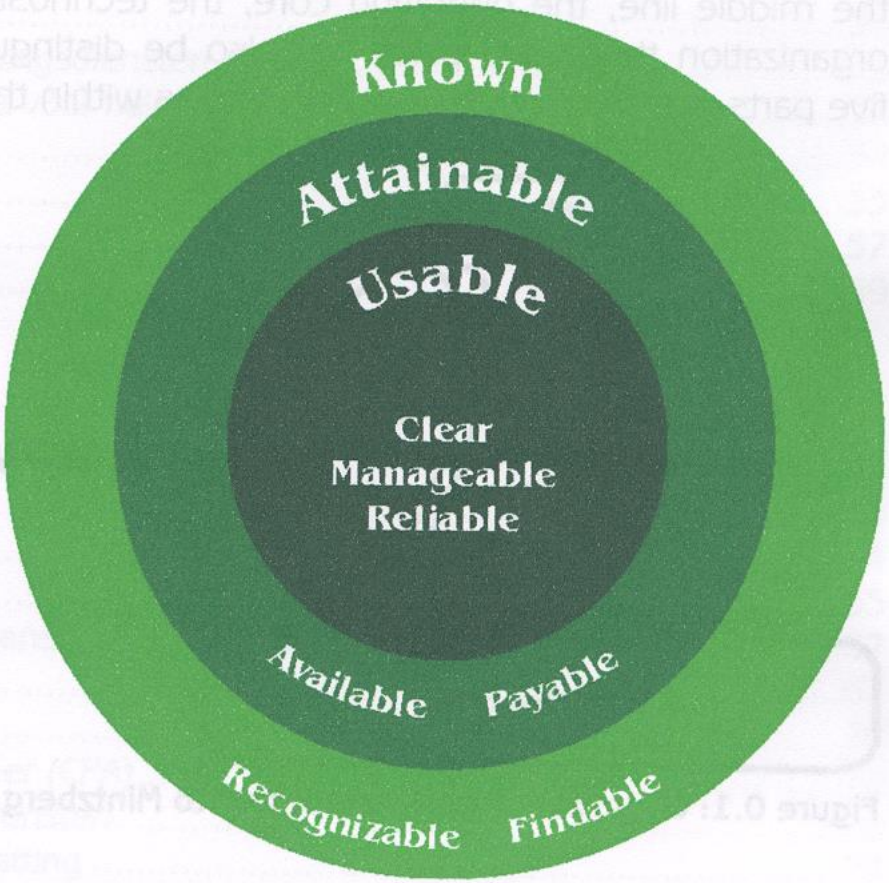
(Rajabifard and Williamson, 2002)

Spatial data ecosytem objective

- To enable users to save resources, time and effort when trying to acquire (new) data sets

(Rajabifard and Williamson, 2002)

Save resources, time and effort: user perspective



Backx 2003

Access network

- Geoportal:
  - one-stop shop for geoinformation (Crompvoets et al., 2004).

Access network

- Geoportal:
  - one-stop shop for geoinformation (Crompvoets et al., 2004).
  - **significant cost reductions** related to searching, assessing and accessing geo-information can be achieved (see Askew et al., 2005; Beaumont et al., 2005).
- Empirical evidence lacking

Assessing geoportals

- Geoportal (focus on supply):
  - one-stop shop for geoinformation (Crompvoets et al., 2004).
- Web (focus on use):
  - "illusion of an easy access" (Bates et al., 2002)
- Which one serves the user best?

Experiment: geoportal assessment

MSc students were assigned four tasks:

1. literature study on both (geo)portal theory and transaction cost theory: geoportal criteria
2. apply criteria to assess two portals of their choice
3. assess geoportals/ web from a transaction cost perspective (cost of time spent on finding, assessing, accessing, and acquiring geoinformation)
    1. Framework dataset at two sides of an administrative border
    2. For university assignment
4. discussion and experiences were reflected upon.

Goal: to experience the process of finding data, inquiring and acquisition

Assessing geoportals

Scenario	Number of students
Scenario 1 The students received information about the geoportal through which they should start searching for geoinformation	6 students
Scenario 2 The students not received any instructions where to search for geoinformation	7 students

Assessing geoportals

	Geoportal	Web
Succeeded		
Average time (minutes)		
Failed		
Average time (minutes)		

Assessing geoportals

	Geoportal	Web
Succeeded		4 (out of 14)
Average time (minutes)		158
Failed		10 (out of 14)
Average time (minutes)		70

Assessing geoportals

	Geoportal	**Web**
Succeeded	9 (out of 12)	4 (out of 14)
Average time (minutes)	253	158
Failed	3 (out of 12)	10 (out of 14)
Average time (minutes)	165	70

Characteristics experienced

	Geoportal	Web
validation data	yes	no
validation metadata	yes	no
structured provision of data	yes	no
support helpdesk	sometimes	no
sample data	sometimes	sometimes
data availability	some data only available through portal	some data only available through web

Experiences in 2010

- Where is the data? only metadata
- Contact portal manager failed: broken links/ mail addresses
- Language
- No direct access: registration process
- Payment required
- Limited use: no commercial use
- User friendliness: where should I go?
- Technical

Recommendations

- Fix the links
- Add at least sample data to test the data
- More coherency and compliancy of geoportals worldwide
- Perform user assessments to make the portal as user friendly as possible
- Make the portal known to the world: make sure it shows in the first ten hits in a general search engine

2016: how are the portals doing?

- Assessing geoportal and open data portals

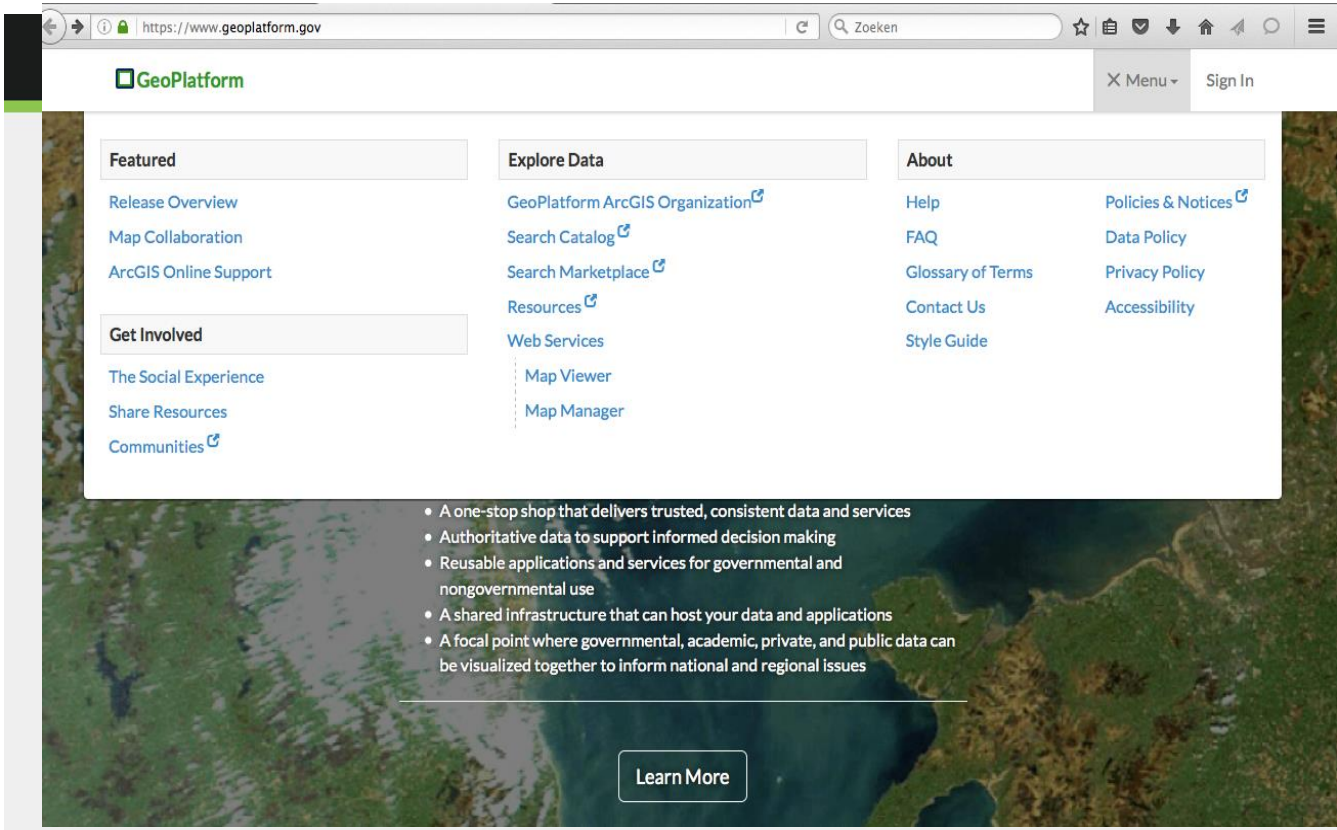
14 students investigated

- 12 geoportals
- 13 open data portals

- 25 Key Performance Indicators developed

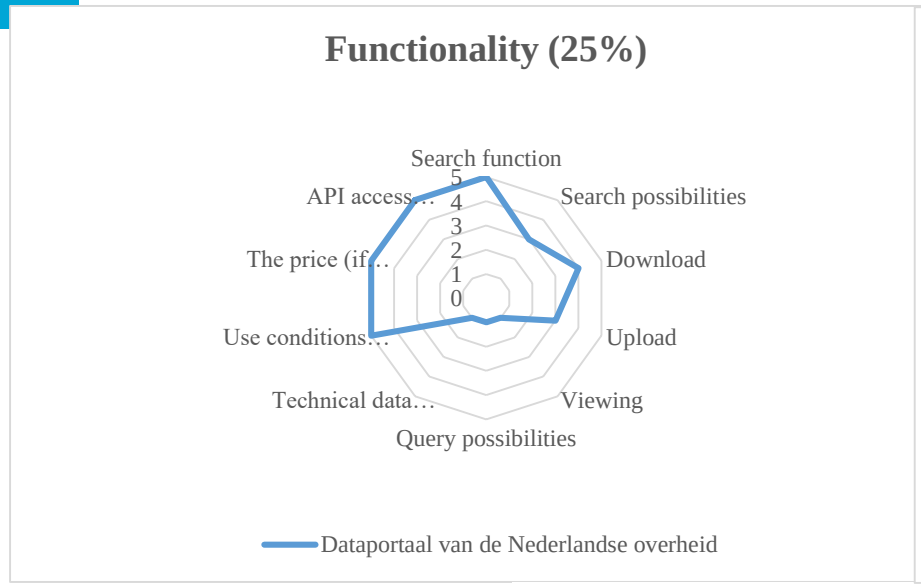
Geoportal development

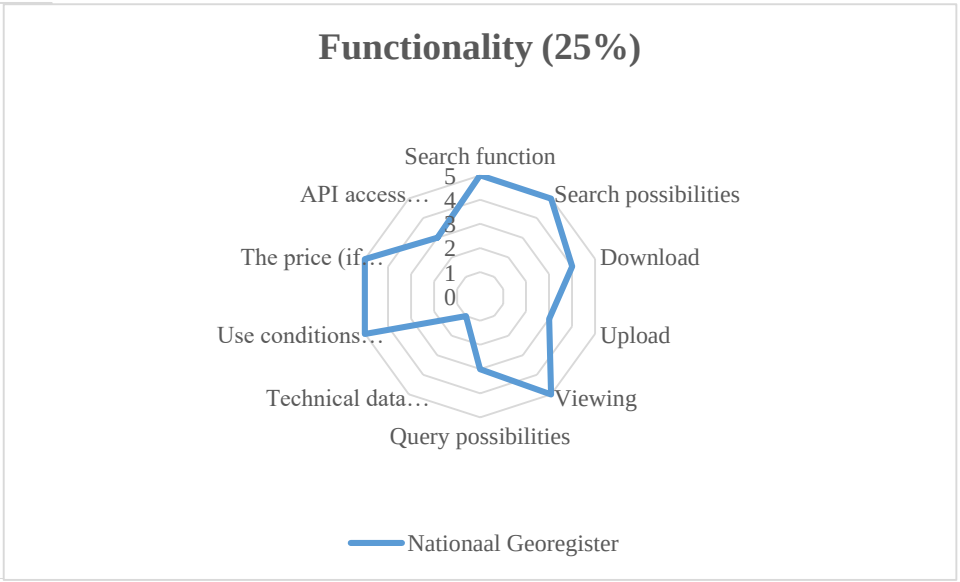
- No portal
- Project
- Product portal
- Clearinghouse
- Platform



See: http://www.sdiassessment.org/

Comparing geoportal and open data portal (case NL)





Main overall findings (2016)

Open data portal

Scores well on:

- Q14 services (12/12)
- Contact possible (11/12)
- Moving between pages (12/12)
- User friendly search function (11/12)

- *Download for all data* (10/12)
- *No need to register* (12/12)
- *Link to other portals* (10/12)

Geoportal

Scores well on:

- Q14 services (11/11)
- Contact possible (10/11)
- Moving between pages (8/11)
- User friendly search function (11/11)

- *Standard metadata* (7/11)

Striking in 2016

Open data portal

- No (free) viewing for all data (5/12)
- Dead links 4/12
- But: statistics on dead links are also monitored, see https://data.overheid.nl/statistiek/linkcheck

Geoportal

- No free viewing for all data (6/11)
- Dead links 5/11
- No download for all data (9/11)

Remarkable findings geoportal

- Language:
  - Metadata in one 'home country' language
  - Searching in English possible, results in 'home country' language
- Jargon of spatial data
- Expert knowledge required to understand how to deal with the acquired files
- Free data but need to register
- Notification service for updates
- Functions on a mobile device, though the website is not adapted to screen size.

Remarkable findings open data portal

- Linking to the source for required information: depending on the source of the data finding a contact person varies from very easy to very difficult
- Rating datasets

Reflection

- Students and student assignment…!
- (geo)portals seem to add value in terms of successfully acquiring geoinformation
- No reliable results

If developing a portal, please note

A provider perspective

A user perspective

een oproep vanuit de Open Data wereld: "ArcGis World en Nationaal GeoRegister" [..]

"ArcGis World en Nationaal GeoRegister

In het kader van doorlopend onderzoek ben ik eens aan het klussen geslagen met de (open) datasets op Nationaal Georegister (http://www.nationaalgeoregister.nl/geonetwork/srv/nl/main.home) en ArcGis World (http://www.arcgis.com/home/).

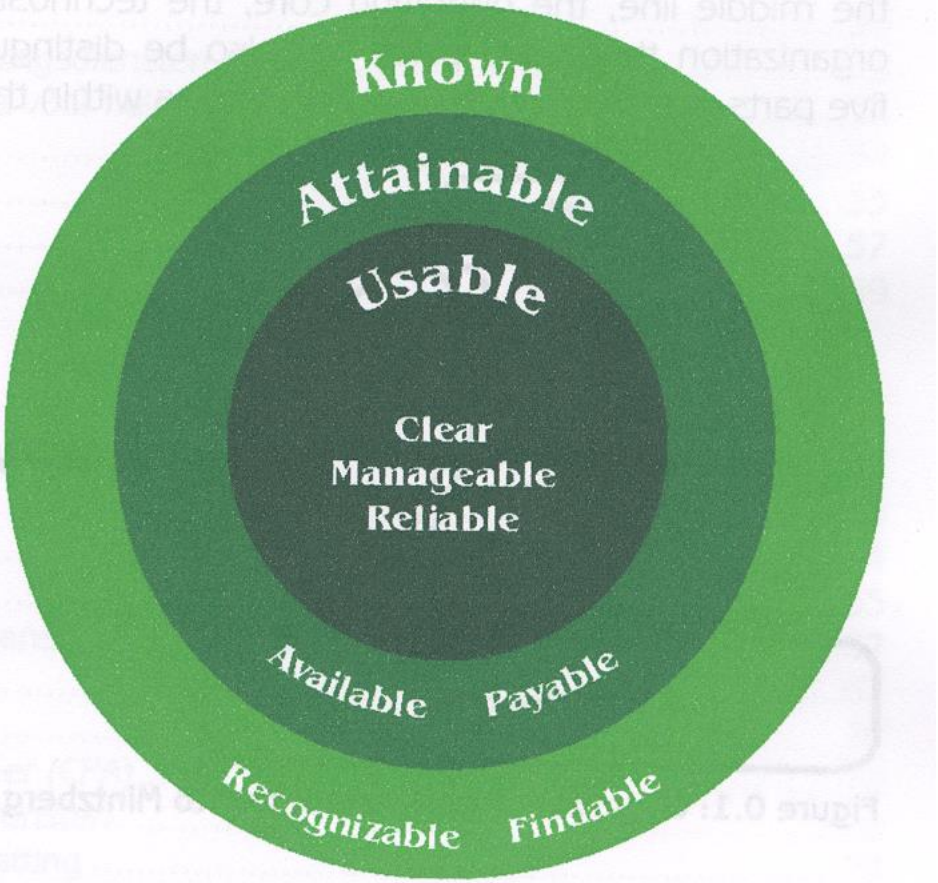
"This website is not suitable at all for users to find any data. Even experienced users, like myself, remain puzzled about the offered content"

het me foutloos te zoeken, dan is er geen wegwijs te worden uit de aangeboden data. Als ik uit puur ongeduld maar wat datasets selecteer kan ik niets downloaden of als service benaderen. Kortom, de site is onbruikbaar binnen een Open Data strategie.

Overigens wil ik daarmee het iniatief van het Nationaal GeoRegister niet opzij zetten. Het is een belangrijk initiatief, dat marktpartijen en particulieren kan stimuleren allerlei kaarten en apps te ontwikkelen via oplossingen zoals ArcGis World.

Wel zou ik GeoNovum willen aanraden contact op te nemen met Paul SuijkerBuijk als mr. OpenData binnen de ICTU voor opname van de datasets binnen de op voeten staande OpenData catalogus Nederland. De presentatie en vindbaarheid van data zal daarmee sterk verbeteren. […]

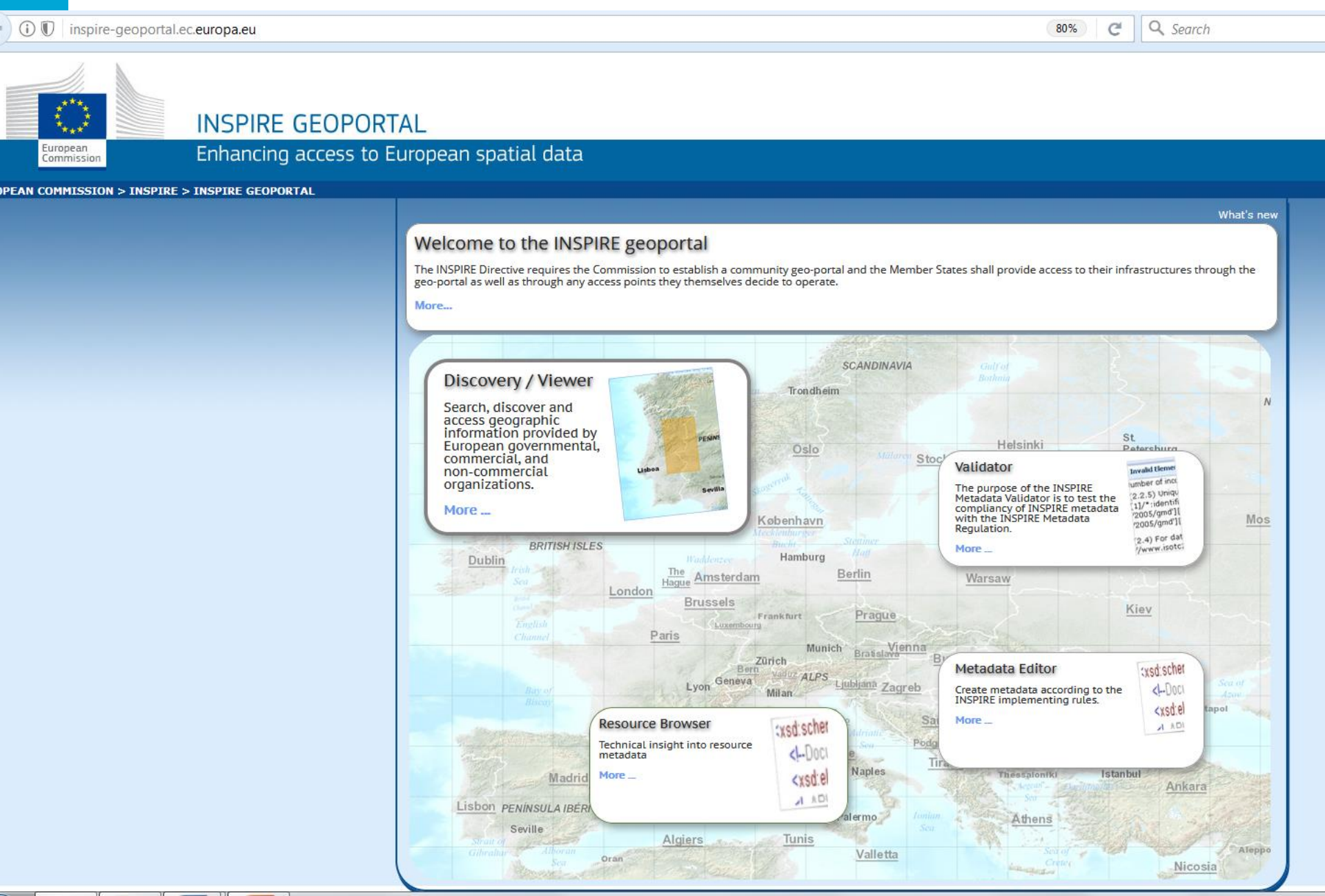
Save resources, time and effort: user perspective



Backx 2003

Testing two portals of the EU

- Looking for address data of the Netherlands


inspire-geoportal.ec.europa.eu
80%
Search
European Commission
INSPIRE GEOPORTAL
Enhancing access to European spatial data
OPEAN COMMISSION > INSPIRE > INSPIRE GEOPORTAL
What's new
Welcome to the INSPIRE geoportal
The INSPIRE Directive requires the Commission to establish a community geo-portal and the Member States shall provide access to their infrastructures through the geo-portal as well as through any access points they themselves decide to operate.
More...
Discovery / Viewer
Search, discover and access geographic information provided by European governmental, commercial, and non-commercial organizations.
More ...
Validator
The purpose of the INSPIRE Metadata Validator is to test the compliancy of INSPIRE metadata with the INSPIRE Metadata Regulation.
More ...
Metadata Editor
Create metadata according to the INSPIRE implementing rules.
More ...
Resource Browser
Technical insight into resource metadata
More ...
SCANDINAVIA
Trondheim
Oslo
Helsinki
København
BRITISH ISLES
Dublin
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PENÍNSULA IBÉRI
Seville
Naples
Istanbul
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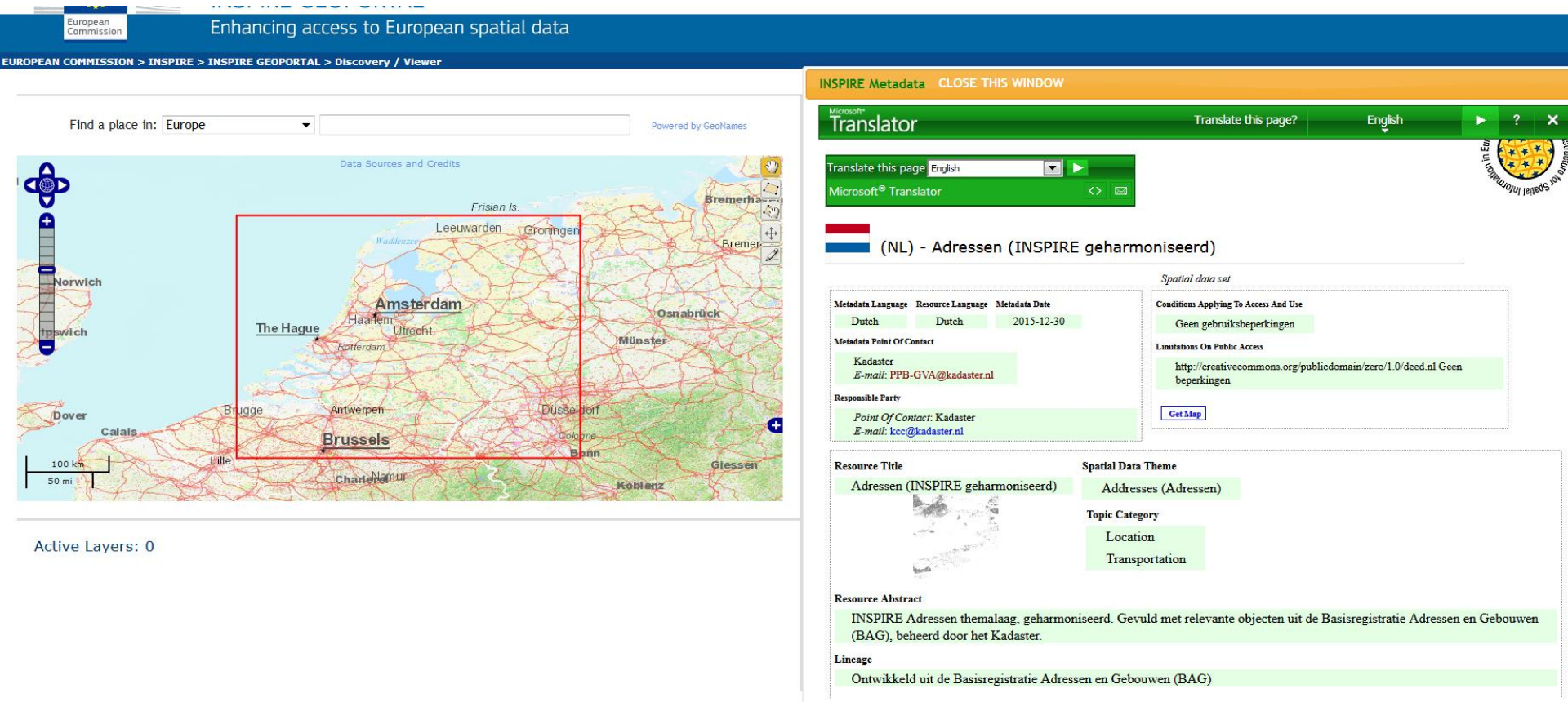
Athens
Algiers
Tunis
Valletta
Nicosia
Aleppo

Search for address Netherlands

But if 1. addresses and 2. Netherlands



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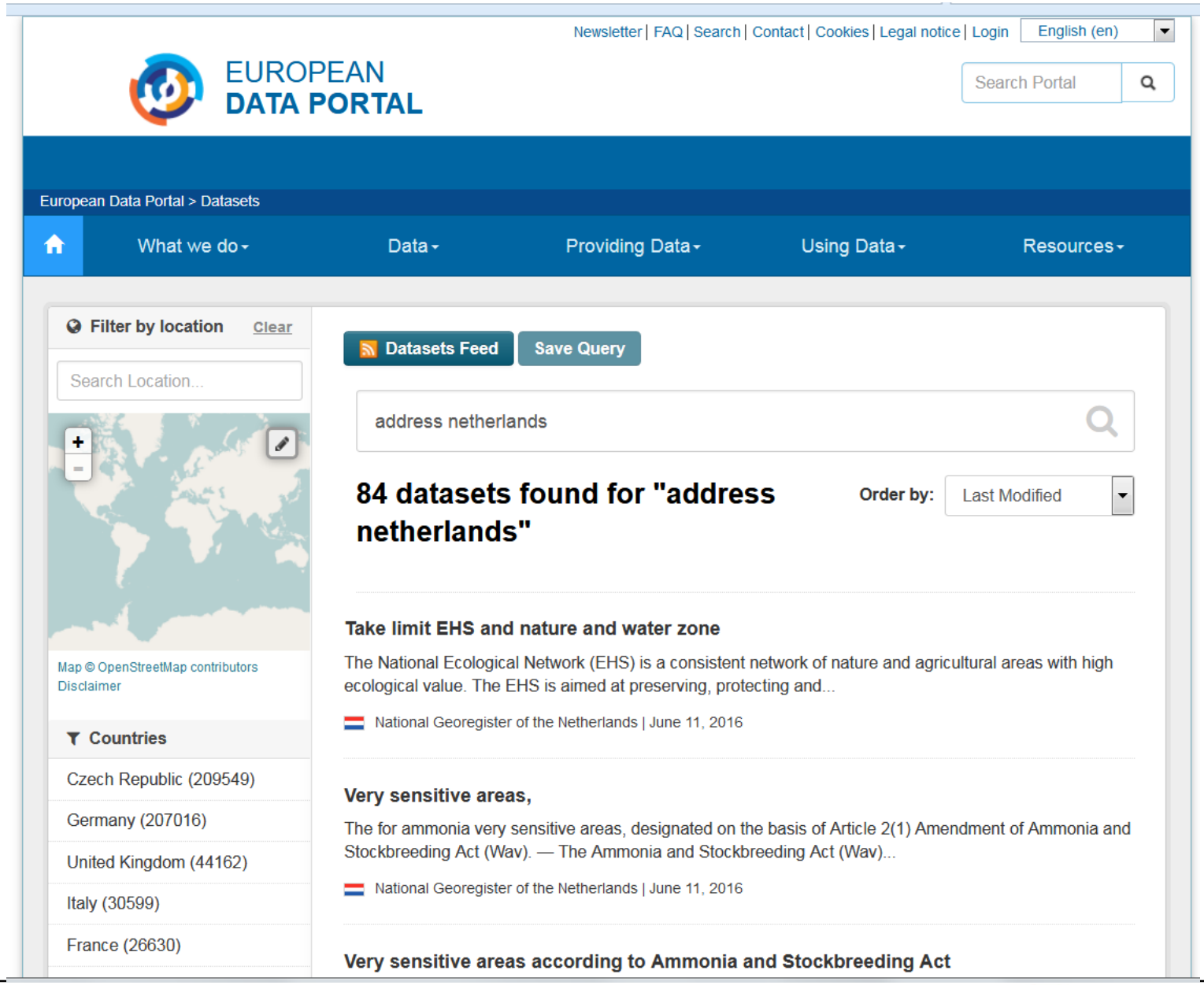
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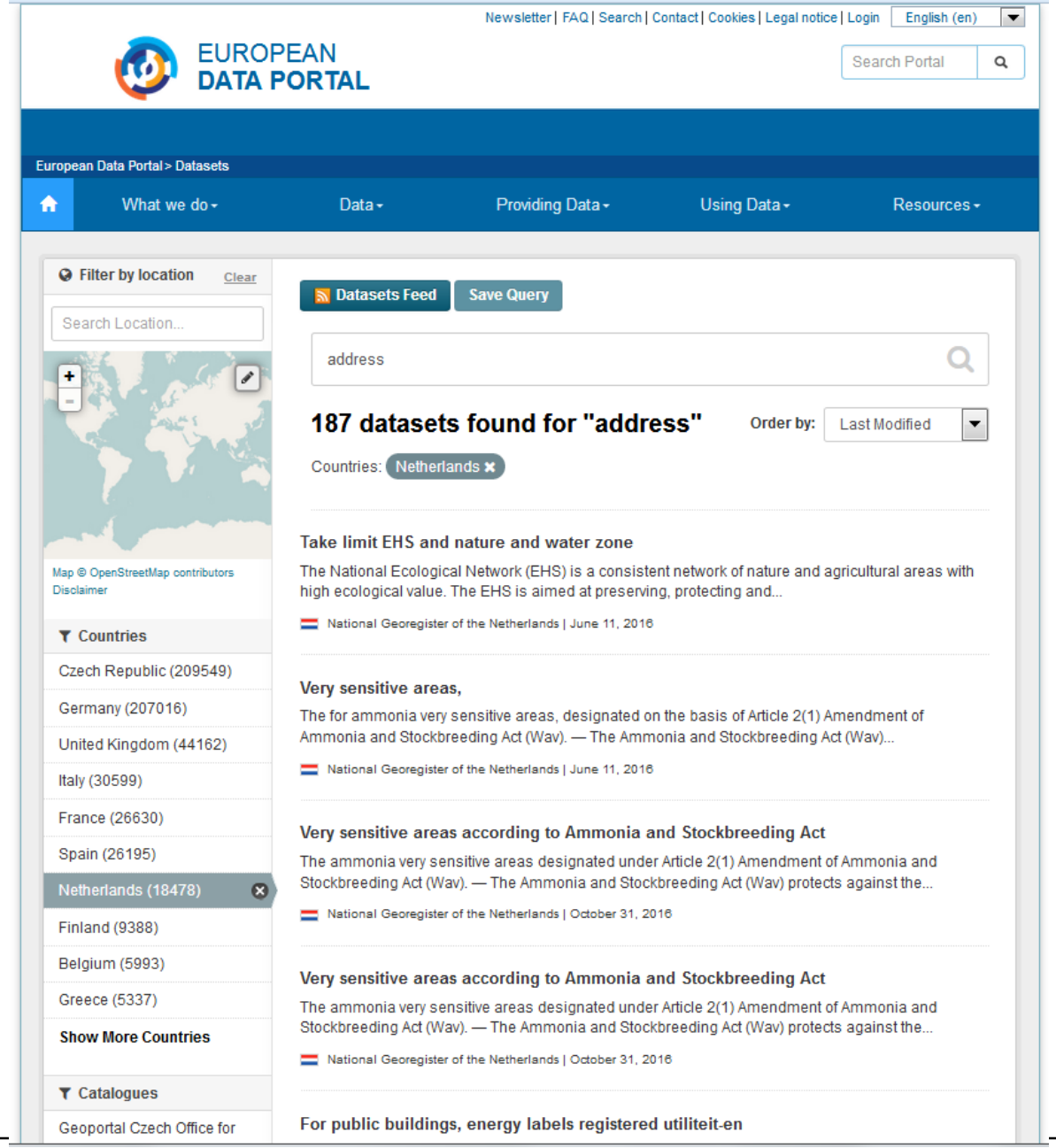
Very sensitive areas according to Ammonia and Stockbreeding Act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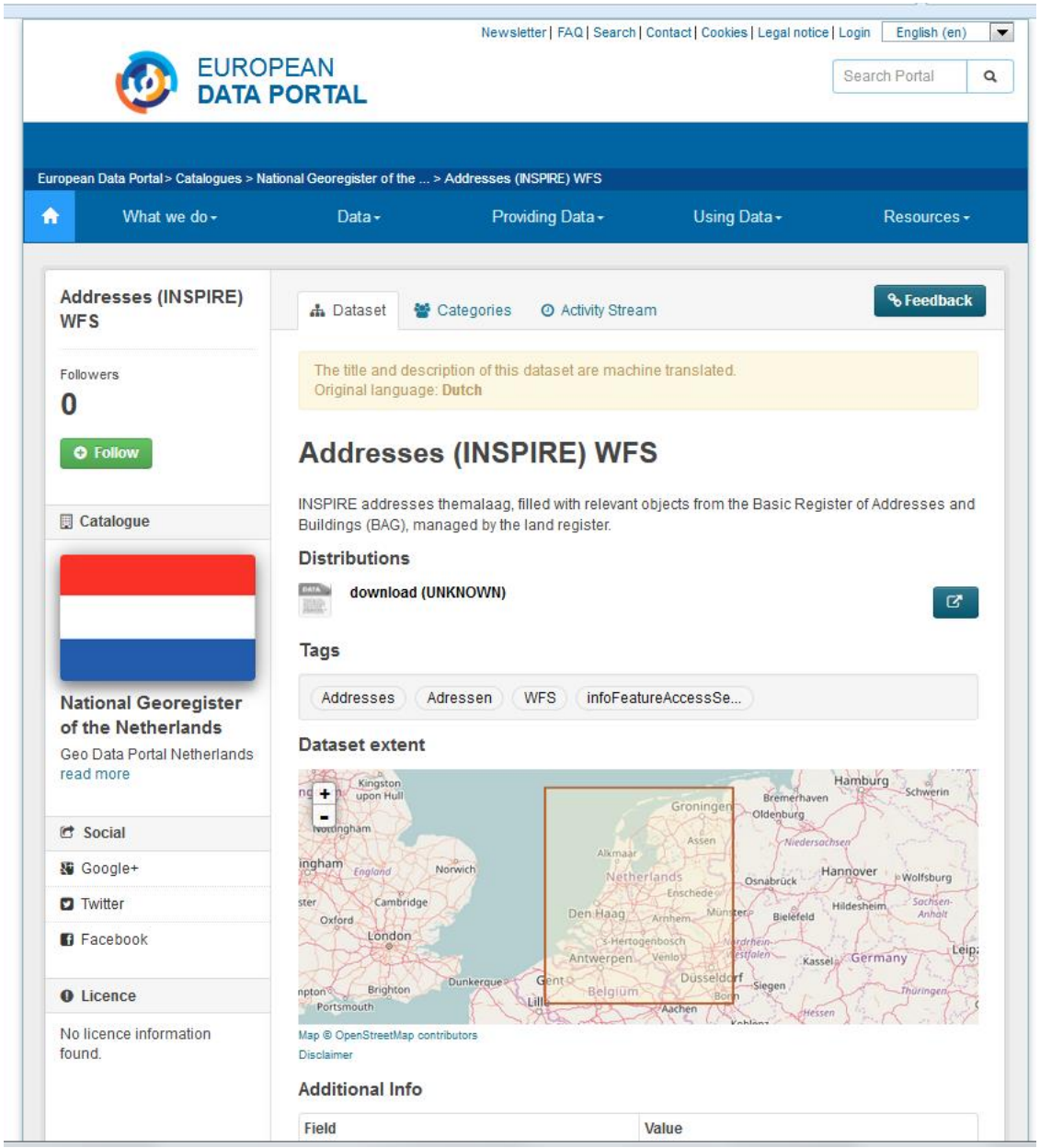
For public buildings, energy labels registered utiliteit-en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The title and description of this dataset are machine translated.
Original language: Dutch
Addresses (INSPIRE) WFS
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Distributions
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Dataset extent
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Additional Info
Field
Value

Wrap up

- national geoportals added value for users if data published in the portal (& some data only published in a portal)
- Performance national geoportals and open data portals comparable
- Test the performance of your portal frequently:
  - Fix the links!
  - Involve users
- Users?
  - Who are the envisioned users of the portal?
  - User friendliness?
  - Multilingual portal?

- Visit www.sdiassessment.org for the status of geoportals worldwide

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