FAIRness assessment

Alejandro Guinea de Salas (Geograma), Juan Martin Pelegrina (Bilbomatica), Marc Olijslagers (KU Leuven), Thorsten Reitz (wetransform), Fabio Vinci (EPSIT), Anders Östman (Novogit)



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Co-funded by the European Health and Digital Executive Agency (HaDEA) under Action No 2018-EU-IA-0093

Overview

- Setting the scene
 - Use cases overview
- FAIRness assessment
 - FAIR-Enough tool
 - MQA tool
- Discussion





POPImpact: Impact of Emergency Events in the Population

Aims to provide more accurate data on the population affected by an emergency by obtaining a pan-European building layer to which the population has been assigned.

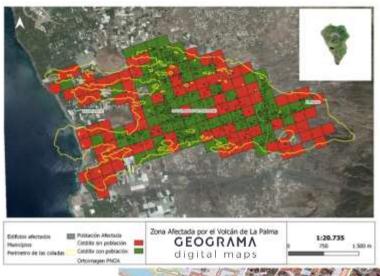
A methodology based on **postGIS** and various **disaggregation methods** to know the population affected by an emergency. One or more methods can be chosen depending on the input data.

POPIMPACT metadata published in

data.europa.eu



https://data.europa.eu/data/datasets/es-gopeg-bu?locale=en







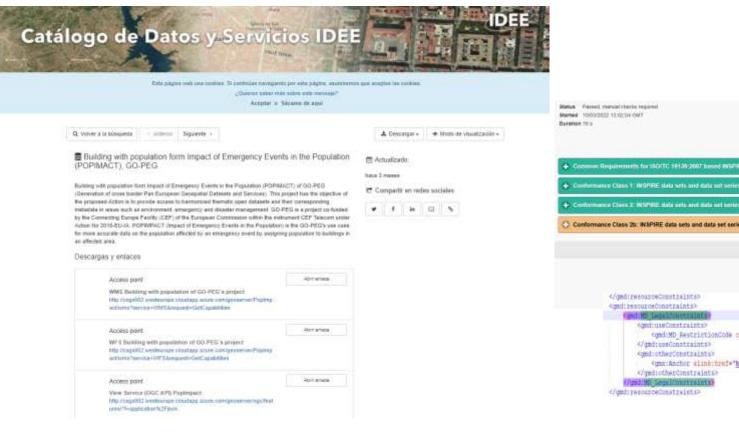
Geograma: Alejandro Guinea de Salas

Co-funded by the European Health and Digital Executive Agency (HaDEA) under Action No 2018-EU-IA-0093



POPImpact assessment

Metadata from national catalogue



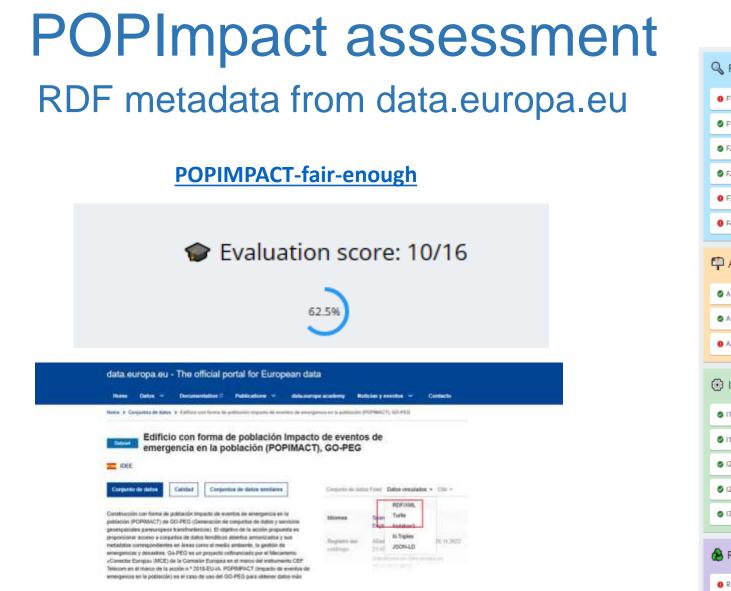
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Geograma: Alejandro Guinea de Salas





https://data.europa.eu/api/hub/repo/datasets/es-gopeg-bu.rdf?useNormalizedId=true

🔍 Findable	
F1 - Resource identifier is persistent	v
S F1 - Resource metadata identifier is unique	Ý
F2 - Metadata is grounded and machine-readable	~
F2 - Metadata is structured	~
F3 - Metadata identifier explicitly in metadata	~
F4 - The resource is indexed in a searchable resource	~
P Accessible	
A1.1 - Metadata uses an open free protocol for metadata retrieval	Ý
A1.2 - Metadata authentication and authorization	Ý
A2 - Metadata is persistent	Ý
③ Interoperable	
I1 - Metadata uses a formal semantic knowledge representation language	Ý
I1 - Metadata uses a formal structured knowledge representation language	~
12 - Metadata uses FAIR Vocabularies registered in known repositories	v
🔮 12 - Metadata uses resolvable FAIR Vocabularies	~
I3 - Metadata contains outward references	v
🛞 Reusable	
R1 - Metadata includes a License	~
R1 - Metadata includes a standard License	v



Geograma: Alejandro Guinea de Salas

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POPImpact assessment

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GO-PEG

Geograma: Alejandro Guinea de Salas

Co-funded by the European Health and Digital Executive Agency (HaDEA) under Action No 2018-EU-IA-0093



Wildfire

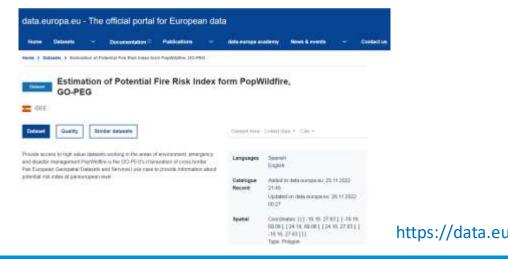
http://csgs002.westeurope.cloudapp.azure.com/geoserver/web/wicket/bookmarkable/ org.geoserver.web.demo.MapPreviewPage?3&filter=false

GeoServe

Objective: Calculation of the Potential Fire Risk Index PFRI

Workflow defined in FME to calculate PFRI based on the methodology that take into account three input (Land cover, Physiography of the terrain and Bioclimate region)

Wildfire metadata published in data.europa.eu



https://data.europa.eu/data/datasets/es-gopeg-uc?locale=en

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ins High

✓ Very Low
✓ No Fink
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✓ 1F OpenStreetMap



Bilbomatica: Juan Martin Pelegrina

Co-funded by the European Health and Digital Executive Agency (HaDEA) under Action No 2018-EU-IA-0093

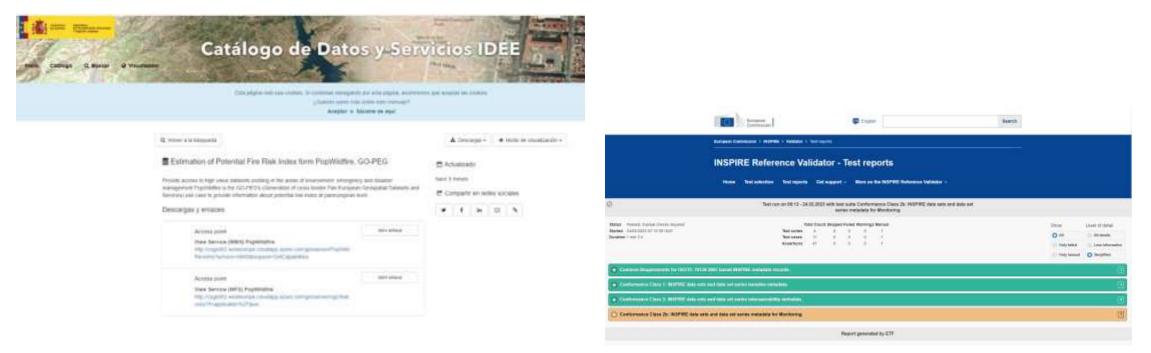
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Wildfire assessment

Report: https://inspire.ec.europa.eu/validator/test-run/details.html?id=EID041fde5d-8c9c-4303-9408-5e176583ad82 **Data:** <u>https://www.idee.es/csw-inspire-idee/srv/spa/catalog.search#/metadata/ES.GOPEG.UC</u>

https://www.idee.es/csw-inspire-idee/srv/spa/catalog.search#/metadata/ES.GOPEG.UC







Wildfire assessment

🔍 Findable	3
F1 - Resource identifier is persistent	8
FI - Resource metadata identifier is unique	3
F2 - Metadata is grounded and machine-readable	
F2 - Metadata is structured	.u
• F3 - Metadata identifier explicitly in metadata	3
F4 - The resource is indexed in a searchable resource	21

4 Accessible	
A1.1 - Metadata uses an open free protocol for metadata retrieval	×
A1.2 - Metadata authentication and authorization	2
A2 - Metadata is persistent	ų.

Report: <u>https://fair-enough.semanticscience.org/evaluations/2b7fbcc3006e40569f503fea7c29e7dda4d4fe8f</u> **Data:** <u>https://data.europa.eu/api/hub/repo/datasets/es-gopeg-uc.rdf?useNormalizedId=true</u>



Interoperable	-
I1 - Metadata uses a formal semantic knowledge representation language	*
O I1 - Metadata uses a formal structured knowledge representation language	ι¢.
IZ - Metadata uses FAIR Vocabularies registered in known repositories	
🕲 12 - Metadata uses resolvable FAIR Vocabularies	*
Ø 13 - Metadata contains outward references	*

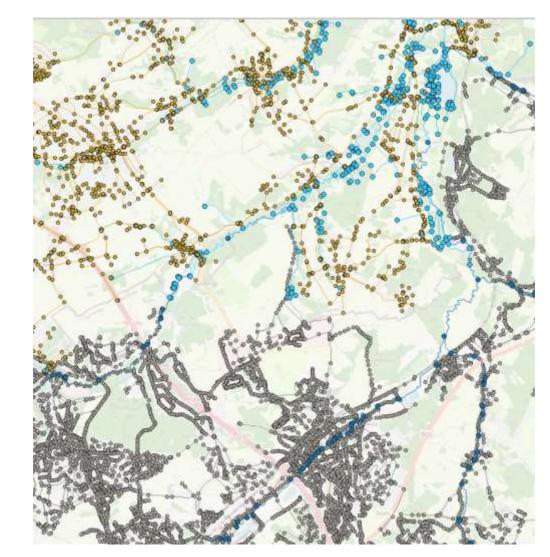
le Reusable	
R1 - Metadata includes a License	*
R1 - Metadata includes a standard License .	×.





TRACING

- BE-GOOD Graph-Tracing-Engine
- Node-edge network combining sewer and surface water data
- Possible sources and affected locations linked to the network
- INSPIRE Hydro-Network and Utility Network (extended)
- INSPIRE gpkg encoding







TRACING assessment

💊 Findable	*
F1 - Resource identifier is persistent	×.
F1 - Resource metadata identifier is unique	*
F2 - Metadata is grounded and machine-readable	С.
S F2 - Metadata is structured	÷
F3 - Metadata identifier explicitly in metadata	*
F4 - The resource is indexed in a searchable resource	
P Accessible	
A1.1 - Metadata uses an open free protocol for metadata retrieval	-
A1.2 - Metadata-authwrocation and authorization	-
🚱 A2 - Metadata is persistent	-
⊙ Interoperable	
S II - Metadata uses a formal semantic knowledge representation language	
It - Metadata uses a formal structured knowledge representation language	÷
Q - Metadata uses FAIR Vocabularies registered in known repositories	÷
🖉 12 - Metadata uses reschiable FAIR Vocabularies	
II - Metadata contains outward references	
B Reusable	
R1 - Metaclatia includes a License	-
R1 - Metadata incluides a standard License	

Not published yet, expected result similar to source dataset:

Accessibility							
Download URL	100%	Most frequent accessU	R n/a	Most frequent download	200		
Reusability							
Access restrictions	true	License information	100%	Access restrictions voc	true	Contact point	tru
Publisher	false						
Contextuality							
File size	0%	Rights	100%	Modification date	true	Modification date	01
Findability							
Keyword usage	true	Categories	true	Geo search	false	Time based search	true
Interoperability							
DCAT-AP compliance		Format	92%	Media type		Format / Media type fro	



TRACING assessment

Problems with recognising identifiers

• In INSPIRE MD:

```
<gmd:identifier>
    <gmd:MD_Identifier>
        <gmd:code>
            <gco:CharacterString>9d8f9dcd-e307-4226-a8e1-bd83ea01f589</gco:CharacterString>
        </gmd:code>
        </gmd:code>
        </gmd:MD_Identifier>
        </gmd:identifier>
        <//gmd:identifier>
        <//gmd:identifier>
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        </gmd:identifier>
        </gmd:identifier>
        <//gmd:identifier>
        <//gmd:identifier>
```

Flemish model license not recognised

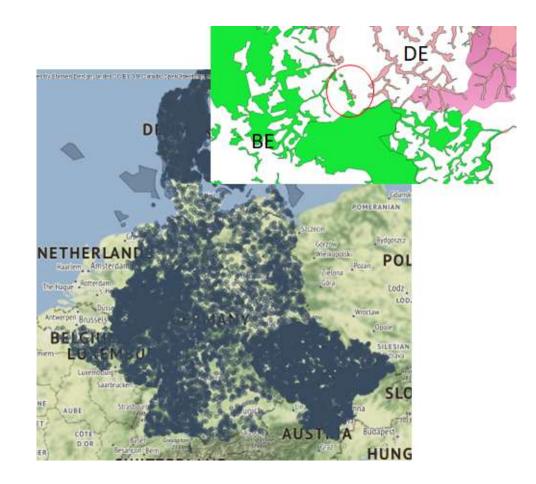
```
<dct:license>
<dct:LicenseDocument rdf:about="http://data.vlaanderen.be/id/licentie/modellicentie-gratis-hergebruik/v1.0">
<dct:LicenseDocument rdf:about="http://purl.org/adms/licencetype/Attribution"/>
<dct:type rdf:resource="http://purl.org/adms/licencetype/Attribution"/>
<dct:title>Vlaamse Open Data licentie gratis hergebruik</dct:title>
</dct:LicenseDocument>
</dct:LicenseDocument>
```





fAIRport

- No-Fly zones for UAVs derived from cross-border INSPIRE data, using the INSPIRE AM target schema
- Further datasets derived from other sources not yet published
- <u>fAIRport metadata DEE</u>
- <u>fAIRport metadata GDI-DE</u>







fAIRport assessments

Evaluation scores 11/16	
🗣 Findable	-
IT-Resource identifier is persistent	-
© FI - Heusute metadata identifier is unique	
6 f2 - Hetadata is groonded and machine readable	
🕼 12 - Meladida II Shukharid	(+)
Fig- Metadata identifier explicitly in metadata	
14 - The resource is indexed in a searchable resource	
Accessible At 1 - Metactata uses an open free protocol for metadata retreval At 2 - Metactata automotivation and automization A - Metactata in persistence	
④ Interoperable	-
Ø IF - Metadata uses a formal semantic knowledge representation language	
O 11 Metadata uses a hierari itructured knowledge representation tanguage	
G. G. Matadata uses FAR Vocabularitis regulared in indoen repositories	
Q . Minututa uses resolvable FAR Vocabularies	
IS - Metadula contains individual individuals	
& Reusable	
🚳 in , Mitalata Indudes a Lixetia	14
🜒 💷 - Metadaja installes a standard (Jonne	14

Metadata quality

The Metadata Quality Assurance is intended to help data providers and data portals to check their metadata against various indicators. For information on which metrics we use for indicator measurements, please have a look at our methodology page.

Accessibility							
Download URL	100%	Most frequent accessU.	200	Most frequent download,	200		
Reusability							
Access restrictions	true	License information	100%	Access restrictions voc.	talse	Contact point	tru
Publisher	truo						
Contextuality							
File size	.0%	Rights	0%	Modification date	truo	Modification date	100
Findability							
Keyword usage	true	Categories	trué	Geo search	010	Tene based search	fais
Interoperability							
DCAT-AP compliance	tatse	Format	100%	Media type	0%	Format / Media type tro	0





fAIRport discussion

- Since the fAIRport datasets are also published with INSPIRE compliant ISO 19115/19139 Metadata, the same issues pertain:
 - Issues with recognising the present unique, persistent and resolvable identifiers
 - German GovData license not recognised?







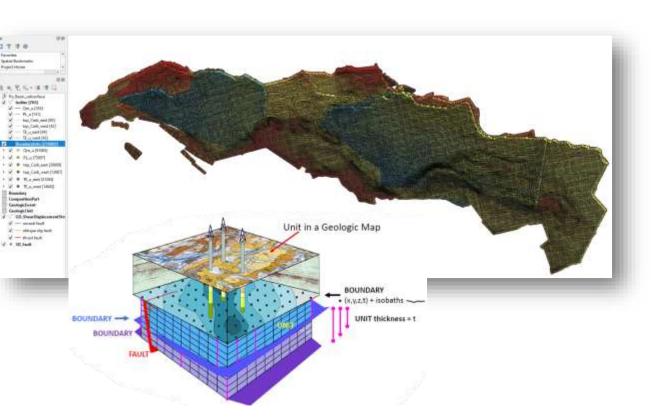
GO-DEPTH

Goal: to provide easy-to-use, interoperable subsurface data using:

- INSPIRE Geology (extended model)
- INSPIRE GeoPackage encoding
- OGC API Features services

GO-DEPTH metadata published in data.europa

Home Datasets 🛩 Documentation 🔅 P	ublications 👻	data.europa academy	News & events 1 ×	Contact us
Horne > Detauets > G6_3DWod_PoBaste Datavet				
GE 3DMod PoBasin -	Datacat			
GE_JDMOU_FOBasin -	Dataset			
Itskan Catalogue of metadata for Spatial Data				
Italian Catalogue of metadata for Spatial Data Datavet Quality Similar datasets		Tistaned from	Lewed data * 124a *	
		Tistanoi food	Used date * 124 *	
	100 P.	phic Luding	Linked data * Ella *	



https://data.europa.eu/data/datasets/ispra_rm-ge_3dmod_pobasin_dt?locale=en





GO-DEPTH assessment

INSPIRE metadata in the national catalogue

Agenzia per l'Italia Digitale		PPON	LOGIN					
geodati.gov.it Reportantic Maximum del Det/ Territarial		Intervision	G Fotowsman G O O					
Nome - About - Advanced search Geodate	a v Documents News Goovlewer Toolkit v		🕐 Help 🛛 🗝	European Commission > INSPIRE > Valid	ator > Test reports			
Home / Metadata search results				INSPIRE Reference				
METADATA		Show cart		Home Test selection Test re	eports Get support 🗸	More on the INSPIR	E Reference Vali	dator ♥
Filters: Anytest ×		والتيار الماريني المتراك			Test run on 15:57 - 24.02.2 onformance Class 2b: INSP set series metadata for Mor	PIRE data sets and dat	a	
1			Version	Status Passed, manual checks required Started 24/02/2023 14:58:11 GMT	Total Skipped Count	d Failed Warnings Manua	al Show	Level of detail
		Rep	its 1-2 of 2	Duration 49 s	Test suites 4 0	0 0 1	O AB	All details
DATASET	E	Add to cart			Test cases 11 0 Assertions 41 0	0 0 1	 Only failed Only menual 	 Less information Simplified
The geological 3D model of the Pol	GE_3DMOD_POBASIN - DATASET The geological 3D model of the Po Basin includes the geometry of four stratigraphic horizons (top or unconformity) bounding 3thological homogeneous successions of sodimentary units; in the Triassic - Pteistacone time interval, and			+ Common Requirements for ISO/T	C 19139:2007 based INSPIF	RE metadata records.	<u>I Cartanana</u>	2
179 Guit geometries, t				+ Conformance Class 1: INSPIRE d	ata sets and data set series	s baseline metadata.		
Display Responsible and point of c	Display Responsible and point of contact details +			+ Conformance Class 2: INSPIRE da	ata sets and data set series	s interoperability meta	idata.	
DETAILS -	OPEN + DOC SERVICE	a - anneana -		Conformance Class 2b: INSPIRE	data sets and data set serie	es metadata for Monit	oring	1

https://geodati.gov.it/geoportale/visualizzazione-metadati/scheda-metadati/?uuid=ispra_rm:GE_3DMod_PoBasin_DT





GO-DEPTH assessment

RDF metadata from data.europa.eu

https://fair-enough.semanticscience.org/evaluations/fc460a58261d7c0b67cd199e61b520fecfa6d0aa

Findable	
0 FI-Resource lawrother to persistent	
🕏 Fl - Remuta mendata dentifer isunque	
C - Mecclets is grounded and machine-readable	
6 F2- Hesides a structured	
P3 - Mexicate reactifier equivate in metadata	
Fire resource is indexed in a maintractive resource	
p Accessible	
A) A - Metadata case an open free protocol/for metadata het/eval	
6 47.2 I litelatela automisation and automisation	
X2 - Metabase is performent	
0 Interoperable	
🛢 11 - Masadata Jakes a Sorral terrentic Growiedge representation tergange	
6 71 - Headeds uses a formal structured intervietige rememeration language	
S II - Mexadeta uzec FAIR Vitramularien regizieren in konsen regizieren	
0. 2 - Mexicane week reported to AVA Vocativities	
6 C - Heradata contant outward eleventas	
C Reusable	
Reusable To Master Income Longe	

https://data.europa.eu/api/hub/repo/datasets/ispra_rm-ge_3dmod_pobasin_dt.rdf? useNormalizedId=true 🗵

Identifier of this evaluation: https://w3id.org/fair-enough/evaluations/fc460a58261d7c0b67cd199e61b520fecfa6d0aa

Evaluated in 15s with the fair-enough-metadata collection on the 2023-02-22

See other evaluations for https://data.europa.eu/api/hub/repo/datasets/ispra_rm-ge_3dmod_pobasin_dt.rdf?useNormalizedId=true

Evaluation score: 10/16

62.5%E





FAIRness Assessment results

Use cases obtained very similar results

- Starting from 100% valid INSPIRE (ISO 19139-based) metadata
- Running the FAIR-Enough tool on RDF metadata

Common considerations in the next slides





Results of the FAIR-Enough assessment

FAIR	Metrics tests		Issues		
Accessible	A2_1M	Metadata is persistent	N/A		
	F1_2M	Resource identifier is persistent	The unique identifier of the metadata resource is		
Findable	F3_1M	Metadata identifier explicitly in metadata	not persistent and it is not contained in the metadata itself.		
	F4_1M	The resource is indexed in a searchable resource	The resource is not indexed in search engines: DuckDuckGo search engine, Google custom search API and Bing search engine.		
	R1_1M	Metadata includes a License	This information is lost in the transformation between		
Reusable	R1_2M	Metadata includes a standard License	INSPIRE Metadata to Geo-DCAT-AP, made by data.europa.eu.		





Results of the FAIR-Enough assessment: Further investigations

	<pre><gnd:useconstraints></gnd:useconstraints></pre>
<pre><gmd:useconstraints> <gmd:useconstraints> <gmd:md_restrictioncode 19139="" codelist="http://standards.iso.org/iso/1913:</td><td><pre><gmd:MD_RestrictionCode codeList=" gmxcodelists.xml#md_restrictioncode"<="" http:="" iso="" resources="" standards.iso.org="" td=""></gmd:md_restrictioncode></gmd:useconstraints></gmd:useconstraints></pre>	
<gmd;otherconstraints></gmd;otherconstraints>	
<pre><gco:characterstring>https://creativecommons.org/licenses/by/4.0</gco:characterstring></pre>	irString>
<pre>/gmd:resourceConstraints></pre>	

GeoDCAT-AP

In [DCAT-AP-20200608], licensing information is specified on (a) data catalogues (services) and on (b) the distribution(s) of a dataset, and not on the dataset itself. The principle is that different dataset distributions may be associated with different licensing terms. Moreover, [DCAT-AP-20200608] recommends the use of dct:accessRights for specifying access conditions.

Based on this, GeoDCAT-AP specifies use and access limitations by using, respectively, dct:license and dct:accessRights. These properties take as value the URI of the use / access limitations, when available.

[] dcat:distribution [a dcat:Distribution ;
 dct:license <https://creativecommons.org/licenses/by/4.0/> ;





Results of the FAIR-Enough assessment: Further investigations

In <u>INSPIRE</u>, this element, quoting, "defines the link(s) to the resource and/or the link to additional information about the resource". [VOCAB-DCAT-2] has a property, namely, dcat:landingPage, having exactly the same purpose.

Based on this, the mappings of element "resource locator" for data sets and data set series will vary depending on the function code (when available), based on the following table.

ISO 19115 – CI_OnlineFunctionCode	Property	Domain	Range		
(not provided)	dcat:landingPage	dcat:Datase	t foaf:Document		
download	dcat:accessURL	dcat:Dis	<dcat:distribution></dcat:distribution>		
Information	foaf:page	dcat:Dat	<dcat:distribution></dcat:distribution>		
 <gnd:protocol> <gnu:anchor mlinkihrmf*"http<br=""></gnu:anchor></gnd:protocol> <gnu:anchor mlinkihrmf*"http<br=""></gnu:anchor> <td>//inspire.ec.europa.eu/metadata</td> <td>pe/sqc/wfs">000 i codelist/apatiaID -codelist/QnLineDe</td> <td><dct:rights></dct:rights></td> <td>trictions tp://inspire.ec.europa.eu/metadat hor> mw:Anchor> * codelistValue="download">download<td><pre>ver/go-peg/wfs?service=WFSLamp;version=2.0.0Lamp;request=GetCapabilitie ta-codelist/LimitationsOnPublicAccess/noLimitations"/> gmd:CI_OnLineEin re European Health and Digital Executive Agency (HaDEA)</pre></td></td>	//inspire.ec.europa.eu/metadata	pe/sqc/wfs">000 i codelist/apatiaID -codelist/QnLineDe	<dct:rights></dct:rights>	trictions tp://inspire.ec.europa.eu/metadat hor> mw:Anchor> * codelistValue="download">download <td><pre>ver/go-peg/wfs?service=WFSLamp;version=2.0.0Lamp;request=GetCapabilitie ta-codelist/LimitationsOnPublicAccess/noLimitations"/> gmd:CI_OnLineEin re European Health and Digital Executive Agency (HaDEA)</pre></td>	<pre>ver/go-peg/wfs?service=WFSLamp;version=2.0.0Lamp;request=GetCapabilitie ta-codelist/LimitationsOnPublicAccess/noLimitations"/> gmd:CI_OnLineEin re European Health and Digital Executive Agency (HaDEA)</pre>





Results of the FAIR-Enough assessment: Further investigations GeoDCAT-AP_IT metadata from national catalogue

DATASET

GE_3DMOD_POBASIN - DATASET

The geological 3D model of the Po Basin includes the geometry of four stu bounding lithological homogeneous successions of sedimentary units, in 179 fault geometries. E...

Display Responsible and point of contact details DETAILS OPEN Metadata Website XML-Metadata OWNLOAD SERVICE

	<dcatapit:distribution <="" th="" xmlns:dcatapit="http://dati.gov.it/onto/dcatapit#"></dcatapit:distribution>
	rdf:about="https://geodati.gov.it/resource/distribution/ispra_rm:GE_3DMod_PoBasin_DT/GML-1">
	<rdf:type rdf:resource="http://www.w3.org/ns/dcat#Distribution"></rdf:type>
	<pre><dct:title xml:lang="it" xmlns:dct="http://purl.org/dc/terms/">Distribuzione - Formato GML</dct:title></pre>
	<pre><dct:description xml:lang="it" xmlns:dct="http://purl.org/dc/terms/">Distribuzione - Formato GML</dct:description></pre>
	<pre><dct:format <="" pre="" xmlns:dct="http://purl.org/dc/terms/"></dct:format></pre>
	rdf:resource="http://publications.europa.eu/resource/authority/file-type/GML"/>
	<dcat:accessurl <="" td="" xmlns:dcat="http://www.w3.org/ns/dcat#"></dcat:accessurl>
	rdf:resource="http://cloud.epsilon-italia.it:8080/geoserver/ogc/features/collections/GO-PEG:Po-Plain-GU-Boundaries?"/>
	<pre><dct:license xmlns:dct="http://purl.org/dc/terms/"></dct:license></pre>
	<pre><dcatapit:licensedocument rdf:about="https://creativecommons.org/licenses/by/4.0/"></dcatapit:licensedocument></pre>
1	<rdf:type rdf:resource="dct:LicenseDocument"></rdf:type>
	<pre><dct:type rdf:resource="http://purl.org/adms/licencetype/Attribution"></dct:type></pre>
	<foaf:name xmlns:foaf="http://xmlns.com/foaf/0.1/">Creative Commons Attribuzione 4.0 Internazionale (CC BY 4.0)</foaf:name>
	<pre><dct:rights <="" pre="" xmins:dct="http://purl.org/dc/terms/"></dct:rights></pre>
	rdf:resource="https://geodati.gov.it/resource/constraints/ispra_rm:GE_3DMod_PoBasin_DT_ID_useConstraints"/>
	<dct:rights <="" td="" xmlns:dct="http://purl.org/dc/terms/"></dct:rights>
	rdf:resource="https://geodati.gov.it/resource/constraints/ispra_rm:GE_3DMod_PoBasin_DT_ID_accessConstraints"/>
	<adms:representationtechnique xmlns:adms="http://www.w3.org/ns/adms#"></adms:representationtechnique>
	http://inspire.ec.europa.eu/metadata-codelist/SpatialRepresentationTypeCode/vector





Results of the FAIR-Enough assessment: Further investigations GeoDCAT-AP_IT metadata from national catalogue

https://fair-enough.semanticscience.org/evaluations/f258bd2a64d54b103838c18e3dcd39b530001eac

🗣 Findable	
• 7) - Resource identifier is persistent	
© FT - Resource measure denotes a unique	
© F2 - Measaca is grounded and machine-reacable	
6 F2 - Messaes is all volumes	
🜒 Matatana dampihar anglichty in matatala	
• F4 - The replaces in instantial in a secondaria resource	
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KI 1 - Matadata authentication and authoritation	
A 2 - Metadata Is permittent	
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S 1 Harapeta uses a former structures introvietge representation language	
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3 - Steaping content convert references	
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6 11 - Versitze incluses a clience	

https:	//www.epsilon-italia.it/public/GO-PEG/GE_3DMOD_POBASIN.rdf 🗹
	Identifier of this evaluation: https://w3id.org/fair-enoug/v/evaluations/2d23b0b0a70bc797052ed7b9d66490d5c38b2515
	Evaluated in 29s with the fair-enough-metadata collection on the 2023-02-22
	See other evaluations for https://www.epsilon-italia.it/public/GO-PEG/GE_3DMOD_POBASIN.rdf
	Extracted metadata
	© License: https://creativecommons.org/licenses/by/4.0/





Results of the FAIR-Enough assessment

		VALIDATION TOOL					
	ITEM UNDER TEST	INSPIRE Validator	GEODCAT-AP Validator	FAIR-Enough	MQA Tool		
N	xml medata ISO-19139 published in national geoportal	\checkmark					
Converter	rdf metadata (geo)DCAT-AP transformed by data.europa.eu (<i>geo-harvester</i>)		×	6/16	34 violations 5 warnings		
	rdf metadata (geo)DCAT-AP-IT transformed by national open data portal		×	4/16	30 violations 2 warnings		
			FAIR related different	, 0			



Converter

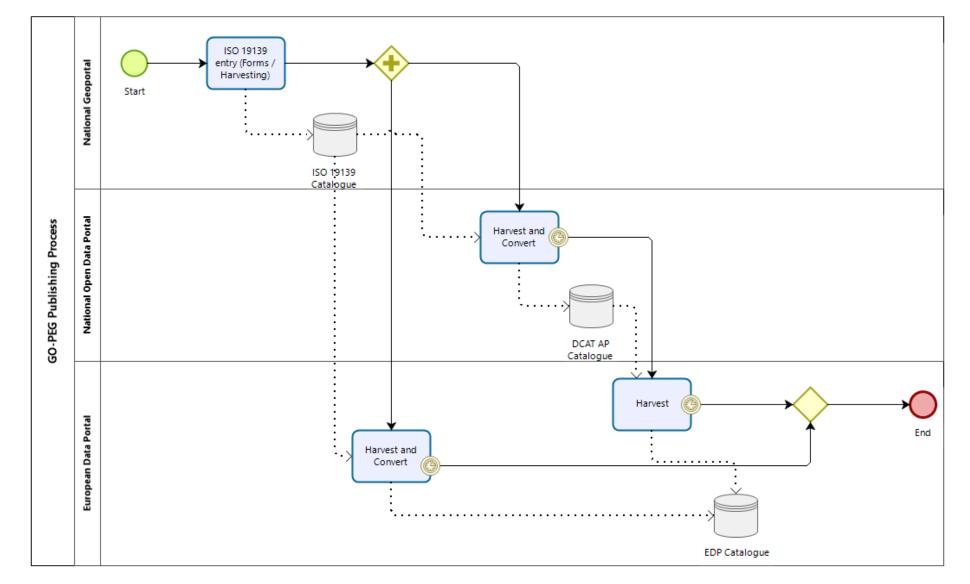


Discussion

- We assume that, by complying with the FAIR principles, we increase the value of our digital assets.
- There are many tools available for assessing FAIRness. We have used FAIR Enough and MQA
 - Very easy to execute a test / assessment
 - Backtracking errors may be time consuming -> more structured approach to quality assurance needed.
- Some observed issues and barriers
 - Usage of unique and persistent identifiers
 - Conversion ISO 19115/19139 to DCAT-AP-XX
 - Multiple metadata entries in EDP
 - Scope of the catalogue (only one country, only public authorities, ...)







GO-PEG





Some additional issues and barriers

- Quality Assurance of metadata publication.
 - Acceptance tests at strategic points in the workflow
 - In addition to FAIR Enough, we have discussed usage of checklists
- The future geodata publishing landscape
 - The role of geodata catalogues (INSPIRE requirements)?
 - Impact of OGC API Records?
- FAIRness of other digital assets
 - Processes and tools, in addition to data and services
 - Variety of standards (and user needs)





THANK YOU

GO-PEG | Generation Of crossborder PanEuropean Geospatial Datasets and Services



Co-funded by the European Health and Digital Executive Agency (HaDEA) under Action No 2018-EU-IA-0093