



SeaDataCloud

WP 8.1- Progress with vocabulary developments in D8.1

Alexandra Kokkinaki, Gwen Moncoiffe, Quyen Luong, Simon Cox,
Adam Leadbetter, Rob Thomas

sdn-userdesk@seadatanet.org –
www.seadatanet.org

WP8.1 Progress



W8.1.1 Improve the transparency of the vocabulary governance model (BODC, CSIRO, MI)



WP8.1.5 Make versioning and history of concepts visible through NVS (BODC, CSIRO, MI)



WP8.1.6 Document the provenance of mappings (BODC, CSIRO, MI)



WP8.1.4 Deprecation of vocabularies (MARIS, IFREMER, BSH, BODC)



D8.1 report

machine readable
interoperable
unambiguous

NVS



title-:	SeaDataNet data transport formats
alternative-:	SDN formats
description-:	Formats used for data delivery by SeaDataNet.
date-:	2018-09-06 02:00:03.0
publisher-:	Natural Environment Research Council
creator-:	SeaDataNet
versionInfo :	8
RE_RegisterManager:	British Oceanographic Data Centre
RE_RegisterOwner:	SeaDataNet
comment-:	Governance for vocabularies used in the EU SeaDataNet project implemented as consultation between BOD members of the SeaDataNet Technical Task Team

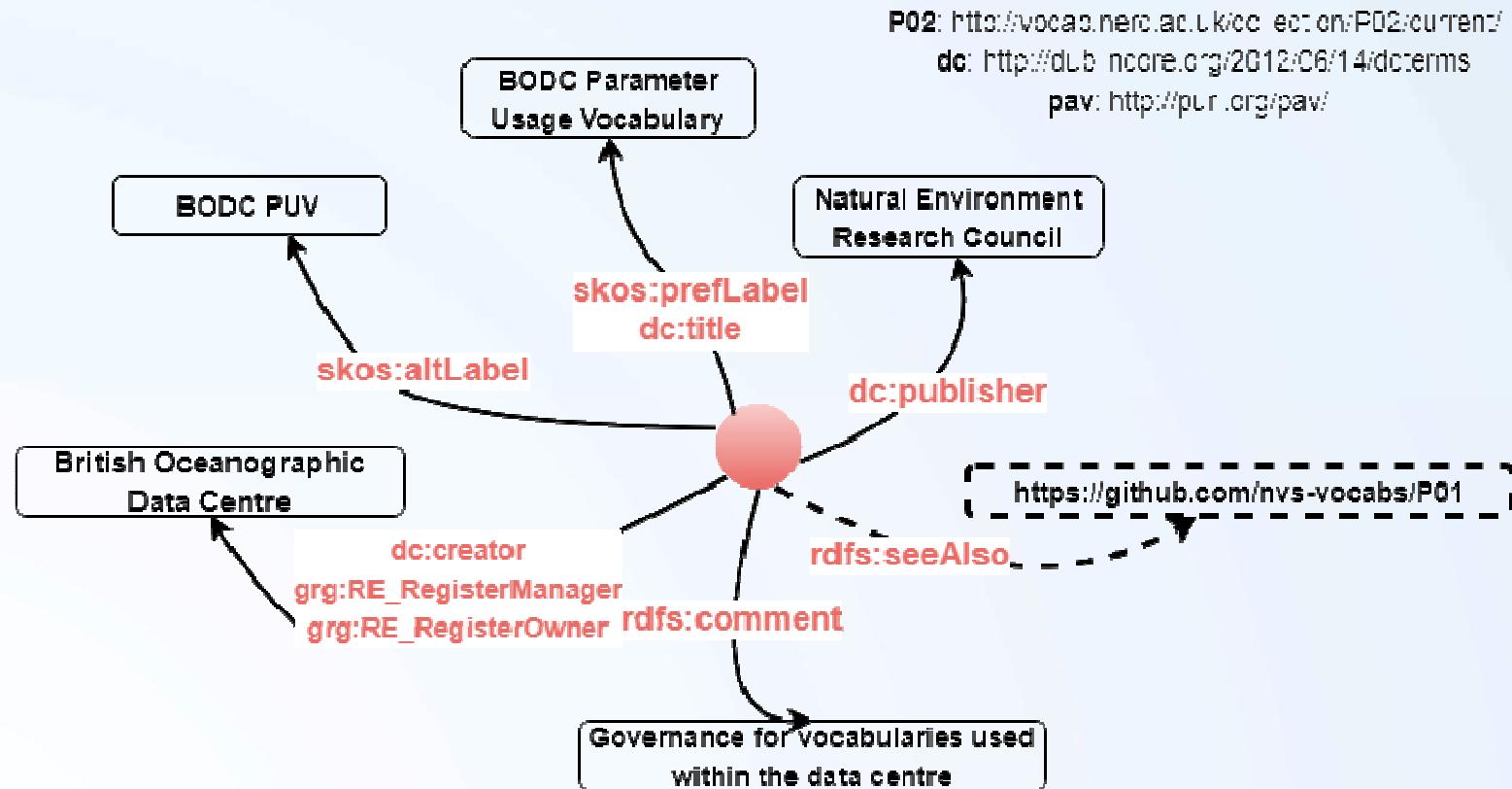
Contact details to the governance authority or records of governance discussions and decisions

WP8.1.1 Transparency of the governance model



Transparency of the governance model

- Github (issue tracker)
 - <https://github.com/nvs-vocabs>
 - <https://github.com/nvs-vocabs/S02>
 - <https://github.com/nvs-vocabs/S06>
 - <https://github.com/nvs-vocabs/S29>
 - <https://github.com/nvs-vocabs/S27>
 - <https://github.com/nvs-vocabs/S25>
 - <https://github.com/nvs-vocabs/S26>
 - <https://github.com/nvs-vocabs/P01>



Εφαρμογές	Bookmarks	Hibernate	Projects	BODCInternal	Q&D-RDF	RDF study	PHD	Vocabularies	rdf_staff	medepad	Q&D-RDF	b
i Μη ασφαλής vocab.nerc.ac.uk/collection/S02/current/												
title-:	BODC parameter semantic model relationships between what theme and where theme											
alternative-:	Where/what relationships											
description-:	Terms used to describe the relationship between the 'where theme' and the 'what theme' in the BODC semantic model for measured phenomena											
date-:	2018-03-28 02:00:04.0											
publisher-:	Natural Environment Research Council											
creator-:	British Oceanographic Data Centre											
versionInfo-:	13											
RE_RegisterManager:	British Oceanographic Data Centre											
RE_RegisterOwner:	British Oceanographic Data Centre											
comment-:	Governance for vocabularies used within the data centre											
see also-:	https://github.com/nvs-vocabs/S02											

↑ -- attached to the --

URI	http://vocab.nerc.ac.uk/collection/S02/current/S021/
Identifier ()	SDN:S02::S021
Preferred label (en)	attached to the
Alternative label ()	
Version Info ()	1
Has Current Version	http://vocab.nerc.ac.uk/collection/S02/current/S021/1/
PAV Version ()	1
PAV Authored On ()	2006-04-06 16:04:00.0
Definition ()	
Deprecated ()	false
Related	http://vocab.nerc.ac.uk/collection/P01/current/BATTMAPZ/
Date ()	2006-04-06 16:04:00.0

↑ -- by the --

URI	http://vocab.nerc.ac.uk/collection/S02/current/S022/
Identifier ()	SDN:S02::S022
Preferred label (en)	by the
Alternative label ()	
Version Info ()	1
Has Current Version	http://vocab.nerc.ac.uk/collection/S02/current/S022/1/
PAV Version ()	1
PAV Authored On ()	2006-04-06 16:04:00.0
Definition ()	
Deprecated ()	false
Related	http://vocab.nerc.ac.uk/collection/P01/current/BB117RSD/
Related	http://vocab.nerc.ac.uk/collection/P01/current/BB117B01/
Related	http://vocab.nerc.ac.uk/collection/P01/current/BB117G01/
Related	http://vocab.nerc.ac.uk/collection/P01/current/BB117NIR/
Related	http://vocab.nerc.ac.uk/collection/P01/current/BB117R01/
Related	http://vocab.nerc.ac.uk/collection/P01/current/VSSDACTX/
Related	http://vocab.nerc.ac.uk/collection/P01/current/BB117NSD/
Related	http://vocab.nerc.ac.uk/collection/P01/current/OWWAE07A/





WP8.1.5 Versioning of concepts

In NVS, each concept carries its own version number and publication date. Each time any concept attribute is modified, a DB trigger archives the record as it was, increments the version number and sets the last modification/publication timestamp to the current time.

↑ -- Latitude north (WGS84) by unspecified GPS system --	
URI	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/
Identifier ()	SDN:P01::ALATGP01
Preferred label (en)	Latitude north (WGS84) by unspecified GPS system
Alternative label (en)	Lat_GPS
Definition (en)	Unavailable
Version Info ()	2
Date ()	2012-07-25 11:51:09.0

Links to previous version
Access to the concept's
information as it was in previous version



Requirements

- Provide access to version information about the concept

Steps

- URL design
- RDF model design
- Implementation
 - REST
 - SPARQL and
 - SOAP interfaces



URL Design

- <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/>
 - Brings the current concept version
- <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/1/>
 - Brings concept version 1
- <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/2/>
 - Brings concept version 2
- <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/3/>
 - Brings concept version 3 etc.

ONTOLOGY	PROPERTY	Definition
provenance, authoring and versioning (PAV)	hasCurrentVersion	This property is intended for relating a non-versioned or abstract resource to a single snapshot that can be used as a permalink to indicate the current version of the content.
	hasVersion	This property is intended for relating a non-versioned or abstract resource to several versioned resources, e.g. snapshots
	previousVersion	The previous version of a resource in a lineage
	version	The version number of a resource. This is a freetext string
<u>dcterms</u>	isVersionOf	A related resource of which the described resource is a version, edition, or adaptation.

title-: SeaDataNet data transport formats	
alternative-:	SDN formats
description-:	Formats used for data delivery by SeaDataNet.
date-:	2014-11-27 02:00:02.0
publisher-:	Natural Environment Research Council
creator-:	SeaDataNet
versionInfo-:	7
RE_RegisterManager:	British Oceanographic Data Centre
RE_RegisterOwner:	SeaDataNet
comment-:	Governance for vocabularies used in the EU SeaDataNet project implemented as consultation between BODC and the members of the SeaDataNet Technical Team
↑ -- Bathymetric Attributed Grid format --	
URI	http://vocab.nerc.ac.uk/collection/L24/current/BAG/
Identifier ()	SDN:L24::BAG
Preferred label (en)	Bathymetric Attributed Grid format
Alternative label ()	BAG
versionInfo ()	Has Current Version http://vocab.nerc.ac.uk/collection/L24/current/BAG/1/
PAV version ()	
PAV Authored On ()	2014-06-24 08:56:13.0
Definition (en)	A global, non-proprietary, open source exchange format created to facilitate the processing and storage of large volume multibeam sonar data. It is developed by the Open Navigation Surface Working Group.
Deprecated ()	false
Date ()	2014-06-24 08:56:13.0
↑ -- Climate and Forecast NetCDF --	
URI	http://vocab.nerc.ac.uk/collection/L24/current/CF/
Identifier ()	SDN:L24::CF
Preferred label (en)	Climate and Forecast NetCDF
Alternative label ()	CF_NetCDF
versionInfo ()	Has Current Version http://vocab.nerc.ac.uk/collection/L24/current/CF/3/
PAV version ()	
PAV Authored On ()	2013-07-16 12:27:17.0
Definition (en)	SeaDataNet extension of the Climate and Forecast (http://www.cfconventions.org/) version 1.5 standard binary format with additional semantics embedded. Designed for gridded data.
Deprecated ()	false
Related	http://vocab.nerc.ac.uk/collection/C10/current/SPGRID/
Related	http://vocab.nerc.ac.uk/collection/C69/current/Q/
Date ()	2013-07-16 12:27:17.0
↑ -- Climate and Forecast Point Data NetCDF --	
URI	http://vocab.nerc.ac.uk/collection/L24/current/CFPOINT/
Identifier ()	SDN:L24::CFPOINT
Preferred label (en)	Climate and Forecast Point Data NetCDF
Alternative label ()	CF.6_NetCDF
versionInfo ()	Has Current Version http://vocab.nerc.ac.uk/collection/L24/current/CFPOINT/1/
PAV version ()	
PAV Authored On ()	2013-07-16 12:27:20.0
Definition (en)	SeaDataNet extension of the Climate and Forecast (http://www.cfconventions.org/) version 1.6 standard binary format for point data with additional semantics embedded. Designed for profiles, time series and trajectories.



WP8.1.5 Versioning of concepts

↑ -- Latitude north (WGS84) by unspecified GPS system --

URI	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/
Identifier ()	SDN:P01::ALATGP01
Preferred label (en)	Latitude north (WGS84) by unspecified GPS system
Alternative label (en)	Lat_GPS
Definition (en)	Unavailable
Version Info ()	2
Date ()	2012-07-25 11:51:09.0

Link to previous versions

Access to the concept's
information as it was in previous versions

↑ -- Latitude north (WGS84) by unspecified GPS system --

URI	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/
Identifier ()	SDN:P01::ALATGP01
Preferred label (en)	Latitude north (WGS84) by unspecified GPS system
Alternative label (en)	Lat_GPS
Definition (en)	Unavailable
Version Info ()	2
Has Current Version	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/2/
Has Version	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/1/
PAV Version ()	1

↑ -- Latitude north (WGS84) by unspecified GPS system --

URI	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/1/
Identifier ()	SDN:P01::ALATGP01
Preferred label (en)	Latitude north (WGS84) by unspecified GPS system
Alternative label (en)	Lat_GPS
Definition (en)	Global Positioning System (receiver type unspecified)
Version Info ()	1
Is Version Of	http://vocab.nerc.ac.uk/collection/P01/current/ALATGP01/
PAV Version ()	1
PAV Authored On ()	2009-05-19 14:31:28.0
Deprecated()	false
Date ()	2009-05-19 14:31:28.0



Provenance of mappings

To ensure that there is confidence in mappings carried out, information relating to **who** has carried out the mappings and their reliability was stored alongside the mappings.

Inbox (31,264) - alexander.kirchhoff@bodc.ac.uk x Mail – alexk@bodc.ac.uk x vocab.nerc.ac.uk/collect... x Mail – alexk@bodc.ac.uk x N

Not secure | vocab.nerc.ac.uk/collection/S25/current/BE006789/

Apps Bookmarks Hibernate Projects BODCInternal Q&D-RDF RDF study PHD Vocabularies

↑ -- **Protoperidinium humile (WoRMS 233263)** --

URI	http://vocab.nerc.ac.uk/collection/S25/current/BE006789/
Identifier ()	SDN:S25::BE006789
Preferred label (en)	Protoperidinium humile (WoRMS 233263)
Alternative label ()	
Definition ()	
Version Info ()	1
Has Current Version	http://vocab.nerc.ac.uk/collection/S25/current/BE006789/1/
PAV Version ()	1
PAV Authored On ()	2011-03-04 11:01:44.0
Deprecated()	false
Same as	http://www.marinespecies.org/aphia.php?p=taxdetails&id=233263
Same as	http://lsid.tdwg.org/urn:lsid:marinespecies.org:taxname:233263
Broader	http://vocab.nerc.ac.uk/collection/S01/current/S015/
Narrower	http://vocab.nerc.ac.uk/collection/P01/current/BE6789AB/
Date ()	2011-03-04 11:01:44.0





New URL

external

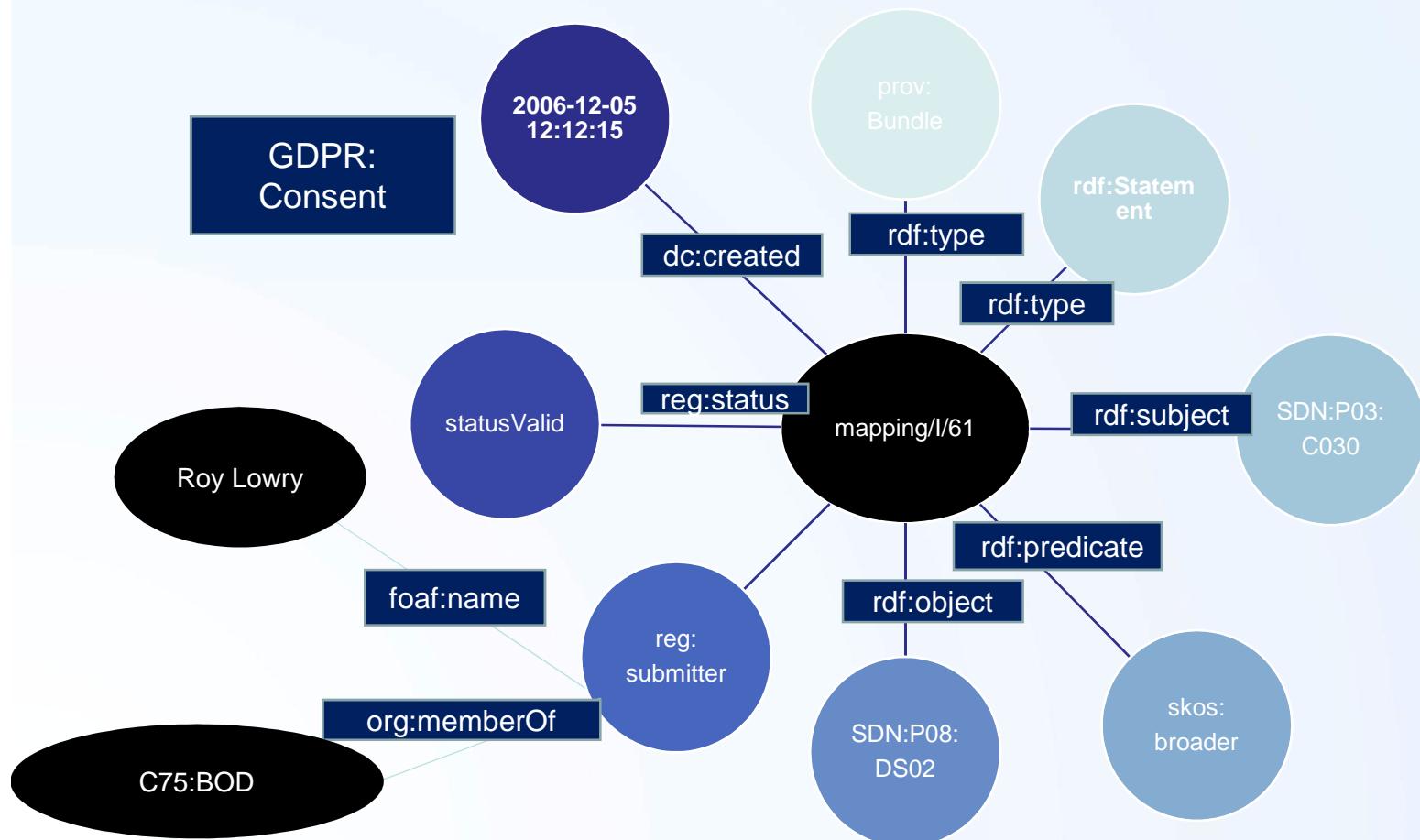
- <http://vocab.nerc.ac.uk/mapping/{I/E}/{mapref}/>

internal

Unique identifier for
the mapping



Model with Reification



N http://vocab.nerc.ac.uk/mapping × +

Not secure | vocab.nerc.ac.uk/mapping/I/61/

Apps Bookmarks Hibernate Projects BODCInternal Q&D-RDF RDF study PHD Vocabularies rdf_staff medepad Q&C

Click entity for XPath. Double-click to collapse/expand. Enter XPath or XML string
then click XPath1/Parse for results or to XML Tree-ify, respectively.

XPath1/Parse XSL 1.0

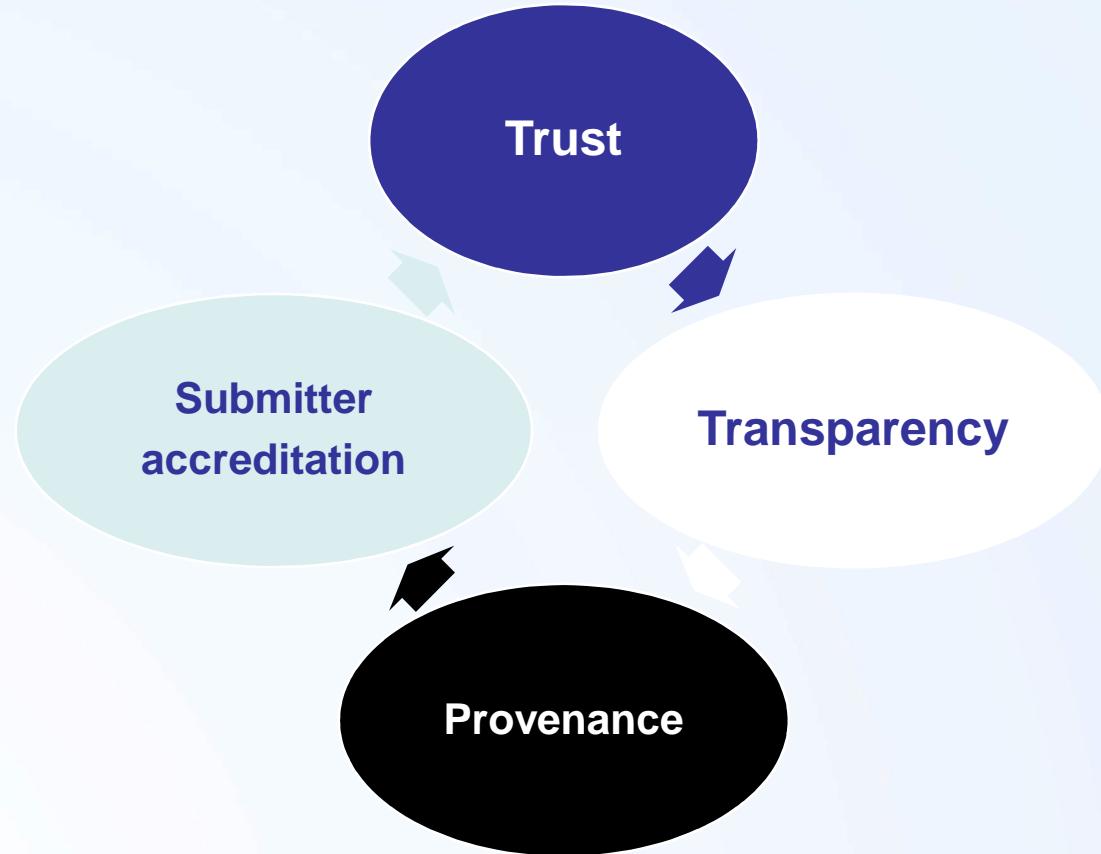
```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:dc="http://purl.org/dc/terms/" xmlns:reg="http://purl.org/linked-data/resource#"
  xmlns:foaf="http://xmlns.com/foaf/0.1/" xmlns:prov="http://www.w3.org/ns/prov#" xmlns:org="http://www.w3.org/ns/org#">
  <rdf:Description rdf:about="http://vocab.nerc.ac.uk/mapping/I/61/">
    <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Statement"/>
    <rdf:subject rdf:resource="http://vocab.nerc.ac.uk/collection/P03/current/C030"/>
    <rdf:predicate rdf:resource="http://www.w3.org/2004/02/skos/core#broader"/>
    <rdf:object rdf:resource="http://vocab.nerc.ac.uk/collection/P08/current/DS02"/>
    <reg:submitter rdf:parseType="Resource">
      <rdf:type rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
      <rdf:type rdf:resource="http://www.w3.org/ns/prov#Agent"/>
      <foaf:name>Roy Lowry</foaf:name>
      <foaf:title>Dr</foaf:title>
      <org:memberOf rdf:resource="http://vocab.nerc.ac.uk/collection/C75/current/BOD"/>
    </reg:submitter>
    <reg:status rdf:resource="http://purl.org/linked-data/resource#statusValid"/>
    <dc:created rdf:datatype="http://www.w3.org/2001/XMLSchema#dateTime">2006-12-05 12:12:15</dc:created>
  </rdf:Description>
</rdf:RDF>
```



SPARQLing

Give me all the mappings Michele has submitted

```
select ?s ?p ?o ?t ?u where {?a <http://purl.org/linked-
data/registry#submitter> ?c .
?a <http://www.w3.org/1999/02/22-rdf-syntax-ns#subject> ?s .
?a <http://www.w3.org/1999/02/22-rdf-syntax-ns#predicate> ?p.
?a <http://www.w3.org/1999/02/22-rdf-syntax-ns#object> ?o.
?c ?t ?u.
FILTER(regex(?u,"Fich","i"))
} limit 100
```





Task WP8.1.4: Deprecation of vocabularies

IFREMER, MARIS, BSH

- MARIS CDI import
- IFREMER Mikado, Nemo, Download Manager
- BSH CSR XML import, CSR data input
webform
- BODC EDIOS import, EDMED import



Work Overview

Tasks	Status
NVS2.0 SOAP/API/SPARQL enhancement to handle deprecation	Done
Support for deprecation	Ongoing



All vocabs that have been updated since October 2018

- select * where {?a <<http://purl.org/dc/terms/modified>> ?dateX .}
- FILTER((?dateX)>"2018-10")
- }



All deprecated terms and the terms that replace them

```
select * where {?a  
<http://purl.org/dc/terms/isReplacedBy> ?p .} limit  
100
```



Thank you

Questions? ^