



SeaDataCloud

Common Vocabulary Services

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Controlled vocabularies

- In information science controlled vocabularies are carefully selected lists of words and phrases, which are used to tag units of information (document or work) so that they may be more easily retrieved by a search.
- Roles:
 - capture expertise in **agreed, well-defined, standardised descriptions**
 - enable population of a given field in a metadata model with standardised unambiguous terms
 - promote consistency, harmonization and interoperability
 - enhance discoverability

URI: <http://vocab.nerc.ac.uk/collection/A01/current/>

title: **International Coastal Atlas Network Coastal Erosion Global Thesaurus**

alternative: **ICAN Coastal Erosion Global Thesaurus**

description: **Terms used at all hierarchical levels in the ICAN global thesaurus for coastal erosion**

creator: **International Coastal Atlas Network**

publisher: **Natural Environment Research Council**

date: **2011-08-16 02:00:06.0**

versionInfo: 1

Broader: <http://vocab.nerc.ac.uk/collection/A01/current/>

Narrower: <http://vocab.nerc.ac.uk/collection/A01/curr/>

Narrower: <http://vocab.nerc.ac.uk/collection/A02/curr/>

Narrower: <http://vocab.nerc.ac.uk/collection/A03/curr/>

Narrower: <http://vocab.nerc.ac.uk/collection/A04/curr/>

Narrower: <http://vocab.nerc.ac.uk/collection/I03/curr/>

Narrower: <http://vocab.nerc.ac.uk/collection/P02/curr/>

RegisterOwner: **International Coastal Atlas Network**

comment: **International federation of coastal web atlases. Governance implemented through the Technical Group**

RegisterManager: **British Oceanographic Data Centre**

```

1 <?xml version="1.0" encoding="UTF-8"?><?xml-stylesheet href="/VocabV2/Collection2Html.xsl" type="text/xsl" me
2 xmlns:skos="http://www.w3.org/2004/02/skos/core#" xmlns:dc="http://purl.org/dc/terms/" xmlns:dce="http://purl
3 xmlns:grg="http://www.isotc211.org/schemas/grg/">
4 <skos:Collection rdf:about="http://vocab.nerc.ac.uk/collection/A01/current/">
5 <skos:prefLabel>International Coastal Atlas Network Coastal Erosion Global Thesaurus</skos:prefLabel>
6 <dc:title>International Coastal Atlas Network Coastal Erosion Global Thesaurus</dc:title>
7 <skos:altLabel>ICAN Coastal Erosion Global Thesaurus</skos:altLabel>
8 <dc:alternative>ICAN Coastal Erosion Global Thesaurus</dc:alternative>
9 <dc:description>Terms used at all hierarchical levels in the ICAN global thesaurus for coastal erosion. Term
10 <dc:creator>International Coastal Atlas Network</dc:creator>
11 <grg:RE_RegisterOwner>International Coastal Atlas Network</grg:RE_RegisterOwner>
12 <dc:comment>International federation of coastal web atlases. Governance implemented through the Technical
13 <dc:publisher>Natural Environment Research Council</dc:publisher>
14 <owl:versionInfo>1</owl:versionInfo>
15 <grg:RE_RegisterManager>British Oceanographic Data Centre</grg:RE_RegisterManager>
16 <dc:date>2011-08-16 02:00:06.0</dc:date>
17 <skos:broader rdf:resource="http://vocab.nerc.ac.uk/collection/A01/current/">
18 <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/A01/current/">
19 <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/A02/current/">
20 <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/A03/current/">
21 <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/A04/current/">
22 <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/I03/current/">
23 <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P02/current/">
24 </skos:Collection>
25 <skos:Collection rdf:about="http://vocab.nerc.ac.uk/collection/A02/current/">
26 <skos:prefLabel>Oregon Coastal Atlas Coastal Erosion Thesaurus markup terms</skos:prefLabel>
27 <dc:title>Oregon Coastal Atlas Coastal Erosion Thesaurus markup terms</dc:title>
28 <skos:altLabel>OCA Coastal Erosion markup terms</skos:altLabel>
29 <dc:alternative>OCA Coastal Erosion markup terms</dc:alternative>
30 <dc:description>Terms used at all hierarchical levels in the Oregon Coastal Atlas for coastal erosion. Term

```

• Concepts

- 159311 valid concepts including:
- P01 parameter codes: 37368
- L22 instrument codes :1198

• Mappings

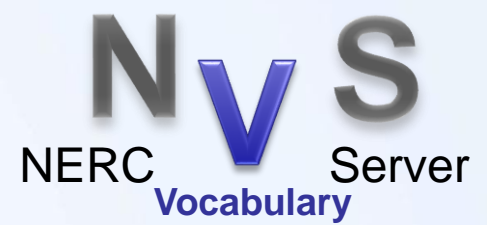
- 617777 internal mappings between concepts
- 21059 mappings of NVS concepts to external resources

• Schemes

- 21 SKOS schemes

• Collections

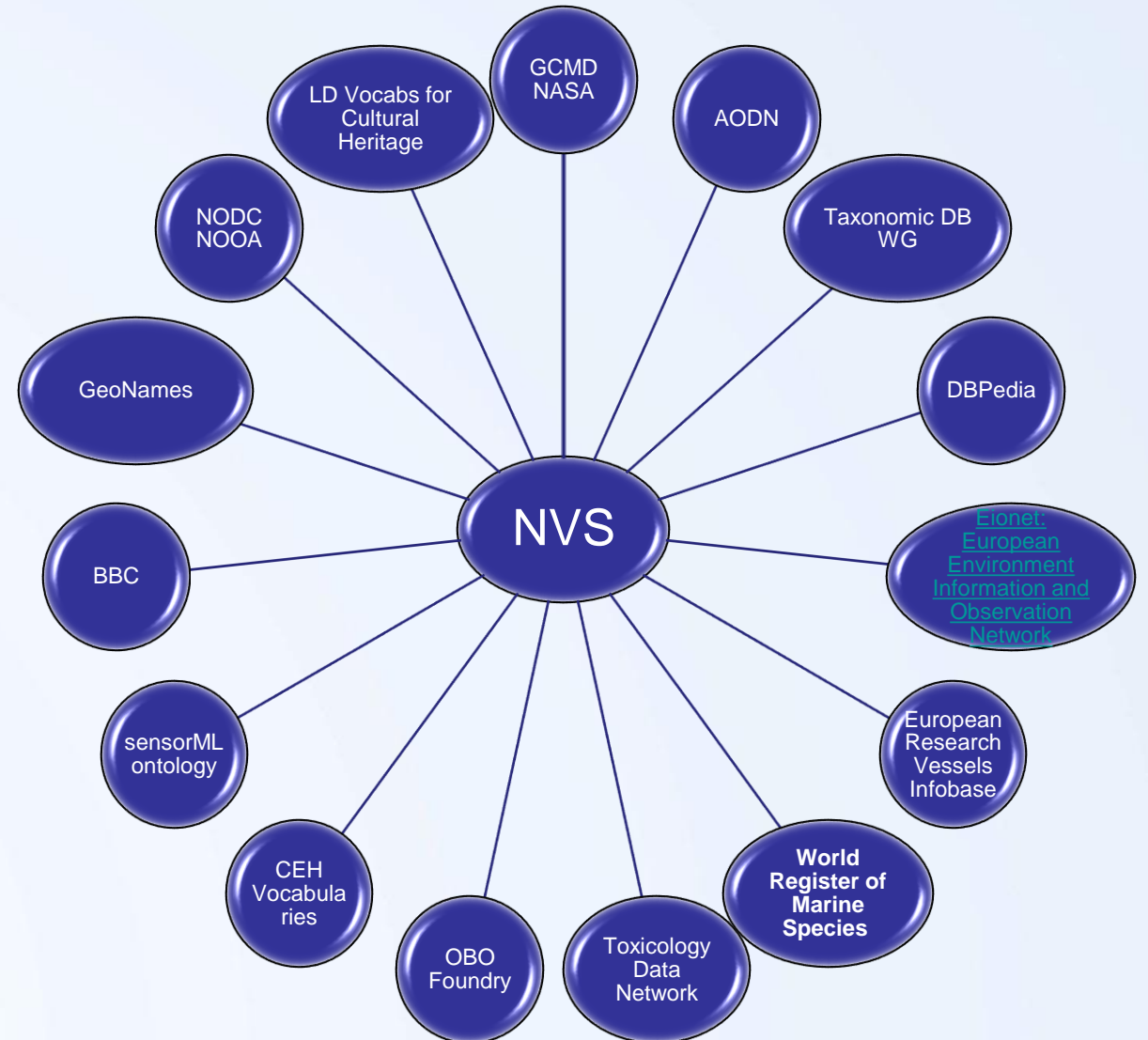
- 239 vocabulary collections
- 71 are owned and governed by BODC
- 55 are under SDC/EMODnet/SeaVox/SWE content governance
- Remainder (113) are owned by 25 different governing bodies




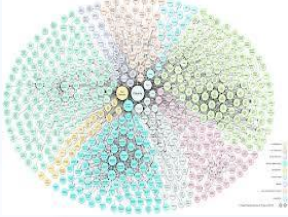

Vocab Management Group

- Technical lead: **Alexandra Kokkinaki**
- Content lead and overall group coordination: **Gwen Moncoiffé**
- Instruments (L22 and L05) and SWE Vocab lead: **Louise Darroch**
- Vocab schema management: **Sean Gaffney**
- Consultant: **Roy Lowry**
- Overlap of expertise and training of new members to ensure every domain is covered by at least 2 members of staff:
 - Chemical domain: Gwen Moncoiffé and Lou Darroch
 - Biological domain: Gwen Moncoiffé and **Arwen Bargery**
 - Physical domain: **Mark Hebden** and **Dani Edgar**
 - Instruments and platforms: Lou Darroch, **Vi Paba** and Dani Edgar
 - Gatekeepers: Gwen and Sean
- New requests through enquiries@bodc.ac.uk

- NVS is a SKOS-vocabulary
- Linked Data
 - Unique http URIs
 - <http://vocab.nerc.ac.uk/collection/XXX/current/>
 - <http://vocab.nerc.ac.uk/collection/XXX/current/YYYYY/>
 - <http://vocab.nerc.ac.uk/scheme/>
 - Content negotiation
 - RDF/XML
 - Human readable interface
 - Mappings
 - Internal (NVS 2 NVS)
 - External (NVS to ext Vocabularies)



Publication

	<p>http://vocab.nerc.ac.uk/sparql/</p>
	<p>http://vocab.nerc.ac.uk/collection/ http://vocab.nerc.ac.uk/collection/XXX/current/ http://vocab.nerc.ac.uk/collection/XXX/current/YYYY/ http://vocab.nerc.ac.uk/scheme/</p>
	<p>http://vocab.nerc.ac.uk/vocab2.wsd/</p>

Principles of operation

- Governance
 - managed by the BODC rigorous content governance principles
 - Each controlled vocabulary its content governance authority
 - its content governance model
 - totally internal, collaborative or totally external.
- Deletion vs Deprecation
 - Never delete, only deprecate
 - All deprecated terms are replaced by a new term: skos:replacedBy
- Versioning
 - Version URLs currently on Collection level
 - Version number on terms and collection

Searching

Vocabulary search [help](#)

Simple search for vocabularies

Advanced search for vocabularies

Simple search within a vocabulary

Advanced search within a vocabulary

Click search button with empty search text to get list of all available collections

Search text

Library	Thesaurus	Title	Alt Title	Version	Members	Modified
C16		SeaDataNet sea areas	SDN sea areas	9	127	11/7/2012 2:00:06 AM
C17		ICES Platform Codes	ICES Platforms	691	5394	1/19/2018 2:00:03 AM
C19		SeaVOX salt and fresh water body gazetteer	SeaVOX water bodies	16	263	2/19/2015 2:00:03 AM
C32		International Standards Organisation countries	ISO countries	7	251	1/14/2016 2:00:02 AM
C34		Activity purpose categories	Purpose categories	4	22	8/27/2011 3:00:05 AM
C35		European Nature Information System Level 3 Habitats	EUNIS3 Habitats	1	56	2/19/2010 2:01:37 AM
C36		Monitoring activity legislative drivers	Monitoring drivers	8	91	6/21/2017 3:00:03 AM
C37		Ten-degree Marsden Squares	Marsden-10	3	612	1/9/2009 2:00:05 AM
C38		SeaDataNet Ports Gazetteer	SeaDataNet Ports	61	4912	12/5/2017 2:00:02 AM
C39		World Meteorological Organisation sea WMO sea states	WMO sea states	1	10	9/30/2009 3:01:08 AM
C45		Marine Strategy Framework Directive	MSFD descriptors	3	11	2/25/2017 2:00:02 AM

https://www.bodc.ac.uk/resources/vocabularies/vocabulary_search/

http://seadatanet.maris2.nl/v_bodc_vocab_v2/welcome.asp

(Search+Build)-P01

Search P01

Semantic Model Vocabulary Builder

Some of BODC's vocabulary collections like for example, the BODC Parameter Usage Vocabulary (P01) are based on a semantic model. The semantic model uses a defined set of controlled vocabularies (the semantic building blocks) and organises them into a structured label which is then used to populate the preferred label field of the main vocabulary. This helps maintain a consistent logic when naming related concepts.

The VOCAB BUILDER tool allows users to browse these vocabularies based on their semantic building blocks. Registered users can also log in and submit new terms.

The following vocabularies are available as semantic models

- [Chemical entity parameter codes](#) (subset of P01)
- [Biological entity parameter codes](#) (subset of P01)
- [Physical entity and other parameter codes](#) (subset of P01)
- [Measurement matrix concepts](#) (S26 and a component of the P01 semantic models)
- [Biological entity concepts](#) (S25 and a component of the P01 semantic models)

To submit new terms please [register](#) with BODC or [log in](#)

https://www.bodc.ac.uk/resources/vocabularies/vocabulary_builder/

Filter Search	Found 37689	Show (1-25)	Prev	Next	EXPORT
Free Search	Concept (37689)				PrefLabel
new string	A079G0X				Particulate-bound sedimentation flux of heptachloro-88-138,23E-trien-2-one (C37) CAS 11960-11-2 per unit time per unit area of the water body by sediment trapping, solvent extraction and gas chromatography
MEASUREMENT PROPERTY (526)	A029G0X				Particulate-bound sedimentation flux of heptachloro-15E,22E-dien-2-one (C37) CAS 11960-09-8 per unit time per unit area of the water body by sediment trapping, solvent extraction and gas chromatography
Concentration (13145)	A039A0Z				Biosurface area of Coscinodiscus (ITS: 2546; WoRMS 148917) per unit volume of the water body by optical microscopy
Abundance (1479)	A079A0Z				Biosurface area of Fibrocapsa directa (ITS: 3669; WoRMS 149467) per unit volume of the water body by optical microscopy
Abundance (2823)	A079A0Z				Biosurface area of Nitoscha (ITS: 5570; WoRMS 119270) per unit volume of the water body by optical microscopy
Asb-free dry weight (1606)	A093A0Z				Biosurface area of Rhizosolenia shubertii (ITS: 2910) per unit volume of the water body
Liquid normalised concept (1109)					
CHEMICAL SUBSTANCE (527)					
total mercury (430)					
cadmium (385)					
lead (362)					
zinc (249)					

http://seadatanet.maris2.nl/bandit/browse_step.php

Edit

Vocabulary editor

BODC operates the NERC [Vocabulary Service](#) Web Service, which provides access to controlled vocabularies. Some of these vocabularies are totally managed by BODC but others have external content governance authorities.

The vocabulary editor allows external authorities access to their vocabularies without the need for manual interaction by BODC. Within the VocabEditor Client (version 1.0) authorised editors may maintain lists under their governance by

- Inserting a single entry
- Uploading bulk entries
- Modifying an existing entry
- Deprecating an entry

To access the VocabEditor please log in below, please note – access is restricted to authorised content governance authorities.

To access the vocabulary editor you are required to be a registered BODC web user. If you have already registered, please [log in](#), alternatively please [register](#) to become a new user.

https://www.bodc.ac.uk/resources/vocabularies/vocabulary_editor/

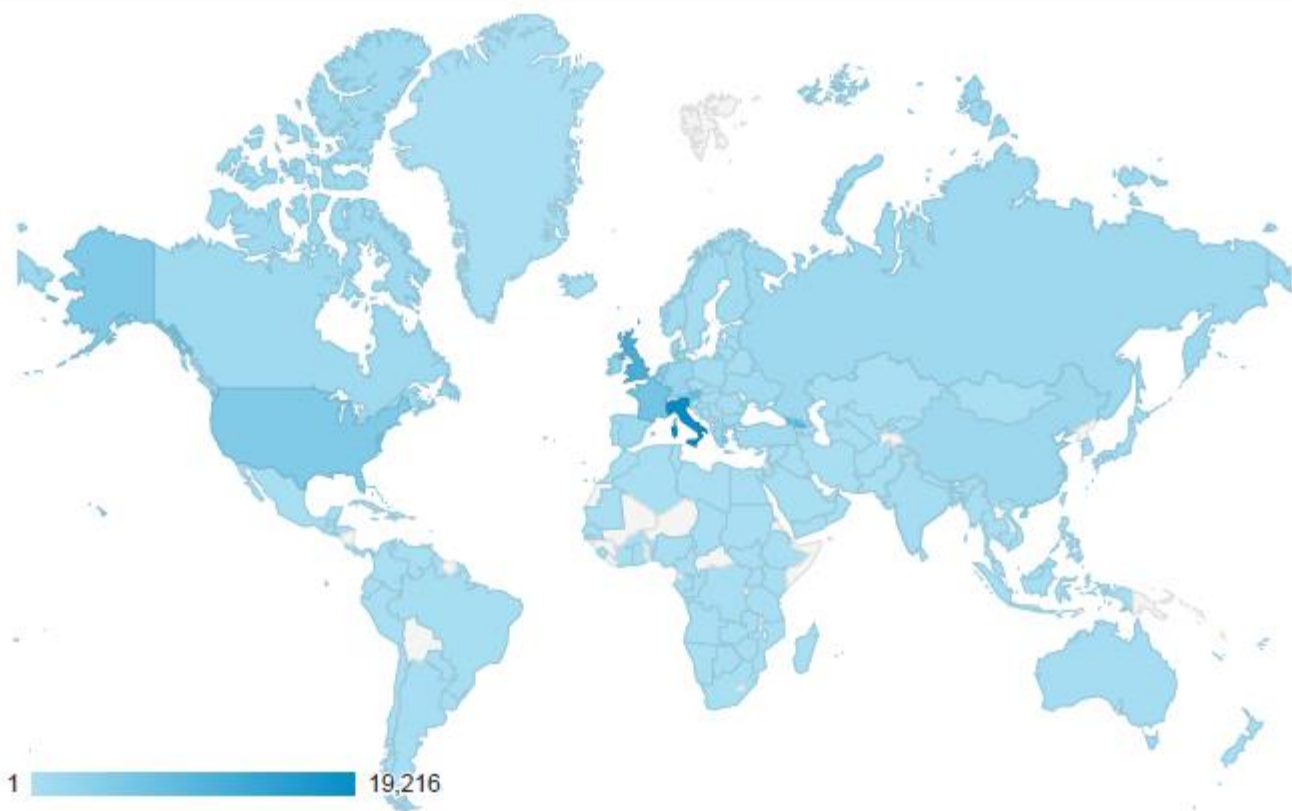
NVS Usage

Jan 1, 2017 - Dec 31, 2017

All Users
100.00% Sessions

Map Overlay

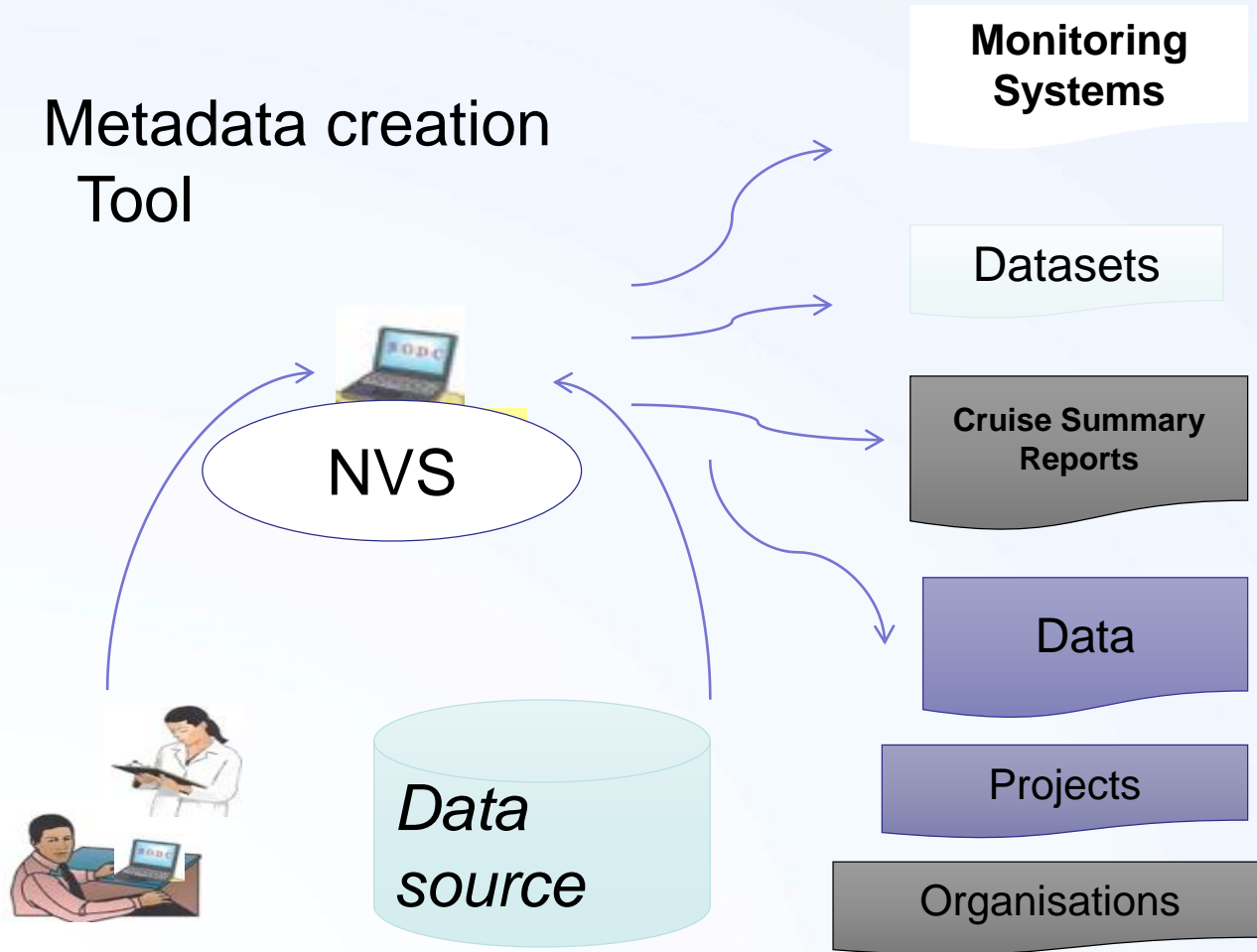
Summary



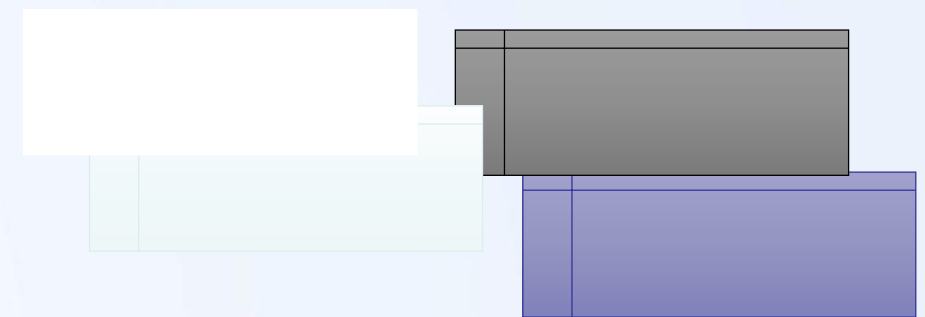
Country ?	Sessions ? ↓
	92,510 % of Total: 100.00% (92,510)
1. Italy	19,355 (20.92%)
2. United Kingdom	10,167 (10.99%)
3. Georgia	8,364 (9.04%)
4. Austria	8,233 (8.90%)
5. France	6,467 (6.99%)
6. United States	4,764 (5.15%)
7. Netherlands	3,490 (3.77%)
8. Ireland	3,192 (3.45%)
9. Belgium	2,591 (2.80%)
10. Germany	2,170 (2.35%)

NVS & EU SeaDataNet-2

Metadata creation
Tool



Metadata Discovery



Map from <http://www.seadatanet.org/Overview/Partners>

Identification Where When What How Who Where to find the data Cruise/Station Documentation Quality Others

Parameters

RBHY - Molecular biology parameters	Name	* Nitrification rate in the water column
MPMN - Moored instrument depth	Code P02	* AMOX
NTUP - New production in water bodies		
NTRA - Nitrate concentration parameters in the water column		
AMOX - Nitrification rate in the water column		
NTRI - Nitrite concentration parameters in the water column		
NTSD - Nitrogen concentrations in sediment		
NTSP - Nitrogen concentrations in suspended particulate matter		
NTPW - Nutrient concentrations in sediment pore waters		
SAMO - Nutrient fluxes between the bed and the water column		
R410 - Ocean colour and earth-leaving visible waveband spectra		
OPBS - Optical backscatter		
CSDE - Organic sulphur compound dynamics in the water column		
OMBI - Organometallic species concentration parameters in water bodies		
OMPW - Organometallic species concentration parameters in sediment pore waters		
OMWC - Organometallic species concentration parameters in water column		
DMST - Organosulphur species concentration parameters in water column		
SICO - Other fluxes between the bed and the water column		
DCMX - Other halocarbon concentrations in water bodies		
HLDE - Other halocarbon dynamics in water bodies		
OMET - Other meteorological measurements		

Administration and dimensions
> Administration and dimensions
Atmosphere
> Atmospheric chemistry



Discovery parameters

All
Acoustic backscatter in the water column
Acoustic noise in the water column
Air pressure
Air temperature

Cruise/Station name

ⓘ

Instrument type

All
>2000 Hz top-bandwidth single-channel seism
>2000 Hz top-bandwidth sub-bottom penetrat
1000 Hz top-bandwidth multi-channel seismic ⓘ

Projectname

ⓘ

Instrument depth (m)
from

to ⓘ

Datasetname

ⓘ

Platform type

All
aeroplane
autonomous surface water vehicle
autonomous underwater vehicle ⓘ

Sea regions

All
World
> Arctic Ocean
>> Baffin Bay ⓘ

Measuring area type

All ⓘ

Waterdepth (m) from

to ⓘ

Temporal resolution

All ⓘ

Originator

All ⓘ

Date (yyyymmdd) from

to ⓘ

CDI partner

All ⓘ

Duration

to Unit ⓘ

Country

All ⓘ

Access restriction

All
academic
by negotiation
commercial charge ⓘ

Progress



WP8.1.3 Further develop the Vocabulary Builder tool



W8.1.1 Improve the transparency of the vocabulary governance model



WP8.1.2 Develop new vocabularies



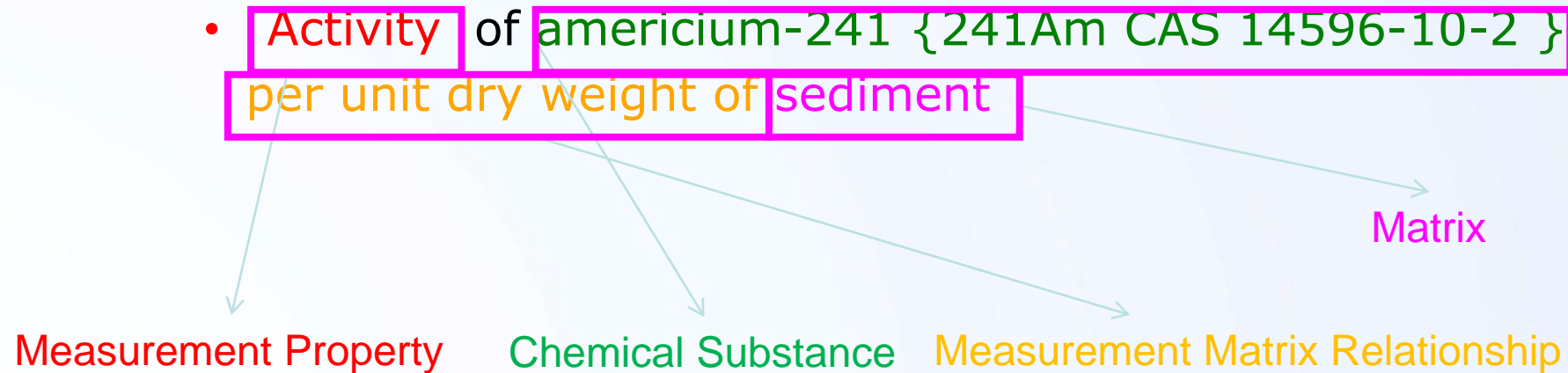
WP8.1.5 Make versioning and history of concepts visible through NVS



WP8.1.6 Document the provenance of mappings

Background

- P01 concept labels are created from a concatenation of concept labels from other vocabularies following an underlying semantic model.



- Inventories
- ▾ Vocabularies
 - NVS search tool
 - NVS editor
 - NVS vocabulary builder
 - BODC parameter codes
 - SeaVoX
- Delivery formats
- Products
- Help and hints
- Portals and links
- Search

P01 Biological Entity Parameter Code Builder help

Preferred label

[show/hide exact results](#) | [reset all](#)

Found **7354** exact matches

- Select a measurement property **S06**
- Select a statistical qualifier (if applicable) **S07**
- Select a primary biological entity **S25**
- Select a secondary biological entity (if applicable) **S25**
- Select a measurement-matrix relationship **S30**
- Select a matrix **S26**
- Select a sample preparation (if applicable) **S03**
- Select an analytical method (if applicable) **S04**
- Select a post-analysis processing (if applicable) **S05**

[Return to index](#)

[Login to enable new concept creation](#)

- Inventories
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Search: No Login

Submit terms: Login

To submit new terms please [register](#) with BODC or [log in](#)



Content progress

- New flow cytometry technical codes added for SDC to P01
- New F02 vocabulary set up and populated with reference names for flow cytometry groupings as agreed by group of FC experts
- A couple of Sampling metadata terms added to P01 GP model (see e.g. <http://vocab.nerc.ac.uk/collection/P01/current/MTHAREA1/> and <http://vocab.nerc.ac.uk/collection/P01/current/MSHSIZE1/>) for Emodnet_chem microplastic request; the physical entity is defined as the "sample collector" i.e. uses the same terminology as that used in L21.
- New C17 platform codes populated
- New contaminant codes created for Emodnet chem

Improve the transparency of the vocabulary governance model

- Keep the governance information on the collection level
- Create github page for each collection and associate the collection with the page through an rdfs:seeAlso

Example: P02

```
<skos:Collection rdf:about="http://vocab.nerc.ac.uk/collection/P02/current/">  
<dc:creator>SeaDataNet</dc:creator>  
<grg:RE_RegisterOwner>SeaDataNet</grg:RE_RegisterOwner>  
<rdfs:comment>Governance for vocabularies used in the EU SeaDataNet project implemented as  
consultation between BODC and the members of the SeaDataNet Technical Task Team</rdfs:comment>  
<rdfs:seeAlso>https://github.com/gwemon/P02-Biological-terms-review/tree/master</rdfs:seeAlso>
```

Versioning of concepts- URI 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 without mappings
 - <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/2/> Brings concept version 2 without mappings
 - <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/3/> Brings concept version 3 without mappings
-
- <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/>
dct:hasVersion
 - <http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/1/>,
<http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/2/>,
<http://vocab.nerc.ac.uk/collection/P07/current/CF12N86/3/>



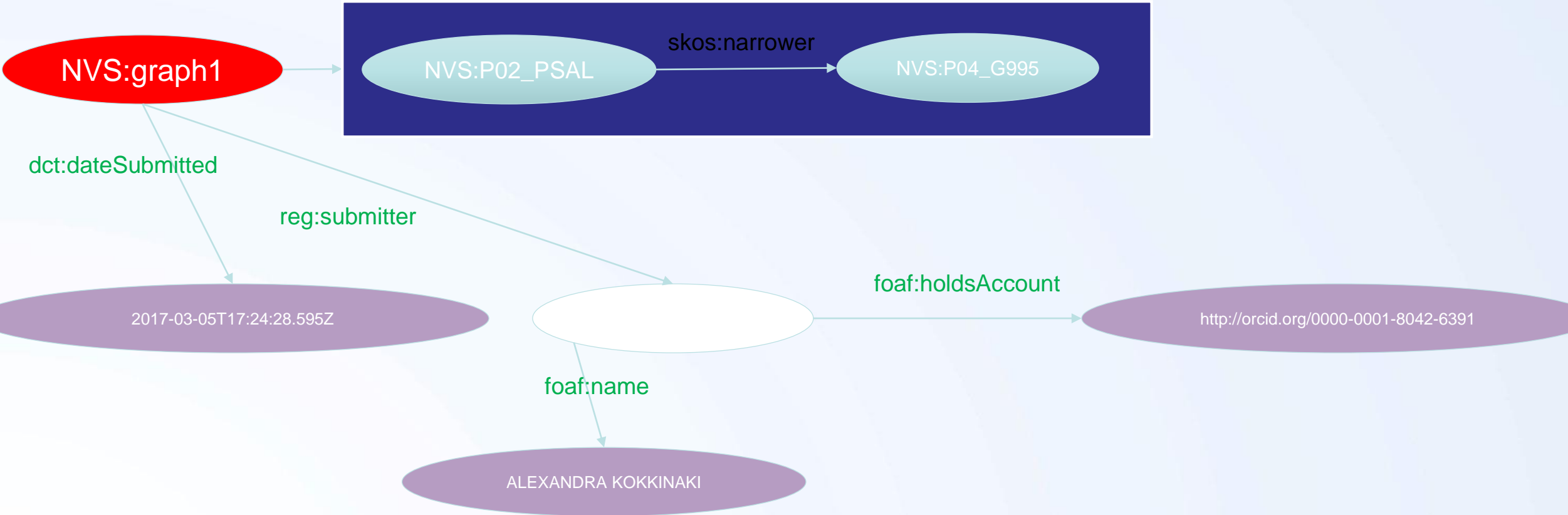
SeaDataCloud

WP8.1.6: Provenance of mappings - Progress

@prefix reg: <http://purl.org/linked-data/registry#>

@prefix foaf: <<http://xmlns.com/foaf/0.1/>>

@prefix skos: <<http://xmlns.com/foaf/0.1/>>



Thanks!

