

# Introduction to the NERC Vocabulary Server

Gwenaëlle Moncoiffé

NERC Vocabulary Server Management Team Lead

National Oceanography Centre - British Oceanographic Data Centre



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# What is the NVS?

- A semantic repository for **standardised terminologies** used for the management of data in the **marine and related domains**
- It stores and serves terms and **relationships** between terms in **human and machine-readable** formats
- Vocabulary terms and list of terms are uniquely identified using persistent URIs

>> <https://vocab.nerc.ac.uk>

## The NERC Vocabulary Server (NVS)

[Service Status](#)

[NVS Home](#) | [Vocabularies](#) | [Thesauri](#) | [Search NVS](#) | [SPARQL](#) | [Other Tools](#) | [About NVS](#)

### NVS Vocabularies

URI

<http://vocab.nerc.ac.uk/collection/>

Description

SKOS concept collections held in the NERC Vocabulary Server. A concept collection is useful where a group of concepts shares something in common, and it is convenient to group them under a common label. In the NVS, concept collections are synonymous with controlled vocabularies or code lists. Each collection is associated with its governance body. An external website link is displayed when applicable.

### Alternates Profiles

Different views and formats:

[Alternate Profiles ?](#)

**Filter**

### Vocabularies

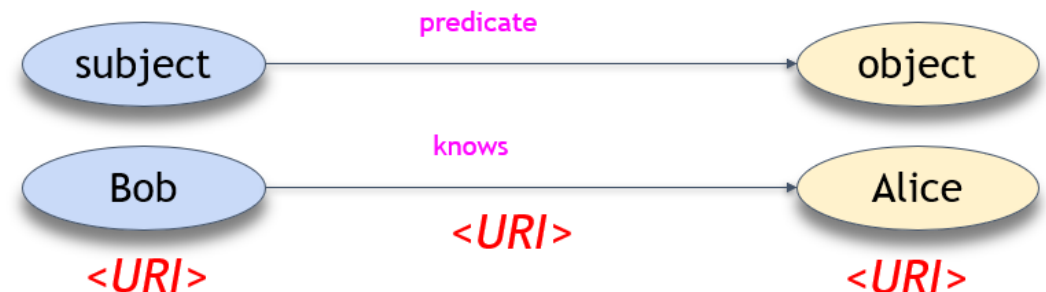
Sort by click on table headings, Filter using the search to the right.

ID ↑	Title ↑	Version ↑	Version Date ↑	Description ↑	Governance ↑	External Link ↑
<a href="#">C30</a>	Active vocabulary content governance authorities	31	2020-04-24	Bodies responsible for the intellectual control of vocabularies served by the NDG/SeaDataNet vocabulary server.	British Oceanographic Data Centre	
<a href="#">C34</a>	Activity purpose categories	4	2011-08-27	Terms used to specify why an activity was undertaken.	SeaDataNet	
<a href="#">R20</a>	Argo GROUNDED flags	2	2021-02-09	Codes to indicate the best estimate of whether the float touched the ground during a	Argo Data Management	

# Concepts and collections

- Concepts can be organised into collections and schemes or thesauri
- In the NVS structure, every concept must belong to one and only one collection
- But any concept may belong to one or more thesauri
- Concept collections are synonymous with controlled vocabularies or code lists
- An example of a collection is the SeaVoX Device Catalogue:  
<https://vocab.nerc.ac.uk/collection/L22>
- The NVS uses standards and ontologies including RDF and SKOS

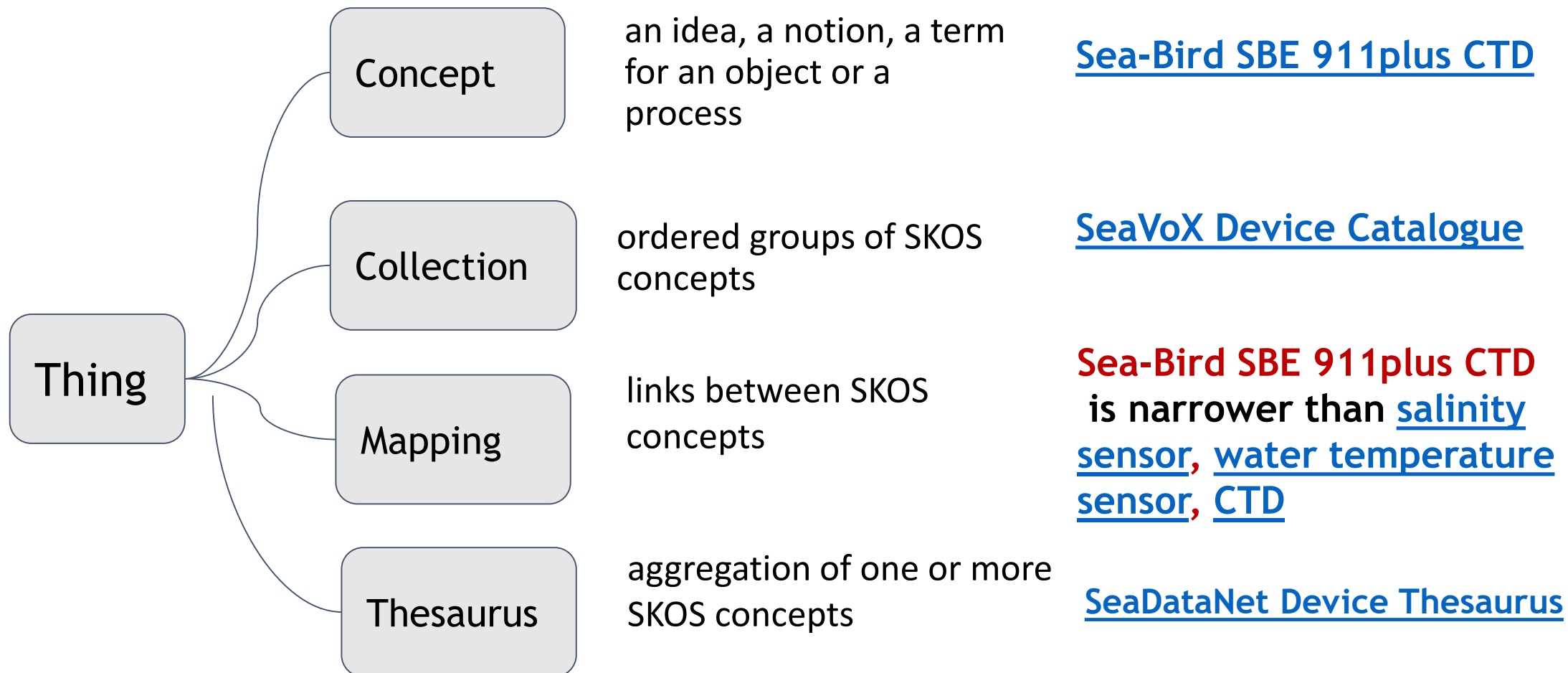
- RDF - Resource Description Framework
- What is RDF
  - A language to describe Resources
- What is a resource
  - Anything/concept in the world: a book, a movie, a web page, a term etc
  - must be identified by a Universally unique identifier (URI)
- What can you do with it?
  - Unambiguously describe a concept/resource/thing
  - Specify how these resources are related
  - Do basic inferencing



# Simple Knowledge Organisation System(SKOS)

- Knowledge Organisation Systems
  - *thesauri*
  - *controlled vocabularies*
  - *Taxonomies*
  - *Classification schemes*
  - *Subject heading systems*
- SKOS provides a standard way to represent KOS in RDF
- Machine readable and interoperable

# SKOS things



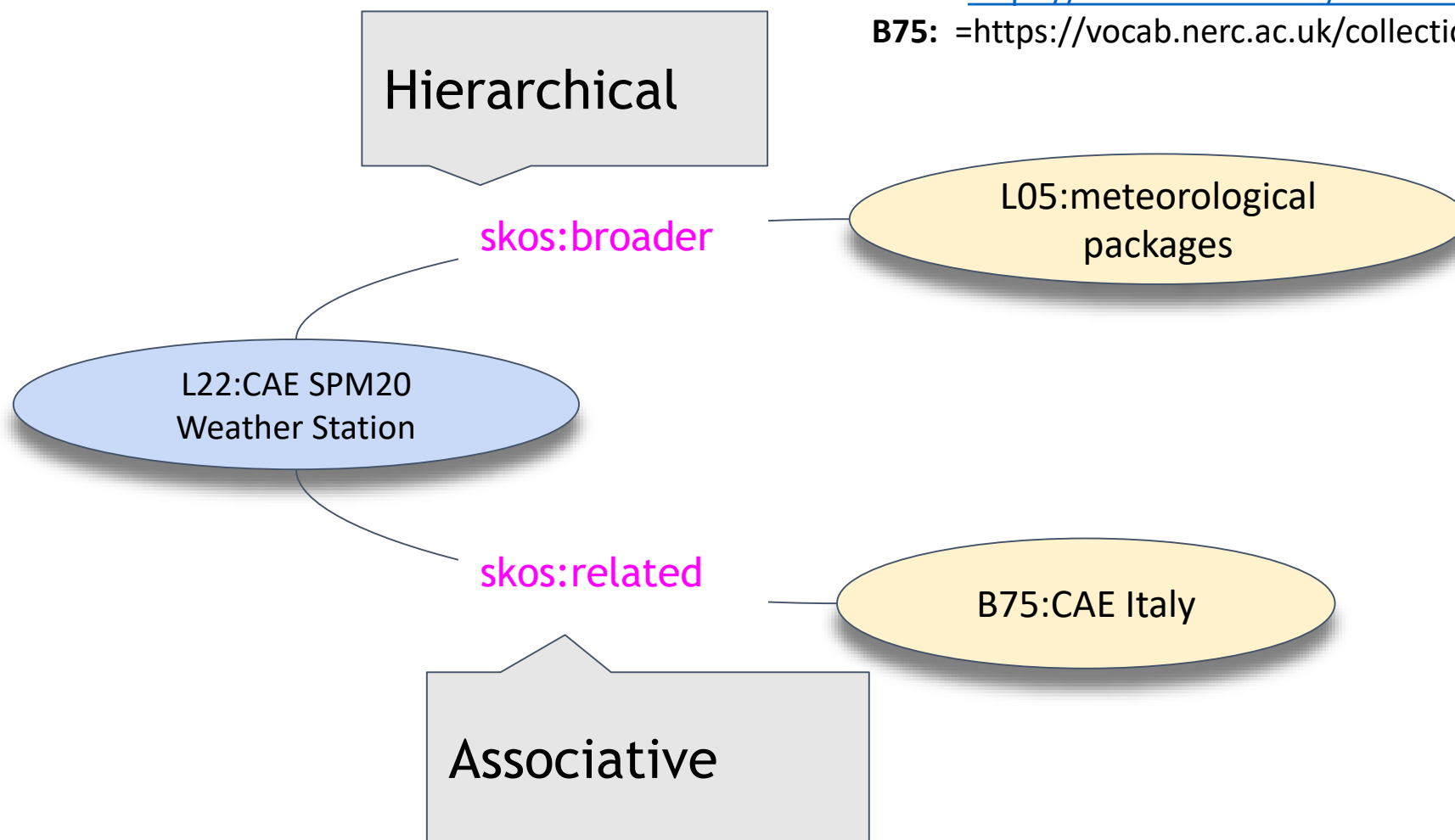
# Semantic relations

skos: = <http://www.w3.org/2004/02/skos/core#>

L05: = <https://vocab.nerc.ac.uk/collection/L05/current/>

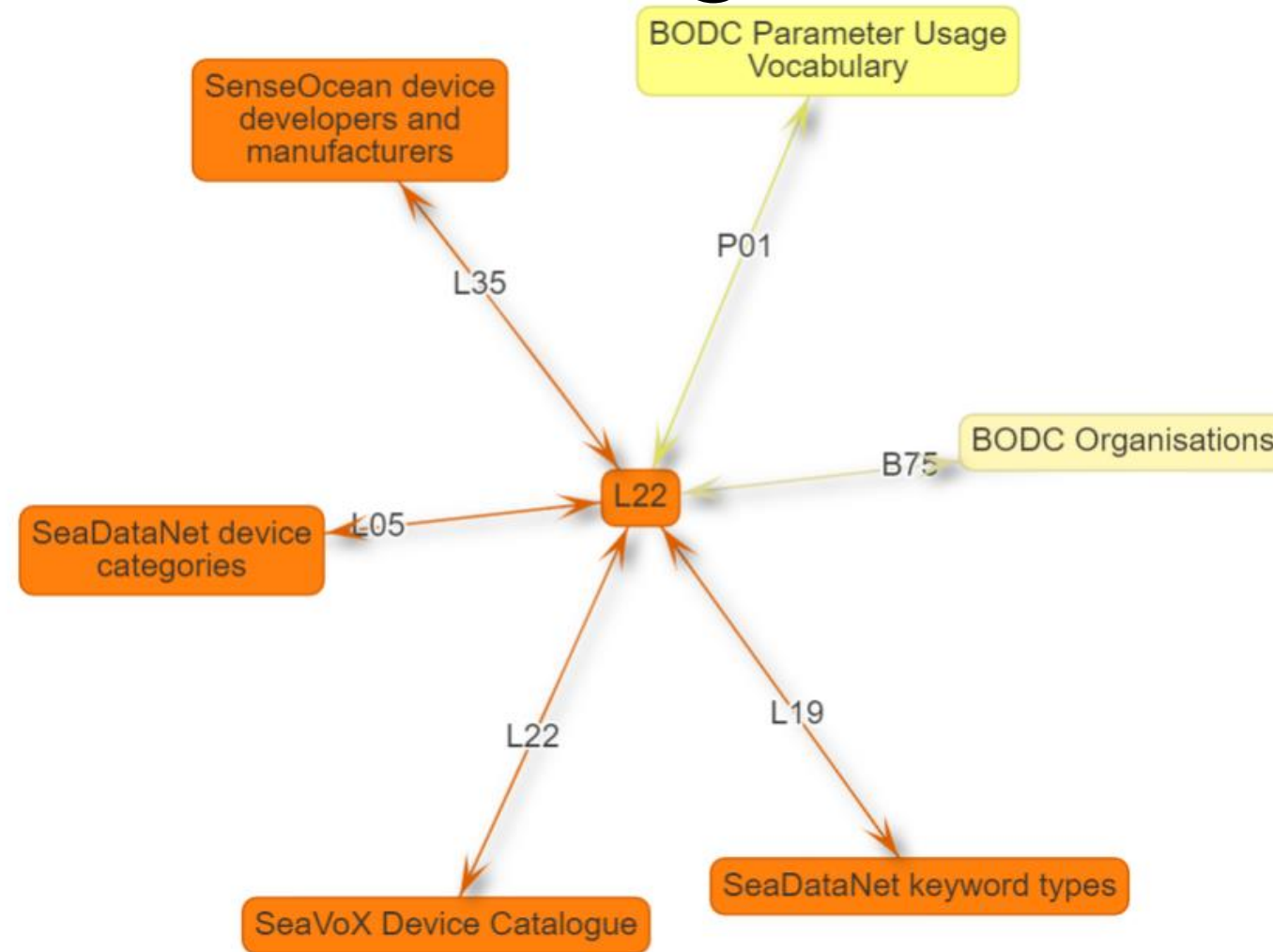
L22: = <https://vocab.nerc.ac.uk/collection/L22/current/>

B75: = <https://vocab.nerc.ac.uk/collection/B75/current/>



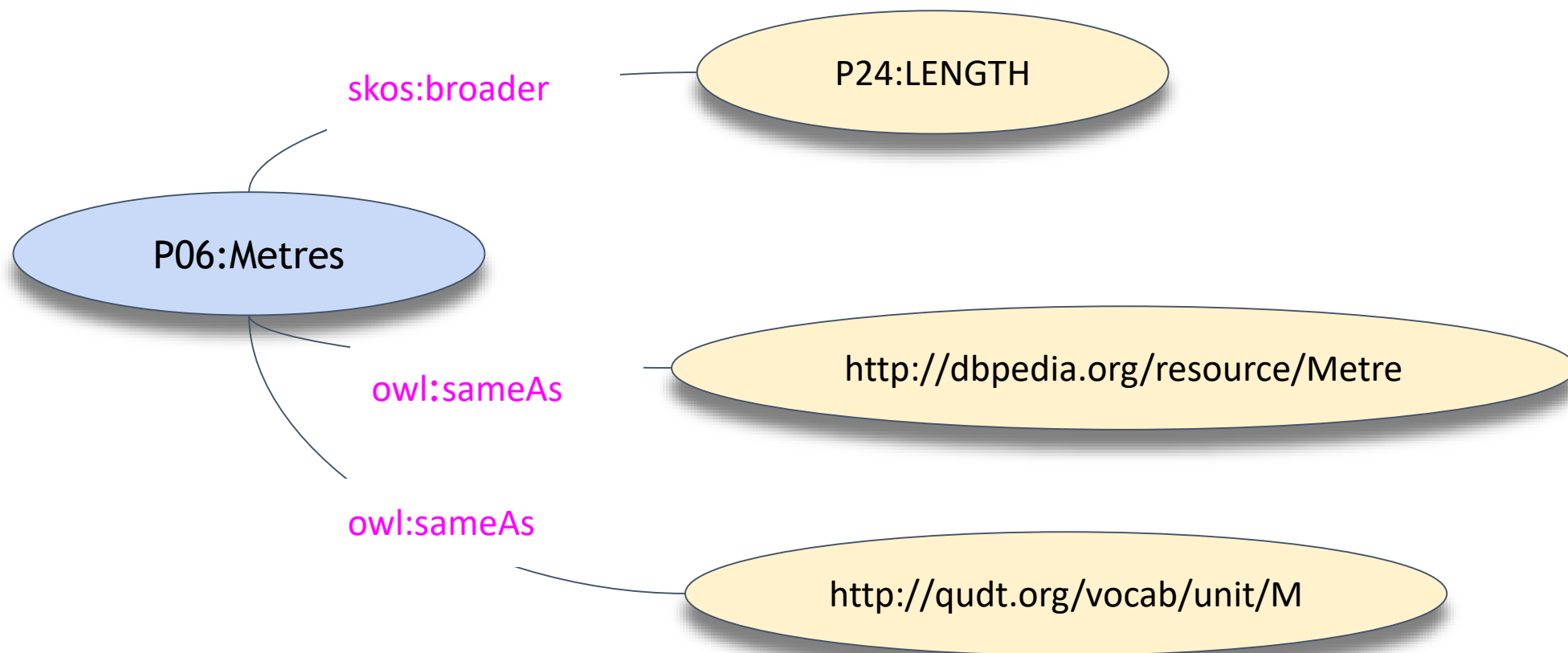


# NVS visualisation of high level relations



[https://vocab.nerc.ac.uk/search\\_nvs/map/](https://vocab.nerc.ac.uk/search_nvs/map/)

# NVS external mappings



**skos:** = <http://www.w3.org/2004/02/skos/core#>

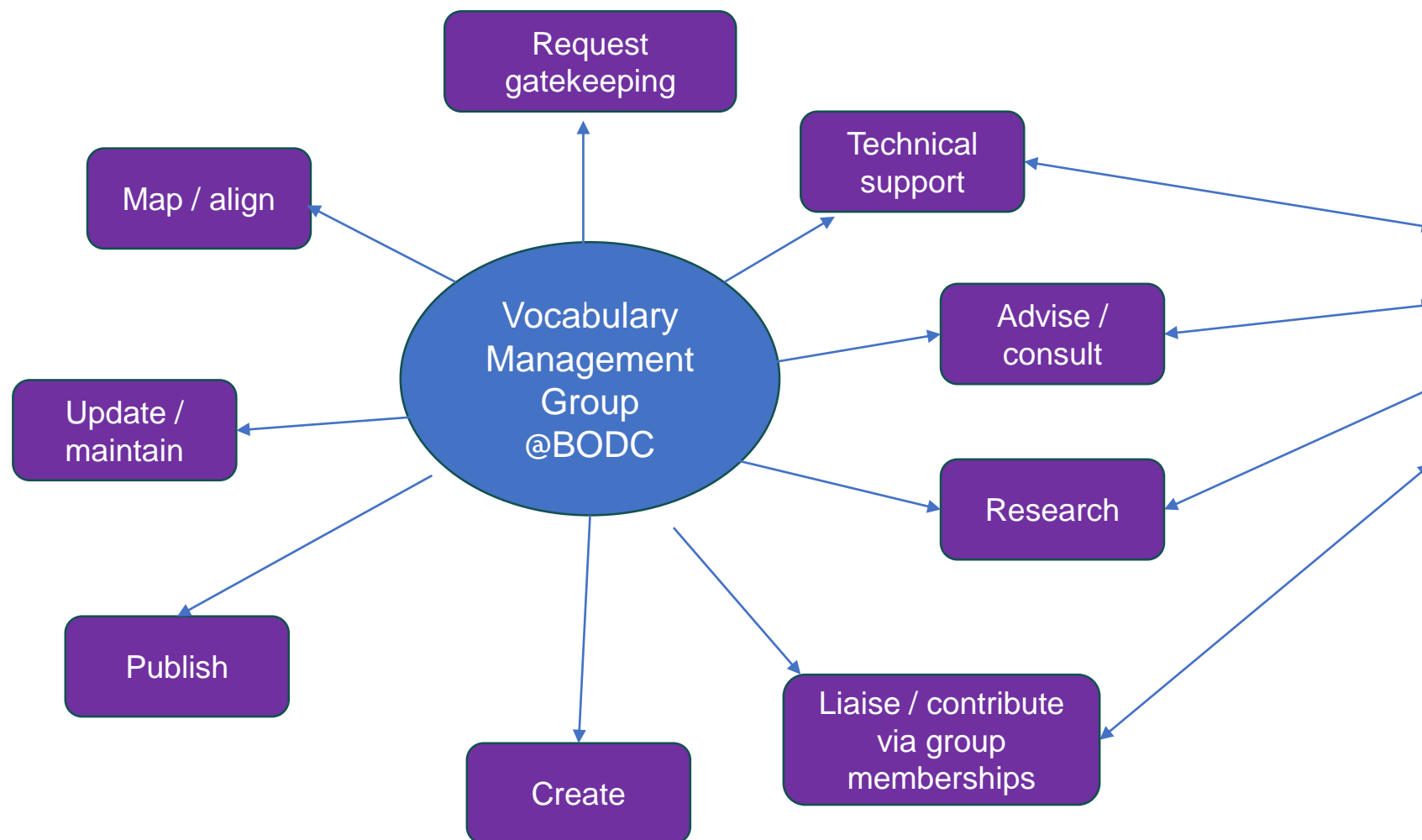
**owl:** = <http://www.w3.org/2002/07/owl#>

**P06:** = <https://vocab.nerc.ac.uk/collection/P06/current/>

**P24:** = <https://vocab.nerc.ac.uk/collection/P24/current/>



# NVS Governance and management



# The NVS in operation

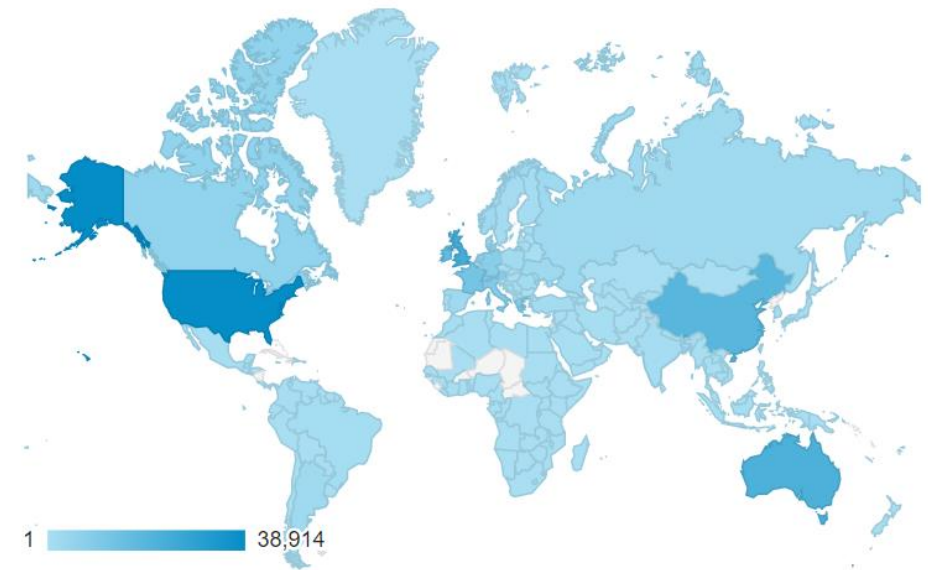
- Launched in 2005 ([NERC Data Grid project](#))
- Further developed during successive European projects
  - Open Service Network for Marine Environmental data ([NETMAR](#))
  - SeaDataNet/SeaDataCloud
- Used globally

Underpins elements of a number of international observing data networks, including:

- [SeaDataNet](#) / [EMODnet](#) in Europe
- [Argo Floats](#) programme
- Ocean Biodiversity Information System ([OBIS](#))
- [MOVEBANK](#) database for animal tracking data

**Geographic distribution by monthly number of sessions (Oct 2020- Oct 2021)**

**1-USA (39k); 2-UK (24k); 3-Australia (22k); 4-Ireland (16k); 5-France (12k)**



**Thank you**

**For more information :**

✉ [contact@groom-h2020.eu](mailto:contact@groom-h2020.eu)

✉ Twitter : @GROOM2RI

✉ [www.groom-h2020.eu](http://www.groom-h2020.eu)

