



National Oceanography Centre  
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# FAIR Semantics and the NVS

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# FAIR **Semantics** and the NVS

- Semantic artefacts
  - controlled vocabularies,
  - ontologies,
  - thesauri etc.
- **I2:** “(Meta)data use **vocabularies** that follow the FAIR principles”.
- However, most of these artefacts are actually not FAIR themselves.
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Project Title	Fostering FAIR Data Practices in Europe
Project Acronym	FAIRSFair
Grant Agreement No	831558
Instrument	H2020-INFRAEOSC-2018-4
Topic	INFRAEOSC-05-2018-2019 Support to the EOSC Governance
Start Date of Project	1st March 2019
Duration of Project	36 months
Project Website	<a href="https://www.fairsfair.eu">www.fairsfair.eu</a>

<https://doi.org/10.5281/zenodo.3707984>

prov:wasGeneratedBy: FAIRsFAIR project

dct:dateAccepted: March 12, 2020

## Content:

- 17 general recommendations aligned with the different FAIR Principles and
- 10 Best Practice recommendations.

## Main objective:

provide a set of guidelines for creating a harmonised and interoperable semantic landscape easing the use and reuse of semantic artefacts from multiple different scientific domains

# FAIR Semantics and the NVS



## 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	

The NVS is used to manage and serve vocabularies needed for the harmonization of data assets and metadata records. Its main focus is the marine and related domains.



# This presentation is about:

- Sharing our experience in evaluating the recommendations through NVS as an operational semantic repository:
  - Stemming from our commitment to serve the marine community with up-to-date and FAIR semantics.
  - Shape the FAIR Semantics recommendations





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# FAIR Semantic Repositories Task Group (FSRTG)

<https://www.rd-alliance.org/group/vocabulary-services-ig/wiki/fair-semantic-repositories-task-group-fsrtg>



# FAIR Semantic Repository Task Group(FSRTG)

- Target group: operational semantic repositories and semantic experts e.g.
  - Agroportal, Bioportal, OGC, NVS, ICES, cf\_standard names, CSIRO
  - vocPrez
  - We want more
- RDA hierarchy: Within (VSSIG)
- Chairs: Alexandra Kokkinaki & Gerard Coen

# Practical

- Aim:
  - Evaluate FairsFair recommendations from an operational repository point of view
  - and their potential for adoption and implementation by operational semantic repositories
- **Meeting frequency:** twice a month
- **How:** Zoom
- **What:** Discuss 3 (very optimistic) recommendations per time and answer the following questions in github





## Q&A

- Do you find it relevant for your repository?
- Do you think it needs to be changed or updated?
- Do you implement it or plan to implement it? How?



# How we worked

<input type="checkbox"/> 10 Open <input checked="" type="checkbox"/> 0 Closed	Author ▾	Label ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾
<input type="checkbox"/> <b>BP-Rec. 10: Define a set of governance policies for the semantic artefacts</b> <span>Repository</span>						2
<small>#27 opened on 1 Jul 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 16: The semantic artefact should be clearly licenced for machines and humans</b> <span>Repository</span>						2
<small>#16 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 13: Crosswalks, mappings and bridging between semantic artefacts should be documented, published and curated</b> <span>Repository</span>						2
<small>#13 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 9: Semantic artefacts should be represented using common serialization formats, e.g., Semantic Web and Linked Data standards</b> <span>Repository</span>						3
<small>#9 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 8: Define human and machine-readable persistency policies for semantic artefacts metadata</b> <span>Repository</span>						5
<small>#8 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 7: Repositories should offer a secure protocol and user access control functionalities</b> <span>Repository</span>						2
<small>#7 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 5: Semantic repositories should offer a common API to access Semantic Artefacts and their content in various serializations for both use/reuse and indexation by any search engines</b> <span>Repository</span>						3
<small>#5 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 3: Use a common minimum metadata schema to describe semantic artefacts and their content</b> <span>Repository</span>						5
<small>#3 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>P-Rec. 2: Use Globally Unique, Persistent and Resolvable Identifier for Semantic Artefact Metadata Record</b> <span>Repository</span>						4
<small>#2 opened on 10 Jun 2020 by ghost</small>						
<input type="checkbox"/> <b>#P-Rec. 1: Use Globally Unique, Persistent and Resolvable Identifier for Semantic Artefacts, their content and their versions</b> <span>Repository</span>						4
<small>#1 opened on 5 Jun 2020 by ghost</small>						

## Git repository to capture input

<https://github.com/FAIRsFAIR/FAIRSemantics>

Labels to differentiate between the various stakeholders:



# Impact of FSRGT group on the second iteration of the FAIR Semantics recommendations



Page: 1 of 65 Automatic Zoom

**FAIRsFAIR**  
Fostering Fair Data Practices in Europe

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Topic	INFRAEOSC-05-2018-2019 Support to the EOSC Governance
Start Date of Project	1st March 2019
Duration of Project	36 months
Project Website	<a href="http://www.fairfair.eu">www.fairfair.eu</a>

**D2.5 FAIR Semantics Recommendations**  
**Second Iteration**

<https://doi.org/10.5281/zenodo.4314321>

prov: wasGeneratedBy: FAIRsFAIR project

dct:dateAccepted : December 18, 2020

**FSRTG input:** section 5 and section2 in terms:

- highlighting gaps in knowledge,
- missing components,
- where community consensus is still needed
- Acknowledgements

## Content:

- Integrates inputs of semantic experts from a wide range of communities
- Aligned with RFC 2119: MUST, SHOULD, MAY
- 9 required recommendations (MUST), 6 optional but important (SHOULD), 1 optional (MAY), 1 community specific recommendation

## Open for comments: github



GitHub is being used by the team to collect feedback:

<https://github.com/FAIRsFAIR/FAIRSemantics>

### Use of labels:

Please use "Clarification Needed" where you feel like a recommendation lacks clarity

Clarification Needed

Please use "Relevance" to comment on the relevance (or lack thereof) for the stakeholder you represent.

Relevance

Please use "Implementation Example" to suggest practical implementations or initiatives that are missing for this recommendation.

Implementation Example

It is also possible to submit problems encountered, suggestions, questions, recommendation proposals etc. as issues.

New issue



## Next steps

- FAIRsFAIR : getting more practical and building a FAIRness evaluation framework for semantic artefacts
- FSRTG: The group continues meetings every second Tuesday of the month and we would like to invite semantic repositories and semantic experts to be part of it:
  - <https://www.rd-alliance.org/group/vocabulary-services-ig/wiki/fair-semantic-repositories-task-group-fsrtg>
- NVS is committed to provide FAIR Semantics to its users

