SeaDataNet: Common Vocabularies Adam Leadbetter & Roy Lowry

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Why common vocabularies?

- A collection of concepts for populating a given metadata field
- Controlled vocabularies
 - Ensure consistent spellings
 - Ensure consistent syntax
- Well-managed controlled vocabularies
 - Prevent metadata misunderstandings
 - Maintain a static relationship between metadata fields and the real world



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Why common vocabularies?

- Concepts from different controlled vocabularies may be connected using simple mapping relationships:
 - Bacillariophycaea same-as diatoms
 - IPTS68 temperature related ITS90 temperature
 - Nutrients in rivers **related** nitrate in water bodies
 - Salinity is-narrower-than physical oceanography
 - Physical oceanography is-broader-than salinity



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- SeaDataNet used the NERC Vocabulary Server ver. 1.X
 - http://vocab.ndg.nerc.ac.uk
- NERC Vocabulary Server was upgraded
 - Work done under the NETMAR project
 - http://vocab.nerc.ac.uk
- This lead to a naming change within SDN-2



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- http://vocab.ndg.nerc.ac.uk/list/Po11/current/
- http://vocab.nerc.ac.uk/collection/Poi/current/
- http://vocab.ndg.nerc.ac.uk/term/Poii/current/PSALCUoi/
- http://vocab.nerc.ac.uk/collection/Po1/current/PSALCU01/
- SDN:Po11::PSALCUo1
- SDN:Po1::PSALCUo1



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- General rules:
 - vocab.ndg.nerc.ac.uk becomes vocab.nerc.ac.uk
 - list or term becomes collection
 - Version should always be "current"
 - The list / collection identifier is truncated
 - Po11 -> Po1
 - C174 -> C17



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- Why?
 - Po21 meant "accepted"
 - Po22 meant "deprecated"
 - Po2 meant "all"
 - Hierarchical relationship not in SKOS standard
 - Now addressed through tags in the XML response
 - <skos:note /> & <owl:deprecated />
 - Benefits
 - Single URN
 - But we had to downplay versioning



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- Documents returned are fully standards compliant
 - RDF/XML as specified by W₃C
 - Has allowed worldwide adoption of the vocabularies
 - Standard query interface deployed (SPARQL)
 - Conform to Linked Data standards
 - Allowing:



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• Status

- NVS v2 now fully integrated with the latest versions of NEMO and Mikado
 - See the demonstrations later!



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- Forthcoming developments
 - EMODNet
 - Allowing new ways of aggregating parameters
 - Poster available from IMDIS
 - Presentations from Technical Workshop
 - Exposing the underlying model for terms in the Po1 parameter usage vocabulary



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- XMETAL04
 - Measurement: "Concentration"
 - Substance: "cadmium {Cd}"
 - Measurement Matrix Relationship: "per unit wet weight"
 - Matrix: "biota"
 - Matrix Subcomponent: "liver"
 - Taxon: "Platichthys flesus (ITIS: 172894: WoRMS 127141)"
 - Organism Name: "Platichthys flesus"
 - Organism Specifics: "Sex: male Size: length 226-250mm"
 - Technique: "inductively-coupled plasma mass spectrometry"



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Thank you

- Any questions?
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