

IR ILICO - PNDB RSI

Organization	GO FAIR
Created by	Data ILICO (data@ir-ilico.fr)
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I. About

Questions

No questions

II. Declare your FAIR Implementation Community

Questions

1

Select your FAIR Implementation Community



ILICO - Infrastructure for coastal ocean observations

Established in 2016, ILICO, France's multi-agency infrastructure for coastal ocean observations, aims to observe and understand coastal ocean and seashore environments in a comprehensive manner. ILICO brings together an ensemble of complementary observation networks that collect samples and deploy a wide range of measurement devices to study these ecosystems. The observation networks are accredited through a peer-reviewed evaluation process overseen by national research agencies. The networks are : COAST HF, CORAIL, DYNALIT, MOOSE, PHYTOBS, ReefTemps, SOMLIT & SONEL. The BenthOBS network is applying for accreditation. ILICO's missions include to foster interactions between members of its pluri-disciplinary research community in order to improve understanding of the function and evolution of these environments.



http://purl.org/np/RACX8I5pQa6IB4i5_gVOM5nccbm4wxIUodFqIVswF9eqY#ILICO

2

Who is the Community Data Steward?

✓ 0000-0002-0441-2446

3

Specify the start date for the validity of the FIP

✓ 2022-10-24

4

Specify the end date for the validity of the FIP

✓ 2023-10-24

III. Declarations for Findability

Questions

1

Declaration F1 Metadata: What globally unique, persistent, resolvable identifier service do you use for metadata records?

✓ b. Declaration: FAIR Enabling Resource(s)

1.b.1

List the FAIR Enabling Resource(s)

Answers

1.b.1.a.1

Select the FAIR Enabling Resource



UUID | Universally Unique Identifier 

A UUID is a 128-bit label used for information in computer systems.



http://purl.org/np/RA5ikgqnKqn071dwzXFdiXlnM8hWZRdFKsQjC_e5YRkEw#UUID

1.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

1.b.1.a.3

Implementation Consideration

✓ The Sextant catalogue is used by several networks and by ILICO to publish metadata.

Each metadata record in Sextant are associate with an UUID.

1.b.1.b.1

Select the FAIR Enabling Resource



DOI | Digital Object Identifier

The digital object identifier (DOI) system originated in a joint initiative of three trade associations in the publishing industry (International Publishers Association; International Association of Scientific, Technical and Medical Publishers; Association of American Publishers). The system was announced at the Frankfurt Book Fair 1997. The International DOI Foundation (IDF) was created to develop and manage the DOI system, also in 1997. The DOI system was adopted as International Standard ISO 26324 in 2012. The DOI system implements the Handle System and adds a number of new features. The DOI system provides an infrastructure for persistent unique identification of objects of any type. The DOI system is designed to work over the Internet. A DOI name is permanently assigned to an object to provide a resolvable persistent network link to current information about that object, including where the object, or information about it, can be found on the Internet. While information about an object can change over time, its DOI name will not change. A DOI name can be resolved within the DOI system to values of one or more types of data relating to the object identified by that DOI name, such as a URL, an e-mail address, other identifiers and descriptive metadata. The DOI system enables the construction of automated services and transactions. Applications of the DOI system include but are not limited to managing information and documentation location and access; managing metadata; facilitating electronic transactions; persistent unique identification of any form of any data; and commercial and non-commercial transactions. The content of an object associated with a DOI name is described unambiguously by DOI metadata, based on a structured extensible data model that enables the object to be associated with metadata of any desired degree of precision and granularity to support description and services. The data model supports interoperability between DOI applications. The scope of the DOI system is not defined by reference to the type of content (format, etc.) of the referent, but by reference to the functionalities it provides and the context of use. The DOI system provides, within networks of DOI applications, for unique identification, persistence, resolution, metadata and semantic interoperability.



http://purl.org/np/RAnAWGdel_1GGmDAqv-vZjby5Xqbl2ZujNz1vgwK_6cRI#DOI

1.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.b.3

Implementation Consideration

- ✓ Some networks (e.g. PHYTOBS, ReefTEMPS, MOOSE) use a DOI to publish metadata and datasets.

2

Declaration F1 Data: What globally unique, persistent, resolvable identifier service do you use for datasets?

- ✓ b. Declaration: FAIR Enabling Resource(s)

2.b.1

List the FAIR Enabling Resource(s)

Answers

2.b.1.a.1

Select the FAIR Enabling Resource



DOI | Digital Object Identifier

The digital object identifier (DOI) system originated in a joint initiative of three trade associations in the publishing industry (International Publishers Association; International Association of Scientific, Technical and Medical Publishers; Association of American Publishers). The system was announced at the Frankfurt Book Fair 1997. The International DOI Foundation (IDF) was created to develop and manage the DOI system, also in 1997. The DOI system was adopted as International Standard ISO 26324 in 2012. The DOI system implements the Handle System and adds a number of new features. The DOI system provides an infrastructure for persistent unique identification of objects of any type. The DOI system is designed to work over the Internet. A DOI name is permanently assigned to an object to provide a resolvable persistent network link to current information about that object, including where the object, or information about it, can be found on the Internet. While information about an object can change over time, its DOI name will not change. A

DOI name can be resolved within the DOI system to values of one or more types of data relating to the object identified by that DOI name, such as a URL, an e-mail address, other identifiers and descriptive metadata. The DOI system enables the construction of automated services and transactions. Applications of the DOI system include but are not limited to managing information and documentation location and access; managing metadata; facilitating electronic transactions; persistent unique identification of any form of any data; and commercial and non-commercial transactions. The content of an object associated with a DOI name is described unambiguously by DOI metadata, based on a structured extensible data model that enables the object to be associated with metadata of any desired degree of precision and granularity to support description and services. The data model supports interoperability between DOI applications. The scope of the DOI system is not defined by reference to the type of content (format, etc.) of the referent, but by reference to the functionalities it provides and the context of use. The DOI system provides, within networks of DOI applications, for unique identification, persistence, resolution, metadata and semantic interoperability.



http://purl.org/np/RAnAWGdel_1GGmDAqv-vZjby5Xqbl2ZujNz1vgwK_6cRI#DOI

2.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.a.3

Implementation Consideration

- ✓ Some networks (e.g. PHYTOBS, ReefTEMPS, MOOSE) use a DOI to publish metadata and datasets.

2.b.1.b.1

Select the FAIR Enabling Resource



UUID | Universally Unique Identifier 

A UUID is a 128-bit label used for information in computer systems.



http://purl.org/np/RA5ikggnKqn071dwzXFdiXlnM8hWZRdFKsQjC_e5YRkEw#UUID

2.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.b.3

Implementation Consideration

- ✓ The Sextant catalogue is used by DYNALIT network to publish datasets. Each metadata record associate with a dataset in Sextant has an UUID.

3

Declaration F2: What metadata schema do you use for findability?

- ✓ b. Declaration: FAIR Enabling Resource(s)

3.b.1

List the FAIR Enabling Resource(s)

Answers

3.b.1.a.1

Select the FAIR Enabling Resource



ISO 19139 | Geographic information - Metadata - XML schema implementation



ISO 19139 defines Geographic MetaData XML (gmd) encoding, an XML Schema implementation derived from ISO 19115.



http://purl.org/np/RAWRs9ggWH1YGHwcWdCifkcZ7GPEJla1fxjs3ppN3mAXw#ISO_19139

3.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.a.3

Implementation Consideration

- ✓ ILICO, DYNALIT and ReefTEMPS publish metadata records with Geonetwork in ISO 19139/19115.

3.b.1.b.1

Select the FAIR Enabling Resource



ISO 19115 | Geographic information - Metadata 

ISO 19115 defines the schema required for describing geographic information and services by means of metadata. It provides information about the identification, the extent, the quality, the spatial and temporal aspects, the content, the spatial reference, the portrayal, distribution, and other properties of digital geographic data and services.



http://purl.org/np/RAWhGD0MUVu3dngBK0eWdNIRWNRhOHkonTAIsIGV8y1v4#ISO_19115

3.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.b.3

Implementation Consideration

- ✓ ILICO, DYNALIT and ReefTEMPS publish metadata records with Geonetwork in ISO 19139/19115.

3.b.1.c.1

Select the FAIR Enabling Resource



ISO 19110|Geographic Information - Methodology for feature cataloguing

ISO 19110 defines the methodology for cataloguing feature types and specifies how the classification of feature types is organized into a feature catalogue and presented to the users of a set of geographic data.



http://purl.org/np/RAqH3J_xRV5dxyQH6XgVXbpHUOBVBJ9J3-R6FUug2hlfA#ISO_19110

3.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.c.3

Implementation Consideration

- ✓ The ISO 19110 standard is used by ILICO to describe stations attributes. However, it's difficult to keep all metadata up to date, so this will probably be replaced by a WFS service.

4

Declaration F3: What is the schema that links the persistent identifiers of your data to the metadata description?

✓ b. Declaration: FAIR Enabling Resource(s)

4.b.1

List the FAIR Enabling Resource(s)

Answers

4.b.1.a.1

Select the FAIR Enabling Resource

✓

DOI | Digital Object Identifier 

The digital object identifier (DOI) system originated in a joint initiative of three trade associations in the publishing industry (International Publishers Association; International Association of Scientific, Technical and Medical Publishers; Association of American Publishers). The system was announced at the Frankfurt Book Fair 1997. The International DOI Foundation (IDF) was created to develop and manage the DOI system, also in 1997. The DOI system was adopted as International Standard ISO 26324 in 2012. The DOI system implements the Handle System and adds a number of new features. The DOI system provides an infrastructure for persistent unique identification of objects of any type. The DOI system is designed to work over the Internet. A DOI name is permanently assigned to an object to provide a resolvable persistent network link to current information about that object, including where the object, or information about it, can be found on the Internet. While information about an object can change over time, its DOI name will not change. A DOI name can be resolved within the DOI system to values of one or more types of data relating to the object identified by that DOI name, such as a URL, an e-mail address, other identifiers and descriptive metadata. The DOI system enables the construction of automated services and transactions. Applications of the DOI system include but are not limited to managing information and documentation location and access; managing metadata; facilitating electronic transactions; persistent unique identification of any form of any data; and commercial and non-commercial transactions. The content of an object associated with a DOI name is described unambiguously by DOI metadata, based on a structured extensible data model that enables the object to be associated with metadata of any desired degree of precision and granularity to support description and services. The data model supports interoperability between DOI applications. The scope of the DOI system is not defined by reference to the type of content (format, etc.) of the referent, but by reference to the functionalities it provides and the context of use. The DOI system provides, within networks of DOI applications, for unique identification, persistence,

resolution, metadata and semantic interoperability.



http://purl.org/np/RAnAWGdel_1GGmDAqv-vZjby5Xqbl2ZujNz1vgwK_6cRI#DOI

4.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

4.b.1.a.3

Implementation Consideration

- ✓ Some networks (e.g. PHYTOBS, ReefTEMPS, MOOSE) use a DOI to publish datasets.

5

Declaration F4 Metadata: Which service do you use to publish your metadata records?

- ✓ b. Declaration: FAIR Enabling Resource(s)

5.b.1

List the FAIR Enabling Resource(s)

Answers

5.b.1.a.1

Select the FAIR Enabling Resource



GeoNetwork 

GeoNetwork is a catalog application to manage spatially referenced resources. It provides powerful metadata editing and search functions as well as an interactive web map viewer.

It is currently used in numerous Spatial Data Infrastructure initiatives across the world.



http://purl.org/np/RAUbp_FvGrwsW3MAWbrkfy0rnvjTpNrX41S2tl1xOb_EU#GeoNetwork

5.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

5.b.1.a.3

Implementation Consideration

- ✓ Geonetwork is used by the ReefTEMPS network to publish metadata records. The Sextant catalogue, used by ILICO and DYNALIT, also runs on geonetwork.

5.b.1.b.1

Select the FAIR Enabling Resource



DMP OPIDoR

DMP OPIDoR guides you through the drafting and implementation into practice of data or software management plans. Accessible by any member of the High Education and Research community as well as its French or foreign partners. Customizable by any research organization willing to implement a data policy. Enriched by examples and recommendations relevant to research environments. Collaborative: allows exchanges between partners of a same project and support staff. Machine actionable: facilitates data entry and interactions with data management services.



<http://purl.org/np/RAsOdj5BnUMdj7ykiGbkEBAEwjCDfKQ1GPyR1p0mxrGE#DMP-OPIDoR>

5.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

5.b.1.b.3

Implementation Consideration

- ✓ ILICO has created Data Management Plans with the DMP OPIDoR tool to describe each network.

6

Declaration F4 Datasets: Which service do you use to publish your datasets?

- ✓ b. Declaration: FAIR Enabling Resource(s)

6.b.1

List the FAIR Enabling Resource(s)

Answers

6.b.1.a.1

Select the FAIR Enabling Resource



GeoNetwork 

GeoNetwork is a catalog application to manage spatially referenced resources. It provides powerful metadata editing and search functions as well as an interactive web map viewer. It is currently used in numerous Spatial Data Infrastructure initiatives across the world.



http://purl.org/np/RAUbP_FvGrwsW3MAWbrkfY0rnvjTpNrX41S2tl1xOb_EU#GeoNetwork

6.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

6.b.1.a.3

Implementation Consideration

- ✓ The Sextant catalogue, used by DYNALIT to publish datasets, runs on geonetwork. ReefTEMPS also uses geonetwork to publish datasets.

6.b.1.b.1

Select the FAIR Enabling Resource



SEANOE - SEA scientific Open data Edition

SEANOE (SEA scientific Open data Edition) is a publisher of scientific data in the field of marine sciences. It is operated by Sismar within the framework of the Odatis.



<http://purl.org/np/RAEyxv-N6UUwcftrUsZULWiaqeyjIA4DiMaYUAMjx9WI4#SEANOE>

6.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

6.b.1.b.3

Implementation Consideration

- ✓ SEANOE is used by some networks (e.g. PHYTOBS, ReefTEMPS, MOOSE) to publish datasets and associate them with a DOI.

IV. Declarations for Accessibility

Questions

1

Declaration A1.1 Metadata: Which standardized communication protocol do you use for metadata records?

✓ b. Declaration: FAIR Enabling Resource(s)

1.b.1

List the FAIR Enabling Resource(s)

Answers

1.b.1.a.1

Select the FAIR Enabling Resource

✓

HTTPS | Hypertext Transfer Protocol Secure 

Hypertext Transfer Protocol Secure (HTTPS) is an extension of the Hypertext Transfer Protocol (HTTP). It is used for secure communication over a computer network, and is widely used on the Internet. In HTTPS, the communication protocol is encrypted using Transport Layer Security (TLS) or, formerly, Secure Sockets Layer (SSL). The protocol is therefore also referred to as HTTP over TLS, or HTTP over SSL.



http://purl.org/np/RAF1ANn-BCFop0OBMOC7S8NtG0y_xYhRX4tAu37XZVCo0#HTTPS

1.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

1.b.1.a.3

Implementation Consideration

- ✓ The metadata can be found in the html pages of all networks, using the https protocol in particular.

1.b.1.b.1

Select the FAIR Enabling Resource



CSW | Catalog Service for the Web

Catalogue services support the ability to publish and search collections of descriptive information (metadata) for data, services, and related information objects. Metadata in catalogues represent resource characteristics that can be queried and presented for evaluation and further processing by both humans and software. Catalogue services are required to support the discovery and binding to registered information resources within an information community.



http://purl.org/np/RA9SQLjEkTvg9qgaHU_IdN0ntL9gYqi0Tu_55ZOr4eMf4#CSW

1.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.b.3

Implementation Consideration

- ✓ Geonetwork offers access to metadata in CSW.

1.b.1.c.1

Select the FAIR Enabling Resource



OAI-PMH Schema | Open Archives Initiative Protocol for Metadata Harvesting Schema

The Open Archives Initiative Protocol for Metadata Harvesting Schema (OAI-PMH Schema) provides a formal structure for validating responses as part of the OAI-PMH Protocol. The OAI-PMH Protocol is a low-barrier mechanism for repository interoperability. Data Providers are repositories that expose structured metadata via OAI-PMH. Service Providers then make OAI-PMH service requests to harvest that metadata. OAI-PMH is a set of six verbs or services that are invoked within HTTP.



http://purl.org/np/RAnwFn9lcKK8S2tccnwPZJw-0_hF5N03BL-8BuchPHtvQ#OAI-PMH

1.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.c.3

Implementation Consideration

- ✓ The OAI schema is used by PHYTOBS and BenthOBS networks.

1.b.1.d.1

Select the FAIR Enabling Resource



SPARQL endpoint

SPARQL (open) endpoint serving the SPARQL semantic query language to retrieve and manipulate data stored in Resource Description Framework (RDF) format.



http://purl.org/np/RAGaQZMETa6UkCriDtorwoxKXvusy3FaGs5y4udMOpvhg#SPARQL_endpoi

1.b.1.d.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.d.3

Implementation Consideration

- ✓ All metadata records associated with a DOI are accessible with SPARQL.

1.b.1.e.1

Select the FAIR Enabling Resource



WFS | Web Feature Service 

The Web Feature Service is primarily a feature access service but also includes elements of a feature type service, a coordinate conversion/transformation service and geographic format conversion service.



http://purl.org/np/RAdEIAqt6tWi9bdm_m6NuY9EtId43eip7TDIMaFPbwj5Q#WFS

1.b.1.e.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.e.3

Implementation Consideration

- ✓ WFS is used by ILICO to describe stations attributes.

1.b.1.f.1

Select the FAIR Enabling Resource



WMS | Web Map Service



The OpenGIS Web Map Service Interface Standard (WMS) provides a simple HTTP interface for requesting geo-registered map images from one or more distributed geospatial databases.



http://purl.org/np/RAFO4Lu8kp5j6xTN5MZ3qRLO_yZkGCuefm0dzboWA9Ygo#WMS

1.b.1.f.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.f.3

Implementation Consideration

- ✓ WMS is used by ILICO to describe stations attributes.

1.b.1.g.1

Select the FAIR Enabling Resource



GeoNetwork API

The GeoNetwork API allows to manage all the catalog (eg. users, groups, editing, formatter, processing).



<http://purl.org/np/RAqmFAaLr7p0uBVGJlVX9K3ysyFwxW9X39cjdLHkx3cw#geonetwork-api>

1.b.1.g.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.g.3

Implementation Consideration

- ✓ ILICO, DYNALIT and ReefTEMPS use geonetwork to publish the metadata.

1.b.1.h.1

Select the FAIR Enabling Resource



HTTP | Hypertext Transfer Protocol 

The Hypertext Transfer Protocol (HTTP) is an application layer protocol in the Internet protocol suite model for distributed, collaborative, hypermedia information systems.



http://purl.org/np/RAm6jl2f_ysCwqHyEEJjb7vdEnZXMwtNyIXSjsbNU3In8#HTTP

1.b.1.h.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.h.3

Implementation Consideration

- ✓ The metadata can be found in the html pages of all networks, using the http protocol in particular.

2

Declaration A1.1 Datasets: Which standardized communication protocol do you use for datasets?

✓ b. Declaration: FAIR Enabling Resource(s)

2.b.1

List the FAIR Enabling Resource(s)

Answers

2.b.1.a.1

Select the FAIR Enabling Resource

✓

FTP | File Transfer Protocol 

The FTP is a standard communication protocol used for the transfer of computer files from a server to a client on a computer network.



http://purl.org/np/RARv4EFw3iwjRn01xnpto4yzc15buTVcm2_q-8a3jLoZw#FTP

2.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

2.b.1.a.3

Implementation Consideration

✓ SONEL provides access to the database using FTP protocol.

2.b.1.b.1

Select the FAIR Enabling Resource



SPARQL endpoint



SPARQL (open) endpoint serving the SPARQL semantic query language to retrieve and manipulate data stored in Resource Description Framework (RDF) format.



http://purl.org/np/RAGAgZMETa6UkCriDtorwoxKXvusy3FaGs5y4udMOpvhg#SPARQL_endpoi

2.b.1.b.2

This implementation choice is:

- a. Currently in use by the community

2.b.1.b.3

Implementation Consideration

- All datasets associated with a DOI are accessible with SPARQL.

2.b.1.c.1

Select the FAIR Enabling Resource



WMS | Web Map Service



The OpenGIS Web Map Service Interface Standard (WMS) provides a simple HTTP interface for requesting geo-registered map images from one or more distributed geospatial databases.



http://purl.org/np/RAFO4Lu8kp5j6xTN5MZ3qRLO_yZkGCuefm0dzboWA9Ygo#WMS

2.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.c.3

Implementation Consideration

- ✓ WMS is used by DYNALIT to provide access to the data.

2.b.1.d.1

Select the FAIR Enabling Resource



OPeNDAP | Open-source Project for a Network Data Access Protocol



OPeNDAP is a protocol that provides a discipline-neutral means of requesting and providing data across the World Wide Web.



<http://purl.org/np/RApihvFKR8-JO6eD5nuYMkyEDONbIZZC5uDkjdqgg0ZQ#OPeNDAP>

2.b.1.d.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.d.3

Implementation Consideration

- ✓ ReefTEMPS provides access to the data with OpenDAP/Thredds.

3

Declaration A1.2 Metadata: Which authentication & authorisation service do you use for metadata records?

✓ b. Declaration: FAIR Enabling Resource(s)

3.b.1

List the FAIR Enabling Resource(s)

Answers

3.b.1.a.1

Select the FAIR Enabling Resource



GeoNetwork account in the internal catalog database 

User authenticates (login/passwd) against the internal catalog database of the GeoNetwork instance



http://purl.org/np/RACAyMJ73GjPbMGtIT4zRfND0LEI5NiiKePx9QT_SNWz4#GNOS_account

3.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

3.b.1.a.3

Implementation Consideration

✓ Geonetwork is used by ILICO, DYNALIT and ReefTEMPS to publish metadata records.

4

Declaration A1.2 Datasets: Which authentication & authorisation service do you use for datasets?

✓ b. Declaration: FAIR Enabling Resource(s)

4.b.1

List the FAIR Enabling Resource(s)

Answers

4.b.1.a.1

Select the FAIR Enabling Resource



GeoNetwork account in the internal catalog database



User authenticates (login/passwd) against the internal catalog database of the GeoNetwork instance



http://purl.org/np/RACAyMJ73GjPbMGtIT4zRfND0LEI5NiiKePx9QT_SNWz4#GNOS_account

4.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

4.b.1.a.3

Implementation Consideration

✓ Geonetwork is used by DYNALIT and ReefTEMPS to publish some datasets.

5

Declaration A2: What metadata preservation policy do you use?

- ✓ b. Declaration: FAIR Enabling Resource(s)

5.b.1

List the FAIR Enabling Resource(s)

Answers

5.b.1.a.1

Select the FAIR Enabling Resource



DataCite DOI Policy

DataCite is providing metadata informations through its DOI oriented service. This allows to give information about DOI related preservation policy



<http://purl.org/np/RA4rdLbzwrBDZzdVLVophtrDEQVvevzou3dihHRZzH4o#datacite-doi-policy>

5.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

5.b.1.a.3

Implementation Consideration

- ✓ The DataCide DOI Policy is used by some networks (e.g. PHYTOBS, ReefTEMPS, MOOSE) that have associate their data and metadata with a DOI.

V. Declarations for Interoperability

Questions

1

Declaration I1 Metadata: What knowledge representation language (allowing machine interoperation) do you use for metadata records?

✓ b. Declaration: FAIR Enabling Resource(s)

1.b.1

List the FAIR Enabling Resource(s)

Answers

1.b.1.a.1

Select the FAIR Enabling Resource



ODV_ASCII | Ocean Data View ASCII format for marine datasets



ODV ASCII data transport format for marine datasets



http://purl.org/np/RAXfjqMGLmatdBCu1X-CuYo9a0_zfQUTbPbvGXHpXXL_0#ODV_ASCII

1.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

1.b.1.a.3

Implementation Consideration

- ✓ PHYTOBS and BenthOBS networks provide access to datasets in ODV format which includes metadata information.

1.b.1.b.1

Select the FAIR Enabling Resource



RDF | Resource Description Framework

The Resource Description Framework (RDF) is a framework for representing information in the Web.



<http://purl.org/np/RAutRQwoS4d5eLq7eBV1xsnWZ2spDYH4xfhhRzOxSZdhs#RDF>

1.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.b.3

Implementation Consideration

- ✓ PHYTOBS and BenthOBS use RDF format for metadata.

1.b.1.c.1

Select the FAIR Enabling Resource



XMLS | eXtensible Markup Language Schema



XMLS defines and describes a class of XML documents by using schema components to constrain and document the meaning, usage and relationships of their constituent parts: datatypes, elements and their content and attributes and their values.



http://purl.org/np/RA5E0NA_BAilxwHhZKQm-ltnFoxw3atel8UFxZ0rs8N5Q#XML_Schema

1.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.c.3

Implementation Consideration

- ✓ XML is used to describe the metadata records in Geonetwork (Sextant - ILICO, DYNALIT -, ReefTEMPS).

1.b.1.d.1

Select the FAIR Enabling Resource



NetCDF OceanSITES

OceanSITES uses NetCDF (Network Common Data Form), a set of software libraries and machine-independent data formats. The OceanSITES data management team has developed an implementation of NetCDF for the data sets. OceanSITES uses netCDF (Network Common Data Form), a set of software libraries and machine-independent data formats developed by the Unidata program at UCAR. Our implementation of netCDF is based on the community-supported Climate and Forecast Metadata Convention (CF), which provides a definitive description of the data in each variable, and the spatial and temporal properties of the data. Any version of CF may be used, but it must be identified in the 'Conventions' attribute.



http://purl.org/np/RAqippWzrV2xpo5prm-7ujf4JGYjKTUtj01dWUzP15G2A#NetCDF_OceanSITES

1.b.1.d.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.d.3

Implementation Consideration

- ✓ ReefTEMPS uses the NetCDF format for its data which includes metadata information.

2

Declaration I1 Datasets: What knowledge representation language (allowing machine interoperation) do you use for datasets?

- ✓ b. Declaration: FAIR Enabling Resource(s)

2.b.1

List the FAIR Enabling Resource(s)

Answers

2.b.1.a.1

Select the FAIR Enabling Resource



NetCDF OceanSITES

OceanSITES uses NetCDF (Network Common Data Form), a set of software libraries and machine-independent data formats. The OceanSITES data management team has developed an implementation of NetCDF for the data sets. OceanSITES uses netCDF (Network Common Data Form), a set of software libraries and machine-independent data formats developed by the Unidata program at UCAR. Our implementation of netCDF is based on the community-supported Climate and Forecast Metadata Convention (CF), which provides a definitive description of the data in each variable, and the spatial and temporal properties of the data. Any version of CF may be used, but it must be identified in the 'Conventions' attribute.



http://purl.org/np/RAqippWzrV2xpo5prm-7ujf4JGYjktUtj01dWUzP15G2A#NetCDF_OceanSITES

2.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.a.3

Implementation Consideration

- ✓ ReefTEMPS uses the NetCDF format for its data.

2.b.1.b.1

Select the FAIR Enabling Resource



ODV_ASCII | Ocean Data View ASCII format for marine datasets



ODV ASCII data transport format for marine datasets



http://purl.org/np/RAXfjqMGLmatdBCu1X-CuYo9a0_zfQUTbPbvGXHpXXL_0#ODV_ASCII

2.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.b.3

Implementation Consideration

- ✓ PHYTOBS and BenthOBS provide access to the datasets in ODV format.

3

Declaration I2 Metadata: What structured vocabulary do you use to annotate your metadata records?

- ✓ b. Declaration: FAIR Enabling Resource(s)

3.b.1

List the FAIR Enabling Resource(s)

Answers

3.b.1.a.1

Select the FAIR Enabling Resource



GEMET | General Multilingual Environmental Thesaurus

The GEMET (General Multilingual Environmental Thesaurus) was created as a general environmental thesaurus, aimed to define a common general language with a core of general terminology for the environment. It is the reference vocabulary of the European Environment Agency (EEA) and its Network (Eionet).



http://purl.org/np/RAudR0-o90xJnKEiC8tnjuZKKikEtCWsqg5kjtg_-lSr0#GEMET

3.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.a.3

Implementation Consideration

- ✓ "GEMET - INSPIRE themes, version 1.0" is used by ILICO in the metadata keywords.

3.b.1.b.1

Select the FAIR Enabling Resource



GCMD Keywords | Global Change Master Directory Keywords



Global Change Master Directory (GCMD) Keywords are a hierarchical set of controlled Earth Science vocabularies that help ensure Earth Science data, services, and variables are described in a consistent and comprehensive manner and allow for the precise searching of metadata and subsequent retrieval of data, services, and variables. Initiated over twenty years ago, GCMD Keywords are periodically analyzed for relevancy and will continue to be refined and expanded in response to user needs.



<http://purl.org/np/RAhixhioRuOn3wpxcLB9oO2sIP98gkaMc5zEcimd9KH5Y#GCMD>

3.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.b.3

Implementation Consideration

- ✓ GCMD vocabulary is used by ReefTEMPS in the metadata keywords.

3.b.1.c.1

Select the FAIR Enabling Resource



AODN - Australian Ocean Data Network

The Australian Ocean Data Network (AODN) comprises data captured by Facilities of Australia's Integrated Marine Observing System (IMOS) and other organisations active in the coastal and marine realms.



<http://purl.org/np/RAHJ9cM0CoOnealCPqeKqUCyzZaWsUvfYUoKSujUmCaVg#AODN>

3.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.c.3

Implementation Consideration

- ✓ AODN vocabulary is used by ReefTEMPS in the metadata keywords.

3.b.1.d.1

Select the FAIR Enabling Resource



BODC - British Oceanographic Data Centre

BODC operates the NERC Vocabulary Server (NVS) which provides access to controlled vocabularies. Some of these vocabularies are totally managed by BODC, others are managed by BODC on behalf of other organisations, while some are owned and, when relevant, managed by external governance authorities.



http://purl.org/np/RAEcm9qr9ROhFOCOpiOCLW0IruMF2e_8KEyyaozAfVJOI#BODC

3.b.1.d.2

This implementation choice is:

- ✓ a. Currently in use by the community

3.b.1.d.3

Implementation Consideration

- ✓ BODC vocabulary is used by ReefTEMPS in the metadata keywords.

4

Declaration I2 Datasets: What structured vocabulary do you use to encode your datasets

- ✓ b. Declaration: FAIR Enabling Resource(s)

4.b.1

List the FAIR Enabling Resource(s)

Answers

4.b.1.a.1

Select the FAIR Enabling Resource



BODC - British Oceanographic Data Centre

BODC operates the NERC Vocabulary Server (NVS) which provides access to controlled vocabularies. Some of these vocabularies are totally managed by BODC, others are managed by BODC on behalf of other organisations, while some are owned and, when relevant, managed by external governance authorities.



http://purl.org/np/RAEcm9qr9ROhFQCOpIQCLW0IruMF2e_8KEyyaozAfVJOI#BODC

4.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

4.b.1.a.3

Implementation Consideration

- ✓ BODC vocabulary is used by PHYTOBS and BenthOBS in the data.

4.b.1.b.1

Select the FAIR Enabling Resource



WoRMS | World Register of Marine Species 

The aim of a World Register of Marine Species (WoRMS) is to provide an authoritative and comprehensive list of names of marine organisms, including information on synonymy. While highest priority goes to valid names, other names in use are included so that this register can serve as a guide to interpret taxonomic literature.



<http://purl.org/np/RAhCgJhUtiLQVEoWwL9xj09IPsFW38ldb3FCdtKsXo9bQ#WoRMS>

4.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

4.b.1.b.3

Implementation Consideration

- ✓ WoRMS vocabulary is used by BenthOBS in the data for the species.

4.b.1.c.1

Select the FAIR Enabling Resource



EUNIS Habitat Classification



The EUNIS habitat classification is a comprehensive pan-European system for habitat identification.



http://purl.org/np/RAYdg3CV1FucepXxPxEpbK94cS2uQ2nY88dHqZvSHfzCM#EUNIS_Habitat

4.b.1.c.2

This implementation choice is:



a. Currently in use by the community

4.b.1.c.3

Implementation Consideration



EUNIS habitat classification is used by BenthOBS in the data.

4.b.1.d.1

Select the FAIR Enabling Resource



NVS | NERC Vocabulary Service



SeaDataNet NVS is used in marine domain for metadata and data.



http://purl.org/np/RALBOR5frFpOCV3IDmuJDX8vJD-AhyjEsDKSOw-c8llfk#NVS_Voc

4.b.1.d.2

This implementation choice is:

- ✓ a. Currently in use by the community

4.b.1.d.3

Implementation Consideration

- ✓ SeaDataNet vocabulary is used by PHYTOBS in the data.

5

Declaration I3 Metadata: What semantic model do you use for your metadata records?

- ✓ b. Declaration: FAIR Enabling Resource(s)

5.b.1

List the FAIR Enabling Resource(s)

Answers

5.b.1.a.1

Select the FAIR Enabling Resource



ISO 19139 | Geographic information - Metadata - XML schema implementation



ISO 19139 defines Geographic MetaData XML (gmd) encoding, an XML Schema implementation derived from ISO 19115.



http://purl.org/np/RAWRs9ggWH1YGHwcWdCifkcZ7GPEJla1fxjs3ppN3mAXw#ISO_19139

5.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

5.b.1.a.3

Implementation Consideration

- ✓ Geonetwork is used by ILICO, DYNALIT and ReefTEMPS to publish metadata records in ISO 19115/19139.

5.b.1.b.1

Select the FAIR Enabling Resource



ISO 19115 | Geographic information - Metadata



ISO 19115 defines the schema required for describing geographic information and services by means of metadata. It provides information about the identification, the extent, the quality, the spatial and temporal aspects, the content, the spatial reference, the portrayal, distribution, and other properties of digital geographic data and services.



http://purl.org/np/RAWhGD0MUvu3dngBK0eWdNIRWNRhOHkonTAIsIGV8y1v4#ISO_19115

5.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

5.b.1.b.3

Implementation Consideration

- ✓ Geonetwork is used by ILICO, DYNALIT and ReefTEMPS to publish metadata records in ISO 19115/19139.

5.b.1.c.1

Select the FAIR Enabling Resource



ISO 19110|Geographic Information - Methodology for feature cataloguing

ISO 19110 defines the methodology for cataloguing feature types and specifies how the classification of feature types is organized into a feature catalogue and presented to the users of a set of geographic data.



http://purl.org/np/RAfDBDoIS3WX7HRAy0gZWdF_zS5Agv3IMsFRfH_DXBkR4#ISO_19110

5.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

5.b.1.c.3

Implementation Consideration

- ✓ Geonetwork is used by ILICO to publish stations attributes in ISO 19110.

6

Declaration I3 Datasets: What semantic model do you use for your datasets?

- ✓ b. Declaration: FAIR Enabling Resource(s)

6.b.1

List the FAIR Enabling Resource(s)

Answers

6.b.1.a.1

Select the FAIR Enabling Resource



OGC-SensorThings

The OGC SensorThings API provides an open, geospatial-enabled and unified way to interconnect the Internet of Things (IoT) devices, data, and applications over the Web. At a high level the OGC SensorThings API provides two main functionalities and each function is handled by a part. The two parts are the Sensing part and the Tasking part. The Sensing part provides a standard way to manage and retrieve observations and metadata from heterogeneous IoT sensor systems. The Tasking part is planned as a future work activity and will be defined in a separate document as the Part II of the SensorThings API



<http://purl.org/np/RALq176Ps7J8NcmeFWShY5cm87ONwmud3trXbMpLqWcv8#OGC-SensorThings>

6.b.1.a.2

This implementation choice is:

✓ c. Is planned to be used in the future

6.b.1.a.3

Implementation Consideration

✓ The OGC-SensorThings standard will be used by ILICO to call up the data in a web app in a standardised way.

VI. Declarations for Reusability

Questions

1

Declaration R1.1 Metadata: Which usage license do you use for your metadata records?

✓ b. Declaration: FAIR Enabling Resource(s)

1.b.1

List the FAIR Enabling Resource(s)

Answers

1.b.1.a.1

Select the FAIR Enabling Resource

✓

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http://purl.org/np/RAQ_sGdY_Qc7I1O_zmn4nr-pMBOxKU04Ur9s998rS6Fc#CC-BY-4.0

1.b.1.a.2

This implementation choice is:

✓ a. Currently in use by the community

1.b.1.a.3

Implementation Consideration

- ✓ License used by most networks (except ReefTEMPS) and ILICO for metadata.

1.b.1.b.1

Select the FAIR Enabling Resource



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http://purl.org/np/RAEEcqbP_ghoZdqL-gsrjYp3YREEZMKuXb4t7xSGnlov8#CC-BY-SA-4.0

1.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

1.b.1.b.3

Implementation Consideration

- ✓ License used by ReefTEMPS for metadata.

2

Declaration R1.1 Datasets: Which usage license do you use for your datasets?

- ✓ b. Declaration: FAIR Enabling Resource(s)

2.b.1

List the FAIR Enabling Resource(s)

Answers

2.b.1.a.1

Select the FAIR Enabling Resource



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http://purl.org/np/RAEEcqbP_ghoZdqL-qsrjYp3YREEZMKuXb4t7xSGnlov8#CC-BY-SA-4.0

2.b.1.a.2

This implementation choice is:

- a. Currently in use by the community

2.b.1.a.3

Implementation Consideration

- License used by PHYTOBS, BenthOBS and ReefTEMPS for data.

2.b.1.b.1

Select the FAIR Enabling Resource



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4.0

[http://purl.org/np/RANw_e-9CEfADSpQKbEVn5G7qu_jczqdJUNssOzYXEvfA#CC-BY-NC-](http://purl.org/np/RANw_e-9CEfADSpQKbEVn5G7qu_jczqdJUNssOzYXEvfA#CC-BY-NC-4.0)

2.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.b.3

Implementation Consideration

- ✓ License used by CORAIL and SOMLIT for data.

2.b.1.c.1

Select the FAIR Enabling Resource



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Using this license you are free to share and adapt this resource but you must give appropriate credit.



ND-4.0

[http://purl.org/np/RAsHps5X17EiVP-ByVsvlqn3rKwP64PFqiH1IWY4Pe5i4#CC-BY-NC-](http://purl.org/np/RAsHps5X17EiVP-ByVsvlqn3rKwP64PFqiH1IWY4Pe5i4#CC-BY-NC-ND-4.0)

2.b.1.c.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.c.3

Implementation Consideration

- ✓ License used by COAST-HF for data.

2.b.1.d.1

Select the FAIR Enabling Resource



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http://purl.org/np/RAQ_sGdY_Qc7l1O_zmn4nr-pMBOxKU04Ur9s998rS6Fc#CC-BY-4.0

2.b.1.d.2

This implementation choice is:

- ✓ a. Currently in use by the community

2.b.1.d.3

Implementation Consideration

- ✓ License used by DYNALIT, MOOSE and SONEL

3

Declaration R1.2 Metadata: What metadata schema do you use for describing the provenance of your metadata records?

- ✓ b. Declaration: FAIR Enabling Resource(s)

3.b.1

List the FAIR Enabling Resource(s)

Answers

3.b.1.a.1

Select the FAIR Enabling Resource



ISO 19139 | Geographic information - Metadata - XML schema implementation



ISO 19139 defines Geographic MetaData XML (gmd) encoding, an XML Schema implementation derived from ISO 19115.



http://purl.org/np/RAWRs9ggWH1YGHwcWdCifkcZ7GPEJla1fxjs3ppN3mAXw#ISO_19139

3.b.1.a.2

This implementation choice is:

a. Currently in use by the community

3.b.1.a.3

Implementation Consideration

The metadata records in the ISO 19115/19139 standard published by Geonetwork for ReefTEMPS and DYNALIT networks and ILICO include provenance information.

3.b.1.b.1

Select the FAIR Enabling Resource



ISO 19115 | Geographic information - Metadata

ISO 19115 defines the schema required for describing geographic information and services by means of metadata. It provides information about the identification, the extent, the quality, the spatial and temporal aspects, the content, the spatial reference, the portrayal, distribution, and other properties of digital geographic data and services.



http://purl.org/np/RAWhGD0MUVu3dngBK0eWdNIRWNRhOHkonTAIsIGV8y1v4#ISO_19115

3.b.1.b.2

This implementation choice is:

- a. Currently in use by the community

3.b.1.b.3

Implementation Consideration

- The metadata records in the ISO 19115/19139 standard published by Geonetwork for ReefTEMPS and DYNALIT networks and ILICO include provenance information.

4

Declaration R1.2 Datasets: What metadata schema do you use for describing the provenance of your datasets?

- b. Declaration: FAIR Enabling Resource(s)

4.b.1

List the FAIR Enabling Resource(s)

Answers

4.b.1.a.1

Select the FAIR Enabling Resource



ISO 19115 | Geographic information - Metadata

ISO 19115 defines the schema required for describing geographic information and services by means of metadata. It provides information about the identification, the extent, the quality, the spatial and temporal aspects, the content, the spatial reference, the portrayal, distribution, and other properties of digital geographic data and services.



http://purl.org/np/RAWWhGD0MUVu3dngBK0eWdNIRWNRhOHkonTAIsIGV8y1v4#ISO_19115

4.b.1.a.2

This implementation choice is:

- ✓ a. Currently in use by the community

4.b.1.a.3

Implementation Consideration

- ✓ The metadata records in the ISO 19115/19139 standard published by Geonetwork for ReefTEMPS and DYNALIT networks include provenance information on datasets.

4.b.1.b.1

Select the FAIR Enabling Resource



ISO 19139 | Geographic information - Metadata - XML schema implementation



ISO 19139 defines Geographic MetaData XML (gmd) encoding, an XML Schema implementation derived from ISO 19115.



http://purl.org/np/RAWRs9gqWH1YGHwcWdCifkcZ7GPEJla1fxjs3ppN3mAXw#ISO_19139

4.b.1.b.2

This implementation choice is:

- ✓ a. Currently in use by the community

4.b.1.b.3

Implementation Consideration

- ✓ The metadata records in the ISO 19115/19139 standard published by Geonetwork for ReefTEMPS and DYNALIT networks include provenance information on datasets.

5

Declaration R1.3: Your community uses this FAIR Implementation Profile to link to domain-relevant community standards.

✗ *This question has not been answered yet!*

VII. Register a new resource as a nanopublication

Questions

No questions