LifeWatch ERIC Metadata Catalogue

GeoNetwork Meeting, June 23rd 2020

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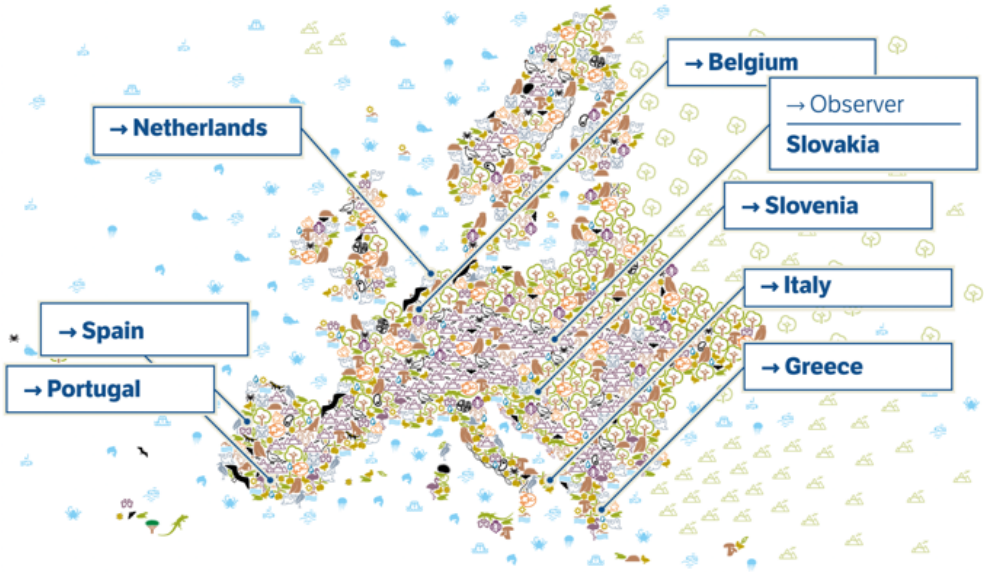
LifeWatch ERIC Service Centre

LifeWatch ERIC

LifeWatch ERIC is a European Infrastructure Consortium that offers e-Science research facilities to scientists investigating Biodiversity organization and Ecosystem functions and services.

Combining a wide range of ICT tools and resources with deep domain knowledge, **LifeWatch ERIC**'s mission is to be the leading worldwide provider of content and services for the Biodiversity research community, creating new opportunities for large-scale scientific development, and enabling accelerated data capture and modelling thanks to the use of innovative technologies.



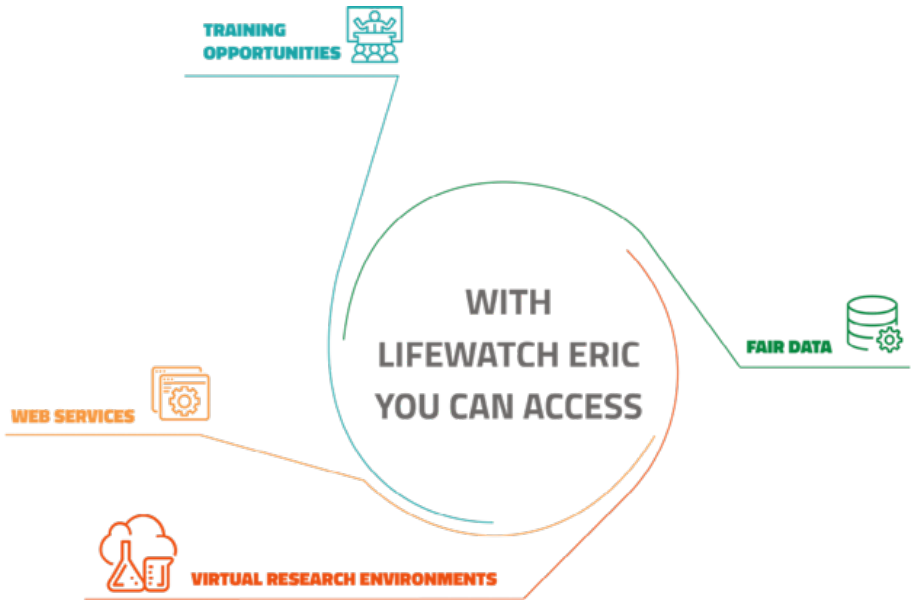
LifeWatch ERIC is a distributed research e-infrastructure consortium consisting of 7 European Member States.

Its structure mirrors its nature, with central components (Common Facilities) located in 3 Member States (Spain, Italy and the Netherlands), and National Nodes in all 7 countries.
LifeWatch ERIC's current members are: Belgium, Greece, Italy, the Netherlands, Portugal, Slovenia and Spain.
Slovakia participates as an Observer.

LifeWatch ERIC

With LifeWatch ERIC users can:

- find, access, work with and reuse **FAIR data** collected by science at a global level, of different typologies and scales. Advanced search functions, thesauri and ontologies are available on our catalogue to further combine data and generate new services;
- process and analyse the data in our **Virtual Research Environments** (VREs). Creating multi-spatial and biological system models, and elaborating trends and predictions are just some of the many possibilities offered by VREs, online laboratories equipped with tools for data analysis, innovative technologies, like blockchain, storage capacity and enormous computational power;
- **get trained** in the use of our services, as well as on key scientific issues through Master's and PhD courses, summer schools, webinar programmes and educational initiatives;
- receive **support** through our Helpdesk and its experts specialised in different domains.



LifeWatch ERIC Metadata Catalogue

The LifeWatch ERIC metadata catalogue is based on GeoNetwork and allows to manage (simple and complex) metadata related to four kinds of resources:

- **Virtual Research Environments**, by using a customized ISO19139 standard (25 metadata attributes)
- **Services**, by using a customized ISO19139 standard (40 metadata attributes)
- **Workflows**, by using a customized ISO19139 standard (25 metadata attributes)
- **Datasets**, by using a customized ISO19139 standard (76 metadata attributes) → EML 2.2

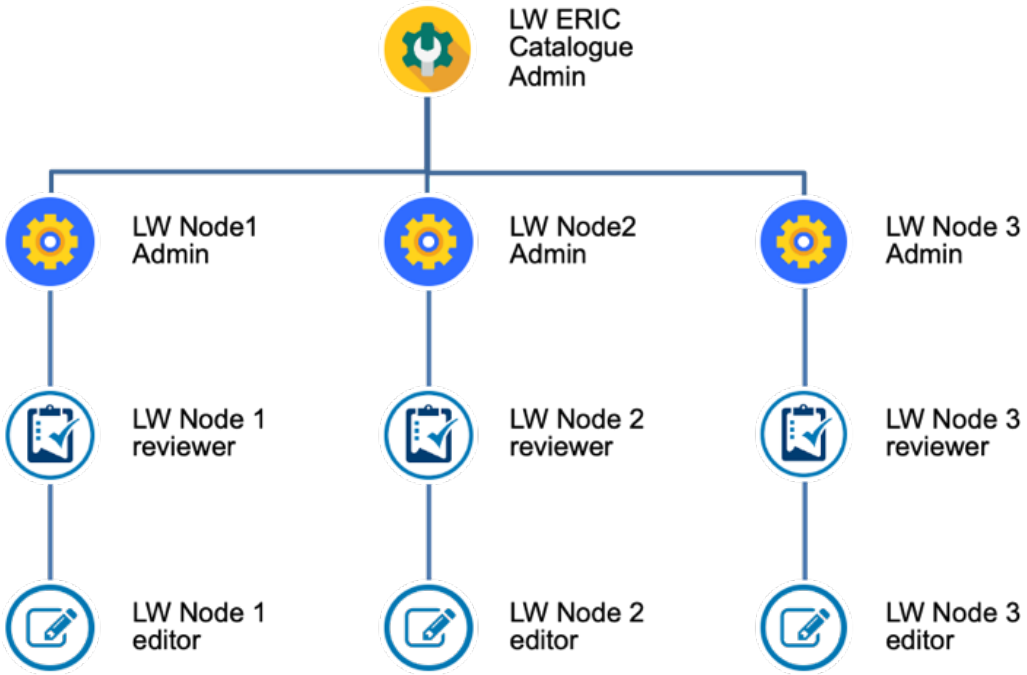
Metadata attributes can be optional/mandatory and can require single/multiple values (metadata cardinality)

The LifeWatch ERIC metadata catalogue allows (upon validation and verification) the creation of Digital Object Identifiers (DOIs) for resources that do not have it.
Only admin users can request a DOI by exploiting the GeoNetwork – DataCite connection.

LifeWatch ERIC Metadata Catalogue

The metadata catalogue allows to:

- search resources with advanced filters (e.g., according to the provider, i.e. LifeWatch national nodes)
- manage users with the corresponding profiles and privileges:



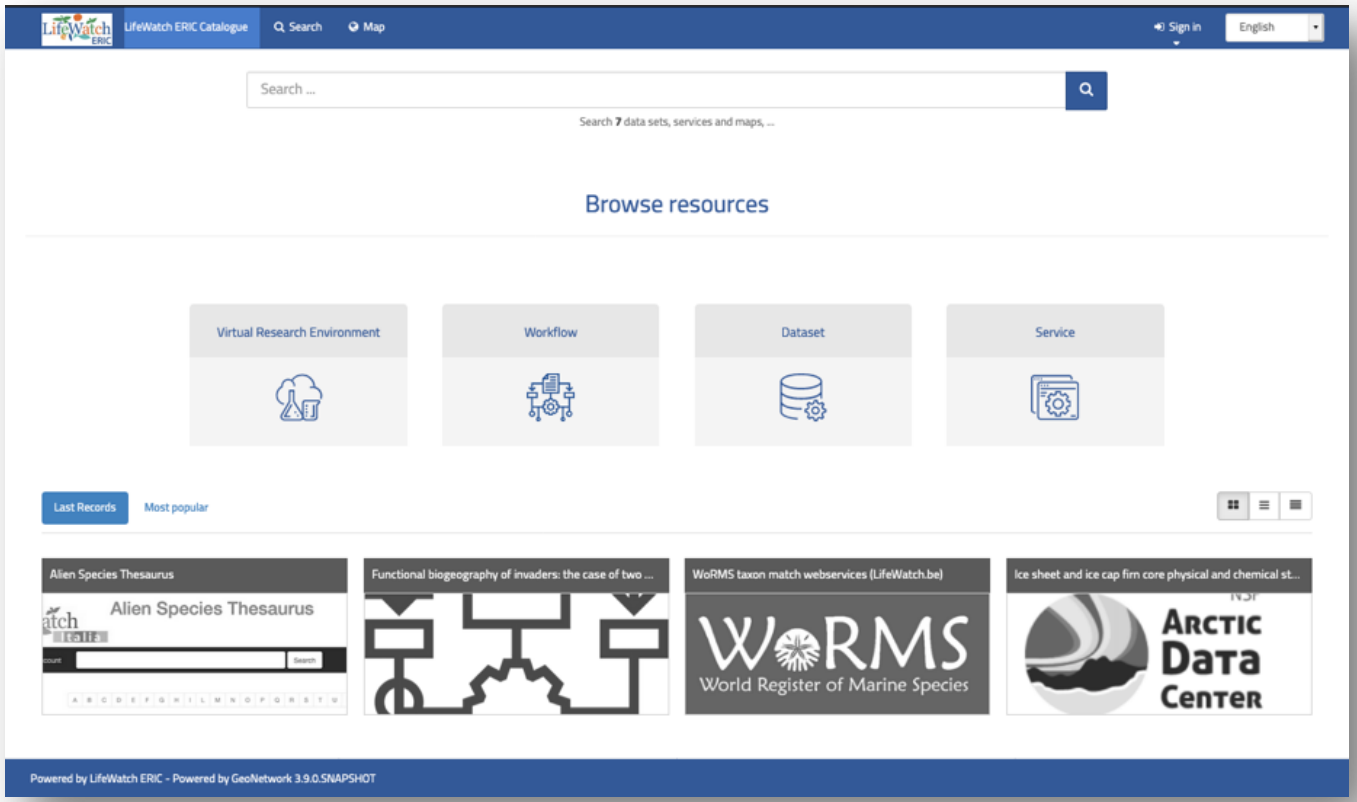
User admin:
has all privileges within its group

Content reviewer:
can review content and authorize publication within its group

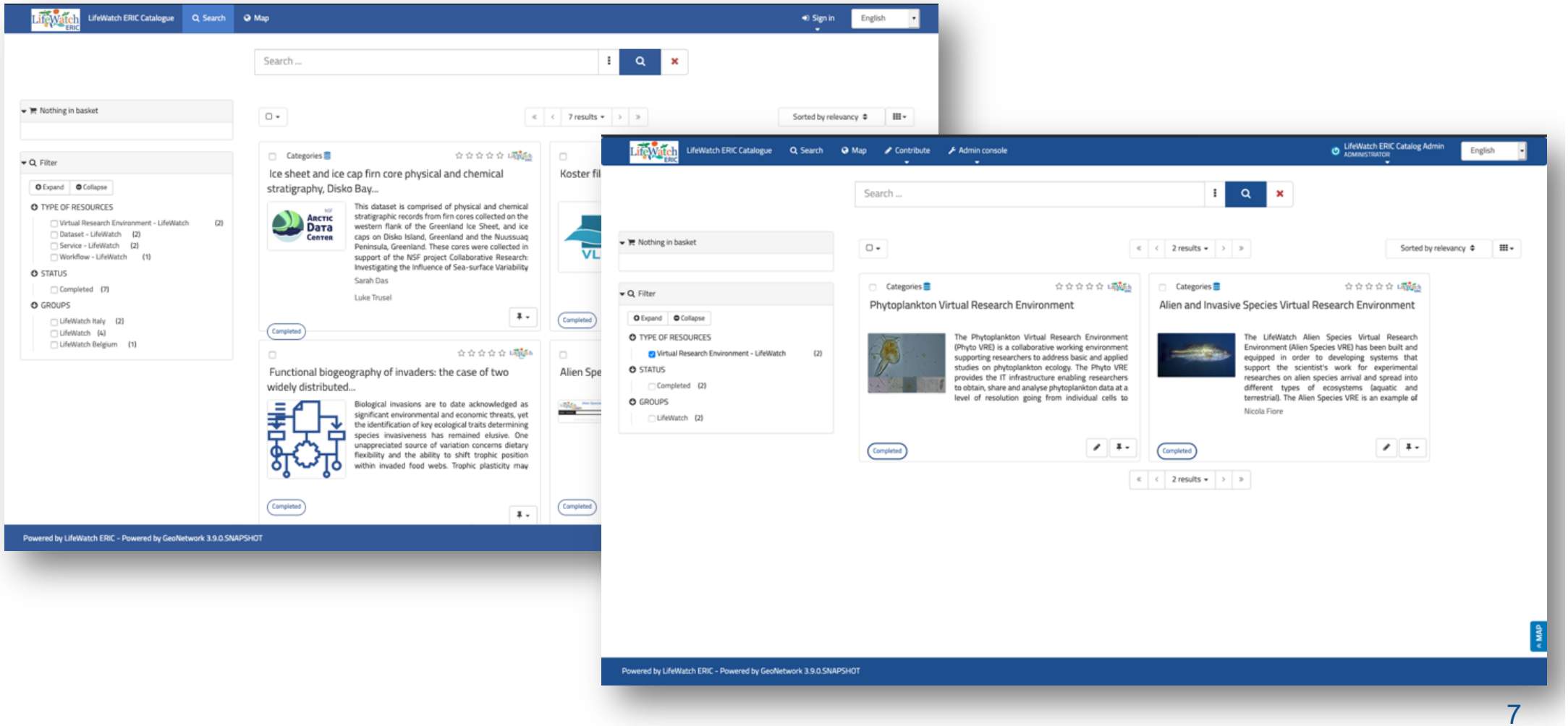
Editor:
can create/edit/delete content within its group

Registered users: can download protected data

LifeWatch ERIC Metadata Catalogue



LifeWatch ERIC Metadata Catalogue



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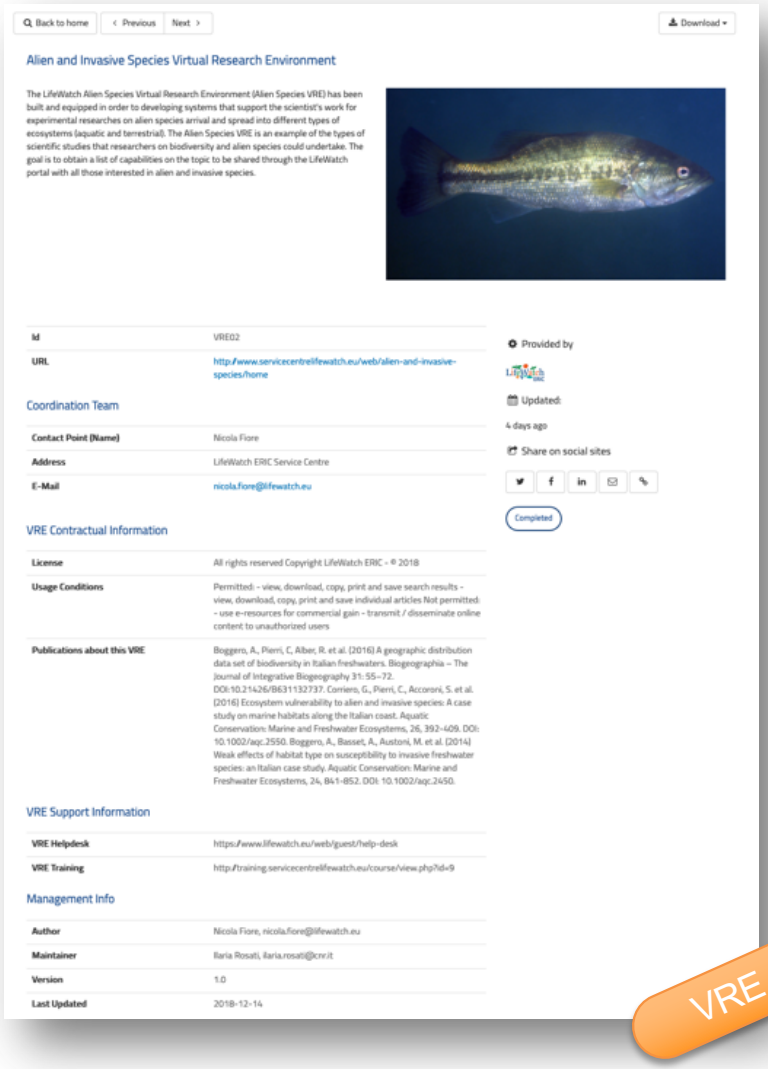
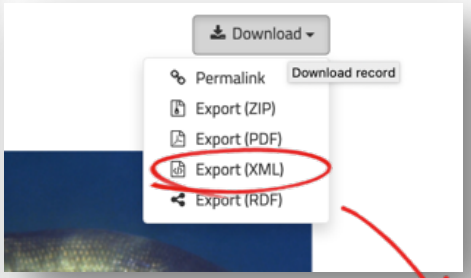


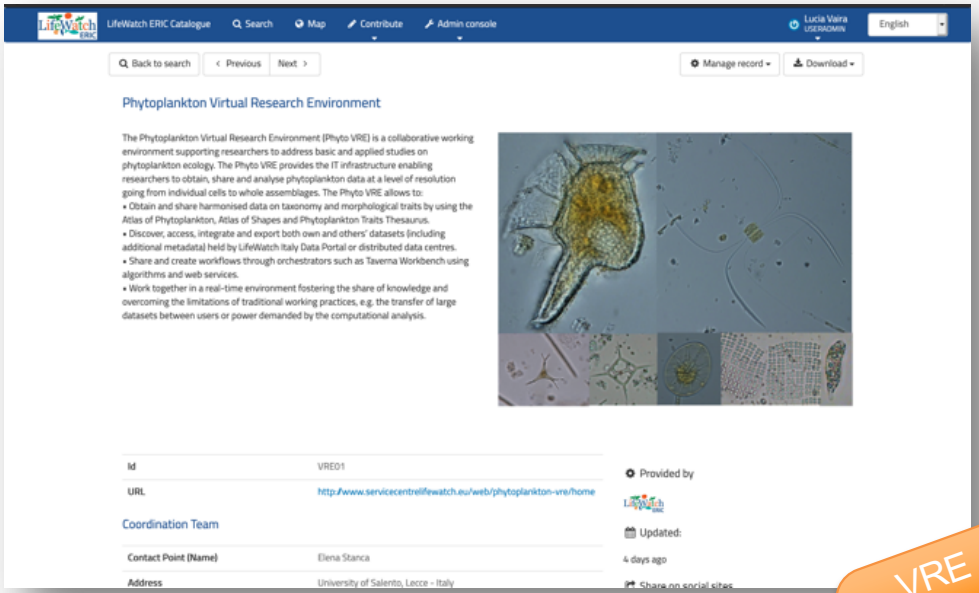
Public users can browse the catalogue and view/download the resources metadata

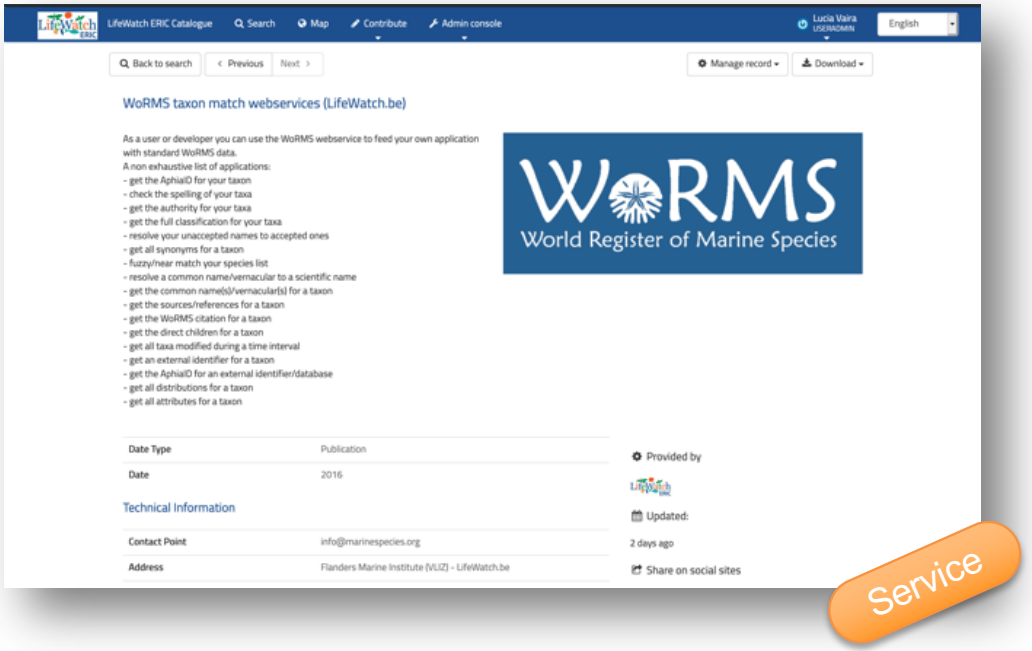


LifeWatch ERIC Metadata Catalogue

Registered users can browse the catalogue and:

- view / download metadata of other groups
- manage / edit / delete metadata within their group





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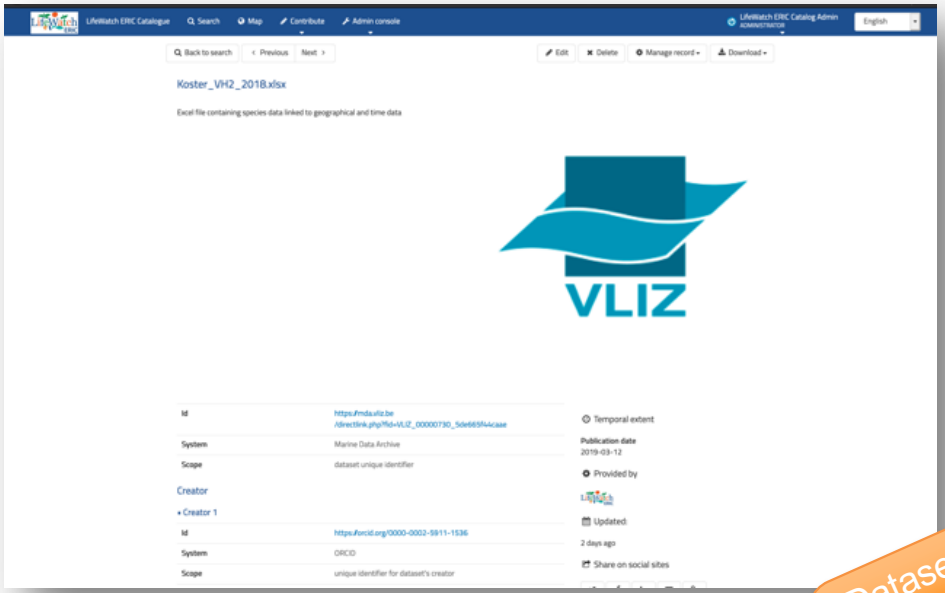


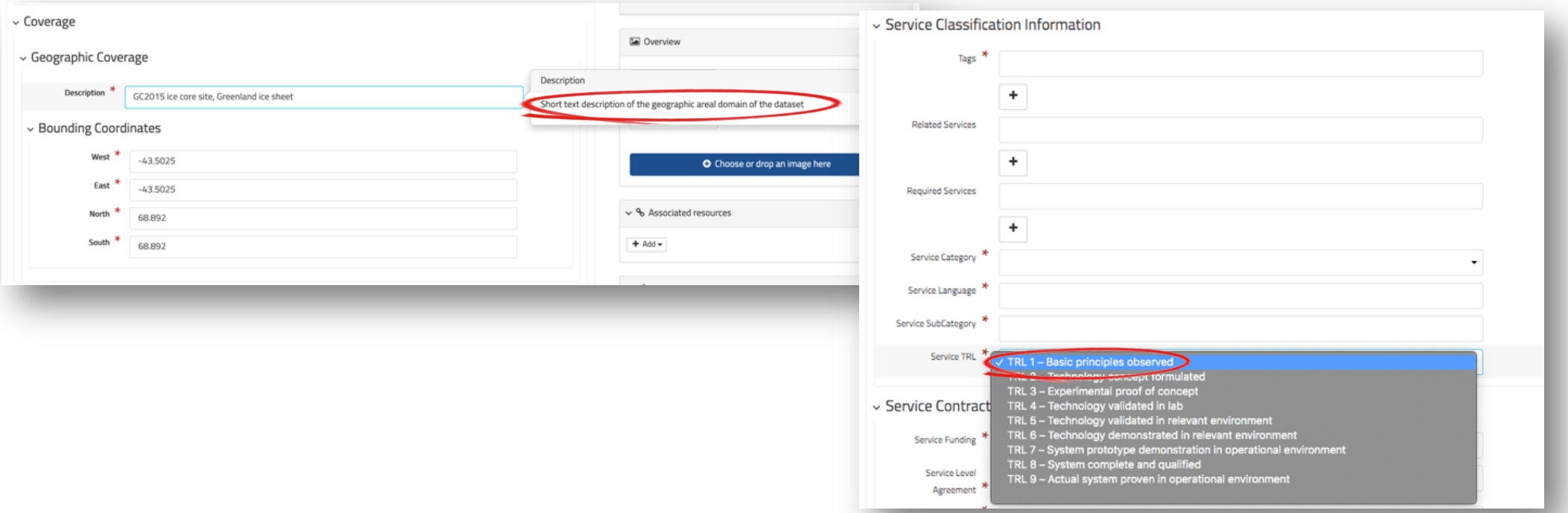
Dataset

Workflow

LifeWatch ERIC Metadata Catalogue

Users are guided in the input process by means of:

- **tooltips** for the description of the specific field
- **drop down lists** with the appropriate values of the specific field
- multiplicity for **multi-value attributes**
- **markers** for optional/mandatory metadata



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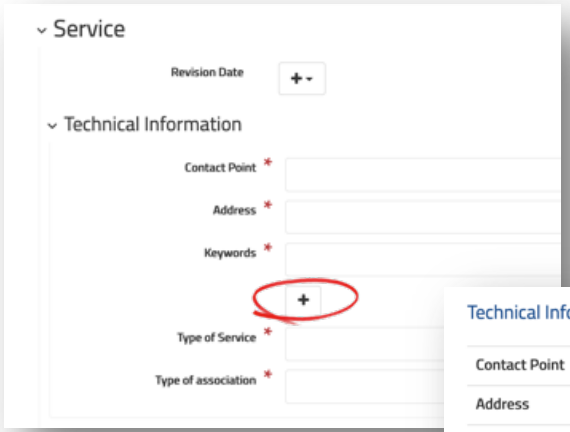
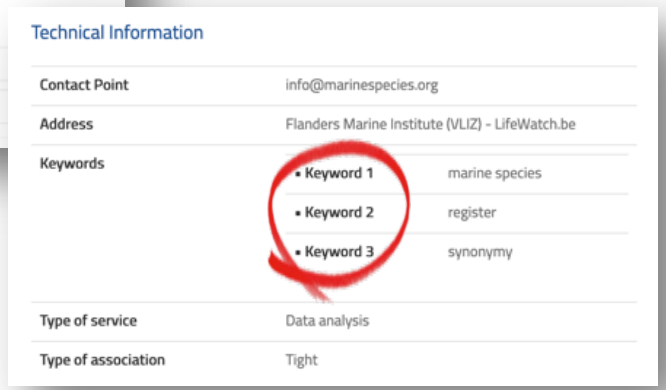
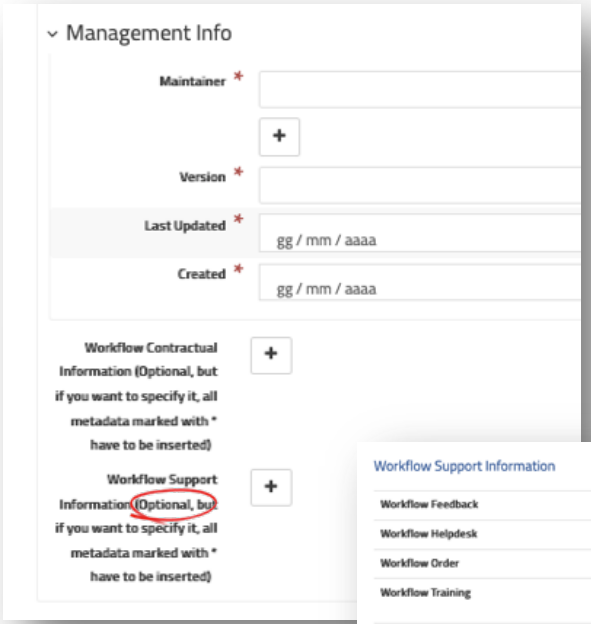


EDITOR

VIEW





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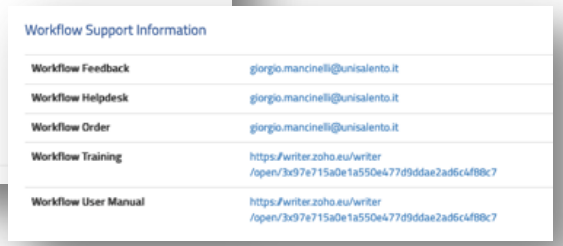


LifeWatch ERIC Metadata Catalogue
Add DOIs to resources with DataCite

A **registered user** wants to create a new resource in the LW ERIC Metadata Catalogue

Logins @LifeWatch ERIC Metadata Catalogue → Adds a new record → Selects the resource type and the template to use → Puts all mandatory metadata for that resource

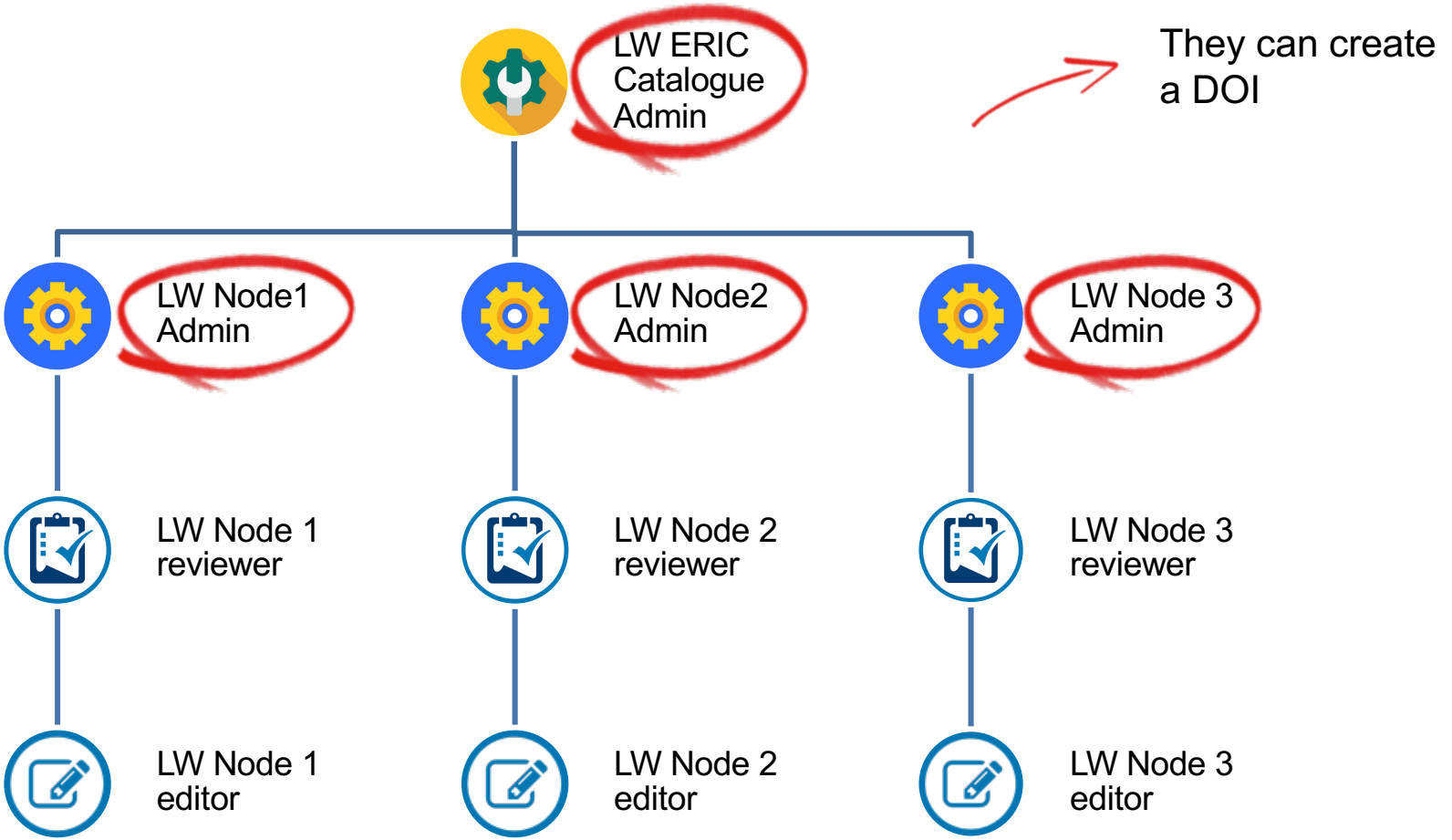
Validation

Clicks “Save and close” button

Which is the role?

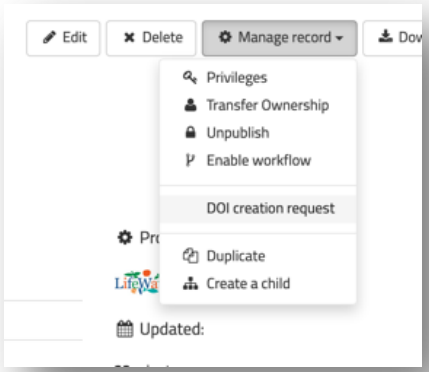
- editor → Can edit/delete content and request a DOI
- admin → Can review content, authorize publication and create a DOI
- reviewer → Can review content, authorize publication and request a DOI

LifeWatch ERIC Metadata Catalogue
Add DOIs to resources with DataCite

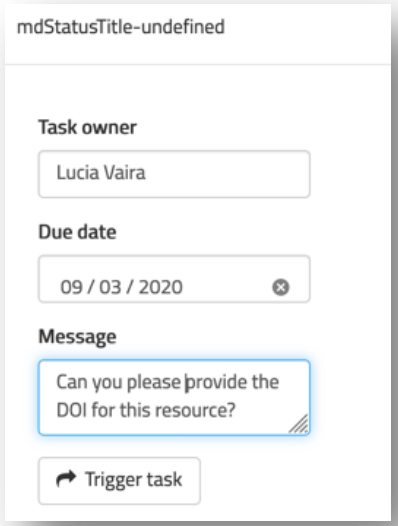


LifeWatch ERIC Metadata Catalogue
Add DOIs to resources with DataCite

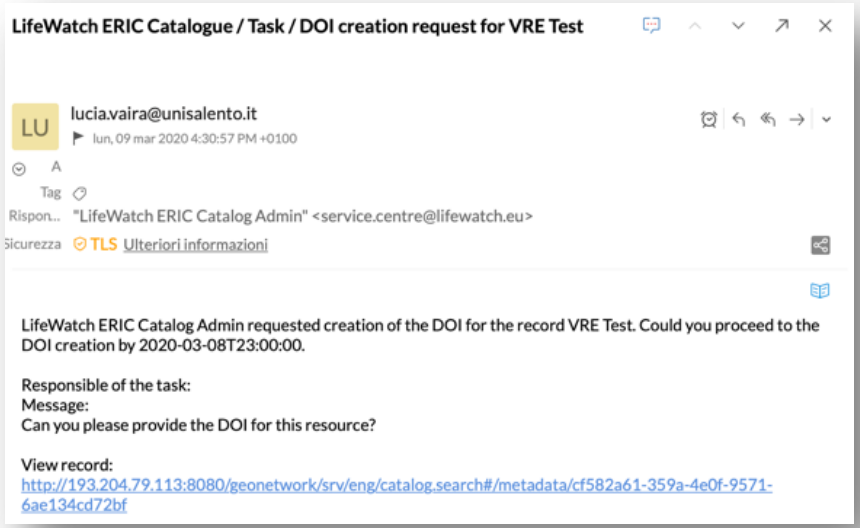
Once that the resource is published, the user requests a DOI



Assigns the task to (him/her)self and triggers the task

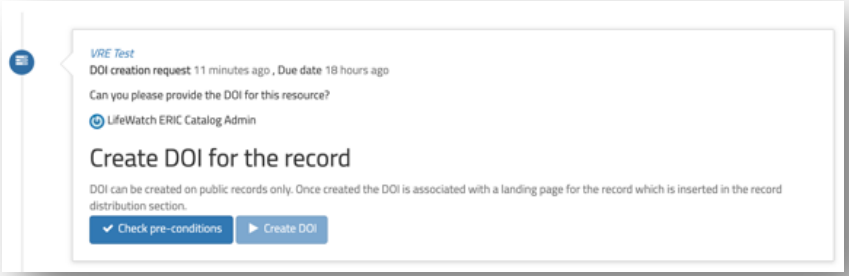


After submission of the task, the task owner is notified by email



LifeWatch ERIC Metadata Catalogue
Add DOIs to resources with DataCite

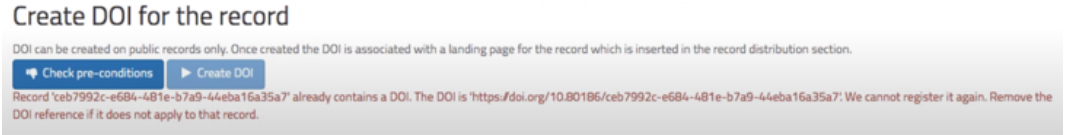
The task can then be resolved by checking the pre-conditions



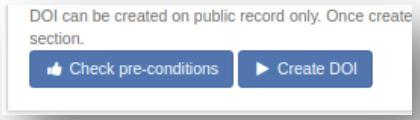
DataCite mandatory fields:

1. Identifier (the prefix is already defined)
2. Creator (individual name and organization name)
3. Title
4. Publisher (set to "LifeWatch ERIC" which is the provider of the DOI)
5. Publication Year
6. ResourceType (one of the allowed values of the enumeration *[Audiovisual, Collection, DataPaper, Dataset, Event, Image, InteractiveResource, Model, PhysicalObject, Service, Software, Sound, Text, Workflow, Other]*)

If DOI already exists, it needs to be removed



Otherwise, it is possible to create a DOI that will be added to the metadata record



DataCite
FIND, ACCESS, AND REUSE DATA

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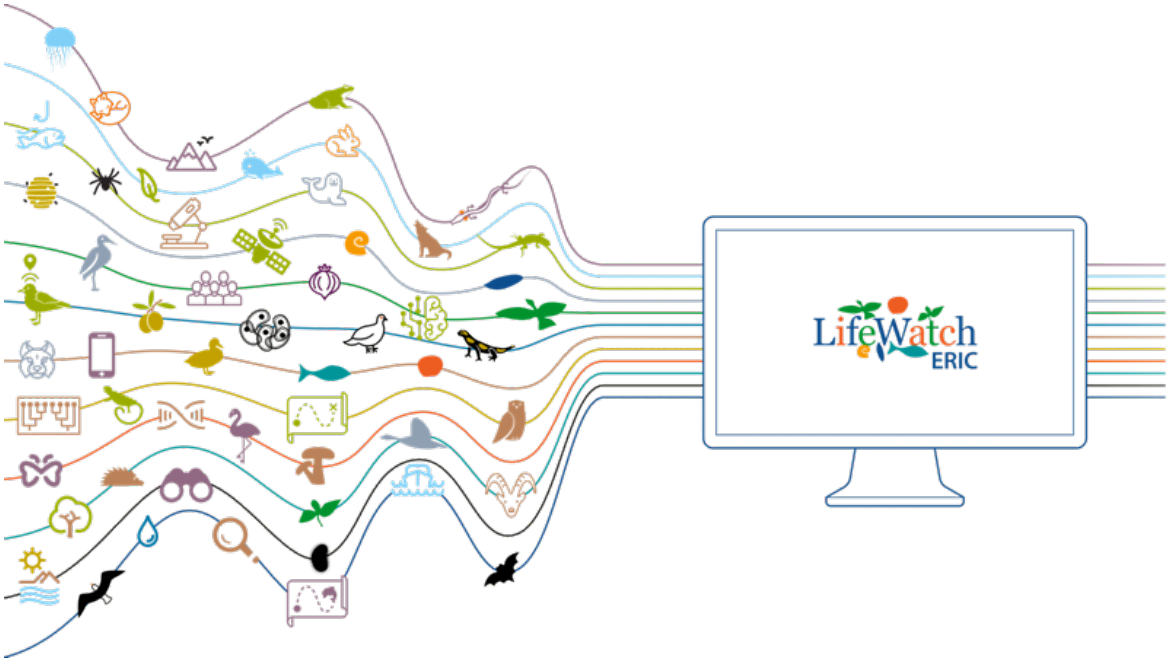
LifeWatch ERIC Metadata Catalogue
Next steps

- **Harvesting** features: manual import/export + machine2machine
- **Interoperability** with other catalogues (EOSC, GeoNetwork, Metacat, etc.)
- **EML 2.2 standards** for datasets (challenging task, we are defining the best approach to follow)
- **Validation** process before publication



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