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Improving data discoverability for the **Antarctic Seismic Data Library System (SDLS)** through **SDN**, **ISO19115-3** and **INSPIRE** compliance

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Introduction

- The Antarctic Seismic Data Library System (SDLS) is a consolidated data dissemination initiative created in 1991 under the mandates of the Antarctic Treaty System (ATS) and the auspices of the Scientific Committee on Antarctic Research (SCAR)
- provides open access to Antarctic multichannel seismic- reflection data (MCS) for use in cooperative research projects
- The ATS mandates that all institutions that collect MCS data in Antarctica must submit their MCS data to the SDLS within 4 years of collection and remain in the library under SDLS guidelines
- 8 years after collection the data switch to unrestricted use and can be requested to the SDLS for open use

Why GeoNetwork?

GeoNetwork Web site: https://geonetwork-opensource.org

- Is based on the principles of free and open source software
- Is a catalog application to manage spatially referenced resources
- Provides powerful metadata editing and search functions
- Provides a validation system
- The metadata editor support ISO19115/119/110 standards
- Allows to assign concept from a thesaurus to a metadata record
- Allows importing external thesaurus (Fig 1)

Current state of the GeoNetwork catalogue

Web site: https://antarcticdatacenter.inogs.it

- GeoNetwork version: 3.10.2.0
- The main catalogue contains the metadata schemes of 217 multichannel seismic-reflection data
- The 217 records are compliant with ISO19115-3 and INSPIRE (Fig 2)
- Each dataset is associated with a Digital Object Identifier (DOI)
- Each record is linked by a URL to the data in the Antarctic Seismic Data Library System (SDLS) (Fig 3)

Current state of SDLS

SDLS web site: http://sdls.ogs.trieste.it

The SDLS portal, developed and hosted by OGS, is the main data hub for the geophysical community working in the area of Antarctica.

- Completely free
- More than 300.000 km of seismic lines
- Dedicated portal
- Direct data access (Fig 4)
- Data download
- FAIR compliant
- DOI assigned
- OGC WFS, WMS compliant
- OGC O&M,SensorML compliant
- Through the integration with GeoNetwork compliant with:
  - ISO19115-3
  - INSPIRE

SeaDataNet thesaurus

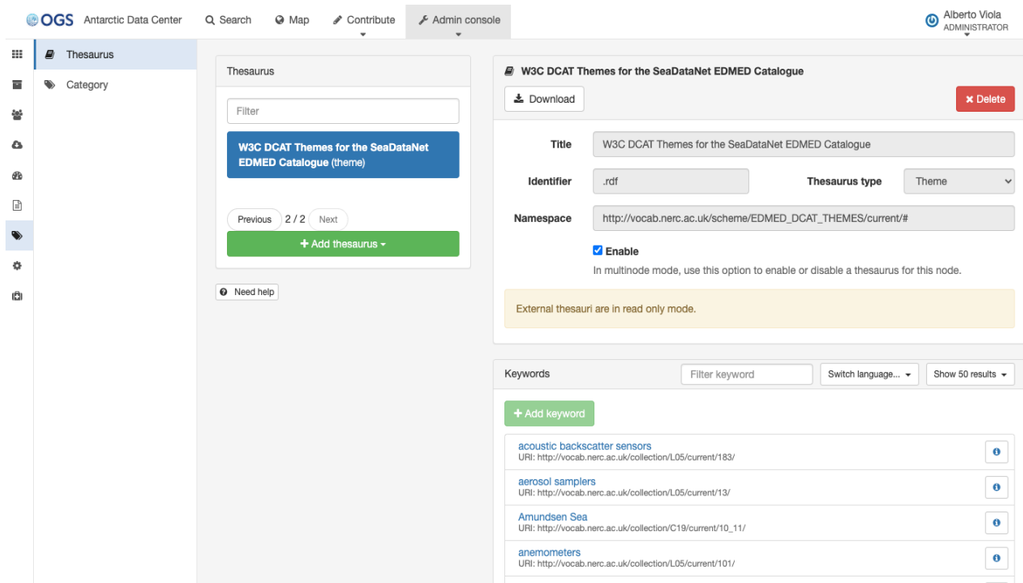

Fig 1. External thesaurus imported in our catalog

Validation ISO19115-3 and INSPIRE compliance

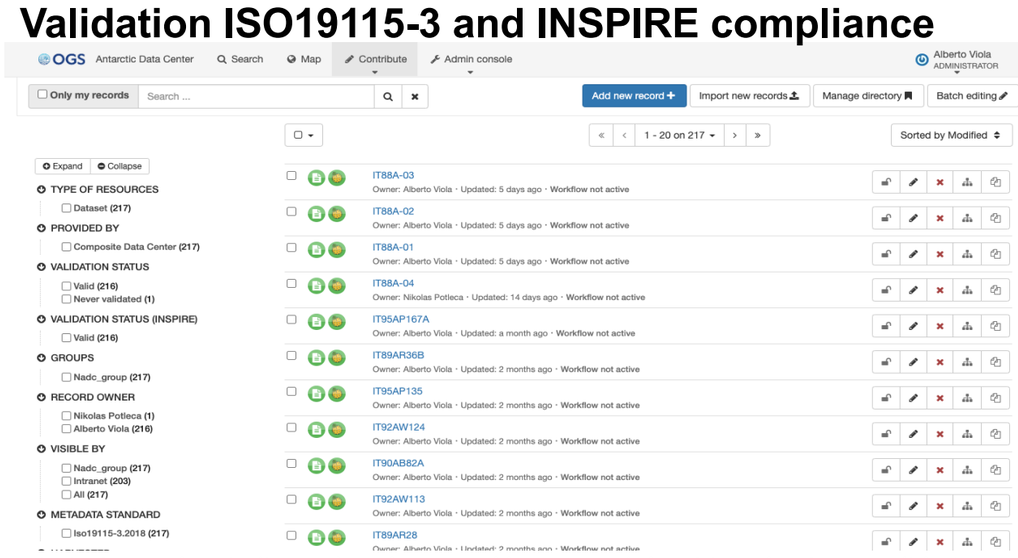

Fig 2. Green dots indicate that the record has passed the ISO and INSPIRE validation

Associated resources

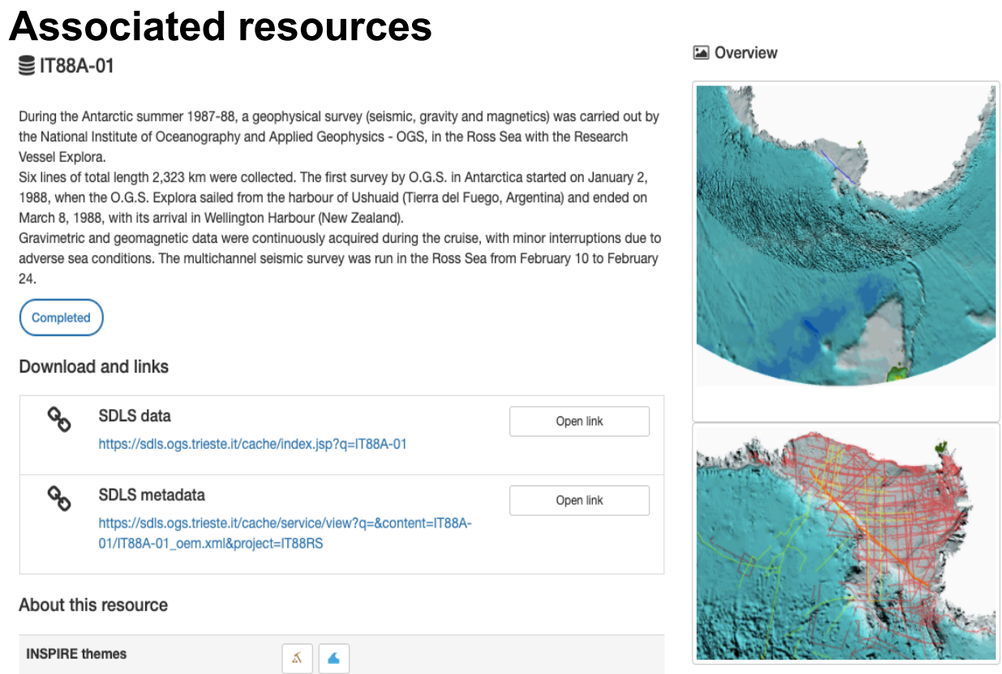

Fig 3. View of a metadata record with the link to the data in SDLS

DOWNLOAD

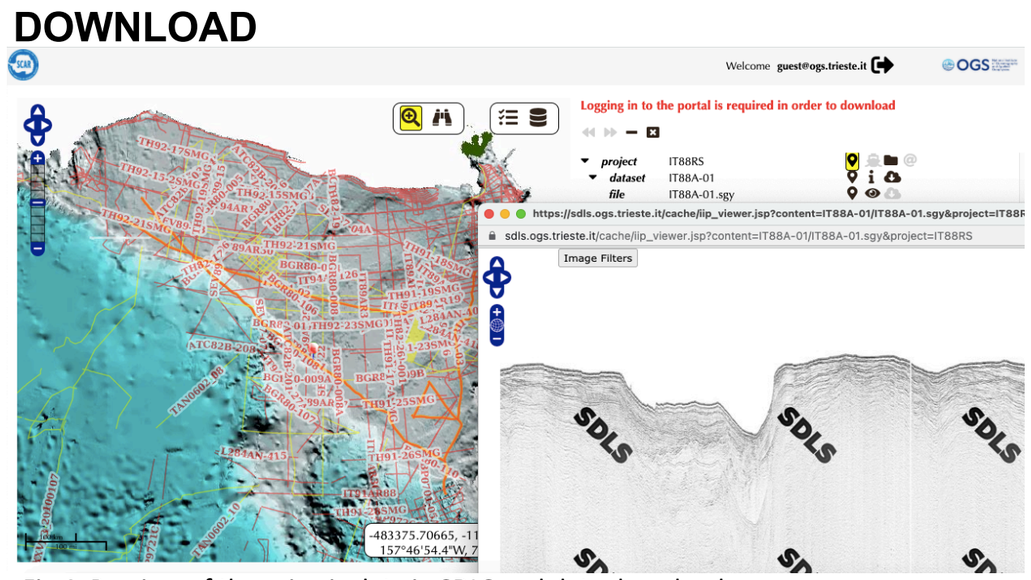

Fig 4. Preview of the seismic data in SDLS and data download

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