Second training course
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MIKADO: Generation of CDI ISO19139 XML files
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Overview

- What’s Mikado?
- What’s new in MIKADO 3?
- Description of CDI ISO 19139
- How to create and update CDI ISO 19139 XML files?
  - Mikado manual
  - Mikado automatic
- How to validate my CDI files?
- Practical work
What’s MIKADO?

Tool for the generation of XML descriptions of SeaDataNet catalogue records (CSR, CDI, EDIOS, EDMED, EDMERP)
What’s new in MIKADO 3?

- Migration to NVS 2.0 BODC vocabulary
- Migration to INSPIRE compliance (CSR and CDI ISO 19139)
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- Migration to NVS 2.0 BODC vocabulary
- Migration to INSPIRE compliance (CSR and CDI ISO 19139)
CDI ISO 19139 (1/9)

All CDI ISO 19139 documentation available at: http://www.seadatanet.org/Standards-Software/Metadata-formats/CDI
**CDI ISO 19139 (2/9)**

- MIKADO generates (manually or automatically) ISO 19139 CDI descriptions instead of ISO 19115 ones.

- MIKADO is still able to read (import) CDI ISO 19115 files and save them as ISO 19139 XML files for data centres to update their existing local XML files, **one by one** (Manual Menu: Open, Save)
CDI ISO 19139 (3/9)

- Main changes in MIKADO
  - Addition of new optional fields
    - EDMED reference
    - CSR reference
    - Additional documentation
    - Data quality information
  - Change in date format (revision date and station date)
  - Change in Sampling interval
CDI ISO 19139 (4/9)

- **EDMED Reference**
  - A reference to the EDMED directory has been added in CDI ISO 19139 profile.
- Optional field in MIKADO
  - EDMED reference (manual)
    - Dropdown list
    - Uploaded using web services
    - Sorted by EDMO code
  - Var80 (automatic)
    - Mapping available
    - Central EDMEDIId or EDMOCODE_LocalEDMEDId

Do not forget to create first your entry in EDMED Catalogue!
CDI ISO 19139 (5/9)

- CSR Reference
- A reference to the CSR directory has been added in CDI ISO 19139 profile.
- Optional field in MIKADO
  - CSR reference (manual)
    - Dropdown list
    - Uploaded using webservice
    - Sorted by EDMO code
  - Var81 (automatic)
    - Mapping available
    - Central CSRId or EDMOC ode_LocalCSRI d
CDI ISO 19139 (7/9)

- **Additional documentation**
- References to publications and documentations have been added in CDI ISO 19139 profile. Every CDI record can reference any number of publications.
- **Optional field in MIKADO**
  - Documentation tab (manual mode)
    - Dropdown list,
    - Upload using webservices
  - Var 90 (automatic mode)
- **Use of permanent URLs:**
  - Catalogue of publications (MARIS)
CDI ISO 19139 (5/9)

- **Data Quality Information**
  - Every CDI record can reference any number of data quality reports.
  - Optional fields in MIKADO:
    - Quality tab (manual)
    - Var95 to var98 (automatic)
**CDI ISO 19139 (8/9)**

- **Changes in date format:** YYYY-MM-DDTHH:MM \(\rightarrow\) YYYY-MM-DD

  - Revision date, Station date

- MIKADO manual: follow the instructions in the MIKADO interface

- MIKADO automatic: use the right format to avoid « date type » error during generation (var06, var20)
**CDI ISO 19139 (9/9)**

- **Sampling interval**
  - “Sampling interval” ➔ “Time resolution”
    - “When” tab (manual)
    - Var21 and 22 (automatic)
  - Value + L031 “SDN Measurement Periodicity Categories” ➔ Value + P06 “BODC data storage units”
How to create and update my CDI files?
MIKADO manual (« Manual » menu)

• Create and update XML files
  • Create a new XML file or open your existing XML file
  • Fulfil or Update the different fields
  • Fulfil new fields if possible
    • EDMED reference,
    • CSR reference,
    • Data Quality,
    • Documentation
  • Save your XML file

If you do not find your EDMED, CSR and Documentation entries in MIKADO, do not forget to update the Vocabulary Lists (Menu Options)!
MIKADO automatic (« Automatic » menu)

- Create and update XML files
  - Update your MIKADO 2.5 configuration files
    - Revision date (var06), Station date (var20): YYYY-MM-DD
    - Sampling interval (var 21,22) : Use P06 instead of L031
    - Fulfil the new fields if possible
      - EDMED reference var80,
      - CSR reference var81,
      - Data Quality var95 to var98,
      - Documentation var90
  - Save your configuration files
  - Generate your XML files
How to validate my CDI files?

**IMPORTANT:** The Validation Service ([www.seadatanet.org/validator](http://www.seadatanet.org/validator)) is not maintained anymore.

- To begin, you can open some of your XML files in MIKADO manual and check the content of the different fields.

- CDI and CSR ISO19139 XML Schemas are dynamically supported by ISO XML lists for EDMED, EDMO, EDMERP, CSR, Vocabs, ISO through Schematron.
  - This allows to validate CDI and CSR XML entries using a XML editor (XML Spy or Oxygen or other XML editors).
Practical work « CDI workshop »

- For experienced users
  - Work on your own data and your own XML files
    - Ask your questions,
    - Show your problems,
    - Give feedback
  → NEMO, MIKADO, Coupling table

- NEMO and NetCDF
  - On Thursday during NetCDF workshop
Practical work « CDI workshop »

- For new users
  - « For new users » folder
    - SDNtools.ppt = lecture about NEMO and MIKADO tools
    - Practicalwork.ppt = exercises on NEMO and MIKADO
**Practical work « CDI workshop »**

- For experienced users who did not bring their own files:
  - Work on the provided data and XML files in « MIKADO » folder which contains
    - An excel file of CDI metadata (generated by NEMO): NEMO_CDI_summary.xls
    - « ISO19115 » folder
      - a CDI ISO 19115 file: CDI_ISO19115_test_training_00005_H10.xml
      - a MIKADO configuration file for CDI XML generation (provided in NEMO): summary_CDI_NEMO.xml
Practical work « CDI workshop »

• Exercise 1: MIKADO manual
  1. Open the CDI ISO 19115 XML file in MIKADO manual
  2. Add an EDMED reference
  3. Add a CSR Reference
  4. Save the CDI file (= CDI ISO 19139)
  5. Compare the CDI ISO 19115 and CDI ISO 19139 by opening them in a text editor or in IE
Practical work « CDI workshop »

Exercise 2: MIKADO automatic

1. Open the MIKADO configuration file summary_CDI_NEMO.xml in MIKADO automatic
2. Modify the « Connection » in order to link this configuration file to the Excel file NEMO_CDI_summary.xls
3. Add an EDMED reference (var80)
4. Add an CSR Reference (var81)
5. Save the configuration file
6. Generate CDI ISO 19139 using this configuration file
7. Open one of the generated CDI XML files using MIKADO manual to check the content of the different fields
Thank you for your attention