SeaDataNet

MIKADO – Generation of SeaDataNet metadata files

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SeaDataCloud 1st Training Course, Ostende, Belgium, 20-27 June 2018
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Summary

- Reminder of MIKADO main features and principles
- MIKADO last developments and main changes
- Best practice for EDMED, EDIOS, CDI content
  - Reoccuring mistakes
  - Recommandations
- Hands-on session

What's MIKADO ?

MIKADO is used to generate XML descriptions for the SeaDataNet catalogues:

- **CSR** - Cruise Summary Reports
- **EDMED** - Marine Environmental Data sets
- **CDI** - Common Data Index
- **EDMERP** - Marine Environmental Research Projects
- **EDIOS** – Permanent Ocean-observing System

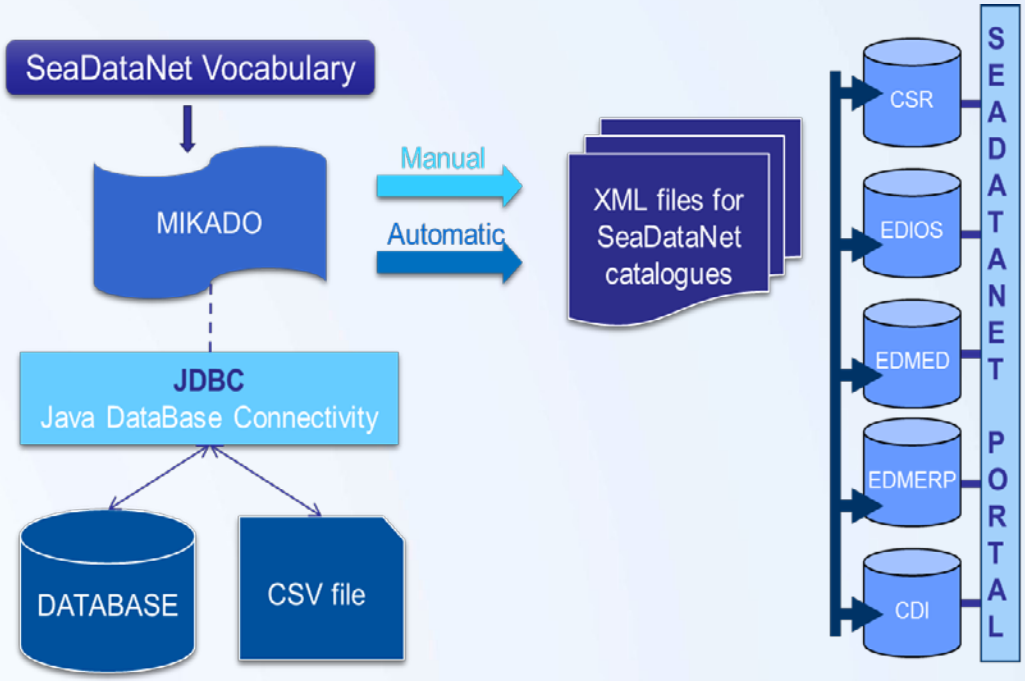
Technical characteristics

- Written in **Java** Language (Version >= 1.8)
- Available under multiple environments : Windows, Linux.
- Interactive and batch modes available
- Use of the **SeaDataNet common vocabularies** web services to update lists of values
  - needs network connection in order to have up to date lists of values.
  - but Mikado works offline once the lists are up-to-date

MIKADO main features

MIKADO can be used in 2 different ways :

- One manual way for users who have a small amount of entries
- One automatic way to generate automatically XML descriptions from information referenced in a database or in a CSV file.



Current release V3.5.1

Freely available on SeaDataNet Web site

https://www.seadatanet.org/software/mikado

User manual is also provided:

https://www.seadatanet.org/content/download/651/3414/file/sdn_Mikado_UserManual_V3.5.1.pdf

FAQ webpage:

https://www.seadatanet.org/Software/MIKADO/FAQ

MIKADO last developments

- Last SDN2 training session (May 2015)
  - MIKADO 3.3.4 (**4** new releases since then)
- Last EMODnet chemistry training session (May 2017)
  - MIKADO 3.3.5 (**3** new releases since then)
- Present version of MIKADO
  - MIKADO 3.5.1 released on June 2018

Main changes in MIKADO

- MIKADO 3.4
  - Upgraded database drivers
  - New facility to import directly the NEMO CDI summary file in MIKADO
- MIKADO 3.5
  - Report for Vocabulary updates
  - Improvement to avoid reoccurring errors “Date type”

Upgraded database drivers

- Upgrade of all database drivers
- Driver for Excel no more maintained
  - Connection to Excel files are no more possible
  - JDBC connectivity to excel is not maintained by Java
  - Alternative solutions for Excel users are described in the MIKADO user manual - Part 10.4 and will be demonstrated during this training session.
- Driver for csv added

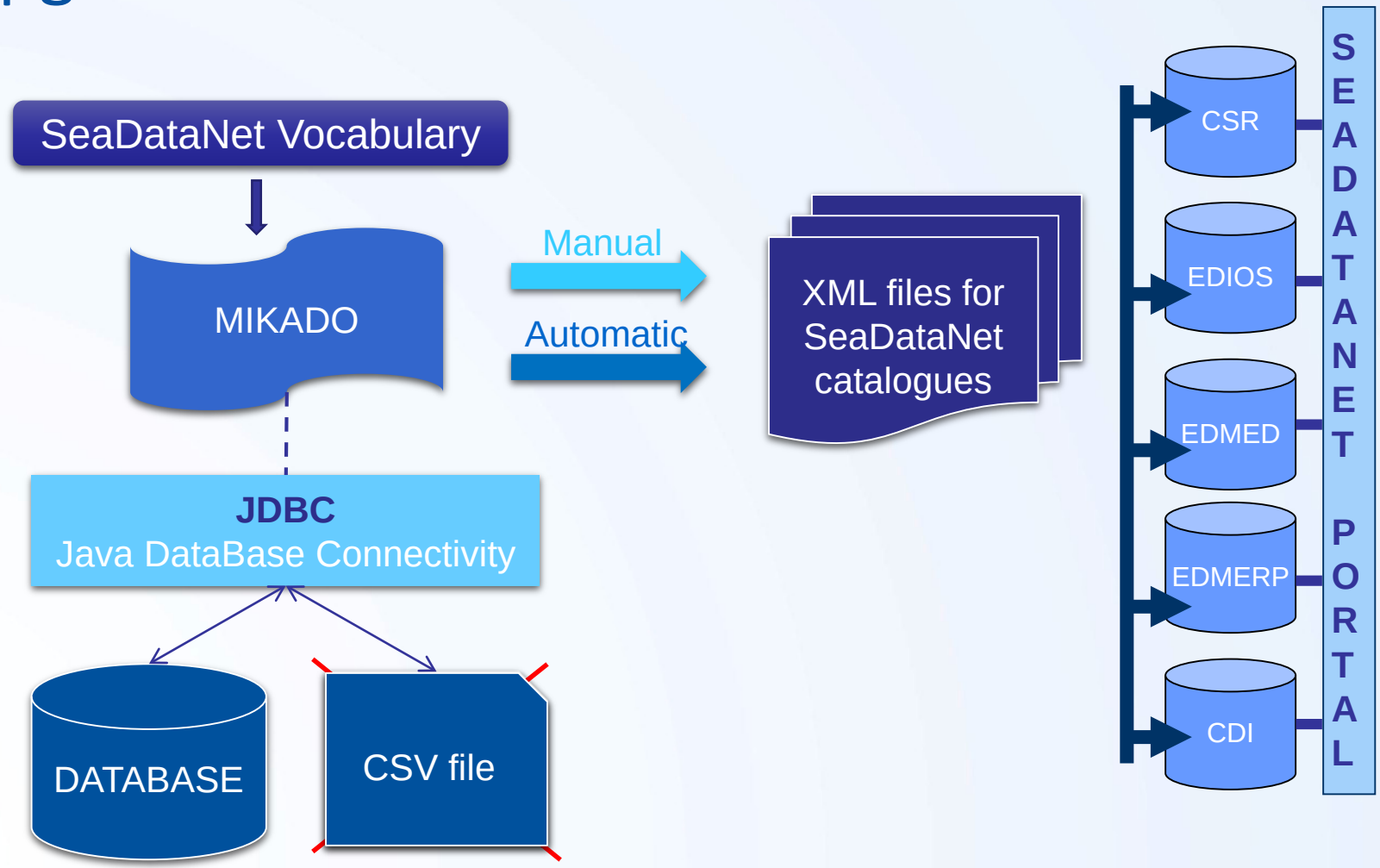
Upgraded database drivers

Alternative solutions for Excel users

- Case 1: Excel file with one sheet
  - Convert your Excel file into csv file to be connected with MIKADO

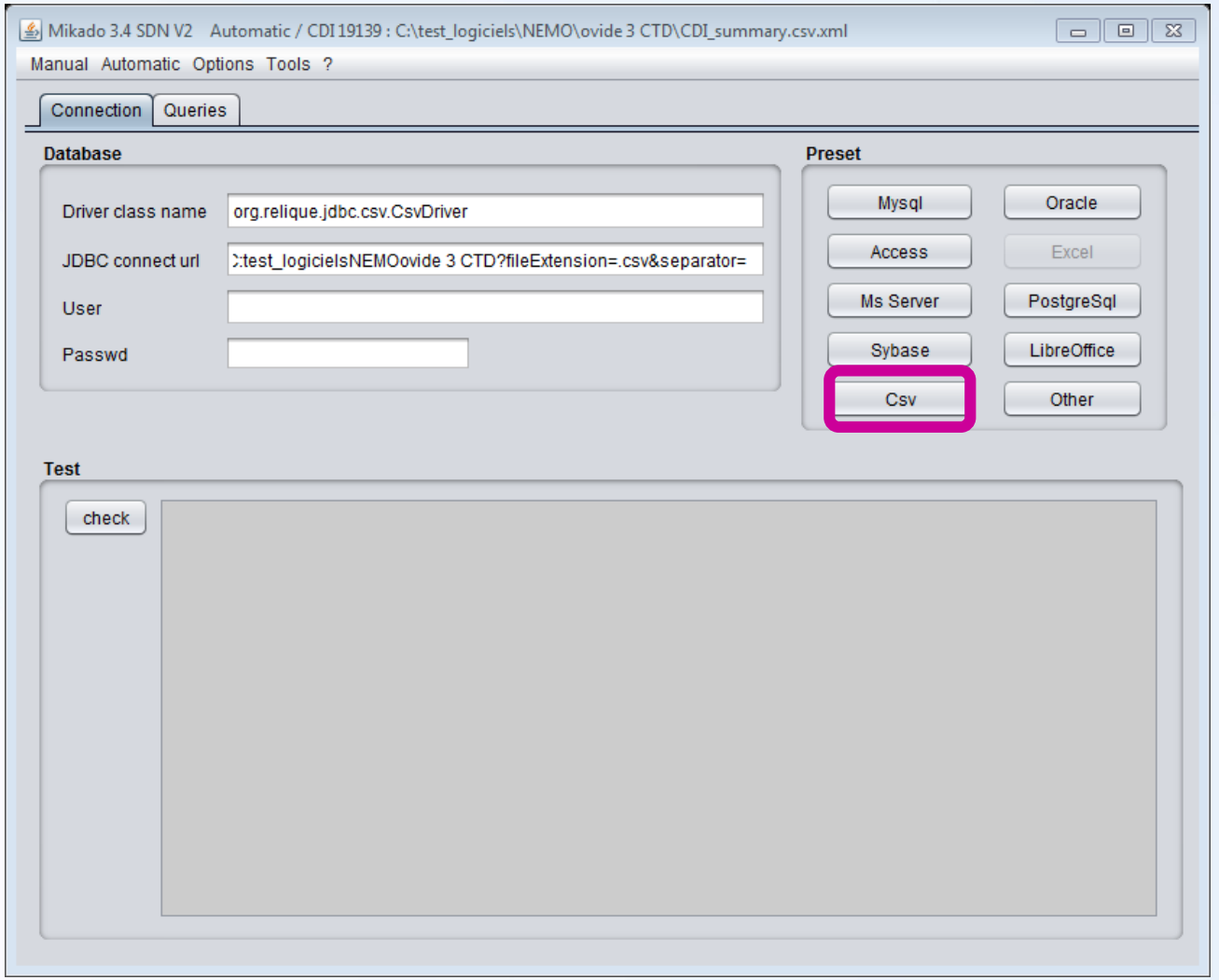
- Case 2: Excel file with several sheets
  - Try to merge your different sheets in only one sheet and convert your file into csv file → case 1
  - Store your metadata in a database (Open Office database, Microsoft Office Access, MySQL, …)

Upgraded database drivers



Upgraded database drivers

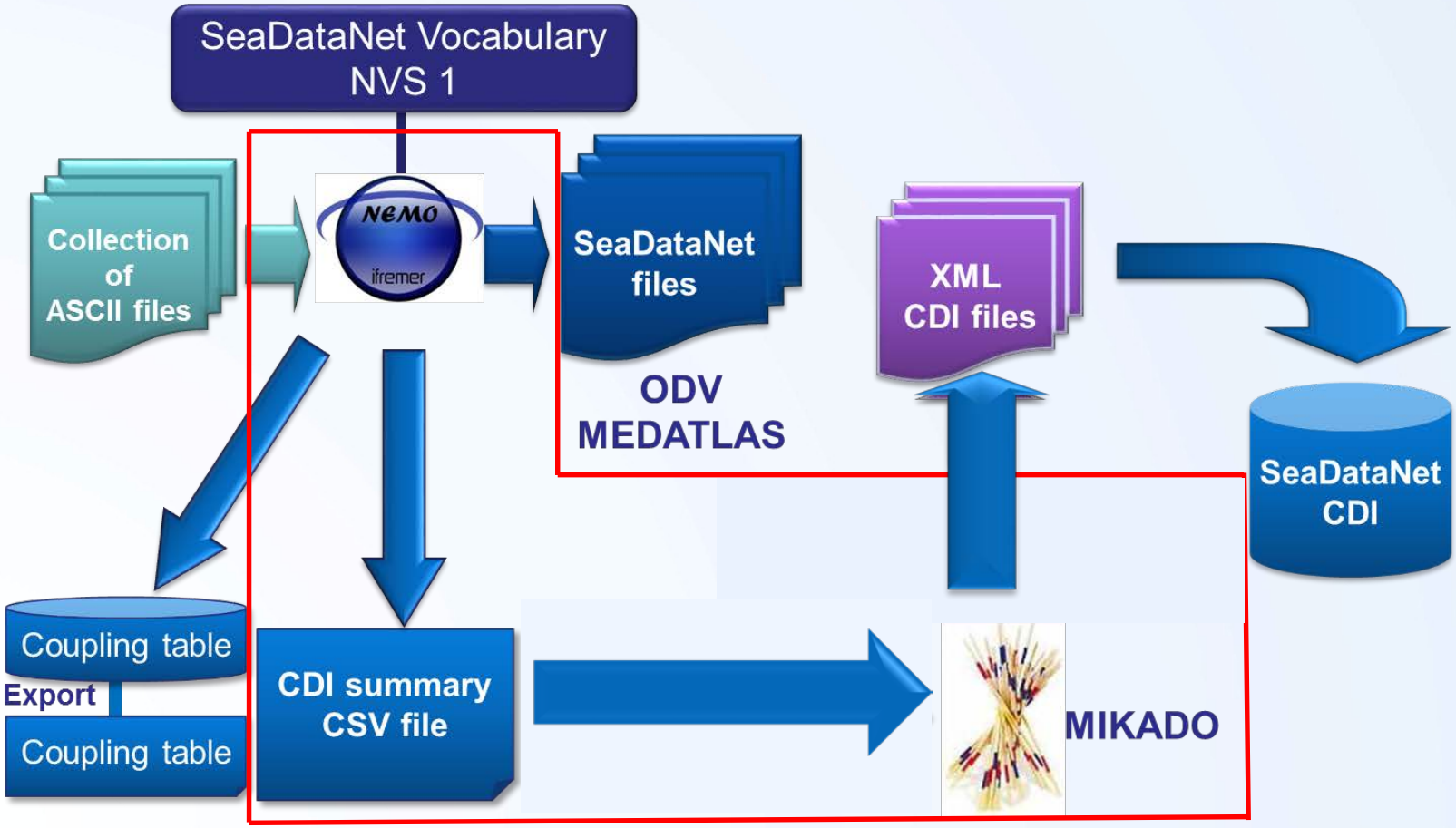
New CsvJdbc driver added to configure csv files containing the metadata



NEMO-MIKADO interactions

A new facility has been implemented in MIKADO to import directly the NEMO CDI_summary_file in MIKADO **without the Excel STEP** and to generate automatically the corresponding SQL queries.

NEMO-MIKADO interactions



Mikado 3.4 SDN V2

Manual | Automatic | Options | Tools | ?

- New ▶
  - EDMED
  - CSR
  - CDI
  - CDI from NEMO export
  - EDMERP
  - EDIOS PROGRAM
  - EDIOS SERIES
  - EDIOS PLATFORMS
  - PCR
  - SEISMIC SENSORML
  - SEISMIC O&M
- Open ▶
- Save
- Save as
- Generate ▶
- Mapping ▶
- Exit

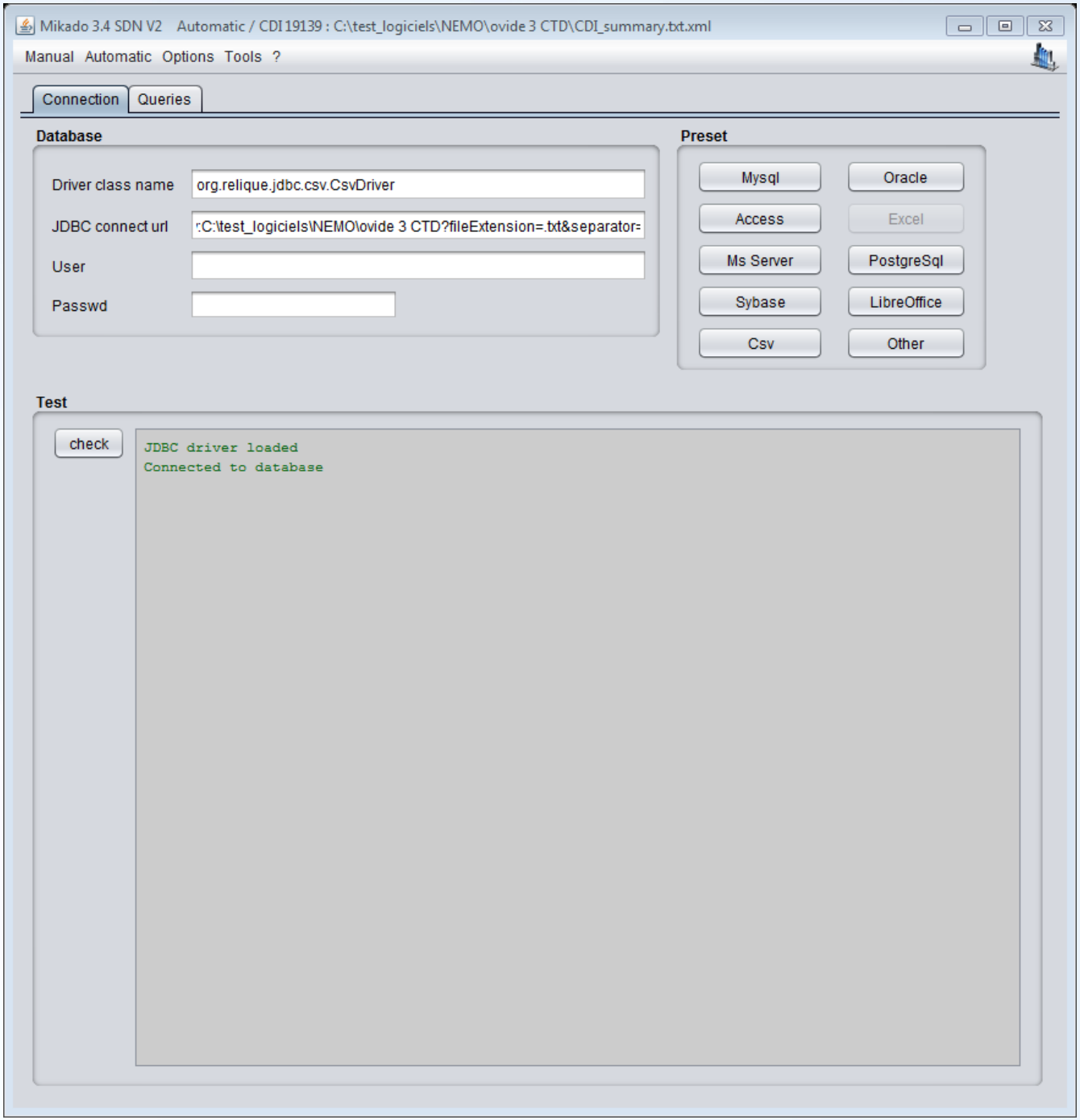
MIKADO

Geo-Seas

SeaDataNet

This software has received funding from the **EU H2020** programme under agreement n° 730960 ***SeaDataCloud*** (2016-2020), the **EU FP7** programme under agreement n° 283607 ***SeaDataNet II*** (2011-2015) and agreement n°238952 ***Geo-Seas*** (2009-2013) and **EU FP6** programme under agreement n° 026212 ***SeaDataNet*** (2006-2011).

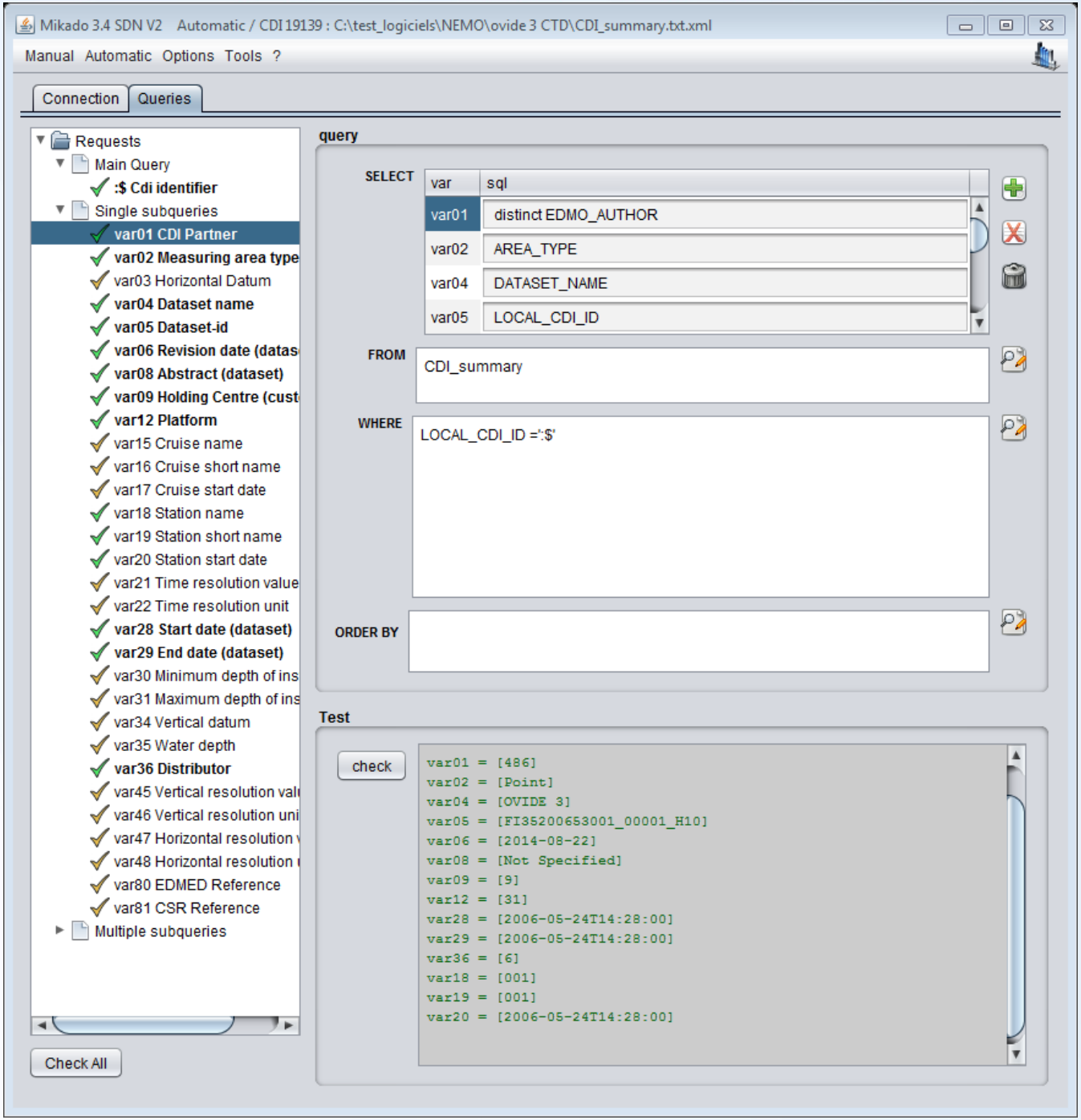
NEMO CDI_summary file imported



SeaDataNet

Corresponding SQL queries automatically generated

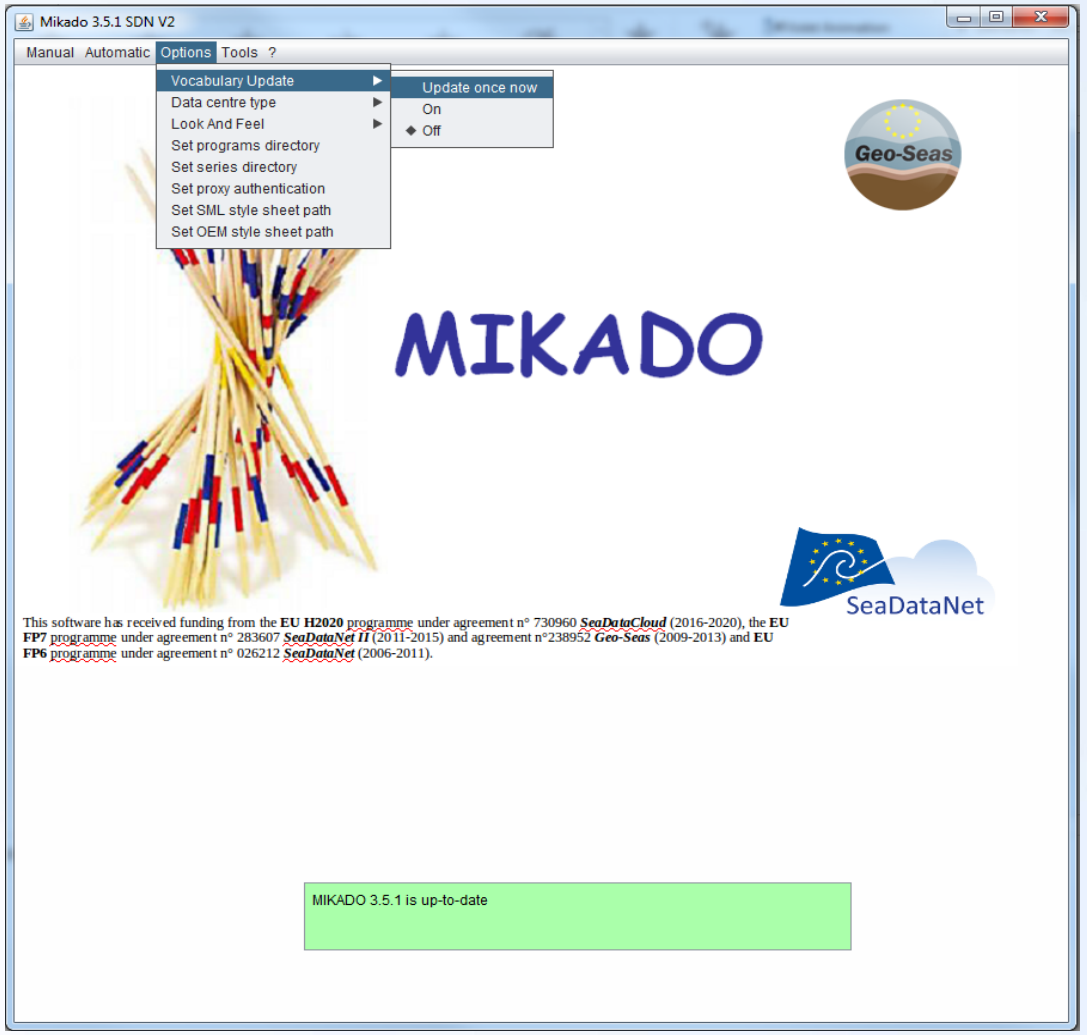
Configuration file automatically created and saved by MIKADO



Report for vocabulary updates

MIKADO uses the SeaDataNet common vocabularies web services to update its lists of values

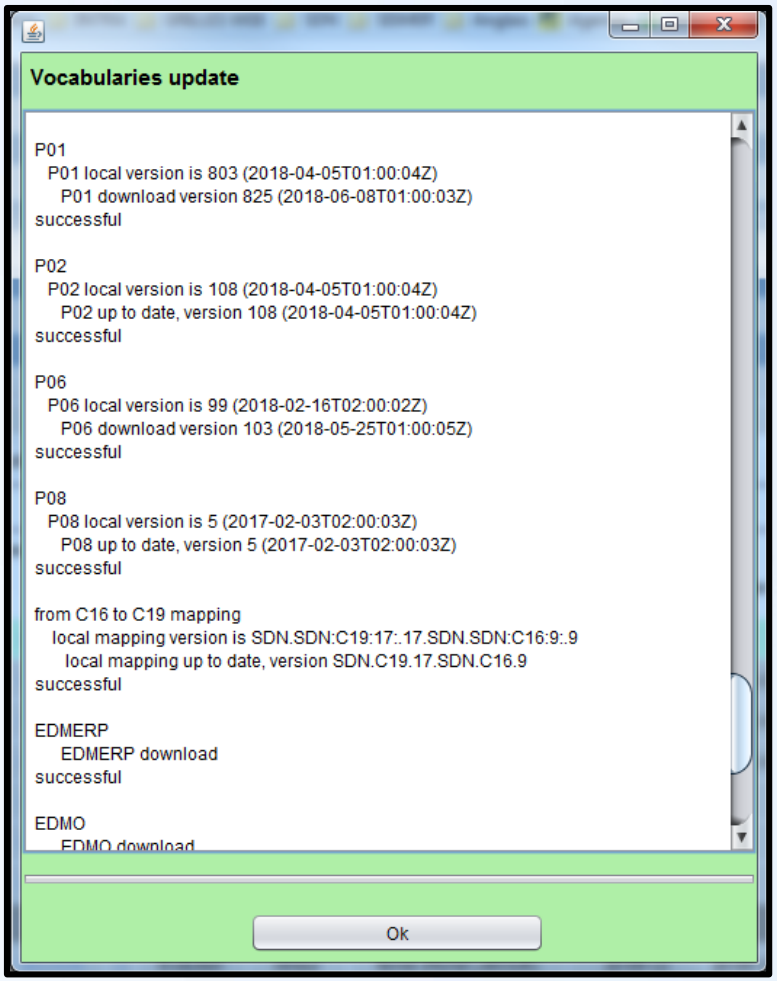
To update the MIKADO vocabularies lists: *Menu "Options" > Vocabulary update*



Report for vocabulary updates

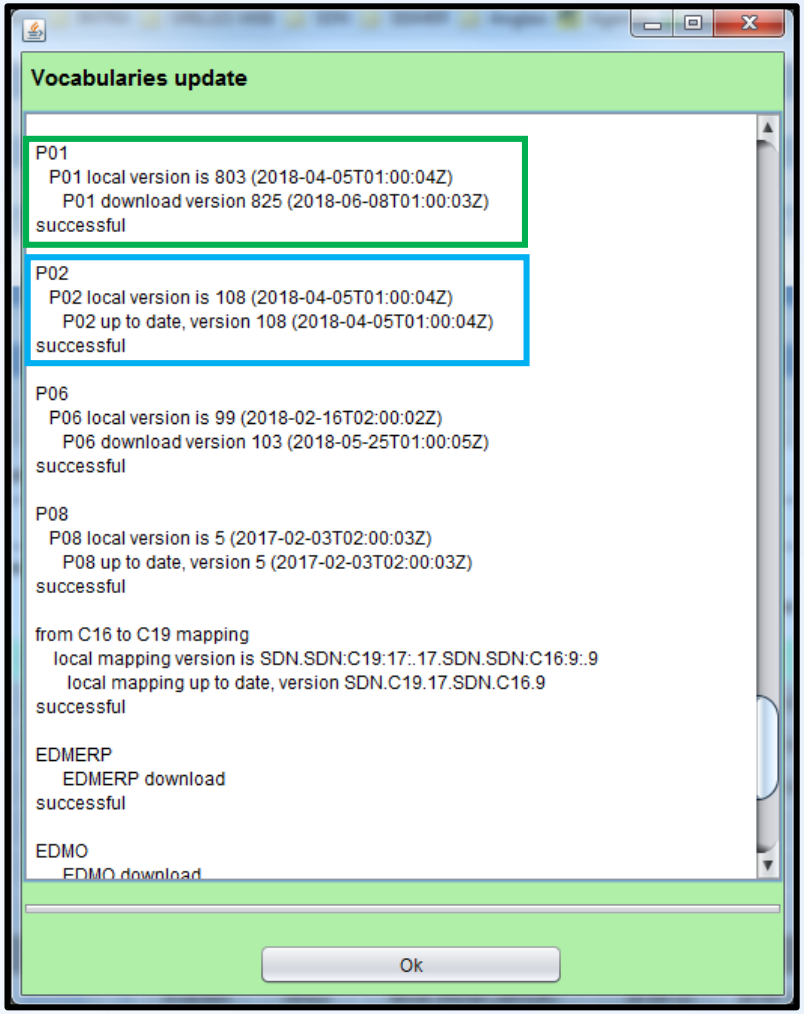
MIKADO < 3.5

MIKADO >= 3.5



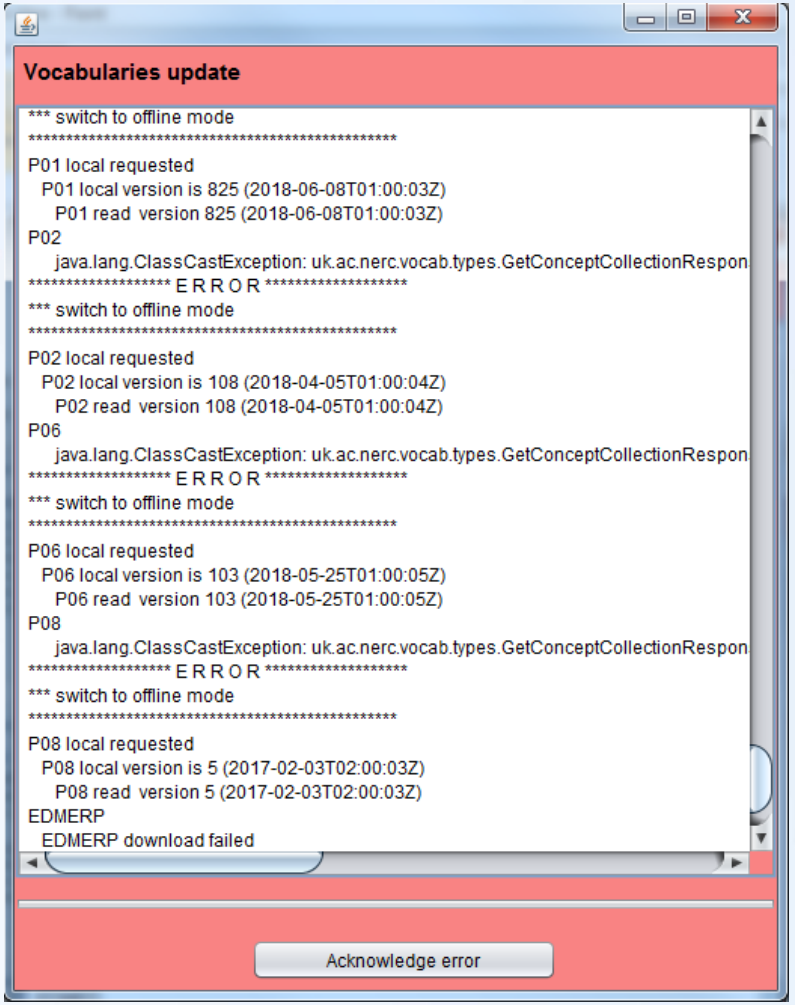
Report for vocabulary updates

- Vocabulary update OK
  - No need to update
  - Updated



Report for vocabulary updates

- Vocabulary update KO



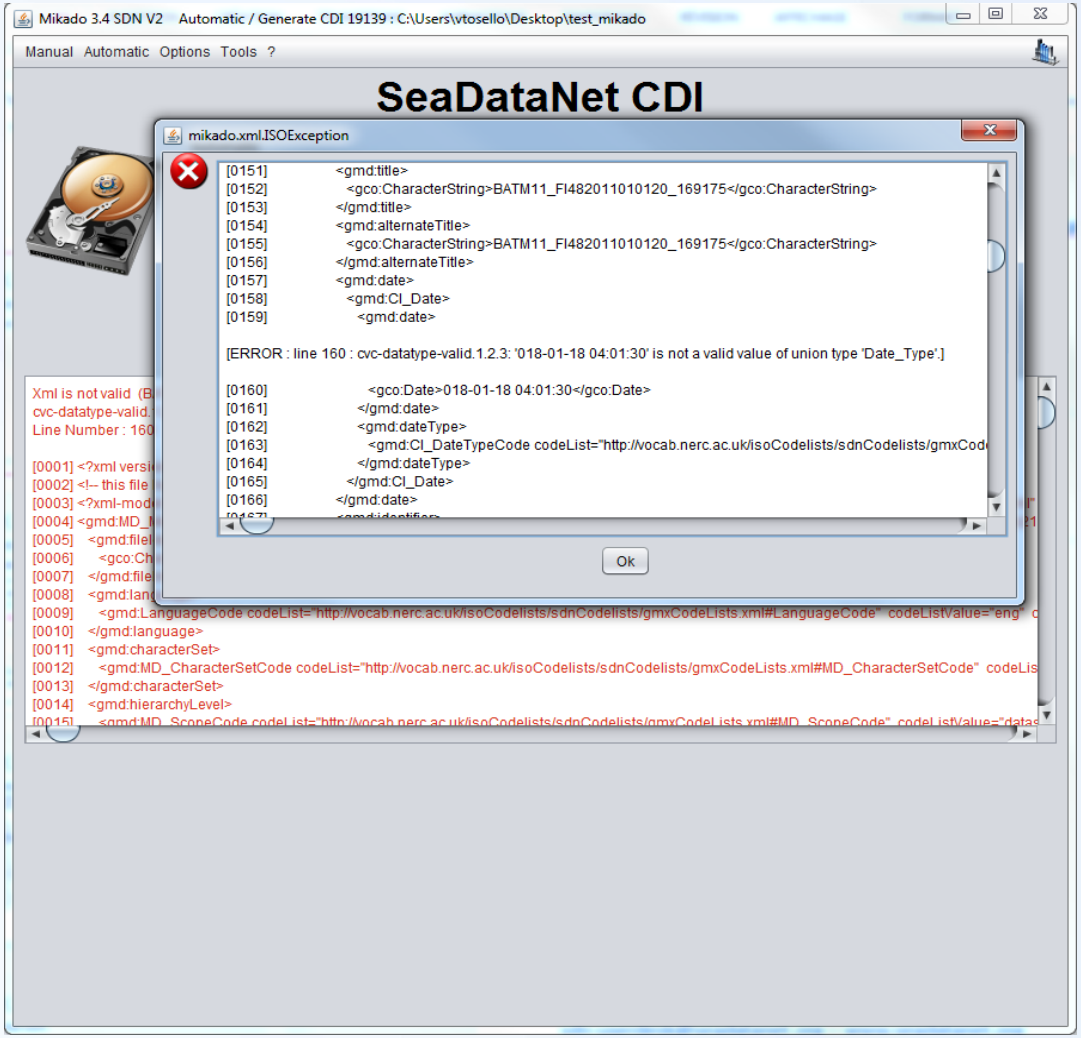
Reoccurring “Date type” errors

- “Date type” errors (MIKADO automatic)
  - In CDI ISO19139 and CSR ISO19139, the following dates must be extracted from the database as a Date (YYYY-MM-DD) and not as a Date Time (YYYY-MM-DDThh:mm)
    - CDI: Revision date (var06), Cruise date (var17), Station date (var20), Quality procedure date (var96)
    - CSR: Revision date (var04)

→ MIKADO expects a **Date** and your query returns a **Date Time**

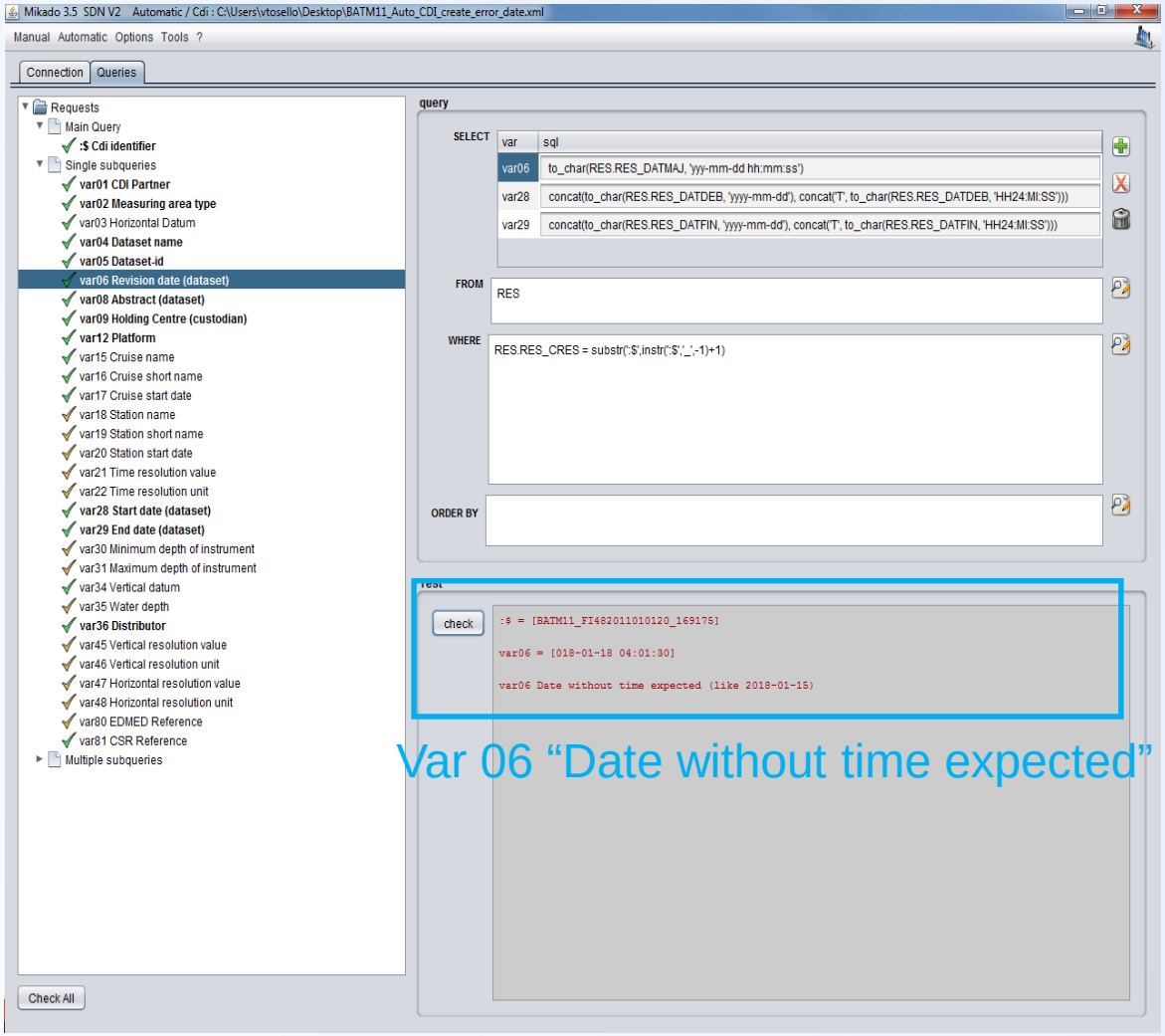
Reoccurring “Date type” errors

- Error messages during XML generation
- Not easily understandable



Reoccurring “Date type” errors

- Error messages during checking
- Easier to understand



EDMED population: Best Practice

- Consider appropriate **granularity** of the EDMED – facilitates discovery of suitable packages of data
- **Search the catalogue** before compiling new records – an appropriate record may already exist
- Use Mikado to extract and **update records** from the EDMED database (MIKADO manual > Download > EDMED from BODC) – please do not update local copies. Or make sure that your local database is kept updated with the feedback received from BODC.
- **Dataset name** should describe the content of the dataset and provide spatial and temporal information
- **Abstracts** should include the 'WHAT', 'WHERE', 'WHEN', 'HOW', 'WHO' of the dataset. Informative abstracts help to 'sell' datasets.
- Please refer to **EDMED Guidance notes**

EDIOS population: Best Practice

- An imminent **review of the EDIOS schema structure is planned** – some changes may be ahead to ensure the schema remains fit for purpose
- BODC will be engaging with SeaDataCloud partners in due course to refresh existing EDIOS content and encourage new content
- **The Mikado User Manual** should always be consulted when creating and updating records. Please refer also to **EDIOS Guidance Notes**.

A common misconception:

- Programme entries do not need to be ingested first for you to create Series and Platform entries

Common CDI errors

- Values "unknown" or blank where (probably / possible) information is available.
  - Error: Abstract: “not specified”
  - Correct: Please fill out at least a general description of the set
- Coordinates: Often coordinates are located on land or in a different area than reported.
- Measuring area type not corresponding with the instrument.
  - Error: CTD as a curve measurement, bathymetry as a point measurement etc.
  - Correct: CTD as point measurement, Bathymetry as a curve measurement

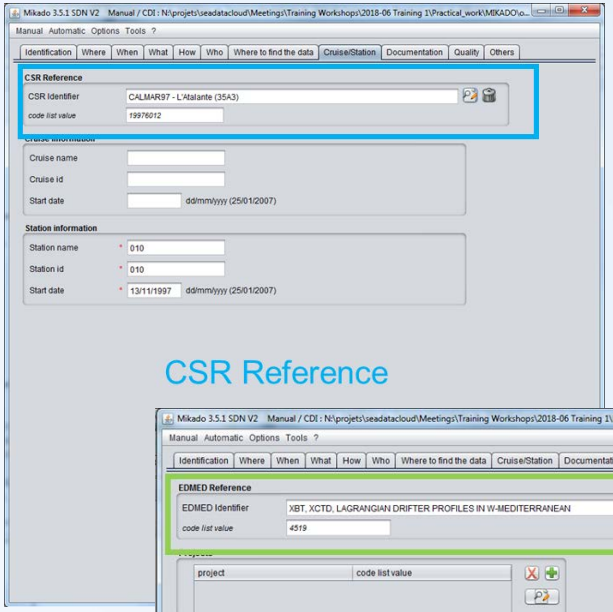
Common CDI errors

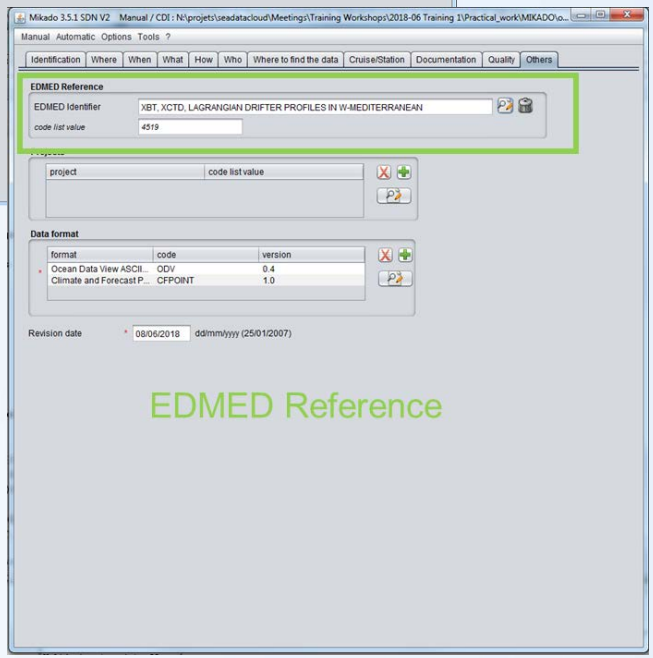
- Local CDI ID should have the correct syntax:
  - Correct syntax: urn:SDN:CDI:LOCAL:value.

  → Use MIKADO
- Cruise / station start date incorrect
  - Wrong: Measurement before start date cruise/station
  - Correct: Measurement must be occurring at the start date or after the start date of the cruise/station.
- Please refer to FAQ about CDI Metadata generation:
  - http://seadatanet.maris2.nl/faq_vervolg.asp?cat=2

CSR and EDMED references in CDI files

- Every CDI can be linked to a CSR reference and an EDMED reference
  - MIKADO manual
    - Dropdown list, uploaded using webservices
  - MIKADO automatic:
    - Var80 (EDMED), var81 (CSR)





Do not forget to create first your entry in CSR/EDMED catalogue and update the vocabularies in MIKADO!

EDMED Reference

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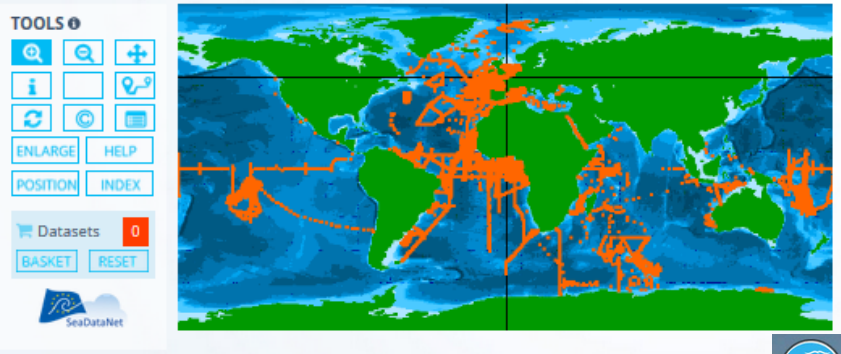
SEADATANET COMMON DATA INDEX (CDI) V3

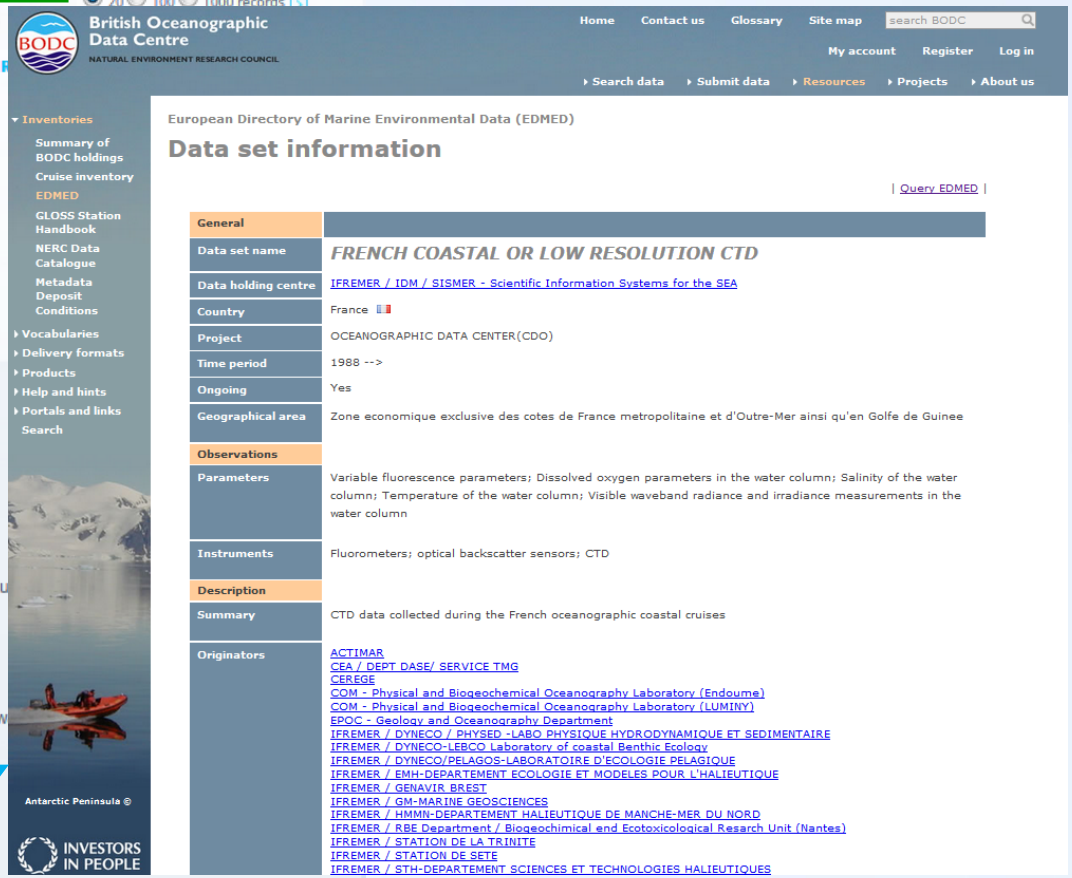


| New query |

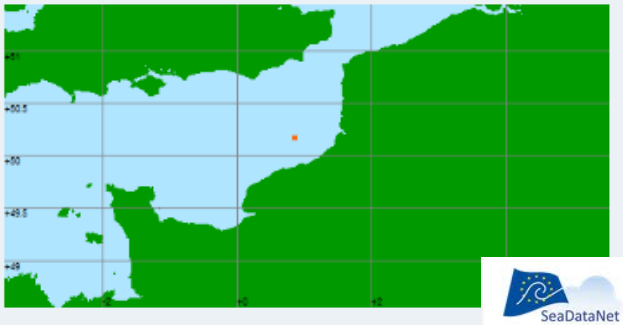
DETAILS

WHAT?

Data set name	2018000003.ctd(00144)
Discipline	Administration and dimensions Biological oceanography Chemical oceanography Marine geology Physical oceanography
Parameter groups	Administration and dimensions Dissolved gases Optical properties Pigments Suspended particulate material Water column temperature and salinity
Discovery parameters	Chlorophyll pigment concentrations in water bodies Concentration of suspended particulate material in the water colu Dissolved oxygen parameters in the water column Salinity of the water column Temperature of the water column Vertical spatial coordinates Visible waveband radiance and irradiance measurements in the w
GEMET-INSPIRE themes	Oceanographic geographical features
Abstract	Données CTD IBTS 2018 137
Related EDMED dataset	FRENCH COASTAL OR LOW RESOLUTION CTD
Data format	MEDATLAS ASCII **Version** 2.0 Climate and Forecast Point Data NetCDF **Version** 1.0 Ocean Data View ASCII input **Version** 0.4
Data size	0.008



CSR Reference

Data set creation date	20180530
WHERE?	
Map	
Latitude 1	50.1425
Longitude 1	0.896833
Measuring area type	point
Water depth (m)	-9999
Depth reference	sea level
Sea regions	Dover Strait
WHEN?	
Start date	20180211
Start time	06:36:00
End date	20180211
End time	07:36:00
HOW?	
Instrument / gear type	CTD
Vertical resolution	1 Decibars
Platform type	research vessel
Cruise name	IBTS 2018
Alternative cruise name	18000003
Cruise start date	20180115
Cruise Summary Report (CSR)	IBTS 2018 - Thalassa (35HT)
Station name	FI3520180003000144
Alternative station name	144
Station start date	20180211
WHO?	
Originator	IFREMER / HMMN-DEPARTEMENT HALIEUTIQUE DE MANCHE-MER DU NORD
Data Holding centre	IFREMER / IDM / SISMER - Scientific Information Systems for the SEA
Project name	INTERNATIONAL BOTTOM TRAWL SURVEY (IBTS) - FRANCE

SeaDataNet

PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT

CRUISE SUMMARY REPORT INVENTORY (CSR)

CRUISE SUMMARY REPORT OF THALASSA CRUISE IBTS 2018 (BSH REF-NO.: 20185209)

GENERAL INFORMATION	
Platform/Ship	Thalassa
Cruise begin	15.01.2018
Cruise end	12.02.2018
Port of Departure	Boulogne, France
Port of Return	Boulogne, France
Chief Scientist(s)	VERIN YVES - IFREMER / HMMN-DEPARTEMENT HALIEUTIQUE DE MANCHE-MER DU NORD
Responsible Laboratory	IFREMER / HMMN-DEPARTEMENT HALIEUTIQUE DE MANCHE-MER DU NORD
LOCATION	
General Ocean Areas	English Channel, North Sea
Marsden Squares (S, N, E, W)	
Bounding Box(es)	WEST EAST SOUTH NORTH -1.4 8.9 49.6 55
Specific Geographic Areas	Sud mer du Nord et Manche Orientale
Link to Track Charts	
PROJECT	
Project Title / Coordinating	IBTS - INTERNATIONAL BOTTOM TRAWL SURVEY (IBTS) - FRANCE / IFREMER / HMMN-DEPARTEMENT HALIEUTIQUE DE MANCHE-MER DU NORD

SeaDataNet

Hands-on session

SeaDataCloud 1st Training Course, Ostende, Belgium, 20-27 June 2018

sdn-userdesk@seadatanet.org – www.seadatanet.org

Objectives

Be trained on specific functions of MIKADO software

- Generation of CDI XML file using the NEMO summary file
- Adding CSR and EDMED references in CDI files using MIKADO manual and MIKADO automatic
- Alternative solution for CDI generation for Excel users

https://classroom.oceanteacher.org/course/view.php?id=335

Workshop SeaDataNet tools: MIKADO

- Exercise 1: NEMO-MIKADO interactions
- Exercise 2: CSR and EDMED references in CDI files
- Exercise 3: Alternative solutions for Excel users

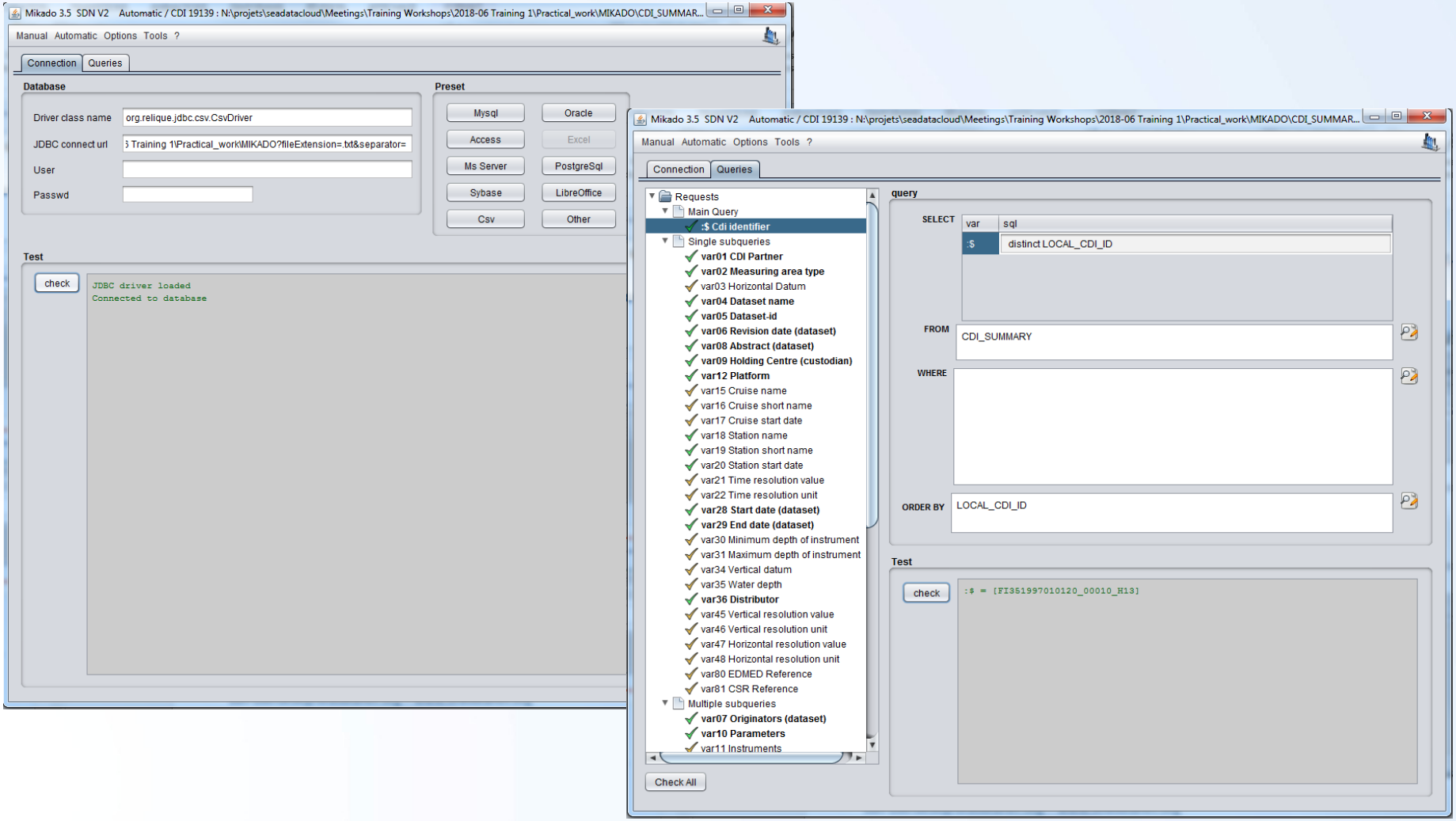
Exercise 1: NEMO – MIKADO interactions

Step 1: Create a new configuration file using NEMO summary file (CDI_SUMMARY.txt)

- Menu “Automatic”
  - Select “New” / “CDI from NEMO export”

→ MIKADO creates automatically a configuration file at the same place than the NEMO summary file.

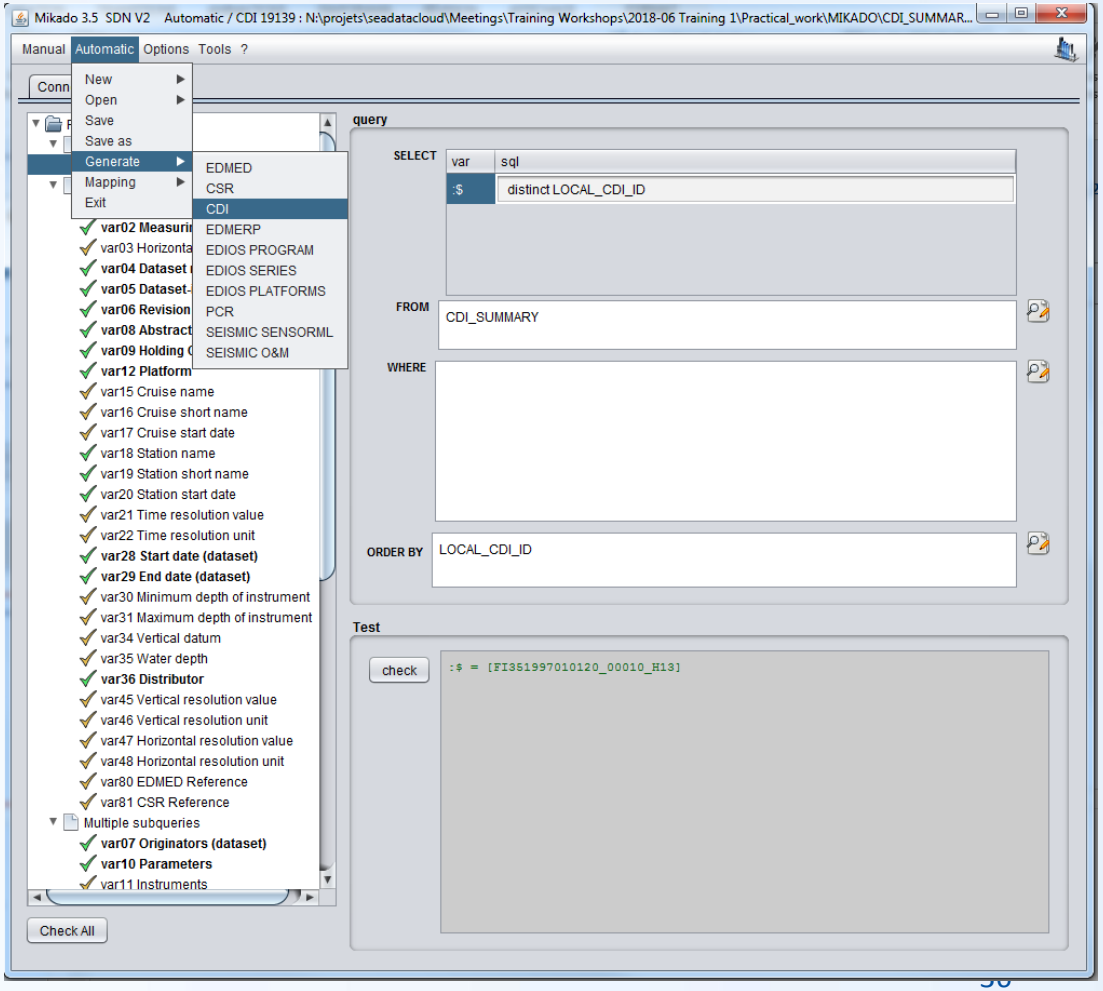
Exercise 1: NEMO – MIKADO interactions



Exercise 1: NEMO – MIKADO interactions

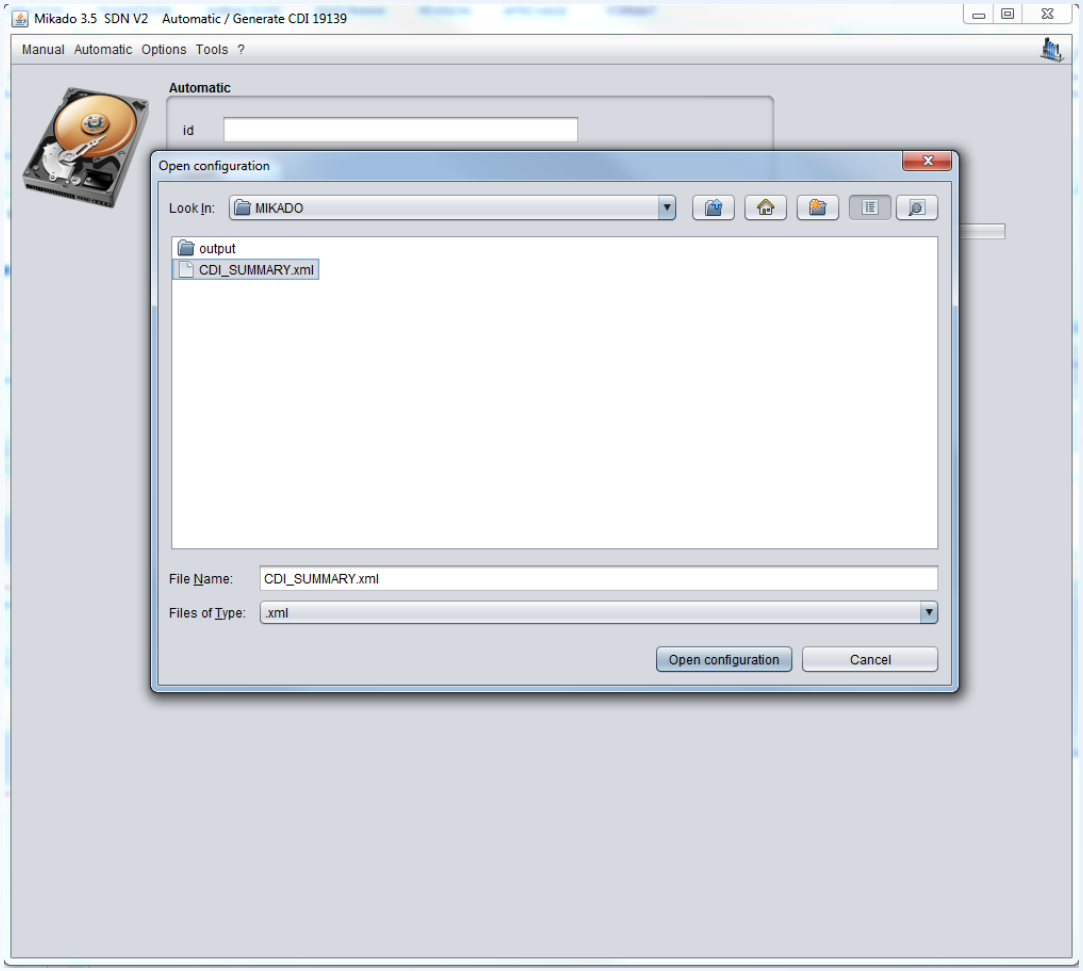
Step 2: Generate the CDI XML files

- Menu “Automatic”
  - Select “Generate” / “CDI”



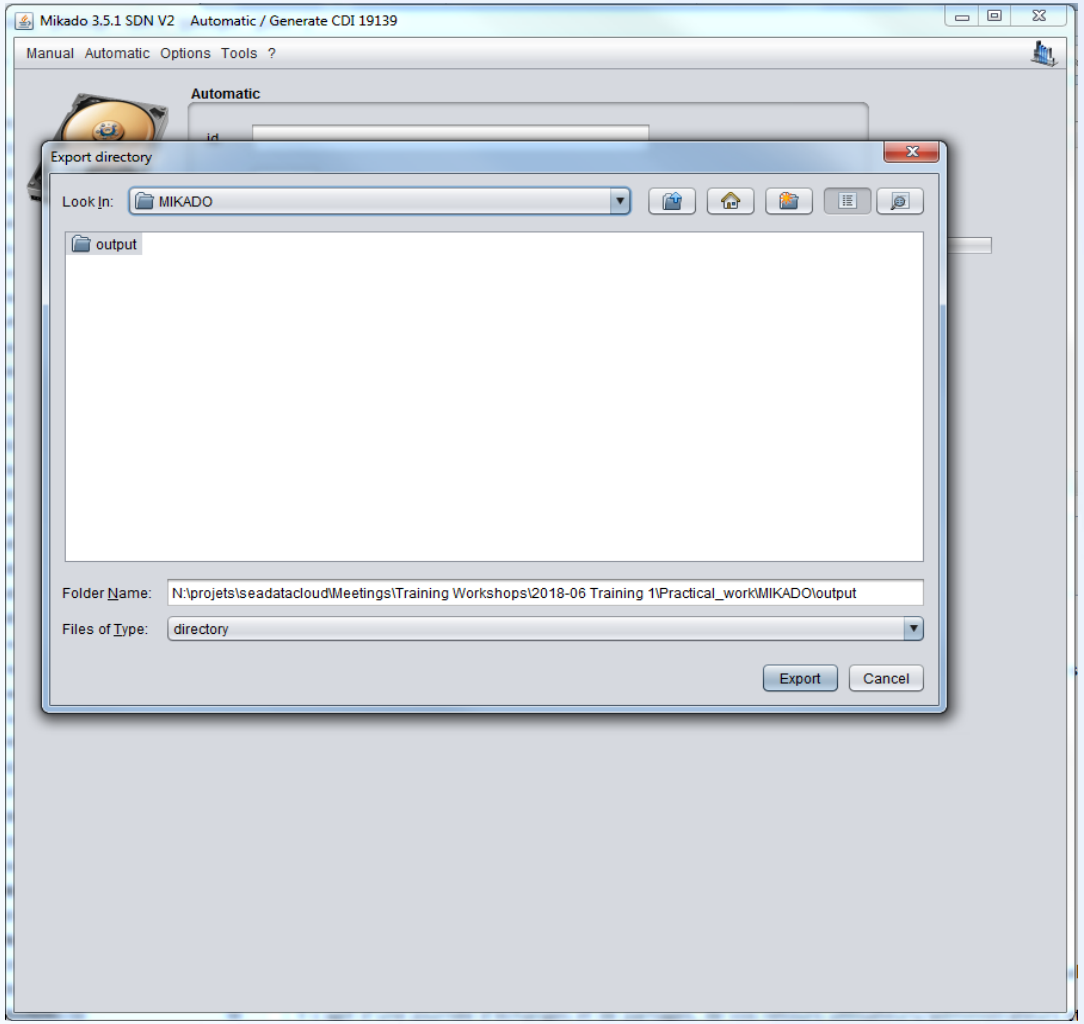
Exercise 1: NEMO – MIKADO interactions

Select the configuration file automatically created by MIKADO



Exercise 1: NEMO – MIKADO interactions

Select the output folder

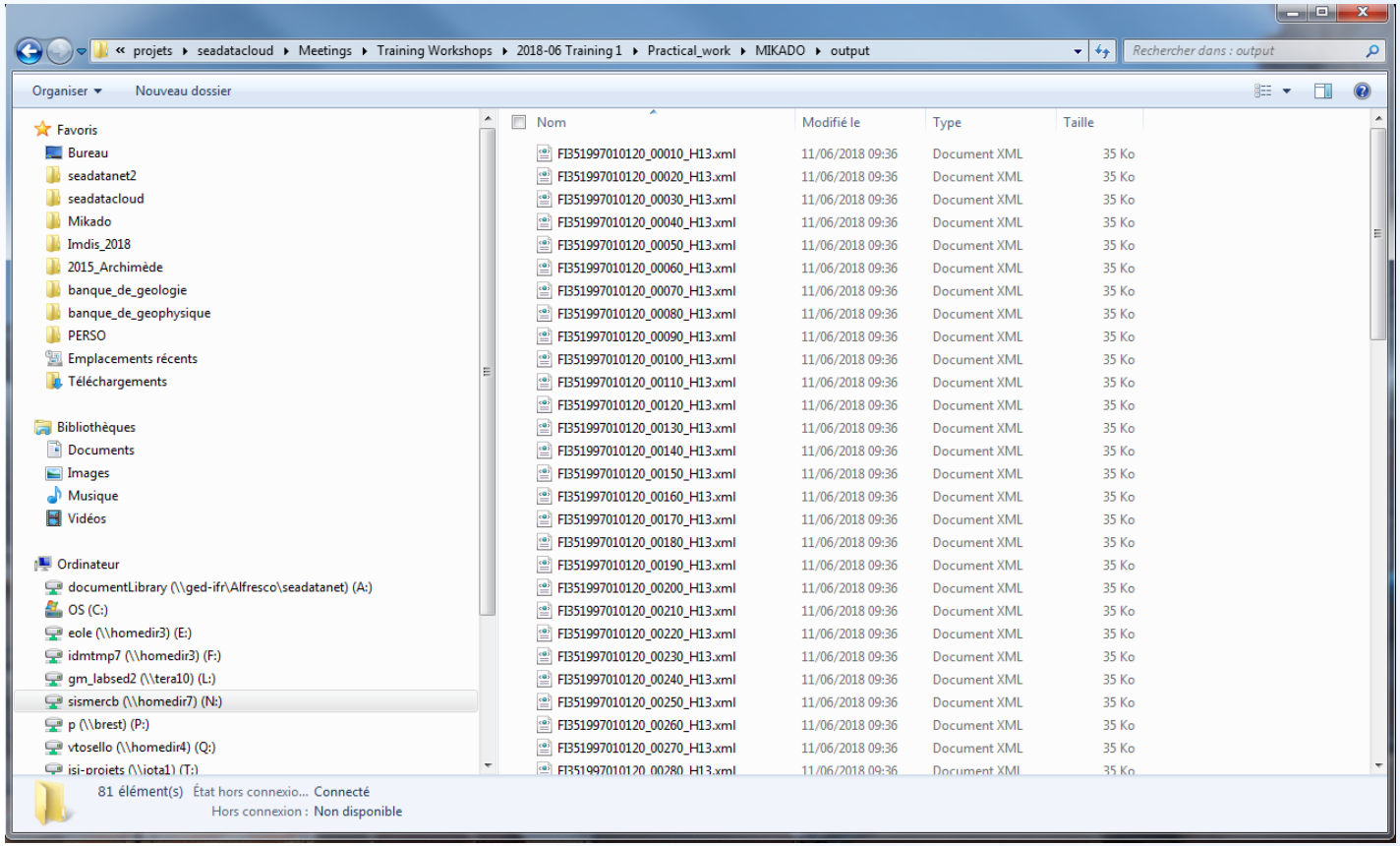


Exercise 1 : NEMO – MIKADO interactions

Generate the XML files

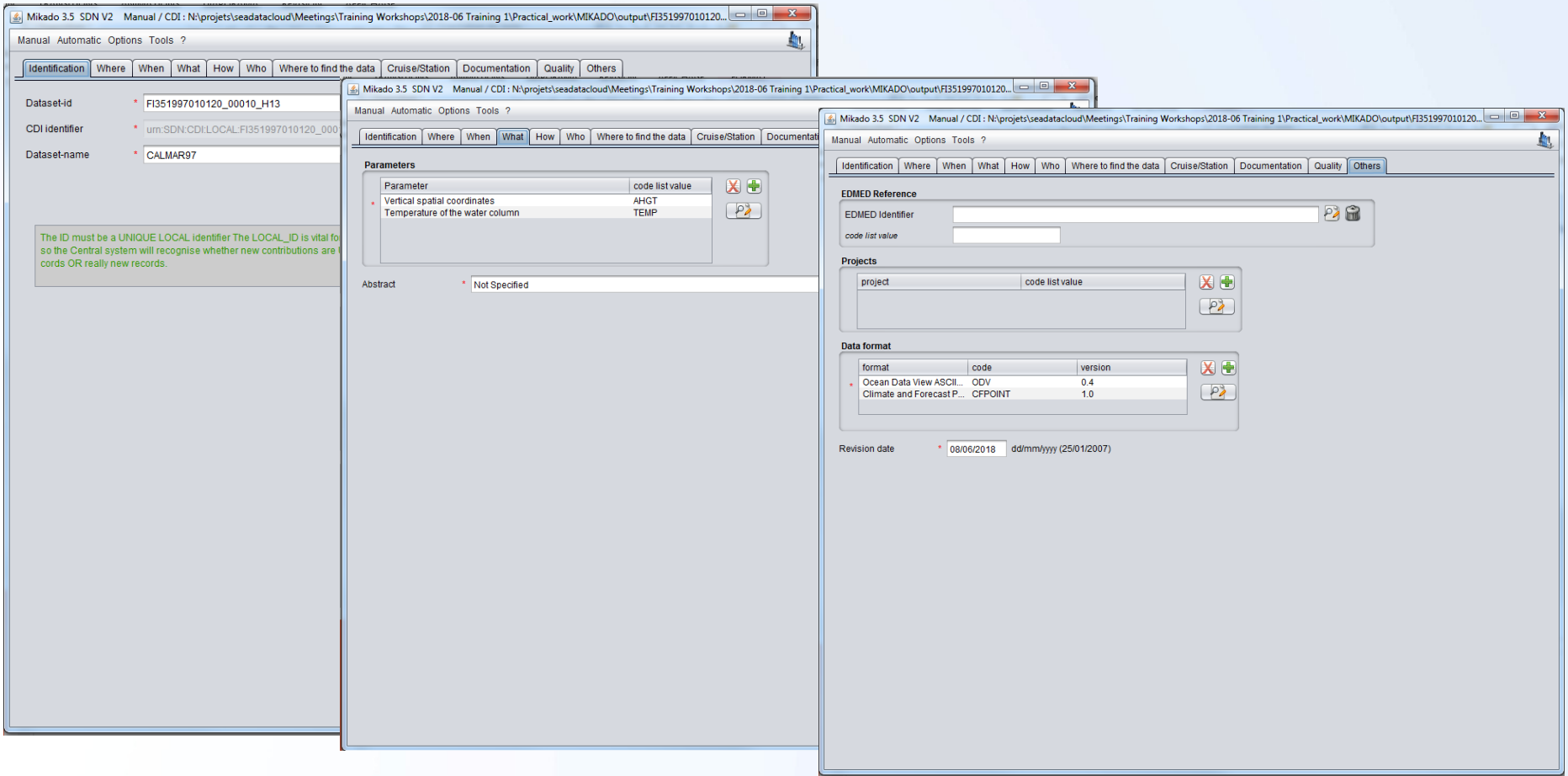
Exercise 1 : NEMO – MIKADO interactions

The 81 CDI XML files have been created!



Exercise 1 : NEMO – MIKADO interactions

Step 3: Open one of the XML files in MIKADO manual



Exercise 2 : CSR and EDMED references in CDI files

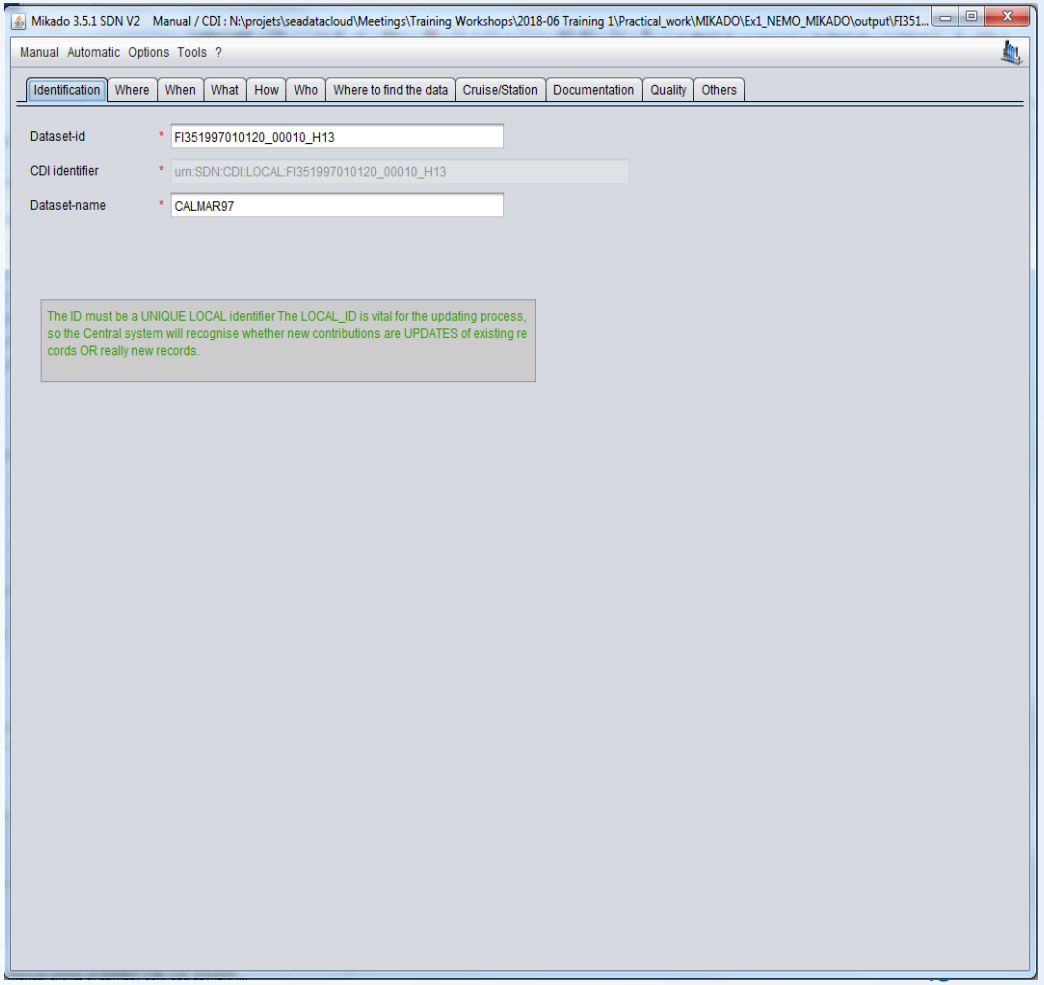
Add a CSR reference and a EDMED reference in the CDI XML files generated with the NEMO summary file

- using MIKADO manual
- using MIKADO automatic

Exercise 2 : CSR and EDMED references in CDI files

MIKADO manual

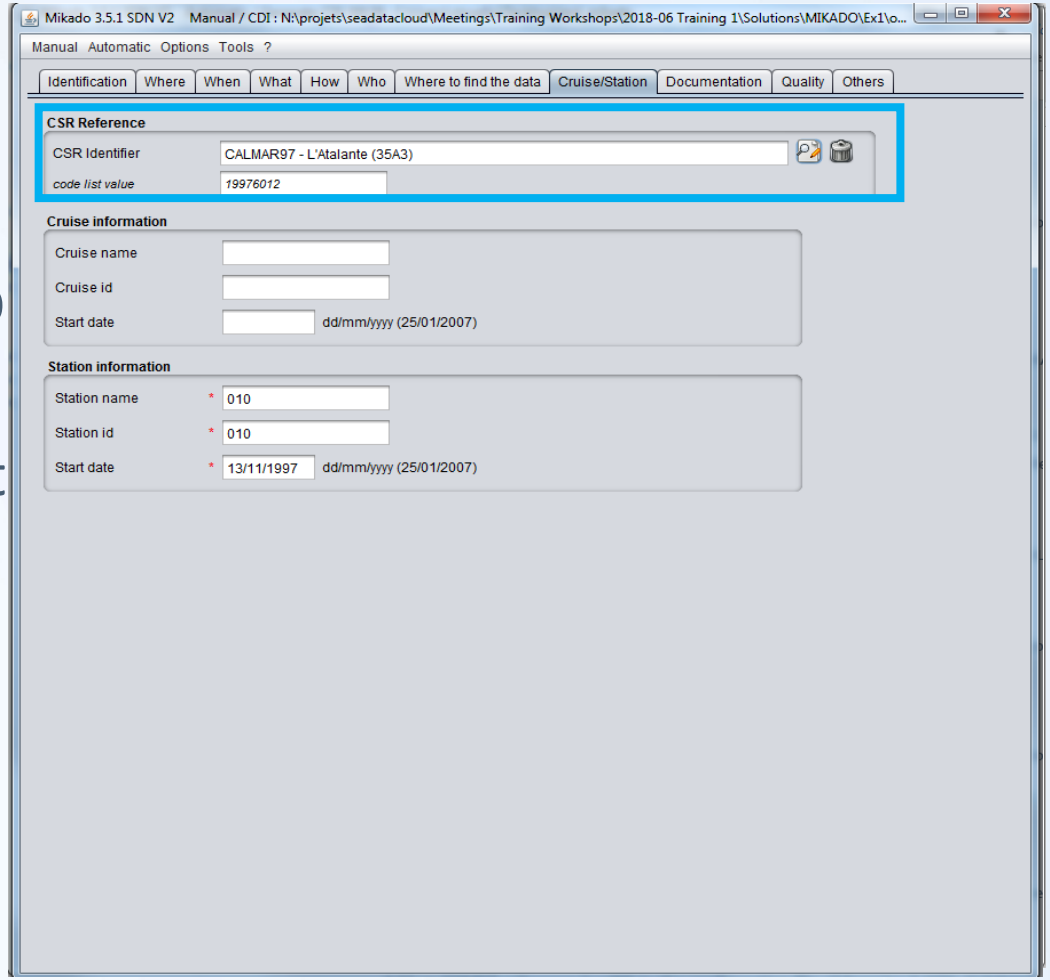
- Open one CDI XML file generated during exercise 1 (Menu “Manual” > Open > CDI)



Exercise 2 : CSR and EDMED references in CDI files

MIKADO manual

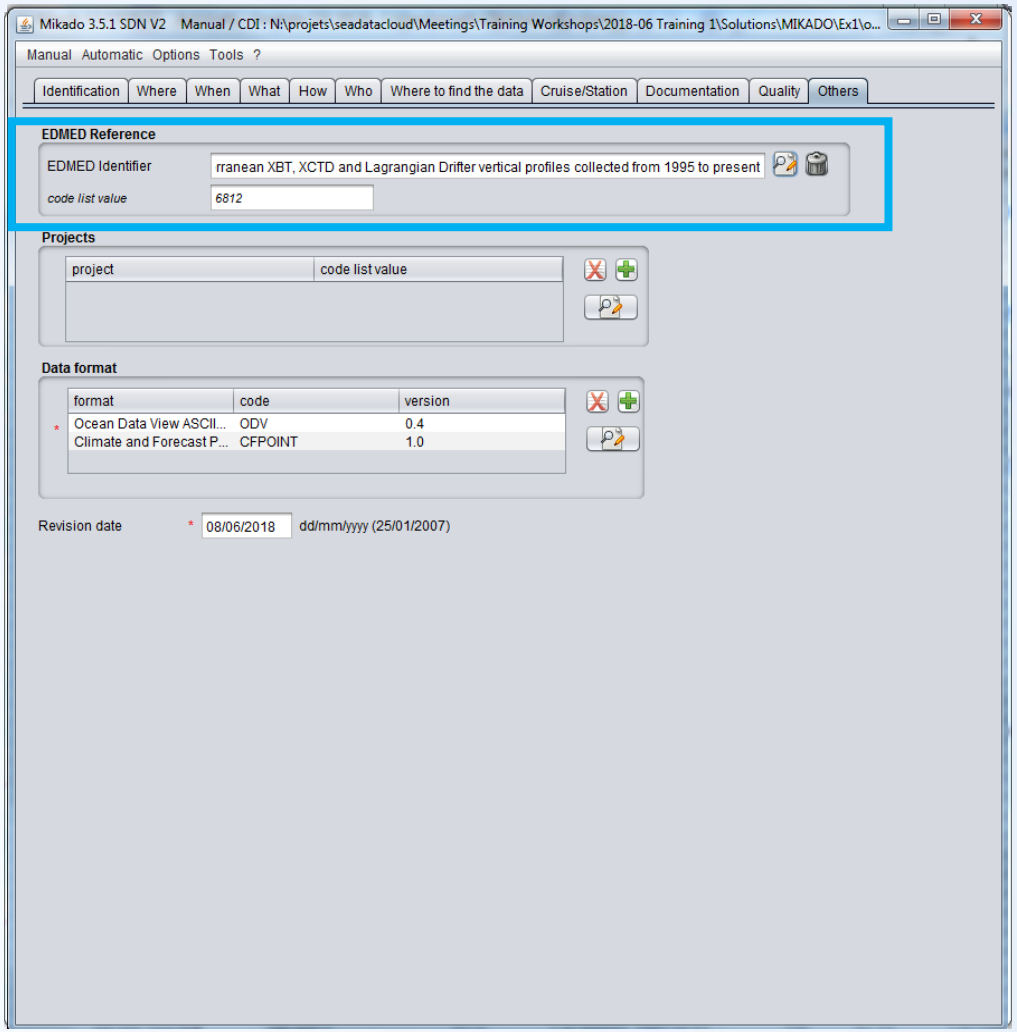
- Add a CSR reference in the "**Cruise/Station**" tab
  - Search by name, local ID or central ID (Use * to set filter in the CSR list and <return> for next match)
  - Cruise name: CALMAR97
  - CSR local ID 97010120 (EDMO 486)
  - CSR central ID 19976012



Exercise 2 : CSR and EDMED references in CDI files

MIKADO manual

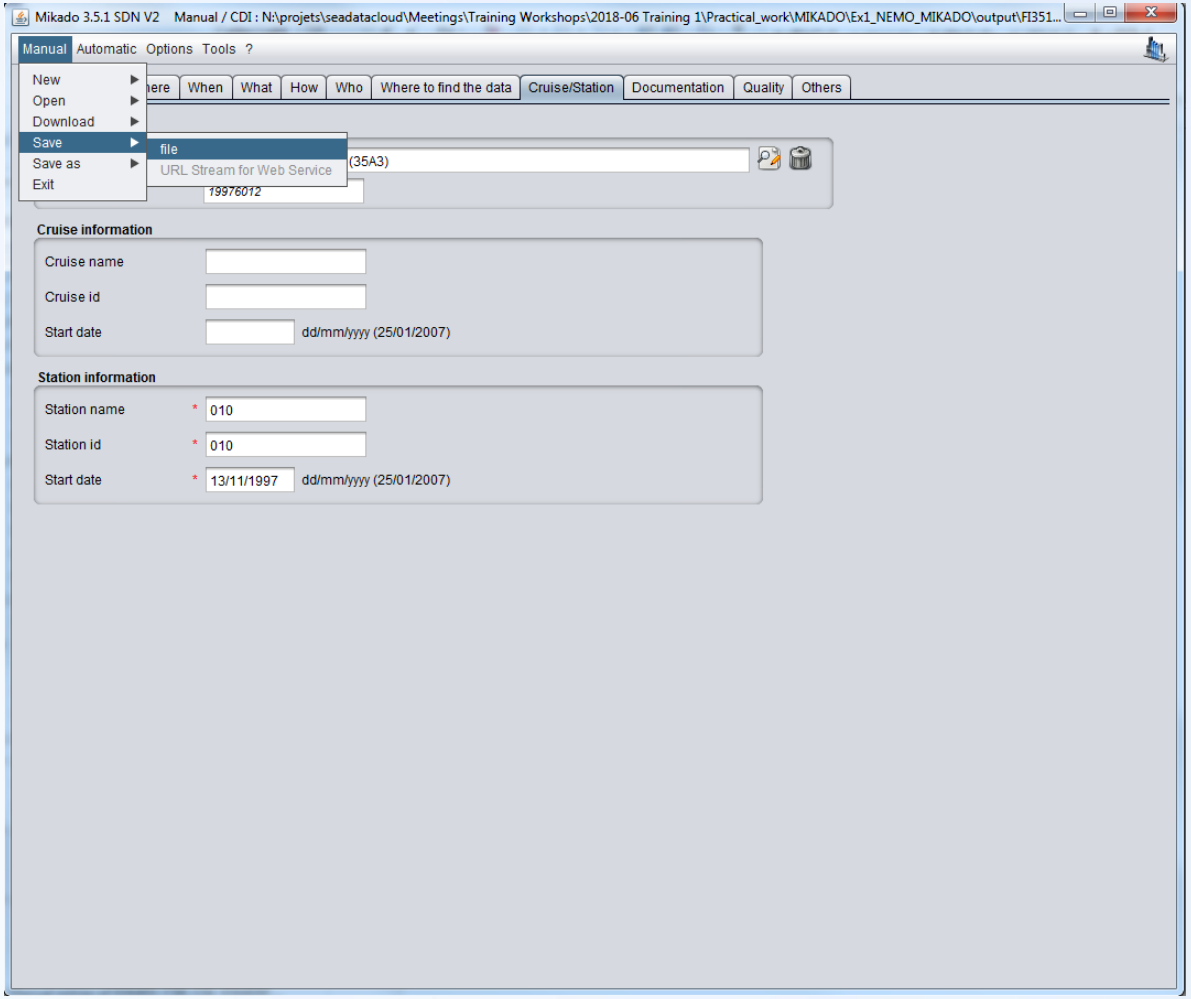
- Add a EDMED reference in the "**Others**" tab
  - Search by name, local ID or central ID (Use * to set filter in the EDMED list and <return> for next match)
  - Central ID 6218
  - Local ID XBTF01 (EDMO 486)



Exercise 2 : CSR and EDMED references in CDI files

MIKADO manual

- Save the XML file
  - Menu Manual
    - Save or Save as



Exercise 2 : CSR and EDMED references in CDI files

Open the XML file using text editor and look for SDN_CSRCode and SDN_EDMEDCode

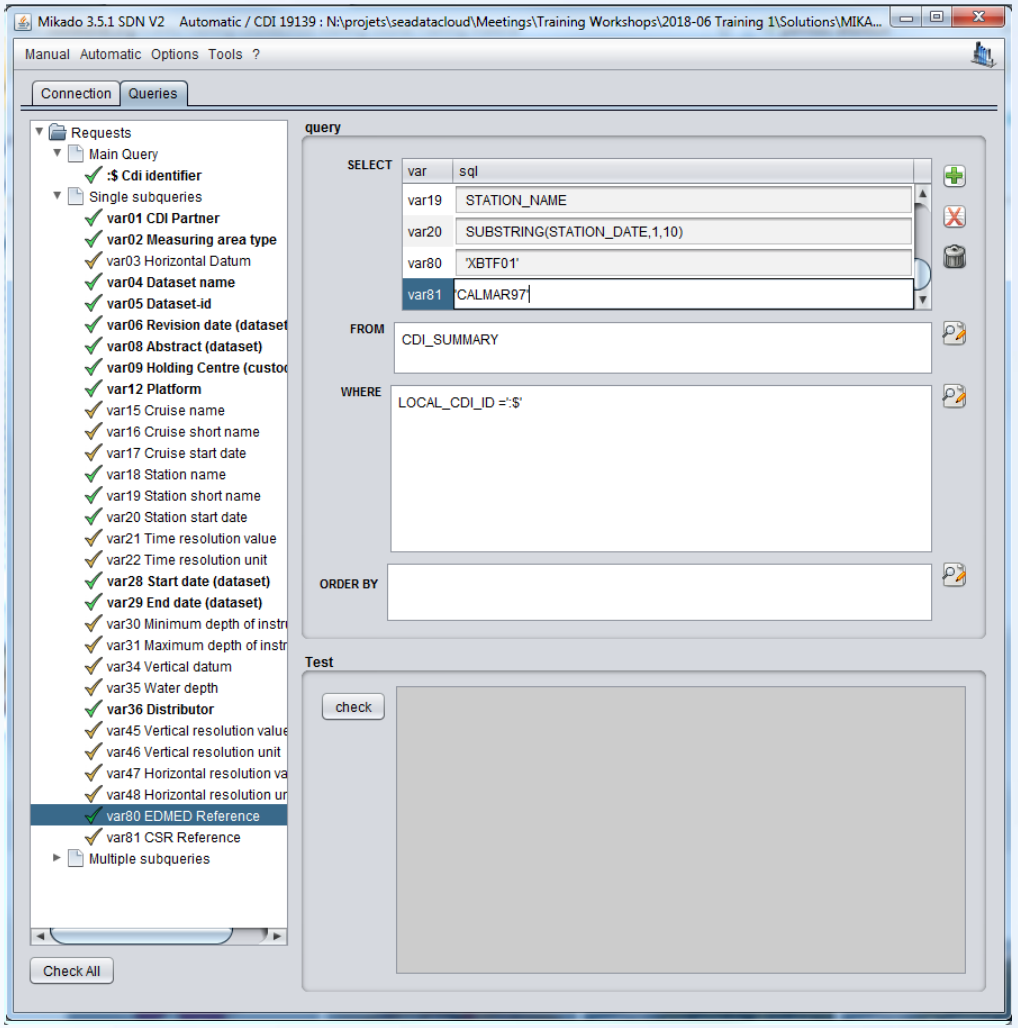
```
- <gmd:code>
    <sdn:SDN_EDMEDCode codeListValue="4519" codeList="http://vocab.nerc.ac.uk/isoCodelists/sdnCodelists/edmedCodeList.xml#SDN_EDMEDCode" codeSpace="SeaDataNet">XBT, XCTD,
      LAGRANGIAN DRIFTER PROFILES IN W-MEDITERRANEAN</sdn:SDN_EDMEDCode>
  </gmd:code>
```

```
- <gmd:code>
    <sdn:SDN_CSRCode codeListValue="19976012" codeList="http://seadata.bsh.de/isoCodelists/sdnCodelists/csrCodeList.xml#SDN_CSRCode" codeSpace="SeaDataNet">CALMAR97 - L'Atalante
      (35A3)</sdn:SDN_CSRCode>
  </gmd:code>
```

Exercise 2 : CSR and EDMED references in CDI files

MIKADO automatic

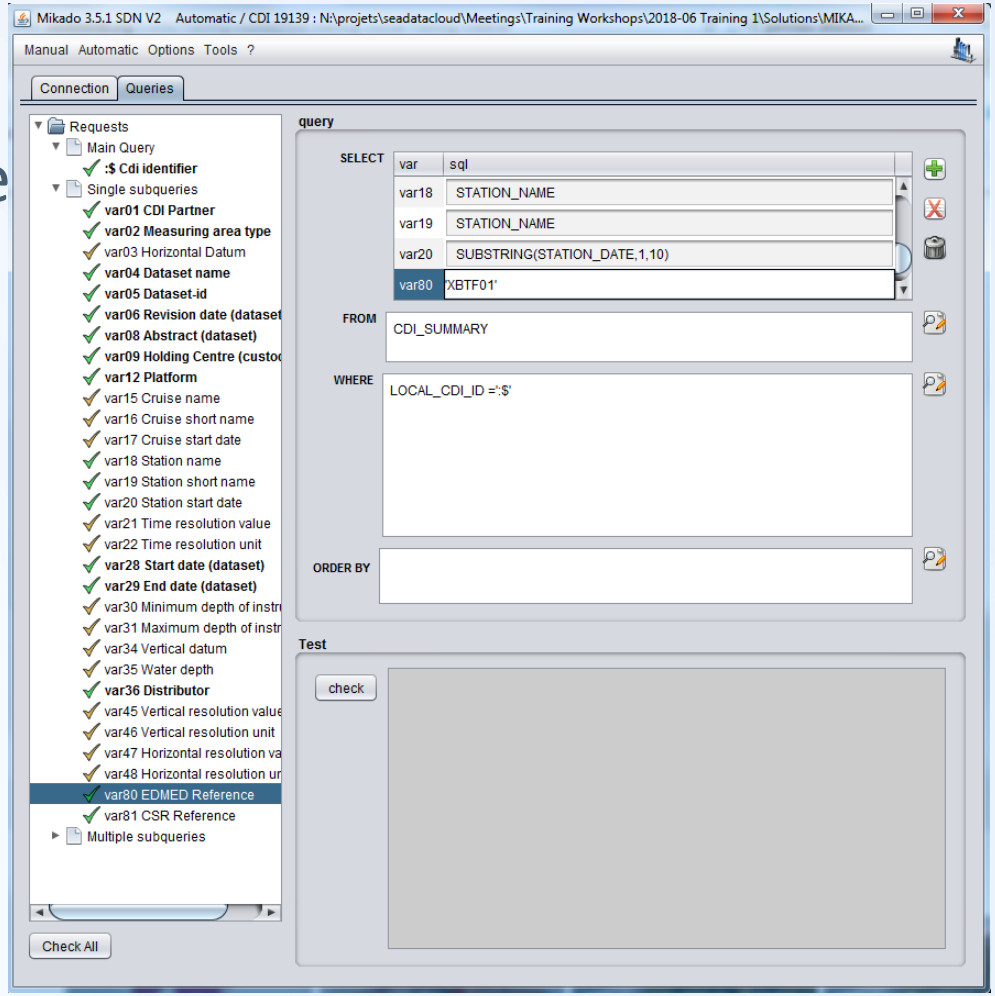
- Open the configuration file of Exercise 1
  - Menu Automatic > Open > CDI
- Add a CSR reference (var81)
  - Cruise name: 'CALMAR97'
  - CSR local ID '97010120'
  - CSR central ID '19976012'



Exercise 2 : CSR and EDMED references in CDI files

MIKADO automatic

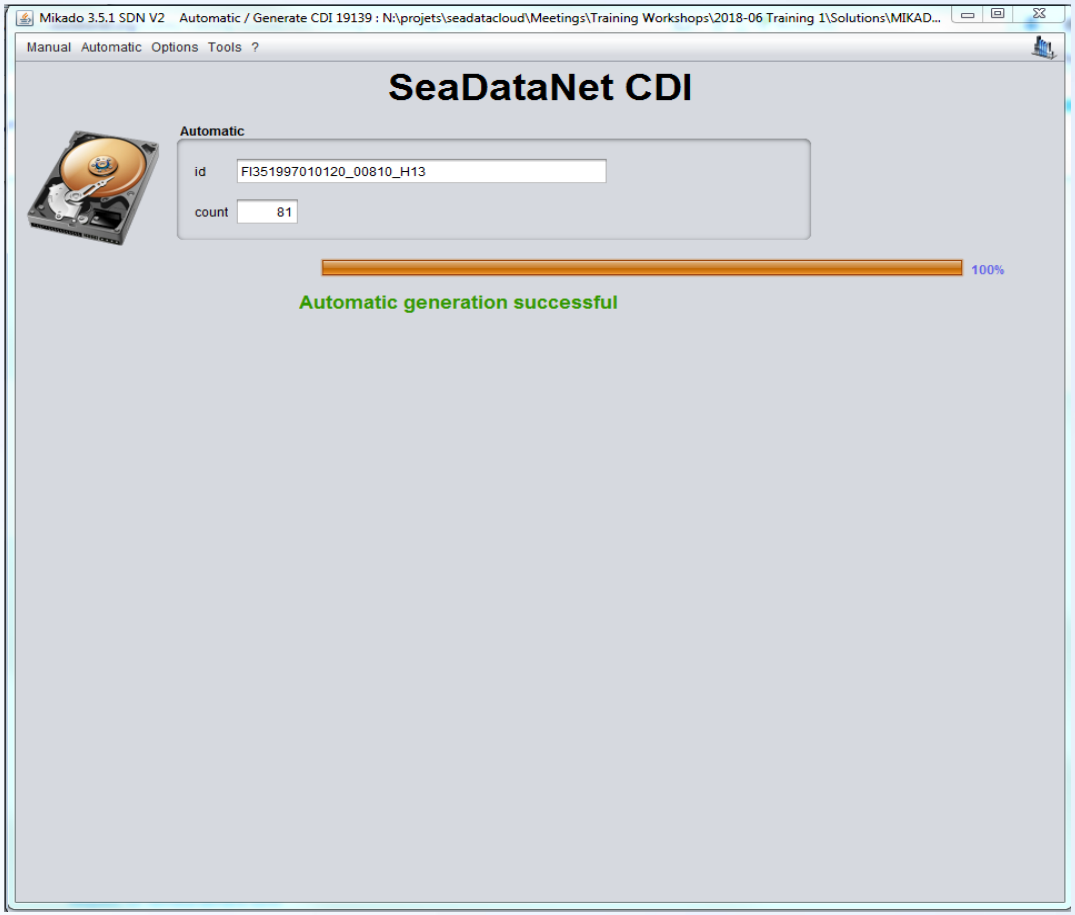
- Add a EDMED reference (var 80)
  - Local ID ‘XBTF01’
  - Central ID ‘6218’



Exercise 2 : CSR and EDMED references in CDI files

MIKADO automatic

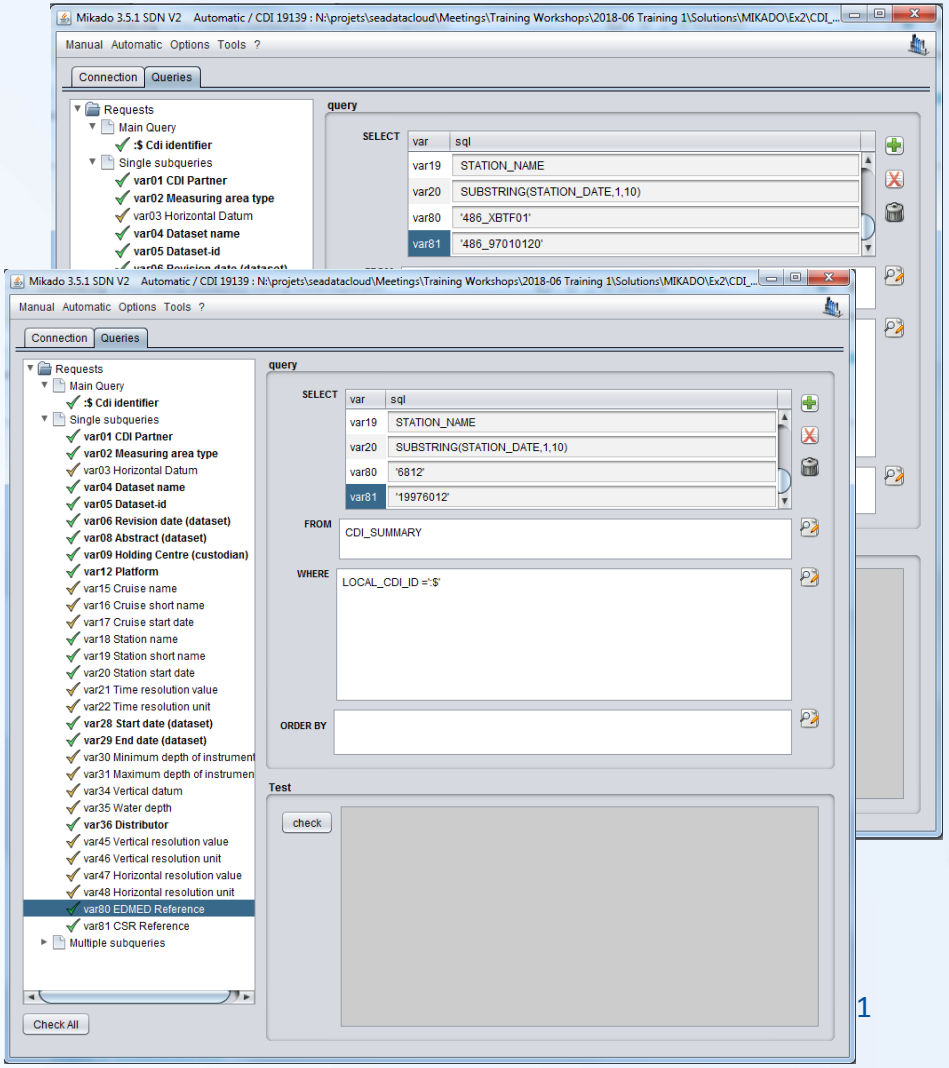
- Check the queries
- Save the configuration file
- Generate the XML files
  - Mapping for CSR
  - Mapping for EDMED



Exercise 2 : CSR and EDMED references in CDI files

MIKADO automatic

- To avoid mapping:
  - Use Central ID or "EDMO_code"_"Local_ID" in var80/81 queries
  - Ex:
    - CSR: '19976012' or '486_97010120'
    - EDMED: '6812' or '486_XBTF01'



Exercise 2 : CSR and EDMED references in CDI files

Open the XML file using text editor and look for SDN_CSRCode and SDN_EDMEDCode

```
- <gmd:code>
    <sdn:SDN_EDMEDCode codeListValue="4519" codeList="http://vocab.nerc.ac.uk/isoCodelists/sdnCodelists/edmedCodeList.xml#SDN_EDMEDCode" codeSpace="SeaDataNet">XBT, XCTD,
      LAGRANGIAN DRIFTER PROFILES IN W-MEDITERRANEAN</sdn:SDN_EDMEDCode>
  </gmd:code>
```

```
- <gmd:code>
    <sdn:SDN_CSRCode codeListValue="19976012" codeList="http://seadata.bsh.de/isoCodelists/sdnCodelists/csrCodeList.xml#SDN_CSRCode" codeSpace="SeaDataNet">CALMAR97 - L'Atalante
      (35A3)</sdn:SDN_CSRCode>
  </gmd:code>
```

Exercise 2 : CSR and EDMED references in CDI files

CSR and EDMED references in CDI portal

Exercise 2 : CSR a

CSR and EDMED references in CDI portal

Exercise 2 : CSR and

CSR and EDMED references in CDI portal

Latitude 1 41.65
Longitude 1
Datum
Measuring area
Water depth (m)
Depth reference
Sea regions
WHEN?
Start date
Start time
End date
End time
HOW?
Instrument / ge
Platform type
Cruise name
Alternative cruis
Cruise start dat
Cruise Summary
Station name
Alternative stati
Station start date 19971126

PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT

CRUISE SUMMARY REPORT INVENTORY (CSR)

CRUISE SUMMARY REPORT OF L'ATALANTE CRUISE CALMAR97 (BSH REF-NO.: 19976012)

GENERAL INFORMATION	
Platform/Ship	L'Atalante
Cruise begin	13.11.1997
Cruise end	26.11.1997
Port of Departure	Barcelona, Spain
Port of Return	La Seyne-sur-Mer, France
Chief Scientist(s)	LOUBRIEU BENOIT - IFREMER / GM-MARINE GEOSCIENCES
Responsible Laboratory	IFREMER / GM-MARINE GEOSCIENCES
LOCATION	
General Ocean Areas	Mediterranean Sea, Western Basin
Marsden Squares (S, N, E, W)	144 (30.0, 40.0, 0.0, 10.0) 180 (40.0, 50.0, 0.0, 10.0)
Bounding Box(es)	WEST EAST SOUTH NORTH .6 5.1 39.6 43.2
Specific Geographic Areas	Golfe du Lion
Link to Track Charts	›› GML track ›› Chart
PROJECT	
Project Title / Coordinating Body	
OBJECTIVES	
Description	The CALMAR (acronym for CAtalano-Languedocian MARgin) cruise had the main objective of performing a survey with multibeam echosounders of the continental margin sectors located between the canyons of Sète and Cap Creus, in the Gulf of Lion. However, the first part was devoted to core sampling and mapping in the Gulf of Valencia: 48 hours of work done on behalf of the University of Barcelona on 13, 14 and 15 November, in the framework of a ship-time exchange (the data remains the property of the Spaniards, Dr Miquel Canals). 2nd part: studies in CALMAR zone.

WHO?
Originator IFREMER
Data Holding centre IFREMER / IDM / SISMER - Scientific Information Systems for the SEA
HOW TO GET THE DATA?
Data Distributor IFREMER / IDM / SISMER - Scientific Information Systems for the SEA
Database reference XBTF01
Access/ordering of data web data access with registration
Internet access/ordering
Access restriction SeaDataNet licence
OTHER INFO

Exercise 3: Alternative solutions for Excel users

- **Case 1: Excel file with one sheet**
  - **Convert your Excel file into csv file to be connected with MIKADO**

- Case 2: Excel file with several sheets
  - Try to merge your different sheets in only one sheet and convert your file into csv file → case 1
  - Store your metadata in a database (Open Office database, Microsoft Office Access, MySQL, …)

Exercise 3: Alternative solutions for Excel users

- Excel file with one sheet

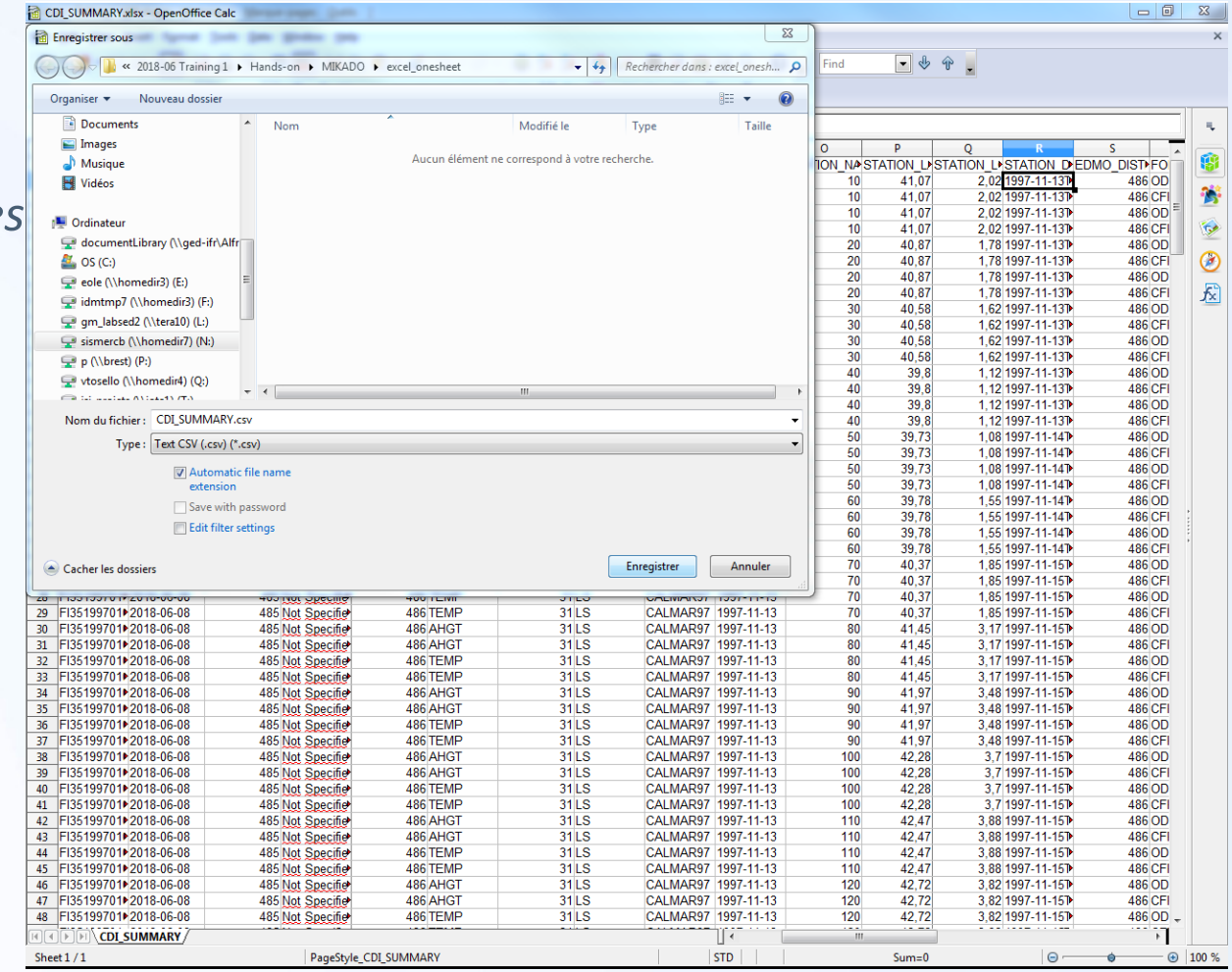
Files

CDI_SUMMARY.xlsx

CDI_SUMMARY_excel_onesheet.xml

Convert the Excel file into csv file using Microsoft Office Excel or Open Office Calc

- Save as
- Select csv type
- Save

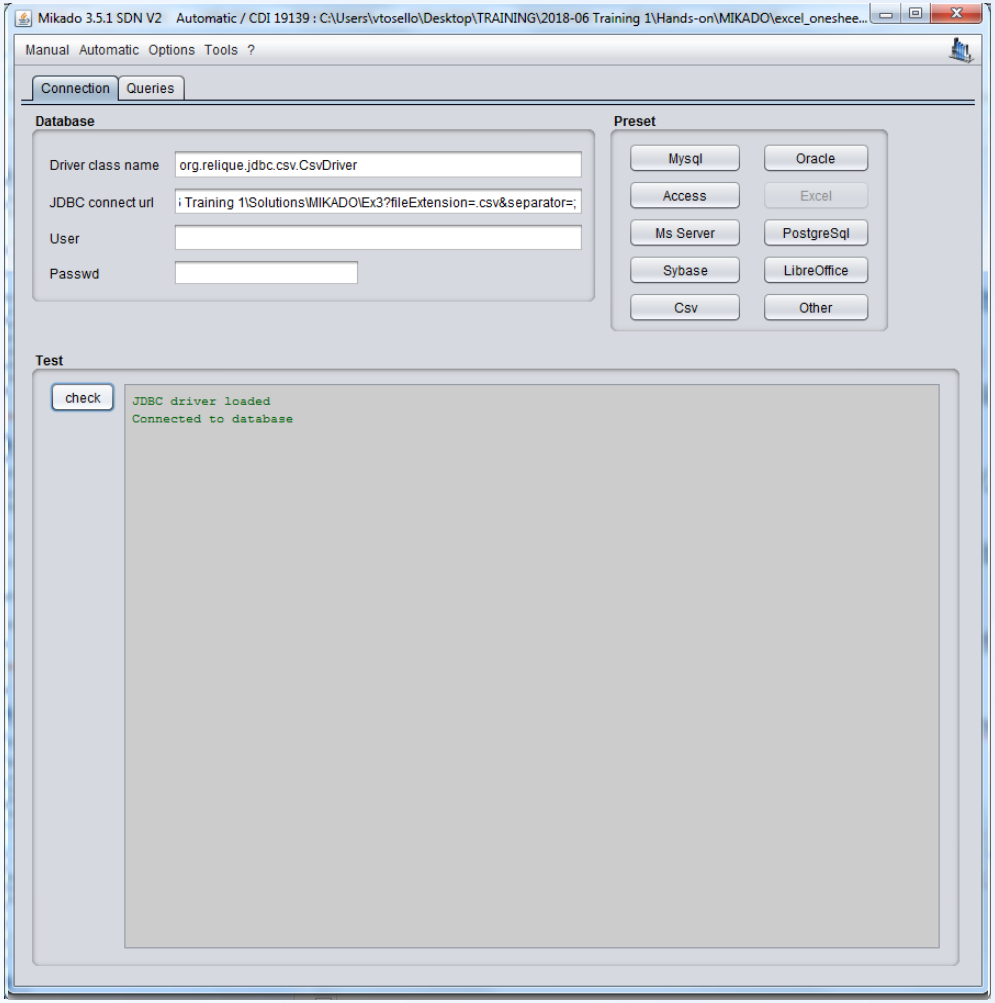


Exercise 3 : Alternative solutions for Excel users

- Open the Excel configuration file

CDI_SUMMARY_excel_onesheet.xml

- Click on “CSV” button
- Select the CSV file
- Check the connection

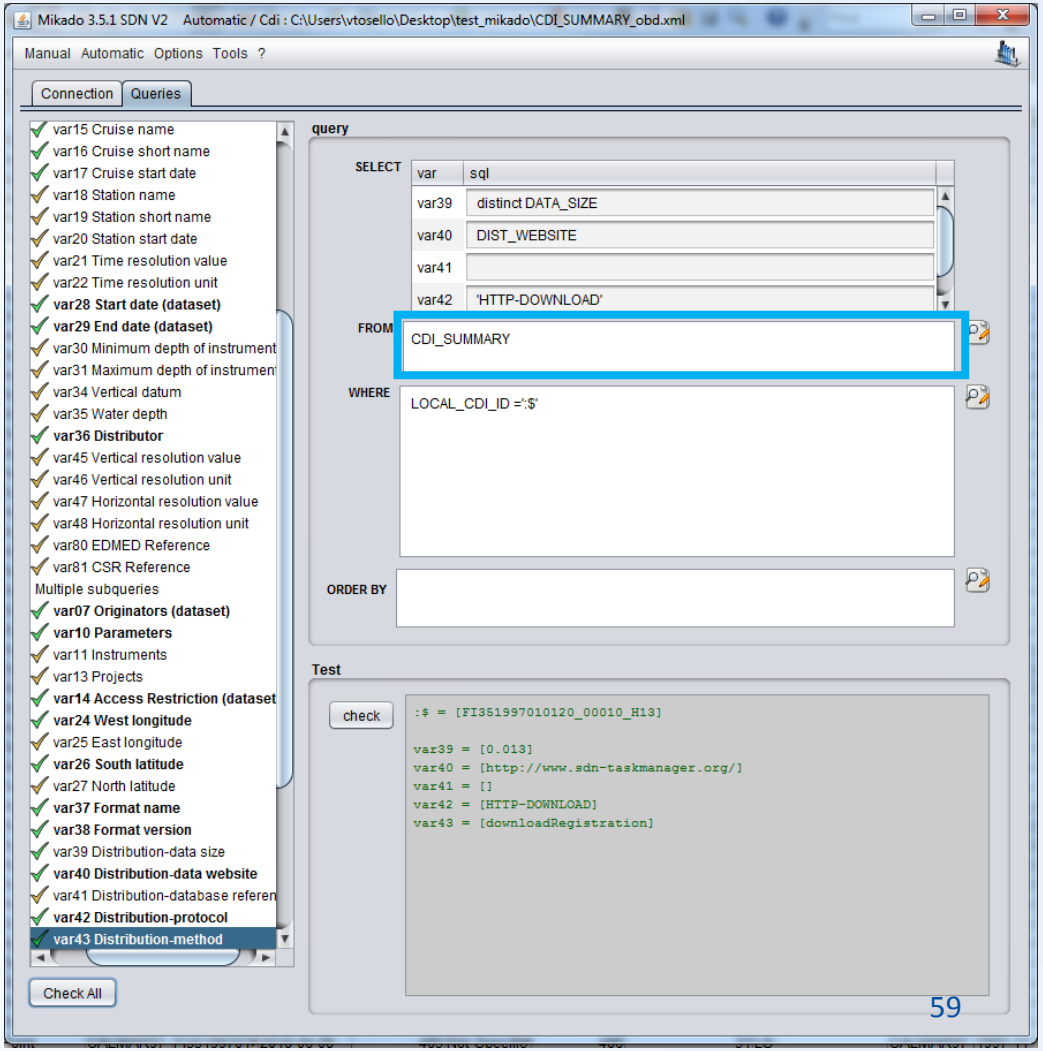


Exercise 3 : Alternative solutions for Excel users

- Update the queries

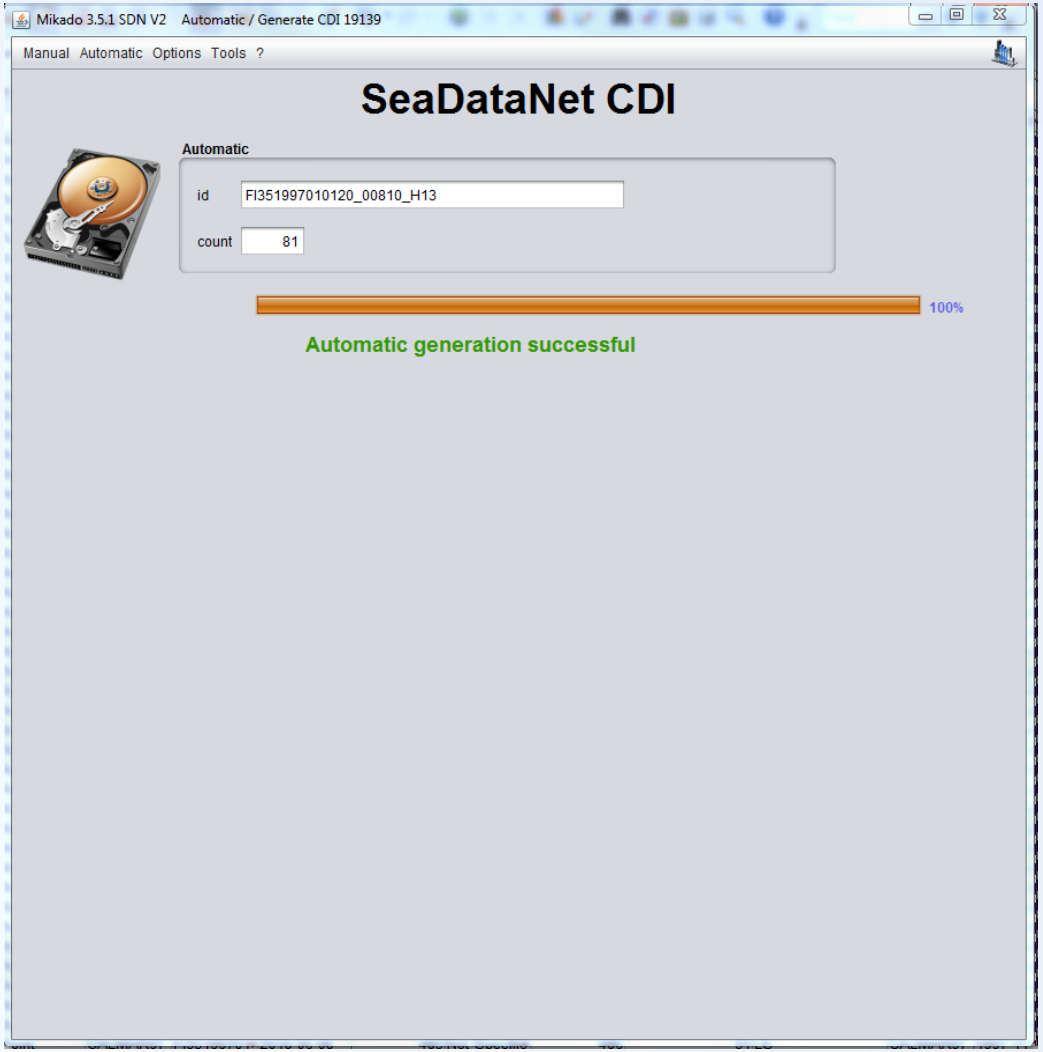
Syntax is not the same for querying an Excel file and a Open Office database

  - Remove [...$] in the « From » clauses
    - [CDI_SUMMARY$]
    - [CDI_PARAM$]
    - [CDI_FORMAT$]



Exercise 3 : Alternative solutions for Excel users

- Check all the queries
- Save the configuration file
- Generate XML files



Exercise 3: Alternative solutions for Excel users

- Case 1: Excel file with one sheet
  - Convert your Excel file into csv file to be connected with MIKADO
- **Case 2: Excel file with several sheets**
  - **Try to merge your different sheets in only one sheet and convert your file into csv file → case 1**
  - **Store your metadata in a database (Open Office database, Microsoft Office Access, MySQL, …)**

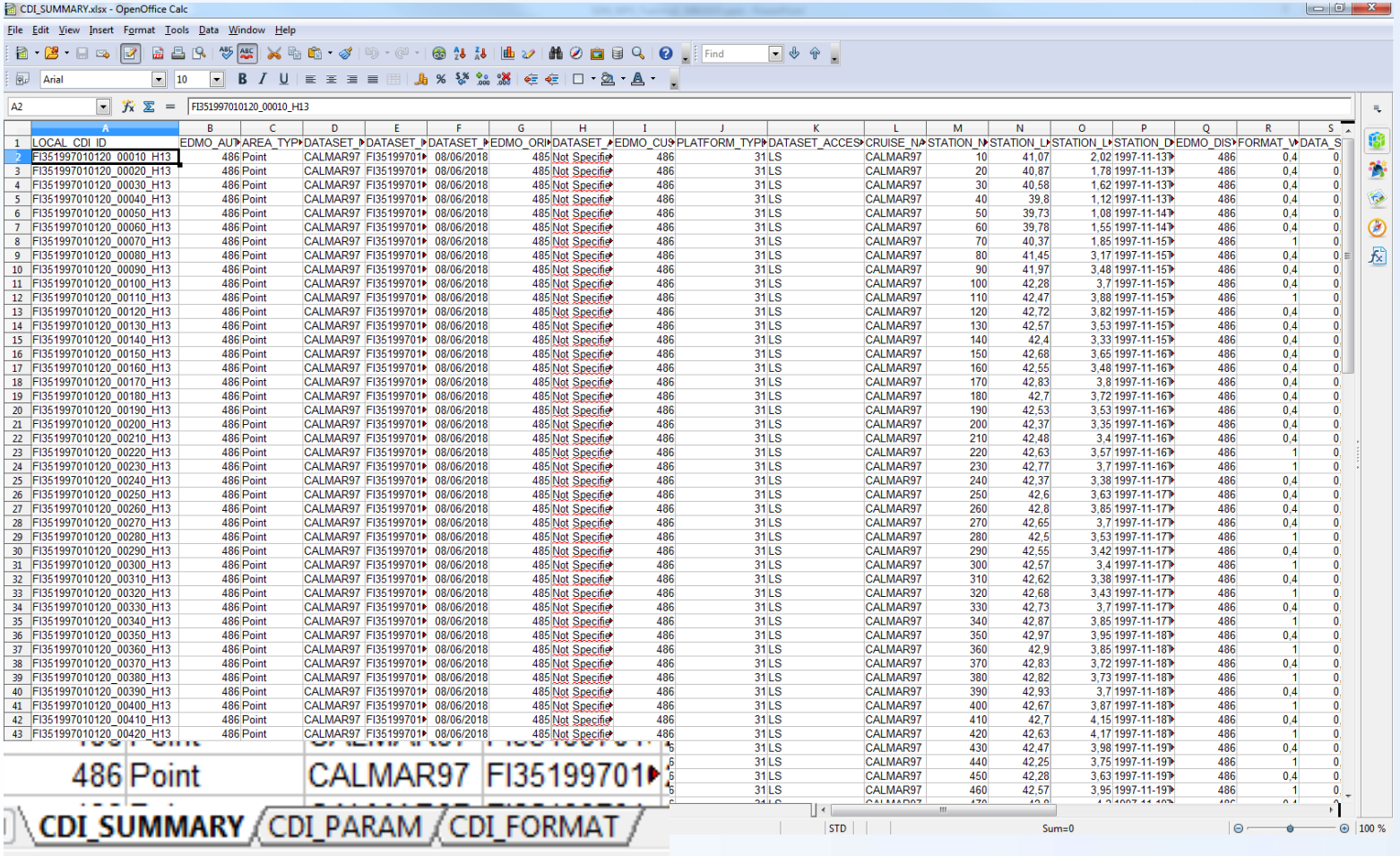
Exercise 3: Alternative solutions for Excel users

- Case 2: Excel file with several sheet

Files

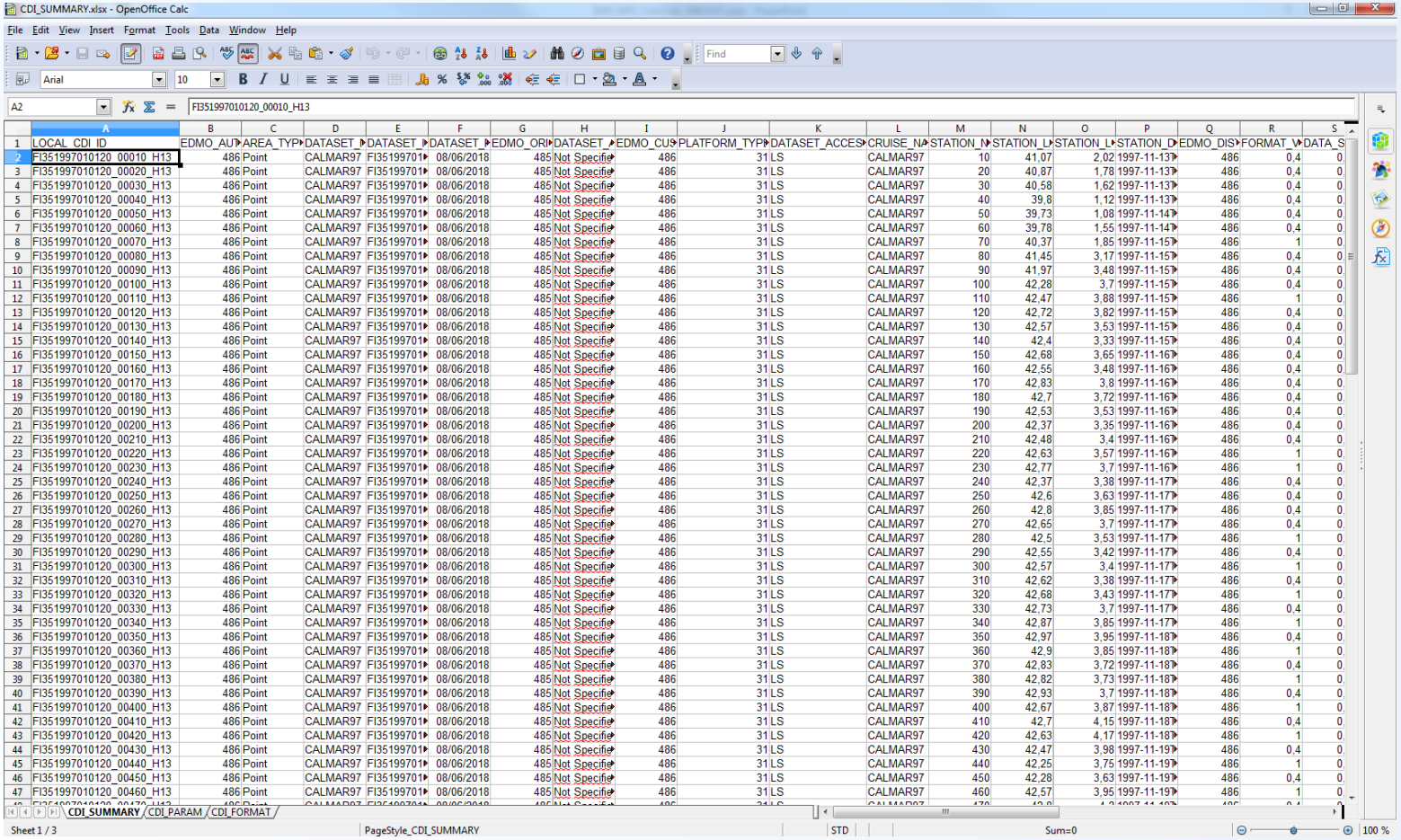
CDI_SUMMARY_multisheets.xlsx

CDI_SUMMARY_excel_multisheets.xml



Exercise 3: Alternative solutions for Excel users

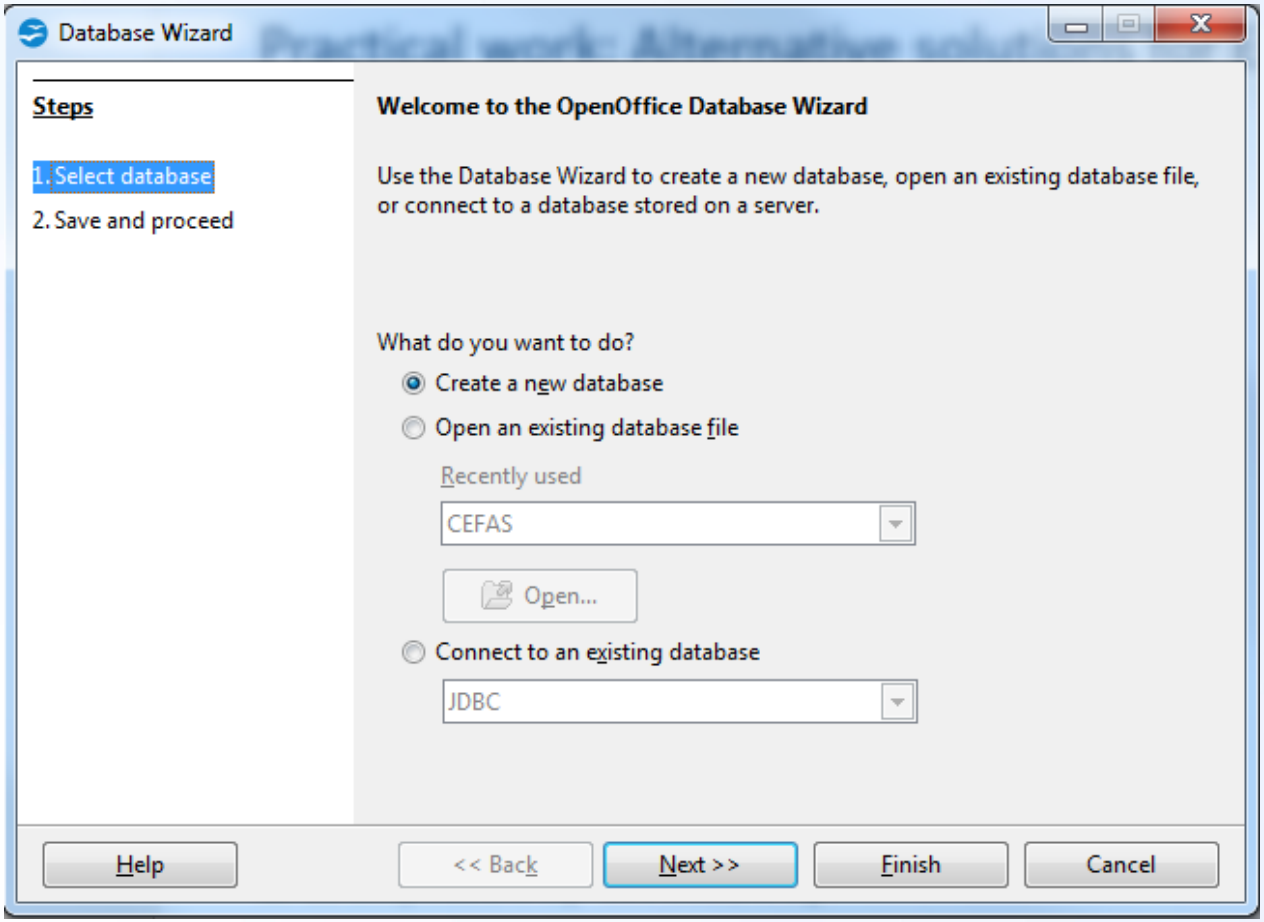
Open the CDI_SUMMARY_multisheet.xlsx Excel file in OO Calc



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	LOCAL_CDI_ID	EDMO_AU	AREA_TYP	DATASET_	DATASET_	DATASET_	EDMO_ORI	DATASET_	EDMO_CU	PLATFORM_TYP	DATASET_ACCES	CRUISE_NA	STATION_N	STATION_LA	STATION_LO	STATION_D	EDMO_DIS	FORMAT_VI	DATA_S
2	FI351997010120_00010_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	10	41,07	2,02	1997-11-13	486	0,4	0
3	FI351997010120_00020_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	20	40,87	1,78	1997-11-13	486	0,4	0
4	FI351997010120_00030_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	30	40,58	1,62	1997-11-13	486	0,4	0
5	FI351997010120_00040_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	40	39,8	1,12	1997-11-13	486	0,4	0
6	FI351997010120_00050_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	50	39,73	1,08	1997-11-14	486	0,4	0
7	FI351997010120_00060_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	60	39,78	1,55	1997-11-14	486	0,4	0
8	FI351997010120_00070_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	70	40,37	1,85	1997-11-15	486	1	0
9	FI351997010120_00080_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	80	41,45	3,17	1997-11-15	486	0,4	0
10	FI351997010120_00090_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	90	41,97	3,48	1997-11-15	486	0,4	0
11	FI351997010120_00100_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	100	42,28	3,7	1997-11-15	486	0,4	0
12	FI351997010120_00110_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	110	42,47	3,88	1997-11-15	486	1	0
13	FI351997010120_00120_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	120	42,72	3,82	1997-11-15	486	0,4	0
14	FI351997010120_00130_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	130	42,57	3,53	1997-11-15	486	0,4	0
15	FI351997010120_00140_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	140	42,4	3,33	1997-11-15	486	0,4	0
16	FI351997010120_00150_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	150	42,68	3,65	1997-11-16	486	0,4	0
17	FI351997010120_00160_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	160	42,55	3,48	1997-11-16	486	0,4	0
18	FI351997010120_00170_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	170	42,83	3,8	1997-11-16	486	0,4	0
19	FI351997010120_00180_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	180	42,7	3,72	1997-11-16	486	0,4	0
20	FI351997010120_00190_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	190	42,53	3,53	1997-11-16	486	0,4	0
21	FI351997010120_00200_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	200	42,37	3,35	1997-11-16	486	0,4	0
22	FI351997010120_00210_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	210	42,48	3,4	1997-11-16	486	0,4	0
23	FI351997010120_00220_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	220	42,63	3,57	1997-11-16	486	1	0
24	FI351997010120_00230_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	230	42,77	3,7	1997-11-16	486	1	0
25	FI351997010120_00240_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	240	42,37	3,38	1997-11-17	486	0,4	0
26	FI351997010120_00250_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	250	42,6	3,63	1997-11-17	486	0,4	0
27	FI351997010120_00260_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	260	42,8	3,85	1997-11-17	486	0,4	0
28	FI351997010120_00270_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	270	42,65	3,7	1997-11-17	486	0,4	0
29	FI351997010120_00280_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	280	42,5	3,53	1997-11-17	486	1	0
30	FI351997010120_00290_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	290	42,55	3,42	1997-11-17	486	0,4	0
31	FI351997010120_00300_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	300	42,57	3,4	1997-11-17	486	1	0
32	FI351997010120_00310_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	310	42,62	3,38	1997-11-17	486	0,4	0
33	FI351997010120_00320_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	320	42,68	3,43	1997-11-17	486	1	0
34	FI351997010120_00330_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	330	42,73	3,7	1997-11-17	486	0,4	0
35	FI351997010120_00340_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	340	42,87	3,85	1997-11-17	486	1	0
36	FI351997010120_00350_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	350	42,97	3,95	1997-11-18	486	0,4	0
37	FI351997010120_00360_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	360	42,9	3,85	1997-11-18	486	1	0
38	FI351997010120_00370_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	370	42,83	3,72	1997-11-18	486	0,4	0
39	FI351997010120_00380_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	380	42,82	3,73	1997-11-18	486	1	0
40	FI351997010120_00390_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	390	42,93	3,7	1997-11-18	486	0,4	0
41	FI351997010120_00400_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	400	42,67	3,87	1997-11-18	486	1	0
42	FI351997010120_00410_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	410	42,7	4,15	1997-11-18	486	0,4	0
43	FI351997010120_00420_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	420	42,63	4,17	1997-11-18	486	1	0
44	FI351997010120_00430_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	430	42,47	3,98	1997-11-19	486	0,4	0
45	FI351997010120_00440_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	440	42,25	3,75	1997-11-19	486	1	0
46	FI351997010120_00450_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	450	42,28	3,63	1997-11-19	486	0,4	0
47	FI351997010120_00460_H13	486	Point	CALMAR97	FI35199701	08/06/2018	485	Not Specifie	486	31	LS	CALMAR97	460	42,57	3,95	1997-11-19	486	1	0

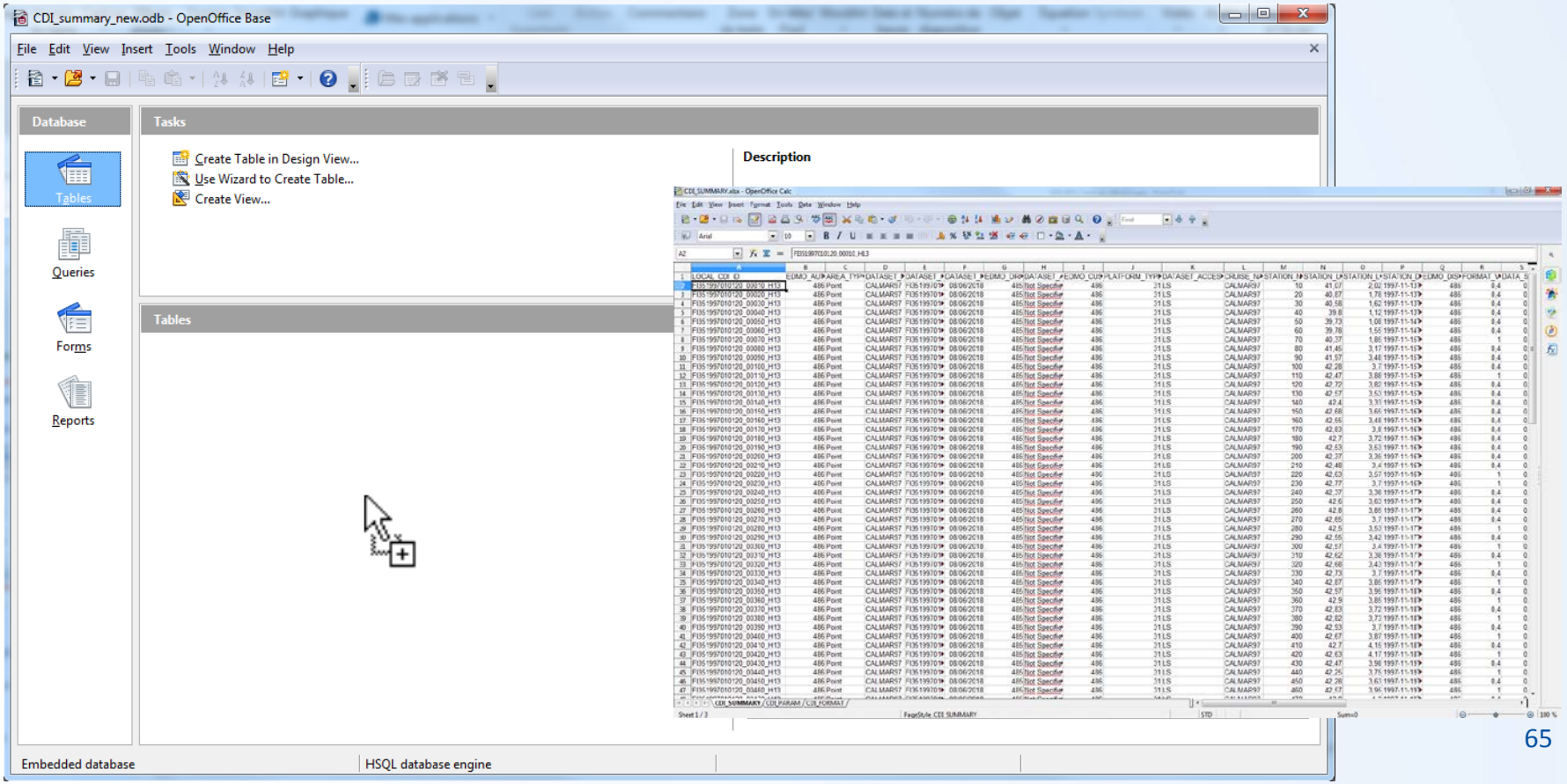
Exercise 3 : Alternative solutions for Excel users

Run Open Office Base and create a new database



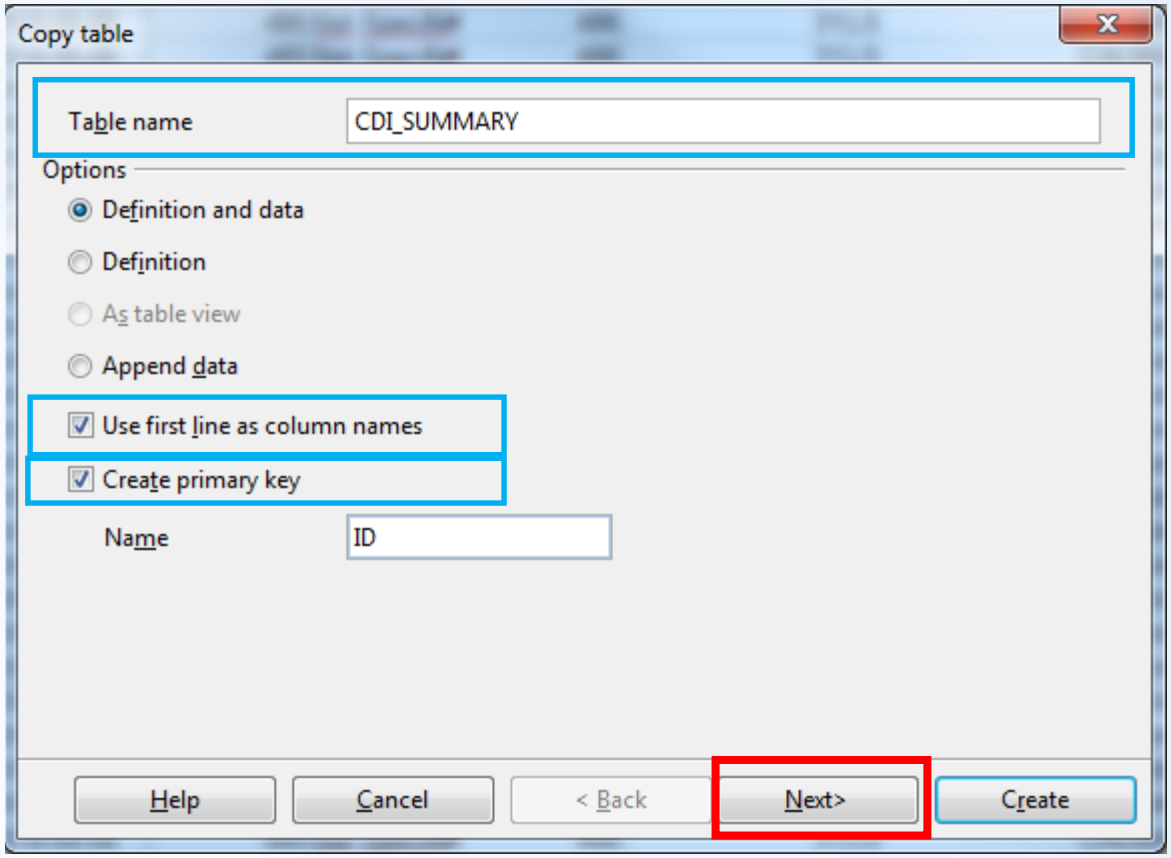
Exercise 3 : Alternative solutions for Excel users

Drag and drop the different sheets from Open Office Calc to Open Office base: a table will be created for each Excel sheet



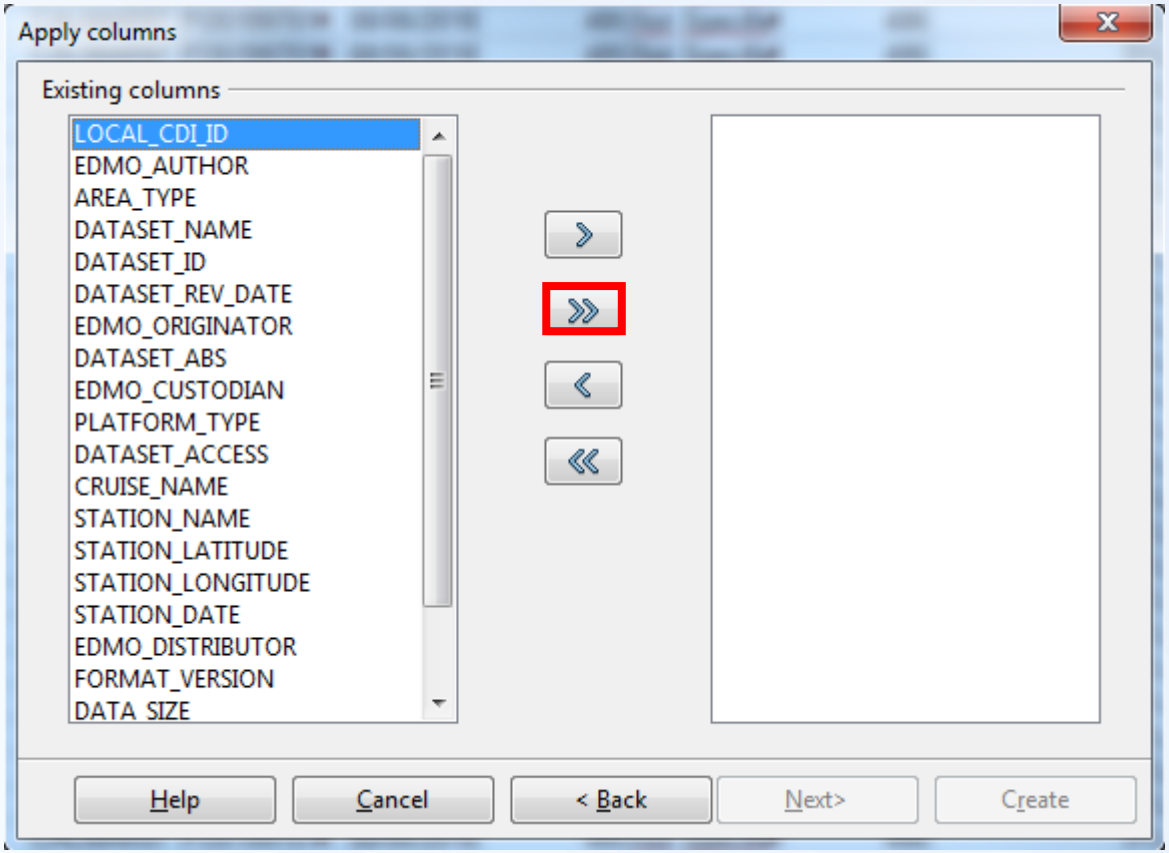
Exercise 3 : Alternative solutions for Excel users

- Table name = Name of Excel sheet
- Check “Use first line as column names”
- Check “Create primary key”
- Click on “Next”



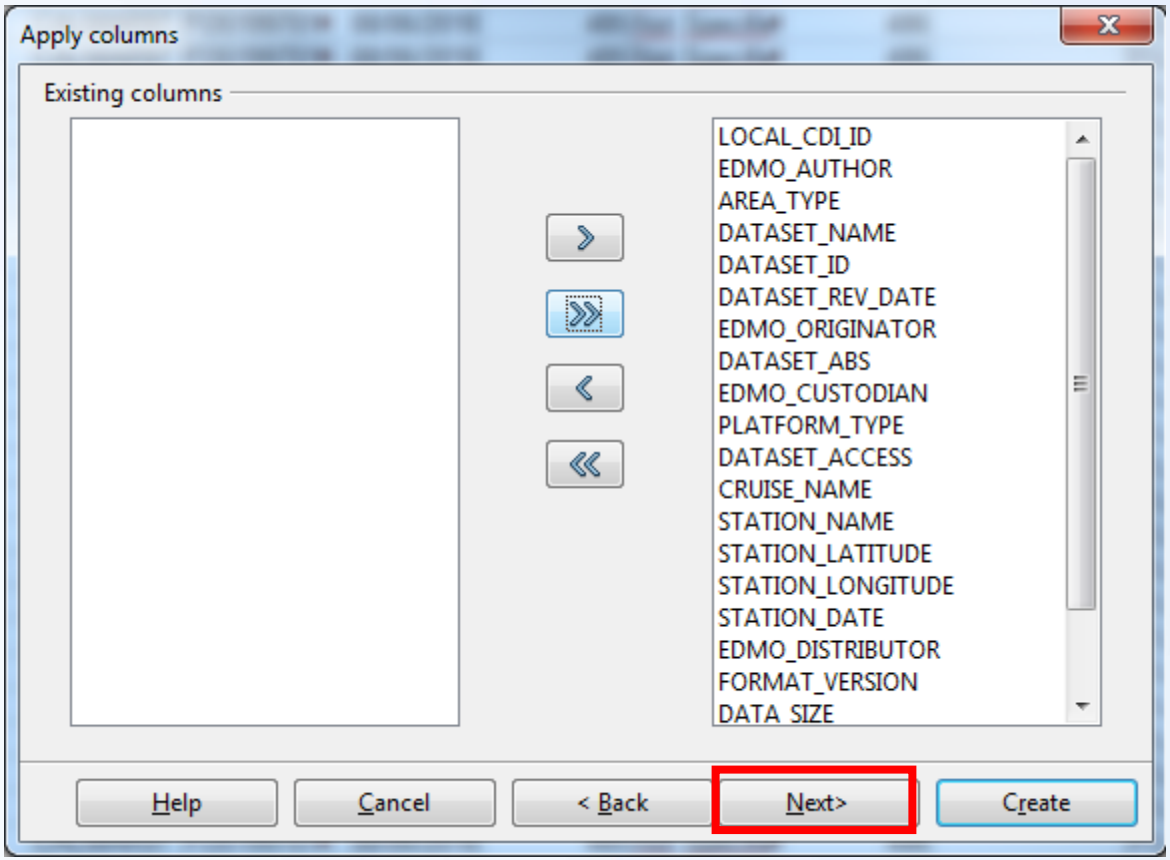
Exercise 3 : Alternative solutions for Excel users

Select all the columns



Exercise 3 : Alternative solutions for Excel users

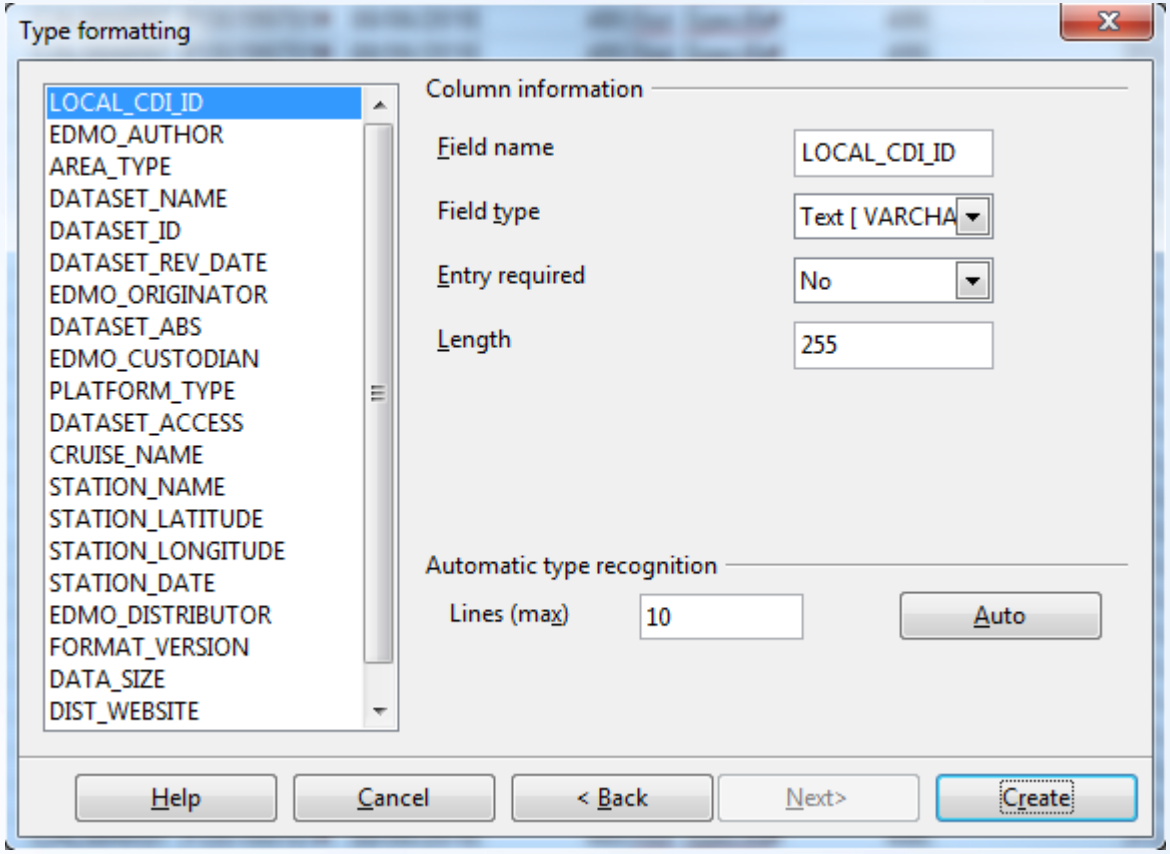
Click on “Next”



Exercise 3 : Alternative solutions for Excel users

Define the format of each field/column

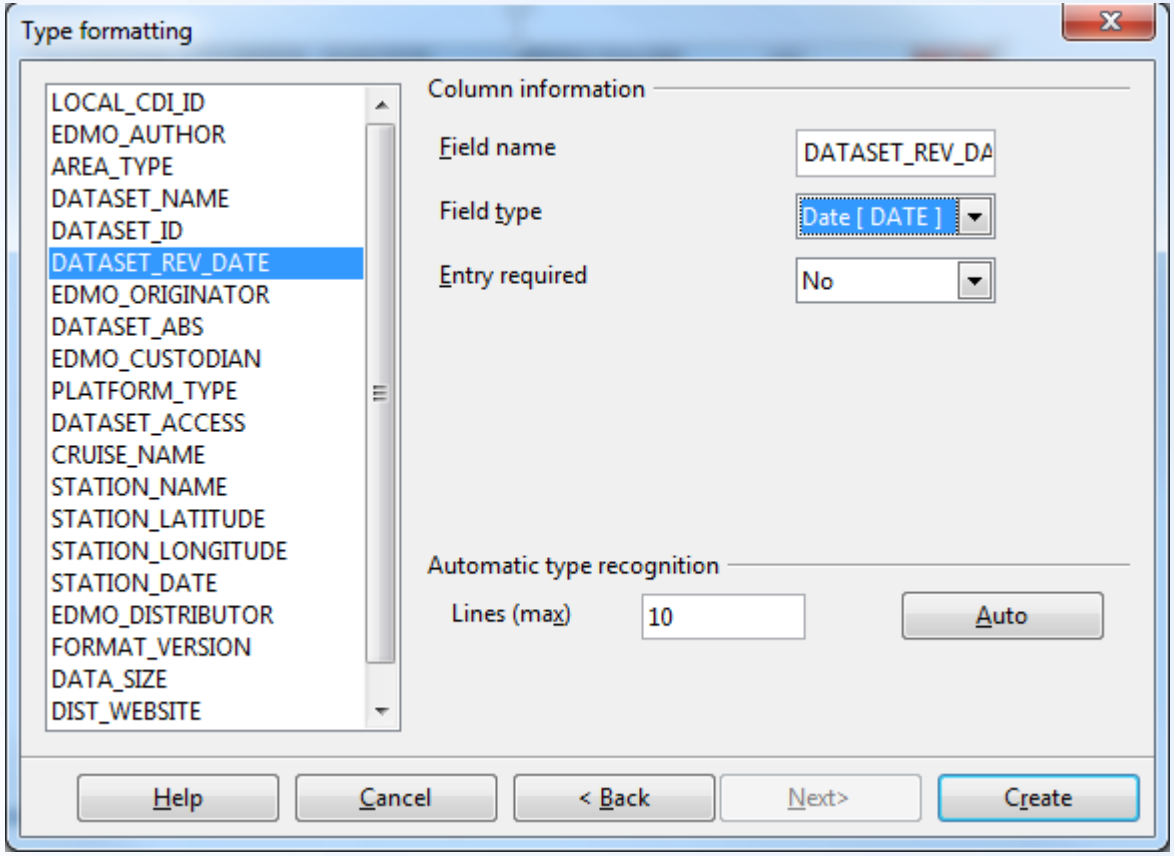
- LOCAL_CDI_ID
  - Type = Text



Exercise 3 : Alternative solutions for Excel users

Define the format of each field

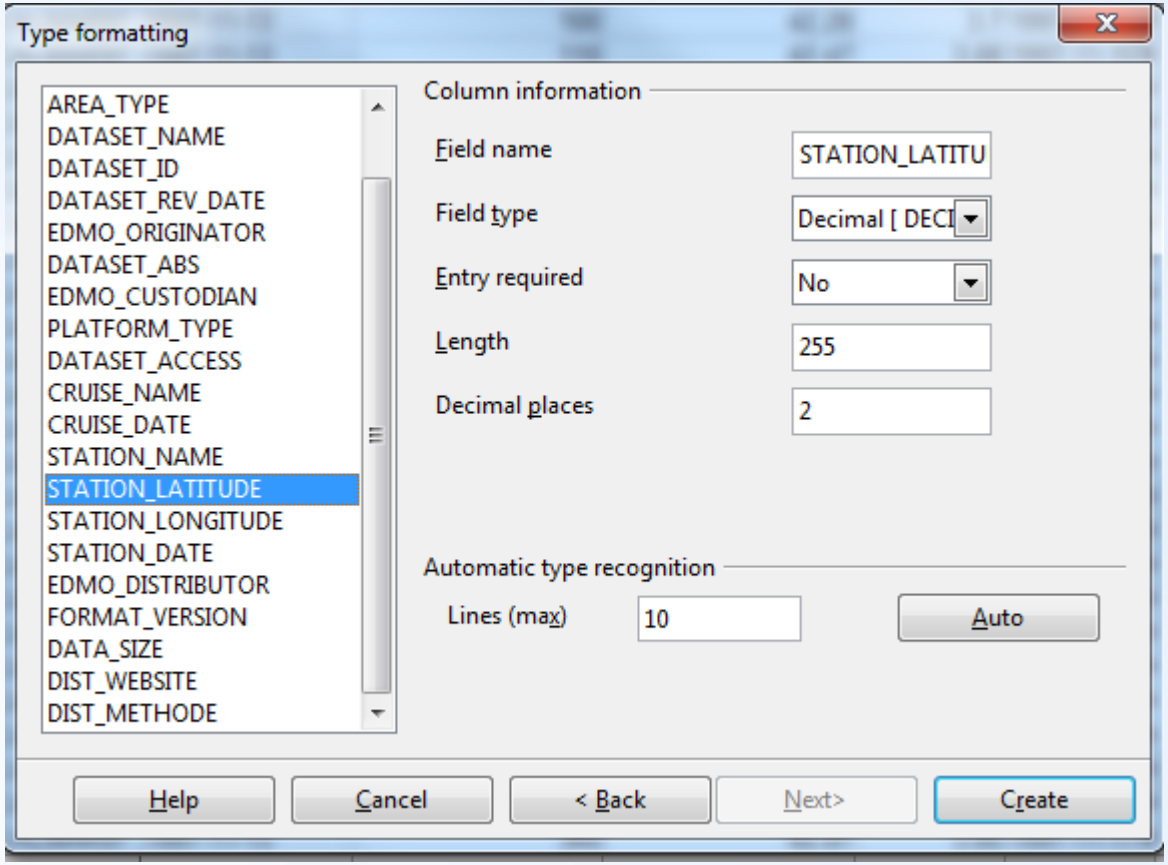
- DATASET_REV_DAT
  - Type = Date



Exercise 3 : Alternative solutions for Excel users

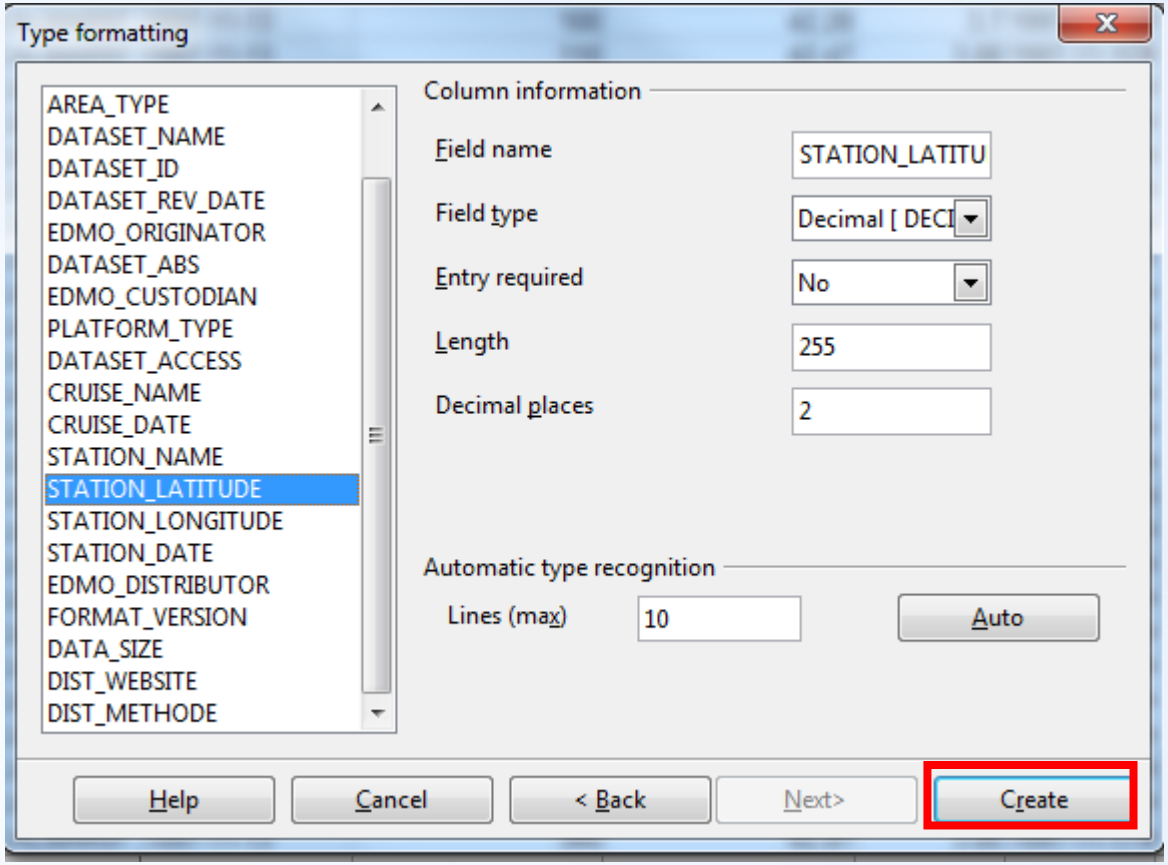
Define the format of each field

- STATION_LATITUDE
  - Type = Decimal
  - Decimal places = 2
- STATION_LONGITUDE
  - Type = Decimal
  - Decimal places = 2

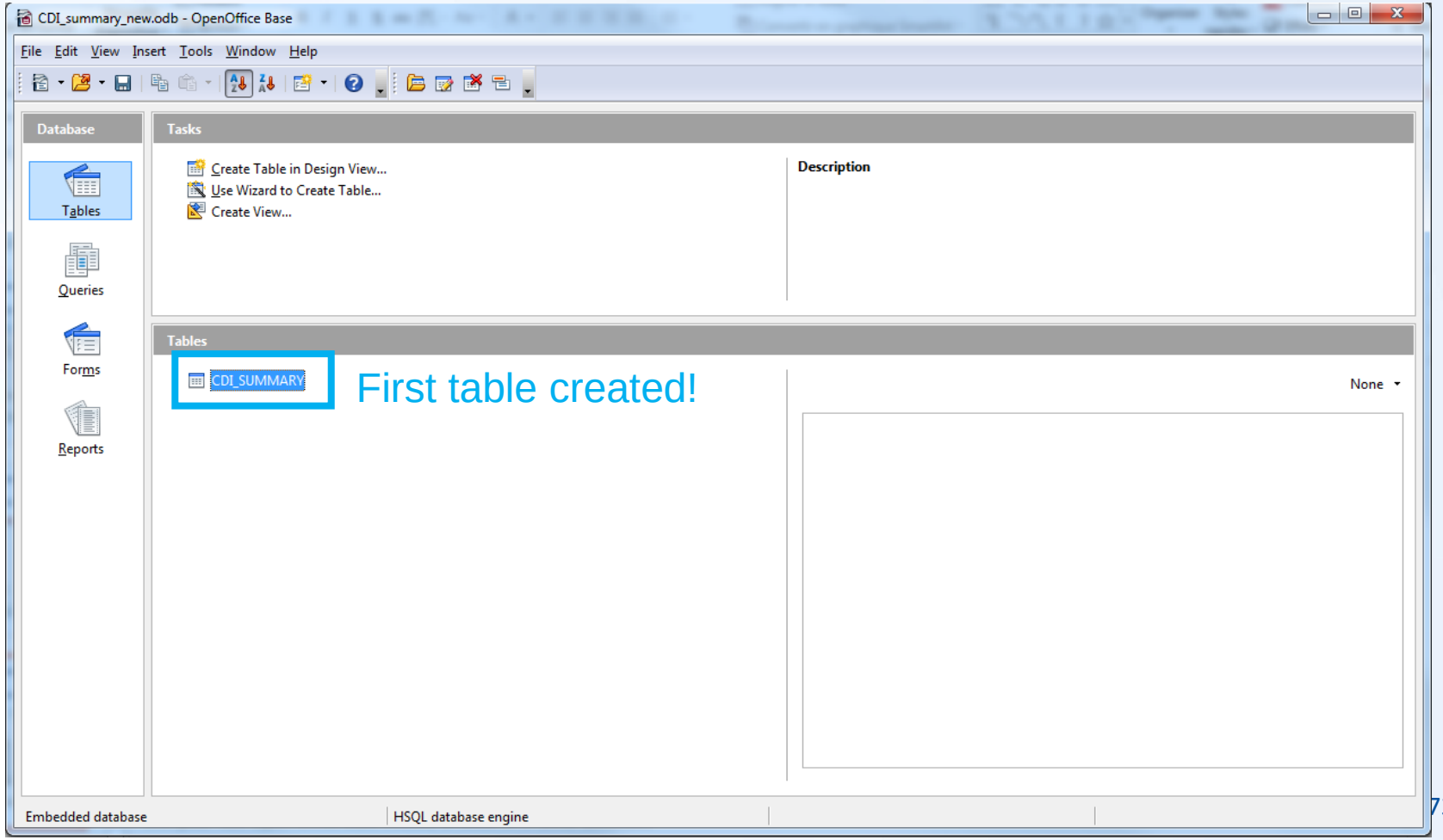


Exercise 3 : Alternative solutions for Excel users

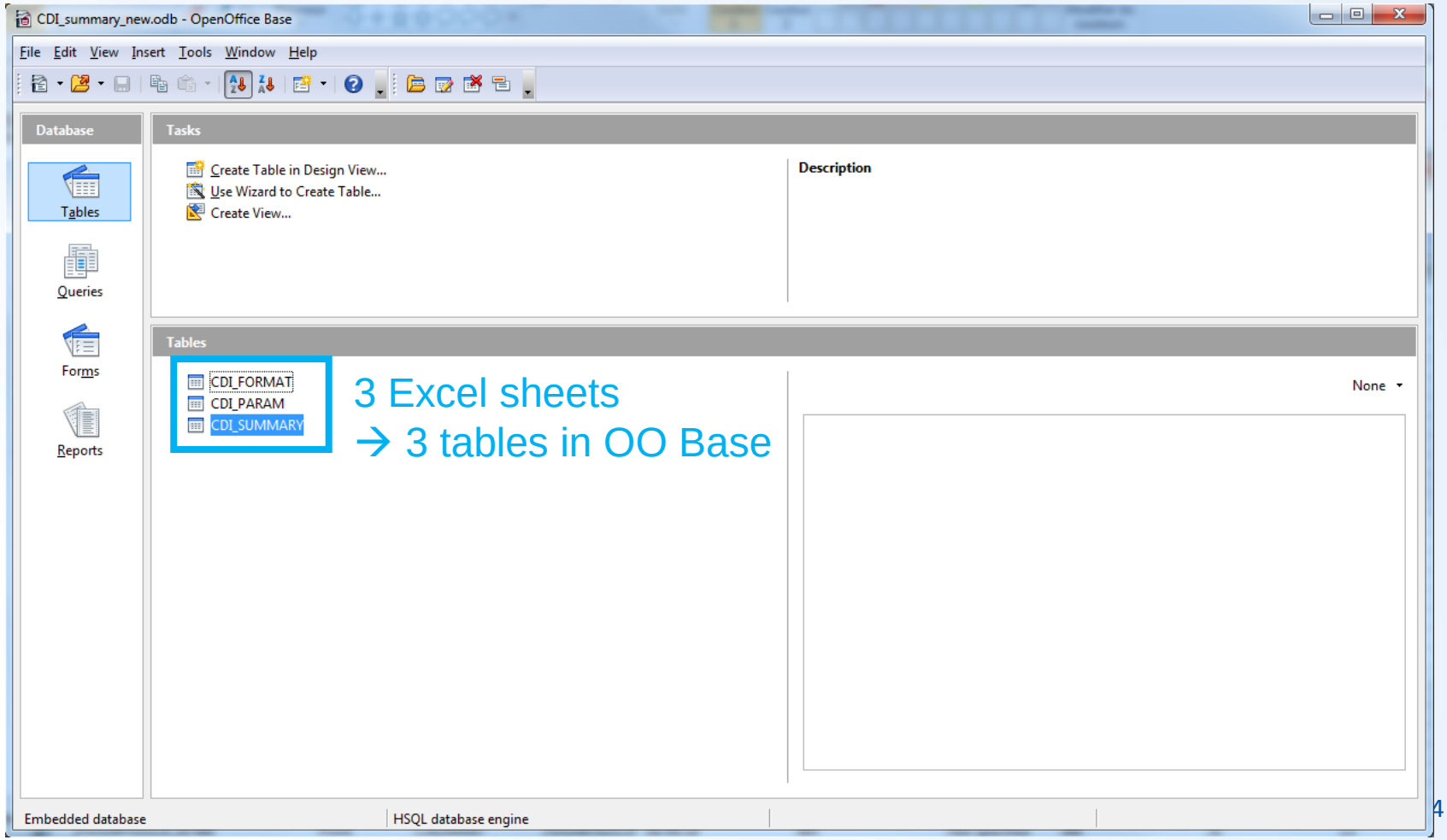
Click on « Create »



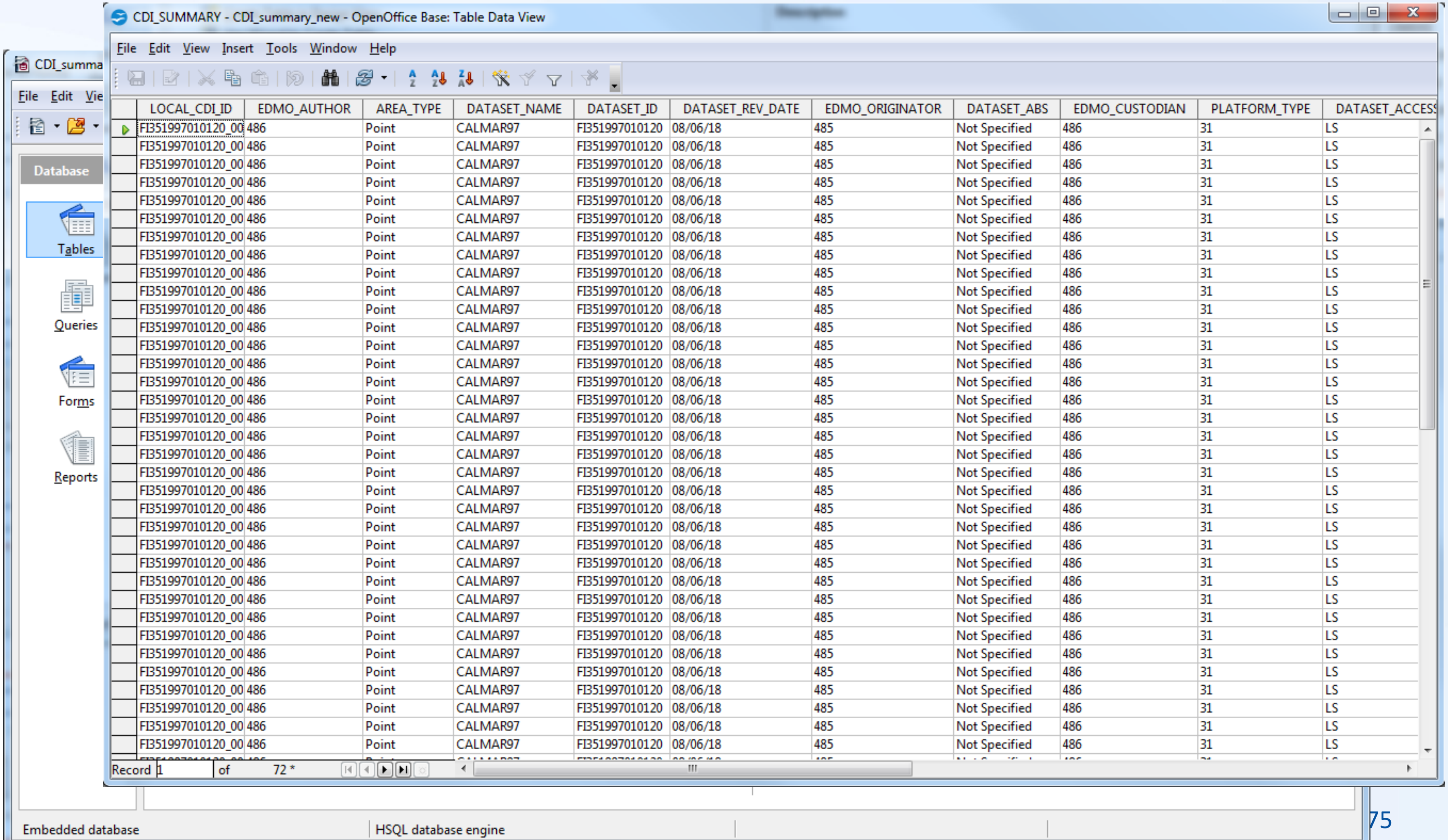
Exercise 3 : Alternative solutions for Excel users



Exercise 3 : Alternative solutions for Excel users



Exercise 3 : Alternative solutions for Excel users



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FI351997010120_00	486	Point	CALMAR97	FI351997010120	08/06/18	485	Not Specified	486	31	LS
FI351997010120_00	486	Point	CALMAR97	FI351997010120	08/06/18	485	Not Specified	486	31	LS
FI351997010120_00	486	Point	CALMAR97	FI351997010120	08/06/18	485	Not Specified	486	31	LS
FI351997010120_00	486	Point	CALMAR97	FI351997010120	08/06/18	485	Not Specified	486	31	LS
FI351997010120_00	486	Point	CALMAR97	FI351997010120	08/06/18	485	Not Specified	486	31	LS
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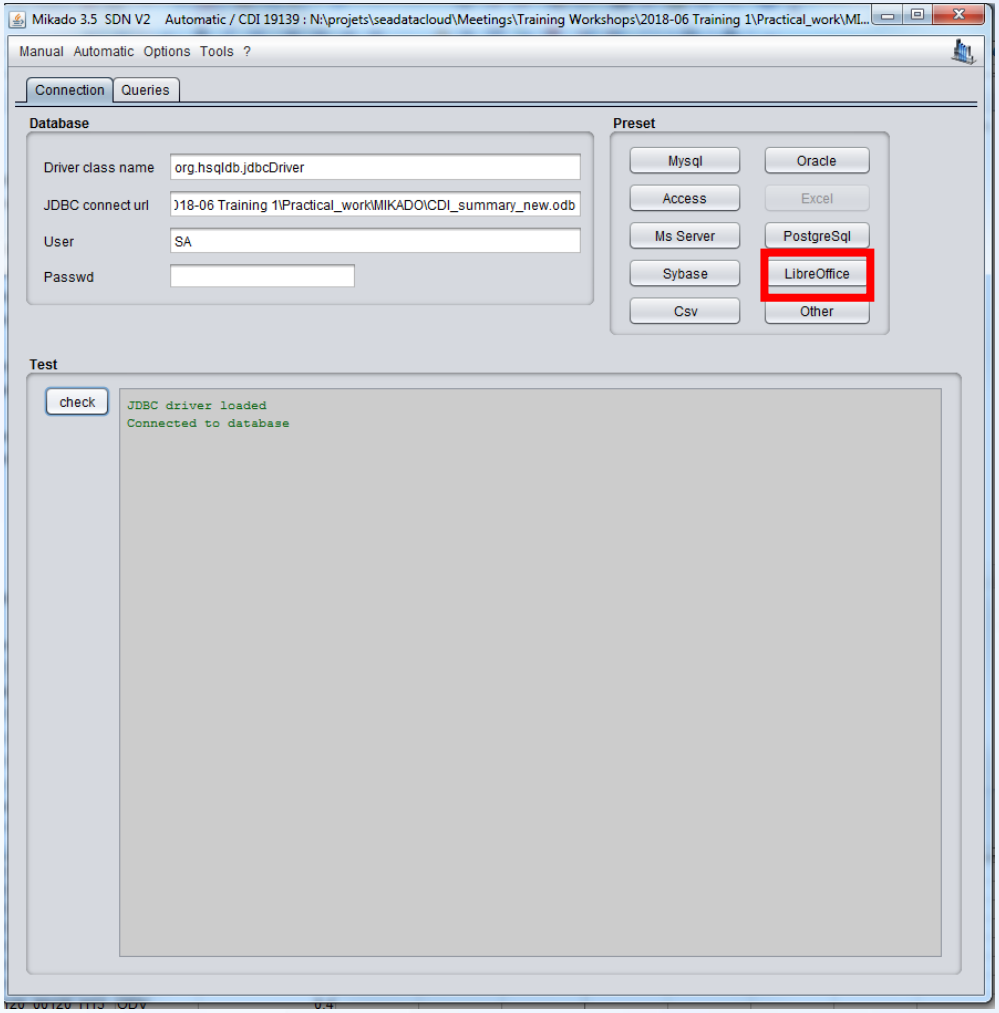
FI351997010120_00	486	Point	CALMAR97	FI351997010120	08/06/18	485	Not Specified	486	31	LS

Exercise 3 : Alternative solutions for Excel users

- Open the Excel configuration file
- Click on “LibreOffice” button
- Select the Open Office Base
- Check the connection

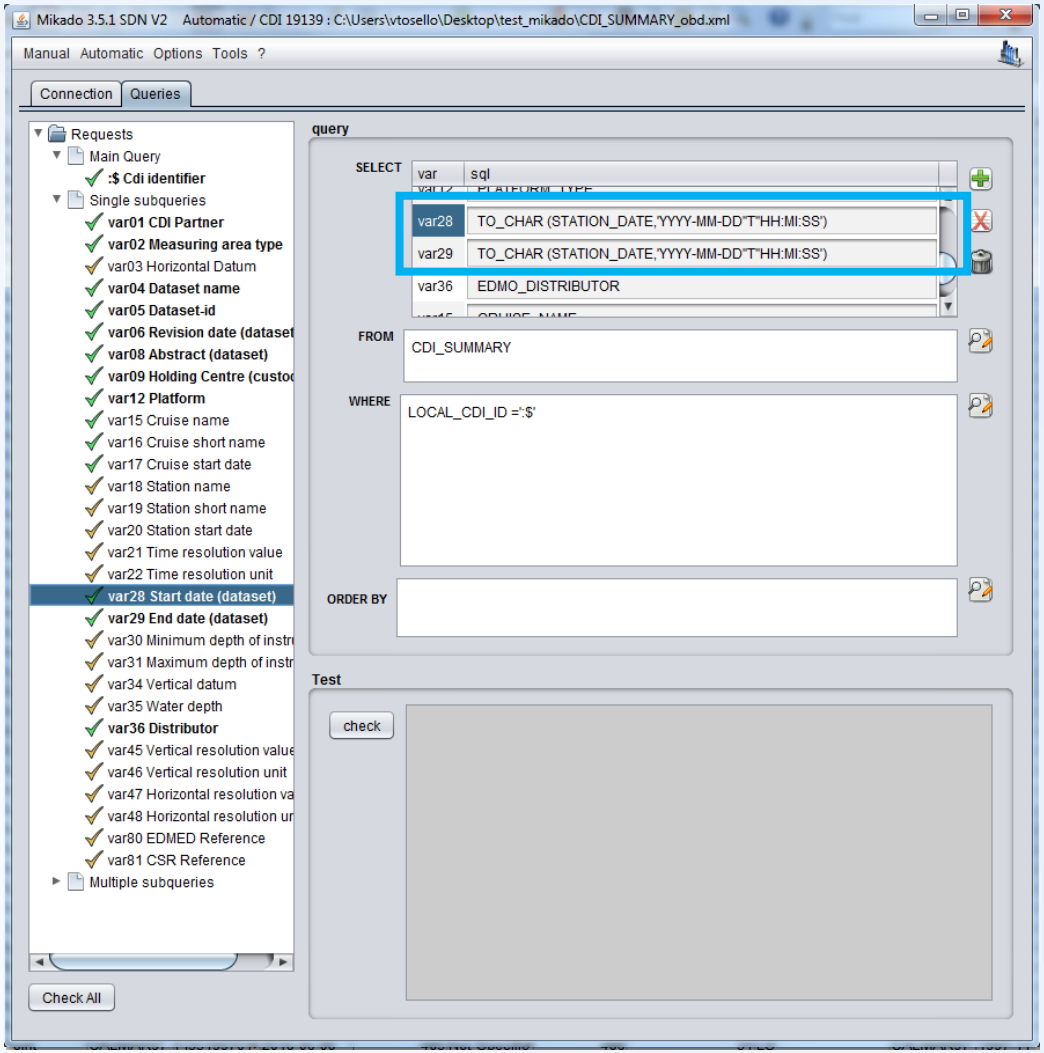


Exercise 3 : Alternative solutions for Excel users

- Update the queries

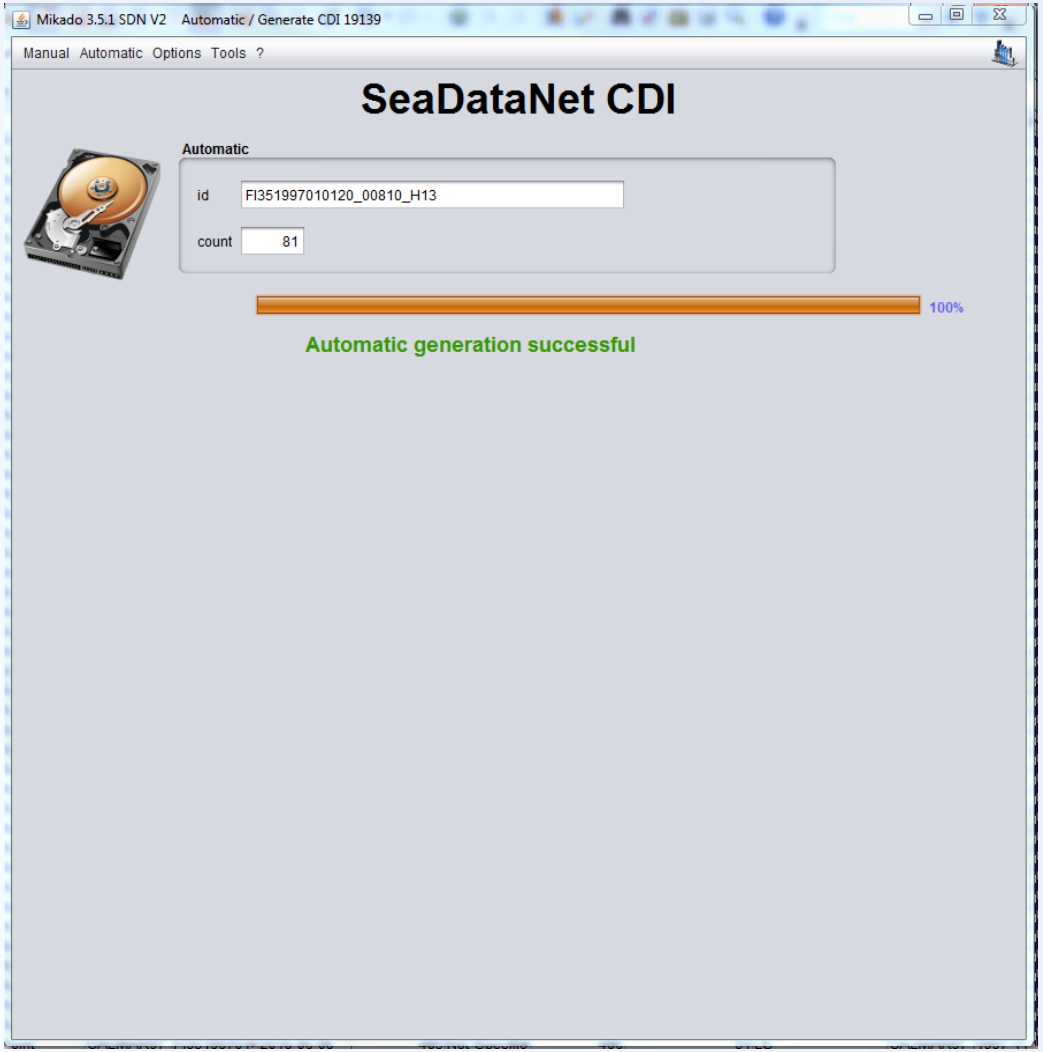
Syntax is not the same for querying an Excel file and a Open Office database

  - Remove [...$] in the « From » clauses
    - [CDI_SUMMARY$]
    - [CDI_PARAM$]
    - [CDI_FORMAT$]
  - Replace the « format » function by the « to_char » function (var 28 and 29)



Exercise 3 : Alternative solutions for Excel users

- Check all the queries
- Save the configuration file
- Generate XML files



Any questions?