

Département Informatique et Données Marines

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Version 1.1.4

ifremer

SeaDataNet

MIKADO V1.7: user manual





SeaDataNet

MIKADO V1.7: user manual

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1. Introduction

In the framework of the European program SEA-SEARCH, IFREMER has designed the MIKADO tool for the generation of XML files that are entries for the following directories:

- the Marine Environmental Datasets (EDMED),
- the Cruise Summary Reports (CSR),
- the Common Data Index to individual datasets (CDI).

In the framework of the European program SeaDataNet, IFREMER proposed to upgrade this tool to support new functionalities and to include the European Directory of Marine Environmental Research Projects (EDMERP) and the European Directory of the Ocean Observing System (EDIOS) in a later version. MIKADO V1 is compliant with the SeaDataNet V1 XML schemas and uses the SeaDataNet web services for standards and common vocabularies.

The XML schemas used by MIKADO for EDMED, CSR, CDI and EDMERP are available on the SeaDataNet BSCW workspace at the following address (login/password required):

<https://www.ifremer.fr/bscw/bscw.cgi/0/67755>

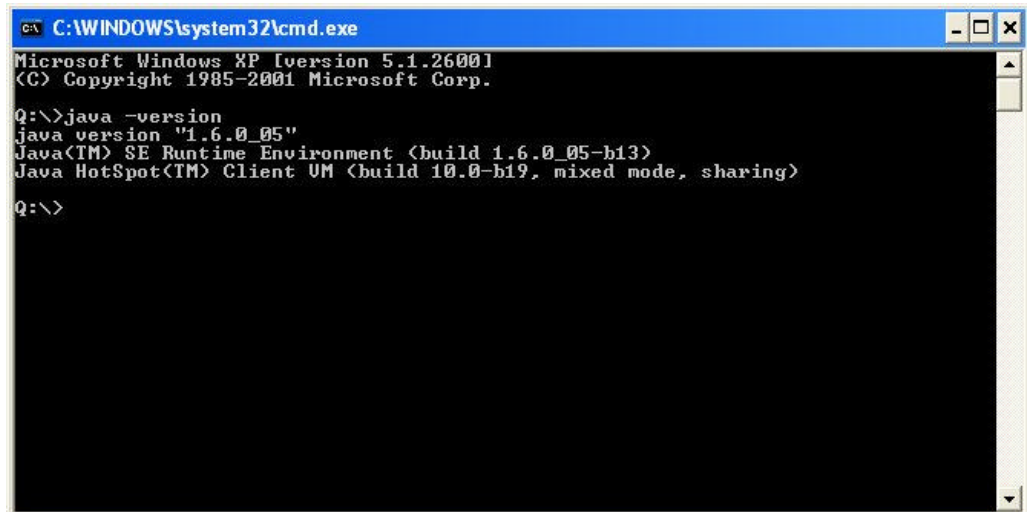
([SeaDataNet](#) / [SDN Technical Task Team](#) / [ISO](#) / [Application of ISO 19115 within SeaDataNet V1](#))

2. Technical characteristics

- Written in **Java** Language (Version > 1.5)
- Available under multiple environments :
 - Microsoft : Windows 2000, XP, VISTA,
 - APPLE
 - Unix - Solaris
 - Linux
- Use of the **SeaDataNet common vocabularies** web services
 - to update lists of values of the SeaDataNet common vocabularies
 - need network connections in order to have up to date lists of values.
 - But Mikado works offline once the list are up-to-date

3. Requirements

- Make sure that the java version on your computer is = 1.6
- To know if Java is available on your computer, in the right version, follow these steps:
 - Open 'Start' menu, then 'Execute'
 - On the displayed window, enter: 'cmd', then click on 'OK' button
 - Enter 'java -version'
- Check if command has been executed:
 - If not, download the last java version at <http://java.com/en/download/index.jsp>.
 - Else, check the version displayed. The version should be greater than or equal to 1.6.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

Q:\>java -version
java version "1.6.0_05"
Java(TM) SE Runtime Environment (build 1.6.0_05-b13)
Java HotSpot(TM) Client VM (build 10.0-b19, mixed mode, sharing)

Q:\>
```

Figure 1: Check Java version installed on your computer

4. Installation

4.1. Download MIKADO software

The last version of MIKADO is available and downloadable on the SeaDataNet website:

http://www.seadatanet.org/services/software_1/mikado.

To install MIKADO, you have to download the MIKADO zip file, to unzip it and to copy the MIKADO directory on your computer.

To uninstall MIKADO, you have just to delete the MIKADO directory.

4.2. Run MIKADO software

To run MIKADO:

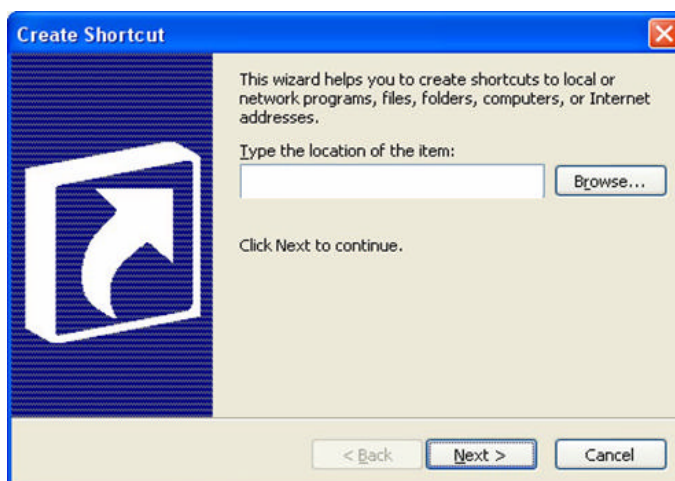
- **under Windows:** double click on the **mikado.bat** file in the MIKADO directory,
- **under Solaris:** run the mikado.csh file in the MIKADO directory.

In order to access MIKADO more easily under Windows, you can create a shortcut on your desktop (see 4.3).

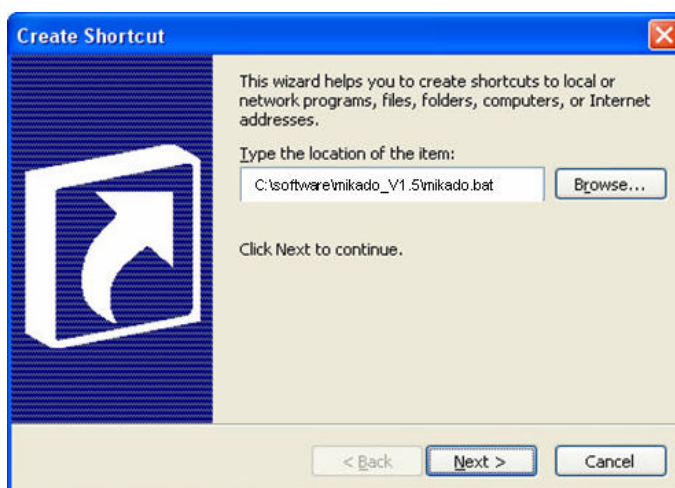
4.3. For Windows: Create an MIKADO shortcut on your desktop

The quickest method to access MIKADO is to create a shortcut on your desktop. To do so, proceed as follow:

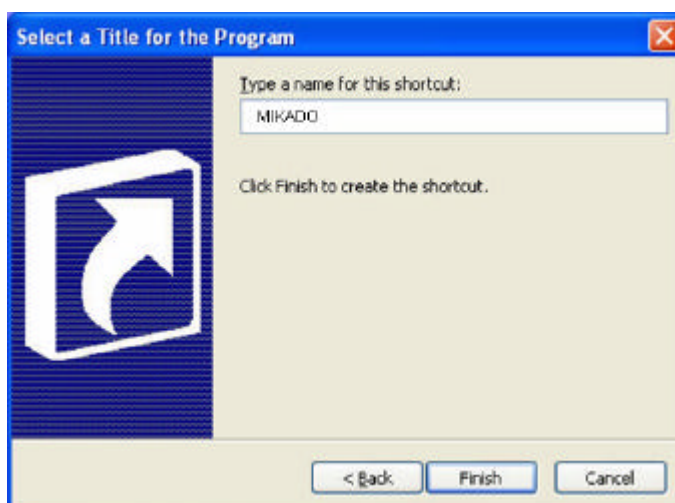
- 1- Right click on your desktop and select **New** and the **Shortcut** options. This window opens:



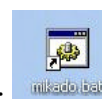
- 2- Select the Mikado.bat file in the MIKADO directory by clicking on the Browse button. Click on the Next button.



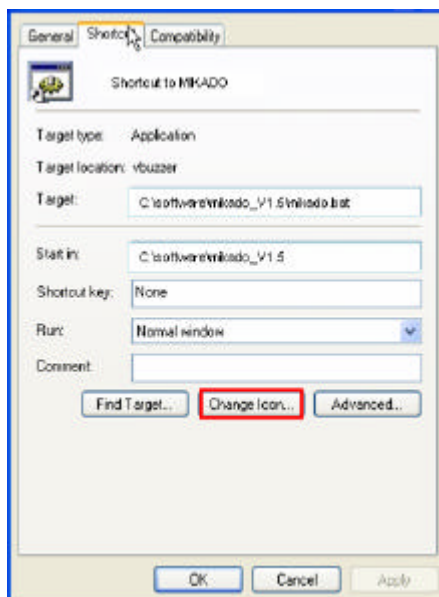
- 3- Select a title for this shortcut: MIKADO for example. Click on the Finish button.



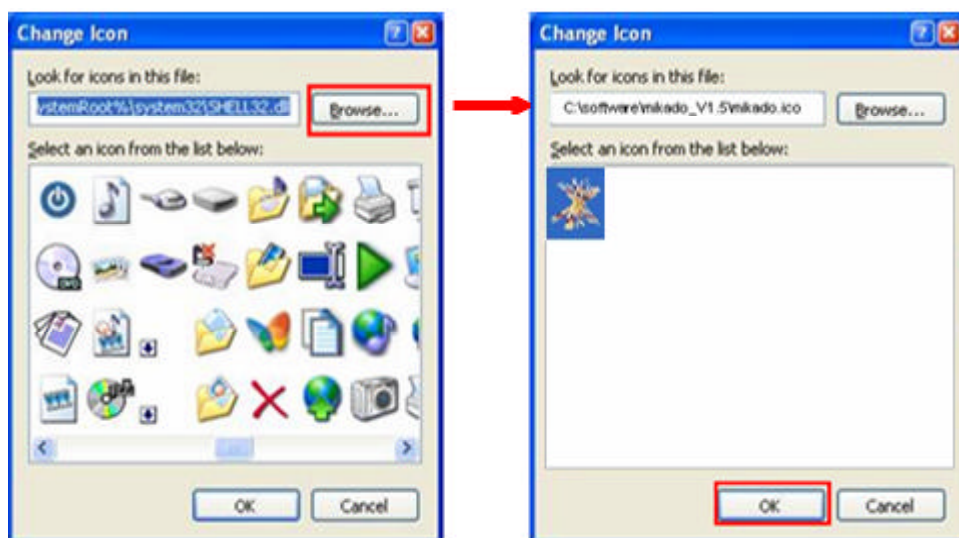
- 4- The MIKADO shortcut will appear on your desktop:



- 5- You can associate the MIKADO icon with the Mikado shortcut. To do so, right click on the Mikado shortcut and select **Properties**. Click on the **Change icon** button in the MIKADO Shortcut Properties window.



- 6- Click on the **Browse** button and select the Mikado.ico file provided in the MIKADO directory. And click on **OK** button.



- 7- The MIKADO icon will appear on your desktop:



5. Main menu of MIKADO

When you run MIKADO tool, you can access four different menus:

- “Manual” menu
- “Automatic” menu
- “Options” menu
- “Tools” menu
- “?” menu.

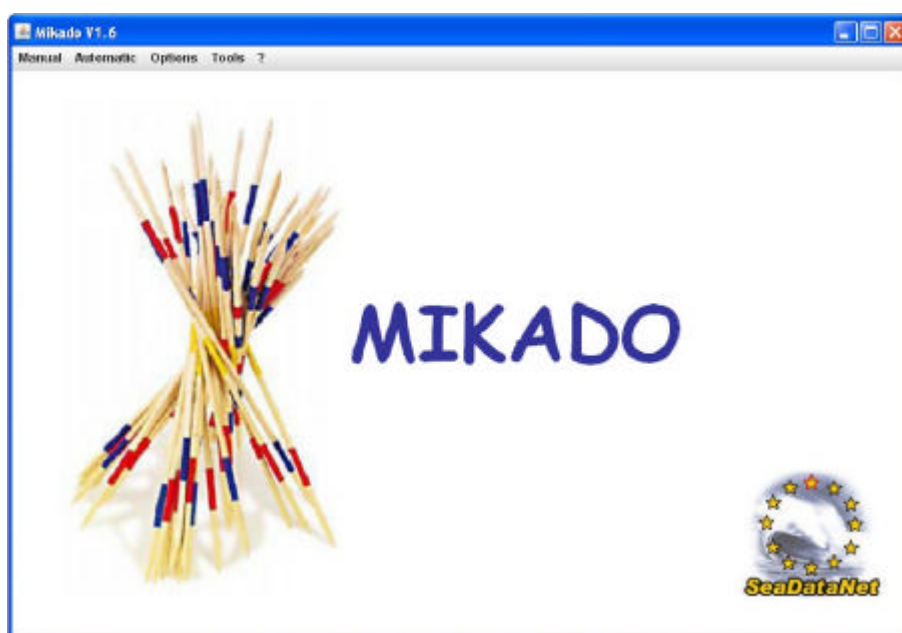


Figure 2: First screen of the Mikado tool

5.1. “Manual” menu

The first “**Manual**” menu (Figure 2) enables you to run the manual way of MIKADO which allows to input manually the relevant information for all the fields in order to generate XML files for one directory.

5.2. “Automatic” menu

The second “**Automatic**” menu (Figure 2) enables you to run the automatic way of MIKADO which allows to generate these descriptions automatically if information is catalogued in a relational database.

5.3. “Options” menu

The “**Options**” menu (Figure 3) allows you:

- To enable the automatic check and download of the controlled vocabularies (see 6).

- To select the data centre type:
 - SDN V1 is the type for the SeaDataNet partners
 - ECOOP V1 is the type for the ECOOP (*European Coastal sea Operational observing and Forecasting system*) partners.
 - Those two data centre types in MIKADO need to be identified in the CDI input: for ECOOP partners, the URL distribution website is free whereas for the SDN partners, the URL distribution website is fixed (see 8.1.3).



Figure 3: Options menu

5.4. “Tools” menu

The “**Tools**” menu (Figure 4) allows you to generate the Coupling table for the SeaDataNet Download Manager.

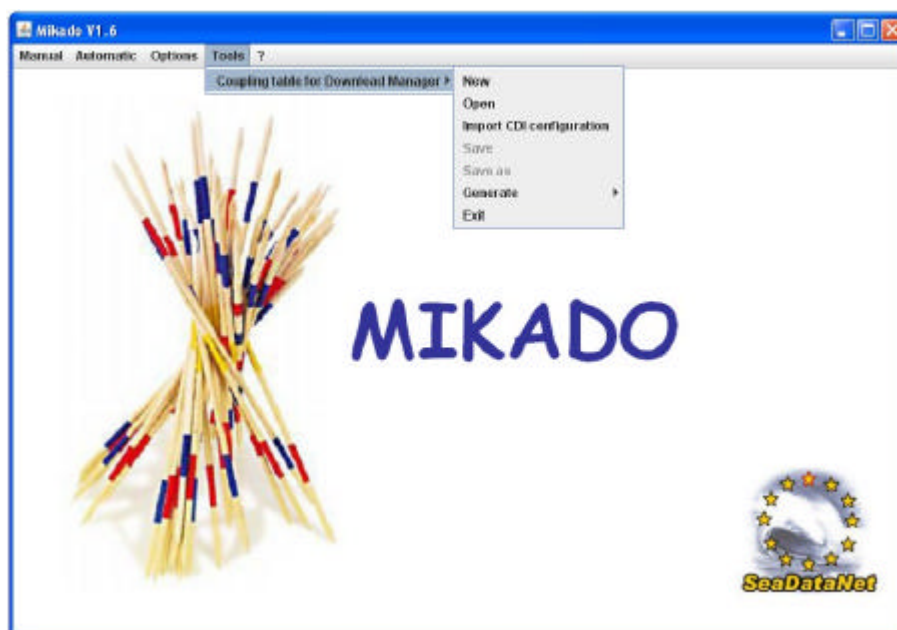


Figure 4: Tools menu

5.5. “?” menu

The “?” menu (Figure 5) provides you information about the MIKADO tool (Version and Date).



Figure 5: About Mikado menu (?)

6. Controlled vocabularies

6.1. Check and import the controlled vocabularies

MIKADO includes functionality to import the controlled vocabularies, EDMERP and EDMO lists for CDI, EDMED, CSR and EDMERP.

The SeaDataNet controlled vocabularies used by MIKADO are available at the following address:
http://seadatanet.maris2.nl/v_bodc_vocab/welcome.aspx

MIKADO uses the following lists:

List code	List Name
C16	SeaDataNet Sea Areas
C77	ICES ROSCOP data types
C174	SeaDataNet CSR ship metadata
C320	ISO countries
C371	Ten-degree Marsden Squares
C381	Ports Gazetteer
L05	SeaDataNet device categories
L021	SeaDataNet Geospatial Feature Types
L031	SeaDataNet Measurement Periodicity Classes
L061	SeaDataNet Platform Classes
L081	SeaDataNet Data Access Restriction Policies
L101	SeaDataNet geographic co-ordinate reference frames
L111	Height and Depth Vertical Co-ordinate Reference Datum
L181	ROSCOP sample quantification units
L231	SeaDataNet metadata entities
L241	SeaDataNet data transport formats
P021	BODC Parameter Discovery Vocabulary
P081	SeaDataNet Parameter Disciplines
EDMO	European marine organisations
EDMERP	European marine projects

In MIKADO, the controlled vocabularies can be downloaded when using the menu **Options > Vocabulary update > Update once now**.

This functionality can be automated: when MIKADO starts, it checks automatically the version of the vocabulary lists and uploads locally the latest version of each list. To do so, use the **Options** main menu and select “On” in the **Vocabulary Update** sub-menu. After clicking on “On” radiobutton, it is not necessary to restart MIKADO: MIKADO checks

directly the version of the vocabulary lists and uploads locally the latest version of each list.



Figure 6: Vocabulary Update Menu

A window shows the progression of the update, where you can see the name of the list which is updated:

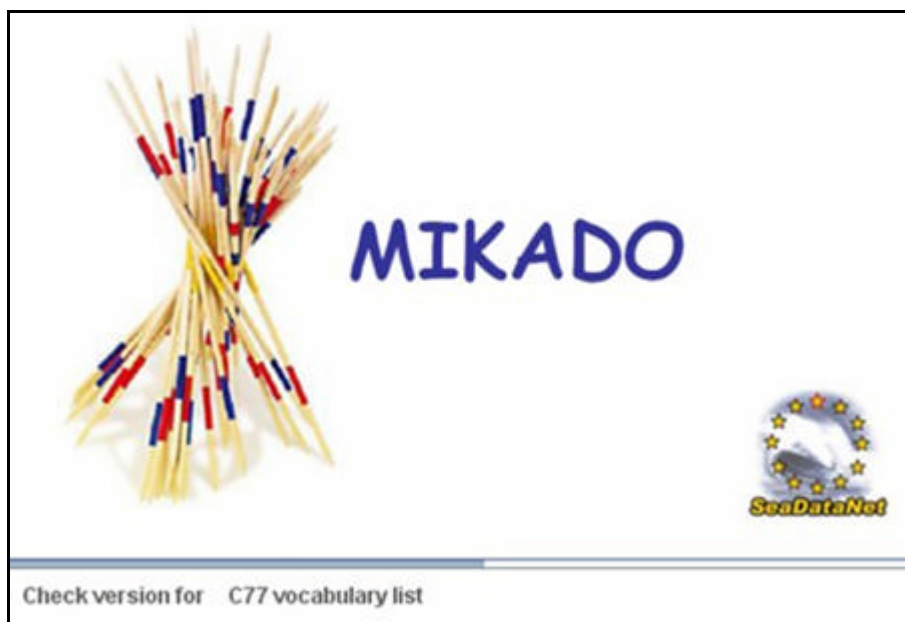


Figure 7: Download of the controlled vocabularies

If there are any network problems, MIKADO detects them and does not check the versions of controlled vocabularies. You will have an error message but it will be possible to work off line.

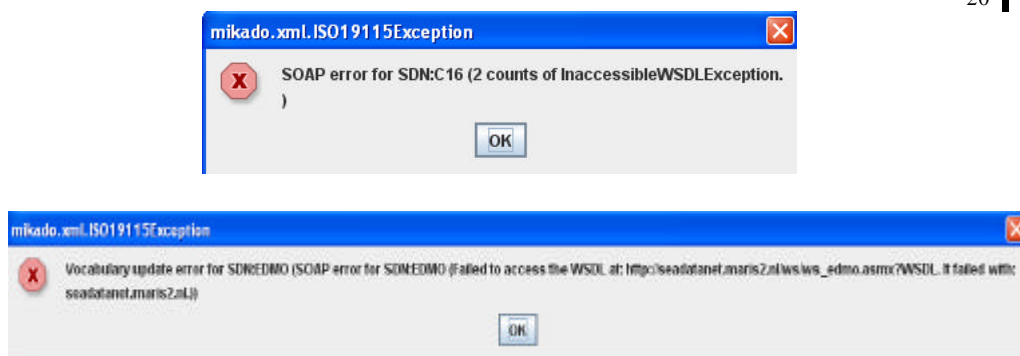


Figure 8: SOAP errors

6.2. Use of the controlled vocabularies

6.2.1. Manual input

The lists of values used by MIKADO Manual version are the SeaDataNet common vocabularies. For each field associated with a list of values, you have to choose the correct value in the corresponding common vocabulary list.

To do so, click on the  icon on the right of the field.

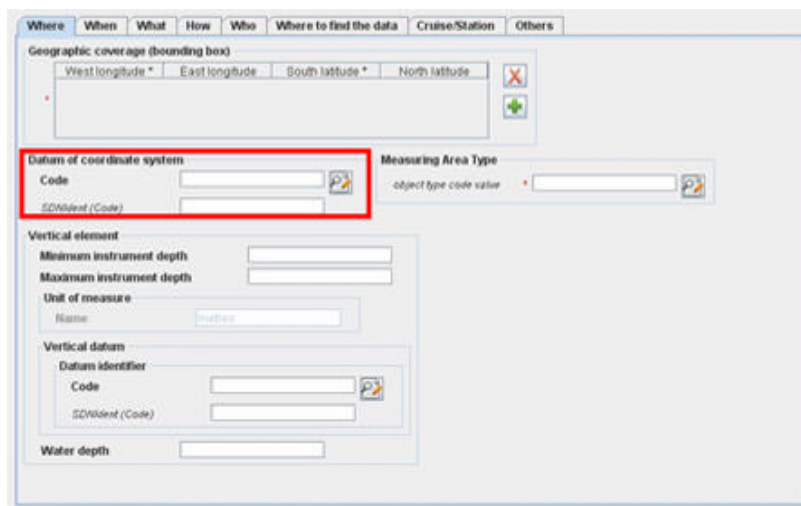


Figure 9: Empty field: Click on the  icon to fulfill it

A new window opens, allowing you to select a value in a list. Select the corresponding value and click on the **OK** button on the bottom of the window.

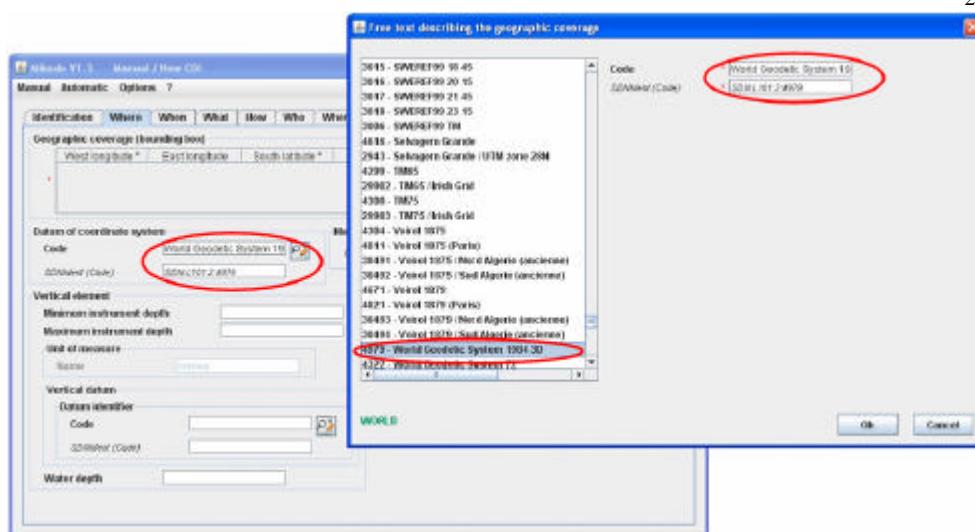


Figure 10: Select the corresponding value in the list

It is possible to set a filter in order to find a specific value in a vocabulary list. To do so, see 7.2.

6.2.2. Automatic generation – Incremental Mapping

6.2.2.1. Manual mapping

MIKADO V1 allows you to create an incremental local mapping between the information of your database and the common vocabularies. This mapping is done during the XML generation:

- Each time that MIKADO does not recognized a value (entrykey or entryterm) which should come from the common vocabulary, it asks the user for mapping.
- MIKADO manages a demand-driven continuous (incremental) extension of a local mapping: mapping of the local database to the common vocabulary.

In the mapping window, you will find in a red field at the top of the window, the value to map with the common vocabulary list. Select the corresponding value in the list and click on OK button at the bottom of the window.

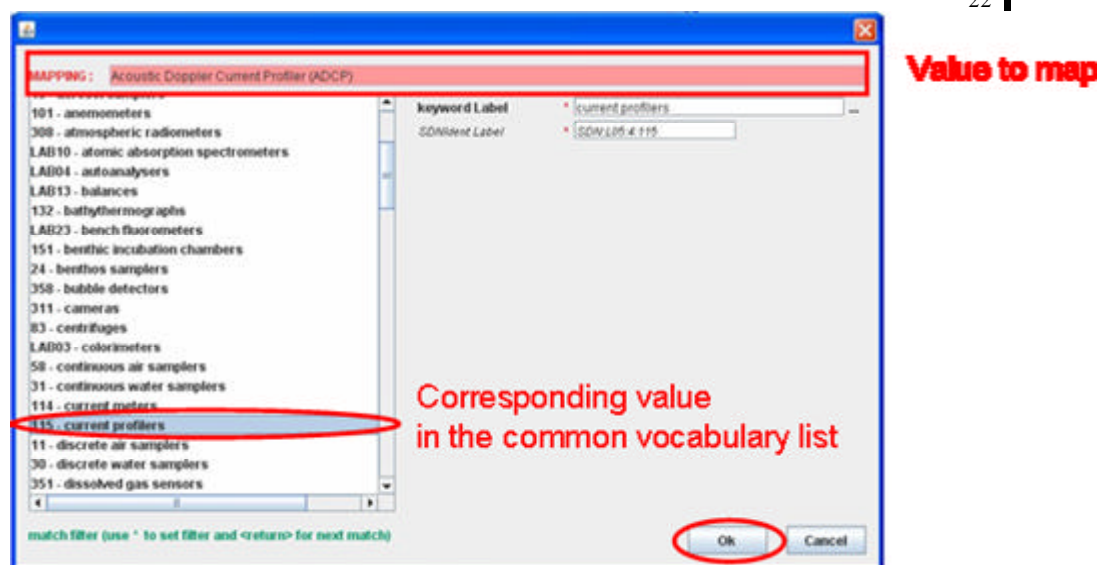


Figure 11: Mapping window for parameters

It is possible to set a filter in order to find a specific value in a vocabulary list. To do so, see 7.2.

6.2.2.2. Automatic mapping

MIKADO V1.5 includes also a functionality to download automatically existing mappings between different vocabulary lists. The available mappings are provided by the BODC Vocabulary Server Mappings Index (C970):

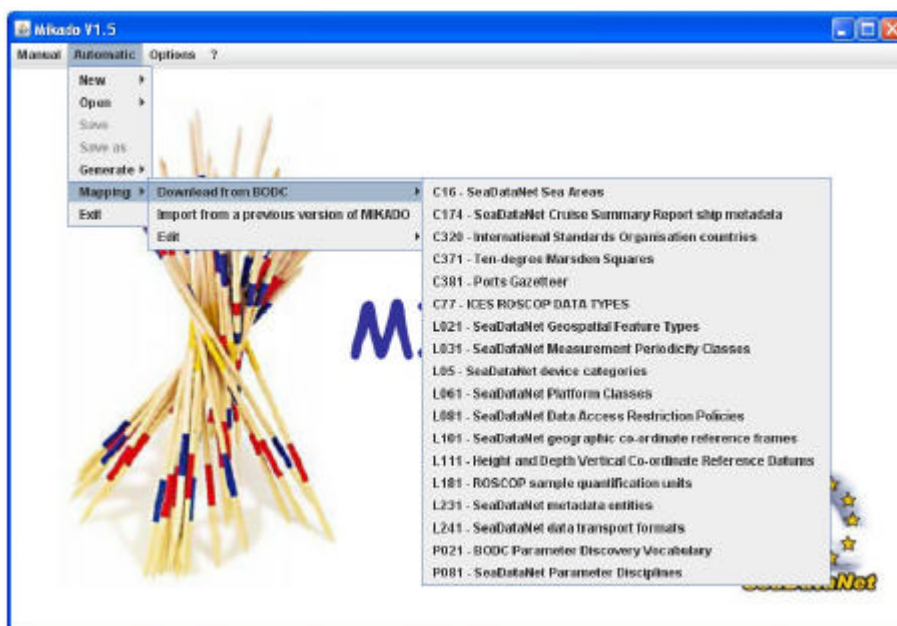
[http://seadatanet.maris2.nl/v_bodc_vocab/search.asp?name=\(C970\)%20Vocabulary+Server+Mappings+Index&l=C970](http://seadatanet.maris2.nl/v_bodc_vocab/search.asp?name=(C970)%20Vocabulary+Server+Mappings+Index&l=C970)

In the available mappings, the SeaDataNet vocabulary lists are mapped with other vocabulary lists using only the exact and narrow matches defined by BODC as follows:

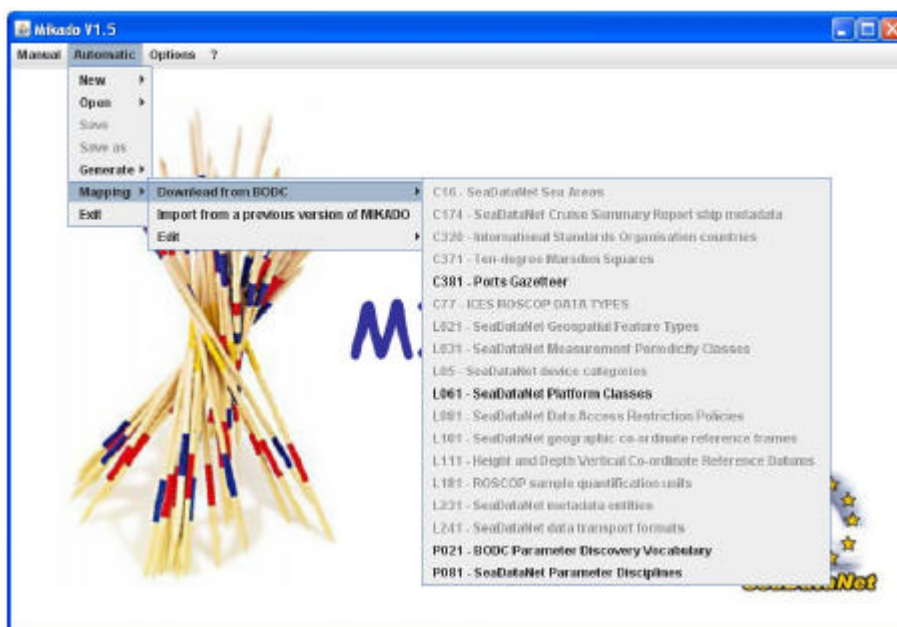
- If MIKADO finds an exact match for a local value in the Seadatanet vocabulary selected list, it maps the local value with this exact match.
- If MIKADO does not find an exact match but finds a narrow match, it maps the local value with the narrow match.
- If MIKADO finds neither exact match nor narrow match, it does not map the local value and then ask the user to define manually the mapping.
- If a local value can be mapped with several SDN values, MIKADO does not map it and ask the user to define manually the mapping.

To use this functionality, follow the different steps:

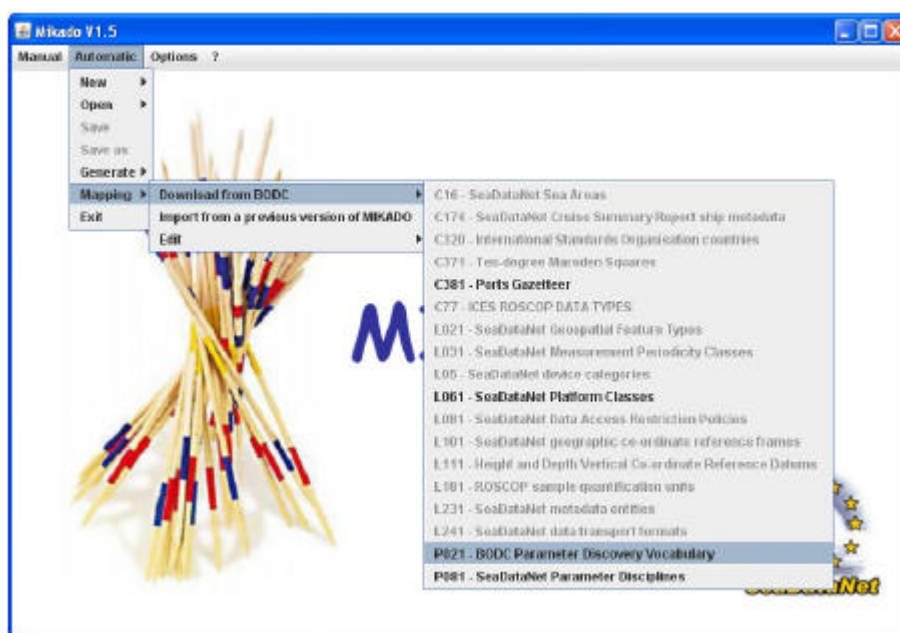
- 1- Select **Mapping > Download from BODC** in the **Automatic** main menu. The available vocabulary lists appear in a dropdown list.



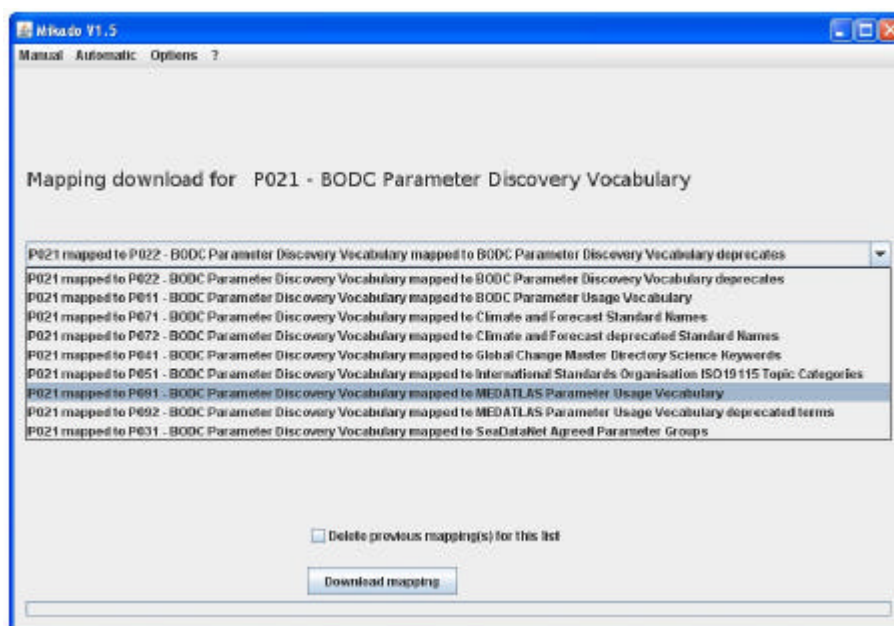
MIKADO checks the available mappings. If no mapping exist for a list, the vocabulary list will appear painted with grey in the dropdown list and the user can not select it.



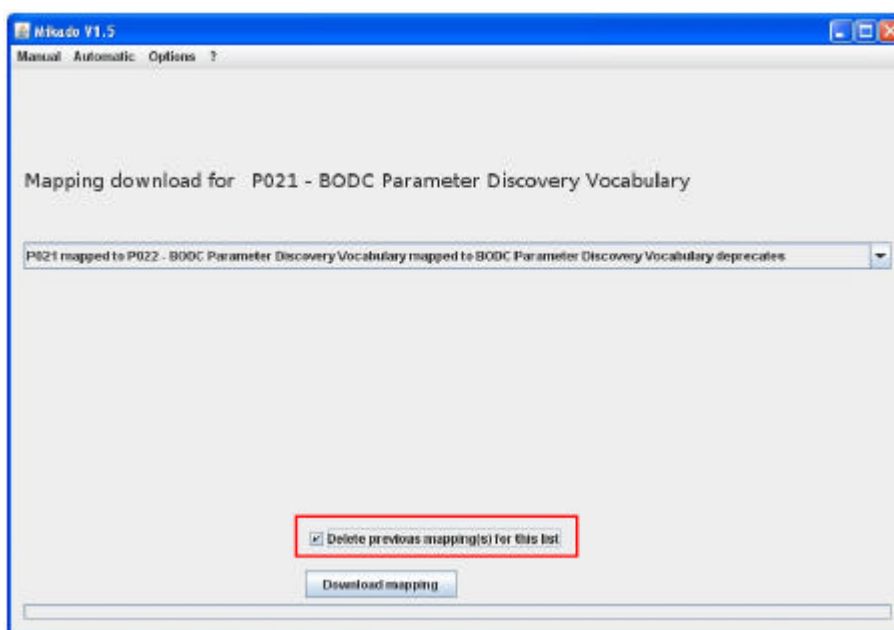
- 2- Select the vocabulary list you want to map automatically with an other one. For example, select the P021 list (BODC Parameter Discovery Vocabulary)



- 3- Select the mapping to upload in MIKADO. For example, select the mapping between the P021 list and the P091 list if P021 corresponds to your local data.

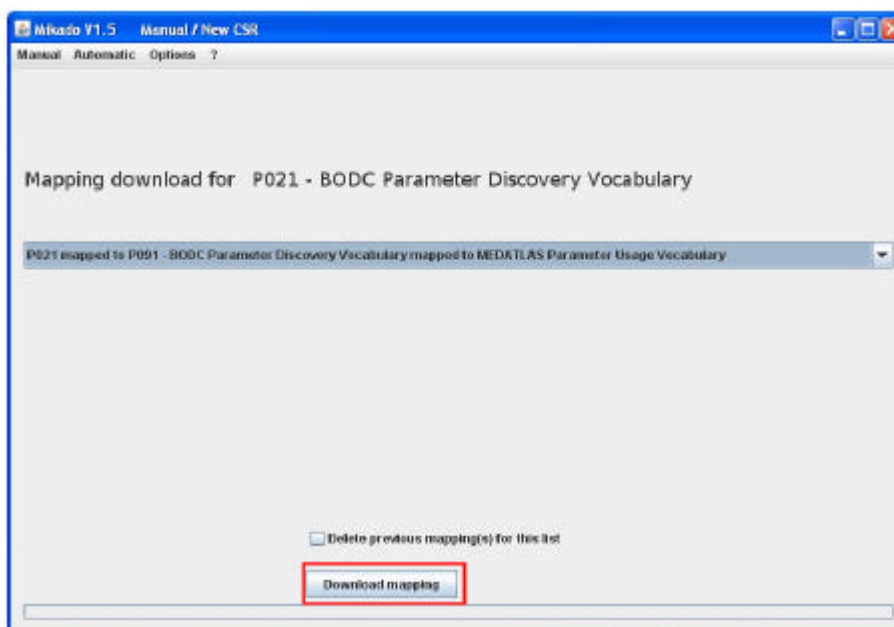


- 4- Tick the check box if you want to delete the previous mappings (manual or automatic) of the selected list.

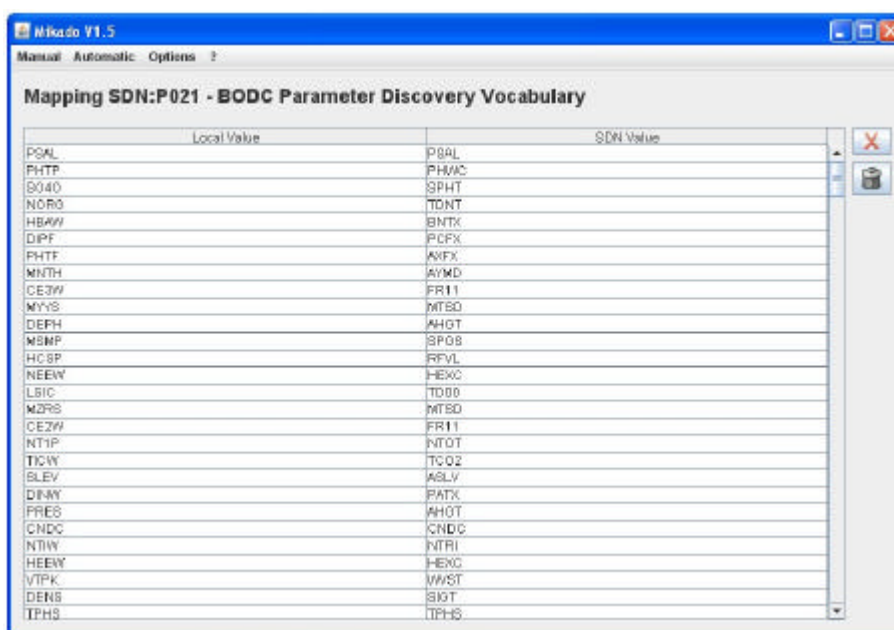


Important: The manual and automatic mappings are saved in the same file. If you choose to delete the previous mappings, you can lose a previous manual mapping and you will have to make it again if you want to use it later. So, be careful using the check box!

- 5- Click on the **Download mapping** button. A progress bar indicates the upload progress.



- 6- It is possible to edit and to check the uploaded mapping by selecting **Mapping > Edit** in the **Automatic** main menu.



Local Value	SDN Value
PSAL	PSAL
PHTP	PHVC
S040	SPHT
NDRO	TDNT
HBAW	BNTX
DIPF	PCFX
PHTF	AVFX
WNTH	AVMD
CE3W	FR11
MYYS	MTSD
DEPH	AHGT
MSMP	SP08
HCSP	RFVL
NEEW	HEXC
LSIC	TDB0
MZPS	MTSD
CEZW	FR11
NT1P	NTOT
TICV	TC02
SLEV	ASLV
DINW	PATX
PRES	AHGT
CNDC	CNDC
NTIW	NTRI
HEEW	HEXC
VTPK	VWST
DENS	SKOT
TPHS	TPHS

6.2.2.3. Edit the mapping

To edit the incremental mapping, select **Mapping > Edit** in the **Automatic** main menu and choose a vocabulary list. The different vocabulary lists appear in a dropdown list. If the mapping does not exist, the vocabulary list appears painted with grey in the dropdown list and the user can not select it.

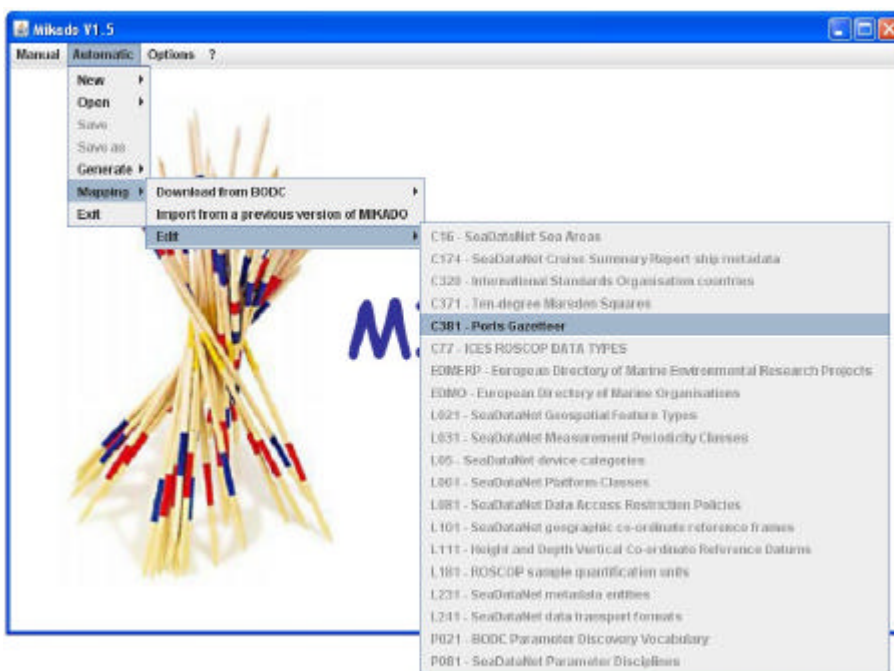





Figure 12: Edit local mapping

For each vocabulary list, you can access the mapping table and you can update it:

- modify the first column of the table (local value) by double clicking on the field you want to update,
- delete a row by selecting the row and by clicking on the  button,
- delete all the rows by clicking on the  button.

Important: Do not forget to press on “Return” when you update a field in the mapping table.

Once the mapping table is updated, you have to save it by clicking on the  button.

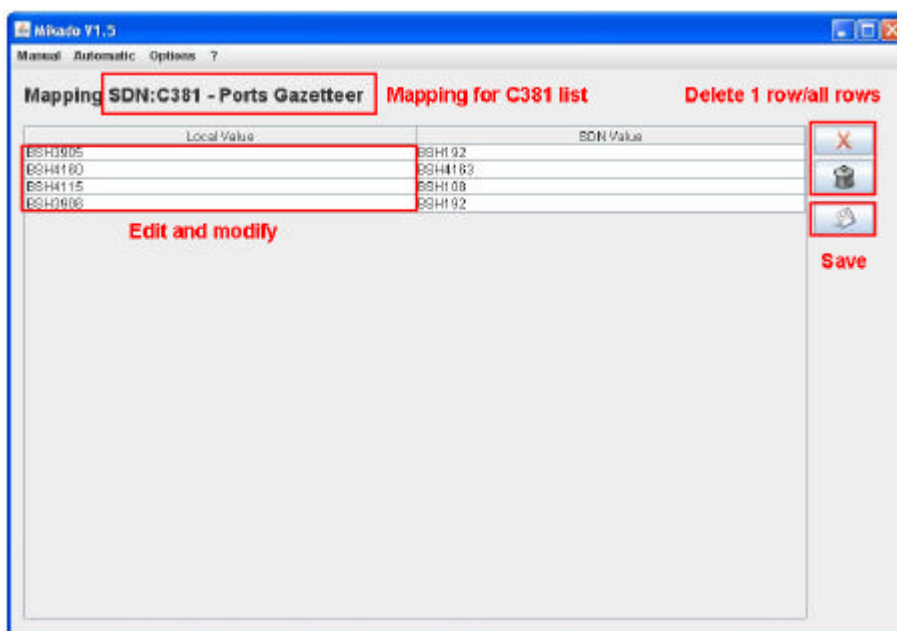


Figure 13: Update local mapping – C381 list

6.2.2.4. Import the mapping

For each release of MIKADO, the local mapping cannot be delivered with the software because it is a local mapping depending on each local database. So, it is possible to import the mapping already done with a previous release of MIKADO.

To do so, select **Mapping > Import from a previous version of MIKADO** in the **Automatic** main menu:

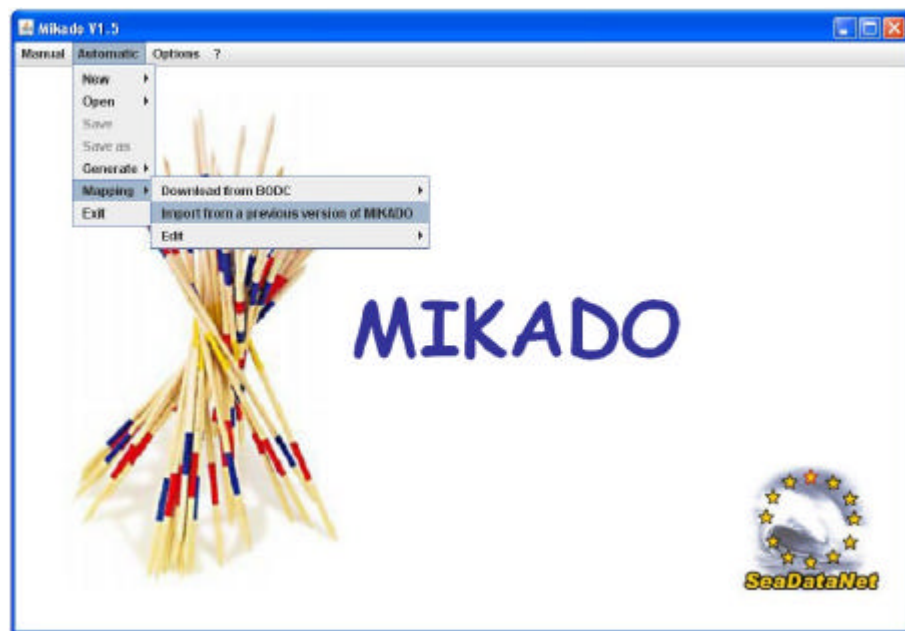


Figure 14: Import local mapping

This opens a window where you have to browse your directories to tell MIKADO where the path of the previous installation of MIKADO was:

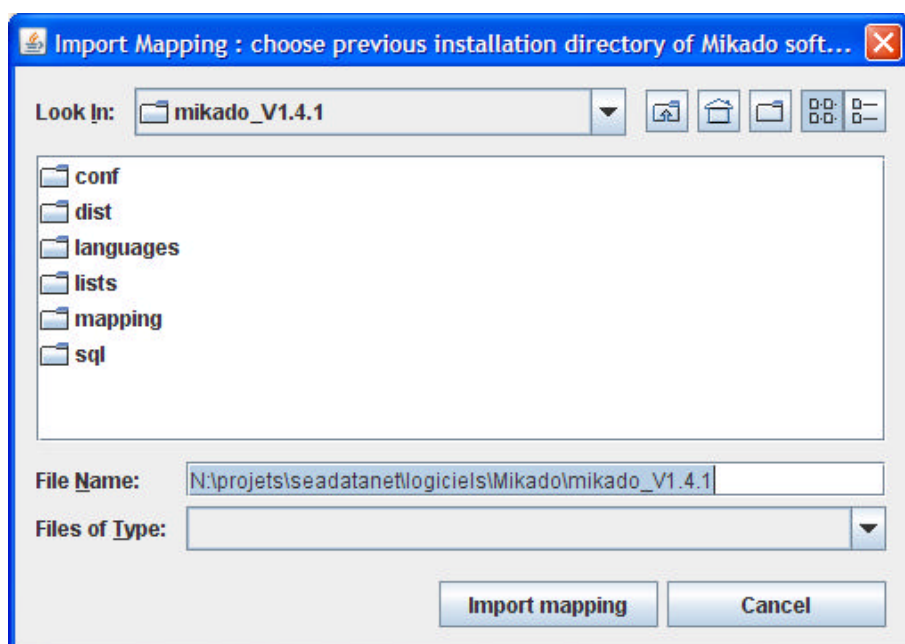


Figure 15: Select the path of the previous installation of MIKADO

Then click on “Import mapping” button and you will get all the mapping to your local database that you have already done.

7. Common functionalities

7.1. Tables

7.1.1. Free text table

The following figure shows examples of free text tables that you will find in the MIKADO Manual interface:

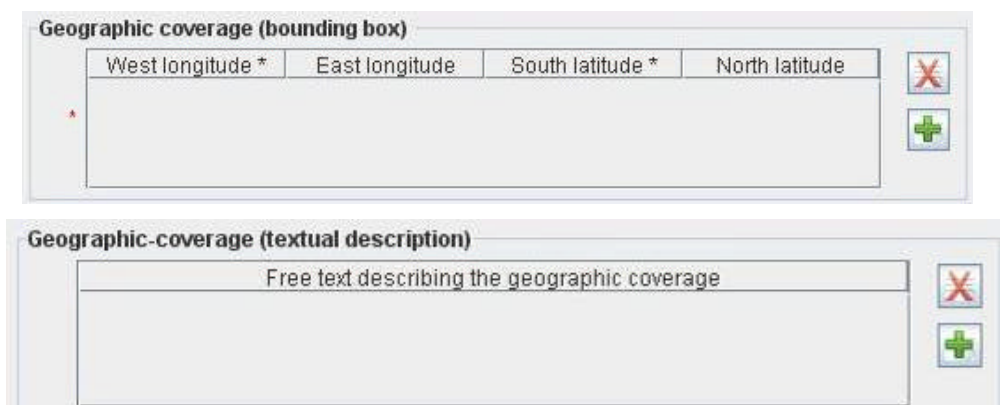

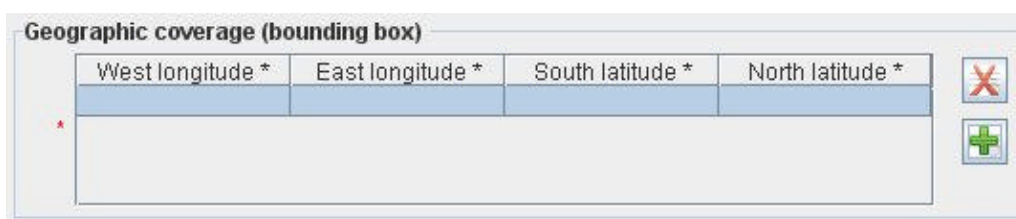


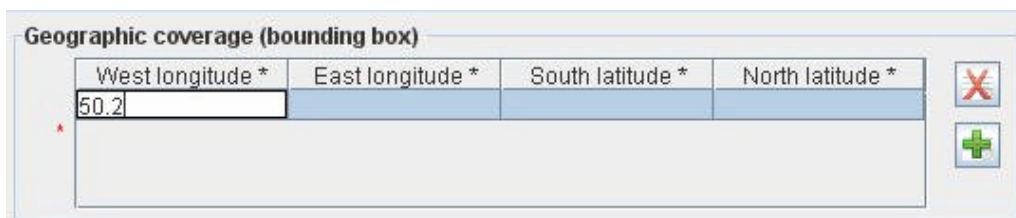
Figure 16: Free text table

7.1.1.1. Add a row

To add information in a free text table, click on the  button. A row will be added to the table. The new row appears in blue.



To complete the added row, double click on the row or on the field you want to complete. The field to complete appears in white:



Important: To validate your update, do not forget to press on “Return”. The updated field appears in blue.

Geographic coverage (bounding box)

West longitude *	East longitude *	South latitude *	North latitude *
50.2			

✖ +

7.1.1.2. Delete a row

To delete a row in a table, select the row to delete by clicking on it and click on the ✖ button. The row will be deleted.

7.1.1.3. Update a row/a field

To update a row/field, double click on it. The selected row/field will appear in white. Update it.

Important: To validate your update, do not forget to press on “Return”.
The updated field appears in blue.

7.1.2. Common vocabularies content table

The following figure shows you examples of tables containing values from a vocabulary list:

Projects	SDNIdent

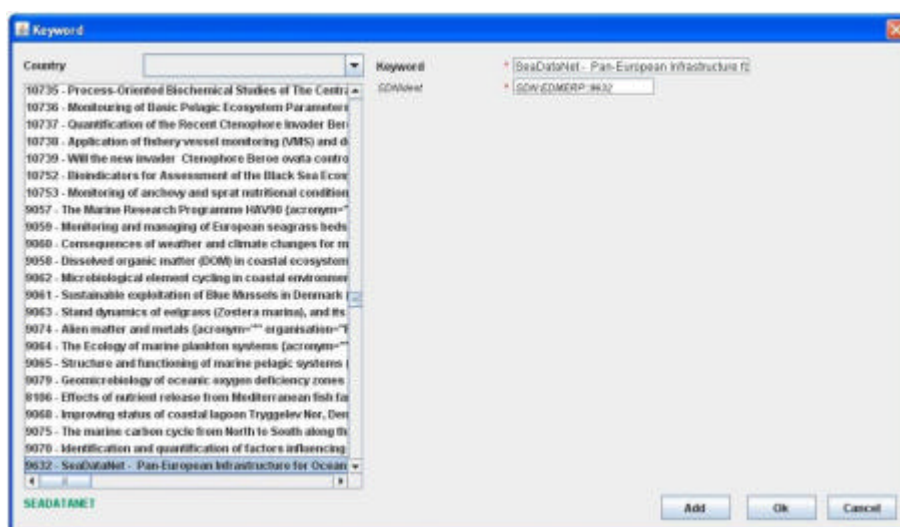
✖ +

🔍 ✎




7.1.2.1. Add a row/several rows

To add information in this kind of tables, click on the + button. A window which allows you to select a value in a vocabulary list opens.


- If you want to add only one value into the table, select the value and click on the **Ok** button.
- If you want to add several values into the table, select the value and click on the **Add** button and do it again to the last value. After selecting the last value, click on the **Ok** button.




The selected value(s) will appear in the table:

Projects	SDNIdent	
SeaDataNet - Pan-European Infrastru...	SDN:EDMERP::9632	 
		

7.1.2.2. Delete a row

To delete a row in a table, select the row to delete by clicking on it and click on the  button. The row will be deleted.

7.1.2.3. Update a row

To update a row in a table, select the row to update by clicking on it and click on the  button. A window which allows you to select a value in a vocabulary list opens. Select the value and click on the OK button.

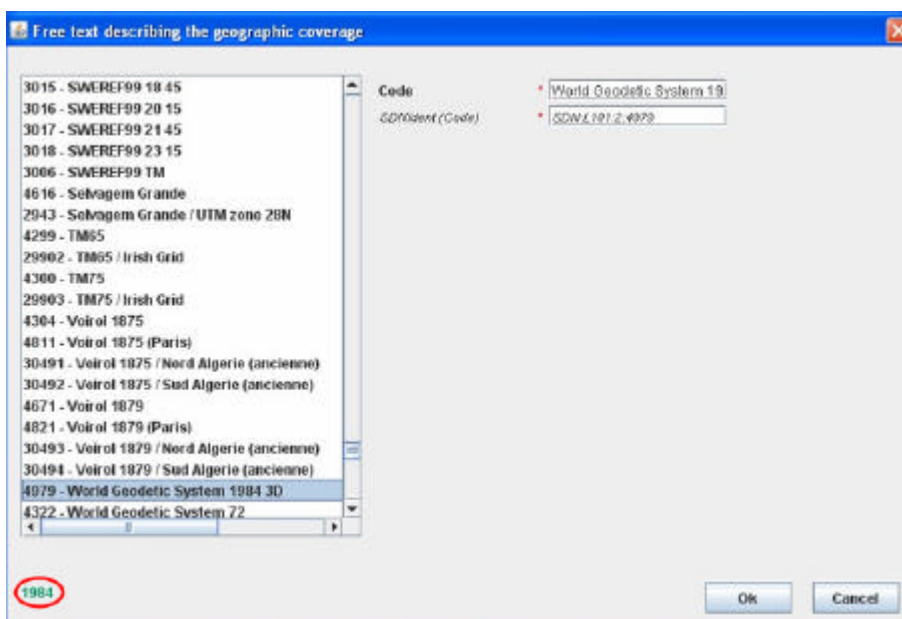
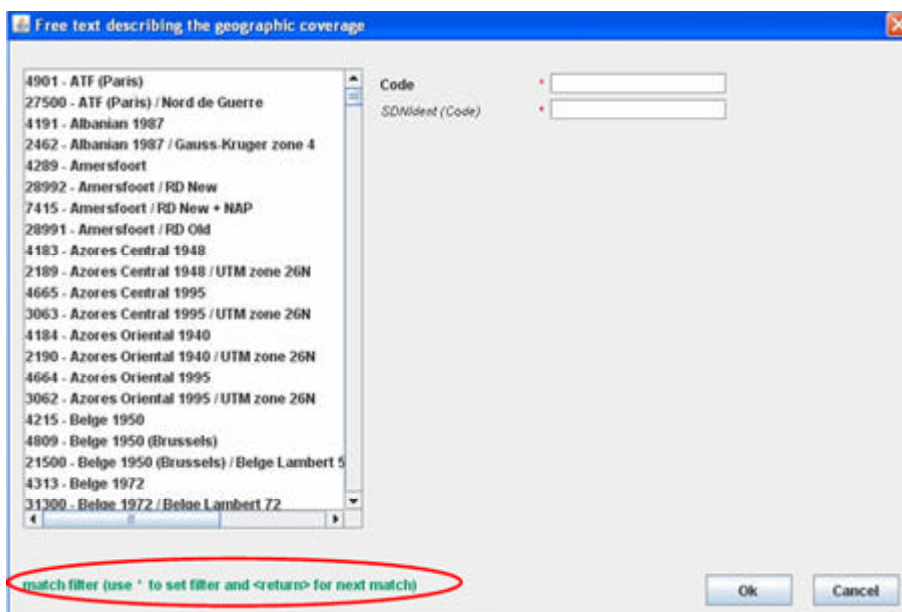
7.2. Vocabulary list

7.2.1. Find a specific value in a vocabulary list

If you want to find a specific value in a vocabulary list, it is possible to match a filter:

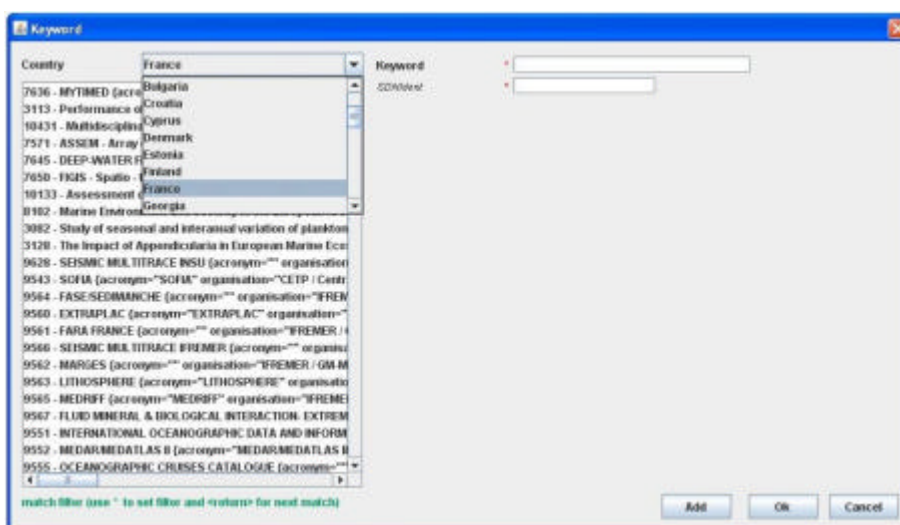
- Select the list by clicking on any value,
- Use * to set filter. For example, if you want to find “World Geodetic System 1984” in the L101 vocabulary list, type ***1984**. The used filter appears in green at the left bottom of the window.

- Press “Return” to go to the next match.



7.2.2. Find EDMERP or EDMO values for a particular country

MIKADO allows to find the EDMERP or EDMO values for a particular country in the EDMERP or EDMO lists. To do so, select the country in the dropdown list as shown in the following figure:



The EDMERP (respectively EDMO) list will be shortened and will contain only the projects (respectively organizations) of the selected country.

After that, it is possible to match an other filter to find a specific value in the EDMERP or EDMO lists (see 7.2.1).

7.3. Common screen characteristics for MIKADO manual input

7.3.1. Mandatory fields

In the different interfaces, the mandatory fields are highlighted with a red star:

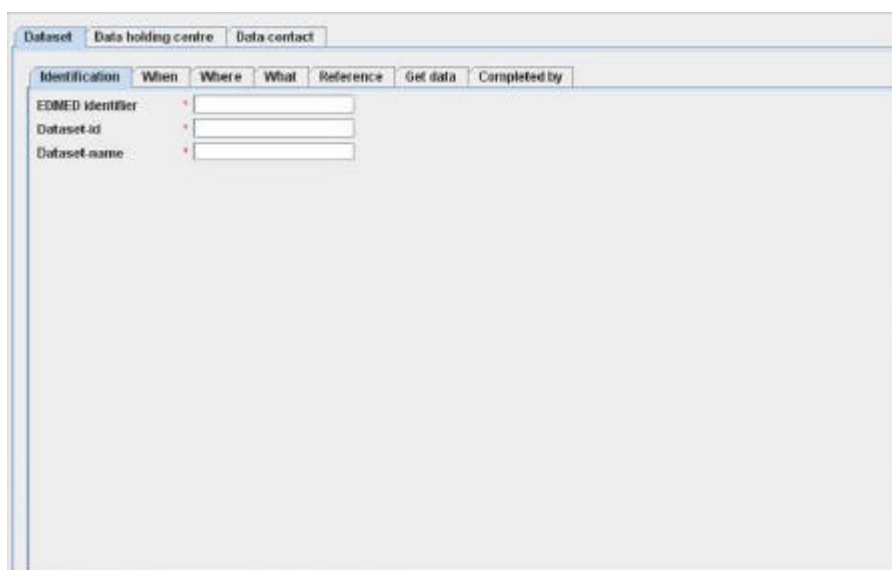
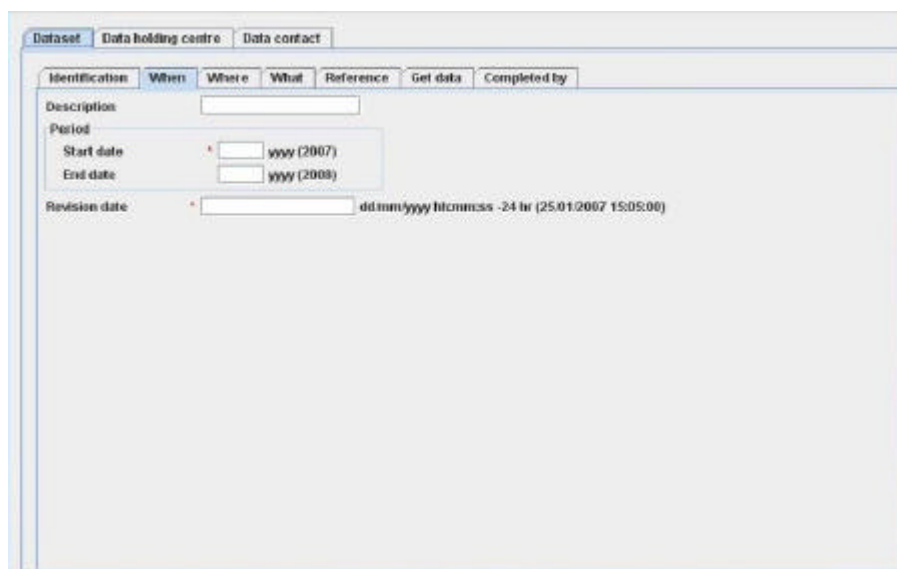


Figure 17: Mandatory fields highlighted with a red star

7.3.2. Specific formats

7.3.2.1. MIKADO manual

Specific formats, like date, are given as comment on the windows when necessary:



The screenshot shows a web-based data entry interface with tabs for 'Dataset', 'Data holding centre', and 'Data contact'. The 'Dataset' tab is active, showing sub-tabs for 'Identification', 'When', 'Where', 'What', 'Reference', 'Get data', and 'Completed by'. The 'When' sub-tab is selected, displaying a 'Period' section with 'Start date' and 'End date' fields. The 'Start date' field contains 'yyy (2007)' and the 'End date' field contains 'yyyy (2008)'. Below these, the 'Revision date' field shows a date in ISO 19115 format: 'dd.mm/yyyyThh:mm:ss -24 hr (25.01/2007 15:05:00)'.

Figure 18: Specific formats

7.3.2.2. MIKADO automatic

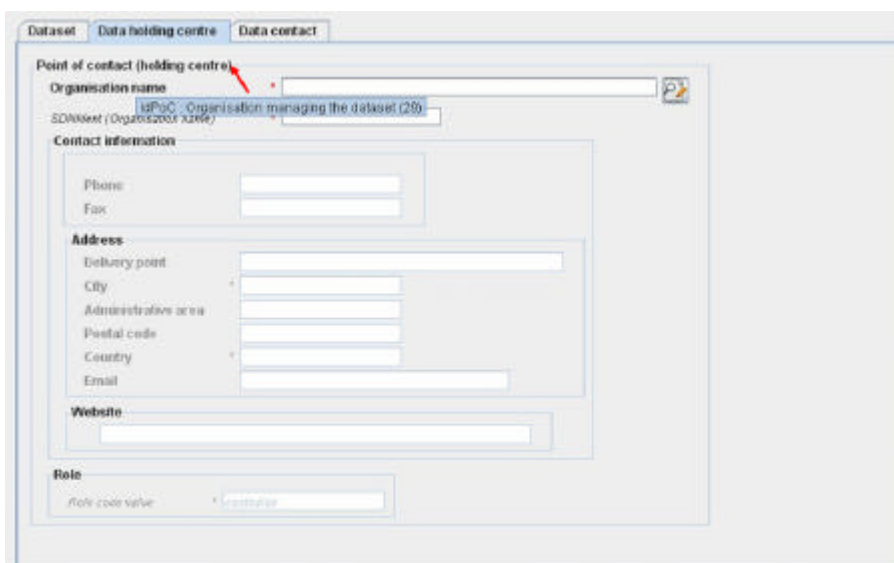
The dates must be extracted from the database (or Excel file) at ISO 19115 format: yyyy-mm-ddThh:mm:ss (time is not mandatory).

7.3.3. Tooltips

MIKADO provides two kinds of tooltips:

- Title tool tip which indicates the XML field associated with the selected title and its definition.
- Field tool tip which gives supplementary information in order to help to fulfill the field;

To access tool tips, put the mouse cursor over an item (title or empty field), without clicking it, and a small box will appear with supplementary information regarding the chosen item.



Dataset Data holding centre Data contact

Point of contact (holding centre)

Organisation name *

SDMNet (Organisation managing the dataset (29))

Contact information

Phone *

Fax *

Address

Delivery point *

City *

Administrative area *

Postal code *

Country *

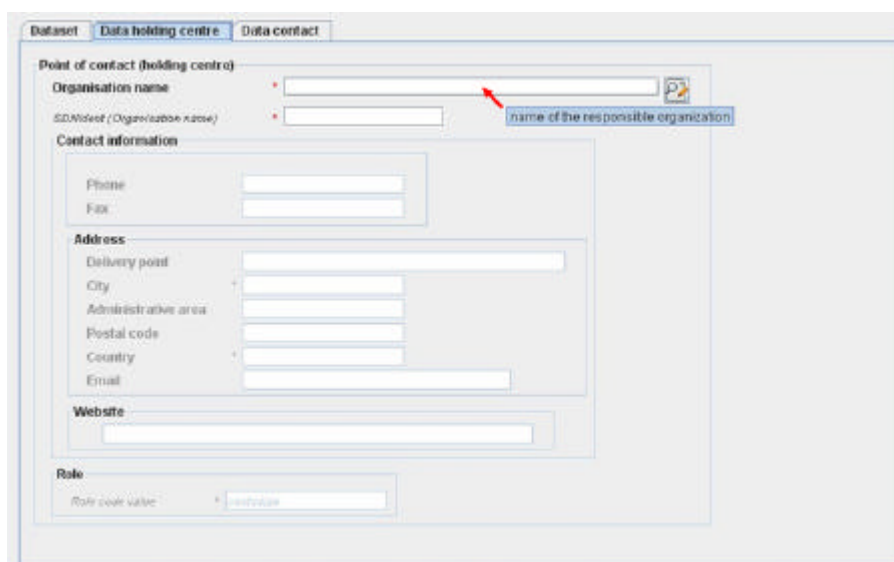
Email *

Website *

Role

Role code value *

Figure 19: Title tool tip



Dataset Data holding centre Data contact

Point of contact (holding centre)

Organisation name *

SDMNet (Organisation managing the dataset (29))

Contact information

Phone *

Fax *

Address

Delivery point *

City *

Administrative area *

Postal code *

Country *

Email *

Website *

Role

Role code value *

Figure 20: Field tool tip

8. Manual entries of EDMED, CSR, CDI and EDMERP descriptions

The manual version of the software is well adapted if there is a small amount of EDMED, CSR, CDI or EDMERP entries.

The input screens have been updated to be compliant with the new XML schemas and the lists of values used by MIKADO Manual are the SeaDataNet common vocabularies (see 6).

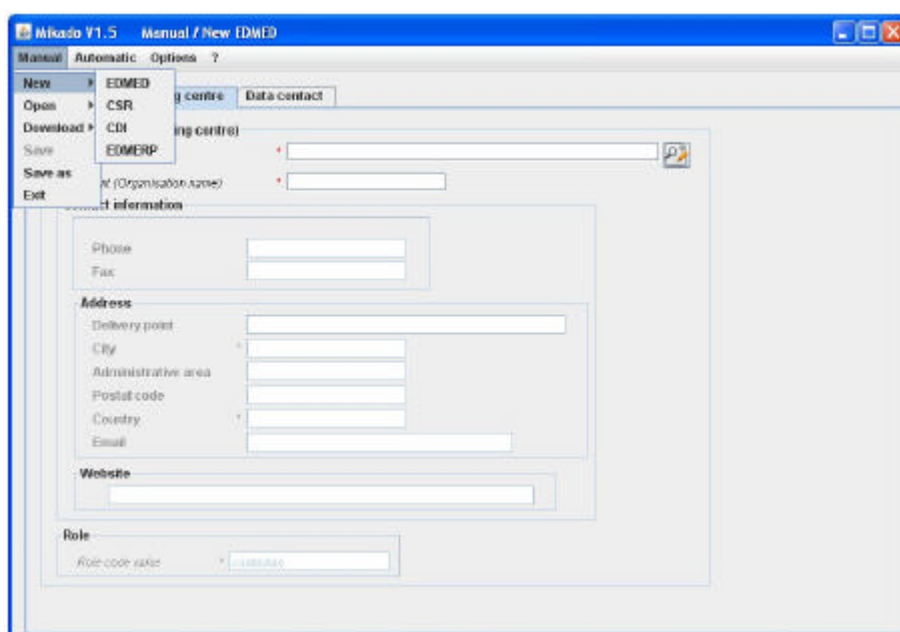


Figure 21: Manual menu

8.1. Create a new XML file

To create a new XML file, select **New** in the **Manual** main menu and choose EDMED, CSR, CDI or EDMERP.

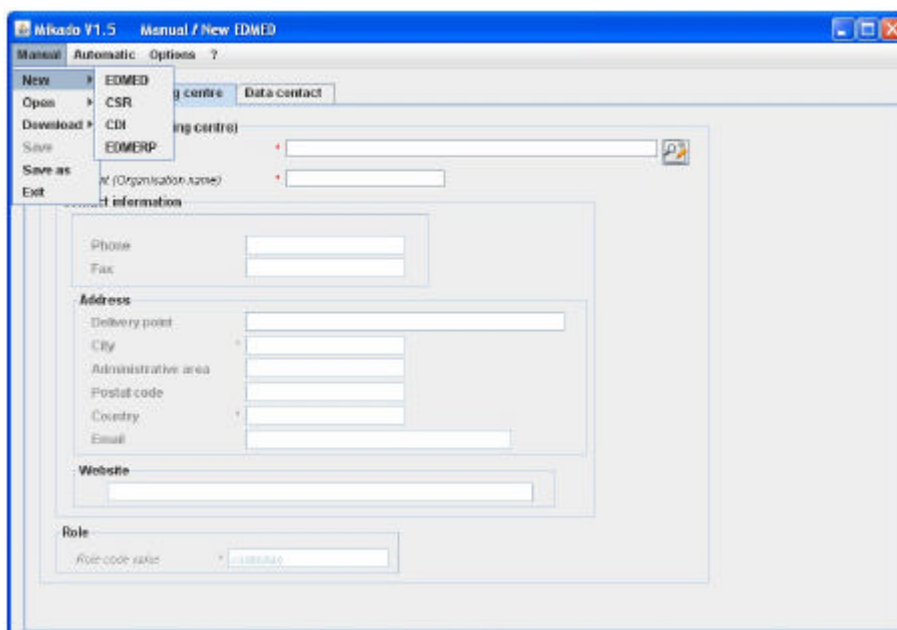


Figure 22: Create a new XML file with MIKADO

8.1.1. Manual EDMED input

There are 3 main tabs for the EDMED information: 'Dataset', 'Data holding centre' and 'Data contact'

The first tab gives the dataset description (Figure 23 to Figure 29) and is divided into 7 tabs which enable to enter information about:

- Identification of the dataset which is very important. **The ID must be a UNIQUE LOCAL identifier. Because the LOCAL_ID is vital for the updating process, it is through this LOCAL_ID than the central system will be able to recognise whether new contributions are updates of existing records or really new records.**
- When and where the dataset was collected.
- What are the data in the dataset (data themes, parameters, instruments, summary, related project).
- References on the data set (bibliography, web site).
- Where and how to get the dataset.
- Responsible of the dataset description.

.

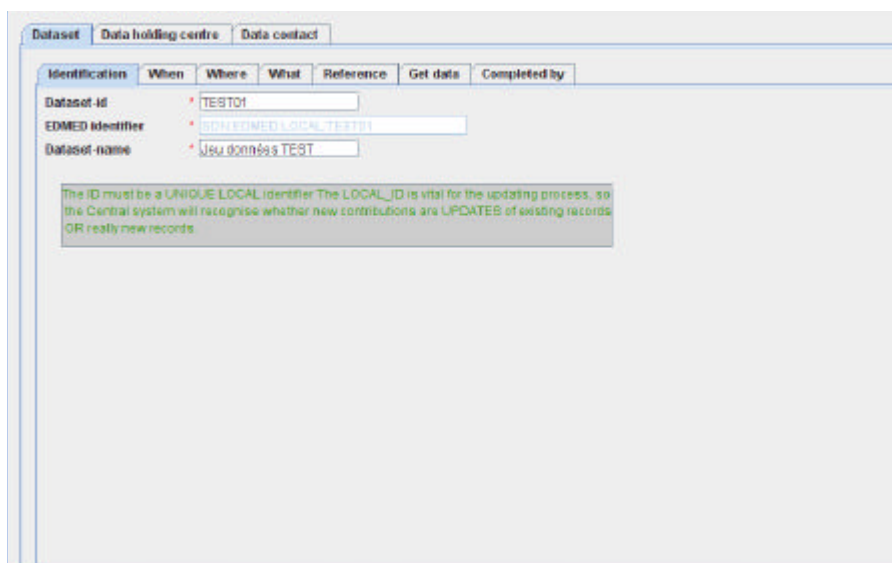


Figure 23: Dataset information window – ‘Identification’

The identification of the dataset is the **unique** LOCAL dataset ID and the dataset name. Both fields are mandatory.

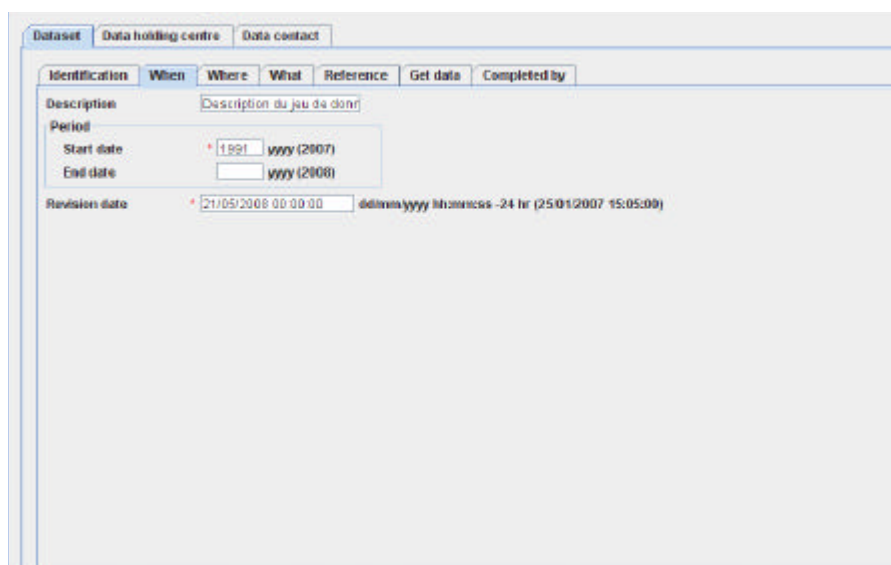
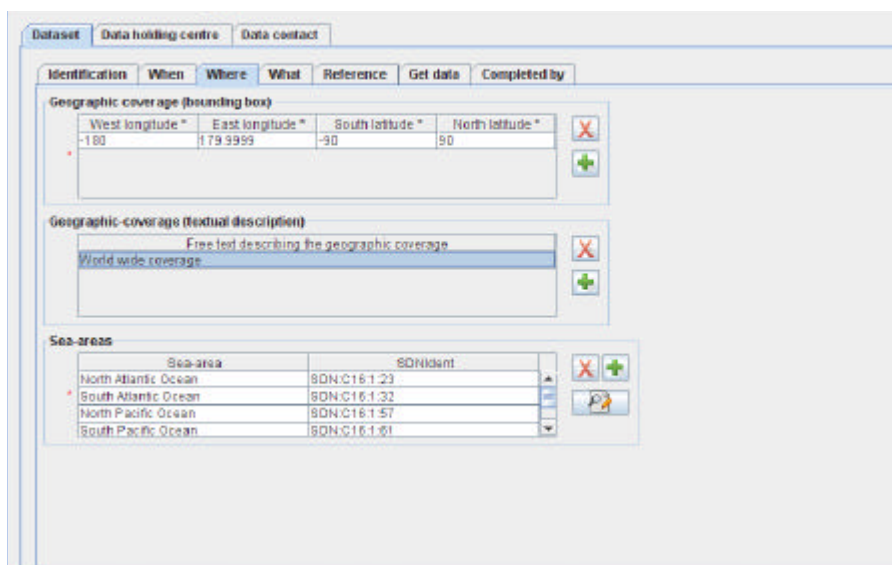


Figure 24: Dataset information – ‘When’



Dataset | **Data holding centre** | **Data contact**

Identification | **When** | **Where** | **What** | Reference | Get data | Completed by

Geographic coverage (bounding box)

West longitude *	East longitude *	South latitude *	North latitude *
-180	179.9999	-90	90

Geographic coverage (textual description)

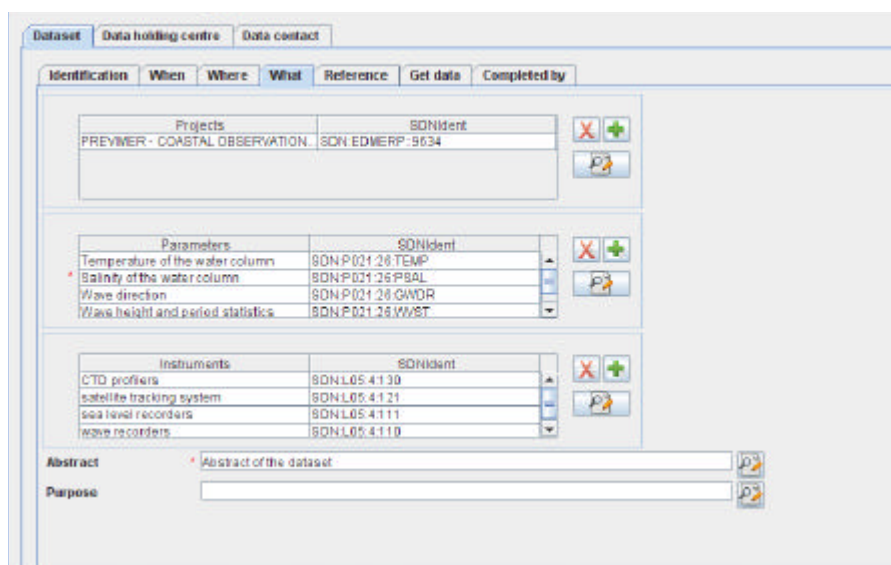
Free text describing the geographic coverage

World wide coverage

Sea areas

Sea area	SDNident
North Atlantic Ocean	8DN.C16.1.23
South Atlantic Ocean	8DN.C16.1.32
North Pacific Ocean	8DN.C16.1.57
South Pacific Ocean	8DN.C16.1.61

Figure 25: Dataset information window – ‘Where’



Dataset | **Data holding centre** | **Data contact**

Identification | **When** | **Where** | **What** | Reference | Get data | Completed by

Projects

Projects	SDNident
PREVIMER - COASTAL OBSERVATION	SDN.EDMERP.9634

Parameters

Parameters	SDNident
Temperature of the water column	8DN.P021.26.TEMP
Salinity of the water column	8DN.P021.26.PSAL
Wave direction	8DN.P021.26.GWDR
Wave height and period statistics	8DN.P021.26.WWST

Instruments

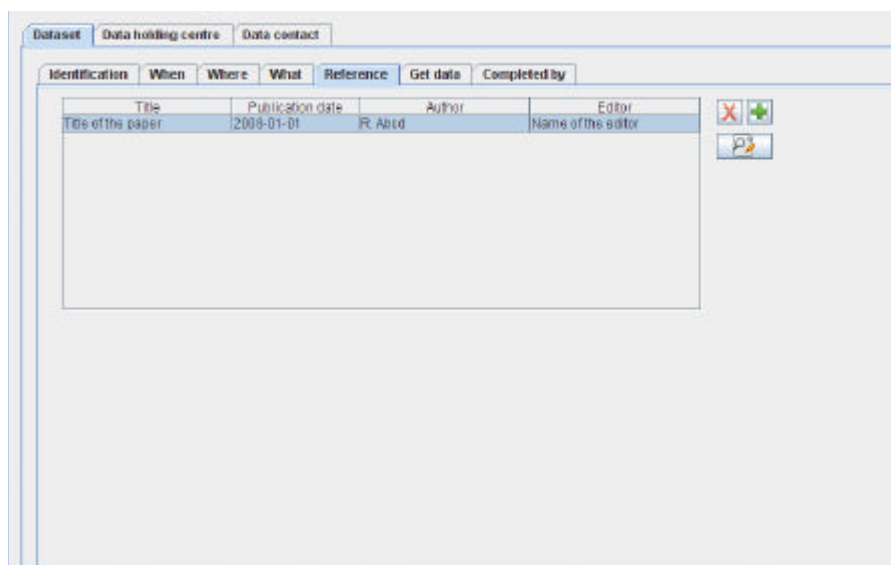
Instruments	SDNident
CTD profilers	8DN.L05.4.1.30
satellite tracking system	8DN.L05.4.1.21
sea level recorders	8DN.L05.4.1.11
wave recorders	8DN.L05.4.1.10

Abstract

Abstract of the dataset

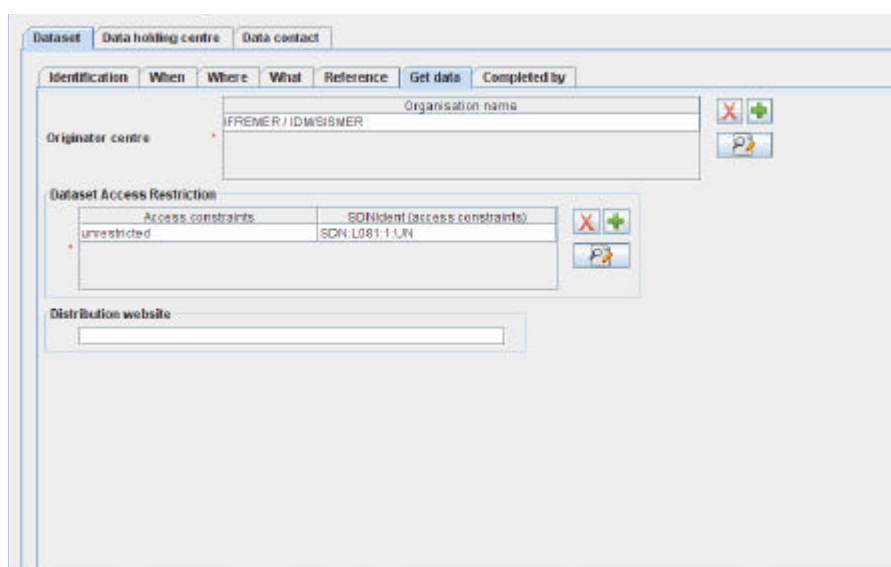
Purpose

Figure 26: Dataset information window – ‘What’



Title	Publication date	Author	Editor
Title of the paper	2009-01-01	R. Aled	Name of the editor

Figure 27: Dataset information window – ‘Reference’

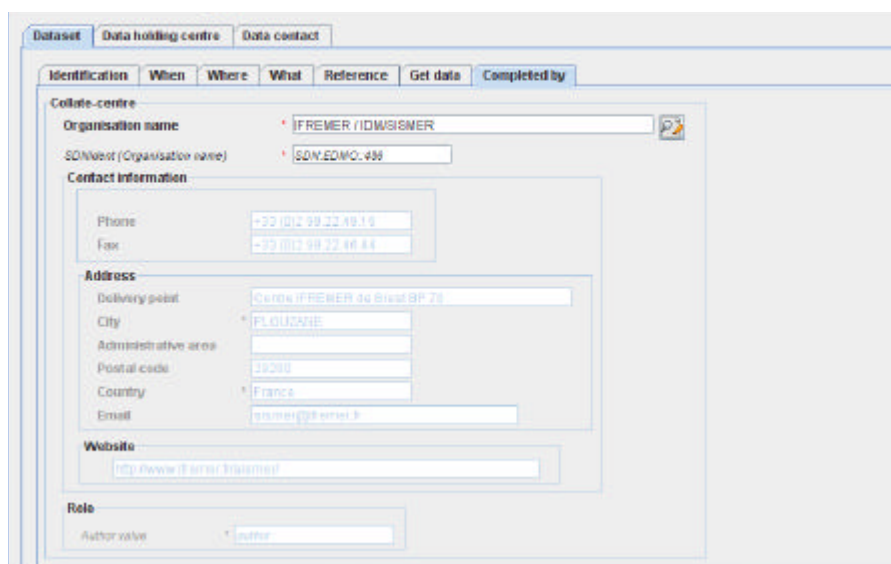


Organisation name: IFREMER / IDWISMER

Access constraints	SDNident (access constraints)
unrestricted	SDN.L081.1.UN

Distribution website:

Figure 28: Dataset information window – ‘Get data’



Contact centre: IFREMER / IDWISMER

SDNident (Organisation name): SDN.EDMO.498

Contact information:

Phone: +33 (0)2 99 22 49 19
Fax: +33 (0)2 99 22 49 44

Address:

Delivery point: C/da IFREMER de Brest BP 21
City: FLOUANGE
Administrative area:
Postal code: 29200
Country: France
Email: ismmer@brest.fr

Website: http://www.ifremer.fr/brest/

Role: Author name: author

Figure 29: Dataset information window – 'Completed by'

The second tab describes the data holding centre:

Figure 30: Data Holding centre information window

The last tab identifies the contact point within the data holding centre (defined in the previous window) able to deal with requests concerning the data sets held by the centre:

Figure 31: Data Contact information window

Here the phone and fax which are related to the organisation name (retrieved from EDMO catalogue) may be modified to be related to the identified person, point of contact for the dataset.

Once all the information related to the EDMED dataset has been fulfilled, the xml file will be created by selecting **Save as** in the **Manual** main menu. The created XML file has a “.xml” extension.

8.1.2. Manual CSR input

There are 5 main input tabs for the CSR information, which are directly inspired by the original ROSCOP form:

- Identification of the cruise which is **very important** and the ID must be a **UNIQUE LOCAL** identifier. Because the **LOCAL_ID** is vital for the updating process, it is through this **LOCAL_ID** than the central system will be able to recognise whether new contributions are **updates** of existing records or really **new records**.
- General information about the cruise.
- Information about the moorings.
- Information about the measurements done during the cruise.
- Information about the geographical areas of the cruise.

8.1.2.1. Identification of the cruise

The identification of the cruise is the **unique** LOCAL cruise ID and the cruise name. Both fields are mandatory.



Figure 32: Unique identification of a cruise

8.1.2.2. General information about the cruise

This window is divided into 6 tabs (Figure 33 to Figure 38) which enable to input information about:

- the cruise (identification, begin and end dates, ports of departure end return),
- the objectives of the cruise : purpose and nature of the cruise as to provide the context in which the data were collected and the projects related to the cruise,

- the ship : ship name and ship type (research, opportunity, naval survey vessel),
- the parameters measured during the cruise and the instruments used for these measurements,
- the responsible party : person(s) in charge of the scientific work (chief scientist) and laboratory responsible for coordinating the scientific planning of the cruise,
- the information about the collate centre.

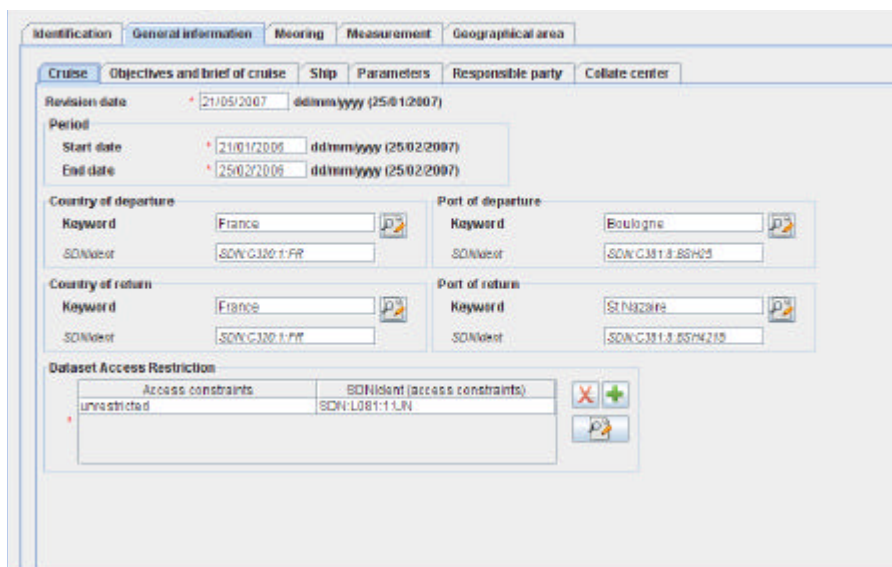


Figure 33: General information window – Cruise

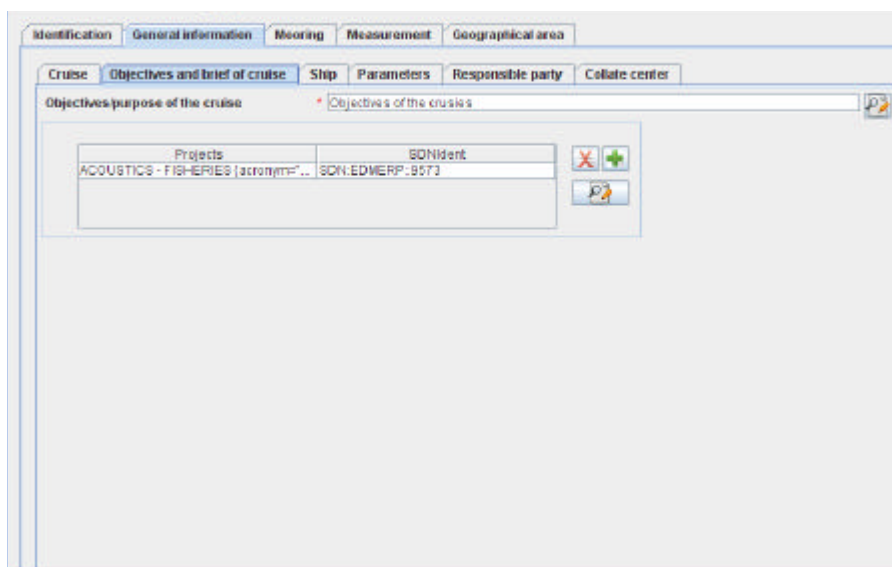
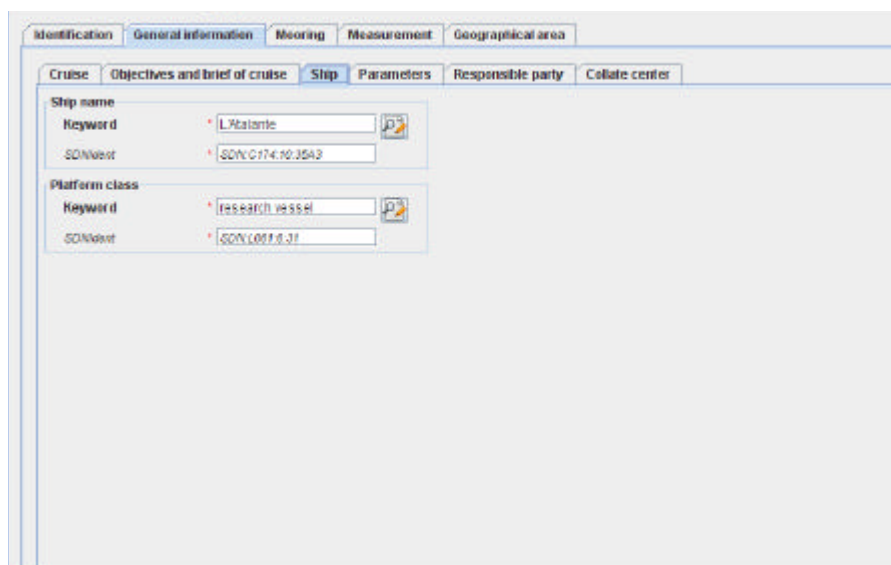


Figure 34: General information window – Objectives and brief of Cruise



Identification General information Mooring Measurement Geographical area

Cruise Objectives and brief of cruise Ship Parameters Responsible party Collate center

Ship name

Keyword * L'Atalante

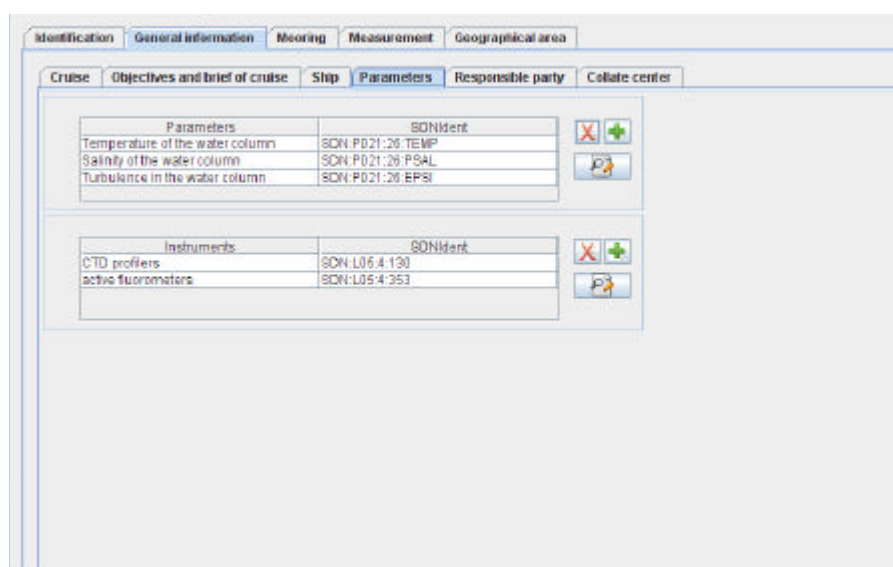
SONIdent * SON C174:10:35A3

Platform class

Keyword * research vessel

SONIdent * SON L061:6:37

Figure 35: General information window – Ship



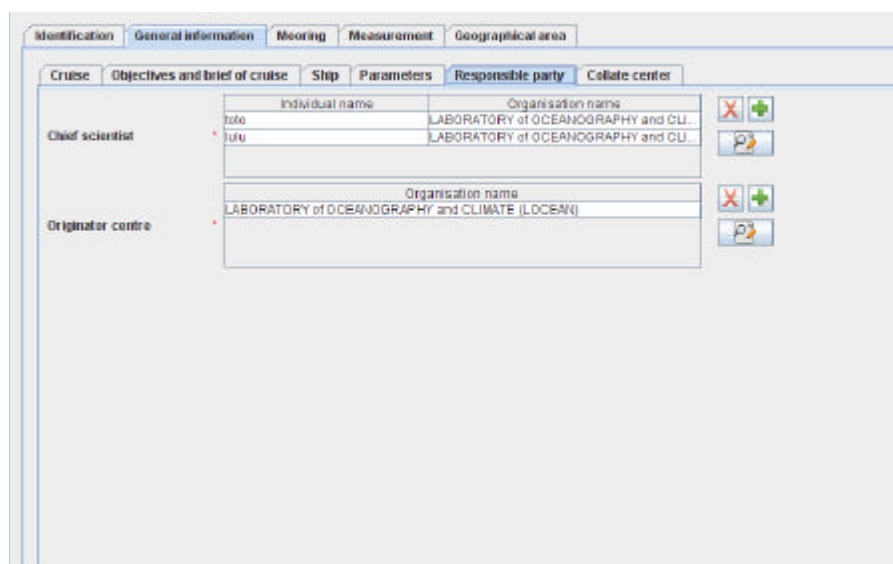
Identification General information Mooring Measurement Geographical area

Cruise Objectives and brief of cruise Ship Parameters Responsible party Collate center

Parameters	SONIdent
Temperature of the water column	SON: P021:26: TEMP
Salinity of the water column	SON: P021:26: PSAL
Turbulence in the water column	SON: P021:26: EPSI

Instruments	SONIdent
CTD profilers	SON: L06:4:130
active fluorometers	SON: L05:4:353

Figure 36: General information window – Parameters



Identification General information Mooring Measurement Geographical area

Cruise Objectives and brief of cruise Ship Parameters Responsible party Collate center

Chief scientist

Individual name * toto

Organisation name * LABORATORY of OCEANOGRAPHY and CL...

Individual name * toto

Organisation name * LABORATORY of OCEANOGRAPHY and CL...

Originator centre

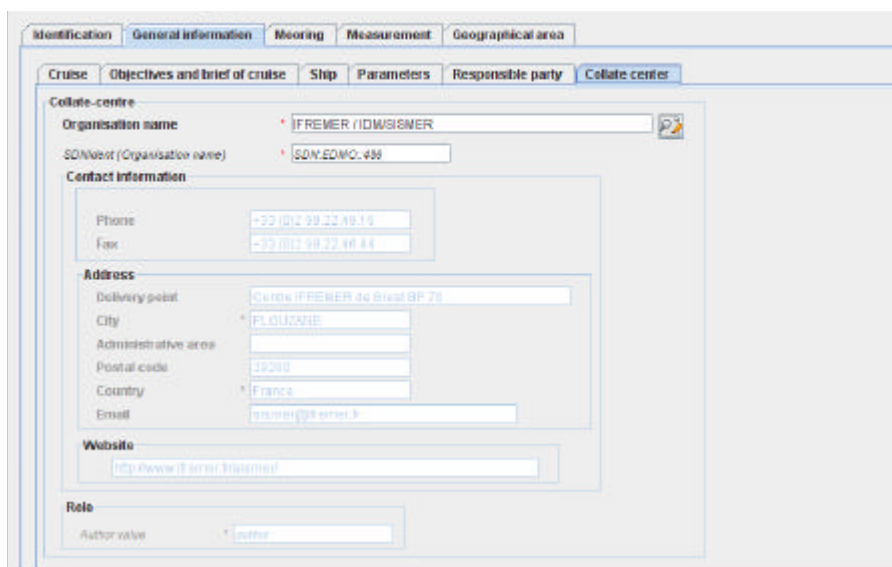
Individual name * toto

Organisation name * LABORATORY of OCEANOGRAPHY and CLIMATE (LOCEAN)

Individual name * toto

Organisation name * LABORATORY of OCEANOGRAPHY and CLIMATE (LOCEAN)

Figure 37: General information window – Responsible party



Identification General information Mooring Measurement Geographical area

Cruise Objectives and brief of cruise Ship Parameters Responsible party Collate centre

Collate-centre

Organisation name * IFREMER /IDW/SISMER

SDN/ent (Organisation name) * SDN/EDMO:488

Contact information

Phone +33 (0)2 99 22 49 19

Fax +33 (0)2 99 22 48 88

Address

Delivery point Centre IFREMER de Brest BP 211

City * PLOUHAZE

Administrative area

Postal code 29200

Country * France

Email sdnnet@ifremer.fr

Website http://www.ifremer.fr/brest

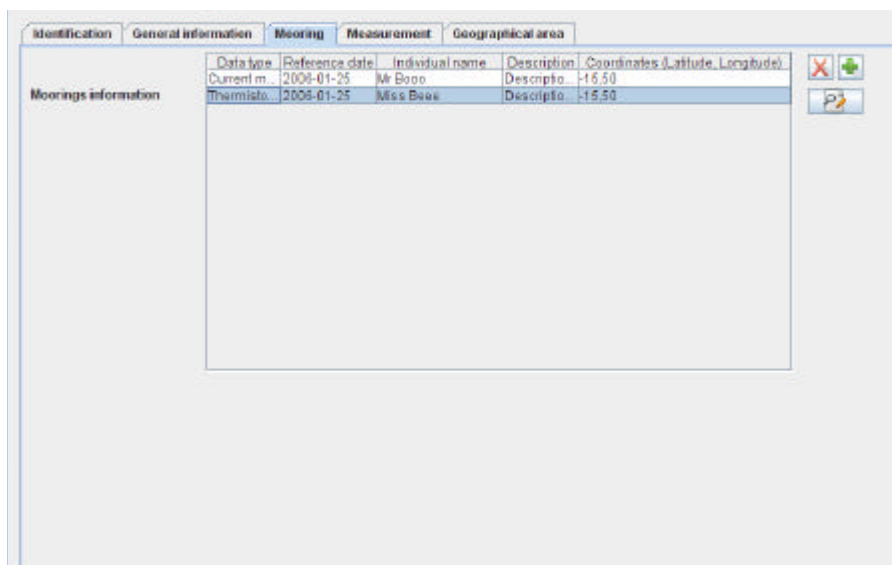
Role

Author name * author

Figure 38: General information window – Collate centre

8.1.2.3. Moorings information

Information about moorings are not mandatory, the window enables to input the information about several moorings.



Identification General information Mooring Measurement Geographical area

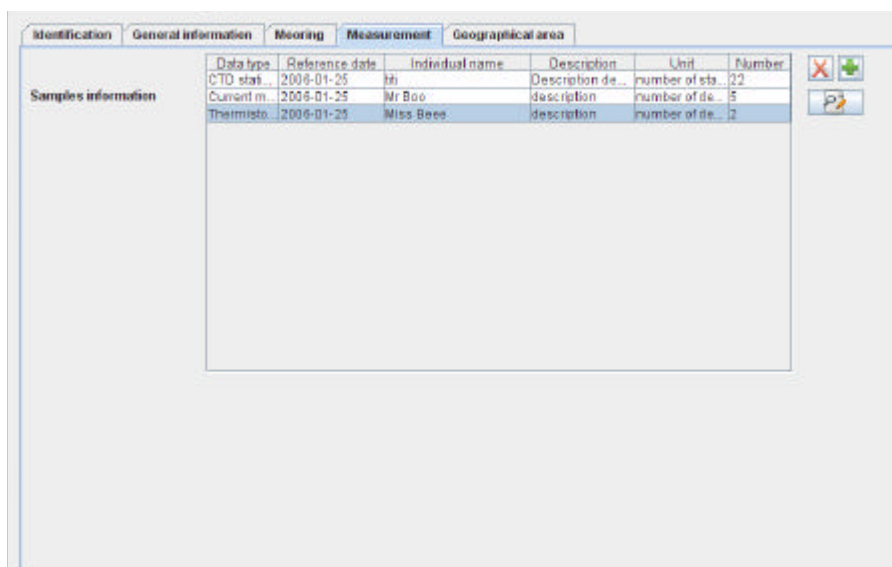
Moorings information

Data type	Reference date	Individual name	Description	Coordinates (Latitude, Longitude)
Current m.	2008-01-25	Mr Boon	Descriptio	-15.50
Thermisto	2008-01-25	Miss Boon	Descriptio	-15.50

Figure 39: Mooring information window

8.1.2.4. Measurements information

Information about measurements are not mandatory, the window enables to input the information about several type of measurements.

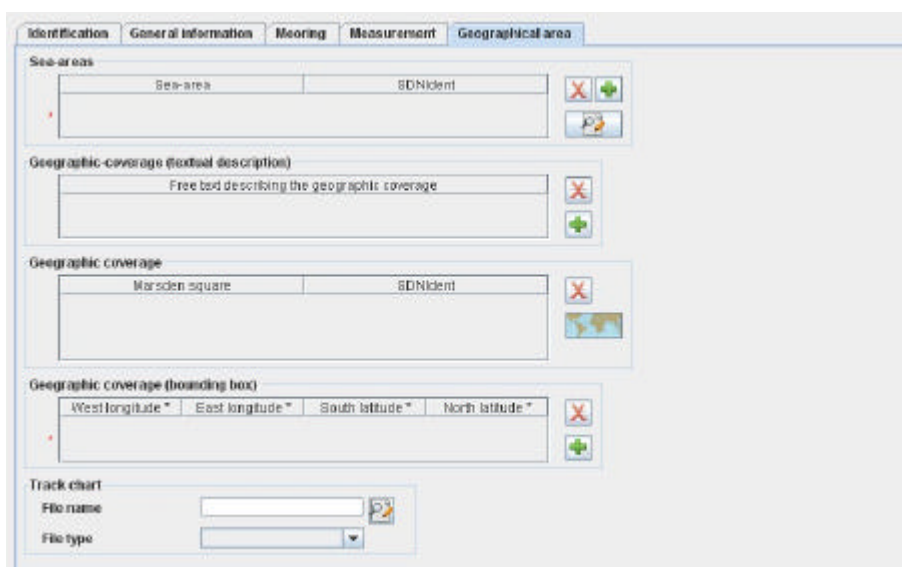


Data type	Reference date	Individual name	Description	Unit	Number
CTD stat...	2006-01-25	hh	Description de...	number of sta...	22
Current m...	2006-01-25	Mr Boo	description	number of de...	5
Thermisto...	2006-01-25	Miss Bees	description	number of de...	2

Figure 40: Measurement information window

8.1.2.5. Geographical area information

The “Geographical area” window enables to input information about the geographical area of the cruise.



Sea areas

Sea-area	SDNident

Geographic coverage (textual description)

Free text describing the geographic coverage

Geographic coverage

Marsden square	SDNident

Geographic coverage (bounding box)

West longitude °	East longitude °	South latitude °	North latitude °


Track chart

File name:

File type:

Figure 41: Geographical area window

If a track chart is available for the cruise, browse to select the file name, File description must be ‘track chart’, File type can be GML, 'GIF', 'PNG', 'JPEG' or 'PDF'.

In “Geographic coverage” frame, the  button opens a map with the Marsden squares. Clicking on one or several MARSDEN square(s) and clicking on Ok button add its (their) value(s) in the “Geographic coverage” table.

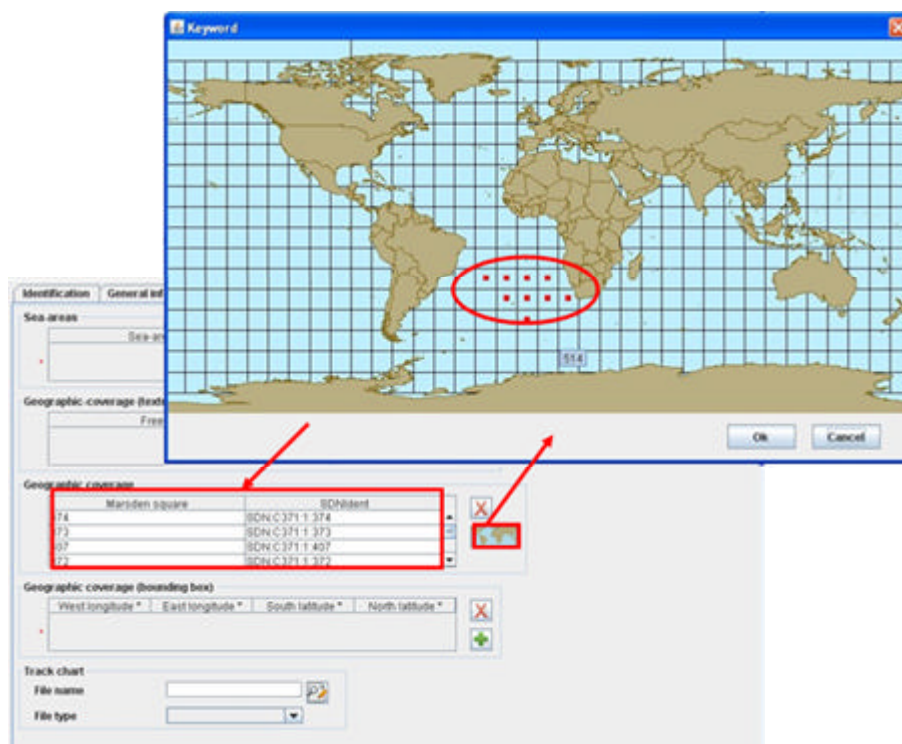


Figure 42: Geographical area – Marsden Squares

Once all the information related to the CSR has been fulfilled, the xml file will be created by selecting **Save as** in the **Manual** main menu. The created XML file has an “.xml” extension.

8.1.3. Manual CDI input

There are 9 tabs for the CDI information (Figure 43 to Figure 52) corresponding to the following basic questions defined in the CDI documentation:

- Identification of the CDI record which is **very important**. The **ID** must be a **UNIQUE LOCAL** identifier. Because the **LOCAL_ID** is vital for the updating process, it is through this **LOCAL_ID** than the central system will be able to recognise whether new contributions are **updates** of existing records or really **new records**
- Where?
- When?
- What?
- How?
- Who?
- Where to find the data?
- Dataset information (Cruise, Station)
- Other relevant information.

The content of the “Where to find the data” tab will depend on the selected options in **Data centre type** in the **Options** main menu:

- If the selected data centre type is SDN V1, the URL distribution website will be fixed and the user could not change it (see Figure 49).
- If the selected data centre type is ECOOP V1, the URL distribution website will be free (see Figure 50).

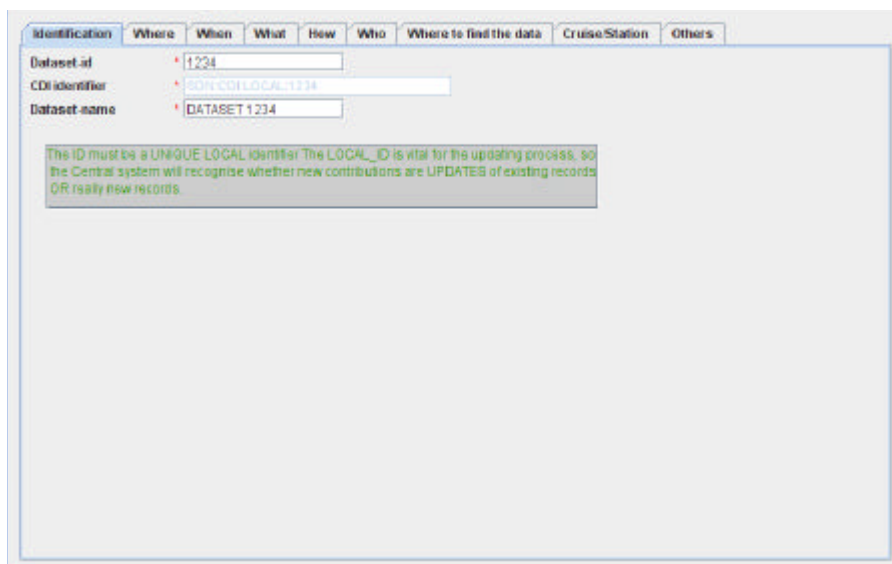


Figure 43: CDI 'Identification' window

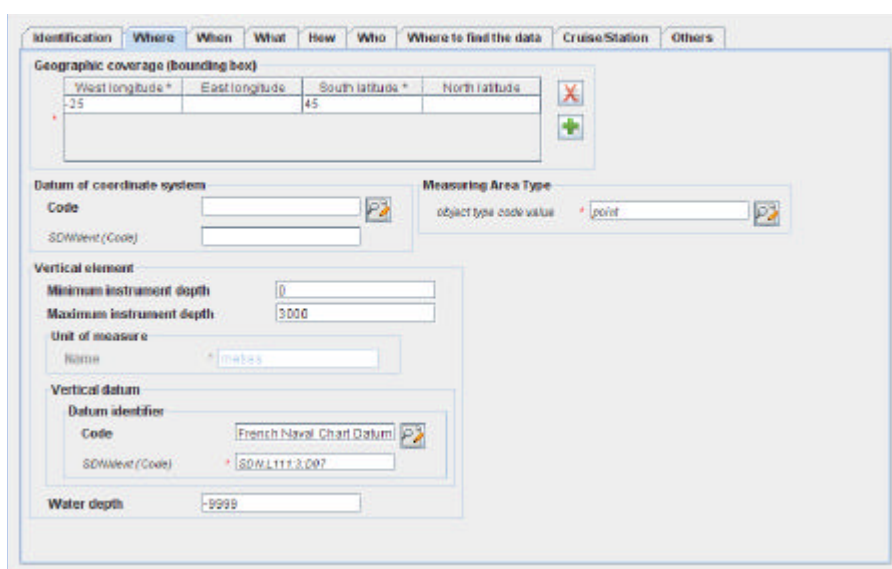
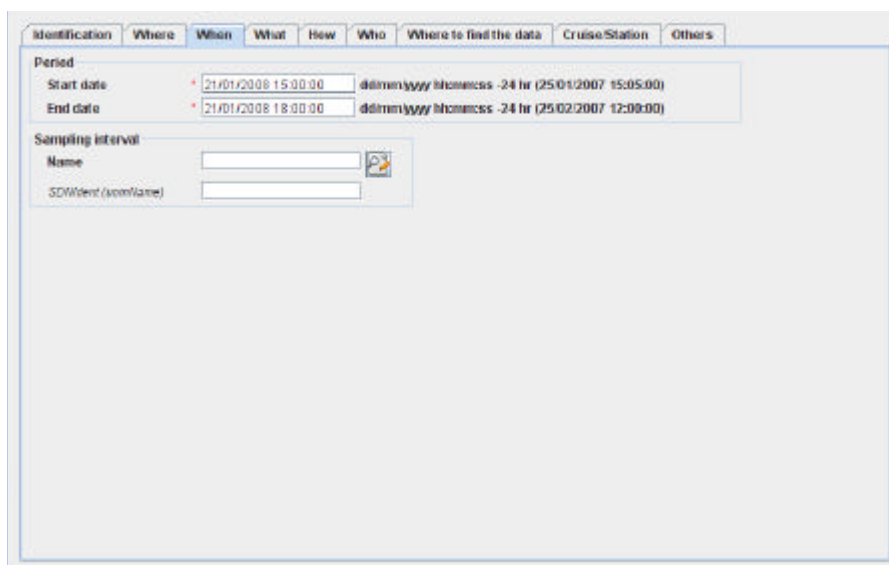


Figure 44: CDI 'Where' window



Identification Where **When** What How Who Where to find the data Cruise Station Others

Period

Start date * 21/01/2008 15:00:00 dd/mm/yyyy business -24 hr (25/01/2007 15:05:00)

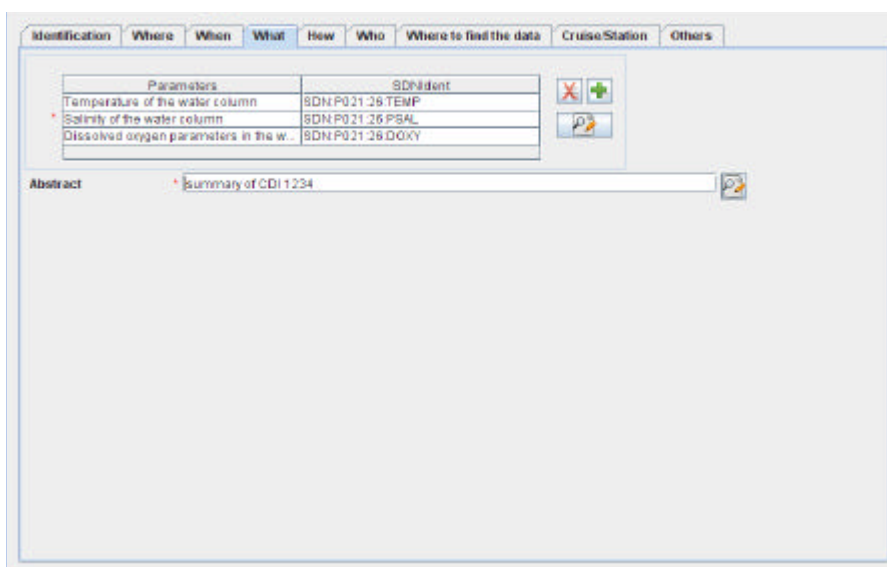
End date * 21/01/2008 18:00:00 dd/mm/yyyy business -24 hr (25/02/2007 12:08:00)

Sampling interval

Name

SDWIdent (seeName)

Figure 45: CDI 'When' window

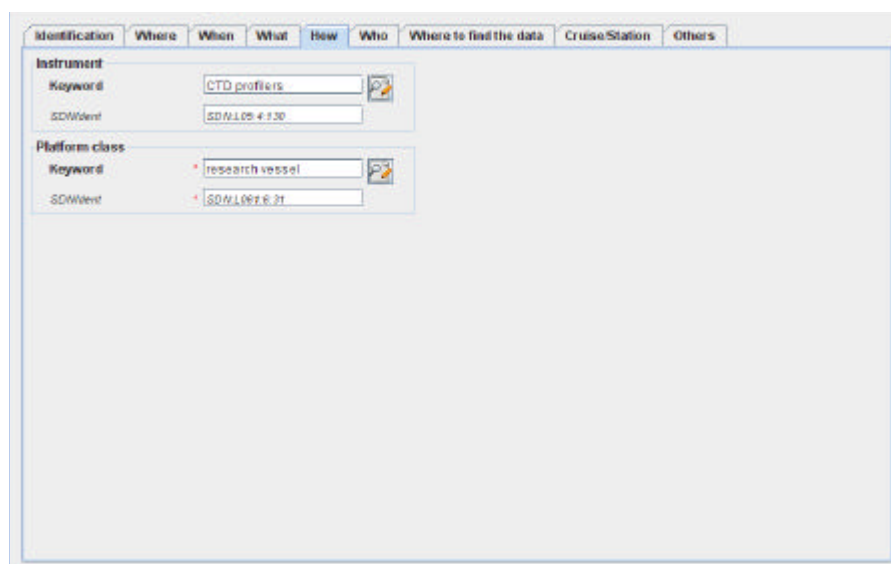


Identification Where When **What** How Who Where to find the data Cruise Station Others

Parameters	SDWIdent
Temperature of the water column	SDN P011 26 TEMP
* Salinity of the water column	SDN P011 26 PSAL
Dissolved oxygen parameters in the w...	SDN P011 26 DOXY

Abstract * summary of CDI 1234

Figure 46: CDI 'What' window



Identification Where When What **How** Who Where to find the data Cruise Station Others

Instrument

Keyword CTD profilers

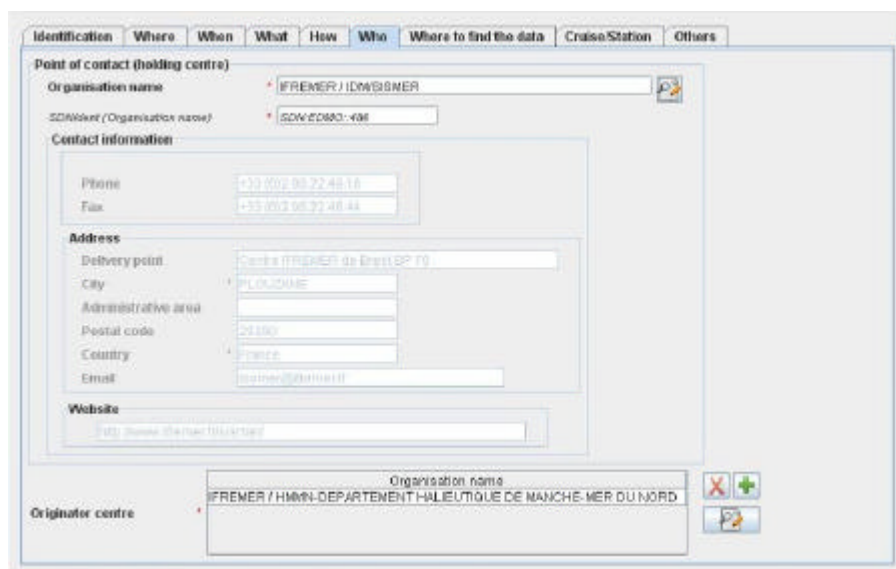
SDWIdent SDN L05 4 130

Platform class

Keyword * research vessel

SDWIdent * SDN L067 6 21

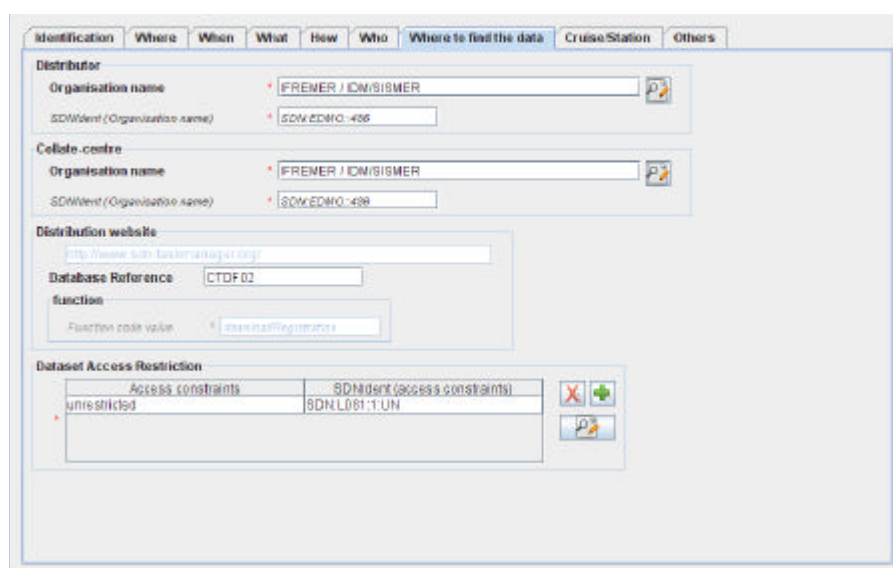
Figure 47: CDI 'How' window



The 'How' window displays contact information for the 'Point of contact (holding centre)'. The fields are as follows:

- Organisation name:** IFREMER / IDW/SISMER
- SDWIdent (Organisation name):** SDW-EDMO-488
- Contact information:**
 - Phone:** +33 (0)2 95 72 48 16
 - Fax:** +33 (0)2 95 72 48 44
- Address:**
 - Delivery point:** Centre IFREMER de Brest SP 19
 - City:** PLOUHAZE
 - Administrative area:**
 - Postal code:** 29 100
 - Country:** FRANCE
 - Email:** brest@brest.merif.fr
- Website:** <http://www.sdn-brest.merif.fr/>
- Originator centre:** IFREMER / HMMN-DEPARTEMENT HALIEUTIQUE DE MANCHE-MER DU NORD

Figure 48: CDI 'Who' window



The 'Where to find data' window displays distribution website and access restrictions. The fields are as follows:

- Distributor:**
 - Organisation name:** IFREMER / IDW/SISMER
 - SDWIdent (Organisation name):** SDW-EDMO-488
- Cellule centre:**
 - Organisation name:** IFREMER / IDW/SISMER
 - SDWIdent (Organisation name):** SDW-EDMO-488
- Distribution website:**
 - Database Reference:** CTDF 02
 - Function:**
 - Function code value:** % maxaffligements
- Dataset Access Restriction:**

Access constraints	SDWIdent (access constraints)
unrestricted	SDN L061.1 UN

Figure 49: CDI 'Where to find data' window – SDN VI

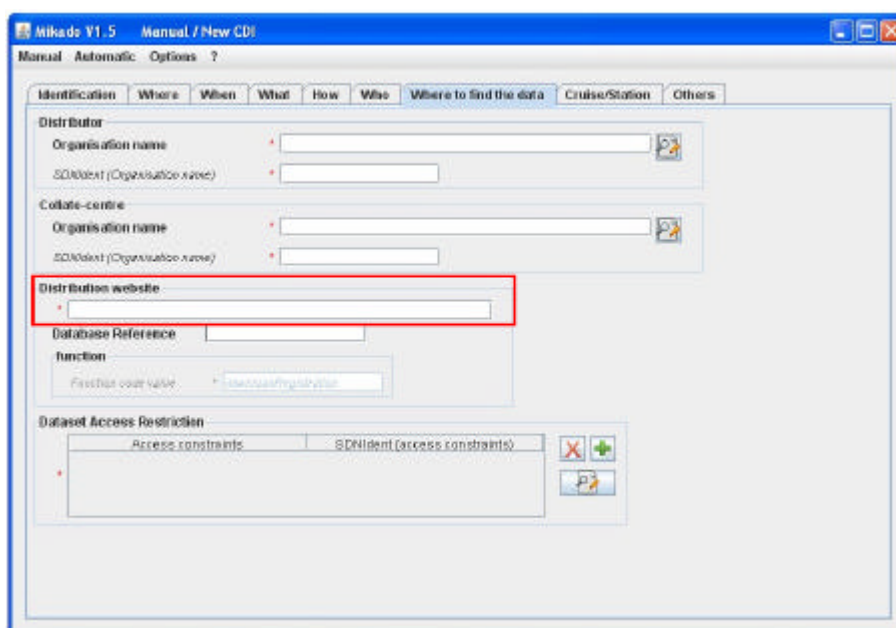


Figure 50: CDI 'Where to find data' window – ECOOP V1

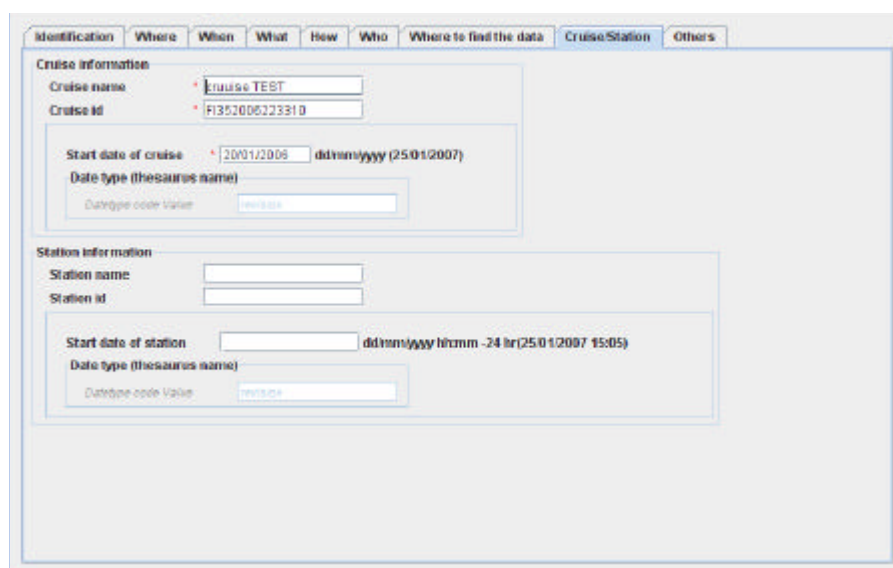


Figure 51: 'Cruise/Station' window for the CDI

In the Cruise/Station tab, at least cruise information or station information is mandatory, The 3 fields (for cruise or for station) are mandatory.

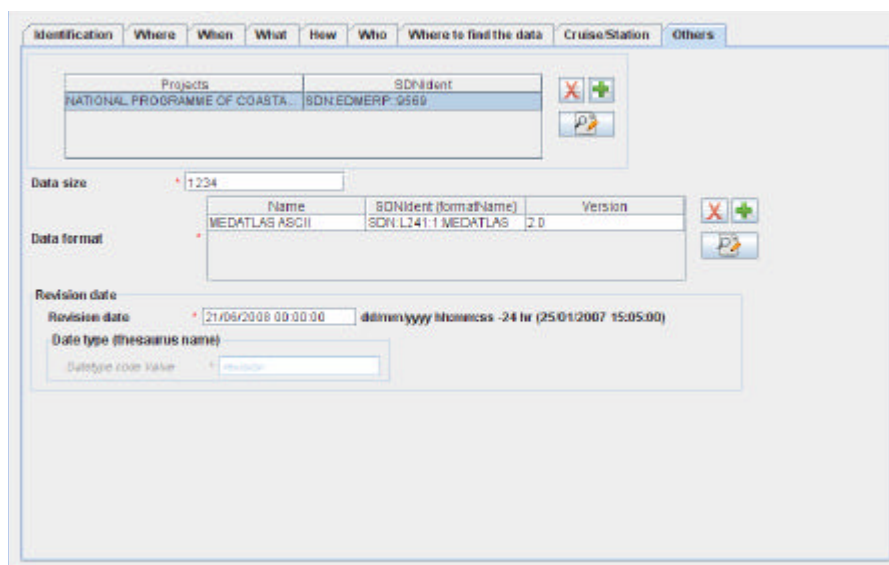


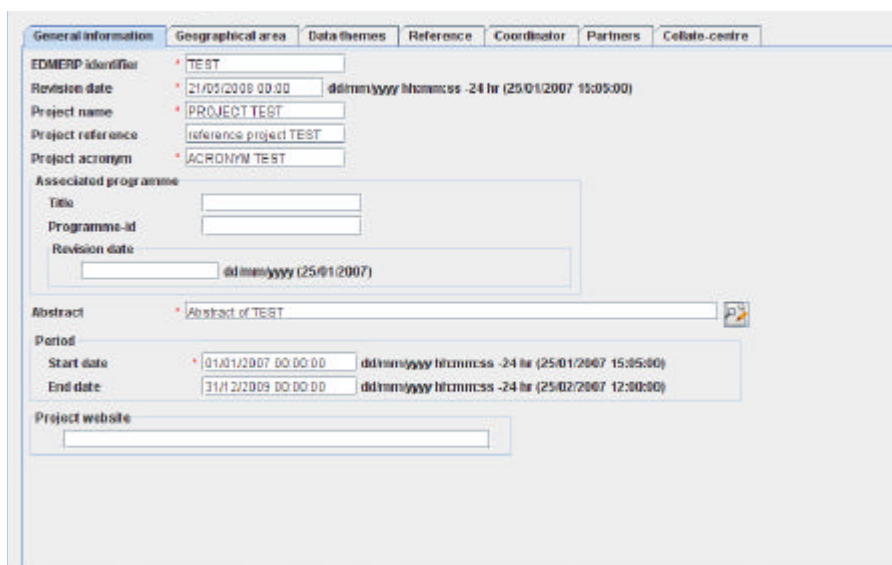
Figure 52: 'Others' window for the CDI

Once all the information related to the CDI has been fulfilled, the xml file will be created by selecting **Save as** in the **Manual** main menu. The created XML file has a “.xml” extension.

8.1.4. Manual EDMERP input

There are 7 tabs (Figure 53 to Figure 59) for the EDMERP information which enable to input information about:

- General information
- Geographical area
- Data themes
- Reference
- Coordinator
- Partners
- Collate Centre.



General information | Geographical area | Data themes | Reference | Coordinator | Partners | Collate centre

EDMERP identifier * TEST

Revision date * 21/05/2008 00:00 dd/mm/yyyy hh:mm:ss -24 hr (25/01/2007 15:05:00)

Project name * PROJECT TEST

Project reference reference project TEST

Project acronym * ACRONYM TEST

Associated programme

Title

Programme-id

Revision date dd/mm/yyyy (25/01/2007)

Abstract * Abstract of TEST

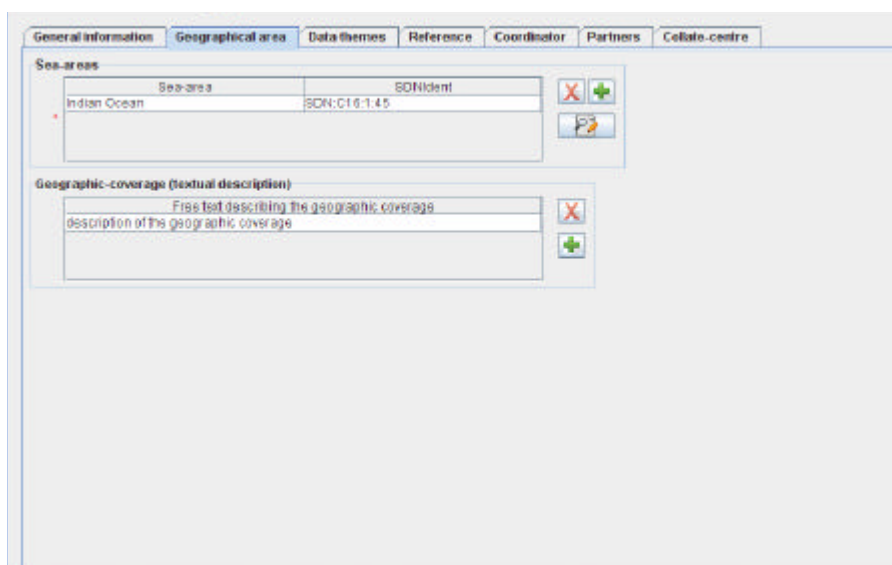
Period

Start date * 01/01/2007 00:00:00 dd/mm/yyyy hh:mm:ss -24 hr (25/01/2007 15:05:00)

End date 31/12/2009 00:00:00 dd/mm/yyyy hh:mm:ss -24 hr (25/02/2007 12:00:00)

Project website

Figure 53 : EDMERP – ‘General information’ window



General information | Geographical area | Data themes | Reference | Coordinator | Partners | Collate centre

Sea-areas

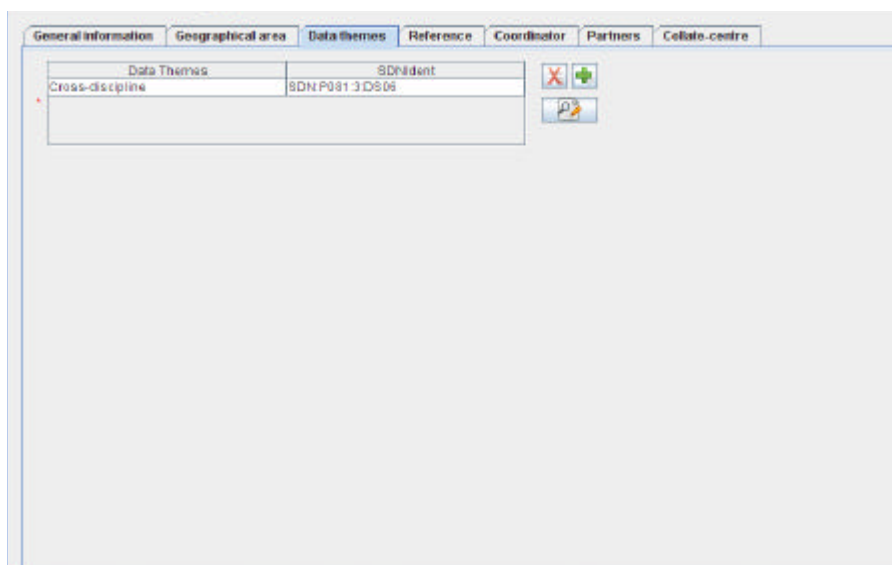
Sea-area	SDNident
Indian Ocean	SDN:C16.1.45

Geographic coverage (textual description)

First text describing the geographic coverage

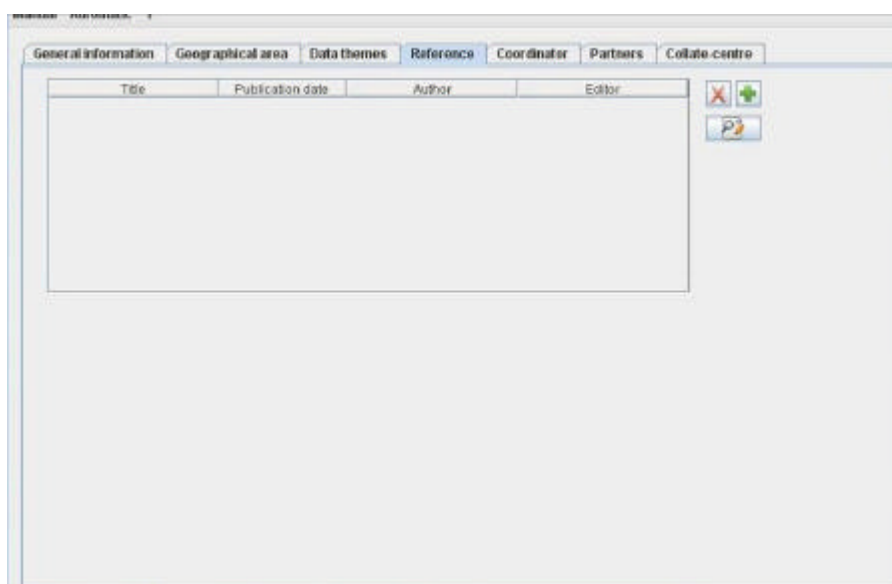
description of the geographic coverage

Figure 54: EDMERP – ‘Geographical area’ window



Data Themes	SDNident
Cross-discipline	8DN P0813 DS06

Figure 55: EDMERP – ‘Data themes’ window



Title	Publication date	Author	Editor
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Figure 56: EDMERP – ‘Reference’ window

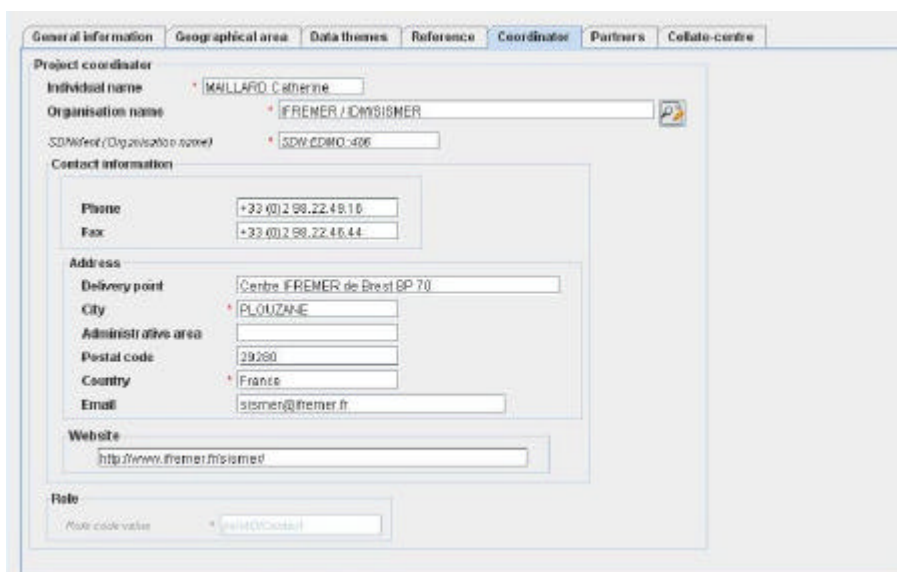


Figure 57: EDMERP – ‘Coordinator’ window

Here the phone, fax and email which are related to the organisation name (retrieved from EDMO catalogue) may be modified to be related to the identified person, the project coordinator.

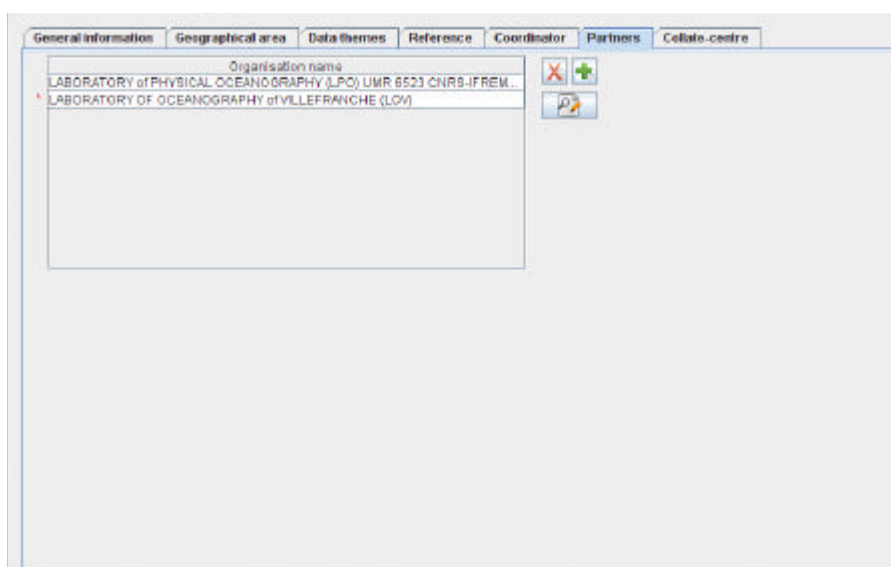


Figure 58: EDMERP - 'Partners' window

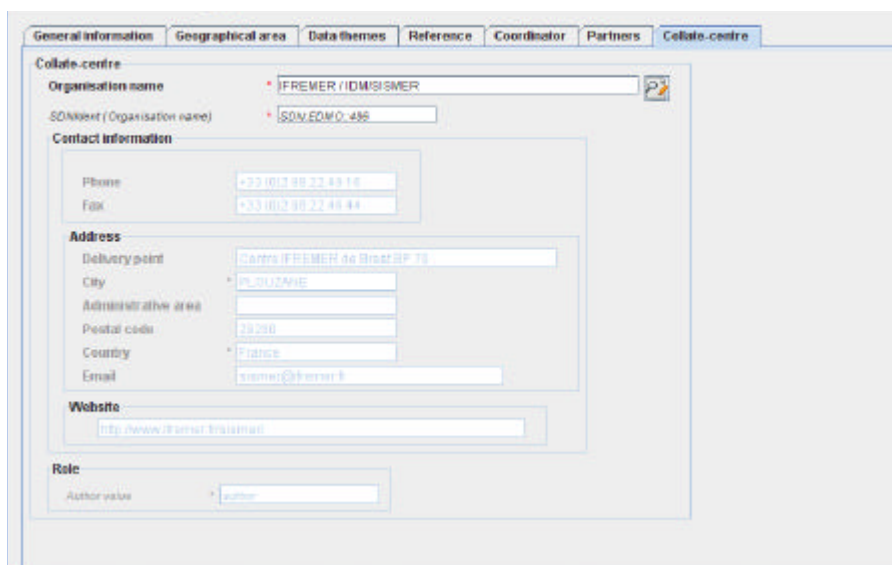


Figure 59: EDMERP – 'Collate centre' window

Once all the information related to the EDMERP has been fulfilled, the xml file will be created by selecting **Save as** in the **Manual** main menu. The created XML file has a “.xml” extension.

8.2. Open an existing XML file

It is possible to open an existing XML file using MIKADO. To do so, select **Open** in the **Manual** main menu and choose EDMED, CSR, CDI or EDMERP. Then, select the XML file to open).



Figure 60: Open an XML file with MIKADO

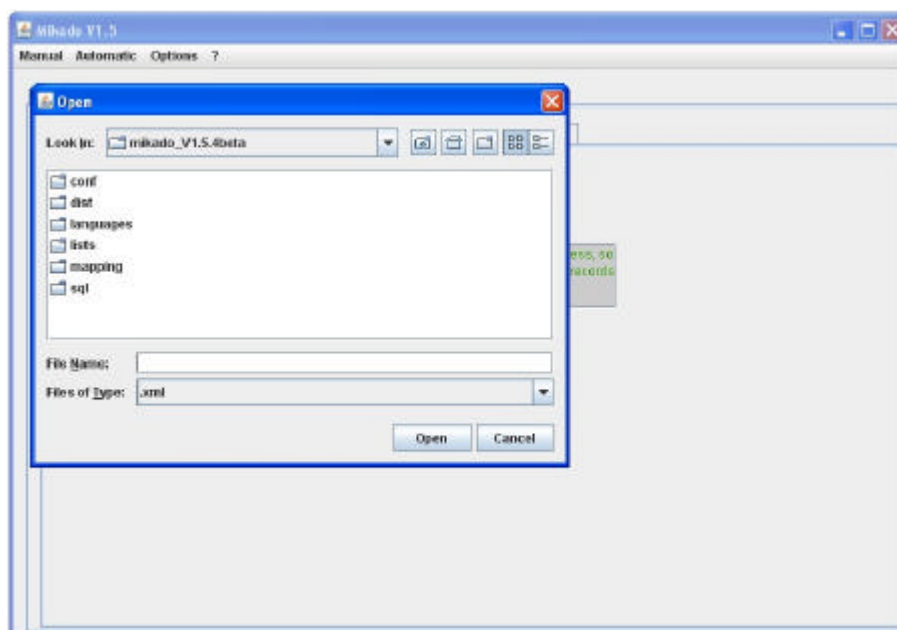


Figure 61 : Select the XML file to open

Update your information using the MIKADO interface and save your modifications by selecting **Save** or **Save as** in the **Manual** main menu.

8.3. Download EDMED entries from BODC

MIKADO V1.5 includes a functionality to download EDMED entries from the EDMED central catalogue managed by BODC. This functionality allows you to download one of your EDMED entries and to update it before sending it again to the EDMED central catalogue.

To download an EDMED entry:

- 1- Select **Download > EDMED from BODC** in the **Manual** main menu.



Figure 62: Download EDMED from BODC

- 2- Fill in the Dataset-id and the Collate centre fields for the EDMED entry you want to download and click on **Download** button.

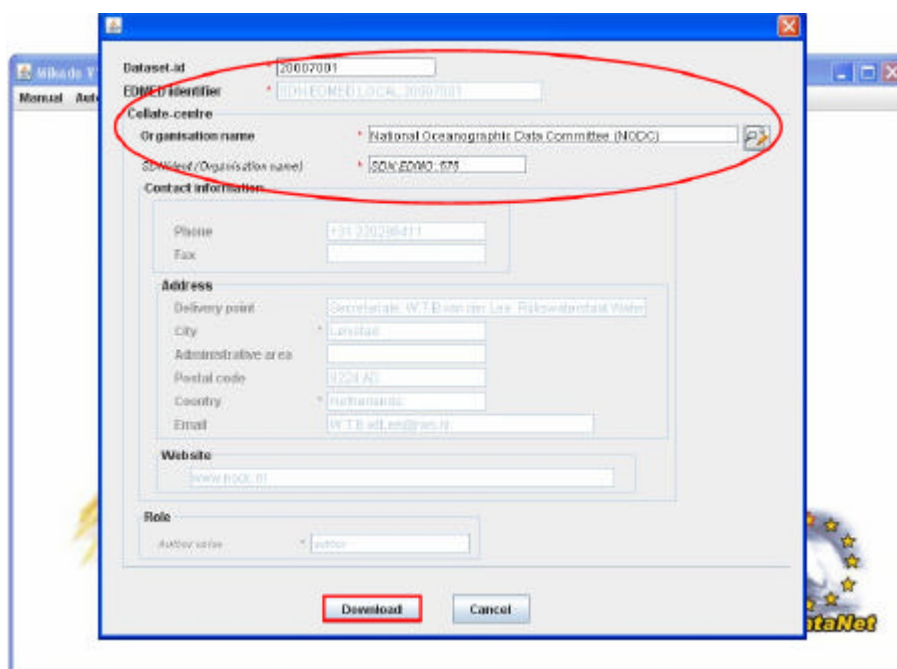


Figure 63: Select the EDMED entry to download

- 3- MIKADO will open the downloaded EDMED entry in its EDMED manual interface. It is now possible to update it and save it (see 8.1.1) before sending it again to the EDMED central catalogue.

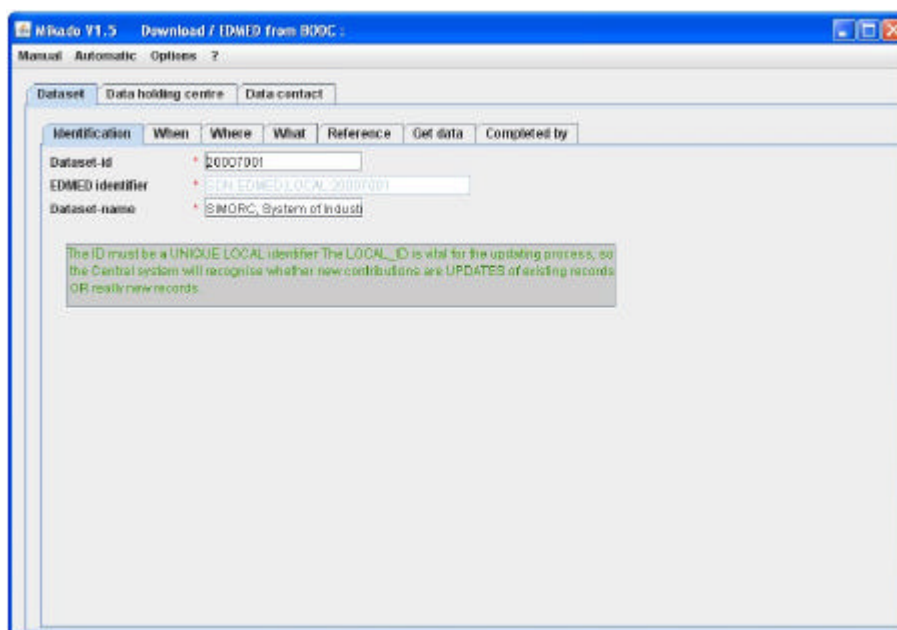


Figure 64: Downloaded EDMED entry

9. Automatic generation of EDMED, CSR, CDI and EDMERP XML files

9.1. General principle

Instead of manually typing information using the forms provided by the tool, in order to describe EDMED, CSR, CDI or EDMERP, the Mikado software is also able to generate these descriptions automatically if elementary information are catalogued in a relational database which can be queried with SQL language through a JDBC driver (Java Data Base Connectivity).

JDBC drivers are available for most popular relational database management system: ORACLE, Microsoft Access, Microsoft Excel, Microsoft SQLServer, MySQL, POSTGRES, Sybase... Please refer to the web site <http://developers.sun.com/product/jdbc/drivers> for more information.

If the driver you want to use is not released in MIKADO, you can download it from ad hoc websites and **copy it in the dist/lib MIKADO directory**.

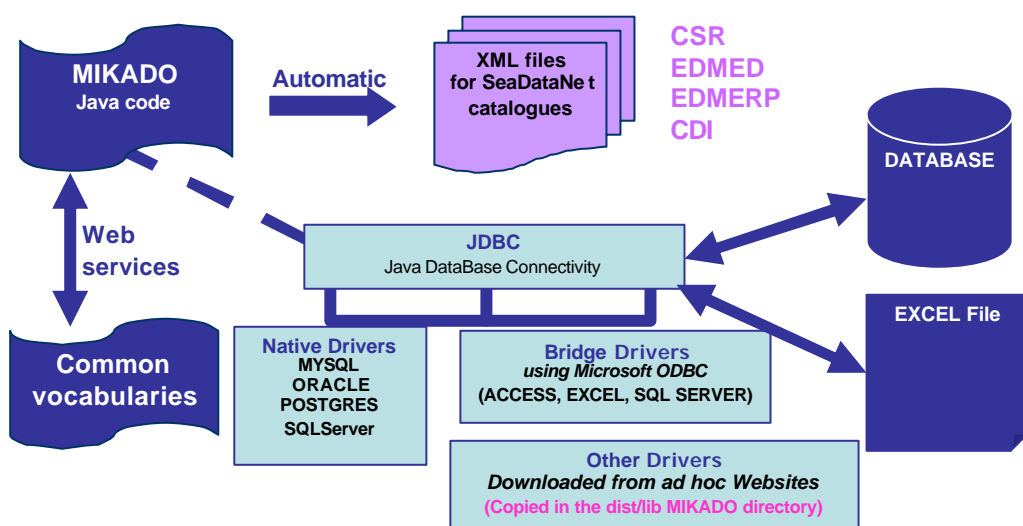


Figure 65: MIKADO - Automatic way

The different steps of MIKADO automatic version are:

- Configuration of the tool:
 - o Definition of the connection parameters to access the local database

- Definition of the queries to retrieve the information in the local database.
- Saving of the configuration and the queries.
- Generation of the XML files.

9.2. Configuration of the tool

MIKADO V1 provides a help for JDBC connection – connection checking and SQL query writing – query checking.



Figure 66: Automatic menu

9.2.1. Create a new configuration

To create a new configuration (connection to the database + queries), select **New** in the **Automatic** main menu and choose EDMED, CSR, CDI or EDMERP.

There are 2 tabs which enable to input information about:

- Connection to the database
- Queries.

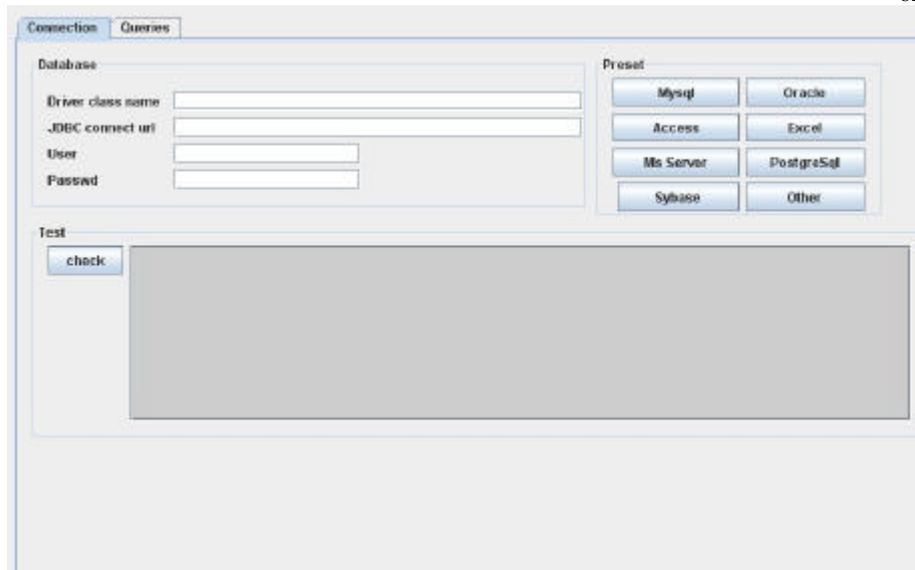


Figure 67: New configuration

9.2.1.1. Define the JDBC connection parameter

- 1 - Choose the database management system by clicking on the corresponding button.

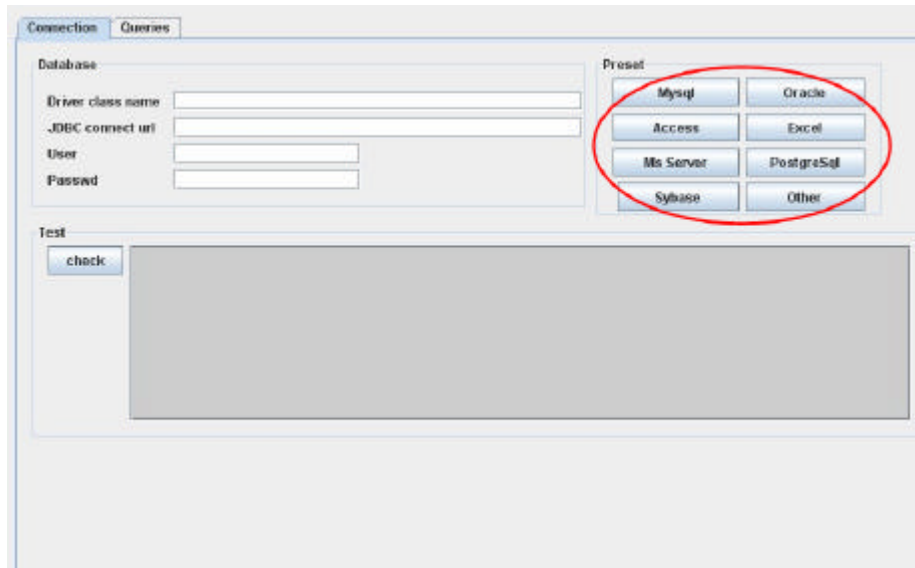


Figure 68: Connection interface- Select the database management system

- 2 - Complete or replace the pre-filled JDBC connect url field (URL of database, user name and password if required by your database).

Please, do not modify the driver class name field.

If you have chosen the “Other” button to define another database management system, you will have to fulfill the **JDBC connect url** field and also the driver class name field to connect to your database (make sure that the driver file is saved in the **dist/lib** MIKADO directory).

Database	
Driver class name	com.mysql.jdbc.Driver
JDBC connect url	jdbc:mysql://localhost/database
User	
Passwd	

Figure 69: Pre-filled connection parameters for MySQL

Database	
Driver class name	oracle.jdbc.driver.OracleDriver
JDBC connect url	jdbc:oracle:thin:@server:port:instance
User	
Passwd	

Figure 70: Pre-filled connection parameters for Oracle

Database	
Driver class name	com.microsoft.jdbc.sqlserver.SQLServerDriver
JDBC connect url	jdbc:sqlserver://serverName;instanceName:portNumber;property=value
User	
Passwd	

Figure 71: Pre-filled connection parameters for SQLServer

Database	
Driver class name	org.postgresql.Driver
JDBC connect url	jdbc:postgresql://server/instance
User	
Passwd	

Figure 72: Pre-filled connection parameters for PostgreSQL

Database	
Driver class name	com.sybase.jdbc3.jdbc.SybDriver
JDBC connect url	jdbc:sybase:Tds:server:port/instance[?charset=]
User	
Passwd	

Figure 73 : Pre-filled connection parameters for Sybase

For Sybase database connection, the part [?charset=] of the **JDBC connect URL** is optional and allows to choose the right set of characters.

Ex : jdbc:sybase:Tds:wallis:7545/quadrige?charset=iso_1

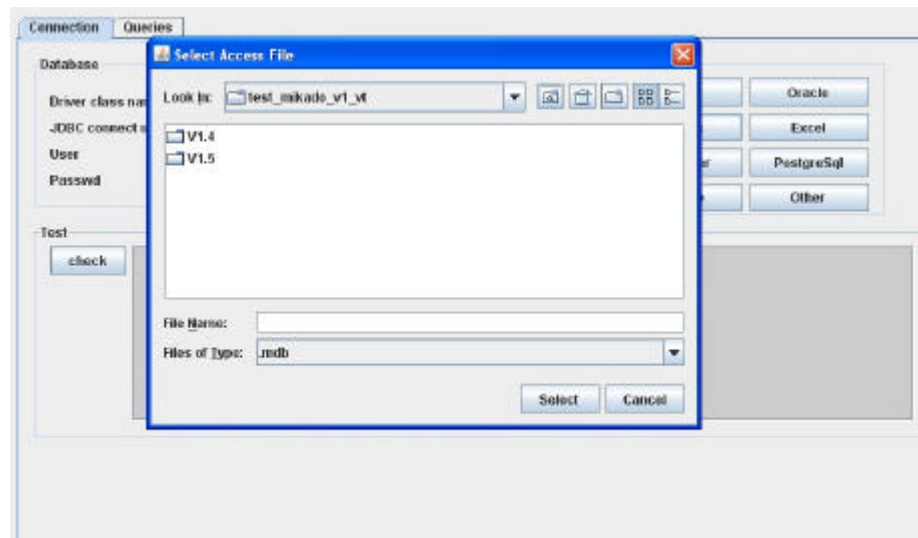


Figure 74: Access and Excel: select the database file

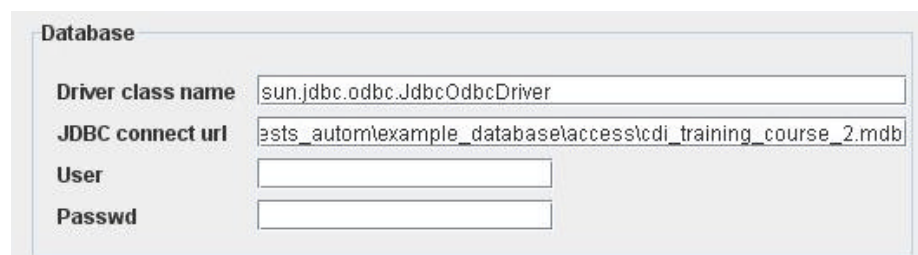


Figure 75: Pre-filled connection parameters for Access and Excel

3- Check the database connection using the **Check** button.

If MIKADO cannot connect to the database: check connection parameters, user and password. For Microsoft Access and Excel, check ODBC parameters too. Refer to your database and JDBC driver documentation.

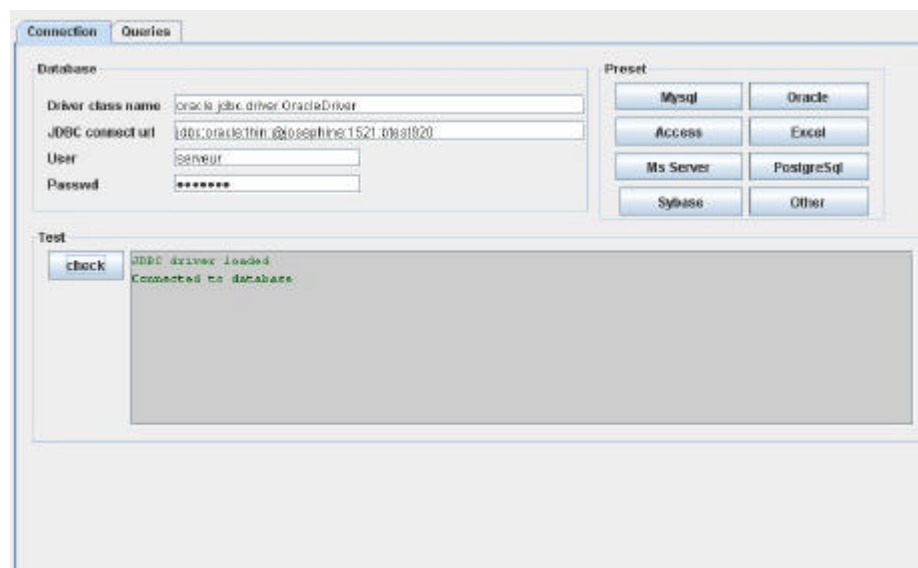


Figure 76: Successful connection to the database- Green message

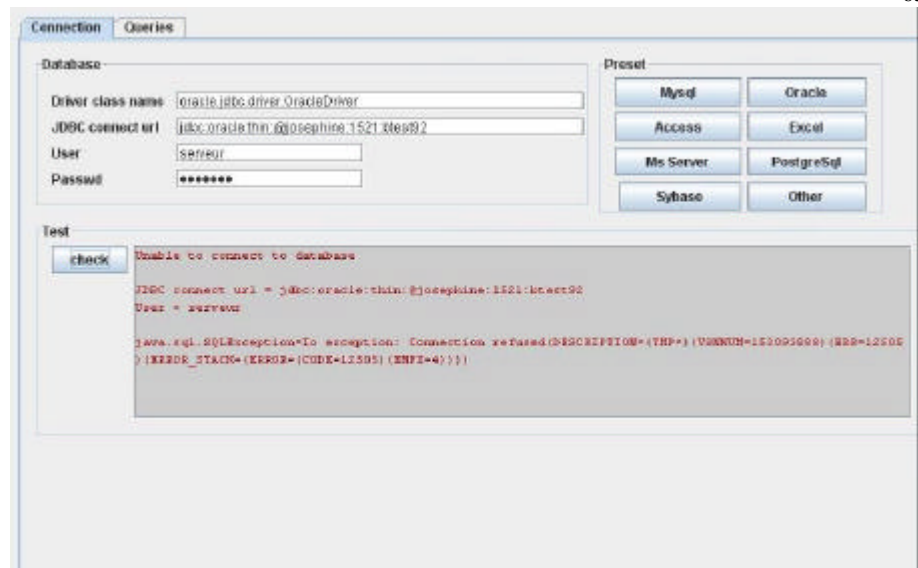


Figure 77: Unable to connect the database – Red message

9.2.1.2. Define the queries

The MIKADO interface for writing queries is divided into 3 parts:

- An expandable tree
- A frame for query writing
- A frame for query checking.

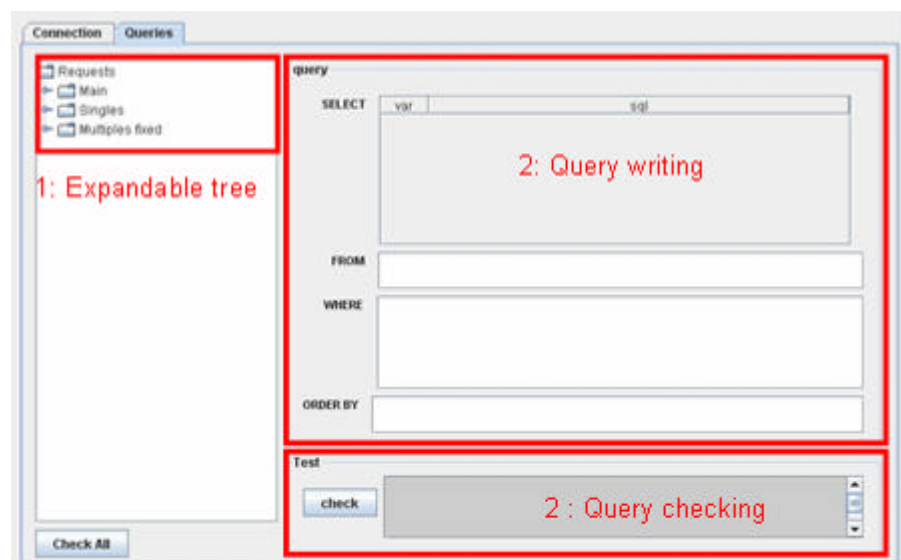


Figure 78 : Queries interface



The query frame is titled 'query' and contains four main sections:

- SELECT:** A table with two columns, 'var' and 'sql'. Below this table is a large red rectangular box labeled 'Table'.
- FROM:** A text input field labeled 'Free text'.
- WHERE:** A text input field labeled 'Free text'.
- ORDER BY:** A text input field labeled 'Free text'.

Figure 79: Query frame: SELECT, FROM, WHERE, ORDER BY frames

The query frame can be divided into 4 sub-frames: SELECT, FROM, WHERE, ORDER BY. The free text frames (FROM, WHERE, ORDER BY) can be completed directly by typing in them. The SELECT frame works as in a free text table (see 7.1.1).

The expandable tree on the left part of the interface makes it possible to explore the different variables by expanding the tree. In order to navigate in this tree, you have to click on the names of the nodes. After clicking, the corresponding query appears in the right part of the interface, in the 'Query' frame. And these queries can be checked using the query checking frame.

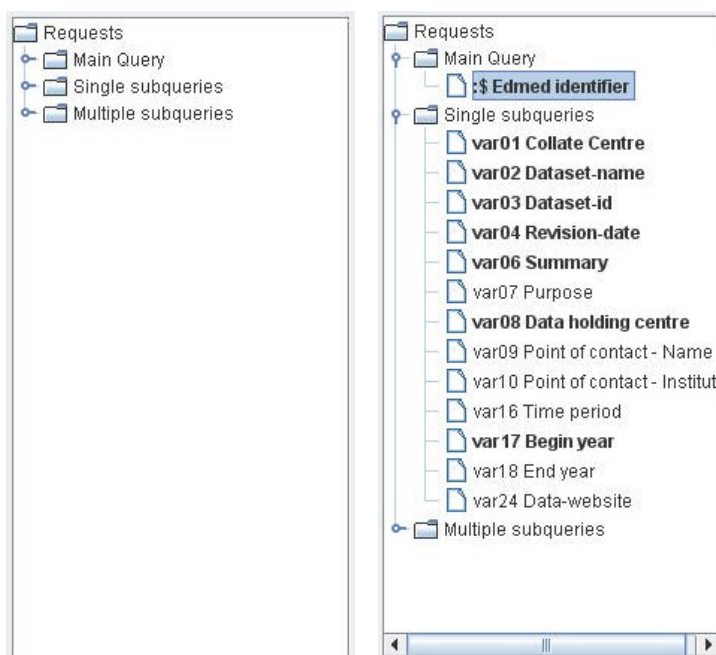


Figure 80: Expandable tree

MIKADO distinguishes different kinds of queries:

- the **main query**: It is the query which identifies all EDMED, CSR, CDI or EDMERP entries that must be exported. This request must return only one column which is the identifier (primary key) of each entry and that will be used for sub-queries. The returned identifiers could be numerical or textual.
- the **single subqueries**: These queries return **only one** row for one identifier returned in the main query.
- the **multiple subqueries**: These queries return **1 to n** rows for one identifier returned in the main query.

The character ‘:\$’ indicates the identifier of the entry as it has been returned by the main query. **One identifier symbol must be used in each sub-query WHERE condition to identify the entry within the list. It will be automatically replaced by the current identifier in the list.** If identifiers are non numerical, :\$ must be enclosed by quotes (‘:\$’)

```
select station_name from mikafdo_station
where station_id = :$ (or ':$' if non numerical)
```

For all these queries, the SQL syntax (for Oracle, Excel, MySQL ...) and SQL variables must be adapted to your own data base.

9.2.1.2..1 Main query

- 1- Click on the main variable in the expandable tree.
- 2- Fulfil the main query in the query frame.
- 3- Check the query using the check button (see 9.2.1.3).

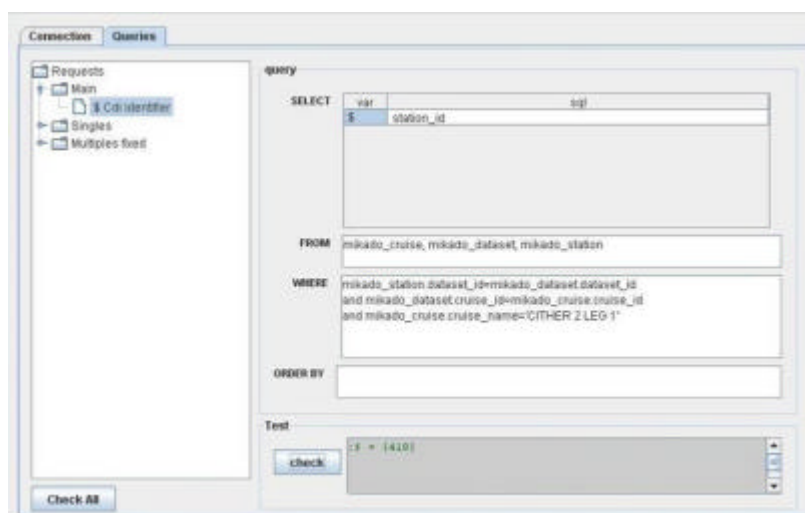


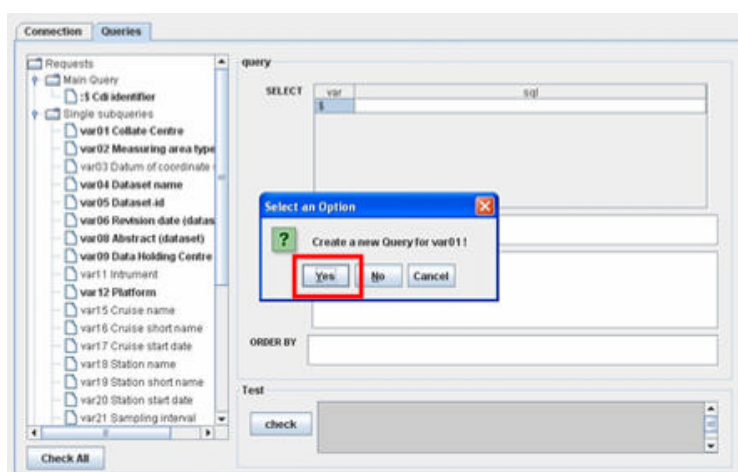
Figure 81 : Main query

9.2.1.2..2 Single subqueries

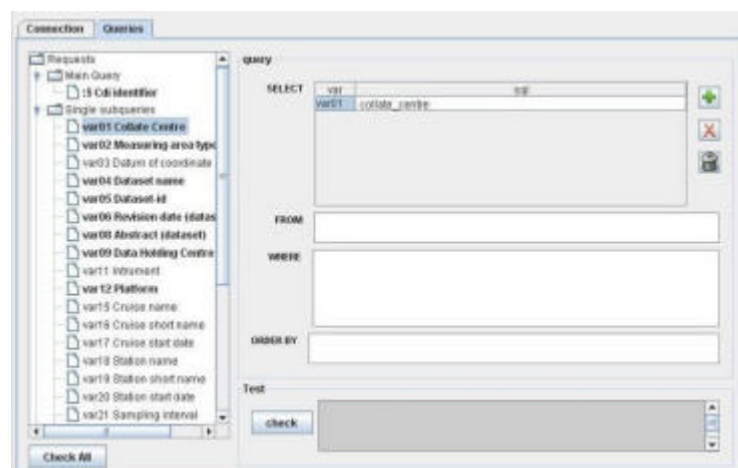
All the XML variables are listed in the expendable tree. The mandatory ones are written in bold characters: they must be fulfilled, null values are not allowed for mandatory variables. One to n single subqueries can be written, each of which can contain as many variables as necessary. Once a variable has been fulfilled, it is highlighted in green in the expendable tree.


To create a single query:

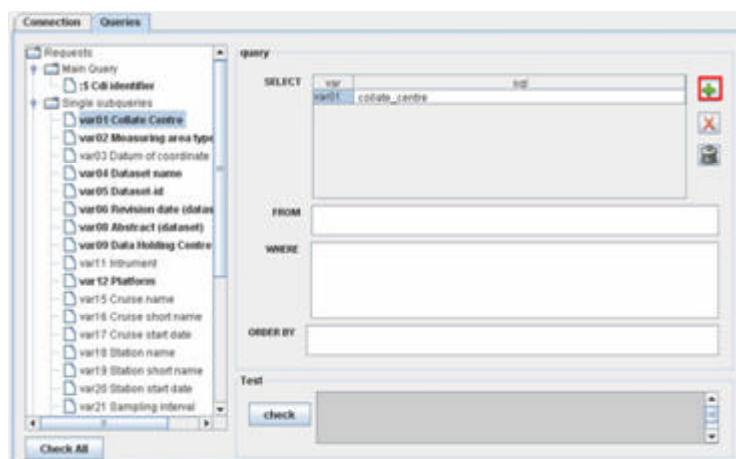
- 1- Select the first variable in the expendable tree to create a new query,



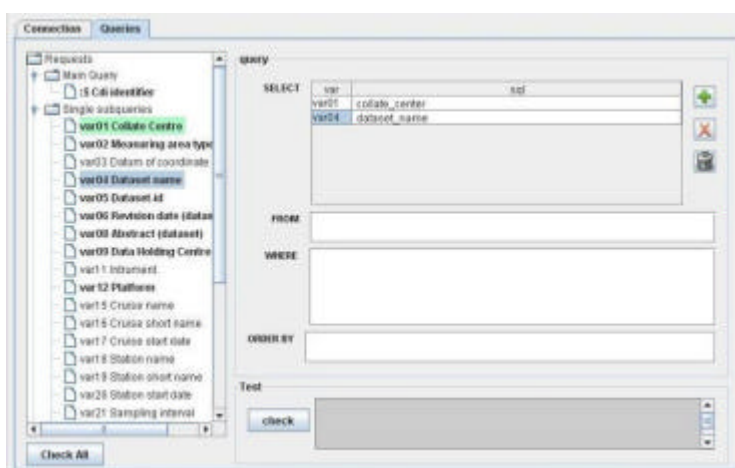
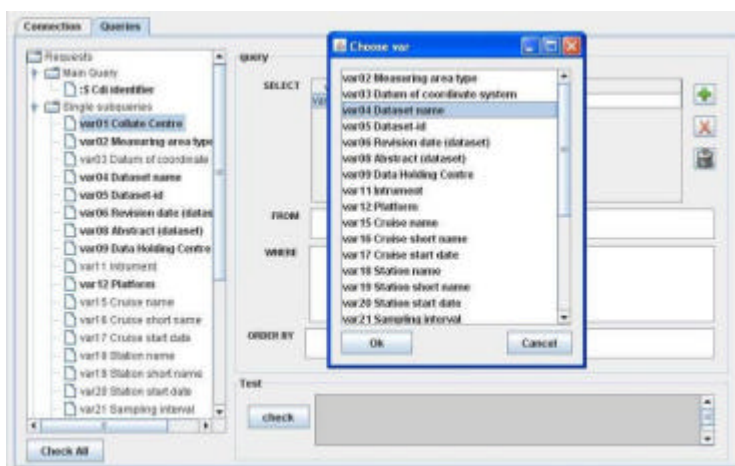
- 2- Complete the corresponding SELECT for this variable in the query frame,



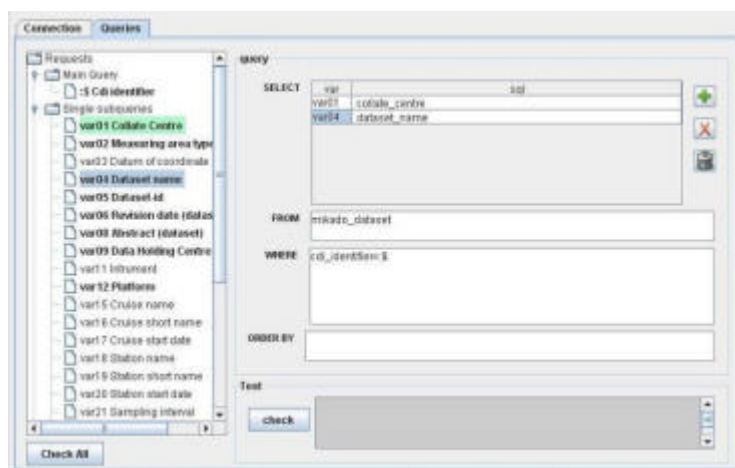
- 3- If needed, add another variable by clicking on the  button



- 4- Choose the second variable in the list then press OK and complete the SELECT clause for this variable and so on, as many time as you need to add variable in the query,

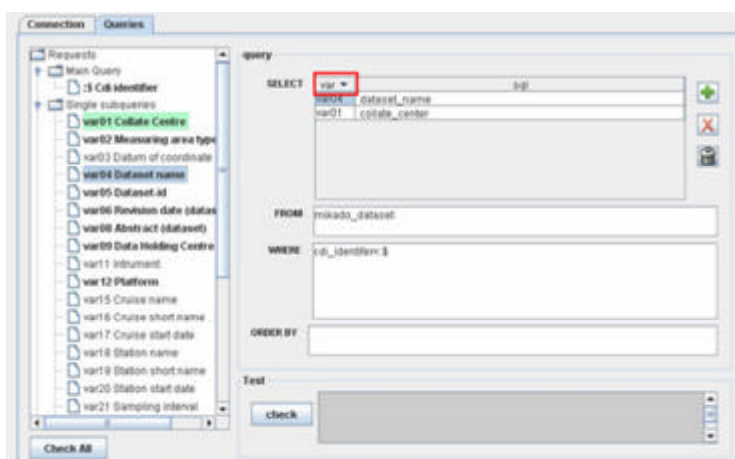


- 5- Fulfil the FROM, WHERE and ORDER BY clauses of the query.



Don't forget that one identifier symbol ('\$') must be used in each sub-query WHERE condition to identify the entry within the list. It will be automatically replaced by the current identifier in the list.

It is possible to sort the different variables of a particular query. To do so, click on the 'var' column; an arrow will appear allowing you to sort the variables by clicking on it:



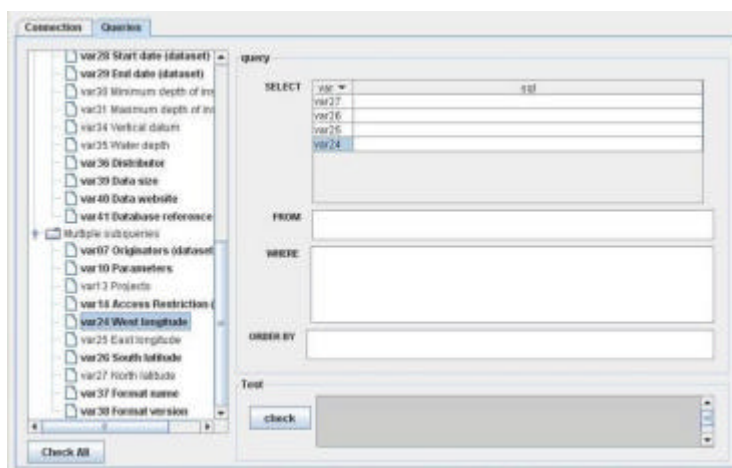
6- Check the query using the checking frame (see 9.2.1.3).

9.2.1.2..3 Multiple subqueries

All the XML variables are listed in the expandable tree. The mandatory ones are written in bold characters: they must be fulfilled, null values are not allowed for mandatory variables. The number of multiple queries and the list of variables per queries are pre-defined. Once a variable has been fulfilled, it is highlighted in green in the expandable tree.

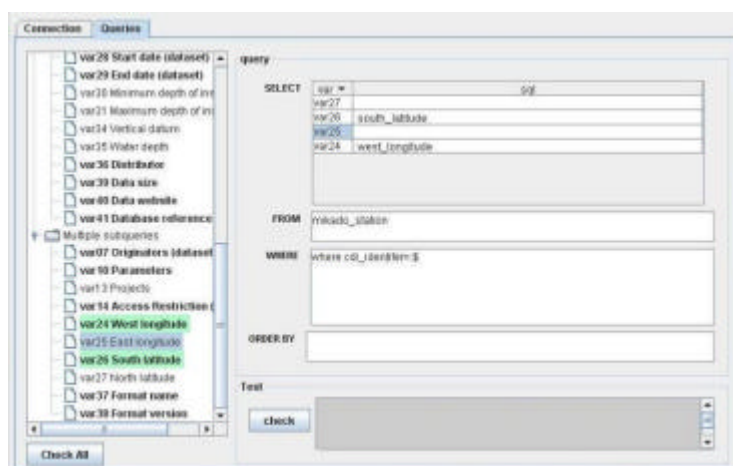
To fulfil a multiple query:

- 1- Select the first variable in the expandable tree to fulfil the corresponding multiple query,



- 2- Complete the corresponding SELECT, FROM, WHERE, ORDER BY clauses for this variable (and associated variables) in the query frame,

Don't forget that one identifier symbol ('\$') must be used in each sub-query WHERE condition to identify the entry within the list. It will be automatically replaced by the current identifier in the list.



If your database does not contain information for some non mandatory variables, let them empty in the SELECT clause.

- 3- Check the query using the checking frame (see 9.2.1.3).
- 4- Fulfil another multiple query by clicking on an empty variable.

9.2.1.3. Queries checking

MIKADO allows to check:

- Each query one by one. To do so, use the **Check** button in the query checking frame.

- All queries at the same time. To do so, use the **Check All** button above the expandable tree. All queries will be checked one after one. Use this button before generating the XML files.

The results of the query checking appear in the query checking frame. A **green** message informs that the query is correct; an **orange** message is a warning to tell the user that a reference to the IDs returned by the main query is missing and a **red** message informs that the query is wrong and gives information about the error.

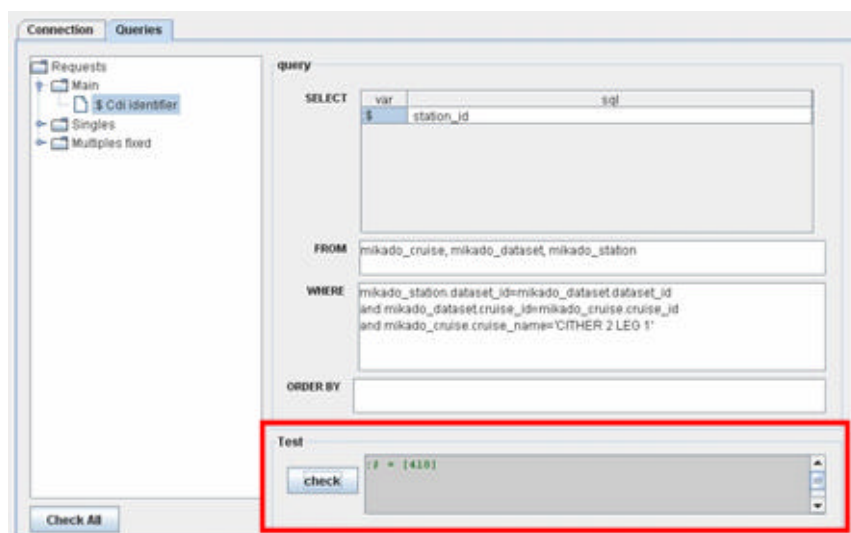


Figure 82: Right query – Green message

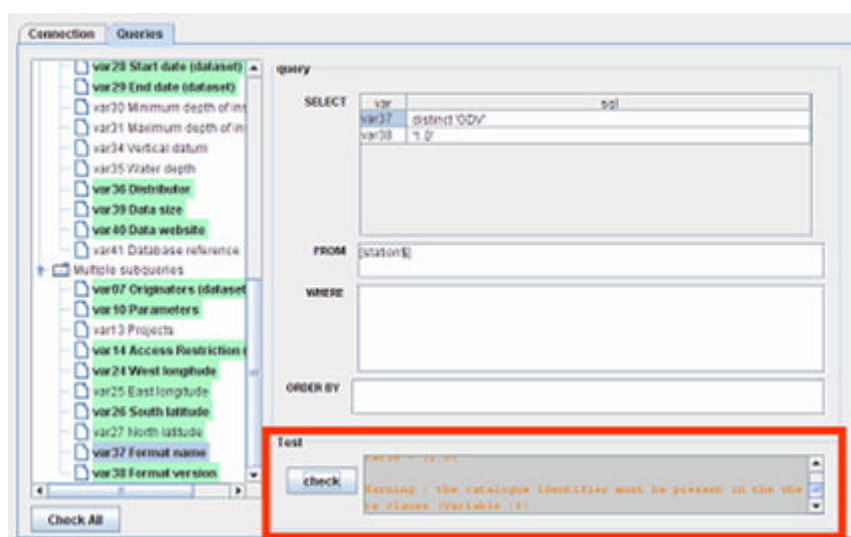


Figure 83: Missing reference to ID - Orange message

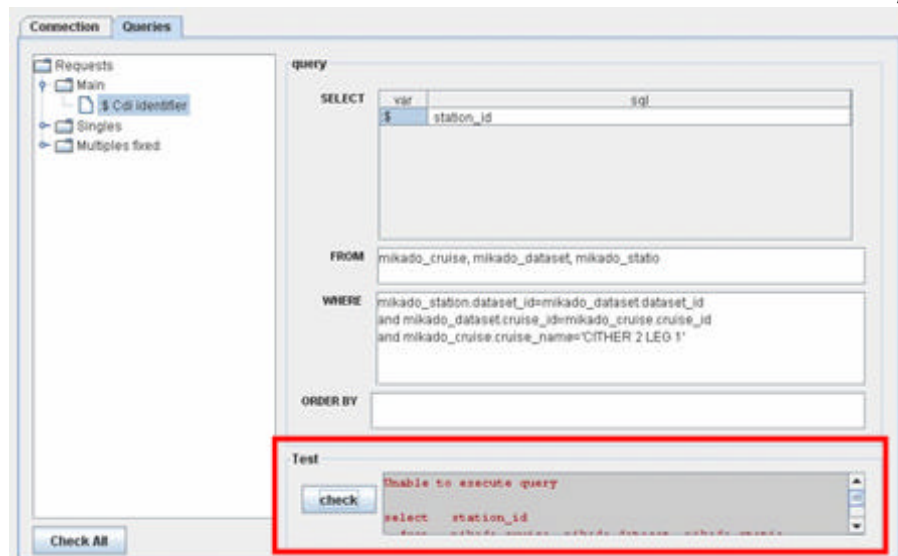


Figure 84: Wrong query – Red message

9.2.2. Save the configuration file

Once the connection parameters and the queries have been fulfilled and checked, you can save the configuration file by selecting **Save** or **Save as** in the **Automatic** menu. The configuration file has an “.xml” extension.

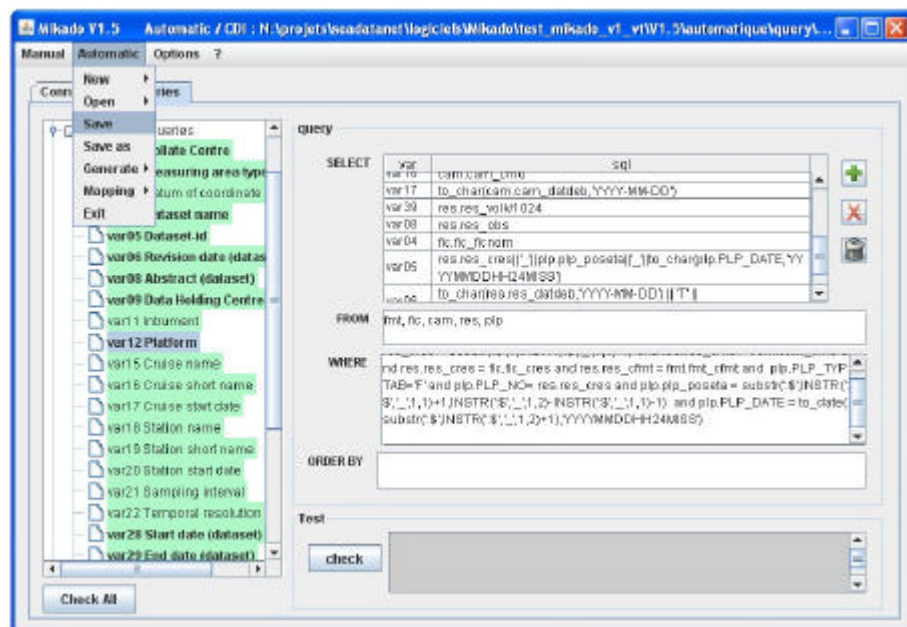


Figure 85: Save the configuration file

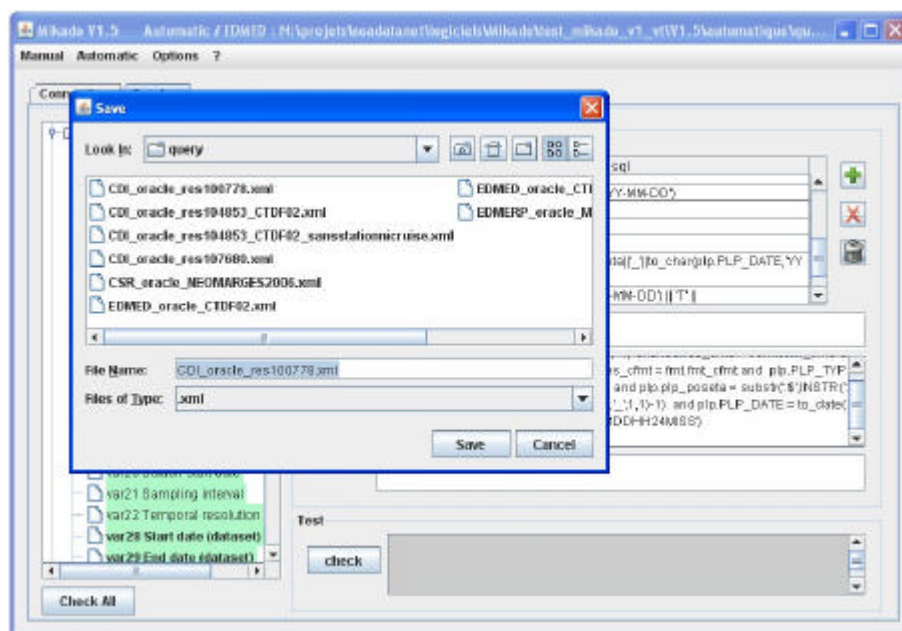
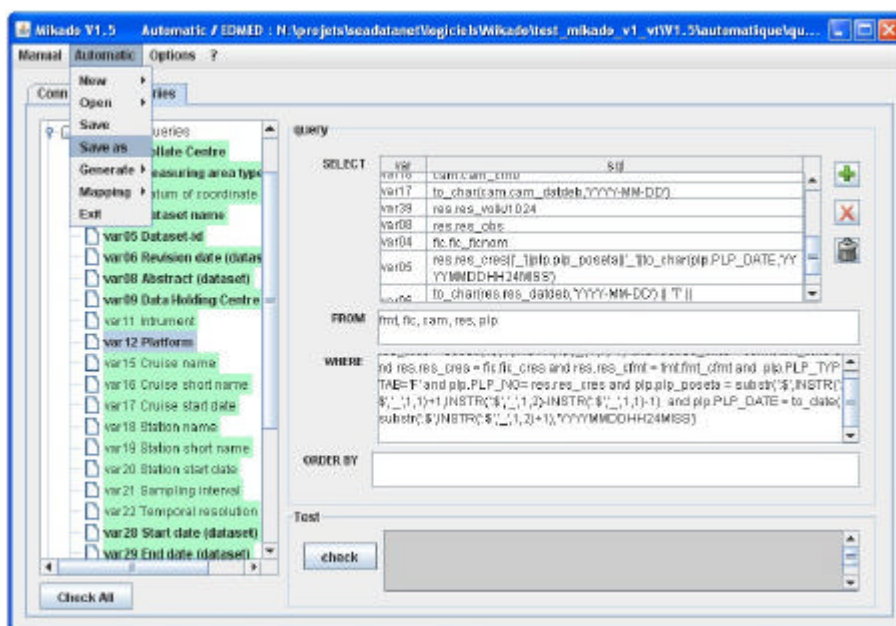


Figure 86: “Save As” the configuration file- Steps 1 and 2

9.2.3. Open an existing configuration

It is possible to open an existing configuration file using MIKADO. To do so, select **Open** in the **Automatic** main menu and choose EDMED, CSR, CDI or EDMERP. Next, select the configuration file to open.



Figure 87: Open a configuration file with MIKADO

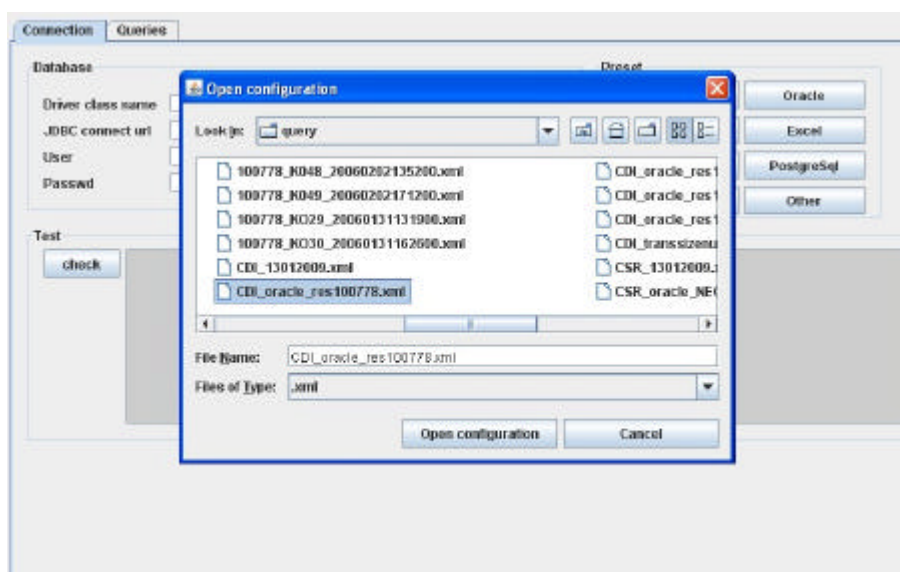


Figure 88: Select the configuration file to open

If there is an incoherence between the selected catalogue and the file opened (for example: the user has click on open, CDI and then has selected an XML file related to EDMED) the following message will appear:

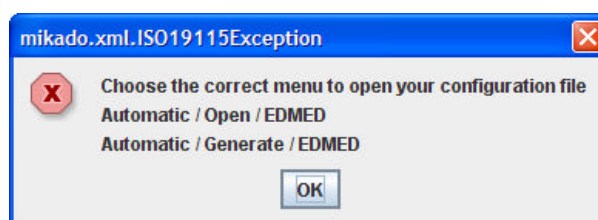


Figure 89: Error message – Wrong selected menu

9.3. Run the automatic generation

The second step in MIKADO Automatic version is the XML generation. The tool must have been configured before generating the XML files (see 9.2).

- 1- Select **Generate** in the **Automatic** Menu.
- 2- Select the catalogue you want to generate: EDMED, CSR, CDI or EDMERP.



Figure 90: Automatic generation of XML files

- 3-Select the configuration file.

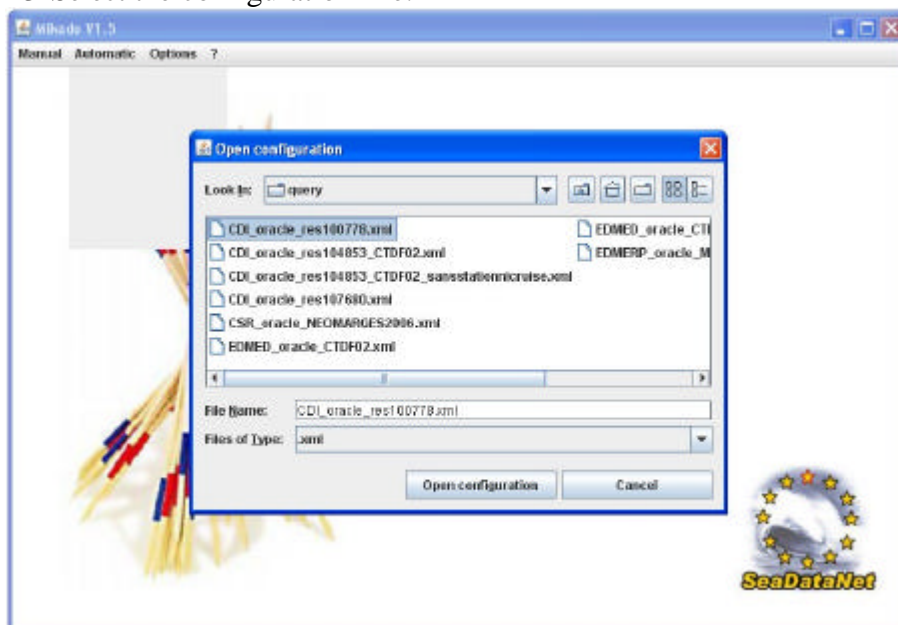


Figure 91: Select the configuration file

If there is incoherence between the selected catalogue and the file opened (for example: the user has click on open, CDI and then has selected an XML file related to EDMED) the following message will appear:

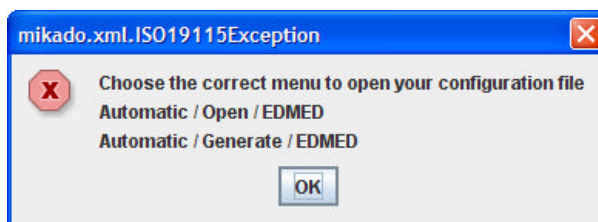
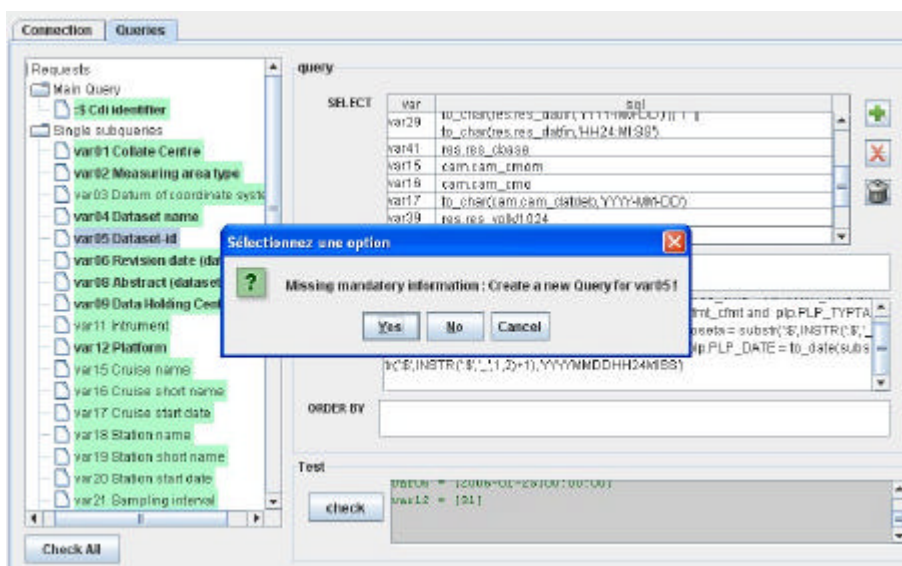


Figure 92: Error message – Wrong selected menu

MIKADO checks if all the mandatory variables had been filled in in the configuration file. If a mandatory variable is missing, MIKADO asks the user to complete it in the configuration file. After that, the user has to save the updated configuration file by selecting **Save** in the **Automatic Menu** and has to run again the generation by selecting **Generate** in the **Automatic Menu**.



4- Select the directory in which you want to create the export XML files.

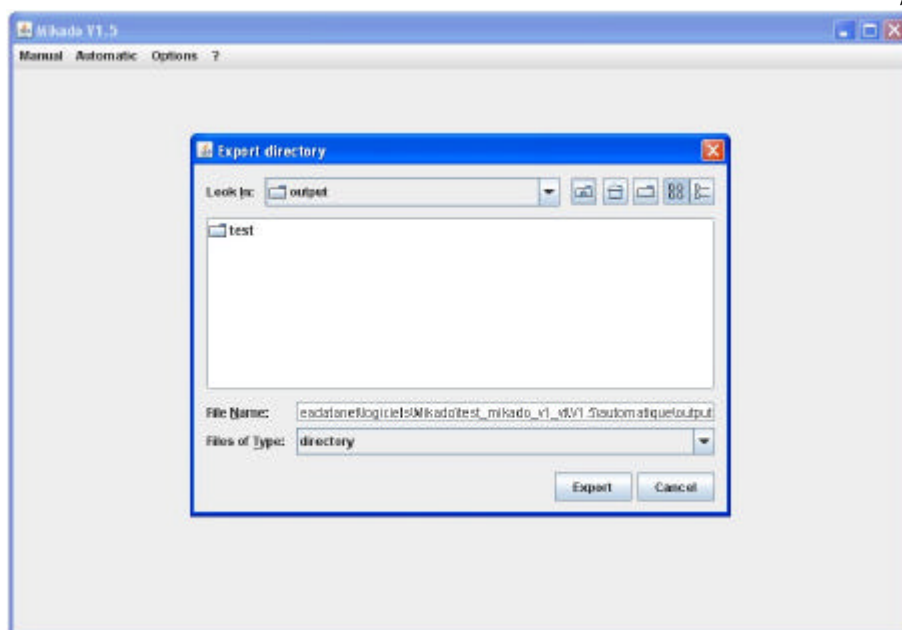


Figure 93: Choose the output directory

5- Select the export format in which you want to generate:

- XML files,
- ZIP file containing the XML files
- both XML and ZIP files.

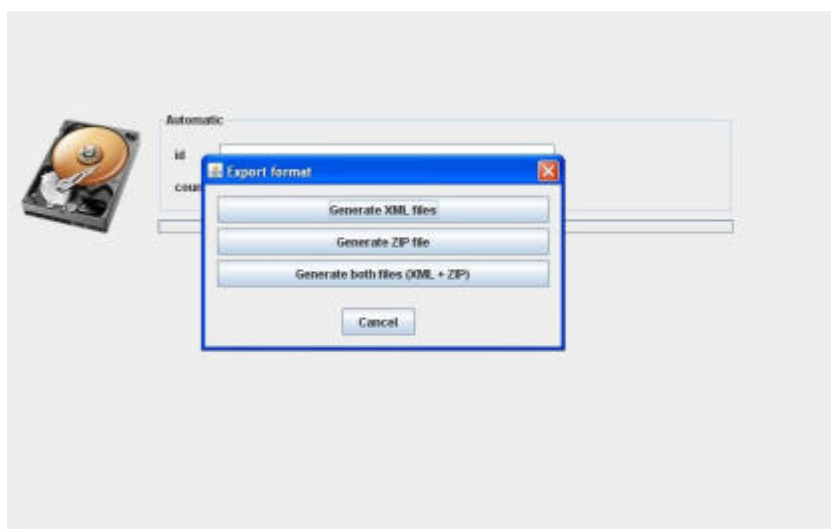


Figure 94: Select the export format

6- Control the XML generation (SQL error, XML error). A progress bar and a percentage indicate the progress of the generation and a **Cancel** button allows to cancel the generation.

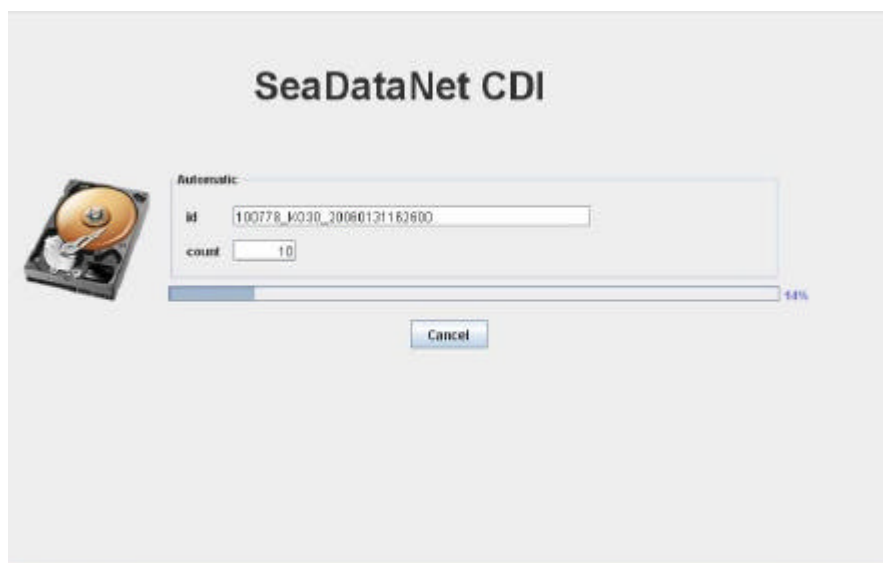


Figure 95: XML generation: Ongoing work

- 6- During the generation, complete the mapping (if necessary see 6.2.2 for more details).

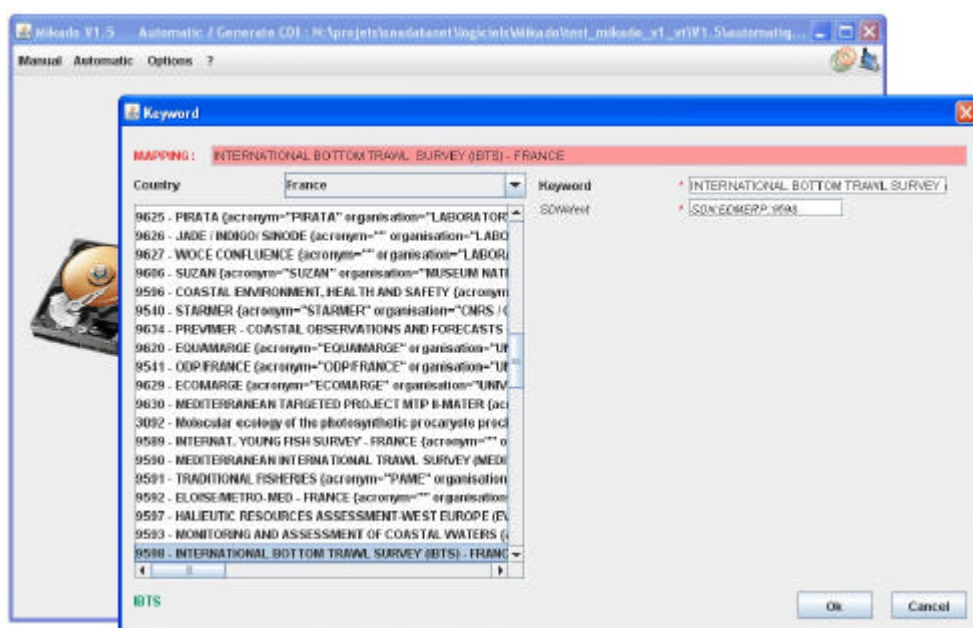


Figure 96: Complete the mapping

All the XML files (extension .xml) will be then created in the chosen directory.

10. Coupling table for Download Manager

10.1. General principle

The coupling table is used to create a coupling file used by SeaDataNet download manager to make the mapping between a LOCAL_CDI_ID (one profile, one time-series or one trajectory) and the name of the file containing this LOCAL_CDI_ID.

The coupling table contains the following information:

- LOCAL_CDI_ID: the CDI local identifier, as included in the central CDI directory at the SeaDataNet portal,
- Management modus:
 - Value equals to 1 or 3 if it concerns a pre-processed data file
 - 1 for mono-station files,
 - 3 for multi-station files,
 - Value equals to 2 if data have to be retrieved from a local database
- Format (ODV or MEDATLAS or NetCDF),
- For modus 1 or 3:
 - File name.
- For modus 2:
 - SQL query which allows to retrieve from local database all metadata and data necessary for creating the ODV data file,
 - Database connection parameters (protocol, ip address, port, name, login, password),
 - Mapping configuration XML file for the conversion of the original datasets to the SeaDataNet ODV format.

10.2. Configuration of the tool

10.2.1. Create a new configuration

To create a new configuration (connection to the database + queries), select **New** in the **Tools** main menu and choose **Coupling Table for Download Manager**.

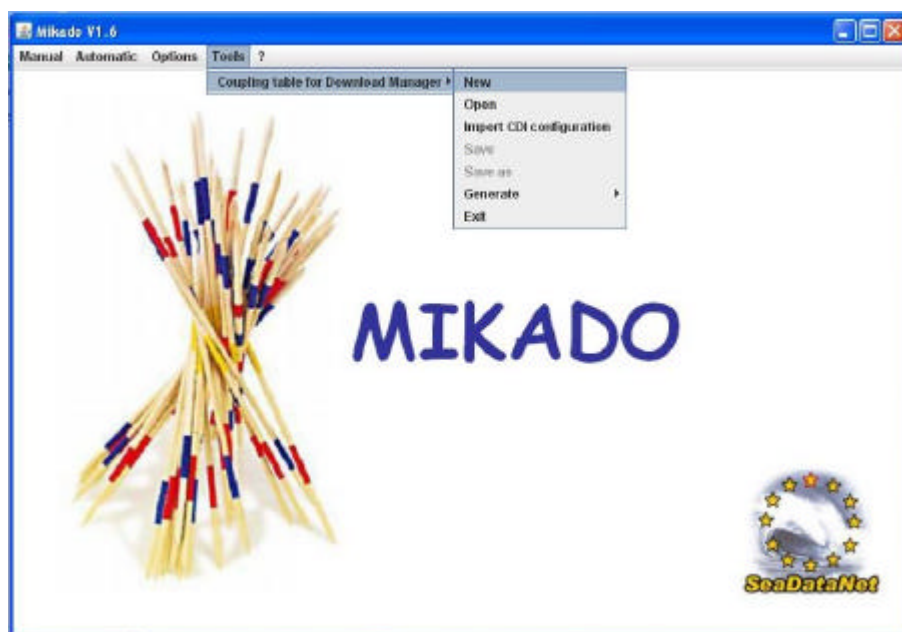


Figure 97: Create a new configuration

There are 4 tabs which enable to input information about:

- Connection to the database,
- Main query,
- Query for Modus 2,
- Query for Modus 1 or Modus 3.

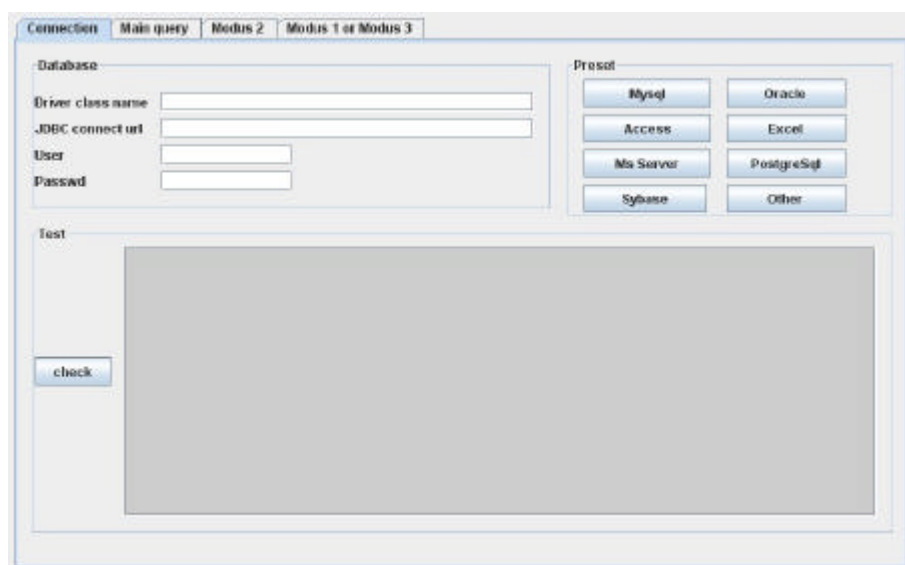


Figure 98: Coupling table - New configuration

10.2.1.1. Connection to the database

To define the JDBC connection parameter, please refer to the part 9.2.1.1 of this document.

10.2.1.2. Main query

1. Select the **Main Query** tab.

2. Fulfil the main query which identifies all the CDI local identifier (LOCAL_CDI_ID), as included in the central CDI directory at the SeaDataNet portal. This query must return only one column which is the LOCAL_CDI_ID of each CDI entry and that will be used for the Modus 2 query or the Modus 1 or 3 query.
3. Check the main query by clicking on the **Check SQL** button (see 10.2.1.5).

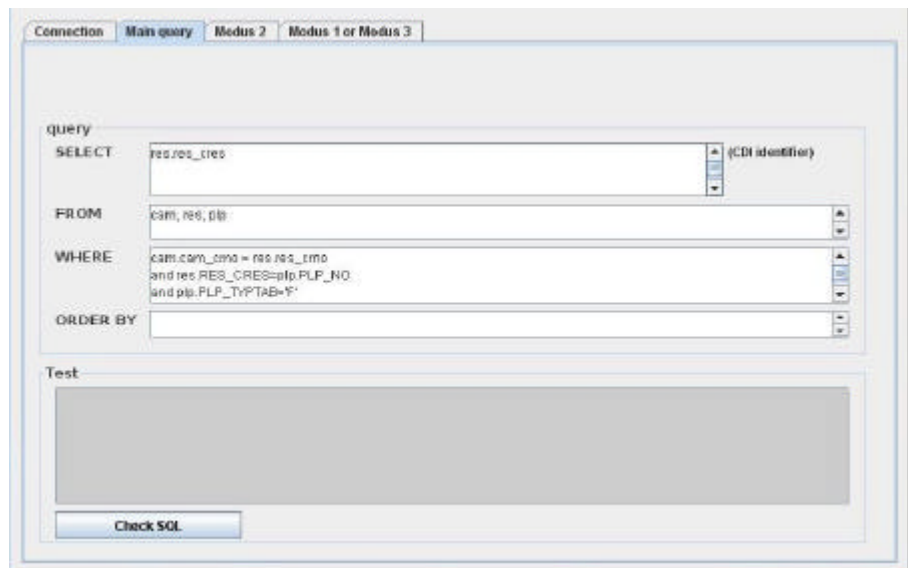


Figure 99 : Coupling table - Main query

10.2.1.3. "Modus 1 or 3" query

1. Select the **Modus 1 or 3** tab.
2. Select the format of the CDI files using the radiobuttons: ODV, Medatlas or NetCDF.
3. Fulfil the "Modus 1 or 3" query which returns the local filename for each LOCAL_CDI_ID returned in the main query. The character ':\$' indicates the LOCAL_CDI_ID returned by the main query. **One identifier symbol (':\$') must be used in the WHERE condition of the "Modus 1 or 3" query to identify the entry within the list. It will be automatically replaced by the current identifier in the list (see 9.2.1.2).**
4. Check the query by clicking on the **Check SQL** button (see 10.2.1.5).
5. Preview the coupling table by clicking on the **Preview coupling table** button (see 10.2.1.6).

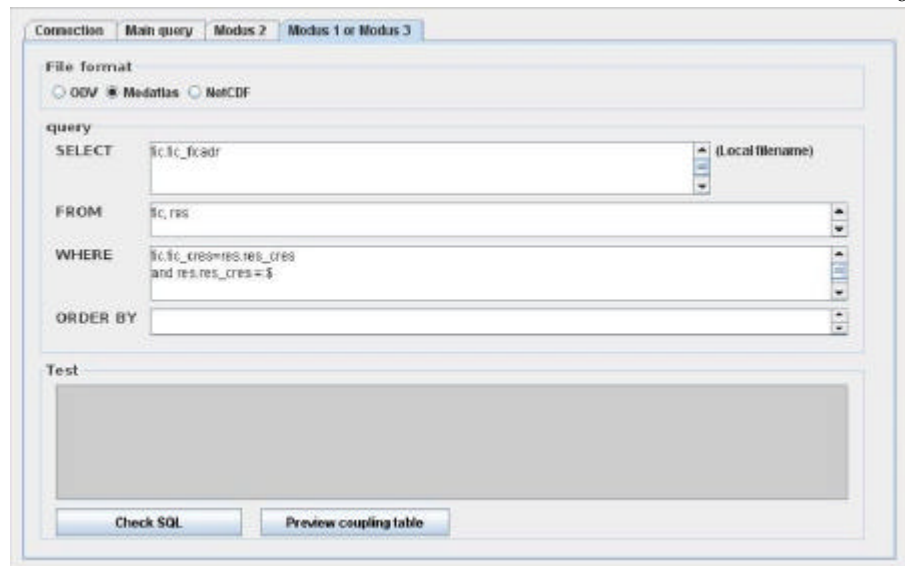


Figure 100: Query formodus 1 or 3

10.2.1.4. “Modus 2” query

1. Select the **Modus 2** tab.
2. Select the mapping configuration file which allows the conversion of the original datasets to the SeaDataNet ODV format.
3. Fulfil the Modus 2 query which retrieves from the local database all metadata and data necessary for creating the ODV data file, for each LOCAL_CDI_ID returned in the main query. The character ‘:\$’ indicates the LOCAL_CDI_ID returned by the main query. **One identifier symbol (‘:\$’) must be used in the WHERE condition of the “Modus 2” query to identify the entry within the list. It will be automatically replaced by the current identifier in the list (see 9.2.1.2).**
4. Check the query by clicking on the **Check SQL** button (see 10.2.1.5).
5. Preview the coupling table by clicking on the **Preview coupling table** button (see 10.2.1.6).

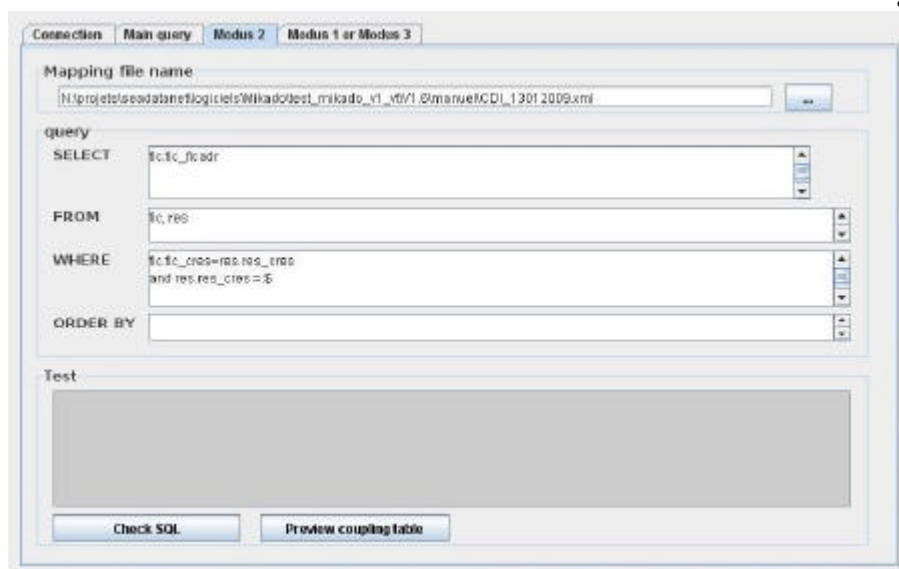


Figure 101: Query for modus 2

10.2.1.5. Queries checking

Before generating the coupling table, MIKADO allows to check:

- the database connection,
- the main query,
- the query in the **Modus 2** and **Modus 1 or 3** tabs.

The results of the query checking appear in the **Test** frame. A **green** message informs that the query is correct; an **orange** message is a warning to tell the user that a reference to the IDs returned by the main query is missing and a **red** message informs that the query is wrong and gives information about the error.

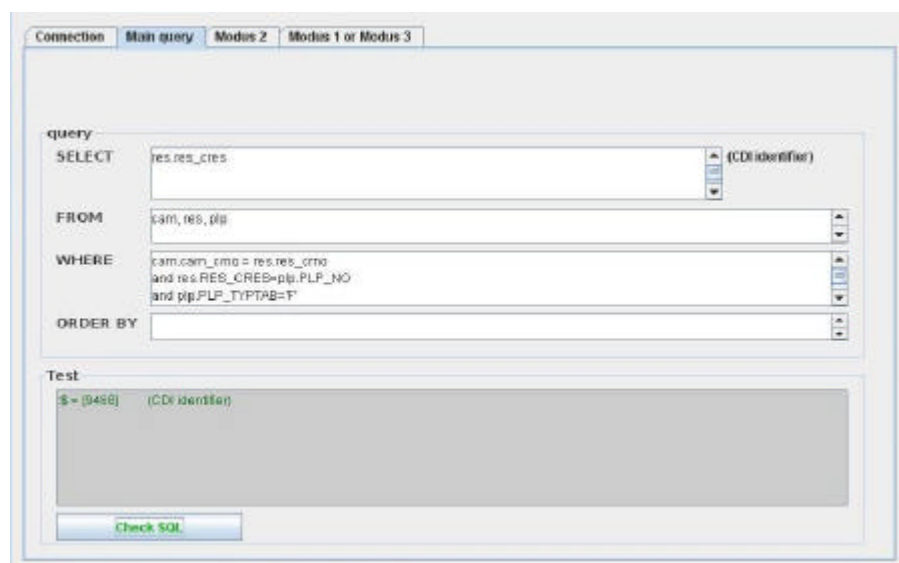


Figure 102: Right query – Green message

The screenshot shows the 'File format' dialog box with the following details:

- Tabs:** Connection | Main query | Modes 2 | Modes 1 or Modes 3
- File format:**
 - ☐ CSV
 - ☒ Metadata
 - ☐ NetCDF
- query:**
 - SELECT:** \$c.fr._floadr (local filename)
 - FROM:** \$c.res
 - WHERE:** \$c.fr._cns2=10 & NR_C10S
 - ORDER BY:**
- Test:**

```
$ = jlsqj (CDI identifier)
$c.fr._floadr = /home/wissem_ghannassig/observances/home/qas/fqqa/mag/M01011000010110015.M (Local filename)
Warning: the catalogue identifier must be present in the where clause predicate ($)
```
- Buttons:** Check SQL, Preview coupling table

Figure 103: Missing reference to ID - Orange message

The screenshot shows the Oracle SQL Developer interface. At the top, there are tabs for 'Connection', 'Main query', 'Modus 2', and 'Modus 1 or Modus 3'. The 'Main query' tab is active. Below the tabs, there is a 'File format' section with three radio buttons: 'ODV', 'Metadatas' (which is selected), and 'MetCDF'. Below this is a 'query' section with a text area containing the following SQL query:

```
SELECT fic.fic_ficad
FROM fic_res
WHERE fic.fic_cres=res.res_cres
and res.res_cres=9458
ORDER BY
```

Below the query section is a 'Test' section with a text area containing the following SQL query:

```
SELECT fic.fic_ficad
from fic_res
where fic.fic_cres=res.res_cres
and res.res_cres=9458
```

Below the 'Test' section, there is an error message in red text:

```
ORA-00904: "FIC"."FIC_FICAD": invalid identifier
```

At the bottom of the interface, there are two buttons: 'Check SQL' and 'Preview coupling table'.

Figure 104: Wrong query – Red message

10.2.1.6. Coupling table preview

In the **Modus 1 or 3** and **Modus 2** tabs, MIKADO allows to preview the coupling table which will be created during the generation. To do so, click on the **Preview coupling table** button and the preview will appear in the **Test** frame.

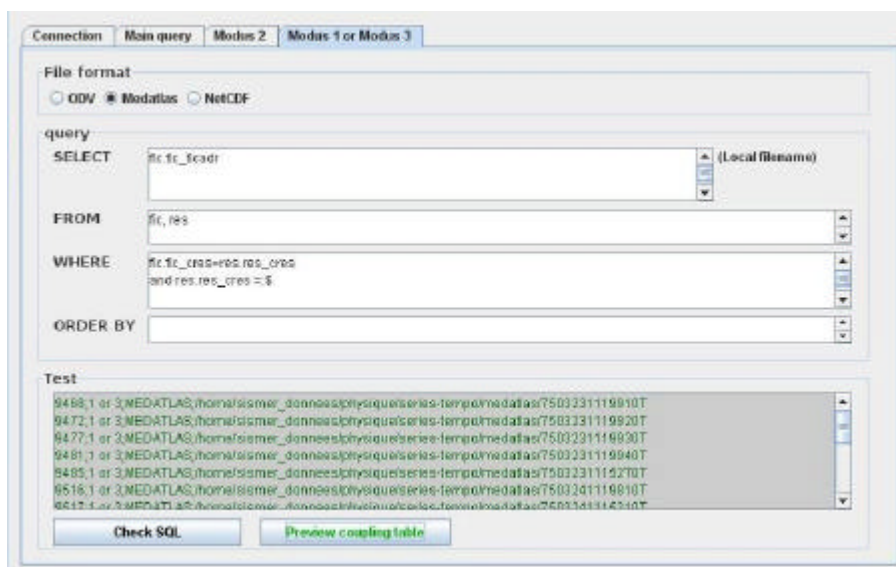


Figure 105: Preview the coupling table

10.2.2. Save the configuration file

Once the connection parameters and the queries have been fulfilled and checked, you can save the configuration file by selecting **Save** or **Save as** in the **Tools > Coupling table for Download Manager** menu. The configuration file has an “.xml” extension.

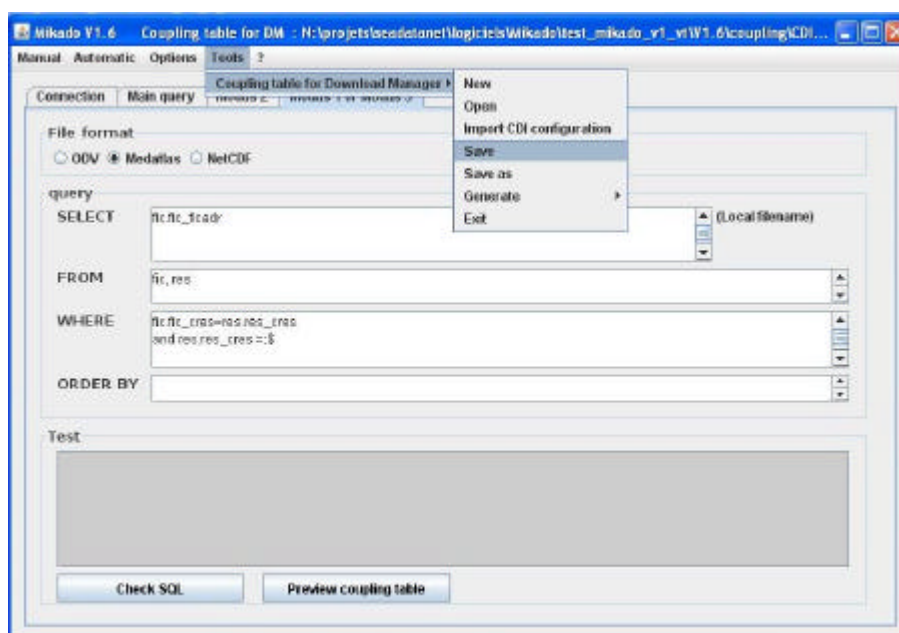


Figure 106: Save the configuration file

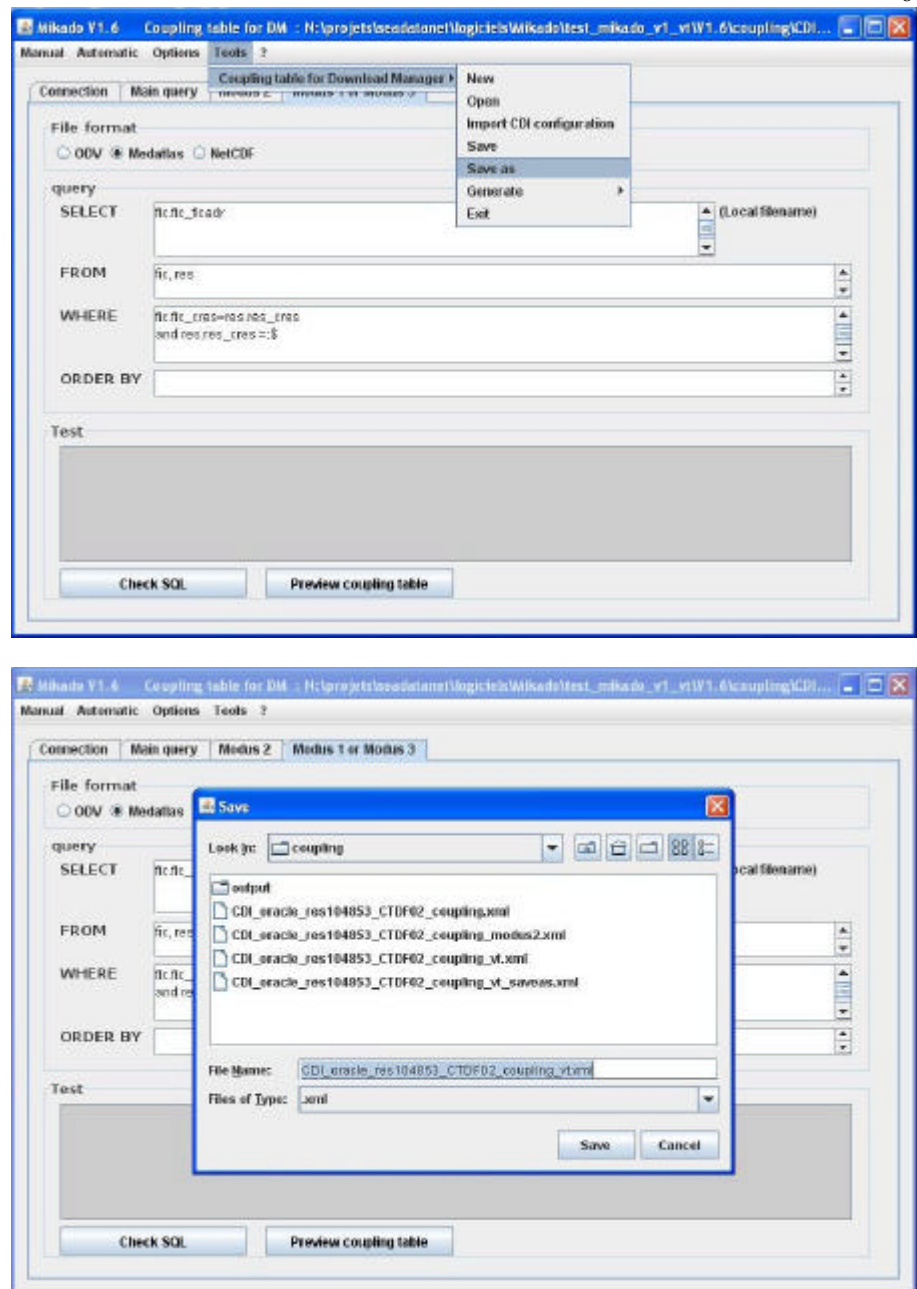


Figure 107: “Save As” the configuration file- Steps 1 and 2

10.2.3. Open an existing configuration

It is possible to open an existing configuration file using MIKADO. To do so, select **Open** in the **Tools** main menu and choose **Coupling Table for Download Manager**. Next, select the configuration file to open.



Figure 108: Open a configuration file with MIKADO

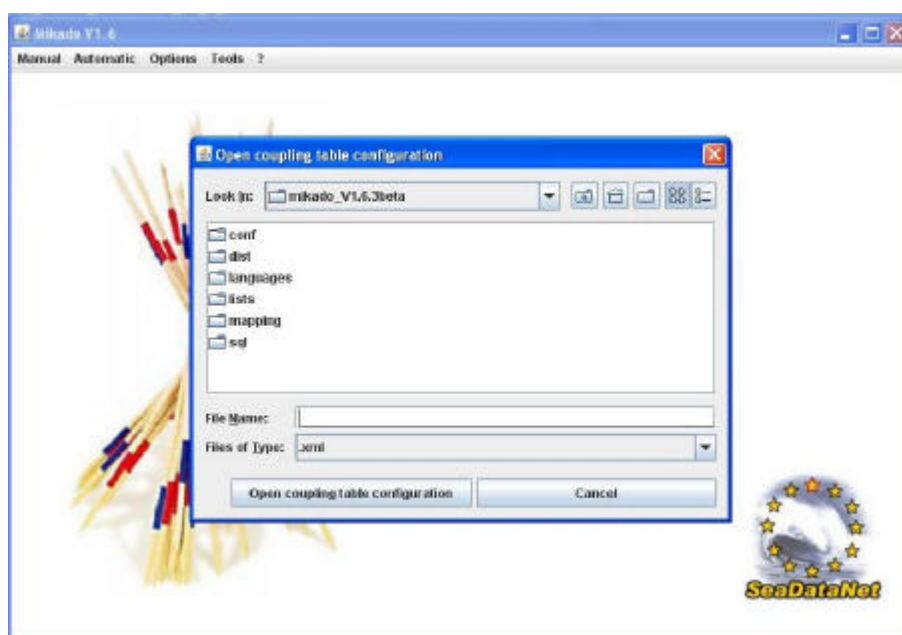


Figure 109: Select the configuration file to open

10.2.4. Import a CDI configuration (MIKADO automatic)

It is possible to import an existing CDI configuration file created with MIKADO automatic. It allows to pre-fill the **Connection** and **Main query** tabs of the Coupling Table configuration. To do so, select **Open** in the **Tools** main menu and choose **Coupling Table for Download Manager**. Next, select the configuration file to open. After that, it is possible to complete the Modus 1, 2 or 3 tabs.

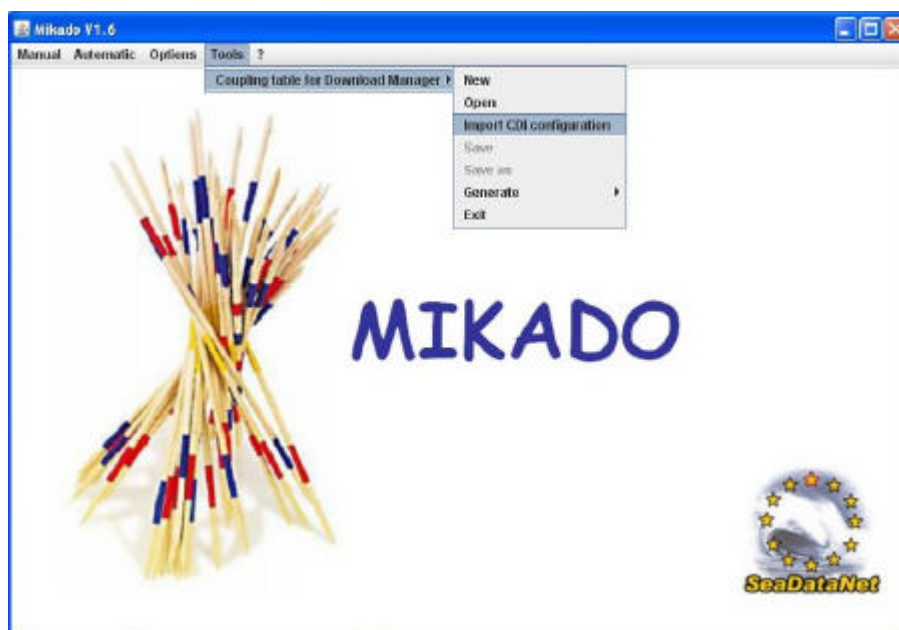


Figure 110: Import a CDI configuration file

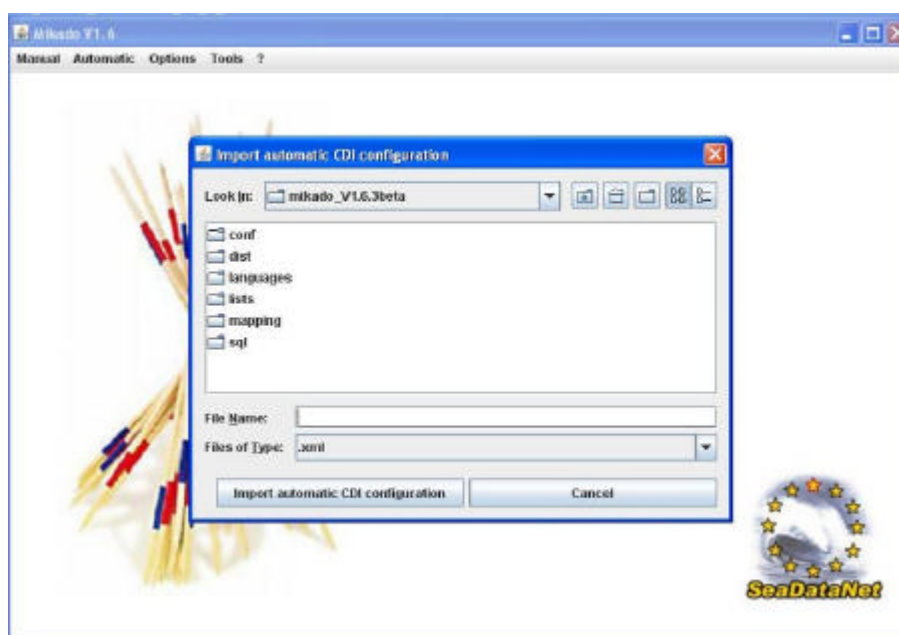


Figure 111: Select the configuration file to import

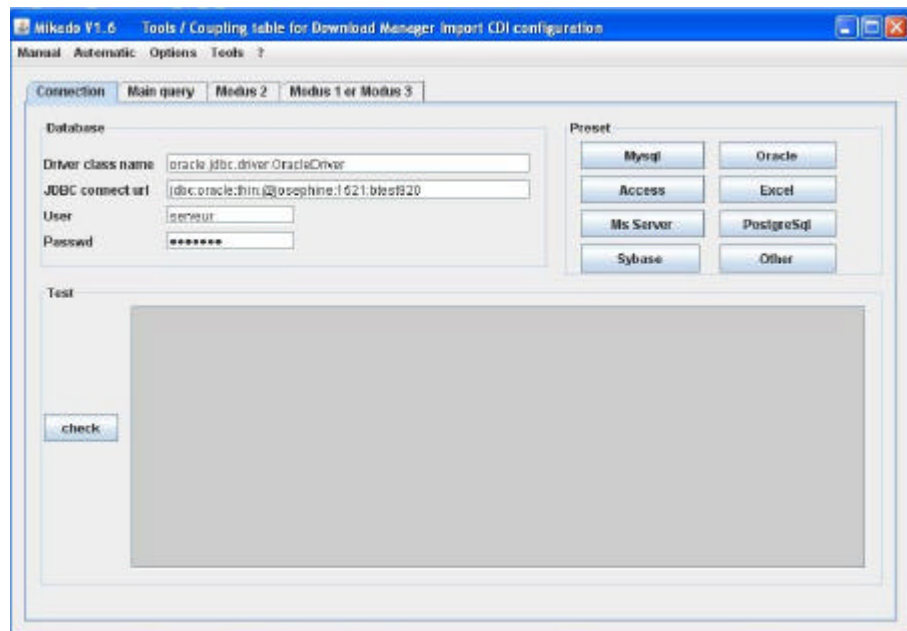


Figure 112: Imported CDI configuration

10.3. Run the automatic generation

The second step is the generation of the Coupling table. The tool must have been configured before generating the XML files (see 10.2).

- 1- Select **Generate** in the **Tools > Coupling Table for Download Manager** Menu.
- 2- Select the modus you want to generate: Modus1, Modus 2 or Modus3.

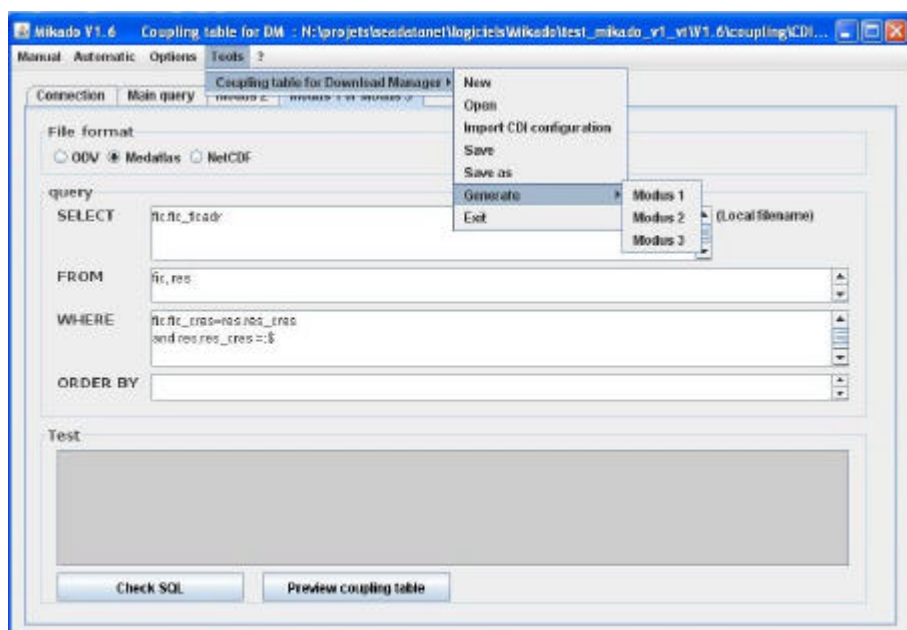


Figure 113: Automatic generation of XML files

- 3- Select the configuration file and the directory in which you want to create the coupling file.

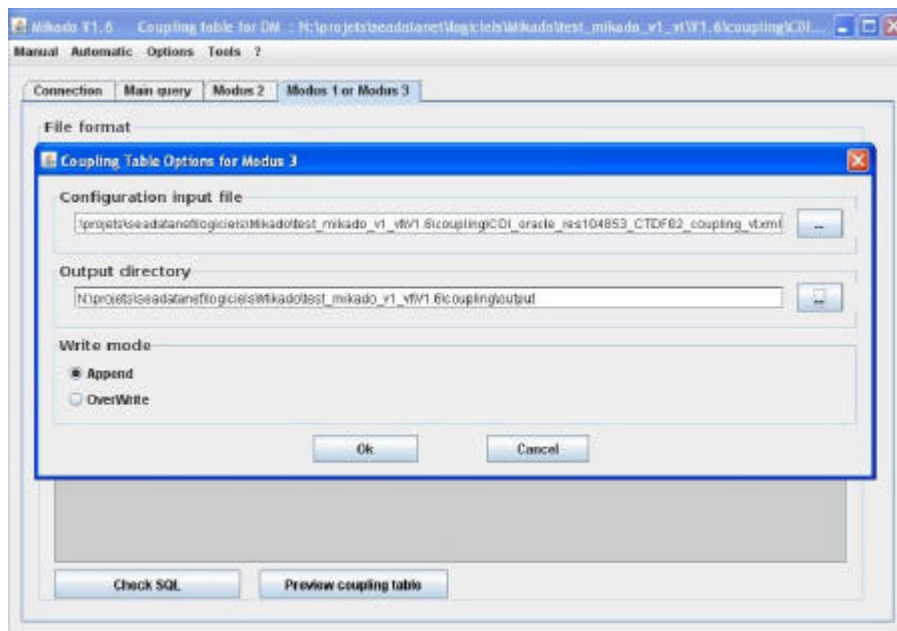


Figure 114: Select the configuration file

- 4- Control the coupling table generation. A progress bar and a percentage indicate the progress of the generation and a **Cancel** button allows to cancel the generation.

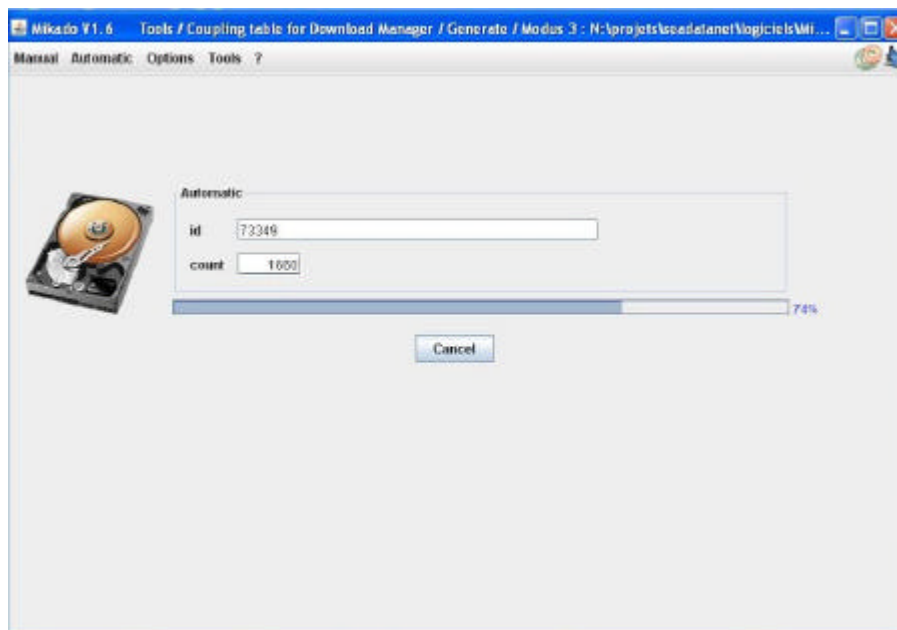


Figure 115: Coupling table generation: Ongoing work

11. Batch mode

In version 1.7 MIKADO can be run in batch mode.

The batch mode works under Windows and UNIX environments, with a small restriction if used by crontab under UNIX (see paragraph 11.3)

If severe errors occur the batch stops and errors are listed in the log file of Mikado. Fatal severe can be :

- SQL errors,
- Missing argument in the command line,
- Wrong configuration file,
- Writing rights missing in the output directory, ...

If argument “continue-on-error” is false, warnings are processed as severe errors, so they also interrupt the batch and are listed in the log file of Mikado (see paragraph 11.1.6).

11.1. Arguments for the command line

By default when MIKADO is run in interactive mode, the command line is :

```
Java -Djava.endorsed.dirs="dist/lib" -jar dist/Mikado.jar mikado-home=.
```

For the batch mode a number of arguments can be added in the command line with the following syntax :

```
Java -Djava.endorsed.dirs="dist/lib" -jar dist/Mikado.jar mikado-home=[path] argument2= ... argument  
n=
```

The available arguments are described hereafter.

11.1.1. Argument mikado-home

This argument is mandatory ; it is the path of the home directory of Mikado. It can be equal to ‘.’ if the batch is launched from the same directory than the home directory of Mikado.

Example:

```
mikado-home= N:\SeaDataNet\software\Mikado\mikado_V1.7
```

11.1.2. Argument batch-type

This argument is mandatory ; it defines the type of output of Mikado.

3 values are allowed :

- XmlFiles : the output of Mikado will be individual XML files (one per LOCAL_CDI_ID)

- ZipFile : the output of Mikado will be zip files containing individual XML files (one per LOCAL_CDI_ID)
- Both : the output of Mikado will be individual XML files (one per LOCAL_CDI_ID) and zip files containing the same individual XML files.

Example : *batch-type = ZipFile*

11.1.3. Argument batch-mode

This argument is mandatory ; it defines which catalogue is concerned by the XML generation. 4 values are allowed : CDI, EDMED, CSR or EDMERP.

Example : *batch-mode = CDI*

11.1.4. Argument conf-file

This argument is mandatory ; it is the path and name of the XML configuration file to be used for the automatic generation of the XML catalogue files. Previously, this configuration xml file with all the queries, must have been created with MIKADO automatic mode.

Example : *conf-file = X:\CDI_export\SQL\CDI_CTDF02_all_V1.6.1.xml*

11.1.5. Argument output-dir

This argument is mandatory ; it defines the output directory of MIKADO which is the directory where the zip files and/or the xml files are written by MIKADO.

Example : *output-dir = X:\CDI_export\CTDF02*

11.1.6. Argument continue-when-error

This argument is mandatory ; 2 values are allowed:.

- true : if MIKADO finds one record with mapping missing, or one record with mandatory field(s) null in the database, it writes a warning for this record in the logfile, and continues to process next records. So, only the XML file of the records with warning will be missing in the output directory.
- false : if MIKADO finds one record with mapping missing, or one record with mandatory field(s) null in the database, it writes a severe error in the logfile, and stops. In the output directory, the files generated before the detection of the error are available.

Example : *continue-on-error = true*

11.1.7. Argument log-file

By default the log file of Mikado is created in Mikado-home and it is named Mikado.log.

User can choose another Path and Name by using the log-file argument in the command line.

Example : `log-file=X:\physique\CDI_export\CTDF02\CDI_CTDF02.log`

11.1.8. Argument trace

By default the trace argument is set to false.

This argument is for tuning the SQL time response of SQL queries written in the configuration file. 2 values are allowed :

- `sql` : a tuning of the SQL request is generated on the standard output, this tuning can be redirected to a text file, using the character '>'
- `false` : no tuning of the SQL queries.

Example :

`trace = sql /* trace is written on the standard output */`

`trace=sql > x:\CDI_export\traces\CTDF02_trace.txt /* trace is written in a text file*/`

The trace file contains the elapsed time for each query of MIKADO's configuration file (main query, single queries and multiple queries). At the end of the trace file, there is a summary giving the time response of the SQL main query, the SQL query with the maximum elapsed time and the average elapsed time of all queries.

Example of trace file :

```
+=====+
| MAIN QUERY ==> 2 milliseconds |
+=====+
select mikado_cdi_localcdiid
from mikado_cdi_temp
where mikado_cdi_CBASE = 'HYDR01'
and mikado_cdi_localcdiid like 'FI35198600141%'
+=====+
| :$ = FI35198600141_00270_H09 |
+=====+
++
| SINGLE QUERY ==> 3 milliseconds |
++
select '486' as var01, '486' as var36, '486' as var09
from dual

etc ...
++
| MULTIPLE QUERY ==> 3 milliseconds |
++
select dpt.dpt_edmo_code as var07
from dpt, mis, cam, res, mikado_cdi_temp
where mikado_cdi_localcdiid = 'FI35198600141_00270_H09'
and mikado_cdi_cres=res.res_cres
and res.res_crno = cam.cam_crno
and mis.mis_crno = cam.cam_crno
and mis.mis_norang = 1 and mis.mis_cdpt = dpt.dpt_cdpt

etc ...
```

```
+=====+
| MAIN QUERY TIME ==> 2 milliseconds |
+=====+
select mikado_cdi_localcdiid
from mikado_cdi_temp
where mikado_cdi_CBASE = 'HYDR01'
and mikado_cdi_localcdiid like 'FI35198600141%'

+=====+
| MAXIMUM SUBQUERY TIME ==> 10 milliseconds |
+=====+
select cod.cod_libel as var03
from cod, res, mikado_cdi_temp
where mikado_cdi_localcdiid = 'FI35198600141_00560_H09'
and mikado_cdi_cres=res.res_cres and cod.cod_nolist = 811 and
cod.cod_langue = 'E'
and res.res_ellips
= cod.cod_code
+=====+
| AVERAGED SUBQUERY TIME ==> 2.23 milliseconds |
+=====+
```

11.1.9. Argument max-files-in-zip

By default the number of XML files in a MIKADO zip file is 1000. User can changes this number of files per zip file by using the argument max-files-in-zip.

Example : `max-files-in-zip = 3000`

11.1.10. Argument zip-prefix

By default there is no prefix on the zip file filename, and, by default, they are called SeaDataNet_[catalogue]_[x].zip (x starting with 1). Users can add a prefix to the zip file by using the zip-prefix argument.

Example : `zip-prefix = CTDF02`

For the CDI catalogue, the zip files will be called :

[CTDF02_SEADATANET_CDI_1.zip](#), [CTDF02_SEADATANET_CDI_2.zip](#),...

11.2. Example of Mikado.bat file for windows

```
REM #####
REM # Mikado 1.7 #
REM #####
REM # endorsed for java < JDK 6 Update 4 release #
REM # (JAX-WS 2.1 and JAXB 2.1 is available in JDK 6 Update 4 release) #
REM #####

REM #####
REM # Mikado with user interface #
REM #####
REM # mikado-home=mikado directory #
REM # optional : log-file=name of logfile (default Mikado.log) #
REM # optional : trace=false(default) or sql #
REM # optional : max-files-in-zip=1000 (default) #
REM # optional : zip-prefix= (no prefix by default) #
```

```
REM #####
REM#java -Djava.endorsed.dirs="dist/lib" -jar dist/mikado.jar mikado-home=.

REM #####
REM # Mikado batch                                     #
REM #####
REM # mikado-home=mikado directory                     #
REM # batch-type=XmlFiles,ZipFile or Both              #
REM # batch-mode=CDI,EDMED,CSR or EDMERP              #
REM # conf-file=path of xml automatic configuration file #
REM # output-dir=output directory for generation      #
REM # continue-when-error=true or false               #
REM # optional : log-file=name of logfile (default Mikado.log) #
REM # optional : trace=false(default) or sql          #
REM # optional : max-files-in-zip=1000 (default)       #
REM # optional : zip-prefix= (no prefix by default)   #
REM #####
java -Djava.endorsed.dirs="dist/lib" -jar dist/mikado.jar mikado-home=. batch-type=ZipFile
batch-mode=CDI conf-file=X:\CDI_export\requetes_SQL\CDI_CTDF02_all_V1.6.1.xml
output-dir=X:\CDI_export\CTDF02 continue-when-error=true
log-file=X:\CDI_export\CTDF02\CDI_CTDF02.log
trace=sql > X:\CDI_export\CTDF02\trace_CTDF02.txt
max-files-in-zip=3000 zip-prefix=CTDF02
```

11.3. Crontab for Unix.

Under UNIX environment, if the user launches batch mode of MIKADO by crontab, there is no DISPLAY opened. So MIKADO in batch mode will stop with a fatal error "cannot open DISPLAY".

To bypass this, user needs to install a virtual display, like XvFb.

For example, for Solaris a software for virtual display installation and tutorial can be downloaded from :

http://www.idevelopment.info/data/Unix/General_UNIX/GENERAL_XvfbforSolaris.shtml.