

# Part of User Manual to install the Eurosion Database on ArcGIS software

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KEYWORDS	Database Installation, Guide, User Manual, Instructions, EUROSION, attribute, relationships, joins, relates			
SUMMARY	This document aims at providing a guide to install the layers delivered within the EUROSION European level Database, as major part of the WP2 contribution.			

Version	Date		Observations
1.0	31/10/03	Creation	First delivery on the EUROSION Web Platform
2.0	04/11/03	Update	Integration of IGN FI and IFEN dataset description confirmation
2.1	10/03/04	Update	Last update from EADS S&DE including some remarks of IGN FI as WP2 leader
2.2	19/03/04	Update	Checking, updating (with last datasets integrated) and complete reshaping of the report by IGN FI

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#### **INTRODUCTION**

This document has been undertaken as part of Work Package 2.3 "Design of the European Database Architecture" of EUROSION, a project contracted by the European Commission to a consortium led by the National Institute for Coastal and Marine Management of the Netherlands (RIKZ), for the period 2002-2004. Within the EUROSION framework, EADS S&DE is in charge of designing data model and supporting IGN France International in the implementation of the European Level Database for coastal erosion.

#### **INITIALISATION**

#### **EUROSION DATABASE DIRECTORIES**

Before installing the database you have to declare the path on which you want to install the database on your computer. Along this manual the path used for the location of the Eurosion database is:

#### %Home%\Eurosion\database

where Home can be any path (c:\; d:\; d:\projects\...).

#### **Eurosion Metadata Editor Setting-Up**

To install the Eurosion metadata editor the following path should be created:

%Home%\Eurosion\ArcCatalogEditor

#### **Eurosion Metadata Directory**

To install the Eurosion metadata create the following path:

%Home%\Eurosion\metadata

HOME depicts a system environment variable.

Technical issue: How to configure an environment variable on your system?

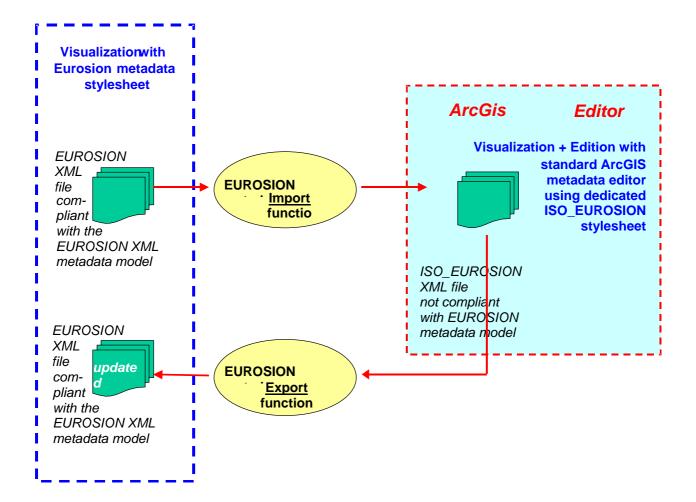
This action differs from one Operating System to another. Behaviors of Windows 2000 and XP appear similar, and thus major steps are described in this chapter hereinafter (§ EUROSION METADATA EDITOR INSTALLATION - SETTING A ENVIRONMENT VARIABLE WITHIN WINDOWS OS)

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#### **Eurosion Metadata Editor Installation**

#### **Process Description**

The following schema depicts the process to be used for updating or modifying metadata within ArcGIS tool.



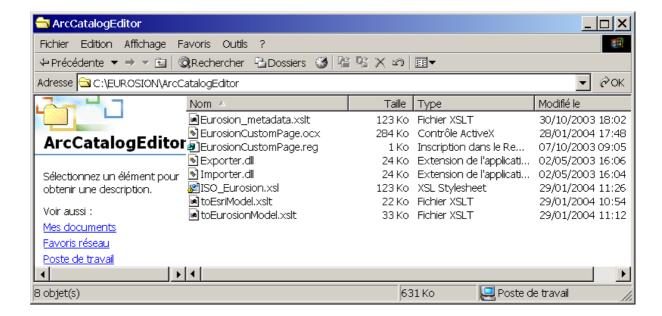
#### Metadata Editor Directory Setting-Up

To make the process real, some files are provided by the consortium and have to be installed on the workstation:

- Stylesheets: ISO\_EUROSION.xsl, EUROSION\_metadata.xslt
- Importer and Exporter DLLs: Importer.dll, Exporter.dll
- data gateways: toESRIModel.xslt, toEUROSIONModel.xslt
- programs: EurosionCustomPage.reg, EurosionCustomPage.ocx

Next paragraphs resume steps to install properly the metadata editor.

- 1. Define the path on which the Metadata Editor shall be installed. For example: C:\Eurosion\ArcCatalogEditor\
- 2. Copy the files provided into this directory:



#### Setting A Environment Variable Within Windows Os

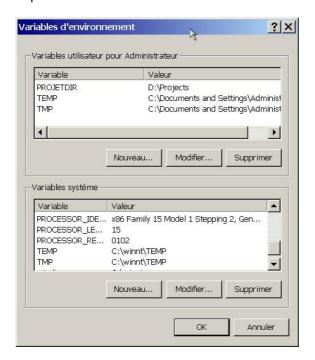
In the next step the need to define the environment variable called EUROSION\_**STYLESHEETS** gives the opportunity of explaining how to proceed.

The <u>environment variable</u> generally indicates to the Operating System a reference for a path where located useful files are. Our concern is to offer the most flexibility to the user for installing the database and all its components. Effectively the database is currently being described to be installed under C:\Eurosion\ArcCatalogeditor\ but setting other values to the environment variables makes it possible to work on other volume drives and/or directories (e.g. G:\Projects\Data\EUROSION\MetaDataEditor or whatever...)

#### EUROSION\_STYLESHEETS variable shall refer to the path: D:\Eurosion\ArcCatalogeditor\

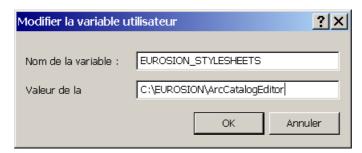
Open the CONTROL PANEL

Select the **SYSTEM** TAB. The window **System Properties** appears
Select **Advanced** TAB and push **Environment variables** button. A new window appears

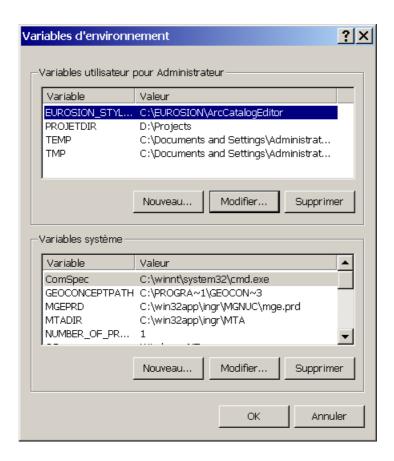


Click on the button **New** (on the middle part of the window, this action will create user own variable and not system variable, assuming that the user is system administrator)

- Add the name of the variable (for our example: EUROSION\_STYLESHEETS)
- Enter the location (directory) where the reference will refer for this variable (C:\EUROSION\ArcCatalogEditor)
- Click OK to close this window and twice for the window above.



Now, the EUROSION\_STYLESHEETS environment variable is set and refers to C:\EUROSION\ArcCatalogEditor



Following steps will consist in registering Importer and Exporter dynamic linked libraries, and install executable files for the ISO Metadata Wizard.

#### Importer.DII Registration

1. The registration is executed through a DOS command to be entered as following: Click on *Start menu* then *Execute* On the prompt type:

regsvr32 "C:\Eurosion\ArcCatalogEditor\Importer.dll"



2. Execution of Categories.exe program.

**Categories.exe** is located in the %ARCHOME%/bin directory *i.e.* where ArcEditor has been installed on the workstation.

During the installing of the ESRI ArcGIS software, the system automatically set the ARCHOME environment variable to this directory (C:\Program Files\ESRI\arcgis\arcexe82\)

Click on **Start menu** then **Execute** On the invite:

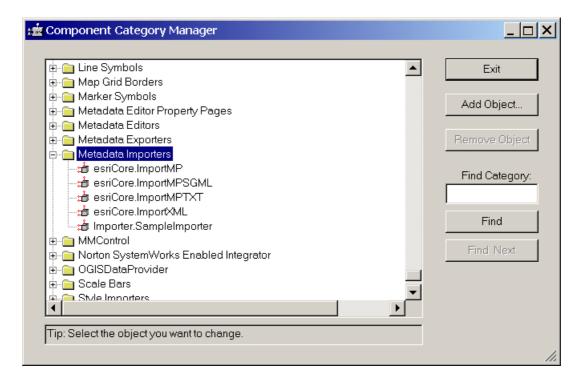
#### %ARCHOME%\bin\Categories.exe

If this does not function:

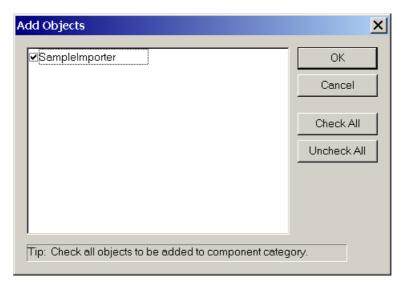
- %ARCHOME% may not be recognized and the administrator/user may set this system variable according to the process described above.
- Otherwise the best solution results in searching the file on the disk.

Beware: this Categories.exe must be in the same arborescence tree of the ArcGIS used.

When the *Categories.exe* program is executed the following window appears:



Search and select the file *Importer.dll* from C:\Eurosion\ArcCatalogEditor\ and click "Open" The add object dialog box appears listing "SampleImporter", which is checked by default. Clik OK.



By clicking OK, a new *Importer.SampleImporter* has been added to the list of components in the Metadata Importers category.

Click on Exit button, the Importer.dll has been successfully installed

#### Exporter.dll registration

Actions are similar to register the Exporter.dll file. Same problems may happen (please see § "Importer.dll registration")

1. The registration is executed through a DOS command to be entered as following: Click on *Start menu* then *Execute* On the prompt type:

regsvr32 "C:\Eurosion\ArcCatalogEditor\Exporter.dll"

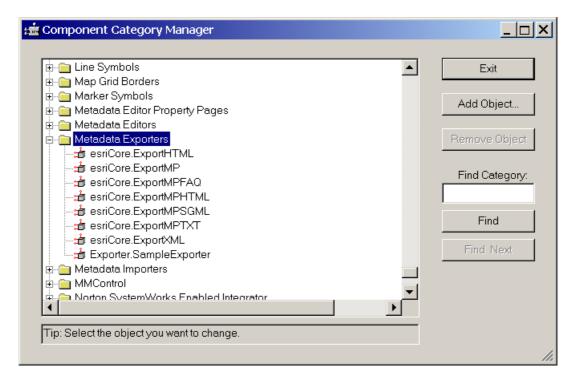


2. Execution of Categories.exe program.

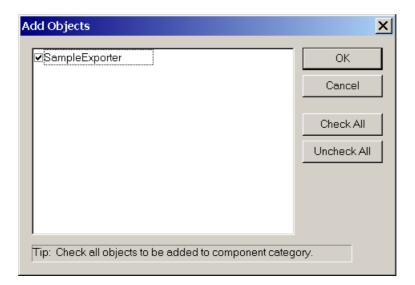
Click on **Start menu** then **Execute** On the invite:

#### %ARCHOME%\bin\Categories.exe

When the *Categories.exe* program is executed, navigate into the window to find the 'Metadata Exporters' folder. Select this folder and click *Add Object* 



Search and select the file *Exporter.dll* from C:\Eurosion\ArcCatalogEditor\ and click "Open" The add object dialog box appears listing "SampleExporter", which is checked by default.



By clicking OK, a new *Exporter.SampleImporter* has been added to the list of components in the Metadata Exporters category.

Click on Exit button, the Exporter.dll has been successfully installed

#### Iso Wizard Installation

Before installing additional wizard components, please copy:

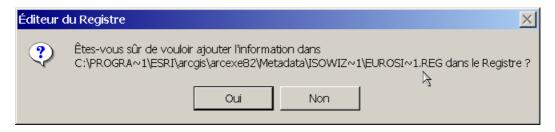
- the ISO\_Eurosion.xsI file into

[location where ArcGIS is installed]...\Metadata\Stylesheets\

- EurosionCustomPage.ocx and EurosionCustomPage.reg files into [location where ArcGIS is installed]...\Metadata\ISOWizard

For our case: [location where ArcGIS is installed] is C:\Program Files\ESRI\arcgis\arcexe82

1. Double-click on *EurosionCustomPage.reg* to add this information inside the register



Click on "Yes" (or "Oui") button to validate.

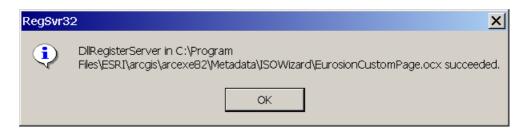
A confirmation message informs you that this file has effectively been registered. Otherwise error message.

2. To register *EurosionCustomPage.ocx*, please activate *Start menu* then *Execute* and type the following command on the invite:

#### Regsvr32 "C:\Program Files\arcgis\arcexe82\Metadata\ISOWizard\EurosionCustomPage.ocx"

For our case: [location where ArcGIS is installed] is C:\Program Files\ESRI\arcgis\arcexe82

Remark: The enclosing quotes make the system consider a path that includes blank spacing character, otherwise the system does not.



All manipulations to make the wizard function are made.

Nevertheless we recommend closing any ESRI application and restarting ArcCatalog. It happened during the tests that the manipulations made were not taken into account due to specific system configuration (either instable or too busy) within Windows 2000 OS: a workaround exists by closing all running applications and starting a new session.

#### **Metadata Editor Use (Within Arc Catalog)**

This chapter describes how to visualize EUROSION XML files with the Metadata Editor (using the EUROSION metadata style sheet made for). Second step consists in describing the import of a XML file compliant with EUROSION metadata scheme to another XML file using ISO\_EUROSION metadata scheme, compatible with the Standard ESRI Metadata Editor, in order to be able to modify, update or complete metadata files. The use of this Standard Metadata Editor Wizard is shown. Last step depicts how to export the ISO\_EUROSION XML file modified into an EUROSION XML file compliant with EUROSION XML metadata scheme (warrant of the exchanges between EUROSION partners and local users.). The process here comments no more no less the schema of § Process Description.

#### Visualisation of EUROSION XML files

To make delivered EUROSION XML compliant files, please do proceed to the following actions:

- Copy the Eurosion stylesheet *Eurosion\_metadata.xslt* into the directory:

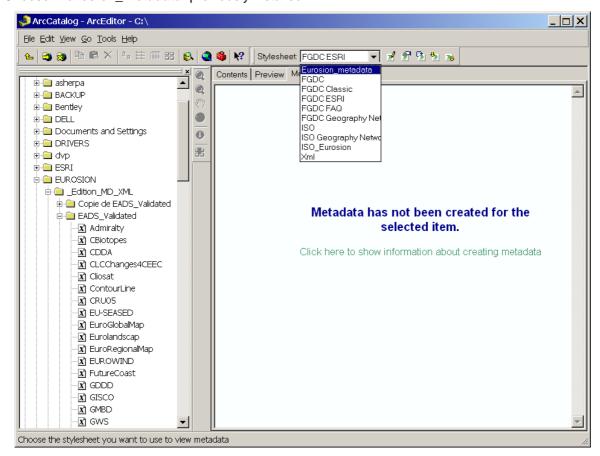
[location where ArcGIS is installed]...\arcgis\arcexe82\Metadata\Stylesheets\

Rename this file by changing its extension as follows: *Eurosion\_metadata.xsl* 

Launch *ArcCatalog* application. Select the TAB called *metadata*.

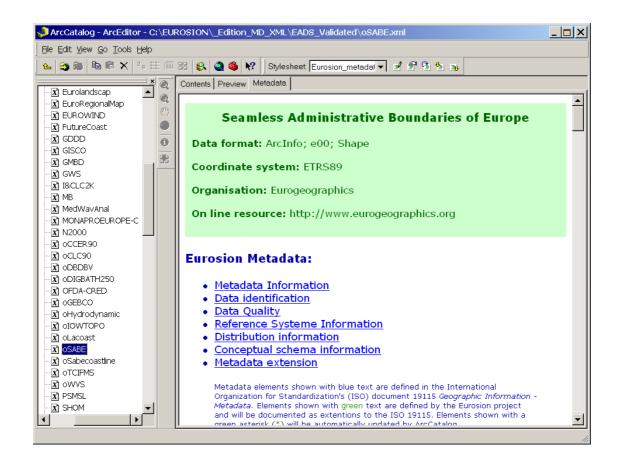
Activing menu View -> Toolbars -> Metadata let appear a window called <u>Stylesheet</u>.

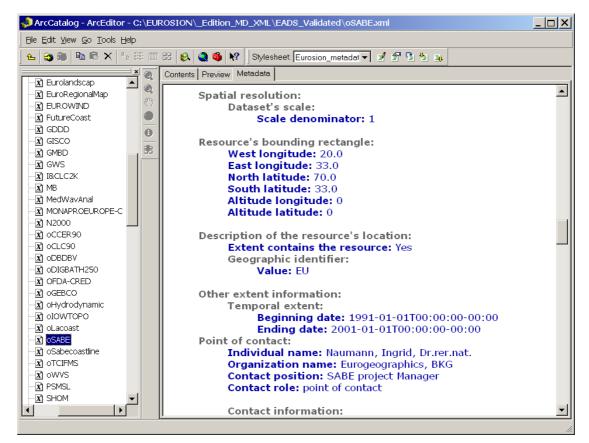
Choose "*Eurosion\_metadata*" previously installed.



Metadata compliant with EUROSION metadata stylesheet can now be viewed with ArcCatalog tool.

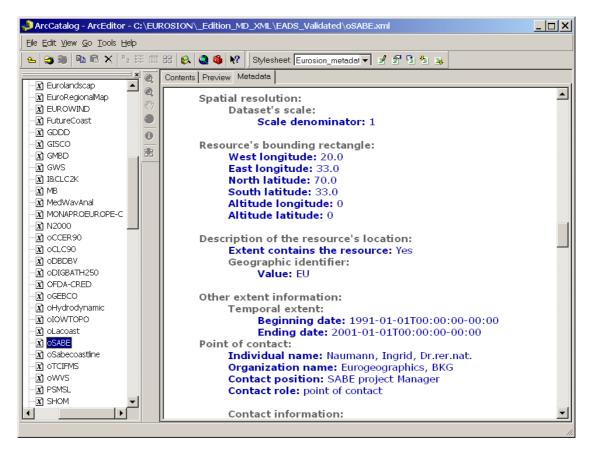
Note: Under Windows 2000 OS, ArcCatalog application might be closed and relaunched to make the modification efficient.





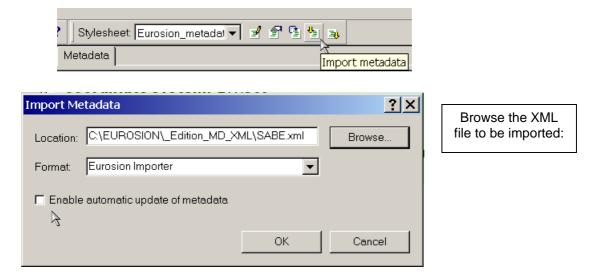
#### Import of Eurosion XML files

This function allows the conversion of an Eurosion XML file compliant with the EUROSION XML SCHEMA into a internal ESRI XML format. This operation is needed to ensure metadata update with the ArcGis Standard Editor Wizard.



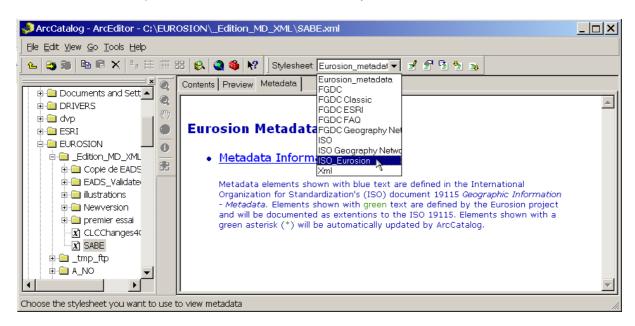
SABE XML metadata file is currently displayed within EUROSION\_metadata Stylesheet

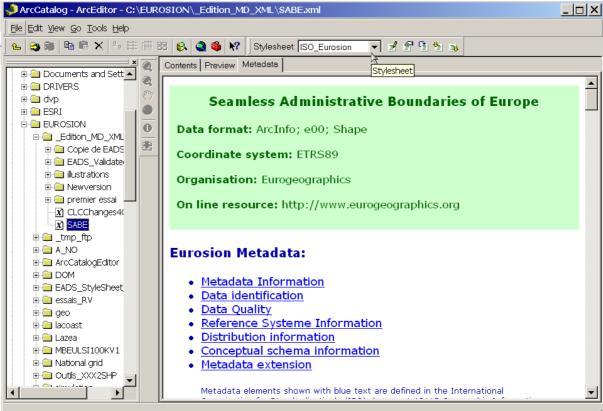
1. The import is launched by **FIRST** selecting the file to import and then pushing the button corresponding to Import of Metadata as shown below.



IMPORTANT: Disable the option "Enable automatic update of metadata" unticking the box.

After validation 'OK', the file has been imported. Its visualization now requires the use of **ISO\_EUROSION** Stylesheet



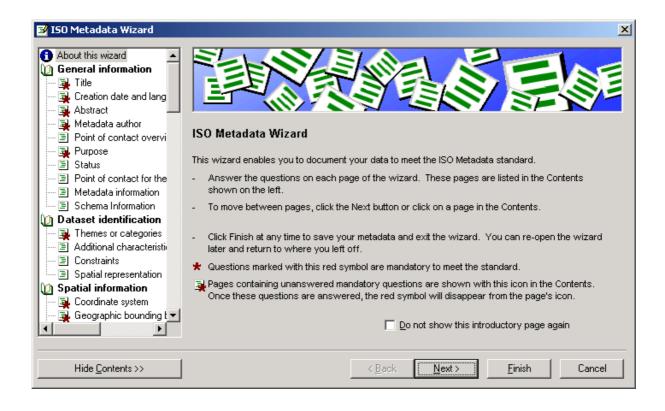


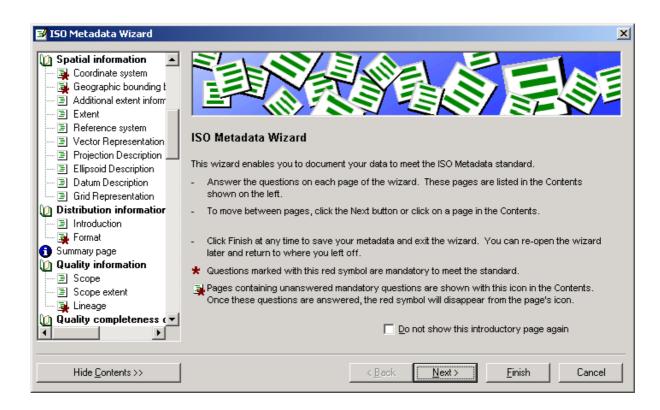
Visualizing the imported file using the ISO\_EUROSION will allow the edition and modification of the imported file (in memory) with the Standard ArcGIS Metadata Editor Wizard. This is described in the next paragraph.

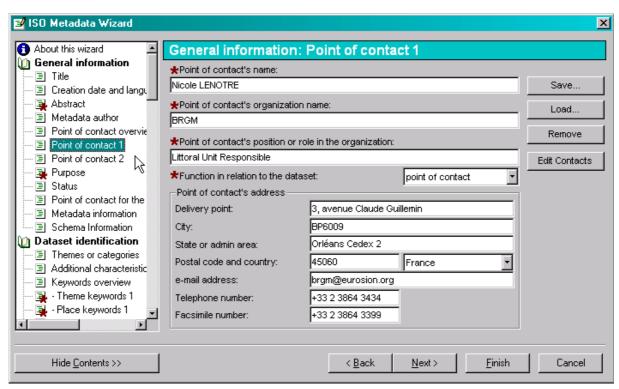
#### Editing metadata

Once the XML imported file is displayed using ISO\_EUROSION stylesheet, the Metadata Editor Wizard is accessible through the button:





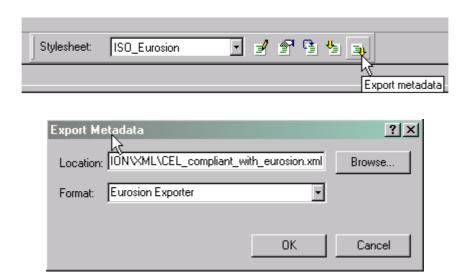


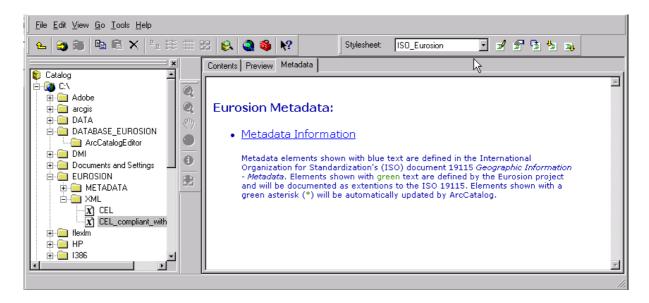


#### Export metadata to an XML format compliant with the Eurosion XML SCHEMA

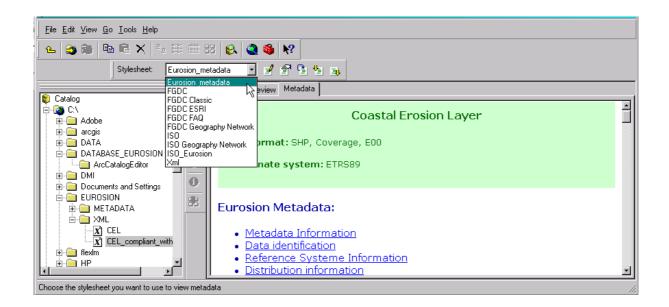
This function allows the previously modified ISO\_Eurosion XML file into EUROSION XML SCHEMA compatible format.

The export is launched by **FIRST** selecting the file to export and then pushing the button corresponding to Export of Metadata as shown below:





The metadata file exported into an XML file compliant with the EUROSION XML SCHEMA can be displayed by changing of stylesheet and selecting EUROSION\_metadata one.



The file has been correctly exported and is now modified and still compliant with EUROSION Metadata Model.

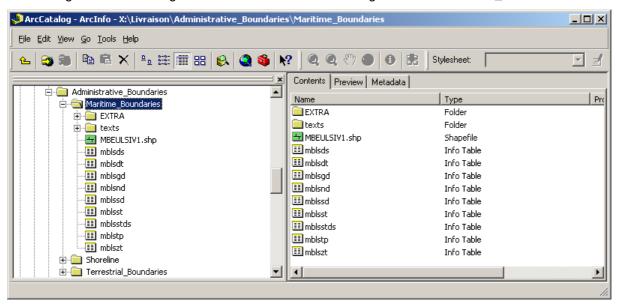
#### **INSTALLING EUROSION DATABASE**

#### **Administrative Boundaries**

#### Maritime boundaries

#### 1. Check the content of the dataset on ArcCatalog

After copying the corresponding dataset from the delivery support to the workstation, check with ArcCatalog that the following information exists when selecting the folder "maritime\_boundaries".

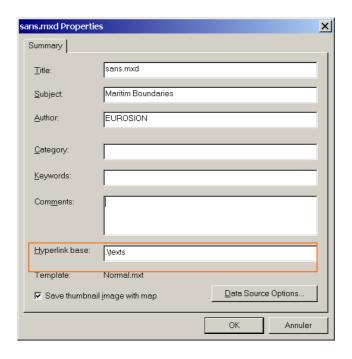


The folder titled "texts" contains the "Law of the Sea" PDF files.

#### 2. Defining the hyperlink base in ArcMap

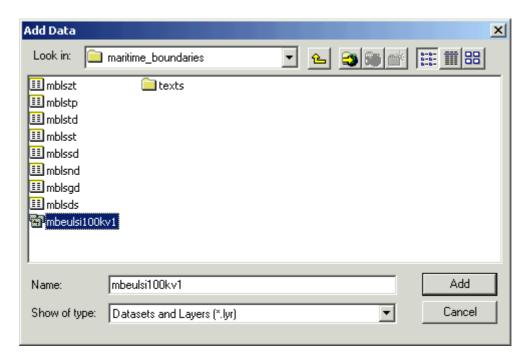
Law of the sea PDF file's names are stored in the attribute *MBLSLK* of table *MBLSDS*. In order to be able to use the hyperlink tool of ArcMap, it is necessary to define a hyperlink base path. In the delivery structure, PDF texts are stored in the directory ".\texts". So the first step in Arc Map is to open the File/Map Properties... window and type .\texts in the Hyperlink base field as shown hereinafter.

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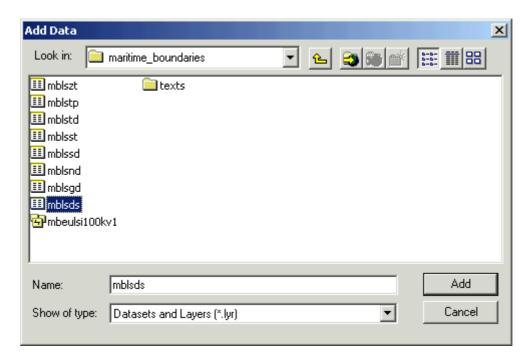


## 3. Joining Arc Attribute Table of coverage MBEULSI100KV1 with INFO table MBLSDS with ArcMap

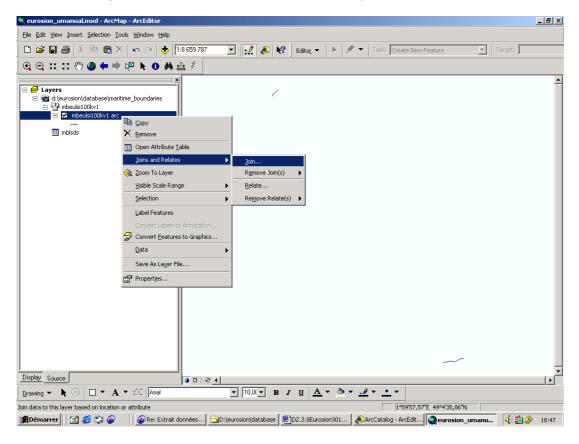
Add coverage MBEULSI100KV1.



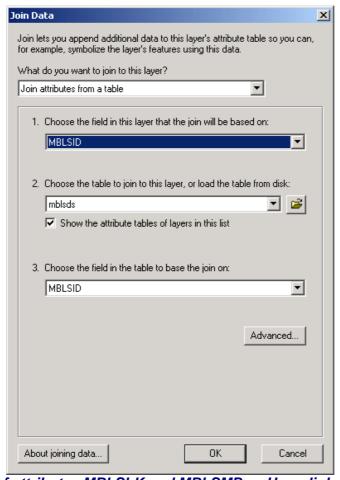
Add table MBLSDS.



Join the Arc Attribute Table with INFO table *MBLSDS*. The attribute *MBLSID* is the key attribute used to establish the join between the two tables. Follow the steps below:



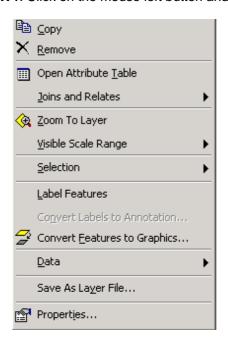
Select the attribute *MBLSID* for the 2 tables and click OK, as follows:



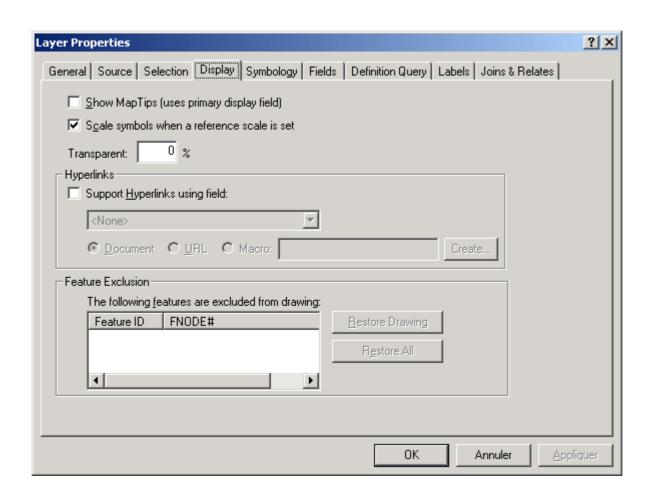
#### 4. Definition of attributes MBLSLK and MBLSMP as Hyperlinks

This step aims at defining these attributes as Hyperlinks to allow the consultation of the PDF files corresponding to the feature selected by the user.

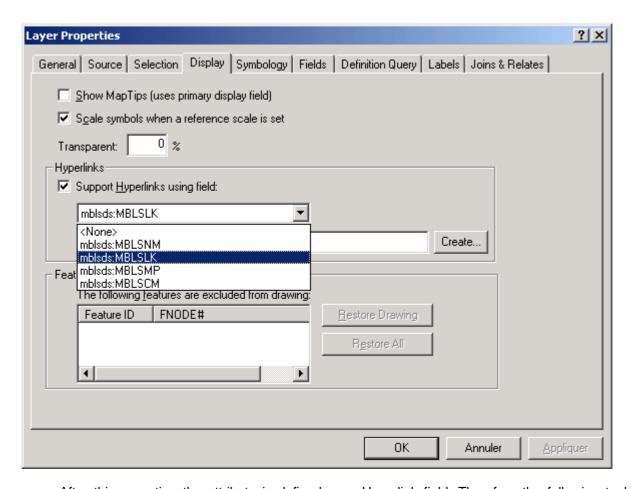
Select coverage *MBEULSI100KV1*. Click on the mouse left button and select option "*Properties*".



The following window appears.



Select the "Display" tab and click on the option "Support Hyperlinks using field". Then select the field **MBLSLK**. Should the linked file be a document (this is the case for this layer) the "Document" option shall remain activated.

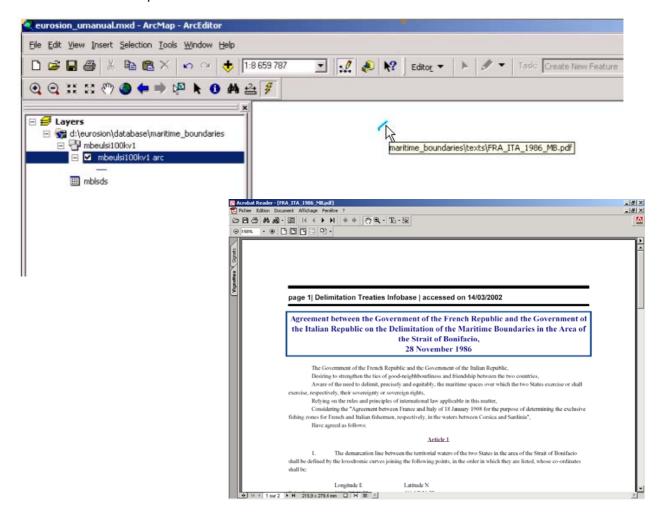


After this operation the attribute is defined as a Hyperlink field. Therefore the following tool becomes active:

#### 5. Check that the correct opening of PDF files

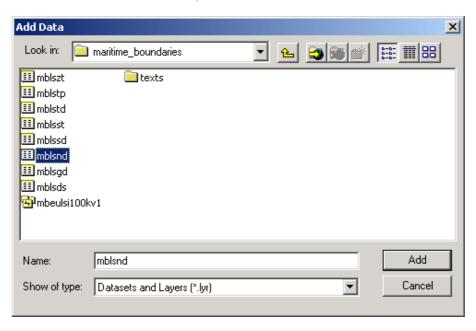
Click on the toggle in the toolbar.

Click on a selected feature to activate the hyperlink. The corresponding PDF file is displayed. Otherwise reconsider phase 4 with attention.

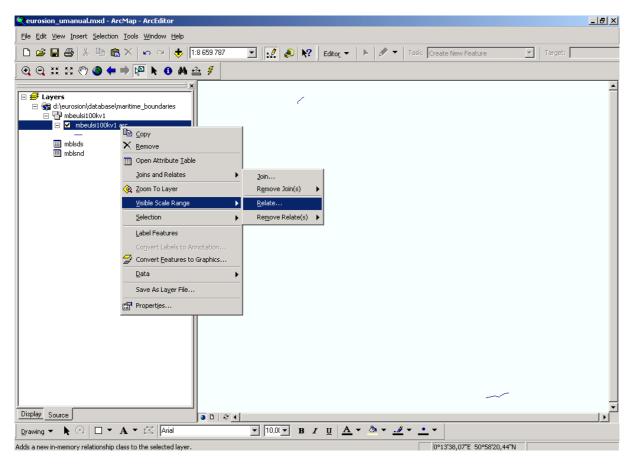


## 6. Relating the Joined MBLSDS-Arc Attribute Table and INFO table MBLSND with ArcMap

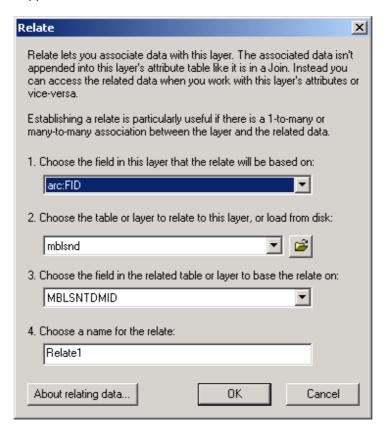
Add INFO table **MBLSND** with ArcMap.



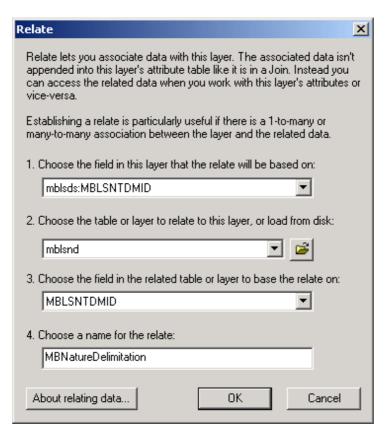
To create the relationship, it is necessary to make the relation with the Arc Attribute Table of coverage *MBEULSI100KV1* already joined with table *MBLSDS*. For that, select the coverage *MBEULSI100KV1*, right-click on the mouse and choose option "*Relate*".



The following window appears:



Select attribute *MBLSNTDMID* which is the attribute for linking the 2 tables. Define the name of this relation with "*MBNatureDelimitation*".



Click on OK and the relation is established.

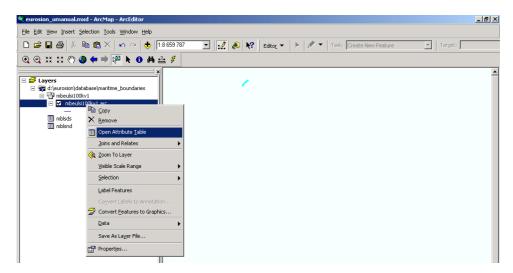
#### 7. Check if the relation with table MBLSND is active

To check if the relation is active, select a feature with the tool

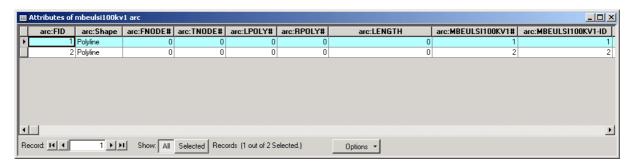
When selected the feature appears with the different colour, light blue in the following figure.



Open the Arc Attribute table of coverage MBEULSI100KV1.



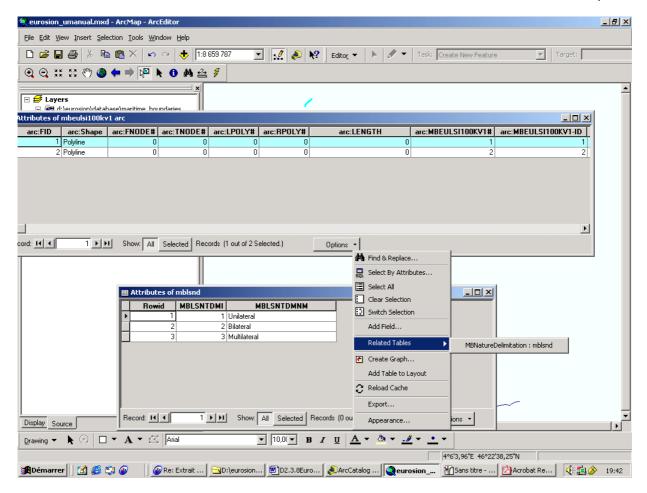
The selected feature on the map appears also highlighted in light blue into the corresponding table.



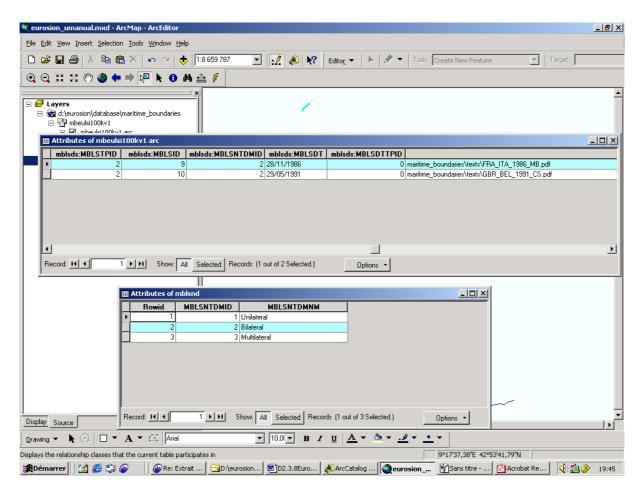
Open table MBLSND.



To check if the relate is active, click on "Options" from the table windows of the coverage **MBEULSI100KV1**. Then activate "Related Table" and click on "MBNatureDelimintation" relationship.



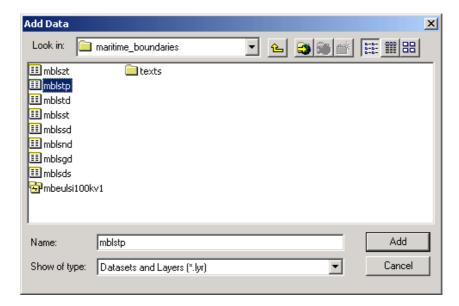
After activating the relation the corresponding record within table **MBLSND** remains selected.



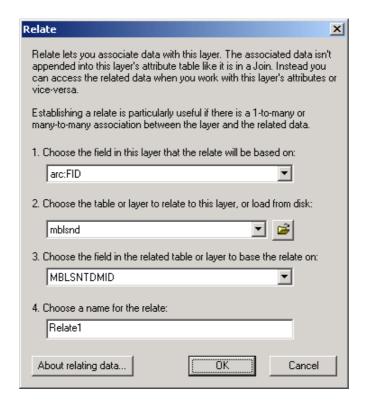
This allows the user to know interactively the nature of the delimitation.

## 8. Relating the Joined MBLSDS-Arc Attribute Table and INFO table MBLSTP on ArcMap

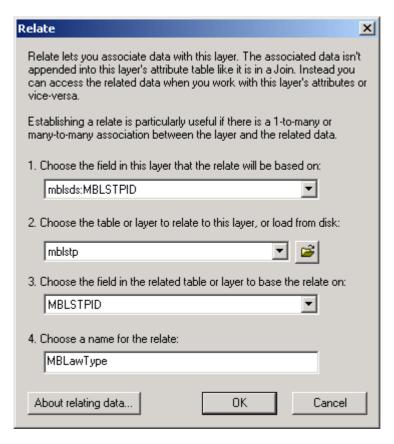
Add INFO table **MBLSTP** with ArcMap.



Select coverage MBEULSI100KV1, right-click on the mouse and choose "Relate" menu.



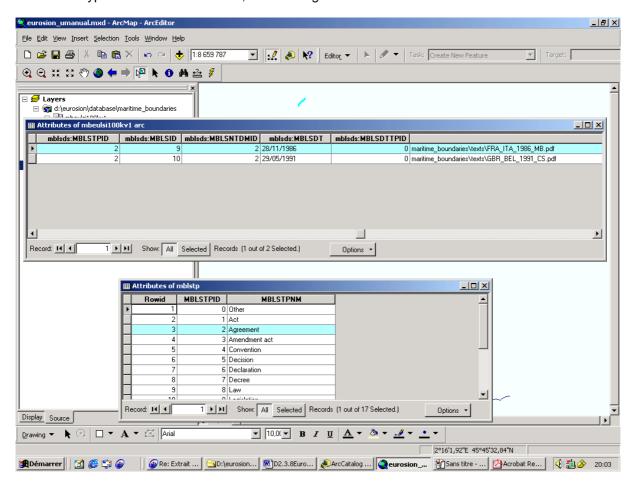
Select the attribute **MBLSTPID** for the Arc Attribute Table of coverage **MBEULSI100KV1** and table **MBLSTP**. Define the name of this relation with "MBLawType".



Click OK and relationship is established.

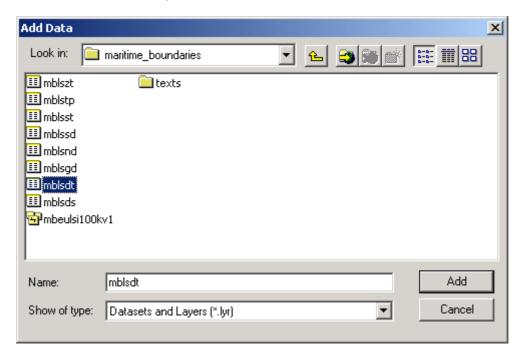
9. Check if the relation with table MBLSND is active

To check if the relationship is activated follow the same steps explained in 7 but this time with table *MBLSTP* and relationship "*MBLawType*". When activating the relation the user may dynamically consult the type of the Law of Sea text, as following:



## 10. Relating the Joined MBLSDS-Arc Attribute Table and INFO table MBLSDT with ArcMap

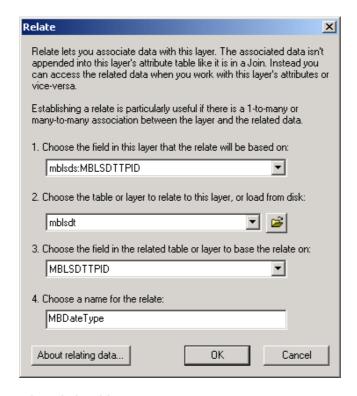
Add INFO table MBLSDT in ArcMap.



Select coverage MBEULSI100KV1, right-click on the mouse and choose "Relate" menu.



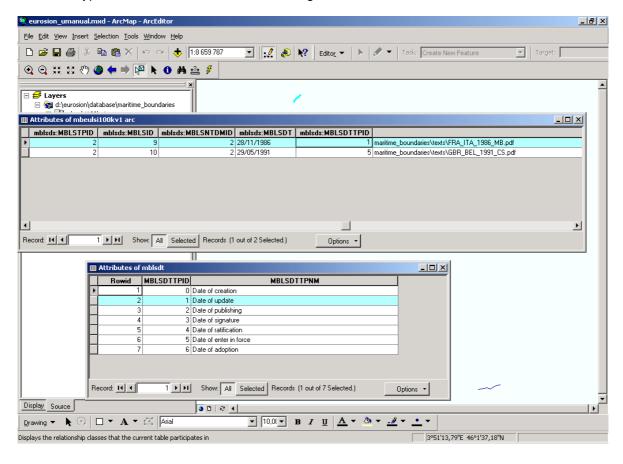
Select the attribute **MBLSDTTPID** for the Arc Attribute Table of coverage **MBEULSI100KV1** and table **MBLSDT**. Define the name of this relation with "MBDateType".



Click OK to create the relationship.

#### 11. Check if the relation with table MBLSDT is active

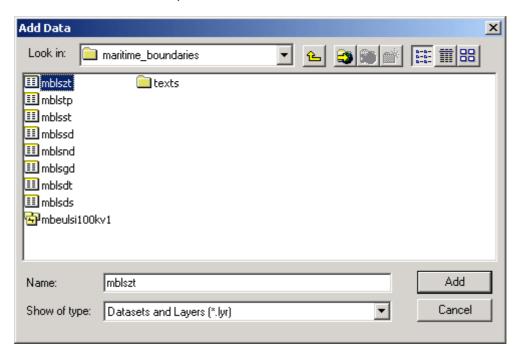
To check if the relationship is activated follow the same steps explained in 7 but this time with table **MBLSDT** and relationship "MBDateType". When activating the relation the user may dynamically consult the type of the Law of Sea text, as following:



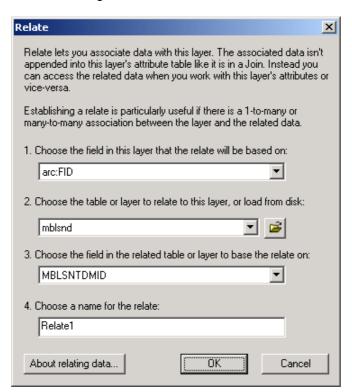
D2-3-8-2\_Eurosion\_Installation\_Guide\_IGNFI\_V2-2 non-copyright 38/78

## 12. Relating the Joined MBLSDS-Arc Attribute Table and INFO table MBLSZT with ArcMap

Add INFO table MBLSZT with ArcMap.

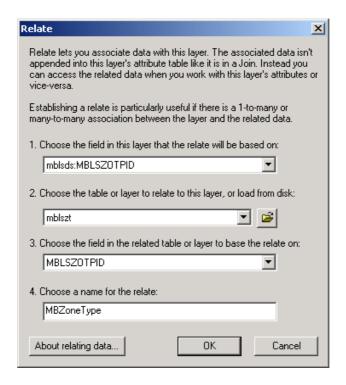


Select coverage MBEULSI100KV1, right-click on the mouse and choose "Relate" menu.



Select the attribute **MBLSZOTPID** for the Arc Attribute Table of coverage **MBEULSI 100KV1** and table **MBLSDT**.

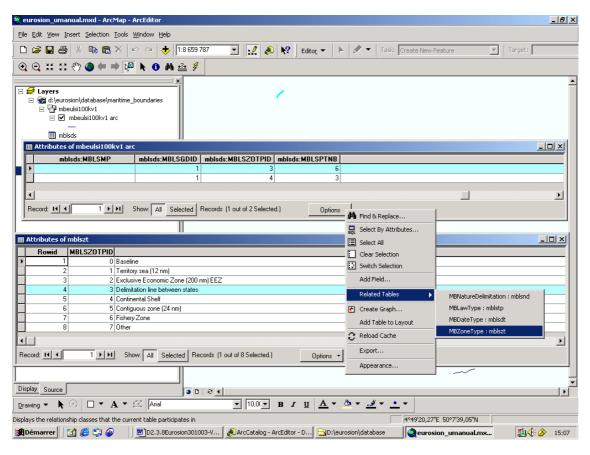
Define the name of this relation with "MBZoneType".



Click OK to create the relationship.

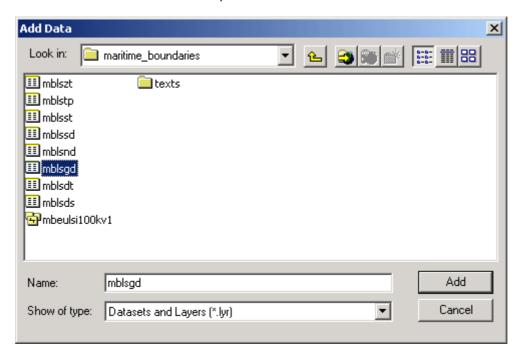
#### 13. Check if the relation with table MBLSZT is active

To check if the relationship is activated follow the same steps explained in 7 but this time with table **MBLSZT** and relationship "MBZoneType". When activating the relation the user may dynamically consult the type of the Law of Sea text, as following:



### 14. Relating the Joined MBLSDS-Arc Attribute Table and INFO table MBLSGD with ArcMap

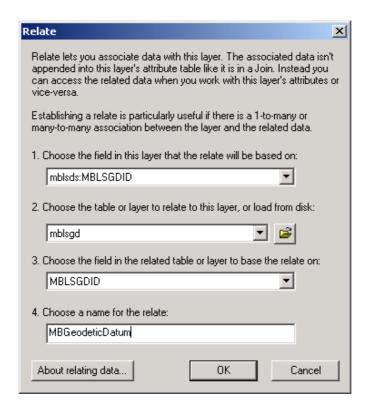
Add INFO table **MBLSGD** with ArcMap.



Select coverage MBEULSI100KV1, right-click on the mouse and choose "Relate" menu.



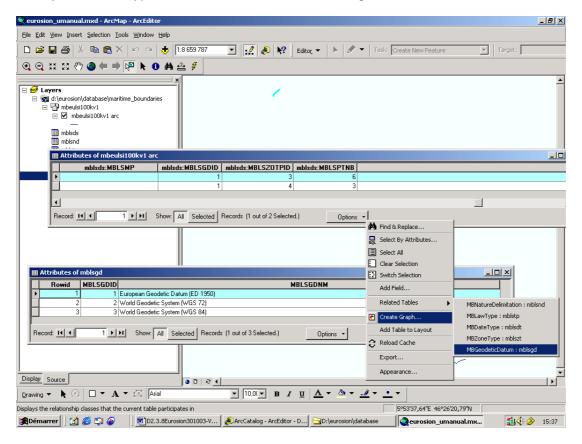
Select the attribute **MBLSGDID** for the Arc Attribute Table of coverage **MBEULSI100KV1** and table **MBLSGD**. Define the name of this relation with "**MBGeodeticDatum**".



Click OK to create the relationship.

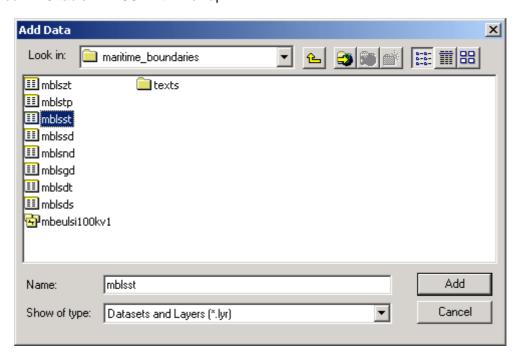
#### 15. Check if the relation with table MBLSGD is active

To check if the relationship is activated follow the same steps explained in 7 but this time with table **MBLSGD** and relationship "MBGeodeticDatum". When activating the relation the user may dynamically consult the type of the Law of Sea text, as following:



# 16. Relating the Joined MBLSDS-Arc Attribute Table and INFO table MBLSST with ArcMap

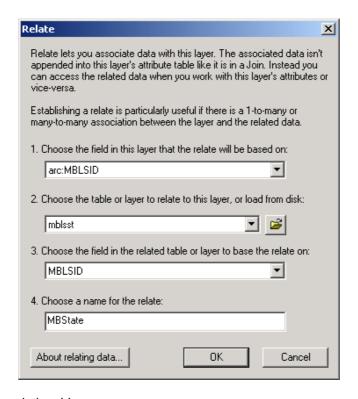
Add INFO table MBLSST with ArcMap.



Select coverage MBEULSI100KV1, right-click on the mouse and choose "Relate" menu.



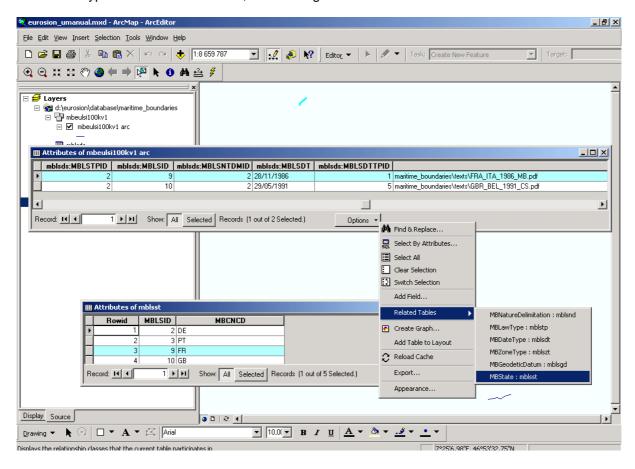
Select the attribute **MBLSID** for the Arc Attribute Table of coverage **MBEULSI100KV1** and table **MBLSST**. Define the name of this relation with "MBState".



Click OK to create the relationship.

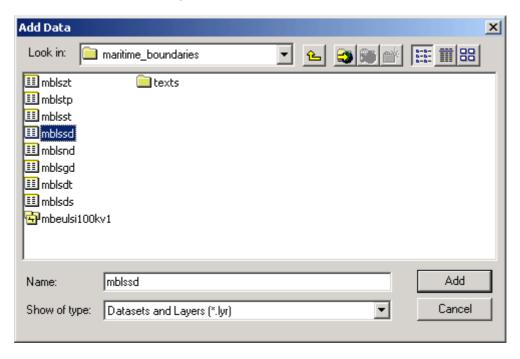
#### 17. Check if the relation with table MBLSST is active

To check if the relationship is activated follow the same steps explained in 7 but this time with table *MBLSST* and relationship "*MBState*". When activating the relation the user may dynamically consult the type of the Law of Sea text, as following:

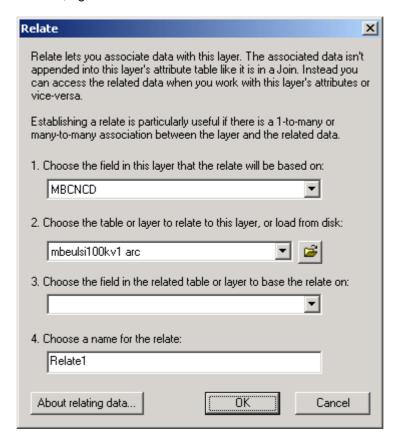


### 18. Relating INFO table MBLSSD and INFO table MBLSSD with ArcMap

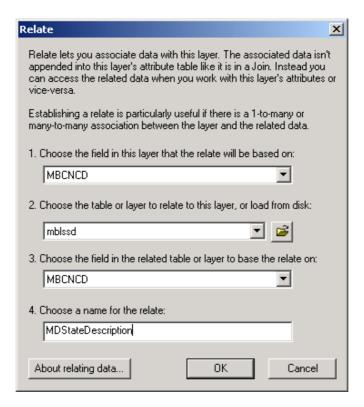
Add INFO table MBLSSD with ArcMap.



Select INFO table MBLSSD, right-click on the mouse and choose "Relate" menu.



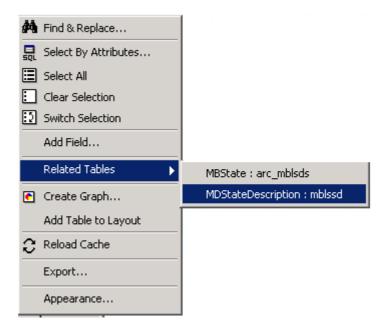
Select the attribute *MBCNCD* for table *MBLSSD*. Define the name of this relation with "*MBStateDescription*".



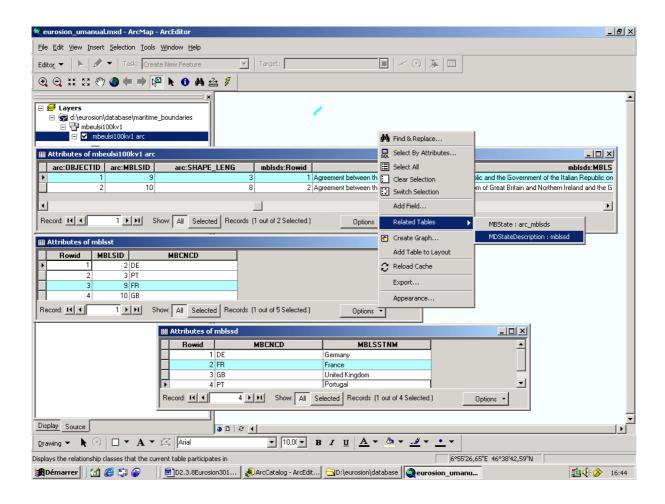
Click OK to create the relationship.

#### 19. Check if the relation between table MBLSST and MBLSSD is active

To check if the relationship is activated follow the same steps explained in 7 but this time with table MBLSST and relationship "MBState". Then open table MBLSSD. Select table **MBLSST** and activate relationship titled "MBStateDescription" as follows.



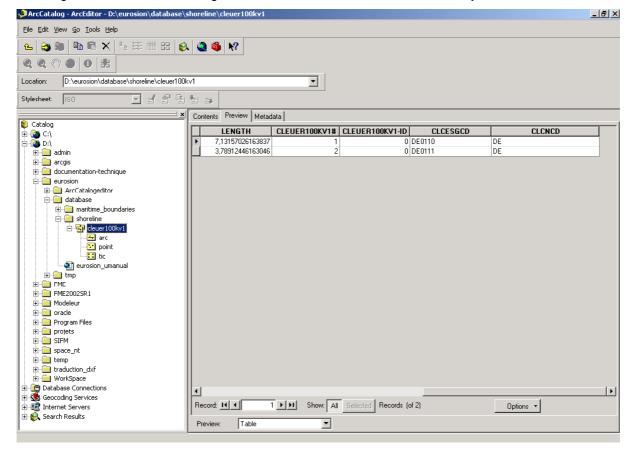
After activating the relation, it is possible to consult the state code and state name for a selected feature.



#### **Shoreline**

### Check the content of the dataset in ArcCatalog

After copying the corresponding dataset from the delivery support, check on ArcCatalog that the following files exist when selecting the folder "*shoreline*". The dataset is ready.



\_

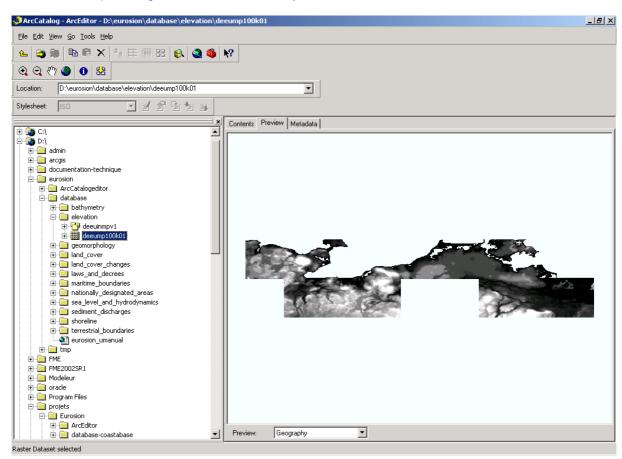
#### **Elevation**

### 1. Check the content of the dataset on ArcCatalog

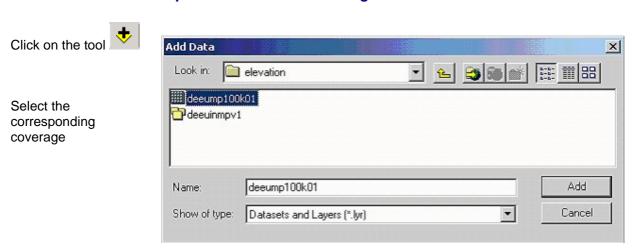
After copying the corresponding dataset from the delivery support, check on ArcCatalog that the following informations exist when selecting the folder "elevation".

Raster images are named **DEEUMP100Knn** where **nn** identifies the bloc number.

The following figure shows the bloc number 01. The dataset must contain the coverage titled **DEEUINMPv1** providing the delimitation of every bloc in vector format.



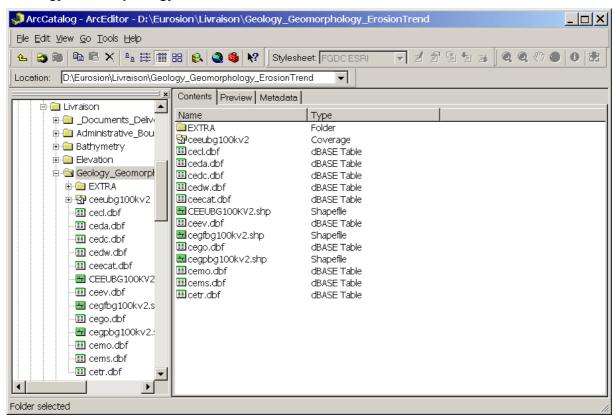
#### 2. Add with ArcMap the DEEUMP100Knn images



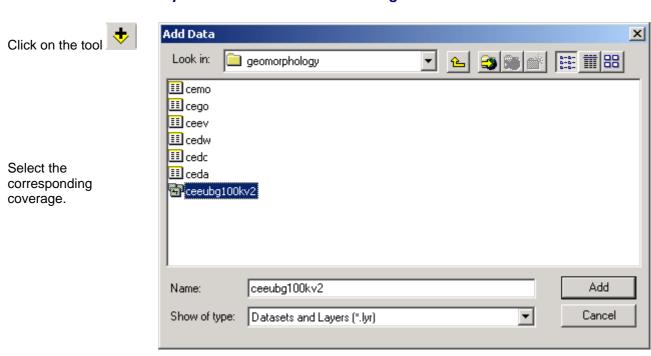
### Geology geomorphology and erosion trend

### 1. Check the content of the dataset on ArcCatalog

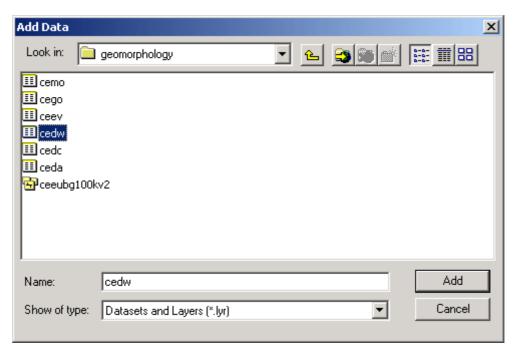
After copying the corresponding dataset from the support delivery, check with ArcCatalog that the following information are present when selecting the folder "Geology\_Geomorphology\_ErosionTrend".



#### 2. Add with ArcMap the CEEEUBG100KV2 coverage and INTO tables

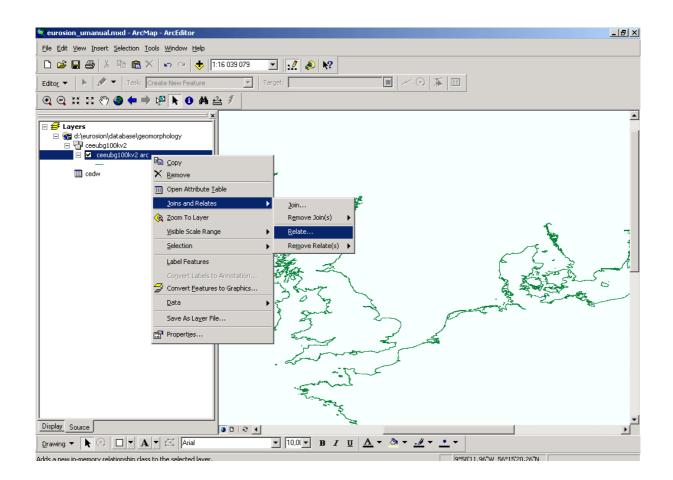


By clicking again on the add INFO tables *CEDW*, *CEDA*, *CEMO*, *CEEV*, *CEGO* and *CEDC*. The following figure illustrates the case of the info table *CEDW*.



# 3. Relating Arc Attribute Table of coverage CEEUBG100KV2 and INFO table CEDW with ArcMap

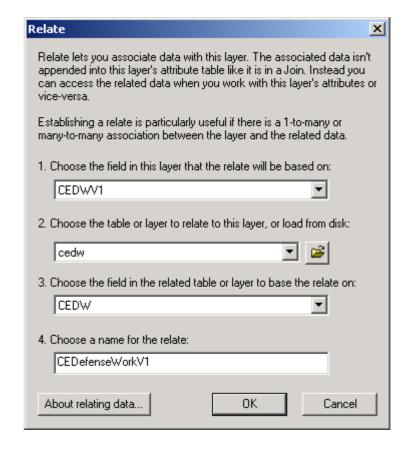
Select coverage *CEEUBG100KV2*, right-click on the mouse, select "*Joins and Relates*" menu, then "*Relate*" as shown in the following figure.



The Relationship window appears.

Select the attribute *CEDWV1* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEDW* into info table *CEDW*.

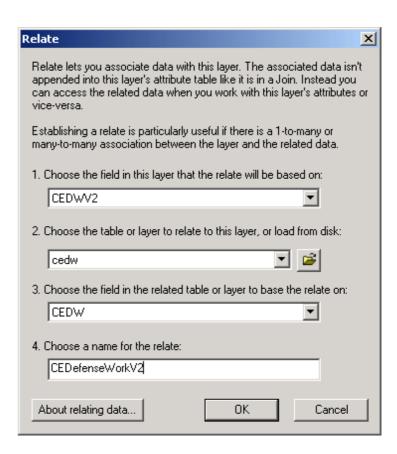
Define the name of the relation as "*CEDefenseWorkV1*" as depicted below.



Open again the Relationship window.

Select the attribute *CEDWV2* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEDW* of info table *CEDW*.

Define the name of the relation as "CEDefenseWorkV2" as shown below.

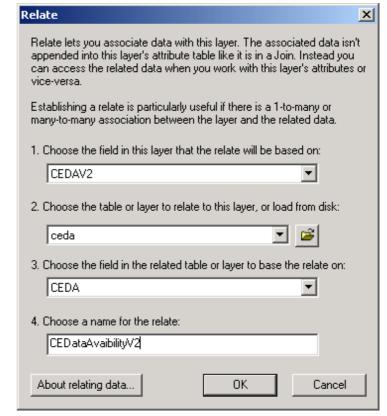


# 4. Relating Arc Attribute Table of coverage CEEUBG100KV2 and INFO table CEDA with ArcMap

Select **CEEUBG100KV2** coverage, rightclick on the mouse select "Joins and Relates" menu, then "Relate" as explained at previous step 3.

In the Relationship window, select attribute *CEDAV2* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEDA* of info table *CEDA*.

Define the name of the relation as "CEDataAvaibilitykV2" as described.



## 5. Relating Arc Attribute Table of coverage CEEUBG100KV2 and INFO table CEMO with ArcMap

Select **CEEUBG100KV2** coverage, rightclick on the mouse, select "Joins and Relates" menu, then "Relate" as explained at step 3.

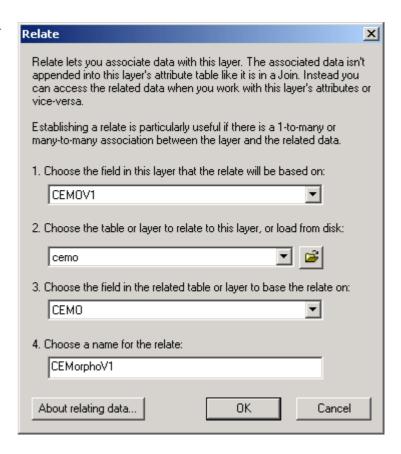
In the Relationship window, select attribute *CEMOV1* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEMO* of info table *CEMO*.

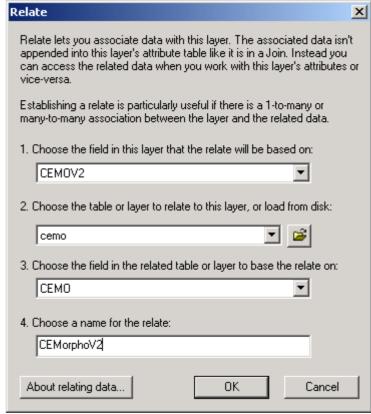
Define the name of the relations as "CEMorphoV1" as shown.

Open again the Relationship window.

Select attribute **CEMOV2** of Arc Attribute Table of **CEEUBG100KV2** coverage and attribute **CEMO** of info table **CEMO**.

Define the name of the relation as "CEMorphoV2" as depicted here.





### 6. Relating Arc Attribute Table of coverage CEEUBG100KV2 and INFO table CEEV with ArcMap

Relate

Select **CEEUBG100KV2** coverage, right-click on the mouse, select "Joins and Relates" menu, then "Relate" as explained at step 3.

Within the Relationship window, select attribute *CEEVV1* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEEV* of info table *CEEV*.

Define the name of the relations as "CEErosionEvolV1" as described.

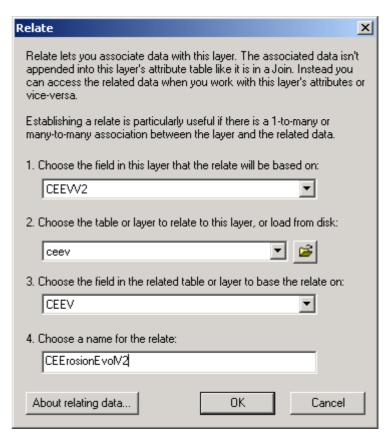
Relate lets you associate data with this layer. The associated data isn't appended into this layer's attribute table like it is in a Join. Instead you can access the related data when you work with this layer's attributes or vice-versa. Establishing a relate is particularly useful if there is a 1-to-many or many-to-many association between the layer and the related data. 1. Choose the field in this layer that the relate will be based on: CEEW1 ▼ Choose the table or layer to relate to this layer, or load from disk: É ceev 3. Choose the field in the related table or layer to base the relate on: CEEV • 4. Choose a name for the relate: CEErosionEvolV1 About relating data... 0K Cancel

X

Open again the Relationship window.

Select attribute **CEEVV2** of Arc Attribute Table of **CEEUBG100KV2** coverage and attribute **CEEV** of info table **CEEV**.

Define the name of the relation as "CEErosionEvolV2"

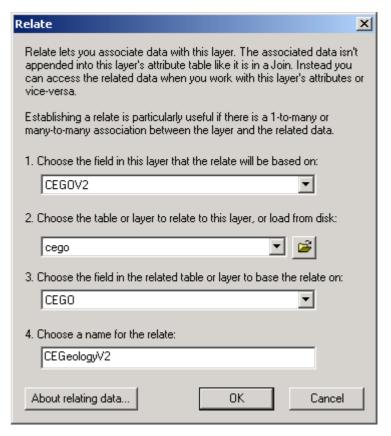


## 7. Relating Arc Attribute Table of coverage CEEUBG100KV2 and INFO table CEGO with ArcMap

Select **CEEUBG100KV2** coverage, right-click on the mouse, select "Joins and Relates" menu, then "Relate" as explained at step 3.

Within the Relationship window, select attribute *CEGOV2* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEGO* of info table *CEGO*.

Define the name of the relation as "CEGeologyV2""

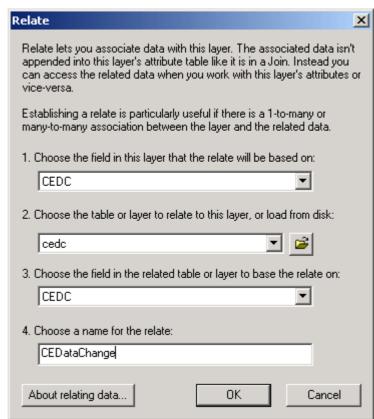


8. Relating Arc Attribute Table of coverage CEEUBG100KV2 and INFO table CEDC with ArcMap

Select **CEEUBG100KV2** coverage, right-click on the mouse, select "Joins and Relates" menu, then "Relate" as explained at step 3.

Within the Relationship window, select attribute *CEDC* of Arc Attribute Table of *CEEUBG100KV2* coverage and attribute *CEDC* of info table *CEDC*.

Define the name of the relation as "CEDataChange""



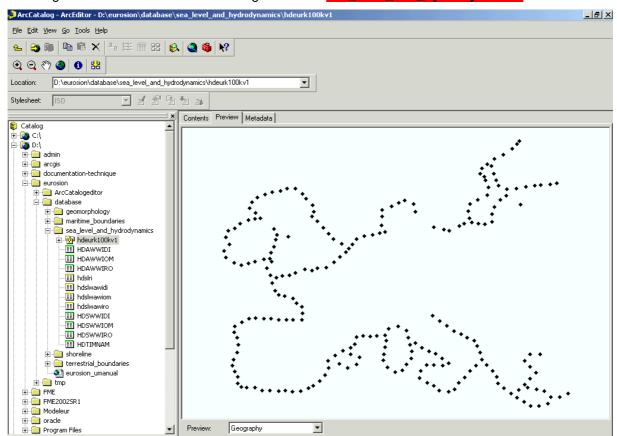
## 9. Relating Arc Attribute Table of coverages CEGFBG100KV2 and CEGPBG100KV2 in ArcMap

Repeat operations 2 to 8 with datasets of French Guyana and Guadeloupe.

### Sea Level Rise And Hydrodynamics

#### 1. Check the content of the dataset on ArcCatalog

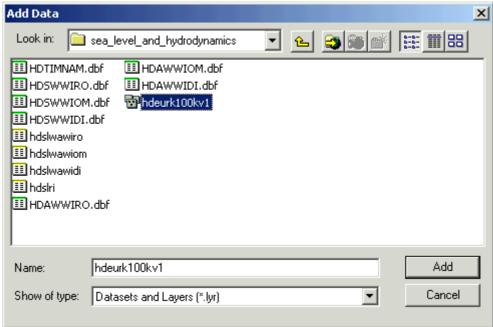
After copying the corresponding dataset from the delivery support, check on ArcCatalog that the following information exists when selecting the folder "sea\_level\_and\_hydrodynamics".

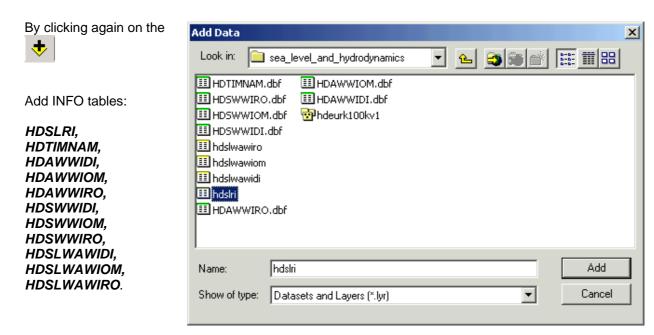


### 2. Add on ArcMap the HDEURK100KV1 coverage and INFO tables

Click on the tool

Then select the corresponding coverage.





The following figure shows one example for info table HDSLRI.

## 3. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSLRI with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute *HDAR* of Point Attribute Table of *HDEURK100KV1* coverage.
- Table HDSLRI
- Attribute HDAR of INFO table HDSLRI.
- Defining the name of the relation as "HDtoRise".

#### Complete the relate windows.

## 4. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDTIMNAM with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute *HDAR* of Point Attribute Table of *HDEURK100KV1* coverage.
- Table HDTIMNAM
- attribute HDAR of INFO table HDTIMNAM
- Defining the name of the relation as "HDtoAmplitude".

### Complete the relate windows.

## 5. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDAWWIDI with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute *HDAR* of Point Attribute Table of *HDEURK100KV1* coverage.
- Table **HDAWWIDI**
- attribute HDAR of INFO table HDAWWIDI
- Defining the name of the relation as "HDtoAllDi".

### 6. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDAWWIOM with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute **HDAR** of Point Attribute Table of **HDEURK100KV1** coverage.
- Table HDAWWIOM
- attribute HDAR of INFO table HDAWWIOM
- Defining the name of the relation as "HDtoAllOm".

#### Complete the relate windows.

### 7. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDAWWIRO with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute HDAR of Point Attribute Table of HDEURK100KV1 coverage.
- Table HDAWWIRO
- attribute HDAR of INFO table HDAWWIRO
- Defining the name of the relation as "HDtoAllRo".

#### Complete the relate windows.

## 8. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSWWIDI with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute *HDAR* of Point Attribute Table of *HDEURK100KV1* coverage.
- Table **HDSWWIDI**
- attribute **HDAR** of INFO table **HDSWWIDI**
- Defining the name of the relation as "HDtoSeaDi".

#### Complete the relate windows.

# 9. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSWWIOM with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute *HDAR* of Point Attribute Table of *HDEURK100KV1* coverage.
- Table HDSWWIOM
- attribute HDAR of INFO table HDSWWIOM
- Defining the name of the relation as "HDtoSeaOm".

### Complete the relate windows.

# 10. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSWWIRO with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute *HDAR* of Point Attribute Table of *HDEURK100KV1* coverage.
- Table HDSWWIRO
- attribute HDAR of INFO table HDSWWIRO
- Defining the name of the relation as "HDtoSeaRo".

## 11. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSLWAWIDI with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute HDAR of Point Attribute Table of HDEURK100KV1 coverage.
- Table HDSLWAWIDI
- attribute HDAR of INFO table HDSLWAWIDI
- Defining the name of the relation as "HDtoSwellDi".

#### Complete the relate windows.

### 12. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSLWAWIOM with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

- Attribute **HDAR** of Point Attribute Table of **HDEURK100KV1** coverage.
- Table **HDSLWAWIOM**
- attribute HDAR of INFO table HDSLWAWIOM
- Defining the name of the relation as "HDtoSwellOm".

#### Complete the relate windows.

## 13. Relating Arc Attribute Table of coverage HDEURK100KV1 and INFO table HDSLWAWIRO with ArcMap

Select coverage *HDEURK100KV1*, and open the <u>Relationship window from the coverage</u>. Complete the Relationship window by selecting

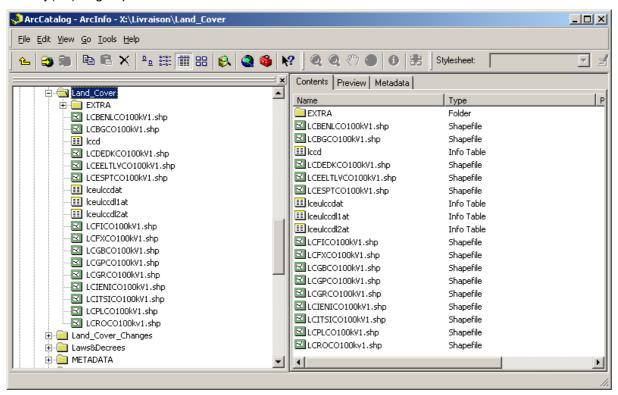
- Attribute HDAR of Point Attribute Table of HDEURK100KV1 coverage.
- Table HDSLWAWIRO
- attribute HDAR of INFO table HDSLWAWIRO
- Defining the name of the relation as "HDtoSwellRo".

#### **Land cover**

### 1. Check the content of the dataset with ArcCatalog

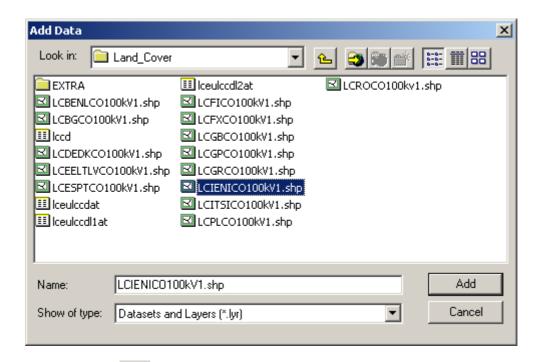
After copying the corresponding dataset from the delivery support, check in ArcCatalog that shown information exists when selecting the folder "*land\_cover*".

The example below depicts CORINE Land Cover coverage 1990 for Ireland 10 km coastal strip. Every coverage is entitled "*LCxxCO100kv1*", where *xx* are the 2 characters ISO code identifying the country(ies) or group of countries.



### 2. Add in ArcMap the LCXXCO100kv1 coverage and INFO tables

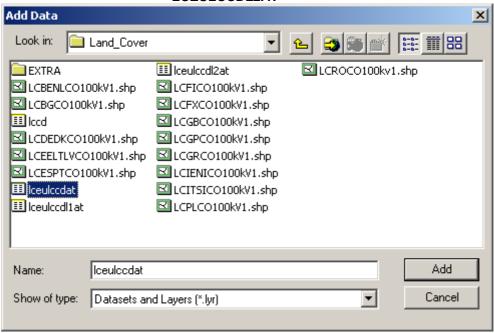
Click on the tool and then select the corresponding coverage. Every CORINE Land Cover 1990 (CLC90) coverage has to be loaded. As an example, the process of adding Ireland coverage "LCIENICO100kv1" is described below.



By clicking again on the

button, add INFO tables:

LCEULCCDAT LCEULCCDL1AT LCEULCCDL2AT



## 3. Relating Polygon Attribute Table of coverage LCXXCO100KV1 with INFO table LCEULCCDAT in ArcMap

Select coverage *LCXXCO100kv1* and open the Relate window from the coverage. Complete the Relationship window by selecting

- Attribute *LCCD* of Point Attribute Table of *LCXXCO100kv1* coverage.
- Table LCEULCCDAT
- attribute LCCD of INFO table LCEULCCDAT
- Defining the name of the relation as "LCxxtoLevel3".

## 4. Relating Polygon Attribute Table of coverage LCXXCO100KV1 with INFO table LCEULCCDL1AT in ArcMap

Select coverage *LCXXCO100kv1* and open the <u>Relate window from the coverage</u>. Complete the Relationship by selecting

- Attribute *LCCDL1* of Polygon Attribute Table of *LCXXCO100kv1* coverage.
- Table **LCEULCCDL1AT**
- attribute LCCDL1 of INFO table LCEULCCDL1AT
- Defining the name of the relation as "LcxxtoLevel1".

Complete the relate windows.

# 5. Relating Polygon Attribute Table of coverage LCXXCO100KV1 with INFO table LCEULCCDL2AT in ArcMap

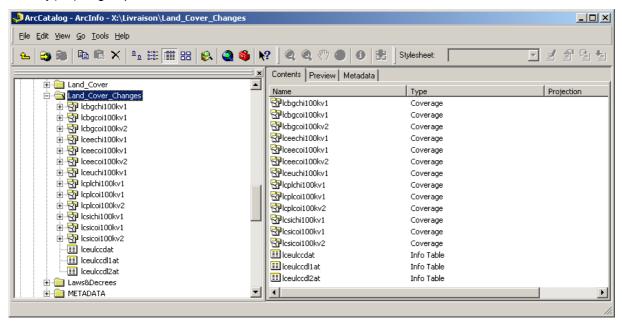
Select coverage *LCXXCO100kv1* and open the <u>Relate window from the coverage</u>. Complete the Relationship by selecting

- Attribute *LCCDL2* of Polygon Attribute Table of *LCXXCO100kv1* coverage.
- Table LCEULCCDL2AT
- attribute LCCDL2 of INFO table LCEULCCDL2AT
- Defining the name of the relation as "LcxxtoLevel2".

### **Land Cover Changes Since 1975**

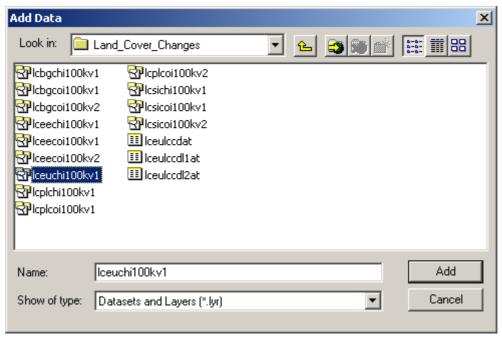
### 1. Check the content of the dataset with ArcCatalog

After copying the corresponding dataset from the delivery support, check in ArcCatalog if the following information exists when selecting the folder "*land\_cover\_changes*". Every coverage is titled "*LCxxCHI100kv1*", where *xx* are the 2 characters ISO code identifying the country(ies) or group of countries.



### 2. Add with ArcMap the LCXXCHI100KV1 coverage and INFO tables

Click on the tool and then select the corresponding coverage. Every CORINE Land Cover Changes coverage has to be loaded.

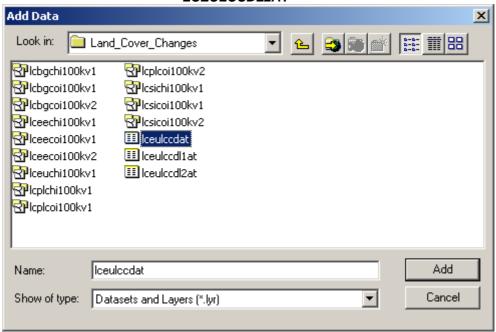


By clicking again on the



add INFO tables:

### LCEULCCDAT LCEULCCDL2AT



### 3. Relating INFO table LCCH and INFO table LCEULCCDAT with ArcMap

Select coverage *LCXXCHI100kv1* and open the <u>Relate window from the coverage</u>. Complete the Relate window by selecting

- Attribute LCCD of LCXXCHI100kv1 coverage.
- Table LCEULCCDAT
- Attribute **LCCD** of INFO table **LCEULCCDAT**
- Define the name of the relation as "LCHXXtoL3Description".

Complete the relate windows.

### 4. Relating INFO table LCCH and INFO table LCEULCCDL2AT with ArcMap

Select coverage *LCXXCHI100kv1* and open the <u>Relate window from the coverage</u>. Complete the Relate window by selecting

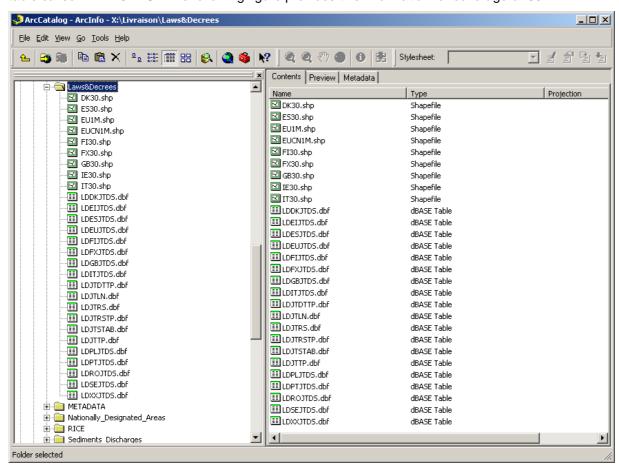
- Attribute LCCDL2 of LCXXCHI100kv1 coverage
- Table LCEULCCDL2AT
- Attribute LCCDL2 of INFO table LCEULCCDL2AT
- Define the name of the relation as "LCHXXtoL2Description".

### Laws and decrees

### 1. Check the content of the dataset with ArcCatalog

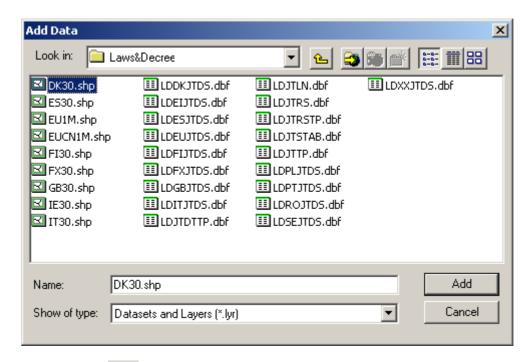
After copying the corresponding dataset from the delivery support, check in ArcCatalog that the following information are present when selecting the folder "*laws&decrees*".

Following SABE Administrative boundaries structure, the coverage are titled "xx30" beside the INFO table called "LDXXJTDS". The following figure provides this information for coverage dk30.



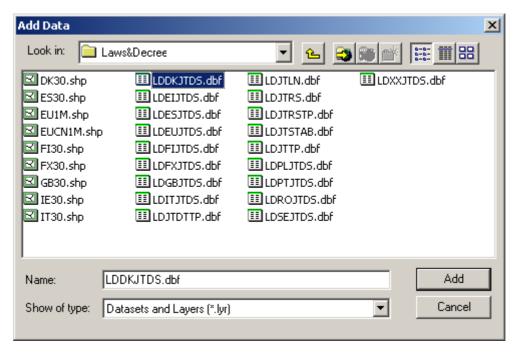
### 3. Add with ArcMap the XX30 coverage and INFO tables

Click on the tool
Select the corresponding coverage.



By clicking again on the add INFO tables:

LDxxJTDS, (in the example LDNLJTDS), LDJTTP, LDJTLN, LDJTSTAB, LDJTRSTP, LDJTRS, LDJTDTTP, SABEISN.



# 4. Joining Polygon Attribute Table of coverage XX30 and INFO table LDXXJTDS with ArcMap

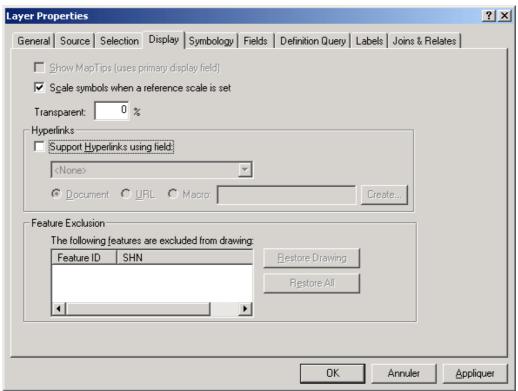
Select coverage **xx30** and open the join windows from the coverage. Complete the Relationship window by selecting

- Attribute ICCSHN of INFO Table xx30
- Table LDXXJTDS
- Attribute **LDJTCNCDSH** of INFO table **LDXXJTDS**
- Defining the name of the relation as "LCHXXtoL1Description".

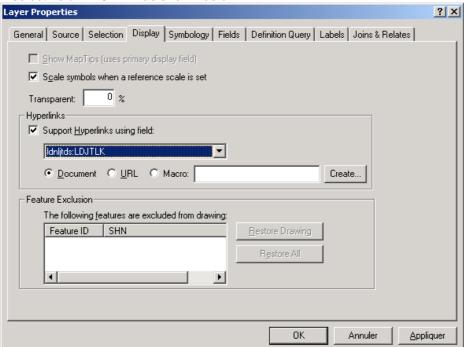
### 5. Definition of attributes LDJTLK as an Hyperlink with ArcMap

This step aims at defining this attribute as Hyperlink to allow the consultation of the PDF files corresponding to the feature selected by the user.

- Select coverage **xx30**.
- Click on the mouse right button select "Properties" menu.
- The following window appears.



- Select option "Support Hyperlinks using field".
- Then select field "LDJTLK" as shown below.



Click "OK" to activate this Hyperlink.

This now implies that every graphical record (line, polygon or point) of the dataset with non empty **LDJTLK** attribute will behave as an Hyperlink. Therefore a single click on the record (e.g. a line), the URL defined is reached.

# 6. Relating the Joined LDXXJTDS-Polygon Attribute Table and INFO table LDJTTP with ArcMap

Select coverage xx30 and open the Relate window from the coverage.

Complete the Relate window by selecting

- Attribute LDJTTPID of Joined LDXXJTDS Polygon Attribute Table of xx30 coverage.
- Table LDJTTP
- Attribute LDJTTPID of INFO table LDJTTP
- Defining the name of the relation as "LDXXtoJTName".

Complete the relate windows.

### 7. Relating the Joined LDXXJTDS-Polygon Attribute Table and INFO table LDJTLN with ArcMap

Select coverage xx30 and open the Relate window from the coverage.

Complete the Relationship window by selecting

- Attribute LDJTLNID of Joined LDXXJTDS Polygon Attribute Table of xx30 coverage.
- Table LDJTLN
- Attribute LDJTLNID of INFO table LDJTLN
- Defining the name of the relation as "LDXXtoJTLanguage".

Complete the relate windows.

### 8. Relating the Joined LDXXJTDS-Polygon Attribute Table and INFO table LDJTSTAB with ArcMap

Select coverage **xx30** and open the Relate window from the coverage.

Complete the Relationship window by selecting

- Attribute *LDJTCNCD* of Joined *LDXXJTDS* Polygon Attribute Table of *xx30* coverage.
- Table LDJTSTAB
- Attribute LDJTCNCD of INFO table LDJTSTAB
- Defining the name of the relation as "LDXXtoJTCountry".

Complete the relate windows.

## 9. Relating the Joined LDXXJTDS-Polygon Attribute Table and INFO table LDJTRSTP with ArcMap

Select coverage xx30 and open the Relate window from the coverage.

Complete the Relate window by selecting

- Attribute LDJTRSTPID of Joined LDXXJTDS Polygon Attribute Table of xx30 coverage.
- Table LDJTRSTP
- Attribute LDJTRSTPID of INFO table LDJTRSTP
- Defining the name of the relation as "LDXXtoJTResource".

Complete the relate windows.

# 10. Relating the Joined LDXXJTDS-Polygon Attribute Table and INFO table LDJTRS with ArcMap

Select coverage **xx30** and open the Relate window from the coverage.

Complete the Relationship window by selecting

Attribute LDJTRSID of Joined LDXXJTDS Polygon Attribute Table of xx30 coverage.

- Table LDJTRS
- Attribute LDJTRSID of INFO table LDJTRS
- Defining the name of the relation as "LDXXtoJTResDescription".

Complete the relate windows.

## 11. Relating the Joined LDXXJTDS-Polygon Attribute Table and INFO table LDJTDTTP with ArcMap

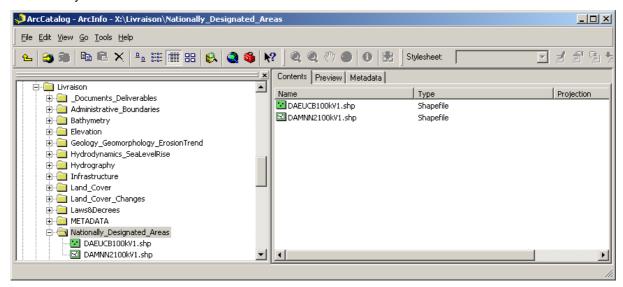
Select coverage **xx30** and open the <u>Relate window from the coverage</u>. Complete the Relate window by selecting

- Attribute *LDJTDTTPID* of Joined *LDXXJTDS* Polygon Attribute Table of *xx30* coverage.
- Table *LDJTDTTP*
- Attribute **LDJTDTTPID** of INFO table **LDJTDTTP**
- Defining the name of the relation as "LDXXtoJTDateType".

### **Nationally designated areas**

### 1. Check the content of the dataset on ArcCatalog

After copying the corresponding dataset from the support delivery, check on ArcCatalog that the following informations exist when selecting the folder "*nationally\_designated\_areas*". Every country or group of country coverage is titled *DAxxN2100kv1*, where *xx* are the 2 characters ISO country code.

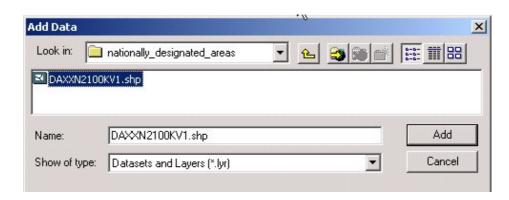


### 2. Add with ArcMap the DAXXN2100kv1 coverages

Click on the tool



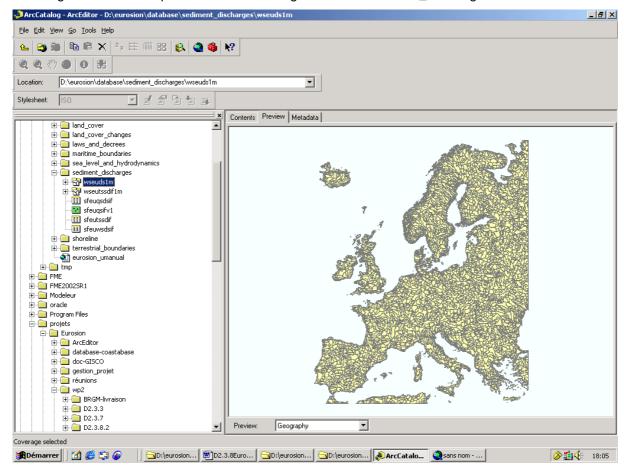
Select the corresponding coverage.



### Sediment discharges from river basins

### 1. Check the content of the dataset with ArcCatalog

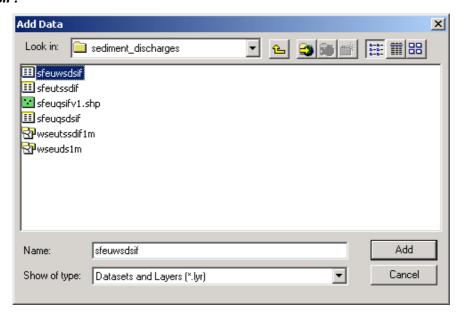
After copying the corresponding dataset from the support delivery, check in ArcCatalog if the following information are present when selecting the folder "sediment\_discharges".



### 2. Add with ArcMap the coverage and INFO tables



By clicking again on the add INFO tables:



## 3. Relating Polygon Attribute Table of coverage WSEUDS1M and INFO table SFEUWSDSIF with ArcMap

Select coverage **WSEUDS1M** and open the <u>Relate window from the coverage</u>. Complete the Relate window by selecting

- Attribute SFWSCDGS of Polygon Attribute Table of WSEUDS1M coverage.
- Table SFEUWSDSIF
- Attribute SFWSCDGS of INFO table SFEUWSDSIF
- Defining the name of the relation as "SFtoWSDescription".

Complete the relate windows.

# 4. Relating Polygon Attribute Table of coverage WSEUDSSDIF1M and INFO table SFEUTSSDIF with ArcMap

Select coverage **WSEUDSSDIF1M** and open the Relate window from the coverage. Complete the Relate window by selecting

- Attribute **WSTSSDFXCD** of Polygon Attribute Table of **WSEUDSSDIF1M** coverage.
- Table SFEUTSSDIF
- Attribute WSTSSDFXCD of INFO table SFEUTSSDIF
- Defining the name of the relation as "SFtoSSD".

Complete the relate windows.

## 5. Relating Polygon Attribute Table of coverage SFEUQSIFV1 and INFO table SFEUQSDSIF with ArcMap

Select coverage **SFEUQSIFV1** and open the <u>Relate window from the coverage</u>. Complete the Relate window by selecting

- Attribute SFQSCDST of Polygon Attribute Table of SFEUQSIFV1 coverage.
- Table SFEUQSDSIF
- Attribute SFQSCDST of INFO table SFEUQSDSIF
- Defining the name of the relation as "SFtoQualityStation".

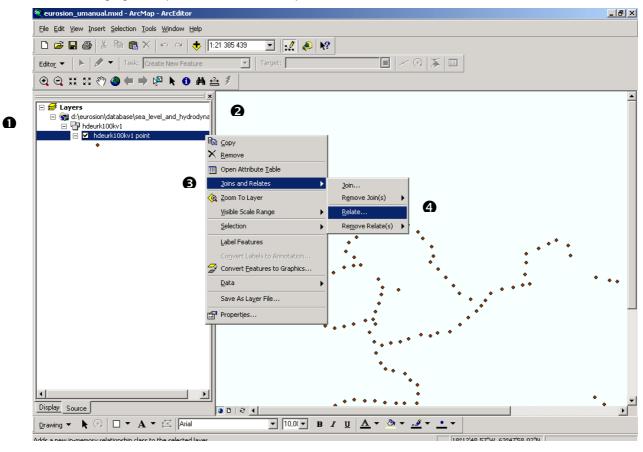
### **GENERIC MANIPULATIONS**

### Open the Relationship window from a selected coverage

For opening the Relate window from a coverage:

- select the coverage in the ArcMap Table of Content (left windows),
- 2 right-click, to display contextual menu,
- select "Joins and Relates" menu,
- 4 then select "Relate" menu.

The following figure explains the chained steps.



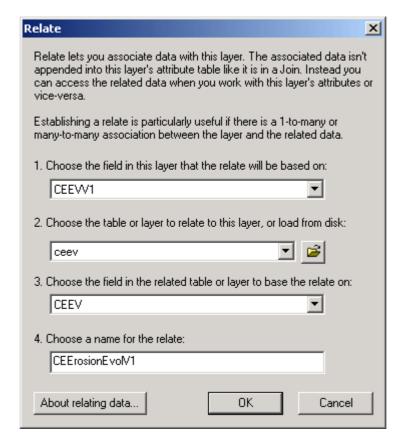
### **Complete the Relate Window**

To create a relationship between a coverage and an INFO table, 4 steps are necessary:

- select first the field of the coverage to be used for establishing the link,
- 2 select then the table to be related to the coverage,
- select the field name of this table to be used for establishing this link,
- give a name to this relationship.

The following figure shows for instance the coverage **CEEUBG100KV2** which is related to the INFO table **CEEV**. Attribute **CEEVV1** of Arc Attribute Table of coverage **CEEUBG100KV2** and attribute **CEEV** of info table **CEEV** are selected to establish the link.

The name of the relation is "CEErosionEvolV1".



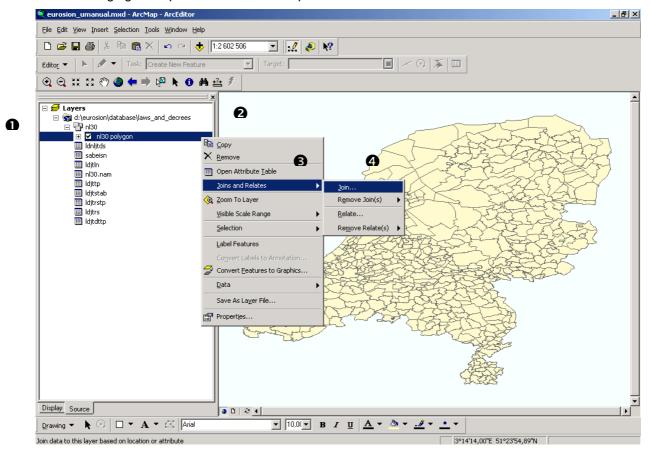
Activate the relation by clicking on OK button.

### Open the Join window from a selected coverage

For opening the <u>Join windows</u> from a coverage:

- select the coverage on the ArcMap Table of Content (left windows),
- 2 mouse right-click, to display contextual menu,
- select "Joins and Relates" menu,
- 4 then select "Join" menu.

The following figure explains the chained steps.



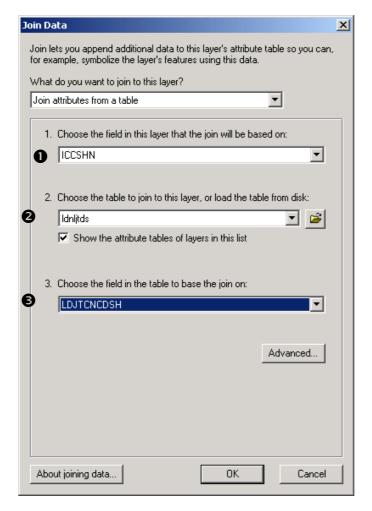
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### Complete the Join window

To create a join between a coverage and an INFO table, 3 steps are necessary:

- select first the field of the coverage to be used for joining the tables,
- 2 select then the table to be related to the coverage,
- select the field name of this table to be used for establishing this link,

The following figure shows for instance the coverage **NL30**, which is being joined to the INFO table **LDNLJTDS**. The selected Attribute **ICCSHN** of the coverage **LDXXJTDS** will be linked to the attribute **LDJTCNCDSH** of table **LDNLJTDS**. Those two attributes have the same characteristics and define the same thing (even if names vary).



Click on OK to activate the join.

### **CONTACTS**

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### **END OF DOCUMENT**