

GREAT-ER

Administration

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0 Information on the Document

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0.3 Document Cross References

Reference	Title	Document-ID	Version	Date
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1 Introduction

1.1 Background

GREAT-ER is a GIS assisted model for environmental risk assessment and management of chemicals in river basins.

Multiple simulation models are available: emission, sewer, waste water treatment and river. The simulation output forms a basis on which risk assessments can be performed. In the long run **GREAT-ER** could help to improve the water quality of our rivers.

The **GREAT-ER** administration enables the handling of data, which represent the basis for the **GREAT-ER** application.

1.2 Start Administration



Select the icon **Administration** from the **GREAT-ER** folder in the start menu to enter the **GREAT-ER 2.0 Administration**.

The "Administration" can be divided into the following main modules:

? **User**

System users can be created, deleted or the user properties can be modified within this section. Each user is assigned to a group.

? **Group**

A group is a collection of different users. The definition of a group is important for the concept of access rights/privileges.

? **Parameter Tree**

The entries reflected in the tree structure of the "Substance Data" in the **GREAT-ER 2.0 Repository** are defined in the parameter tree. Groups or properties can be defined, edited or deleted within the module "Parameter Tree".

? **Phrase**

Phrases are the individual entries in the list of values. The definition of these phrases and their assignment to the list of values can be executed in this unit.

? **Message**

The **GREAT-ER** system error messages are displayed in this module.

? **Session**

A session combines **GREAT-ER** objects (substance, catchment, environment data set etc.) to a specific scenario required to run a **GREAT-ER** simulation.

? **Substance**

Substance administration data can be defined, viewed or modified within this section. Administration data are, for example, name of the substance, access rights or user ID.

? **Environment**

The administration data of an environment data set can be defined, viewed or modified within this section. Administration data are, for example, name of the environment data set, access rights or user ID.

? **Catchment**

The catchment data mainly consist of spatial data sets. They contain different kinds of information such as digital river network or digital background maps. This module enables the user to edit or delete river catchments.

? **Binary Object**

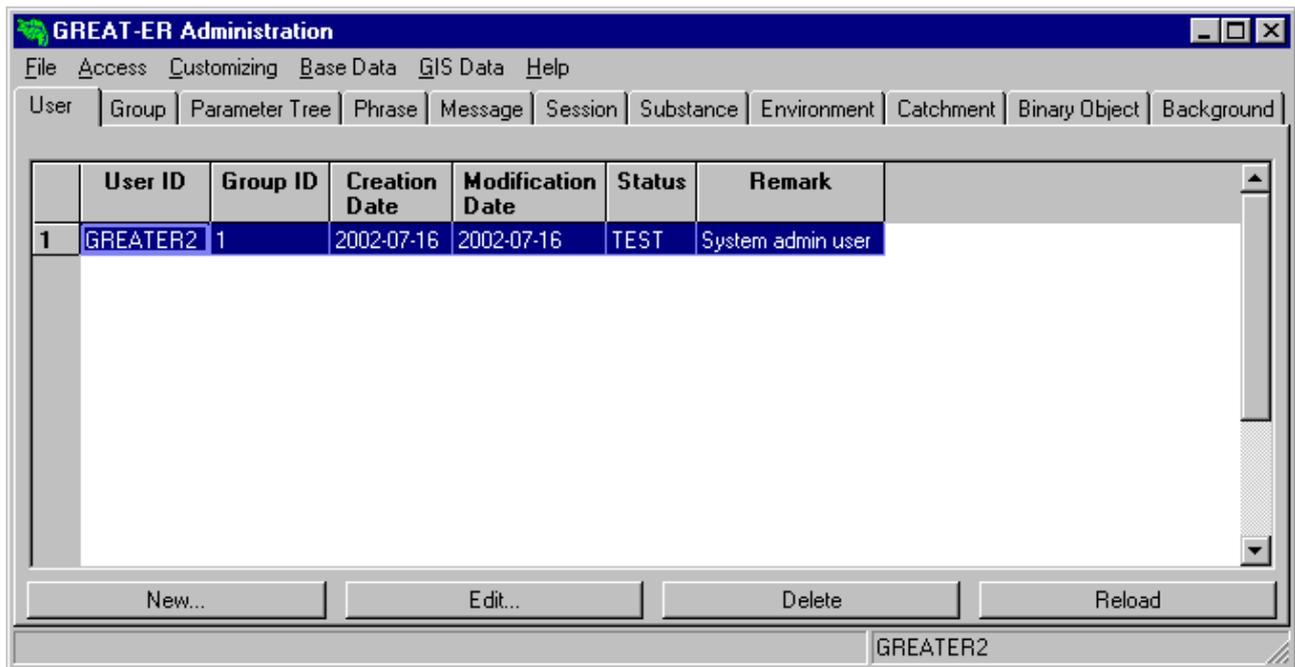
This module covers all binary data. These are normally files which are stored in the database system. The documents that are loaded into the database within the section "Document Download" in the **GREAT-ER 2.0 Repository** are, for example, available in the module "Binary Object".

? **Background**

This section enables the assignment of binary objects such as maps to catchments. This means the different background layers can be added to a map for catchments.

1.3 General Screen Layout

Most of the screens in the **GREAT-ER** administration have a uniform layout. The following figure displays an example of the screen layout.



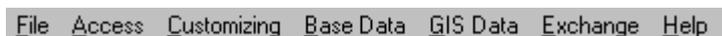
A screen comprises a main window with title bar, menu bar, folder bar, data area and button bar.

The title bar contains the name of the application and the standard MS Windows function for maximizing, minimizing and closing the window



The menu bar and the folder bar enable the user to navigate within the different application modules. Both objects are identical in all **GREAT-ER** program sections.

Menu bar:



Folder bar:



If the number of folders is larger than the displayed folders in the window, then the navigation within the folder bar is done by clicking on the buttons ◀ (previous folder) and ▶ (next folder).

All data displayed in the data section are represented in the table structure. The heading and data depend on the type of module.

	User ID	Group ID	Creation Date	Modification Date	Status	Remark
1	GREATER2	1	2002-07-16	2002-07-16	TEST	System admin user

The button bar is situated below the data section.



The number and types of buttons vary from module to module. The only exception is the button . This button is displayed in every module and its function is to update the displayed data. The function is needed, for example, if more than one user is working with the application. Each user may have entered data and the modifications have not been displayed on the screen immediately. In this case the data are not up-to-date and can be brought up-to-date by clicking on the button .

The remaining buttons are related to the different modules and will be described later in this documentation. As the button  function has already been described and it is accessible in every module, there is no need for a further description.

The last element on the screen is the status bar and is situated at the bottom of the window. The number of hits and the connected user are listed here.

1.4 Menu Structure

The menu represents the full number of functions of the **GREAT-ER** administration application. You will find an overview of the different menus that are available in the **GREAT-ER** administration below. Different menu items are valid in each section. The invalid menu items are disabled and the text of these items is marked grey.

"File" menu

Menu Item	Description
[File:Authenticate]	Connect to the system/database.
[File:Disconnect]	Disconnect from the system/database.
[File:Exit]	Close the application.

"Access" menu

Menu Item	Description
[Access:Set Password]	Set a new password.
[Access:User]	Navigate to the "User" module.
[Access:Group]	Navigate to the "Group" module.

"Customizing" menu

Menu Item	Description
[Customizing:Parameter Tree]	Navigate to the "Parameter Tree" module.
[Customizing:Phrase]	Navigate to the "Phrase" module.
[Customizing:Message]	Navigate to the "Message" module.

"Base Data" menu

Menu Item	Description
[Base Data:Session]	Navigate to the "Session" module.
[Base Data:Substance]	Navigate to the "Substance" module.
[Base Data:Environment]	Navigate to the "Environment" module.

"GIS Data" menu

Menu Item	Description
[GIS Data:Catchment]	Navigate to the "Catchment" module.
[GIS Data:Binary Object]	Navigate to the "Binary Object" module.
[GIS Data:Background]	Navigate to the "Background" module.

"Exchange" menu

Menu Item	Description
[Exchange:Export]	Export a session to an *.xml file.
[Exchange:Import]	Import a session from an *.xml file.

"Help" menu

Menu Item	Description
[Help:Help]	Open the online documentation.
[Help>About]	Information about the GREAT-ER application such as e.g. copyright and version number.

1.5 Access Rights/Privileges

Access rights can be divided into three categories.

- ? Owner
- ? Group (collection of users, who have the same rights and properties)
- ? All

The following rights exist in **GREAT-ER**:

- ? **Edit:**
The user can create new substances or view, modify and delete the existing substances.
- ? **View:**
The user is only allowed to view substances. He is not allowed to create, modify or delete substances.
- ? **None:**
The user has no access rights for the substance. This means he is not able to create, edit, view or delete substances.

Overview of the rights for all three categories:

Owner	Group	All	Right/Privilege
Edit	None	None	1
Edit	View	None	2
Edit	View	View	3
Edit	Edit	None	4
Edit	Edit	View	5
Edit	Edit	Edit	6

The definition of rights for substances/documents is very important to avoid unauthorized usage or unintentional modifications by different users.

Example:

The following groups and users are predefined:

Groups:

Group ID	Description
1	Group for administrators
2	Group for guest users

User:

User ID	Group ID	Description
ADMIN_DB	1	Database Administrator
ADMIN_NET	1	Network Administrator

GUEST1	2	Guest user 1
GUEST2	2	Guest user 2
GUEST3	2	Guest user 3

Example 1:

The user "GUEST1" creates the substance "Diuron" and is owner of this substance. This user belongs to the group guest user (Group ID = 2). The rights for this substance are set to Edit / View / None \neq Right 2.

This means, that the owner can edit the substance, the group can view it and all other users have no access rights.

User ID	Group ID	Description
ADMIN_DB	1	Both users are not the owner of the substance and belong to group 1. As the owner of the substance is "GUEST1" and belongs to group 2, only the access rights of the category "all" is decisive for these users. The access right of the category "all" is "none". So these users have no access rights for the substance "Diuron".
ADMIN_NET	1	
GUEST1	2	This user is the owner of the substance. Access right of the group "owner" is "edit". So "GUEST1" is allowed to modify the substance "Diuron".
GUEST2	2	Both users are not the owner of the substance. But they belong to group1, the same group as the user "GUEST1". The access rights of the category "group" are decisive for these users. The access right of the category "group" is "view". So "GUEST2" and "GUEST3" are allowed to view the substance data of "Diuron".
GUEST3	2	

Example 2:

The user "GUEST1" creates the substance "Diuron" and is owner of this substance. This user belongs to the group guest user (Group ID = 2). The rights for this substance are set to Edit / Edit / View \neq Right 5.

This means that the owner and the group can edit the substance. All other users can view the substance.

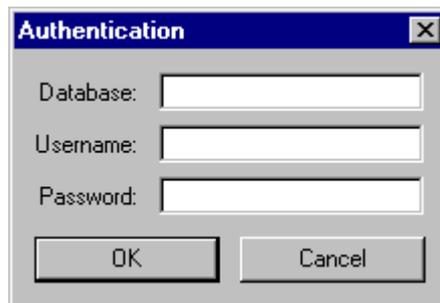
User ID	Group ID	Description
ADMIN_DB	1	Both users are not the owner of the substance and belong to group 1. As the owner of the substance is "GUEST1" and belongs to group 2, only the access rights of the category "all" is decisive for these users. The access right of the category "all" is "view". These users can view the substance "Diuron". They are not allowed to edit the substance.
ADMIN_NET	1	
GUEST1	2	This user is the owner of the substance. Access right of the group "owner" is "edit". So "GUEST1" is allowed to modify the substance.
GUEST2	2	Both users are not the owner of the substance, but they belong to group1, the same group as the user "GUEST1". The access rights of the category "group" are decisive for these users. The access right of the category "group" is "edit". So "GUEST2" and "GUEST3" are allowed to edit the substance data of "Diuron".
GUEST3	2	

1.6 Authentication in the System

After opening the **GREAT-ER** "Administration" the user must connect/authenticate to the system. This is executed by selecting the menu option [**File:Authenticate**].



Enter the log on to the database in the following screen:



Authentication

Database:

Username:

Password:

OK Cancel

Example:

Username: greater2

Password: greater2

If you are using the **GREAT-ER** administration single user version, it is not necessary to enter the name of the database. The user can connect to the database automatically by clicking on the button .

The application is only fully functional when logged in with the database table owner's user name. In the case of the single user version this is "greater2".

A sized down number of functions is offered to restricted users. They are only allowed to:

- ? Set new Password (see section "1.7 Set new Password")
- ? Data Exchange (see section "13 Data Exchange")

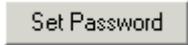
The following message box will appear on the screen after connecting to the database with a restricted user's username and password.



1.7 Set new Password

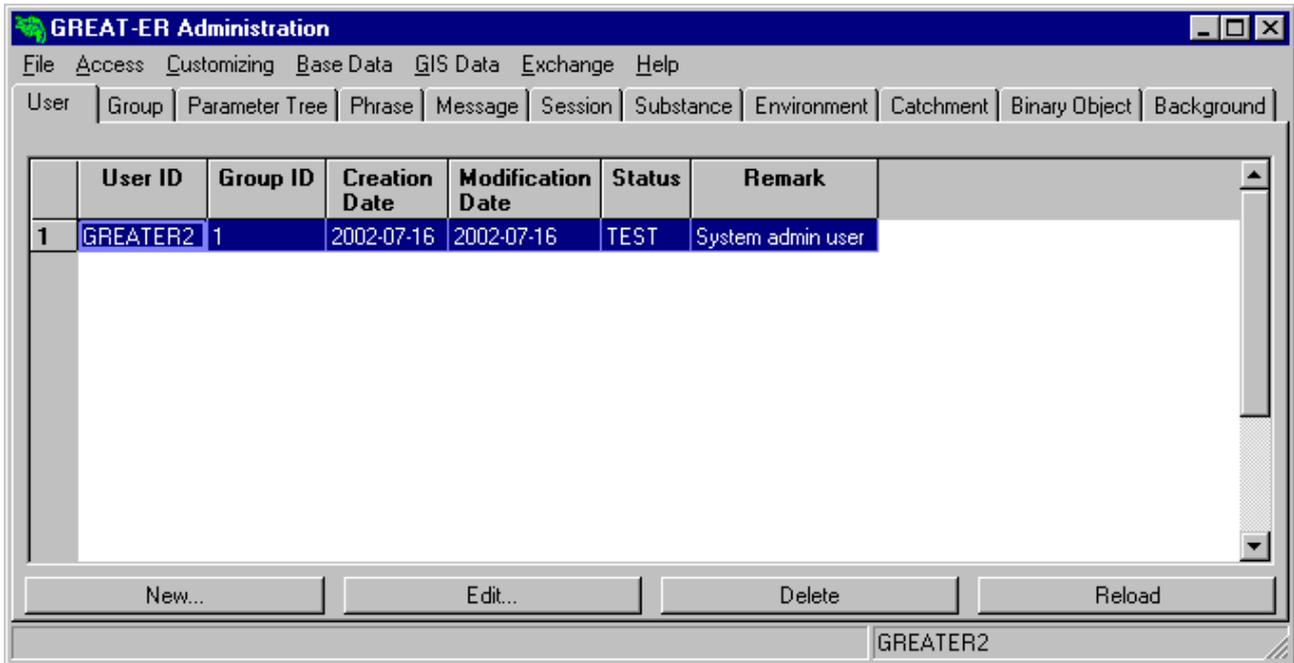
Sometimes it is necessary to change a specific user's password. This may be necessary for security reasons, for example, or to change the initial password after the creation of a new user. The password of the user, who is connected to the administration at the moment, can be modified in the following dialog box.



The new password must be entered and confirmed. Click on the button  to save the changes in the database.

2 User

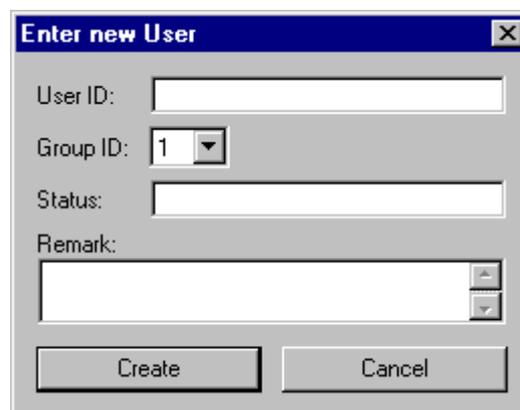
Activate the module "User" by selecting to the folder "User" or the menu item **[Access:User]** after starting the "Administration".



Users for **GREAT-ER** can be created, edited or deleted within this module. The procedures are described in the chapters below.

2.1 Create User

A new user can be created by clicking on the button  in the overview of the "User" module.



Enter new User

User ID:

Group ID:

Status:

Remark:

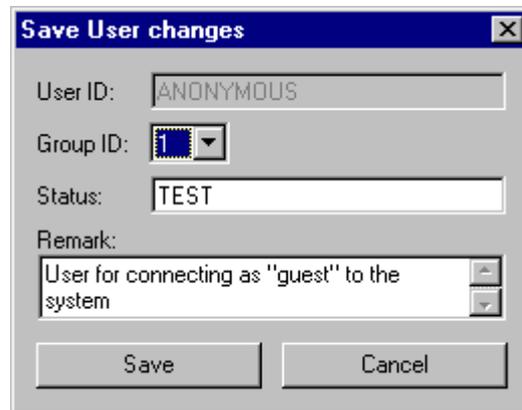
2. User

Please enter user ID, group ID, status and remark in the input boxes. The group ID must be selected from the list of values (see section "3 Group" also for detailed information on groups).

Click on the button  to create the user with the indicated properties in the database. The password is matched to the user ID during the creation process. User ID and password are the same for the first login. But the password can be changed (see section "1.7 Set new Password") after the authentication to the system with the new user. Leave the "Enter new User" window without saving the changes by clicking on the button .

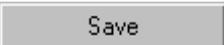
2.2 Edit User

Select the chosen user from the result list and click on the button  to edit user data. It is only possible to modify the user properties and not the user name.



The dialog box titled "Save User changes" contains the following fields and buttons:

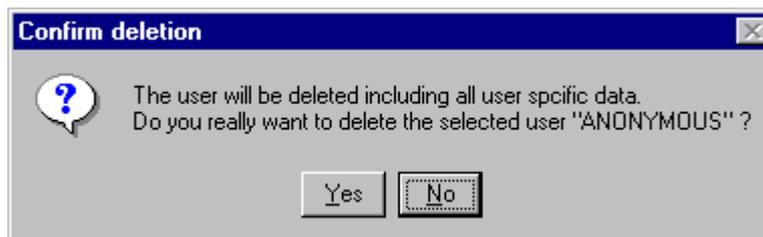
- User ID: ANONYMOUS
- Group ID: 1 (dropdown menu)
- Status: TEST
- Remark: User for connecting as "guest" to the system
- Buttons: Save, Cancel

Click on the button  to store the modifications on the user in the database. Leave the "Enter new User" window without saving the changes by clicking on the button

.

2.3 Delete User

Select the appropriate user from the result list and click on the button  in order to delete a user. The following message box will then appear on the screen.



The dialog box titled "Confirm deletion" contains the following text and buttons:

- Text: The user will be deleted including all user specific data. Do you really want to delete the selected user "ANONYMOUS" ?
- Buttons: Yes, No

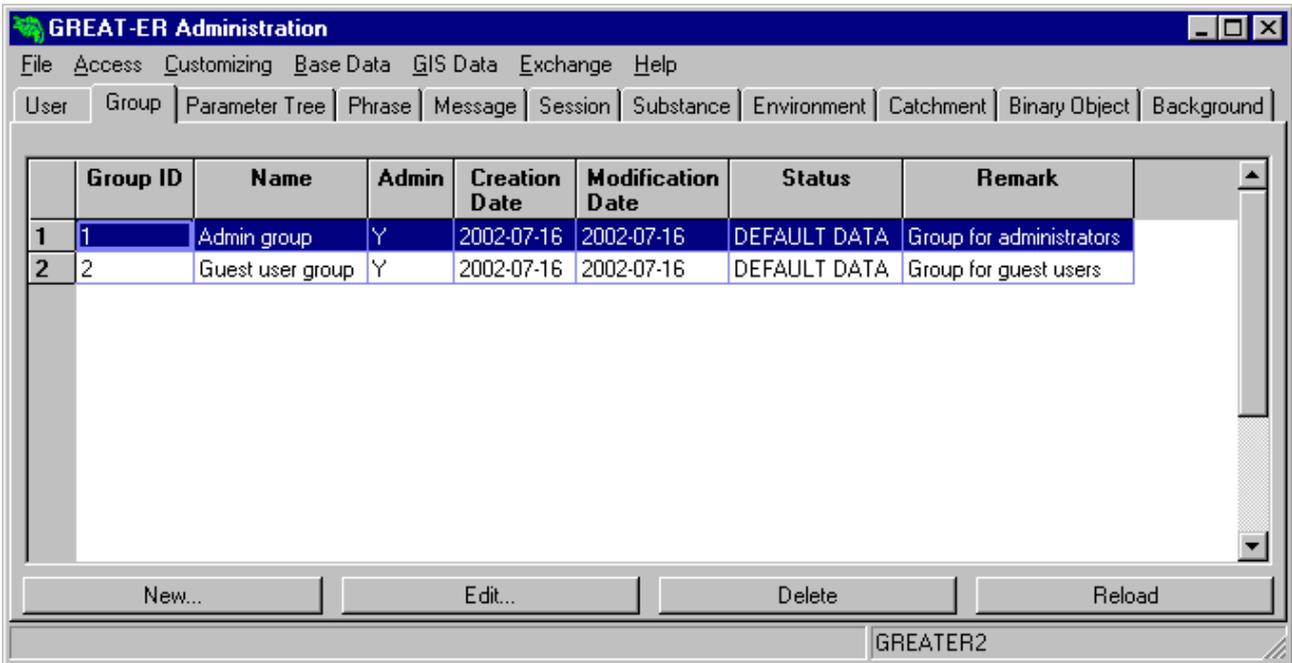
Yes	No
<p>Click on this button to delete the selected user from the GREAT-ER application.</p> 	<p>Click on this button to activate the following message box. The user has not been removed from the GREAT-ER application.</p> 



Please note, that the user is not deleted from the database completely. The deletion revokes all **GREAT-ER** rights. The user still exists in the database, but is no longer displayed in the **GREAT-ER** administration. He can be deleted from the database completely by the database administrator only. This method has been selected to ensure that no serious problems arise through the deletion of users.

3 Group

Activate the module "Group" by selecting the folder "Group" or the menu item **[Access:Group]** after starting the "Administration".

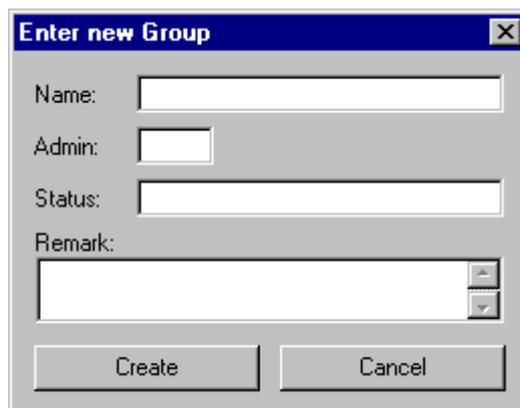


The definition of groups is important for the access rights/privileges concept. This concept is used in the **GREAT-ER** repository, for example. See chapter "1.5 Access Rights/Privileges" for a more detailed description.

The module "Group" enables you to create, edit or delete groups. This function is described in the chapters below.

3.1 Create Group

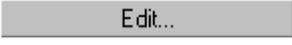
Create a new group by clicking on the button  in the overview of the "Group" module.

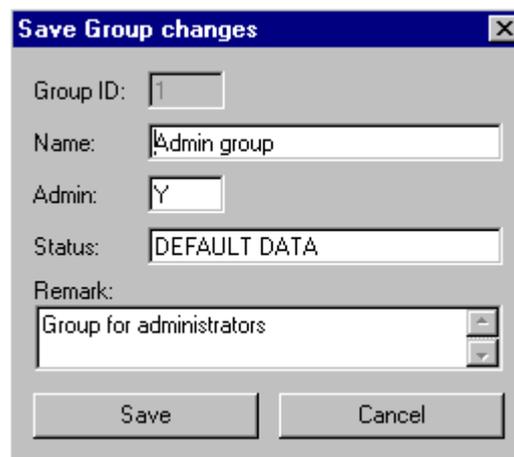


3. Group

Please enter name, administrator flag, status and remark in the input boxes. Click on the button  to create the group with the indicated properties in the database. Leave the "Enter new User" window without saving the changes by clicking on the button .

3.2 Edit Group

Select the group from the result list and click on the button  to edit group data. It is only possible to modify the group properties and not the group ID itself.



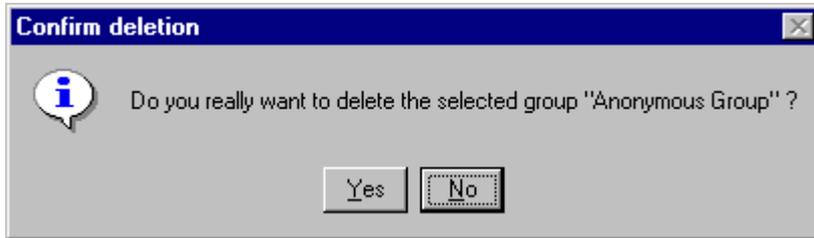
The dialog box titled "Save Group changes" contains the following fields and buttons:

- Group ID:
- Name:
- Admin:
- Status:
- Remark:
- Buttons: Save, Cancel

Click on the button  to store the modifications on the group in the database. Leave the "Enter new User" window without saving the changes by clicking on the button .

3.3 Delete Group

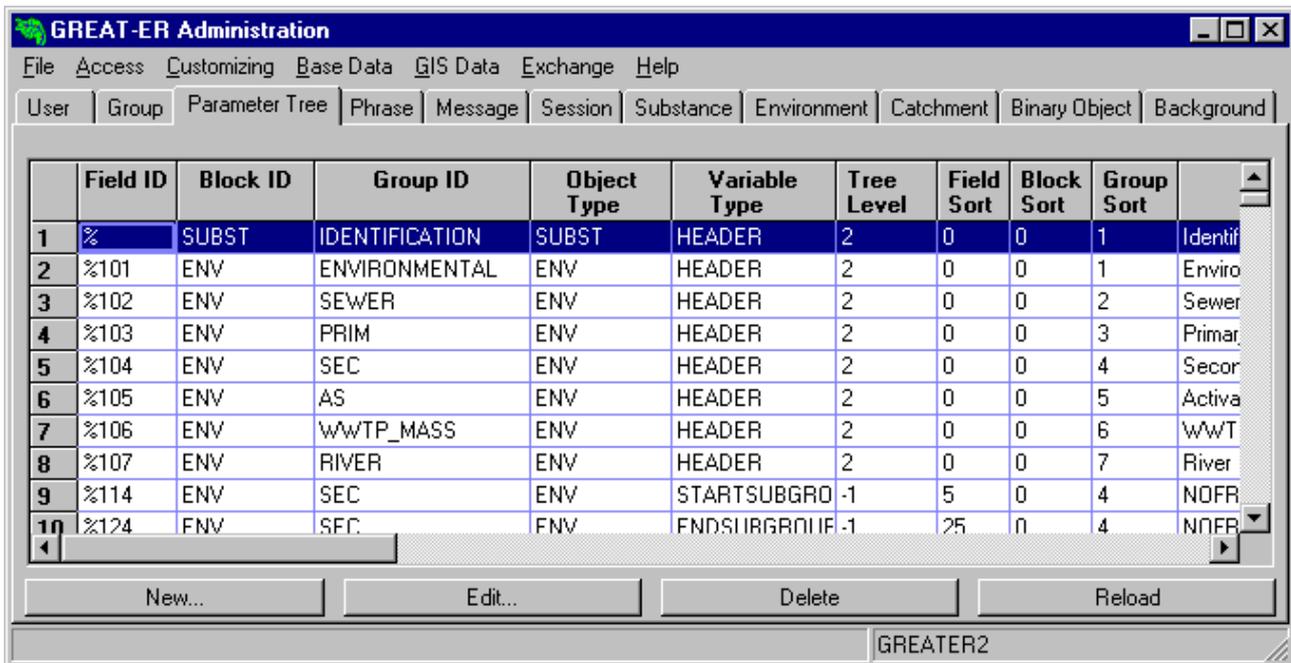
To delete a group, mark it on the result list and click on the button .



Yes	No
<p>Click on this button to delete the selected group entry from the GREAT-ER application.</p>  <p>An information dialog box titled "Info" with a blue header bar and a close button (X) in the top right corner. It contains an information icon (i) on the left and the text "Group 'Anonymous Group' was deleted" in the center. At the bottom, there is an "OK" button.</p>	<p>Clicking on this button activates the following message box. The group entry has not been removed from the GREAT-ER application.</p>  <p>An information dialog box titled "Info" with a blue header bar and a close button (X) in the top right corner. It contains a red error icon (X) on the left and the text "Group was not deleted" in the center. At the bottom, there is an "OK" button.</p>

4 Parameter Tree

Activate the module "Parameter Tree" by selecting the folder "Parameter Tree" or the menu item **[Customizing:Parameter Tree]** after starting the "Administration".

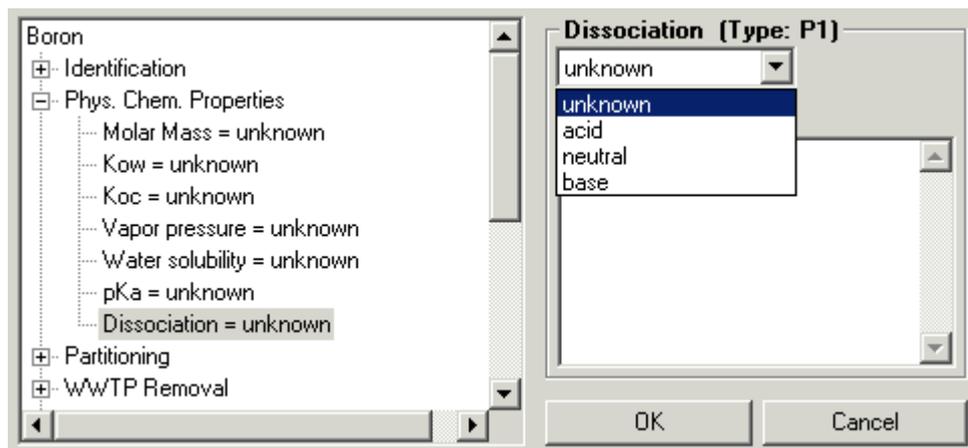


	Field ID	Block ID	Group ID	Object Type	Variable Type	Tree Level	Field Sort	Block Sort	Group Sort	
1	%	SUBST	IDENTIFICATION	SUBST	HEADER	2	0	0	1	Identif
2	%101	ENV	ENVIRONMENTAL	ENV	HEADER	2	0	0	1	Enviro
3	%102	ENV	SEWER	ENV	HEADER	2	0	0	2	Sewer
4	%103	ENV	PRIM	ENV	HEADER	2	0	0	3	Primar
5	%104	ENV	SEC	ENV	HEADER	2	0	0	4	Secor
6	%105	ENV	AS	ENV	HEADER	2	0	0	5	Activa
7	%106	ENV	WWTP_MASS	ENV	HEADER	2	0	0	6	WWT
8	%107	ENV	RIVER	ENV	HEADER	2	0	0	7	River
9	%114	ENV	SEC	ENV	STARTSUBGRO	-1	5	0	4	NOFR
10	%124	ENV	SEC	ENV	ENDSUBGROUPE	-1	25	0	4	NOFR



Please note, that modifying the data in the "Parameter Tree" affects other **GREAT-ER** modules such as e.g. the "**GREAT-ER Repository**" menu structure. This means that modifications should be avoided or must be made very carefully. If a test system is available, then the modifications and their effects could be tested within this system first.

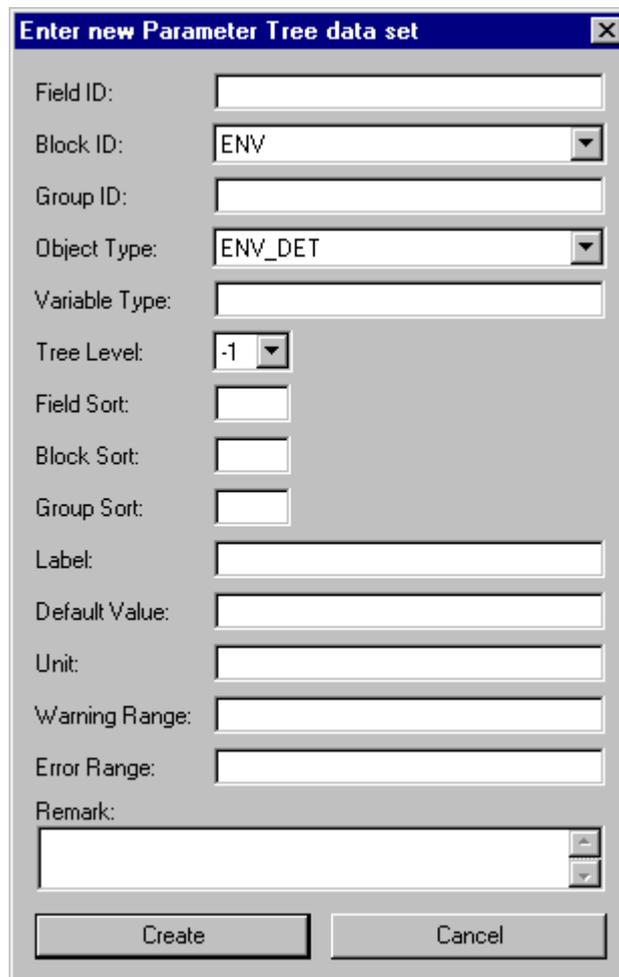
This module is very important for the **GREAT-ER** repository. The figure below shows an excerpt of the section "Substance Data" of the repository. The parameter tree entries are reflected in the tree structure of the "Substance Data". A record in the parameter tree represents a group (e.g. Identification, Phys. Chem. Properties, etc.) or a property of a group (e.g. Molar Mass, Dissociation etc.).



The module "Parameter Tree" enables the user to create, edit or delete entries for the parameter tree. The function of these procedures is described in the chapters below.

4.1.1 Create Parameter Tree Entry

Click on the button  in the overview of the "Parameter Tree" module to create new entries in the parameter tree.



The screenshot shows the 'Enter new Parameter Tree data set' dialog box. It contains the following fields and controls:

- Field ID:
- Block ID:
- Group ID:
- Object Type:
- Variable Type:
- Tree Level:
- Field Sort:
- Block Sort:
- Group Sort:
- Label:
- Default Value:
- Unit:
- Warning Range:
- Error Range:
- Remark:

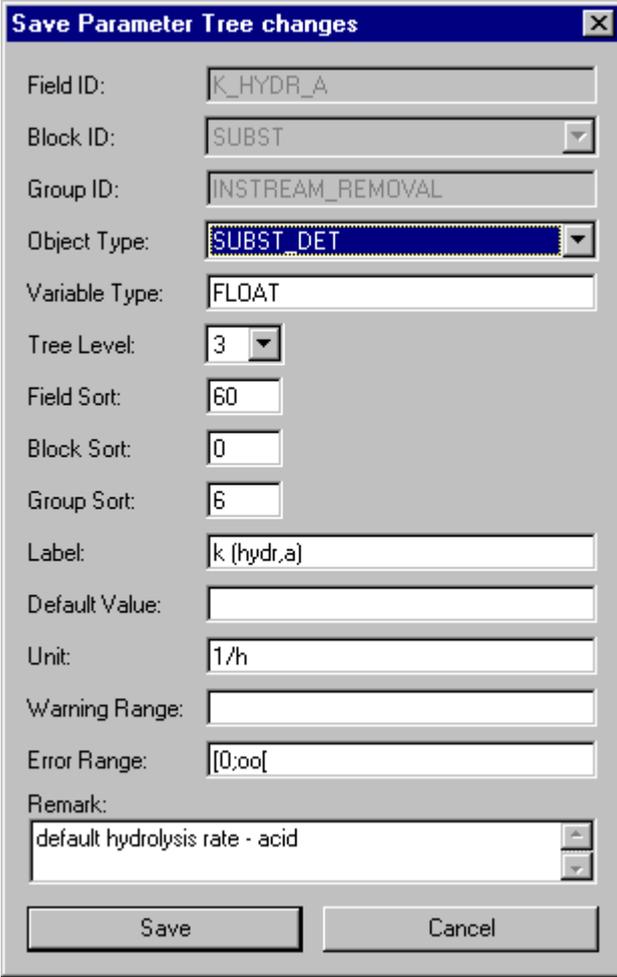
At the bottom, there are 'Create' and 'Cancel' buttons.

Please enter the data in the input boxes. The fields Field ID, Block ID, Group ID, Object Type, Variable Type, Tree Level, Field Sort, Block Sort and Group Sort are mandatory and must be completed.

Click on the button  to create an entry for the parameter tree with the indicated properties in the database. Leave the "Enter new Parameter Tree Data Set" window without saving the changes by clicking on the button .

4.1.2 Edit Parameter Tree Entry

Parameter tree entries can be modified by selecting the chosen entry from the result list in the data section and clicking on the button . The user is allowed to modify all properties except the Field ID, Block ID and Group ID.



Save Parameter Tree changes

Field ID:

Block ID:

Group ID:

Object Type:

Variable Type:

Tree Level:

Field Sort:

Block Sort:

Group Sort:

Label:

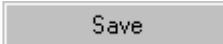
Default Value:

Unit:

Warning Range:

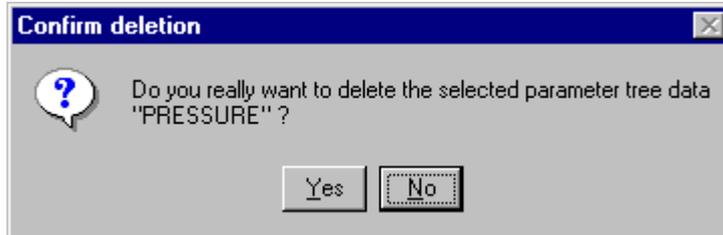
Error Range:

Remark:

Click on the button  to store the modifications on the parameter tree in the database. Leave the "Save Parameter Tree changes" window without saving the changes by clicking on the button .

4.1.3 Delete Parameter Tree Entry

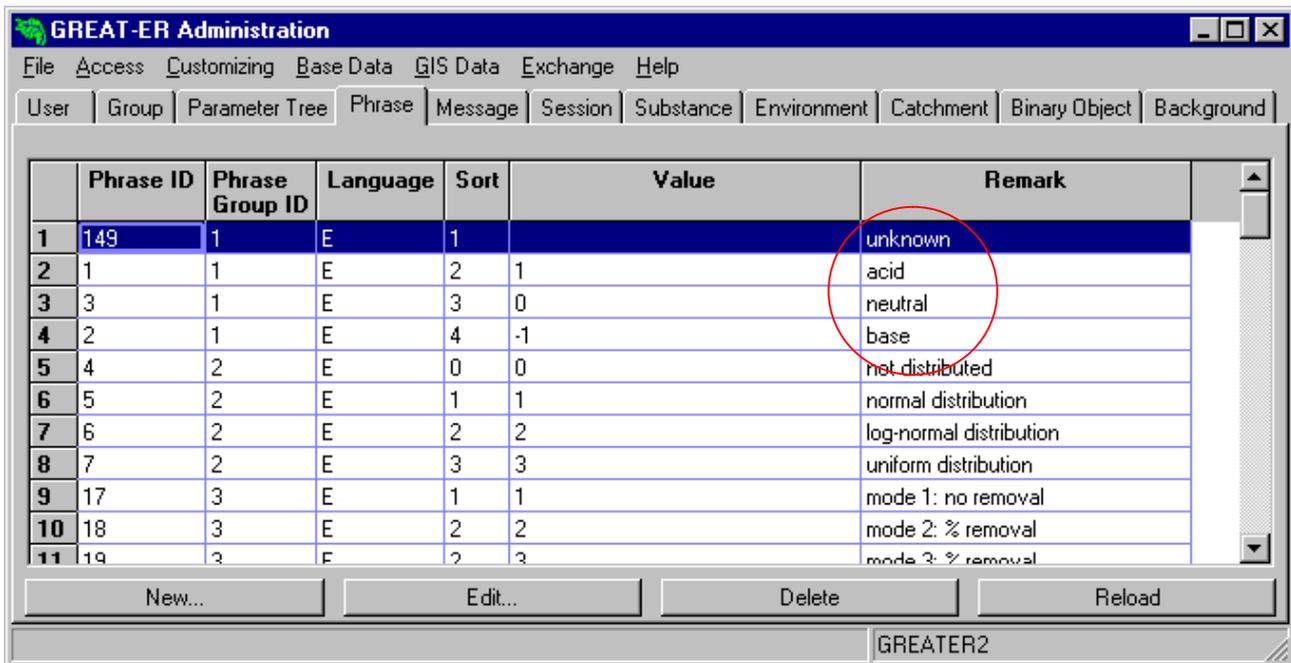
Select the record from the result list and click on the button  in order to delete a parameter tree entry.



Yes	No
<p>Click on this button to delete the selected parameter tree entry from the GREAT-ER application.</p> 	<p>Clicking on this button activates the following message box. The parameter tree entry has not been removed from the GREAT-ER application.</p> 

5 Phrase

Activate the module "Phrase" by selecting the folder "Phrase" or the menu item **[Customizing:Phrase]** after starting the "Administration".



	Phrase ID	Phrase Group ID	Language	Sort	Value	Remark
1	149	1	E	1		unknown
2	1	1	E	2	1	acid
3	3	1	E	3	0	neutral
4	2	1	E	4	-1	base
5	4	2	E	0	0	not distributed
6	5	2	E	1	1	normal distribution
7	6	2	E	2	2	log-normal distribution
8	7	2	E	3	3	uniform distribution
9	17	3	E	1	1	mode 1: no removal
10	18	3	E	2	2	mode 2: % removal
11	19	3	E	2	3	mode 3: % removal

Buttons: New... Edit... Delete Reload

Status: GREATER2

Phrases are individual entries in a list of values. Each entry in a list of values is defined in the module "Phrase". A group of entries forms a list of values.



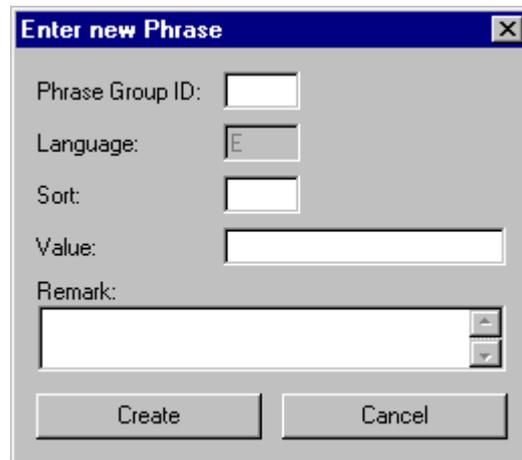
This module supports the definition of these phrases and their assignment to the list of values. This enables the user to create, edit or delete phrases. The description of these functions can be found in the following chapters.



Please note, that modifying the data in the module "Phrase" affects other **GREAT-ER** modules such as e.g. the list of values in the "**GREAT-ER Repository**". This means modifications should be avoided or must be made very carefully. If a test system is available, then the modifications and their effects could be tested within this system first.

5.1 Create Phrase

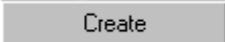
Create new phrases by clicking on the button  in the overview of the module "Phrase".



The "Enter new Phrase" dialog box contains the following fields and controls:

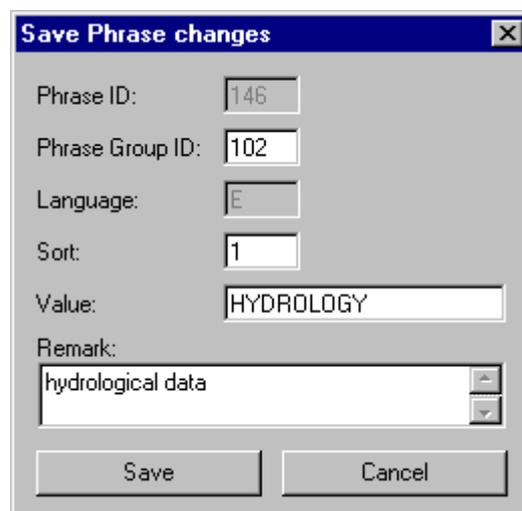
- Phrase Group ID:
- Language:
- Sort:
- Value:
- Remark:
- Buttons: Create, Cancel

Please enter the fields Phrase Group ID, Sort, Value and Remark in the input boxes. Phrases are always pre-defined for English. The definition of phrases for other languages is not supported.

Click on the button  to generate an entry with the indicated properties in the database. Leave the "Enter new Phrase" window without saving the changes by clicking on button .

5.2 Edit Phrase

Sometimes it is necessary to modify the phrases. To do this select the phrase from the result list and click on the button . You may only edit the phrase properties and not the phrase ID itself.



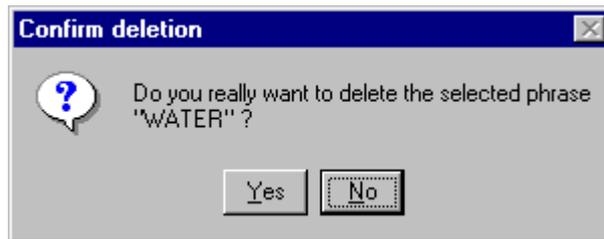
The "Save Phrase changes" dialog box contains the following fields and controls:

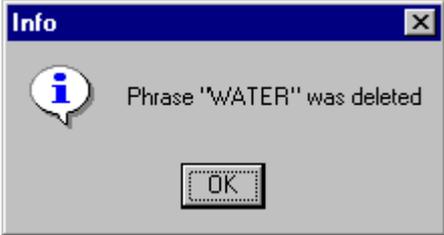
- Phrase ID:
- Phrase Group ID:
- Language:
- Sort:
- Value:
- Remark:
- Buttons: Save, Cancel

Click on the button  to store the phrase modifications in the database. Leave the "Save Phrase changes" window without saving the changes by clicking on the button .

5.3 Delete Phrase

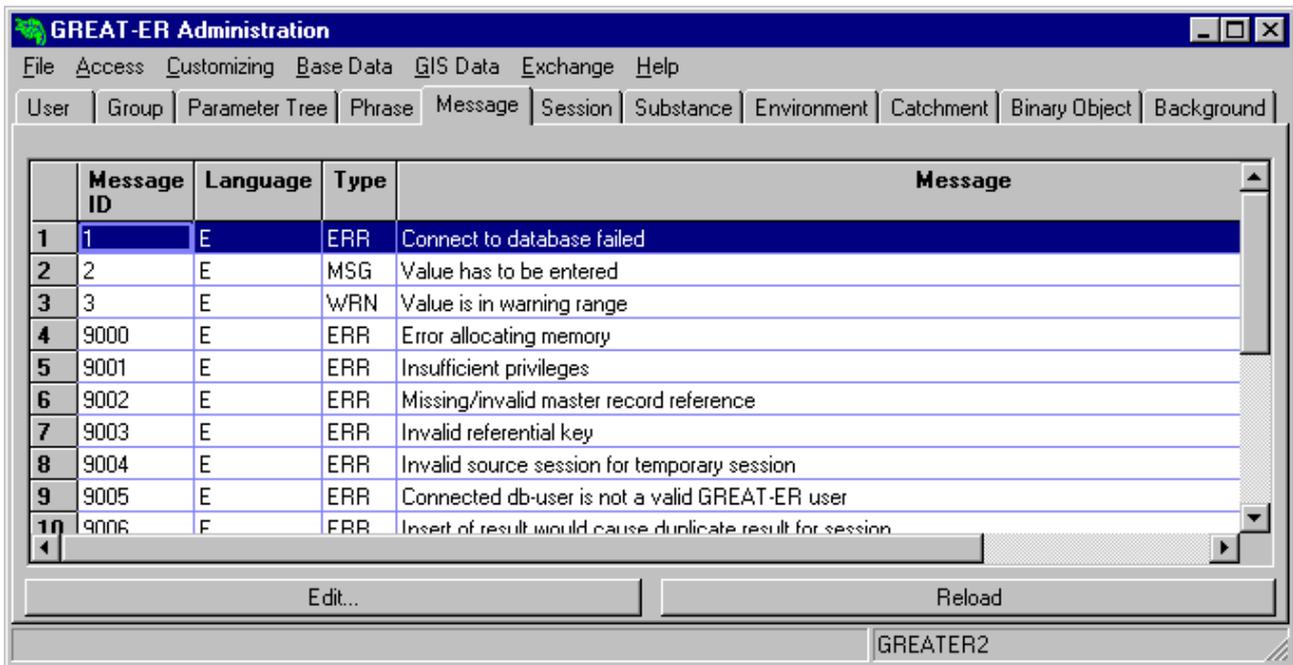
Select the phrase from the result list and click on the button  in order to delete it.



Yes	No
<p>Click on this button to delete the selected phrase entry from the GREAT-ER application.</p> 	<p>Clicking on this button activates the following message box. The phrase entry has not been removed from the GREAT-ER application.</p> 

6 Message

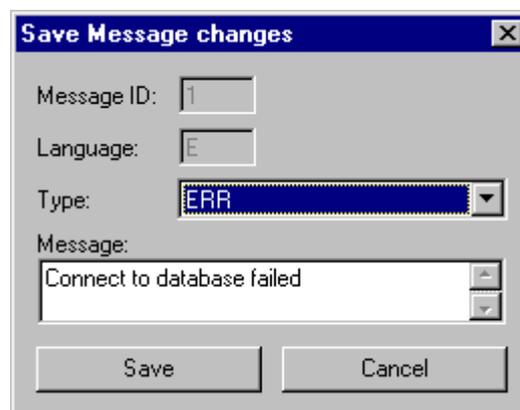
Activate the module "Message" by selecting the folder "Message" or the menu item **[Customizing:Message]** after starting the "Administration".



The **GREAT-ER** system error messages are listed in this unit. The user is not allowed to create new messages, but he can modify already existing messages.

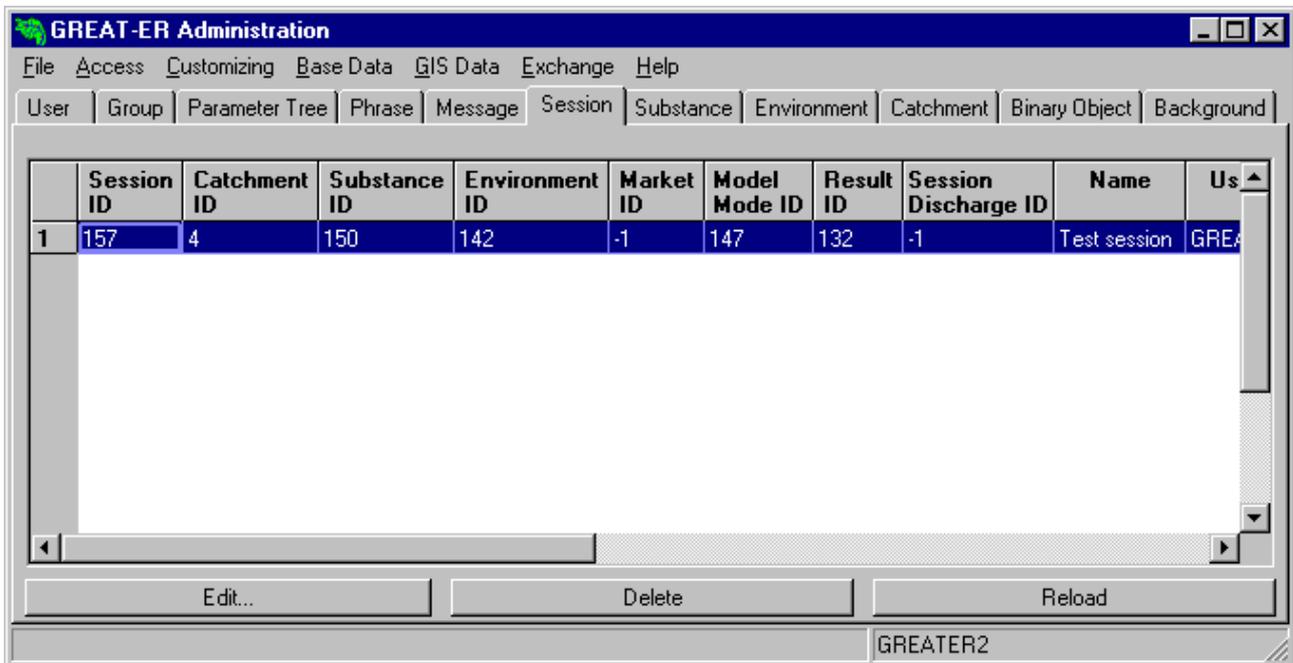
6.1 Edit Message

It is possible to edit messages by selecting the message from the result list and clicking on the button .



7 Session

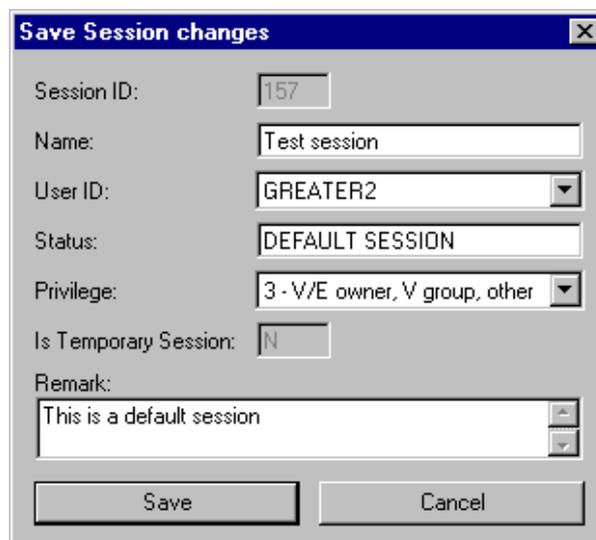
Activate the module "Session" by selecting the folder "Session" or the menu item **[Base Data:Session]** after starting the "Administration".



The module "Session" supports the modification or deletion of sessions. These procedures are described in the chapters below.

7.1 Edit Session

Select the chosen session from the result list and click on the button  to edit session data. It is only possible to modify the session properties and not the Session ID itself.

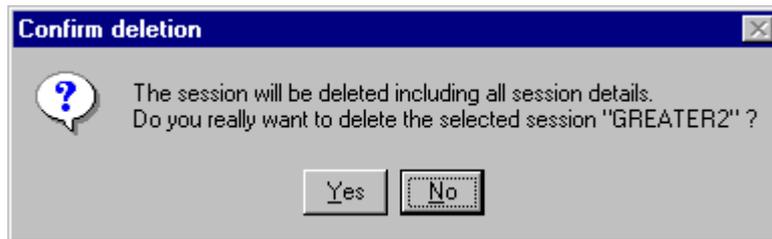


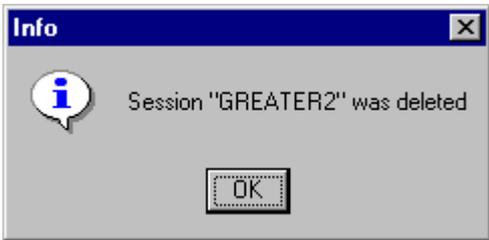
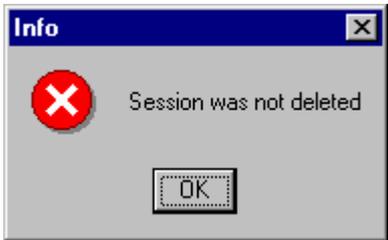
Click on the button  to store the session modifications in the database. Leave the "Save Session changes" window without saving the changes by clicking on the button



7.2 Delete Session

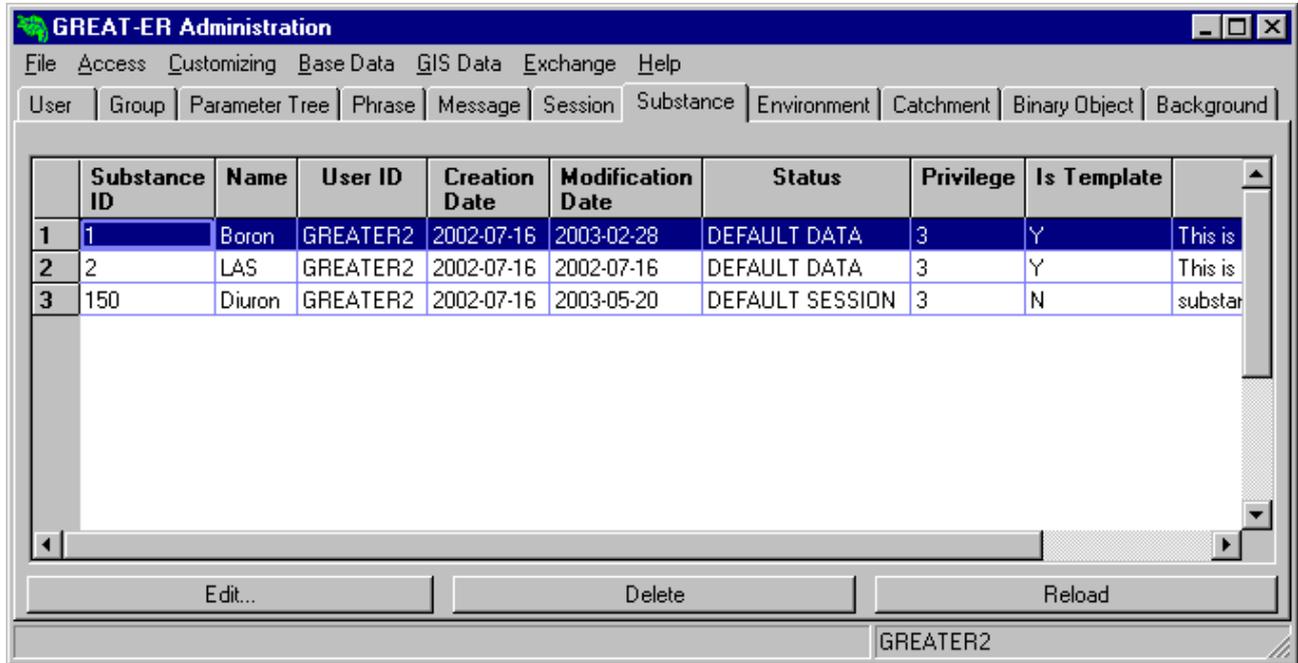
A session can be deleted by selecting the session from the result list and clicking on the button



Yes	No
<p>Click on this button to delete the selected session entry from the GREAT-ER application.</p> 	<p>Clicking on this button activates the following message box. The session entry has not been removed from the GREAT-ER application.</p> 

8 Substance

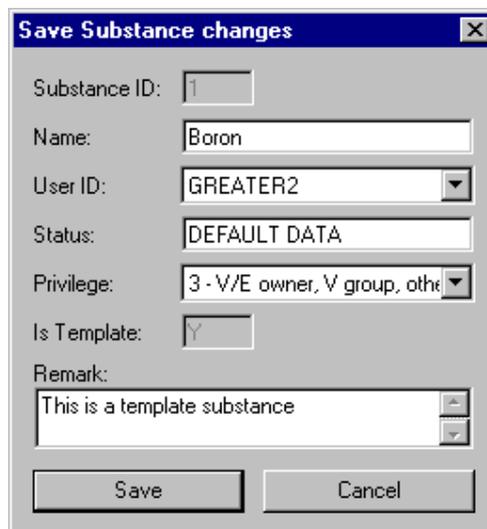
Activate the module "Substance" by selecting the folder "Substance" or the menu item **[Base Data:Substance]** after starting the "Administration".



It is possible to edit or delete substances within the section "Substance". These procedures are described in the chapters below.

8.1 Edit Substance

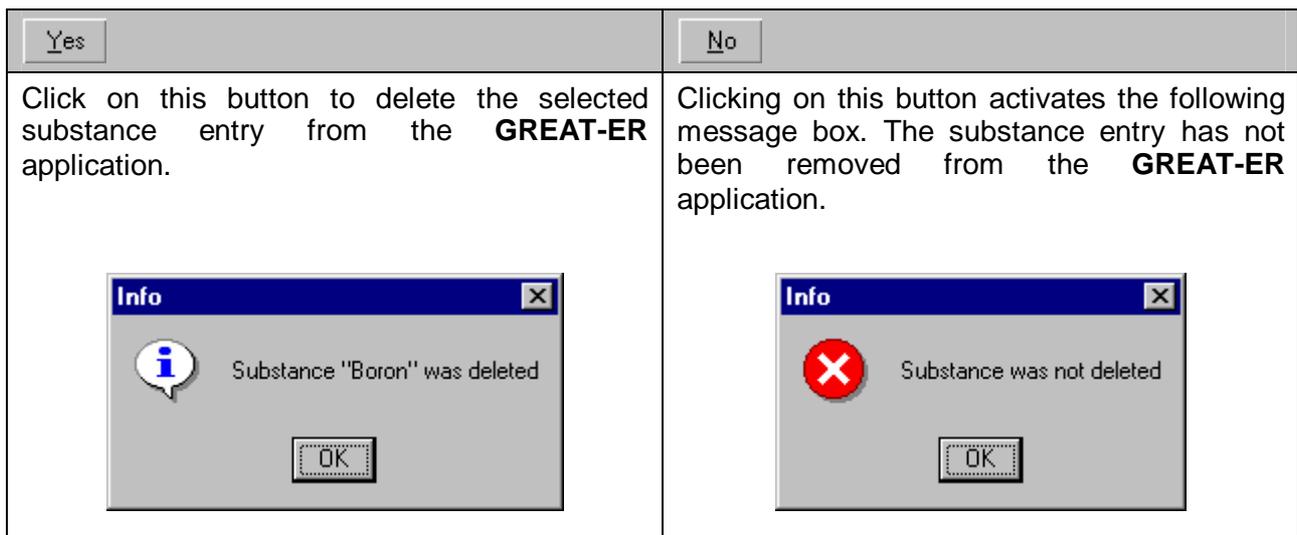
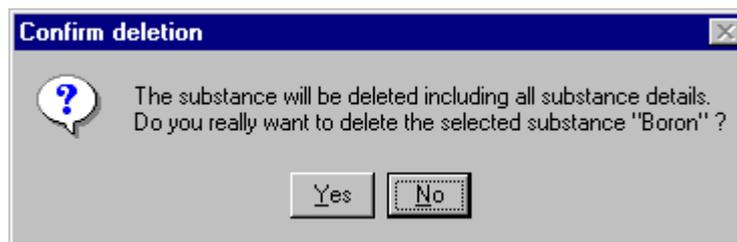
In order to edit substance data, select the substance from the result list and click on the button . It is only possible to modify the properties of the substance and not the Substance ID itself.



Click on the button  to store the modifications in the database that refer to the substance data. Leave the "Save Substance changes" window without saving the changes by clicking on the button .

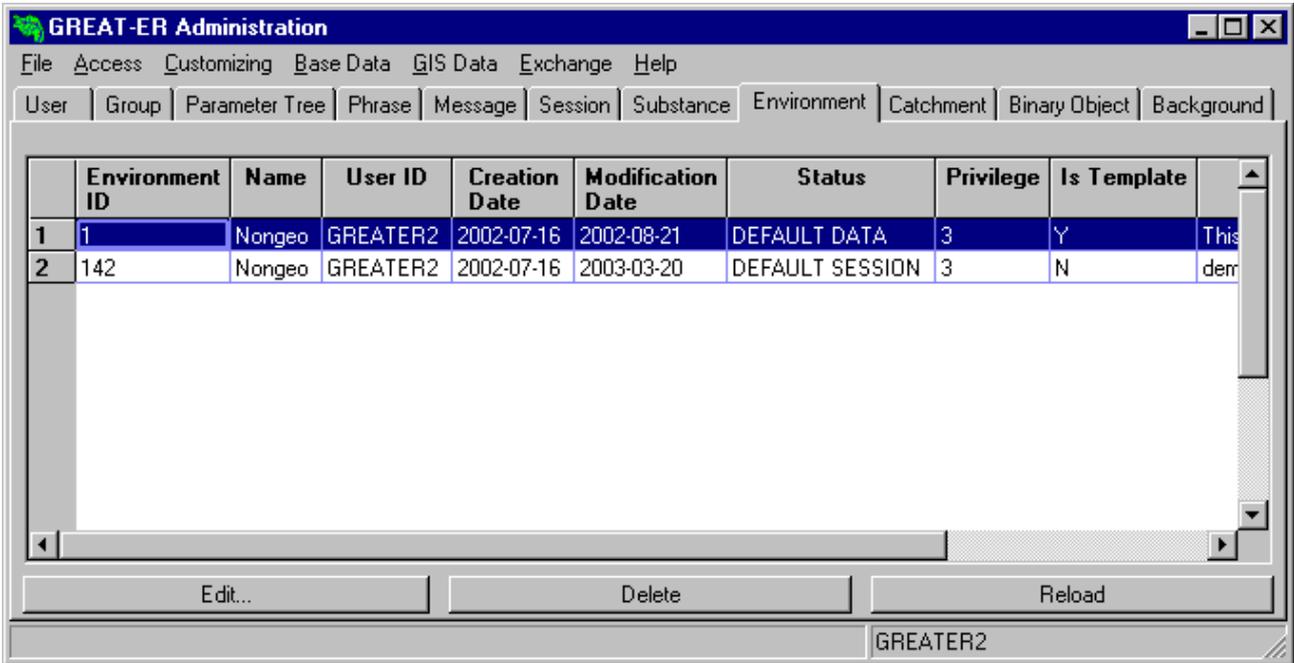
8.2 Delete Substance

Substances may be deleted, if the substance is selected from the result list by clicking on the button .



9 Environment

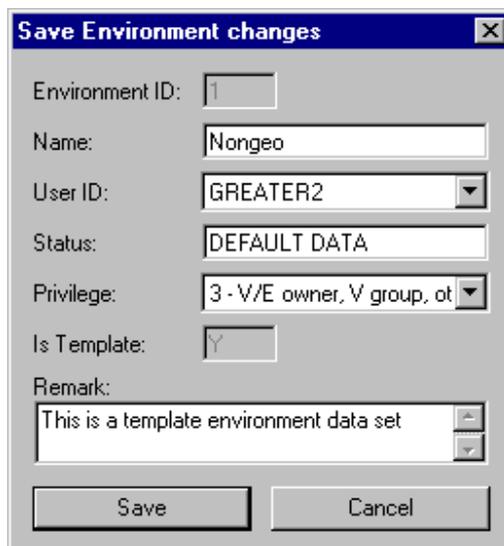
Activate the module "Environment" by selecting the folder "Environment" or the menu item **[Base Data:Environment]** after starting the "Administration".



It is possible to edit or delete environment data within the unit "Environment". These procedures are described in the chapters below.

9.1 Edit Environment

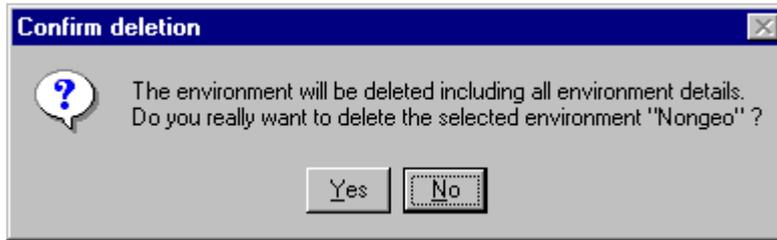
In order to edit environment data, select the environment from the result list and click on the button . It is possible to modify the environment data but not the Environment ID.



Click on the button  to store the modifications in the database that refer to the environment data. Leave the "Save Environment changes" window without saving the changes by clicking on the button .

9.2 Delete Environment

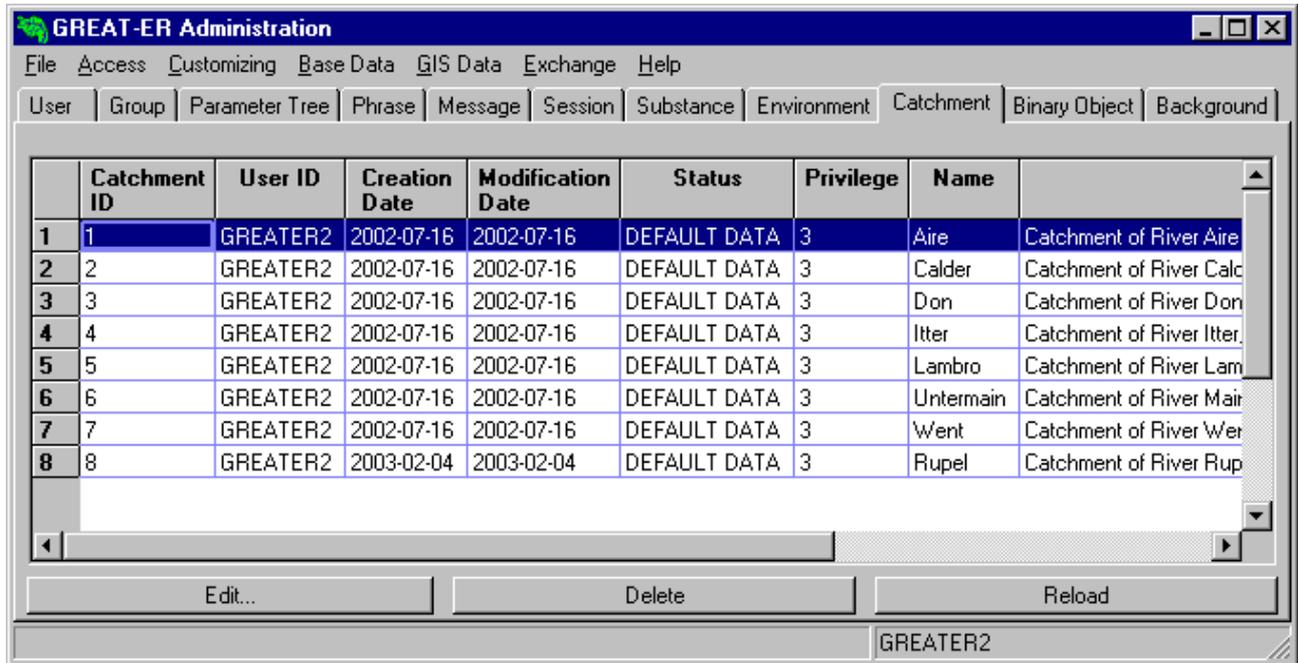
In order to delete environment data, select the record from the result list and click on the button .



	
<p>Click on this button to delete the selected environment entry from the GREAT-ER application.</p> 	<p>Clicking on this button activates the following message box. The environment entry has not been removed from the GREAT-ER application.</p> 

10 Catchment

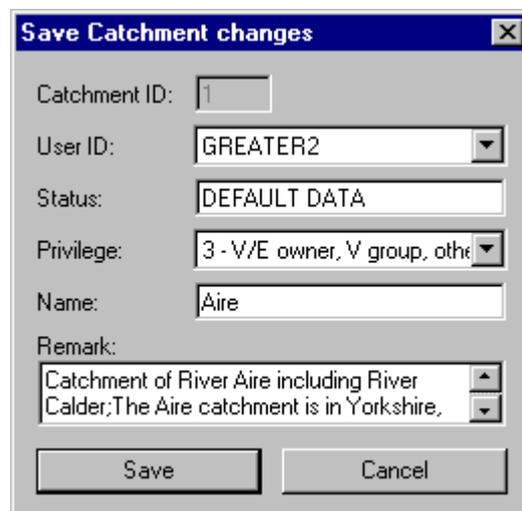
The module "Catchment" is activated by selecting the folder "Catchment" or the menu item **[GIS Data: Catchment]** after starting the "Administration".



It is possible to edit or delete river catchments within the module "Group". These procedures are described in the chapters below.

10.1 Edit Catchment

In order to edit catchment data, select the catchment from the result list and click on the button . It is possible to edit all catchment data, except the Catchment ID.



Click on the button  to save the changes on the catchment data in the database. Leave "Save Catchment changes" window without saving the changes by clicking on the button .

10.2 Delete Catchment

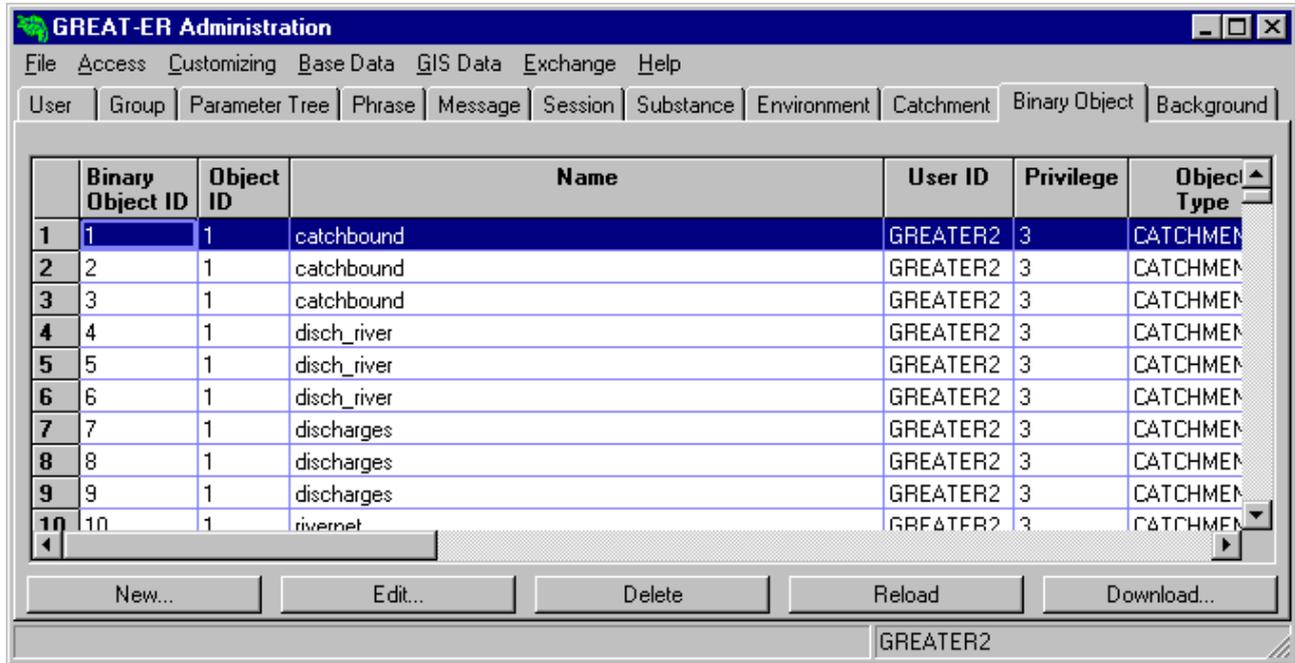
In order to delete the catchment, select the catchment from the result list and click on the button .



	
<p>Click on this button to delete the selected catchment entry from the GREAT-ER application.</p>  <p>An "Info" dialog box with an information icon. The text says: "Catchment 'Aire' was deleted". There is an "OK" button at the bottom.</p>	<p>Clicking on this button activates the following message box. The catchment entry has not been removed from the GREAT-ER application.</p>  <p>An "Info" dialog box with an error icon (red X). The text says: "Catchment was not deleted". There is an "OK" button at the bottom.</p>

11 Binary Object

The module "Binary Object" is activated by selecting the folder "Binary Object" or the menu item **[GIS Data:Binary Object]** after starting the "Administration".



	Binary Object ID	Object ID	Name	User ID	Privilege	Object Type
1	1	1	catchbound	GREATER2	3	CATCHMEN
2	2	1	catchbound	GREATER2	3	CATCHMEN
3	3	1	catchbound	GREATER2	3	CATCHMEN
4	4	1	disch_river	GREATER2	3	CATCHMEN
5	5	1	disch_river	GREATER2	3	CATCHMEN
6	6	1	disch_river	GREATER2	3	CATCHMEN
7	7	1	discharges	GREATER2	3	CATCHMEN
8	8	1	discharges	GREATER2	3	CATCHMEN
9	9	1	discharges	GREATER2	3	CATCHMEN
10	10	1	rivemet	GREATER2	3	CATCHMEN

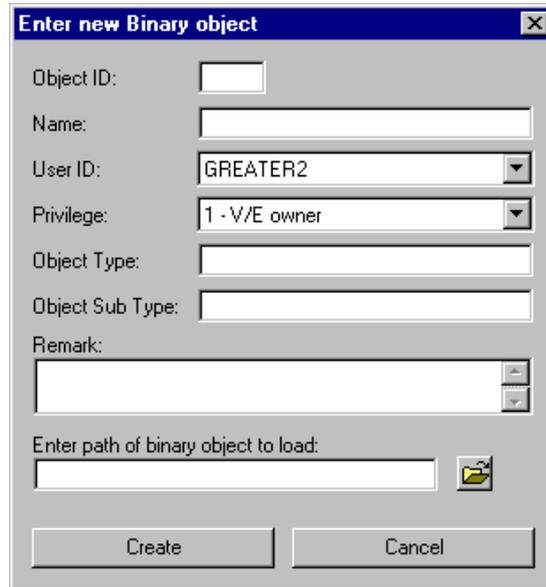
It is possible to create, edit, delete or download binary objects within the unit "Binary Object". These procedures are described in the chapters below.



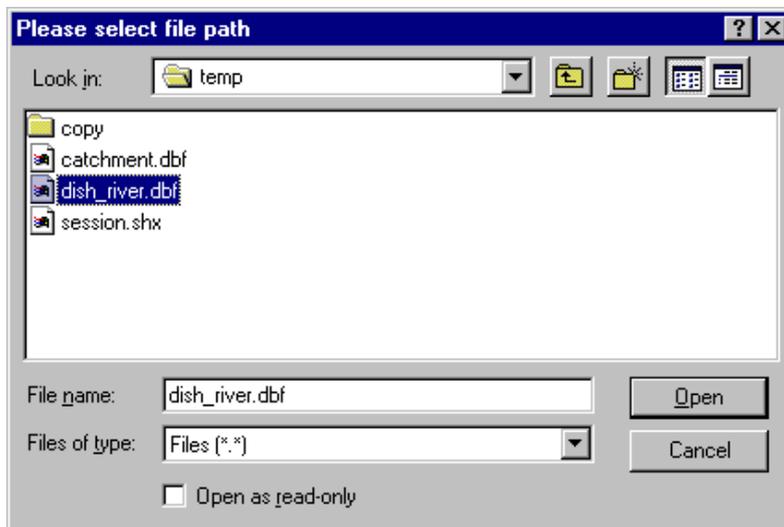
Please note, that modifying the data in the module "Binary Object" affects other **GREAT-ER** modules such as e.g. backgrounds. This means modifications should be avoided or must be made very carefully. If a test system is available, then the modifications and their effect could be tested within this system first.

11.1 Create Binary Object

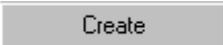
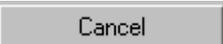
You can create a new binary object by clicking on the button  in the "binary object" unit overview.



If a new file is to be loaded into the database, choose the path for the loaded file. Open the MS Windows standard dialog box by clicking on the button .

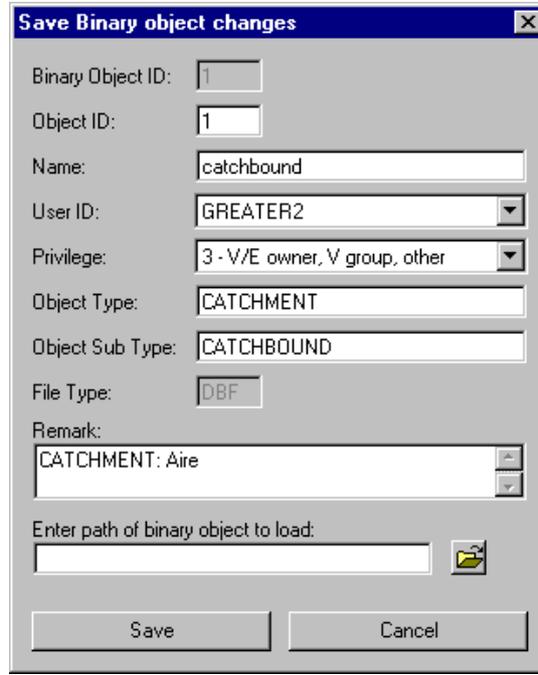


Select the file name and click on the button  to return to the "Enter new Binary object" window.

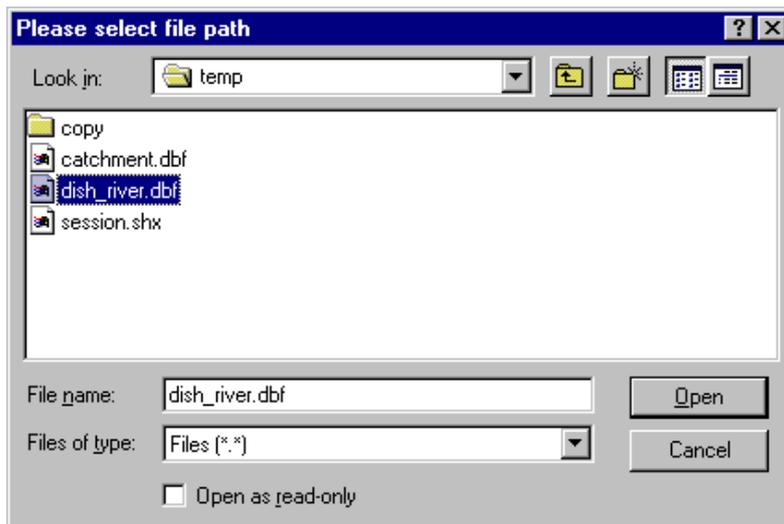
Please enter the data in the input boxes. Click on the button  to create an entry for the parameter tree with the indicated properties in the database. Leave the "Enter new Binary object" window without saving the changes by clicking on the button .

11.2 Edit Binary Object

In order to edit binary objects, select the binary objects from the result list and click on the button . It is possible to edit all binary object data, except the Binary Object ID.



If a file must be updated in the database, choose the path for the loaded file. Open the MS Windows standard dialog box by clicking on the button .

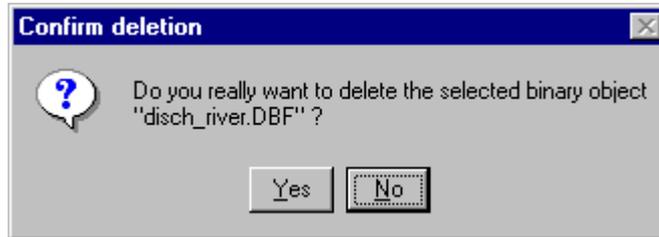


Select the file name and click on the button to return to the "Save Binary object changes" window.

Click on the button to save the changes on the binary object data in the database. Leave the "Save Binary object changes" window without saving the changes by clicking on the button .

11.3 Delete Binary Object

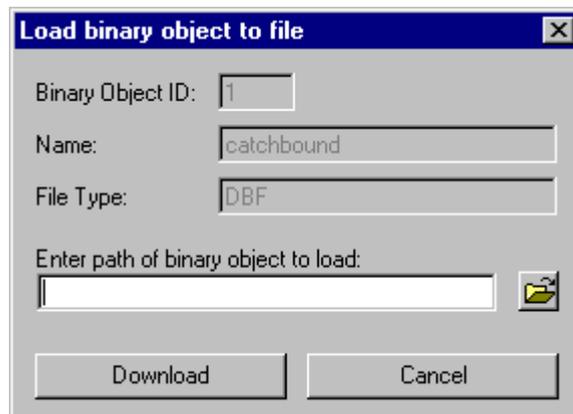
In order to delete the binary object, select the binary object from the result list and click on the button .



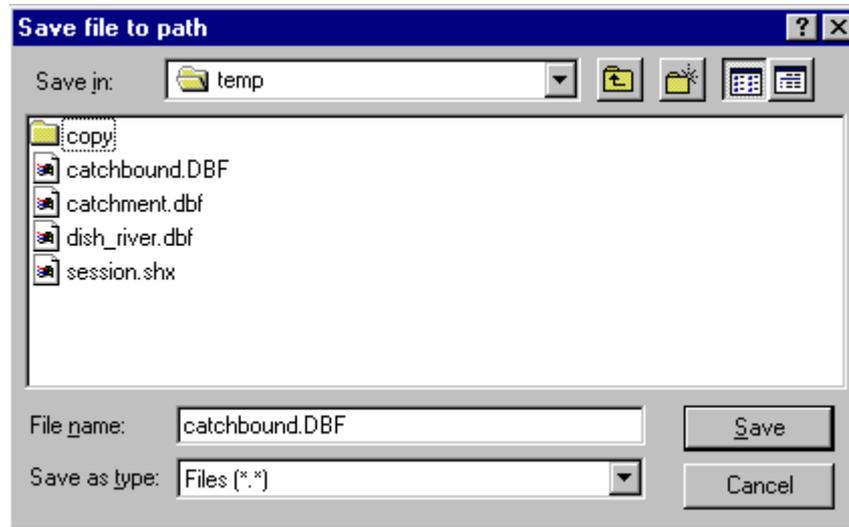
Yes	No
<p>Click on this button to delete the selected binary object entry from the GREAT-ER application.</p> 	<p>Clicking on this button activates the following message box. The binary object entry has not been removed from the GREAT-ER application.</p> 

11.4 Download Binary Object

Select the document from the result list and click on the button  or access the menu item **[Document:Download]** to start the download process.



The selected binary object is loaded from the database into the file system in this step. Open the MS Windows standard dialog box in order to choose the path for the downloaded file and click on the button .



Enter the file name and click on the button  to return to the "Load binary object to file" window. Now load the file from the database into the file system by clicking on the button . Confirmation is displayed on the screen after successful download.



11.5 Catchments and Binary Objects

Normally catchments consist of different binary objects. The essential basic catchment covers catchbound, disch_river, rivernet and discharges. These catchment components are listed in the table below:

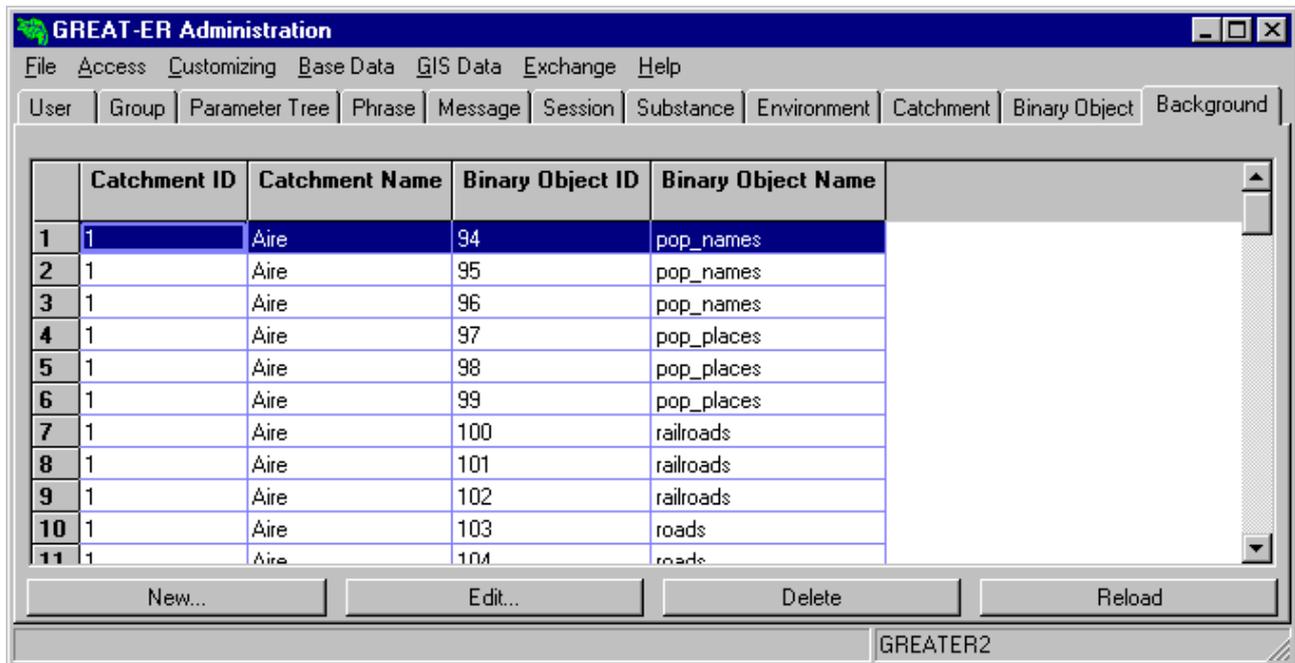
Component	Description	Mandatory	File Type
CATCHBOUND	The catchment of a river network is defined by the farthest point downstream, i.e. the farthest downstream segment. The catchment boundary represents the natural drainage area. Any point in that area will drain to that farthest downstream segment.	Yes	*.SHX, *.SHP, *.DBF
DISCHRIVER	The lines indicate where discharges are entering the river network.	Yes	*.SHX, *.SHP, *.DBF
DISCHARGES	Discharge sites of a catchment. The discharge data contain information about points through which substances are released into the river network, e.g. sewage treatment plants.	Yes	*.SHX, *.SHP, *.DBF
RIVERNET	River network of a catchment.	Yes	*.SHX, *.SHP, *.DBF
PICS	This component contains a point coverage which shows the locations of available photographs.	No	*.SHX, *.SHP

The essential basic catchment covers catchbound, disch_river, rivernet and discharges. Each component is represented by different file types.

File Type	Description
*.SHP	This kind of file contains geographical information.
*.SHX	An index file exists for each *.SHP file. These files are named *.shx files.
*.DBF	The dbf files describe specific catchment attributes.

12 Background

The module "Background" is activated by selecting the folder "Background" or the menu item **[GIS Data:Background]** after starting the "Administration".



Usually one catchment consists of more than one binary object. The reason for this is that a map, for example, is composed of different layers. This means you need one binary object for each layer. The assignment of binary objects to catchments is completed within the module "Background". Please note, that the catchments must be already defined in the module "Catchment" (see chapter "10 Catchment"). This applies also the binary objects, that should have been loaded into the database before (see chapter "11 Binary Object").

It is possible to create, edit or delete background data within the section "Background". These procedures are described in the chapters below.

12.1 Create Background

You can create a new background by clicking on the button  in the "background" module overview. Then select the Catchment ID and the Binary Object ID from the given list of values to complete the input boxes. The list of values contains data which are defined in the modules "Catchment" and "Binary Objects".



Please enter the data in the input boxes. Click on the button  to create an entry for the parameter tree with the indicated properties in the database. Leave the "Enter new Binary object" window without saving the changes by clicking on button .

12.2 Edit Background

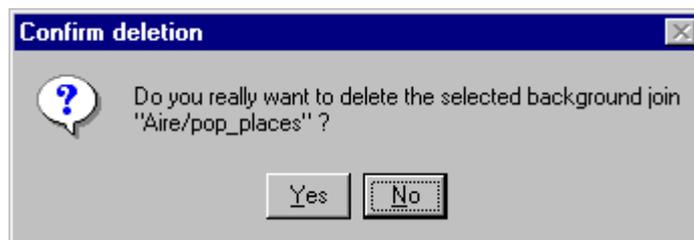
In order to edit background data, select the background from the result list and click on the button . Please choose the Catchment ID and the Binary Object ID from the given list of values to complete the input boxes. The list of values contains data which are defined in the modules "Catchment" and "Binary Objects".



Click on the button  to save the changes on the background data in the database. Leave the "Save Background Join changes" window without saving the changes by clicking on the button .

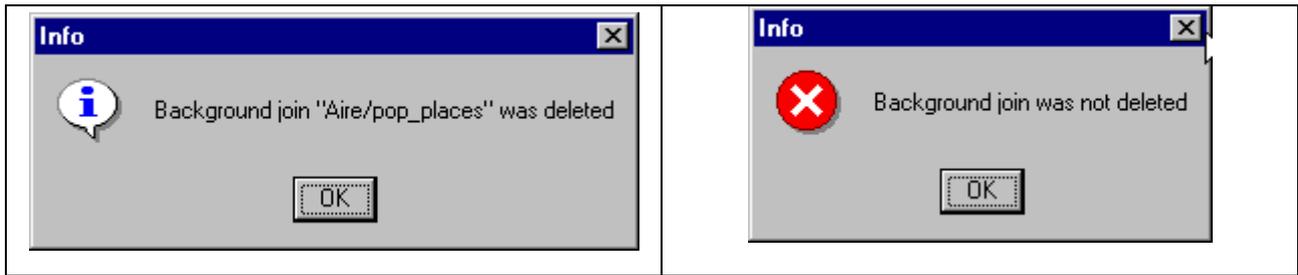
12.3 Delete Background

In order to delete the background, select the background from the result list and click on the button .



	
<p>Click on the button to delete the selected background entry from the GREAT-ER application.</p>	<p>Clicking on this button activates the following message box. The background entry has not been removed from the GREAT-ER application.</p>

12. Background



13 Data Exchange

The exchange data includes one session only and its detail data. The catchment used in the session may be exchanged optionally.

The exchange data includes the following session data (if entered):

- ? catchment with stretches, discharges and binary objects (optional)
- ? substances and substance details
- ? environment data sets and environment details
- ? emission data
- ? model mode data sets and model mode details
- ? result data with binary objects
- ? session discharge data
- ? session data

There are two additional files required to execute the XML data exchange:

- ? greater.dtd

This is the data type definition file for **GREAT-ER**. This file contains all valid XML tags for the data exchange of **GREAT-ER** data.

- ? greater.xsl

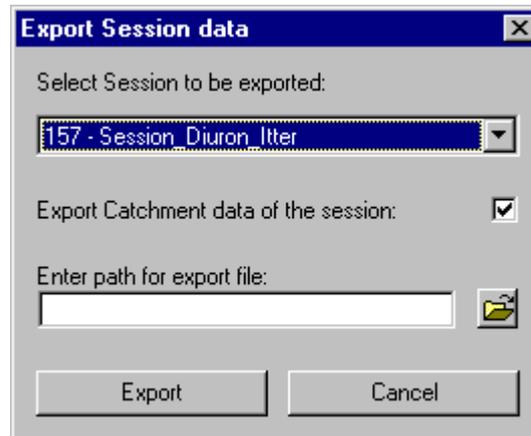
Style sheet file which creates a tabular structure when the XML file is viewed. To view the XML file, open it with a browser, e.g. the MS Internet Explorer.



The files greater.dtd and greater.xsl have to exist in the data exchange directory together with the XML file that was exported from **GREAT-ER** or has been imported into **GREAT-ER**.

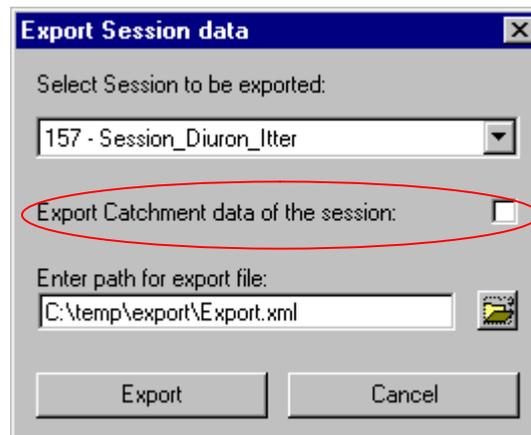
13.1 Export

The module "Export" is activated by selecting the menu item **[Exchange:Export]** after starting the "Administration".



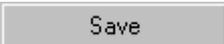
Choose the session you wish to export by selecting it from the list of sessions in the combo box. The catchment of the session is included in the export per default. This can be changed by clicking on the checkbox "Export Catchment data of the session".

If the checkbox "Export Catchment data of the session" is disabled, then the session data is exported without the catchment data (catchment, stretches, discharges, binary objects).



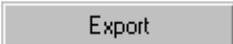
Open the MS Windows standard dialog box to choose the path for the export file and click on the button .

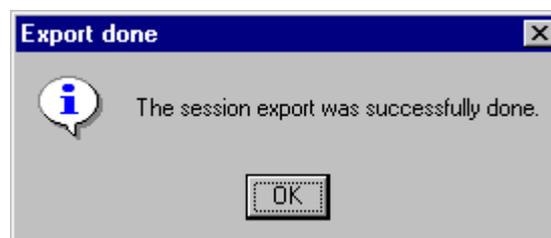


Enter the file name and click on the button  to return to the "Export Session data" window.



The file name for the export file must have file type "XML".
The files greater.dtd and greater.xsl have to be located in the directory that was selected for the *.XML file to export.

Now start the export by clicking on the button . The confirmation of a successful execution is displayed on the screen.



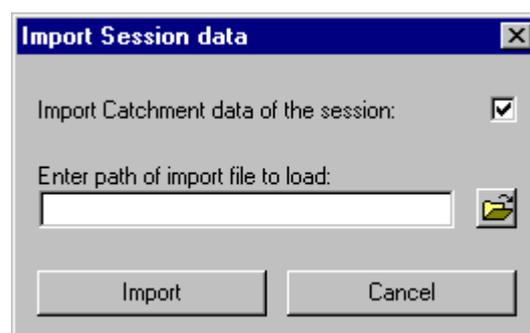
The figure below is an excerpt from the Windows Explorer. An export consists of different files. During the export one *.xml file is created and all binary objects belonging to this session are loaded from the database into the export directory. The binary objects have different object types (.DBF, *.SHÜ, *.SHX, *.JPG and others) corresponding to their definition.

The binary objects belong to the catchment data and the result data of a session.

Contents of 'C:\temp\export'					
Name	Size	Type	Modified	Attributes	
Export.xml	97KB	XML Document	5/23/03 1:10 PM	A	
Export_234.DBF	3KB	DBF File	5/23/03 1:10 PM	A	
Export_235.SHP	1KB	SHP File	5/23/03 1:10 PM	A	
Export_236.SHX	1KB	SHX File	5/23/03 1:10 PM	A	
Export_237.JPG	167KB	JPEG Image	5/23/03 1:10 PM	A	
Export_238.JPG	110KB	JPEG Image	5/23/03 1:10 PM	A	
Export_239.JPG	169KB	JPEG Image	5/23/03 1:10 PM	A	
Export_240.JPG	191KB	JPEG Image	5/23/03 1:10 PM	A	
Export_241.JPG	116KB	JPEG Image	5/23/03 1:10 PM	A	
Export_242.JPG	69KB	JPEG Image	5/23/03 1:10 PM	A	
Export_243.JPG	116KB	JPEG Image	5/23/03 1:10 PM	A	
Export_244.JPG	87KB	JPEG Image	5/23/03 1:10 PM	A	
Export_245.JPG	123KB	JPEG Image	5/23/03 1:10 PM	A	

13.2 Import

The module "Import" is activated by selecting the menu item **[Exchange:Import]** after starting the "Administration".



The catchment is imported together with the session data per default. This can be changed by clicking on the checkbox "Import Catchment data of the session".

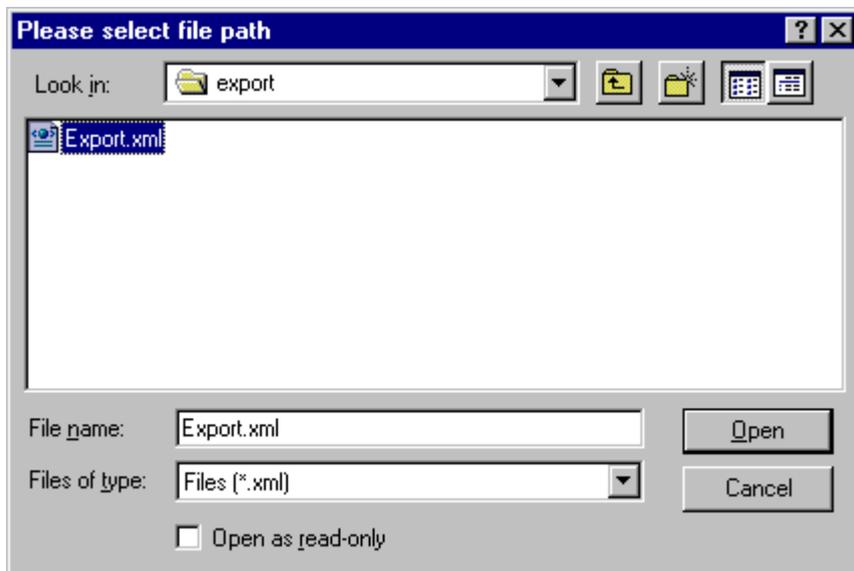
Note

This import procedure checks whether the combination of catchment name and ID already exist in the database. If this is the case, then the import will be halted and an error message displayed. The catchment name must always be different to the ones already existing. This mechanism prevents loading duplicate instances of the same catchment.

Choose the path for the *.xml file to import. Open the MS Windows standard dialog box by clicking on the button

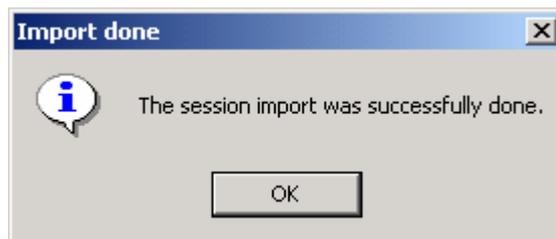


The file name for the import file must have file type "XML". The name of the import file is not relevant. It is also allowed to name the file to be imported "Export.xml".
The binary object files and the files greater.dtd and greater.xsl have to be located in the same directory as the *.xml file to be imported.



Select the *.xml file and click on the button to return to the "Import Session data" window. Now start the import by clicking on the button .

The successful execution confirmation is displayed on the screen.



13.3 Preparation of an XML file

The chapters "13.1 Export" and "13.2 Import" describe how to exchange data from one **GREAT-ER** system to another by using the export and import function one after another. It is also possible to prepare an XML file from scratch to import e.g. a completely new catchment with the administration. For this purpose some rules concerning the content of the XML file must be followed.



To create an XML file from "scratch", i.e. with data not exported from a **GREAT-ER** system, export a similar session which already exists. Then use this file as a template and adapt it to your needs. This will make the process a lot easier.

Rules & Hints for the GREAT-ER XML file preparation

- ? There are only imported data formatted by tags defined in the "greater.dtd" file.
- ? The XML file must include session data. It is not possible to import a catchment without session data. If the main purpose is to import a new catchment, the XML file must include some dummy session data at least. This means that substance, environment and other session details are not entered for the dummy session so that an export file can be used as template.
- ? The catchment name must always be different to the ones already existing in the **GREAT-ER** system. Rename the catchment in the XML file if you want to import it anyway.
- ? The combination of catchment name and Id must always be different to the ones existing in the GREAT-ER system. Rename the catchment file or change the catchment Id in the XML file if you want to import it anyway. To change the catchment Id, replace the CATCH_ID value in the relevant sections of the CATCH_TAB, STRETCH_TAB, DISCH_TAB and replace the OBJECT_ID in the relevant sections of the BIN_OBJ_TAB marked with OBJ_TYPE "CATCHMENT". The new catchment Id must be a positive number higher than the number last used to identify an existing catchment.

Example for replacing the catchment Id values:

Catchment section	Replace 7 with 17: <pre><CATCH_TAB> <CATCH_ID>7</CATCH_ID> <USER_ID>GREATER200</USER_ID> <CRE_DATE>2002-07-16</CRE_DATE> </CATCH_TAB></pre>
Stretch section	Replace 7 with 17: <pre><STRETCH_TAB></pre>

	<pre> <STRETCH_ID>-2</STRETCH_ID> <CATCH_ID>7</CATCH_ID> <STRETCH_CLASS_ID>1</STRETCH_CLASS_ID> </STRETCH_TAB> </pre>
discharge section	<pre> Replace 7 with 17: <DISCH_TAB> <DISCH_ID>47</DISCH_ID> <STRETCH_ID>26772</STRETCH_ID> <CATCH_ID>7</CATCH_ID> <DISCH_CLASS_ID>30</DISCH_CLASS_ID> </DISCH_TAB> </pre>
binary object section	<pre> Replace 7 with 17: <BIN_OBJ_TAB> <BIN_OBJ_ID>78</BIN_OBJ_ID> <OBJECT_ID>7</OBJECT_ID> <NAME>disch_river</NAME> </BIN_OBJ_TAB> </pre>

- ? STRETCH_IDs and DISCH_IDs are imported with the value they have in the XML file. This is due to the consistency required for the river network (data pre-processing).
- ? All other Id values (CATCH_ID, SUBST_ID, SESS_ID and others) are replaced automatically during the import procedure. This is required to prevent data being overwritten by mistake.
- ? The binary object files for the catchment and possibly for the result have to be provided in the directory where the *.xml file is prepared and from which it is later imported.

- ? The binary object files must be named according to the *.xml file followed by “_” and then the relevant BIN_OBJ_ID value to which it belongs in the section of the *.xml file.

Example for naming one binary object:

XML file name	new.XML
Binary object section	<pre> <BIN_OBJ_TAB> <BIN_OBJ_ID>78</BIN_OBJ_ID> <OBJECT_ID>7</OBJECT_ID> <NAME>disch_river</NAME> <USER_ID>GREATER200</USER_ID> <PRIVS>3</PRIVS> <OBJ_TYPE>CATCHMENT</OBJ_TYPE> <OBJ_SUB_TYPE>DISCHRIVER</OBJ_SUB_TYPE> <FILE_TYPE>SHX</FILE_TYPE> <FILE_OBJ>Export70_78.SHX</FILE_OBJ> <FILE_SIZE>156</FILE_SIZE> <REMARK>CATCHMENT: Went</REMARK> <CRE_DATE>2003-01-14</CRE_DATE> <MOD_DATE>2003-02-04</MOD_DATE> </BIN_OBJ_TAB> </pre>
Binary file name	new_78.SHX