

SimaPro 8 Update Instructions



Colophon

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1 Introduction

This document describes how to update your current SimaPro 7.3 to version 8.0, and update your database with ecoinvent v3 plus new and updated methods.

You will find detailed instructions below. Please read these carefully. Should you still have questions, please contact your local [SimaPro partner](#) or the PRé helpdesk via support@pre-sustainability.com or by phone +31 33 4504010.

The update procedure can be summarized as follows:

1. Update of the SimaPro 7 software: Update your SimaPro 7 Single User and Multi-user client software to SimaPro 8.0.
2. Update of the libraries in the SimaPro database: Update your data libraries by importing the update database.

Please note that the update to SimaPro 8 will replace your current SimaPro 7 software. The update of the database may take several hours.

To update a SimaPro 5 or 6 database to SimaPro 8, please contact us for details.

2 Updating the SimaPro Software

2.1 Multi-user versions

We recommend that multi-user updates are done by your network administrator.

- All SimaPro multi-user clients have to be updated.
- The database server can be kept running.

2.2 Procedure for Single User and Multi-user client

1. Download the SimaPro installation file SetupSimaPro802.zip from <http://www.pre-sustainability.com/SimaPro-installation>.
2. Unzip and double click SetupSimaPro802.exe to start the installation. Follow the instructions in the setup wizard. The SimaPro 7 software will be removed and be replaced with SimaPro 8 software. No changes to your database are made.
3. After installing the update, you can start SimaPro 8. Upon opening your database, adaptations are made in the technical database format. A backup will be made. After updating, your SimaPro database cannot be opened with SimaPro 7.3 or older versions anymore.
4. Proceed with the database update. This procedure is described below.

3 Updating the Database

3.1 Database update and transfer

This section describes how to update your database with new and updated data (LCI libraries and LCIA methods) and transfer links in your projects from ecoinvent v2.2 to ecoinvent v3.0.1 processes.

The ecoinvent 3 database is significantly larger than the previous version and has a different category structure. Process names have changed and different system models are implemented, following either an attributional or consequential approach.

More details of what has changed in the ecoinvent database can be found in the manual “Introduction to LCA” (Section 3.4) . We recommend you read the extensive documentation on the changes on www.ecoinvent.org. In the “What’s New in SimaPro 8?” document an overview of the contents of the update can be found.

Before you start the database update procedure, please be aware of the following:

1. The update will change the results of your calculations as methods have been updated.
2. The database update and transfer is memory and processor intensive and may take 2 to 3 hours or more.
3. Your computer should meet the system requirements, see <http://www.pre-sustainability.com/system-requirements>.
4. In Box 1 you can find tips for updating if you have a multi-user Business license.

Box 1. Multi-user versions

If you have a professional Compact, Analyst or Developer Multi user version, updating the database will be quicker if you do the update locally on your own PC. Make sure no users are logged in, close SimaPro and then copy the database (77 numbered *.nx1 files: from ***00.nx1 to ***76.nx1) to your local hard drive. See Box 2 for default locations. In the “Open SimaPro Database” window, choose “Local server”, browse to the database location and follow the instructions below. After updating, copy the database back to the original location.

Owners of an educational Classroom licence do not have “local server” database access, but can request a temporary single user licence via support@pre-sustainability.com to do the update locally.

Box 2. Default directories

SimaPro stores updates and backups in the default database directory if no other direction is chosen. The default directory depends on the Windows version:

- Windows Vista, 7, Windows 8, 2008 server: C:\Users\Public\Documents\SimaPro\Database\
- Windows 2003 server: C:\Documents and Settings\All Users\Shared Documents\SimaPro\Database
-

3.2 Outline of the instructions

The update process is a sequence of five groups of actions, which are described in different sections of this document:

- **Install and initiate.** This part describes how to install the update database and start the update and transfer function.
- **Check.** After initiation, a check is executed to determine whether the state of your database allows the transfer or if you need to make some adjustments.
- **Update and transfer.** If no problems are found in the check, the following actions are performed (Section 6):
 - a backup of the existing database is made,
 - the data in the update-database is imported,
 - copies of projects with links to ecoinvent 2 are made with the suffix “E13”,
 - the links in the copied projects are transferred from ecoinvent 2 to ecoinvent 3, where possible.
- **Log report.** After the update and transfer is finished, a log report shows an overview the changes that were made in the database and possible unresolved issues.
- **Append.** Finally, you need to do an “append” action to convert any substance names in your database to the naming convention in SimaPro.

4 Install and Initiate

4.1 Install

After unzipping the SetupSimaPro802.zip, double click SetupUpdateDatabase802.exe to start the installation of the update database. Follow the instructions in the setup wizard. This will install the update database on your computer, but not update your own database.

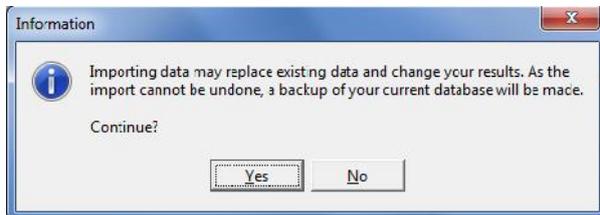
The “Update802” database is installed in the default directory (see Box 2).

Multi-user version: as we recommend updating the database locally, the update database does not have to be installed in one of the locations (directory aliases) defined in the SimaPro database server. You can install on a local hard drive (see Box 1).

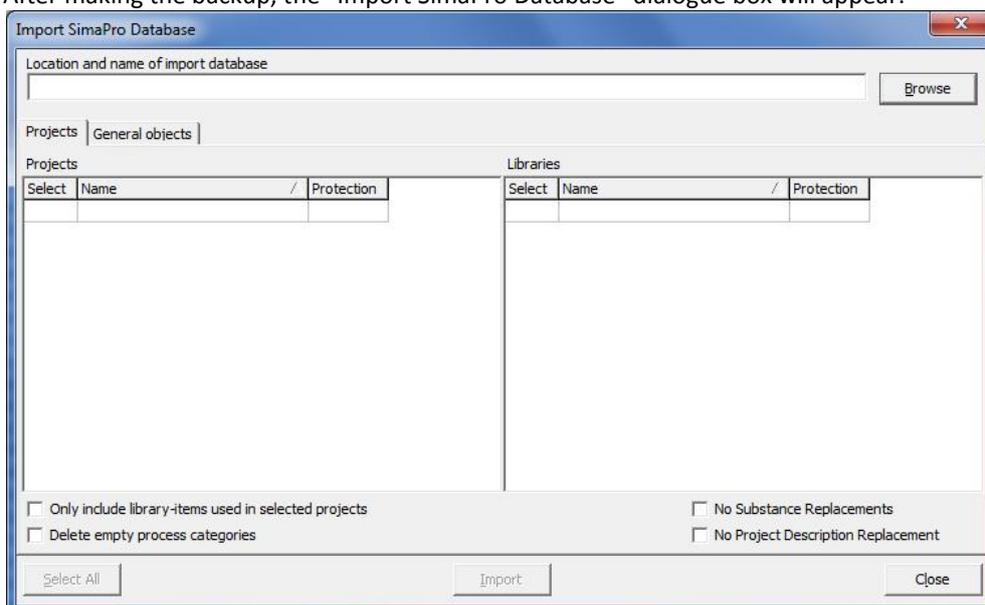
4.2 Initiate

To initiate the update and transfer function, go through the following steps:

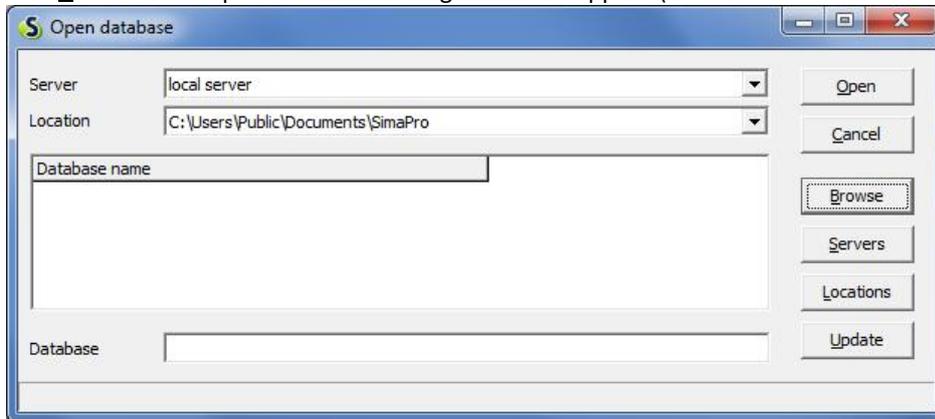
1. Single user version: Start SimaPro.
If you have a SimaPro Multi-user version: Start SimaPro and login as Manager. The database will be locked during import and no other users may be logged in at this moment.
2. Go to File> Open SimaPro Database and select the database you want to update (the database you usually work in).
3. Go to File > Import SimaPro Database. Click Yes to continue.



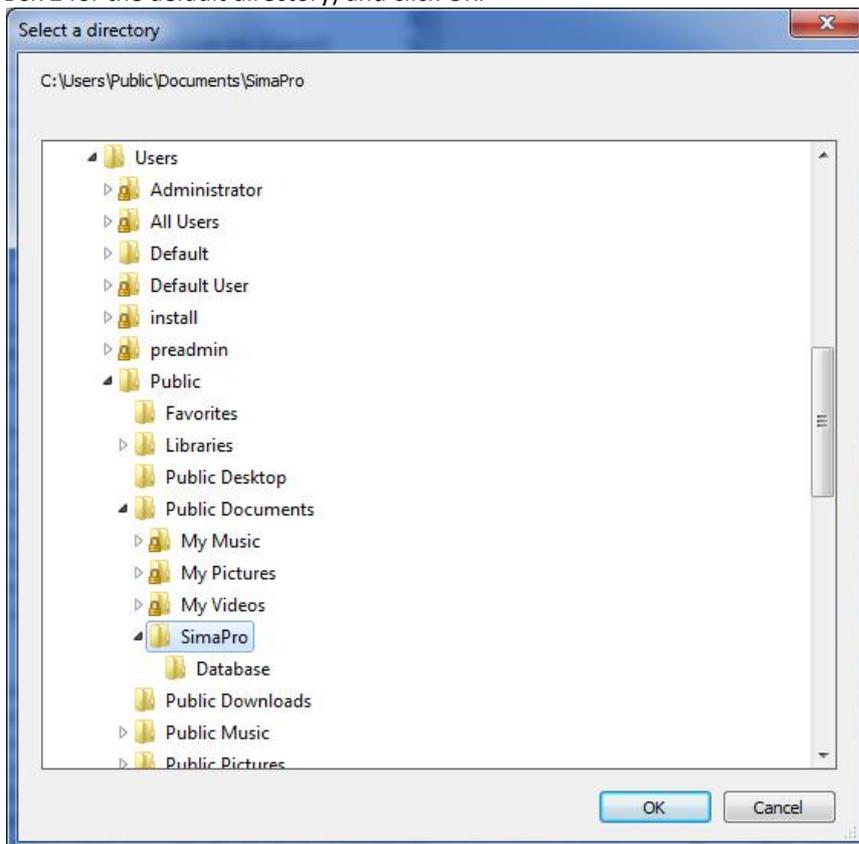
4. After making the backup, the “Import SimaPro Database” dialogue box will appear:



5. Click Browse. The “Open database” dialogue box will appear (local server is shown in Multi user versions only):

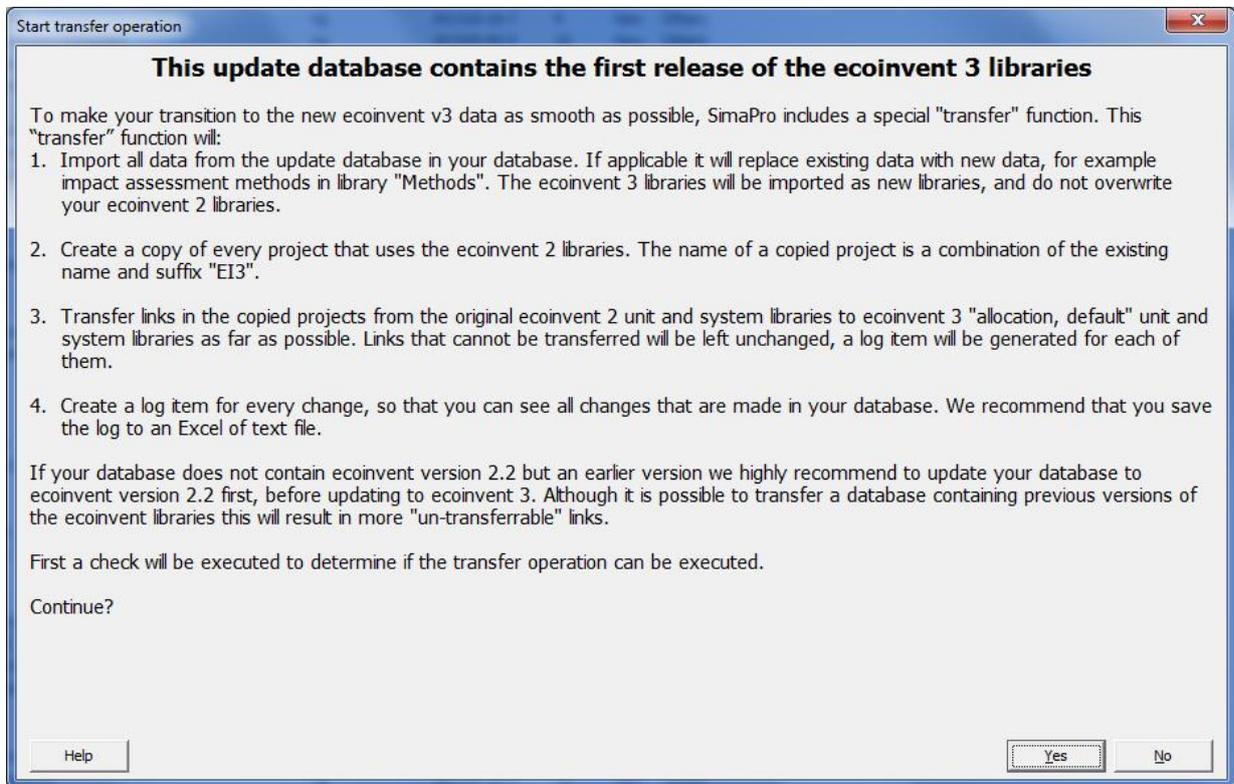


6. Browse to the directory where you have installed the Update Database and select the “Update802” database (see Box 2 for the default directory) and click OK.

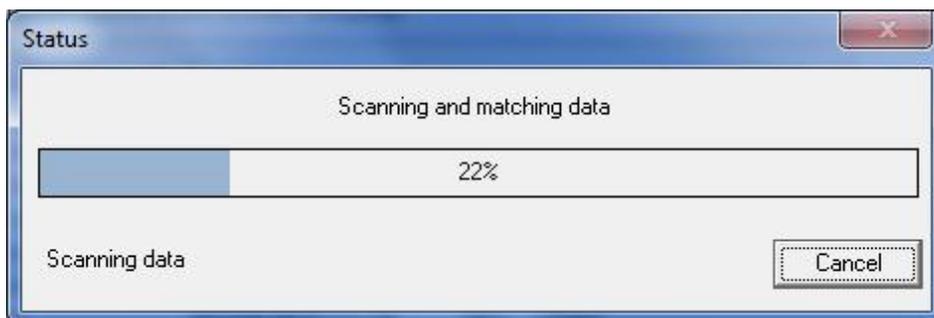


7. The update database (Update802) will appear in the open database dialogue box. Click Open.

8. You will see a progress bar while SimaPro opens the Update802 database. If your database contains the ecoinvent 2 unit and systems libraries, SimaPro shows the following message:



9. Click Yes to start the update and transfer function. First, a check will be executed by scanning and matching data.



5 Check

The check is executed to determine if your database contains the original ecoinvent v2.2 libraries. If you are still using older versions of ecoinvent (v2.1 or earlier), we recommend you first update to ecoinvent v2.2. Contact PRé for more information.

6 Update and Transfer

If no problems are found in the check, you will receive the following message:

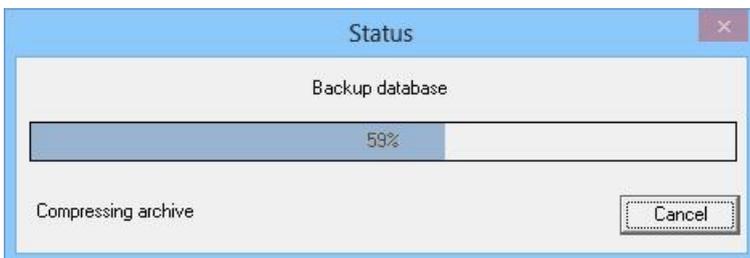


After clicking OK, you need to select a folder (for example the default directory; see Box 2) and enter a file name for your backup file. If you click Cancel, the update and transfer function will be cancelled.

SimaPro will then execute a sequence of actions, starting with making the backup.

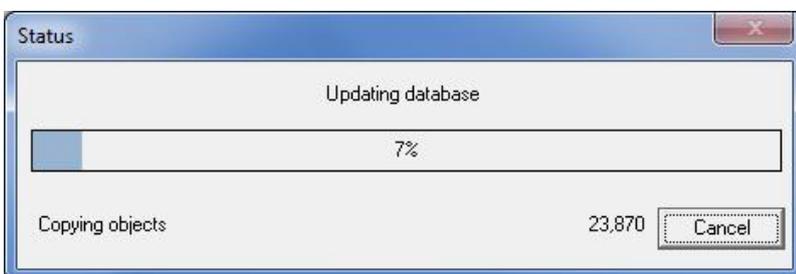
6.1 Backup

First, a back-up of the existing database is made.



6.2 Database import

The data in the update database is imported into the current database. This update database contains four ecoinvent 3 libraries¹, an update of the US LCI library, and an update of the Methods library (see also the "What's New in SimaPro 8?" document). Note that due to the size of the imported libraries this may take several hours.



¹ For information on the differences between allocation default and consequential and between unit and system processes, please read the SimaPro manual "Introduction to LCA" (Section 3.4) and the ecoinvent documentation "Overview and methodology: Data quality guideline for the ecoinvent database version 3", which can be downloaded from www.ecoinvent.org.

6.3 Transfer

The links in your copied projects to ecoinvent 2.2 unit and system processes are transferred to the ecoinvent 3 allocation default unit and system processes where possible (Figure 1). Note that a significant number of links will remain with ecoinvent 2.2, because for some processes there is no ecoinvent 3 equivalent defined. After the update and transfer is finished, you will receive a log report containing warnings about the links that have not been transferred. It is recommended that you replace these links manually by suitable equivalents.

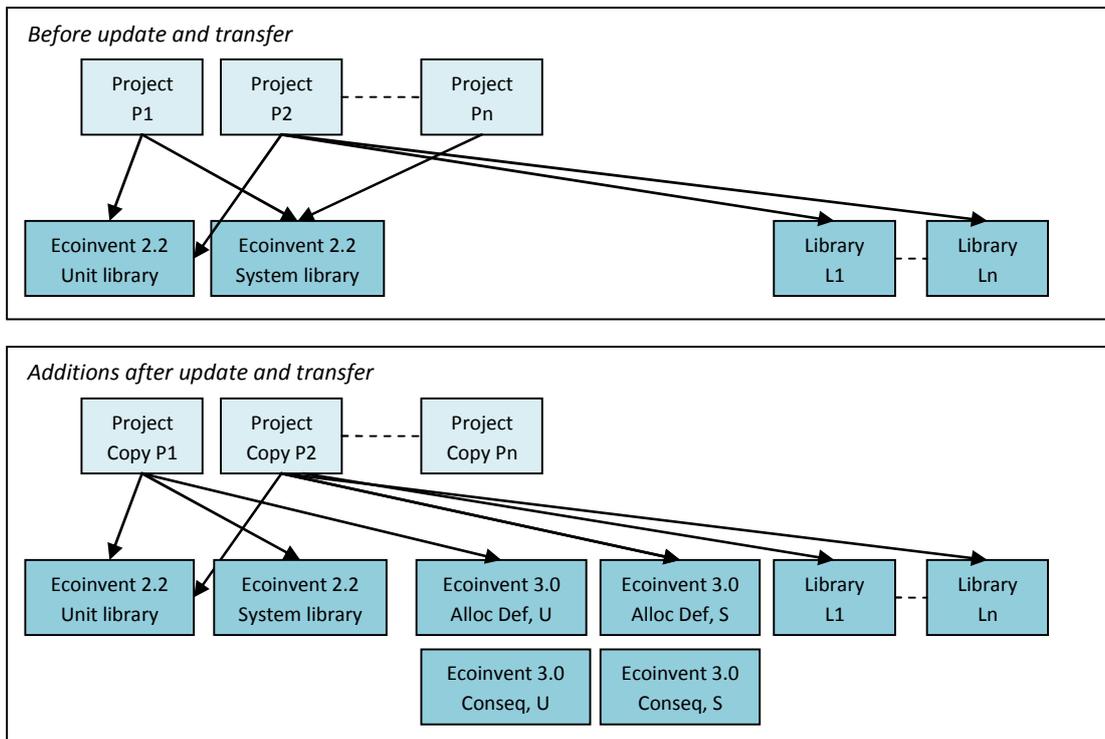
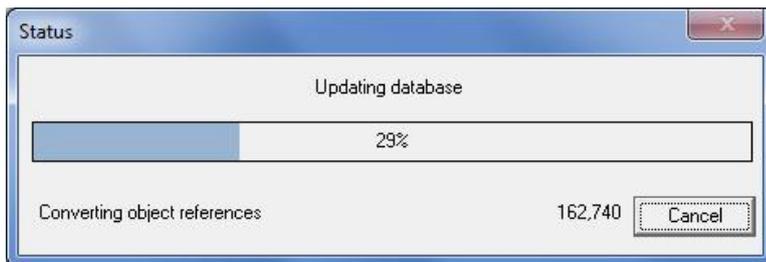


Figure 1: Graphical representation of your database before and additions after the update and transfer (Alloc Def stands for allocation default, Conseq for consequential, Unit or U for unit processes, and System or S for system processes).

Because the transfer affects your data in different places and in different ways, some detailed explanations are needed. The following paragraphs contain a technical description of the transfer.

Your projects can contain links to ecoinvent 2.2 in the following places:

- Processes
- Product-stages
- Calculation setups (products, parameters of scenario analysis, analyze groups)
- Wizards (select process/product stage, show network, operations, product systems)
- Users (library selections, list of accessible projects)

The links will be transferred by referencing the equivalent ecoinvent 3 process, which has a different product name, but the data related to the link may also be different. To explain this, it is important to know the technical differences between the original ecoinvent 2.2 processes and the equivalent ecoinvent 3 processes:

1. **Name only:** only the product names are different.
2. **Unit:** the product names and the units of the reference product can be different (e.g. kWh in ecoinvent 2.2 and MJ in ecoinvent 3), though the quantities are the same (both Energy).
3. **Quantity:** the product names and the quantities of the reference product can be different (e.g. mass in ecoinvent 2.2 and energy in ecoinvent 3).

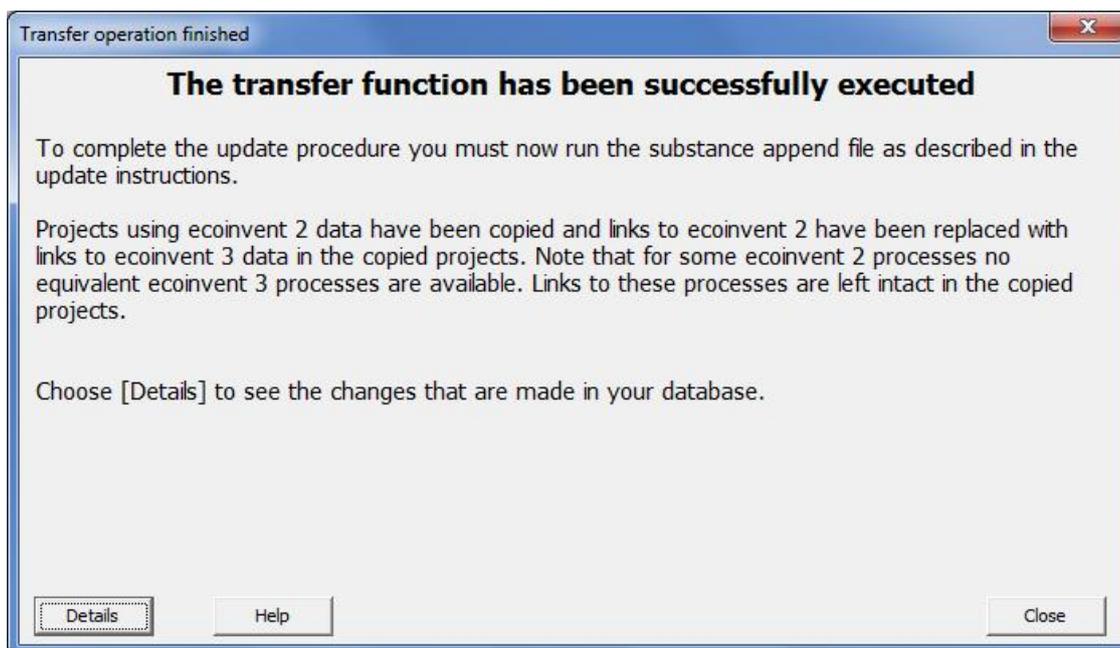
With types 1 and 2, only the product names are changed in your projects.

In case of type 3, the product names, but also the data will be changed in your projects. As amounts can be expressed in three different ways, the conversion is also done in three different ways. For example, we have a product where kg (mass) is used in ecoinvent 2.2 and MJ (energy) in ecoinvent 3. The conversion factor is 50.25 MJ/kg.

- a) **Value.** The value is multiplied by the conversion factor. For example, the value 12.5 kg is replaced by 628.125 MJ.
- b) **Expression.** The expression is extended by multiplying it with the conversion factor. For example, the expression $A + 3*B$ kg is replaced by $(A + 3*B)*50.25$ MJ.
- c) **Link to Excel.** A calculated parameter is created and the external link is moved from the amount field to the new parameter (e.g. "ExtLnk1"). The original external link is then replaced by a corresponding expression. For example, `C:\Data\[LCI-parameters.xls]Data!C5` kg is replaced by `ExtLnk1*50.25` MJ.

7 Log Report

After the update and transfer, SimaPro shows a log report. It contains information about the changes that were made in the database and possible issues you need to resolve manually. After the update and transfer is finished, the following message is shown:



You need to click on [Details] to view the log report. It is required to save this report by clicking on the [Store] button in the log report window:

No	Description	Additional info	Tranferred	Not transferred
1	Project has been copied		175	0
2	Project has been copied		53	0
3	Project has been copied		45	0
4	Project has been copied		555	0
5	Project has been copied		110	0
6	Project has been copied		231	0
7	Project has been copied		90	0
8	Project has been copied		25	0
9	Project has been copied		88	0
10	Project has been copied		0	0
11	Project has been copied		28	0
12	Project has been copied		78	0
13	Project has been copied		90	0
14	Project has been copied		78	0
15	Project has been copied		29	0

It is highly recommended to carefully read the messages. There are 5 different types of messages:

1. **Copied projects**

A list of copied projects is shown with the extension "EI3".

2. **Not converted links**

A list of links that could not be transferred to ecoinvent 3 is shown.

3. **Warnings**

Quantity has changed

This means that the ecoinvent v3 product has a different quantity than the ecoinvent v2.2 product it replaces. Because of this, the amount of a link to this product is converted based on a conversion factor. In column "Additional info", the original unit, the new unit and the conversion factor are given. The object and the location within the object that is changed are described in the subsequent columns. In case of an input or output flow in a process or product-stage, text is added to the comment field with information about the changes. An example of this text is:

[The original ecoinvent v2 process with unit "MJ" (Energy) was automatically replaced by SimaPro with the current ecoinvent v3 process with unit "m3" (volume) using conversion factor 0,025641 m3/MJ.]

In wizards and product systems, a problem could occur and you have to modify the data manually to solve it.

Reference in wizard to category has not been changed

A "Select process/product-stage" node of a wizard contains references to products, but also to process categories.

In case of a category that is also part of the ecoinvent 2.2 libraries, this message is generated. Because the process categories of the ecoinvent 3 libraries differ, you have to manually modify these wizards to get a useful list of processes (see Annex 1). Note this is only possible in a SimaPro Developer version.

4. **Transferred product links**

This means that a link to a product from an ecoinvent v2.2 library is replaced by a link to the equivalent product in an ecoinvent 3 library. In column "Additional info", the name of the original ecoinvent v2.2 product is given and the name of the ecoinvent v3 product that replaces this product. The object and the location within that object that is changed are described with the following items:

- Project. This is the project to which the object belongs.
- Type. This is the type of object.
- Object. The name of the object that is used within SimaPro to identify the object.
- Section. The section within the object in which the modification is applied.
- Line. In most cases, a section contains a list of items. Line gives the number of the items that has been modified.

5. **Other transferred links**

Reference to ecoinvent process has been changed

In SimaPro, references to processes only occur in a few cases. In a calculation-setup, parameters can be specified under the tab "Parameter sets". In case of a process parameter of an ecoinvent 2.2 process, this message is generated. Because the original ecoinvent 2.2 libraries do not contain parameters, this will only happen when parameters are added. If an ecoinvent 2.2 process contains parameters that are used in a calculation setup, the equivalent ecoinvent 3.0 process will not contain any parameter and, therefore, this issue must be solved manually.

Reference to ecoinvent project has been changed

References to the ecoinvent 2.2 libraries will be replaced by a reference to the equivalent ecoinvent 3 library. References to libraries could be found in:

- Calculation setup - library switch option
- Library selection of a project
- List of accessible projects per user (Multi user only, see under Tools, User management, Users)

Product that contains parameters has been changed

This means that a parameter listed in a parameter set of a calculation setup is modified. Because the parameter was part of the process that has been replaced, there is a high probability that the new process does not contain this parameter. Therefore, you should manually modify the calculation-setup to solve this problem.

8 Append Substances

Finally, you need to do an “append substances” action to convert substance names in your projects to the new naming convention in SimaPro. If you do not do this, mismatches between life cycle inventory and impact assessment data may occur, leading to incorrect results.

1. Go to the “Substances” section under “General Data” in the LCA explorer screen.
2. Click “Append”. A new window will open.
3. Click “Load” on the right hand side and select the append file: “AppendSubstances802.xls”. The append file is found in the SimaPro database directory (Box 2).
4. The message “Some lines are not read. Do you want to see the errors?” contains a list of old substance names that were not found in your database, and which do not need to be replaced. If you are not interested in this list, click No.
5. Click the OK button on the bottom of the window. After final confirmation, the substances will be appended. Depending on the size of your database this may take some time.
6. After finishing the append action, you may want to create a backup of the fully updated database via File > Database Management > Backup/Restore > Backup.

ANNEX 1: Manually change reference in wizard to category

Note making changes in a Wizard is only possible with the SimaPro Developer version. A "Select process/product-stage" node of a wizard can contain references to products, but also to process categories. In case of a category that is also part of the ecoinvent 2.2 libraries, a message is given in the log report (see Section 5). Because the process categories of the ecoinvent 3 libraries differ, you have to manually modify these wizards to get a useful list of processes.

You first need to open the project or select the library in which your wizards are stored. In each node, where the wizards contain a reference to a process category, you need to select it and click on the Change button. The Select a process dialogue box will open, in which you can select the process category, which contains the relevant processes for your wizard.

ANNEX 2: Explanation of different error messages

1. **Internal error**
General error message used for all unexpected exceptions that could be raised.
2. **Error with import database**
General error message used for all unexpected errors related to the import database.
3. **Error with current database**
General error message used for all unexpected errors related to the current database.
4. **Cannot change amount and unit of flow**
This means that it is not possible to change the amount and unit of a reference to an ecoinvent 2.2 product. This problem can only occur in case of references with an external link. This error is generated in case it is not possible to move the external link to a calculated parameter. See section 6.3 for more details on how an input or output flow in case of an external link will be modified.
5. **Ecoinvent 3.0 product does not have a mass unit**
This means that the product that is referenced does not have a mass unit, while it should have. This error could be generated in case of references to waste treatment processes.
6. **Reference to ecoinvent 2.2 product has an incompatible unit**
This means that the unit of a reference to an ecoinvent 2.2 product does not belong to the same quantity as the unit of this product. This is checked before the amount and unit are changed in case the equivalent ecoinvent 3 product has another unit and quantity than the original ecoinvent 2.2 product.
7. **Import error raised**
Part of the update and transfer operation is the standard import operation in which the data in the import database is copied to the current database. During this operation errors could be generated and these errors are listed individually. The column "Additional info" contains the description of the original import error and the column "Location" contains the location at which the error occurred.
8. **Duplicate parameters found**
As with error "Import error raised" this error could be generated when copying the data from the import database

to the current database. This error means there are one or more conflicts between existing parameters and parameters that should be copied from the import database.

In case you import the data from the import database with the standard import function an extensive overview of these conflicts is shown.

9. **SimaPro needs more free disk space to store temporary files**

As with error "Import error raised" this error could be generated when copying the data from the import database to the current database. This error means there is not enough free disk space to store temporary files. Please free more disk space on the specified drive and try again.