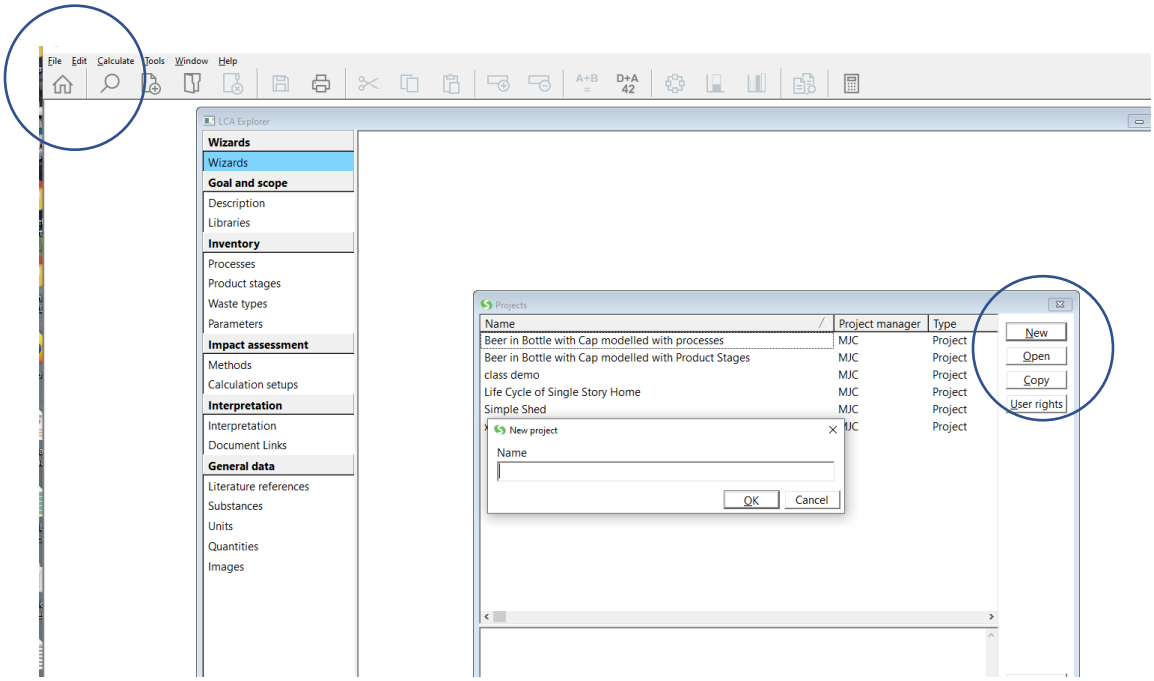
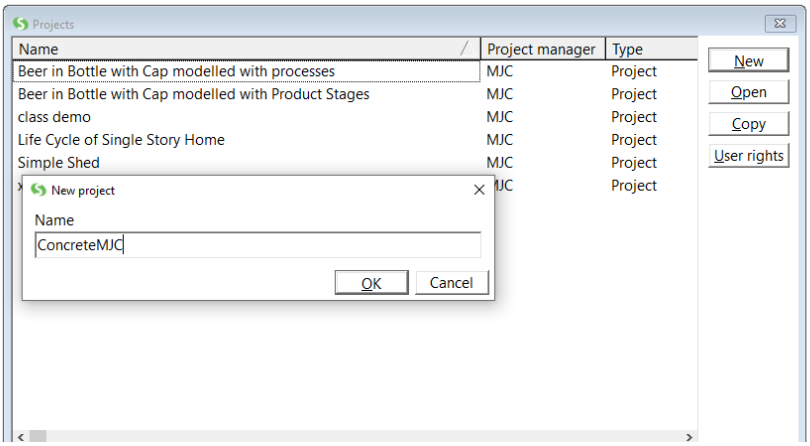
1. Open SimaPro and login.

2. Create a **new** project. To do this either click on “File” and then on New Project or if you have a project window already open click on “New”. In either case you’ll get window that allows you to type in a name of a new project.

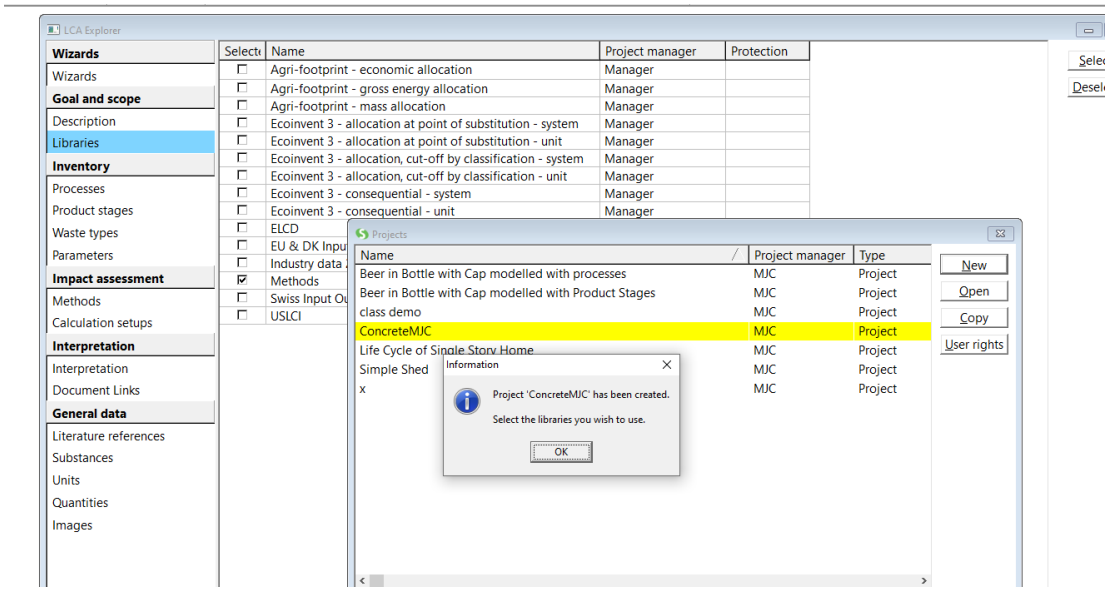


3. Type in the name Concretexx with “xx” being your initials. All your projects **MUST** have your initials. Any project names (of yours) that don’t have your initials can be deleted at any time. Any project names with your initials will not be deleted until after the semester.

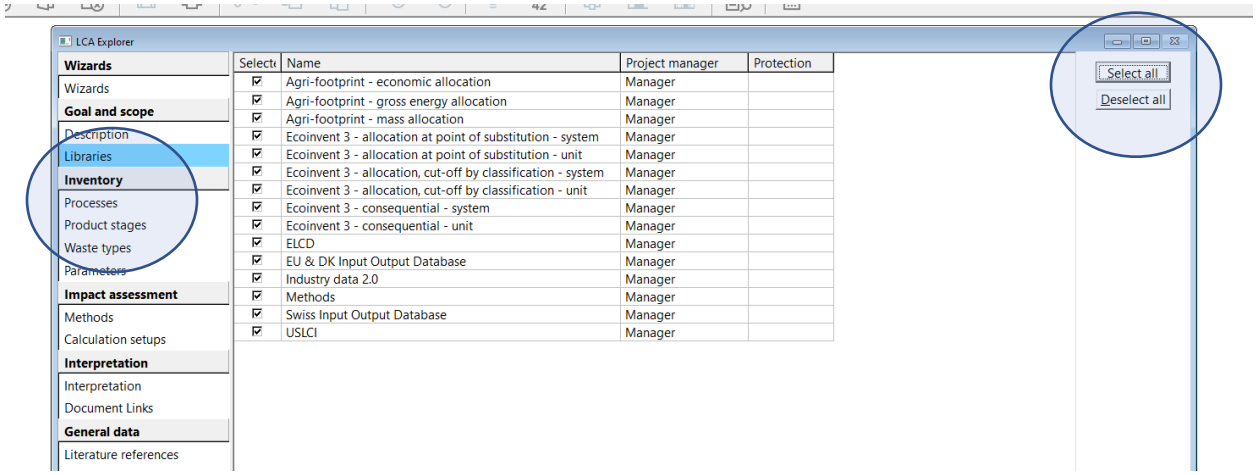
4. Click OK. Then wait a few or more minutes.



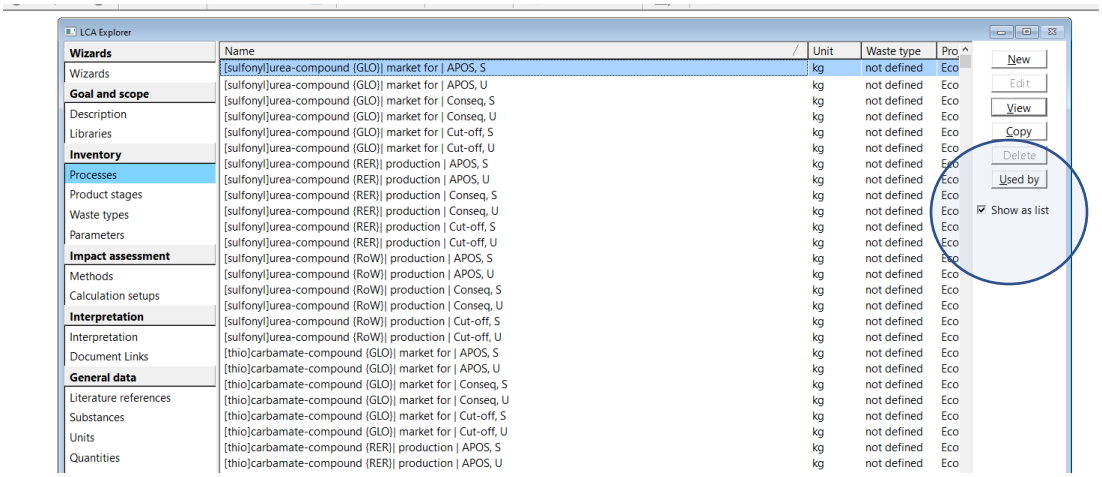
5. You will be brought to a window that asks you to select the libraries you wish to use. **Every time you create a new project you will be asked to select the libraries you wish to use.** These libraries have the datasets calculating the environmental impacts for specific materials or processes.



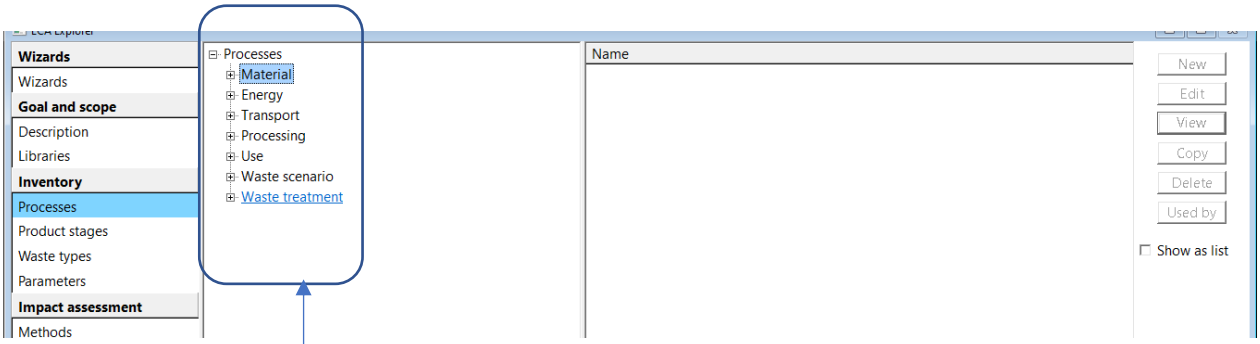
5a. While we will discuss libraries later, for the moment select all of them. Click on "Select all" to get checkmarks in the boxes for every library. Then click on "Processes" and wait while the databases in those libraries are loaded up. **This can take a while depending upon your internet speed**.



5b. You'll get to a window that generally looks like this.

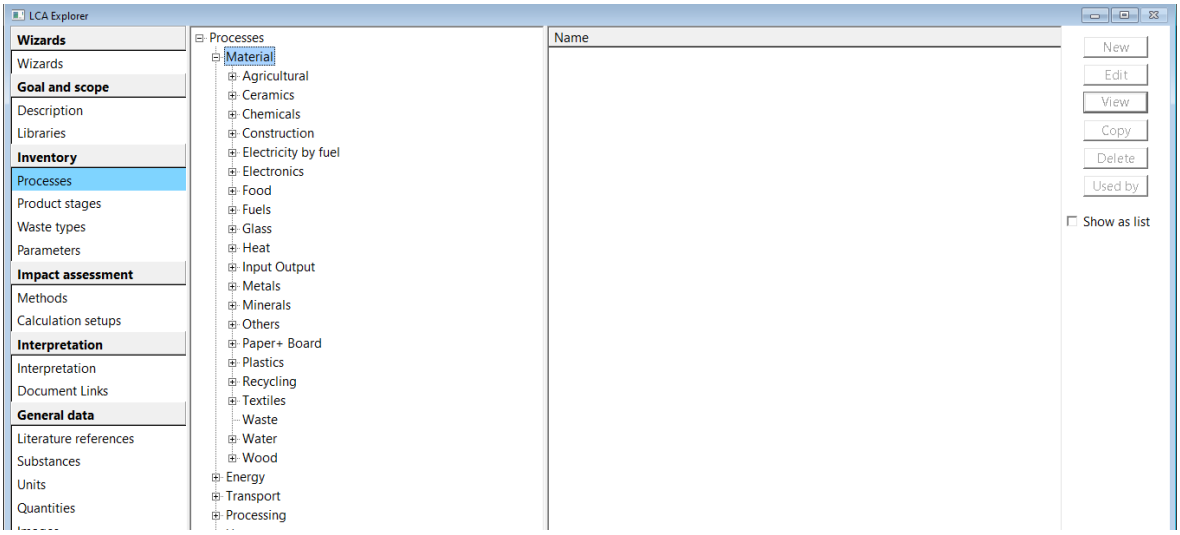


5c. Now unclick the checkmark in the box "show as list" and you'll get a window that looks like this.

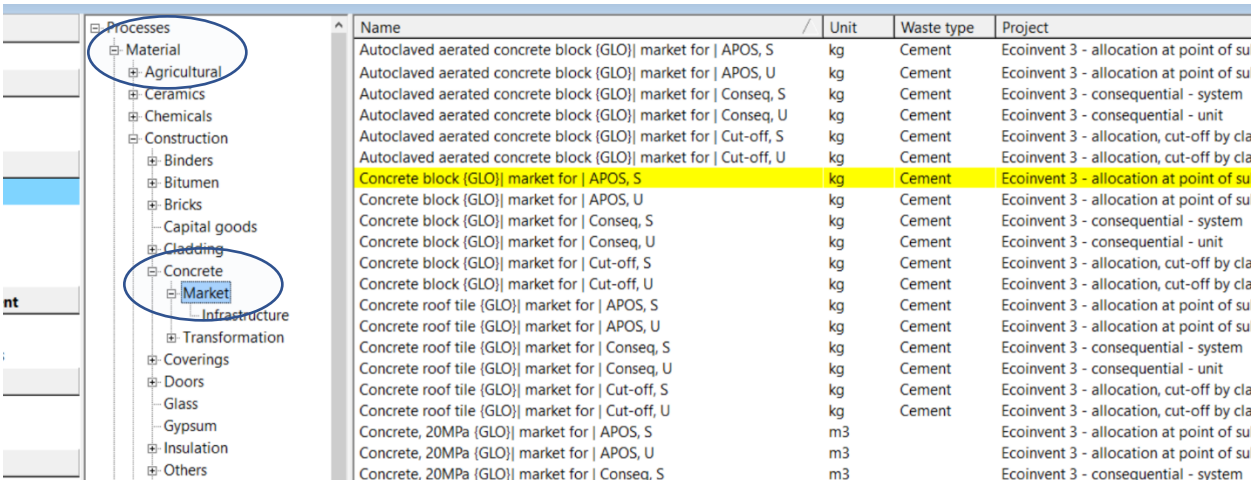


There are where all the databases you selected can be accessed.

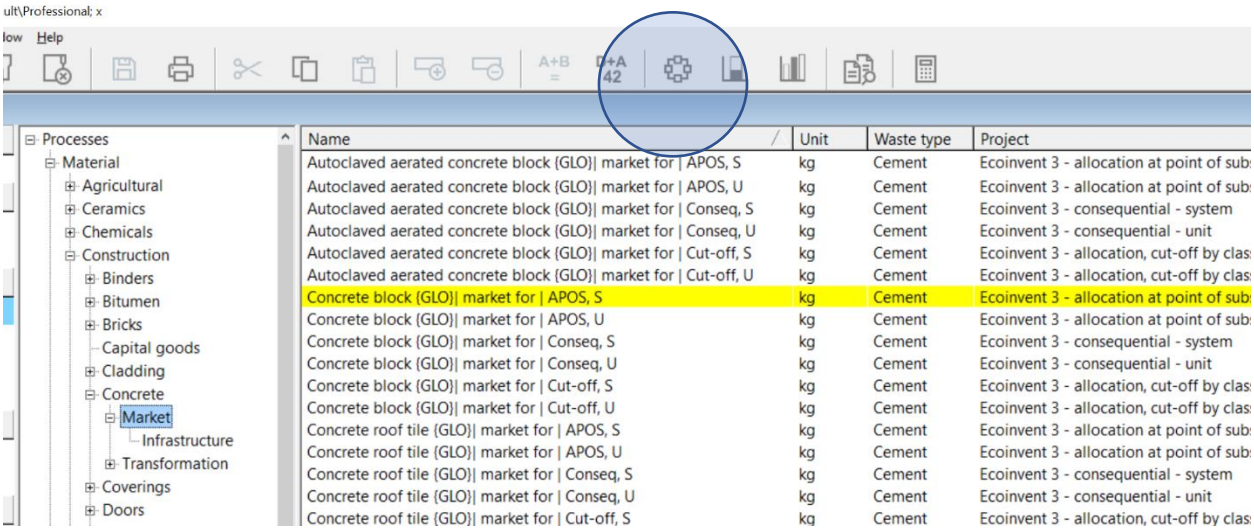
6. Now click on the box in front of Materials to get the following drop-down list of material or process databases.



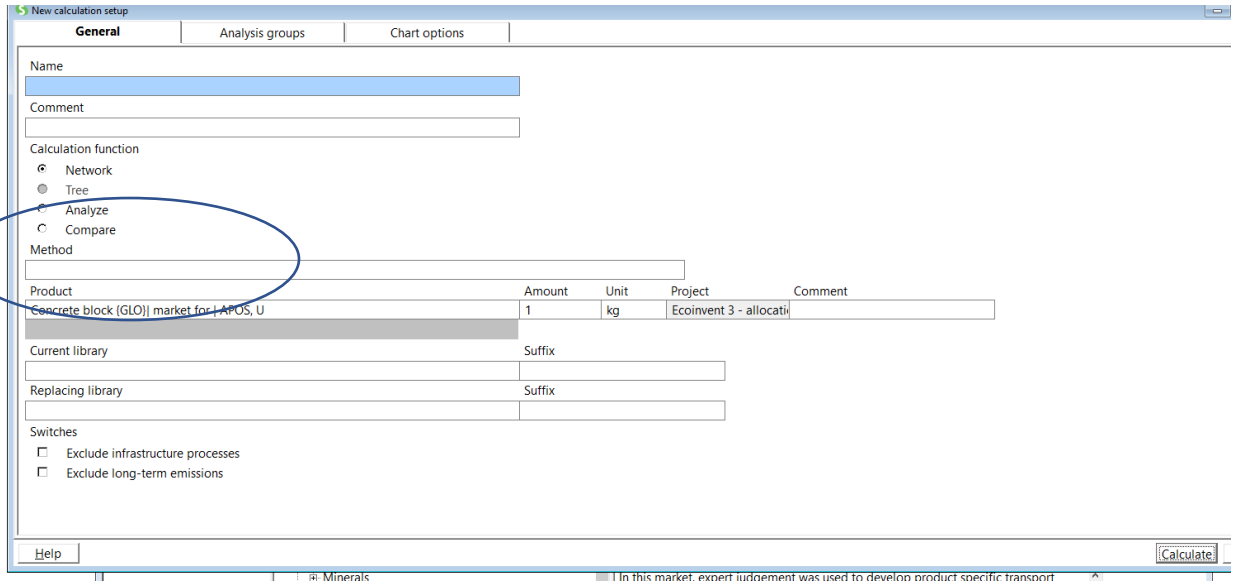
7. Click on Construction, then Concrete, then Market and then highlight **Concrete block {GLO}| market for | APOS, S.**



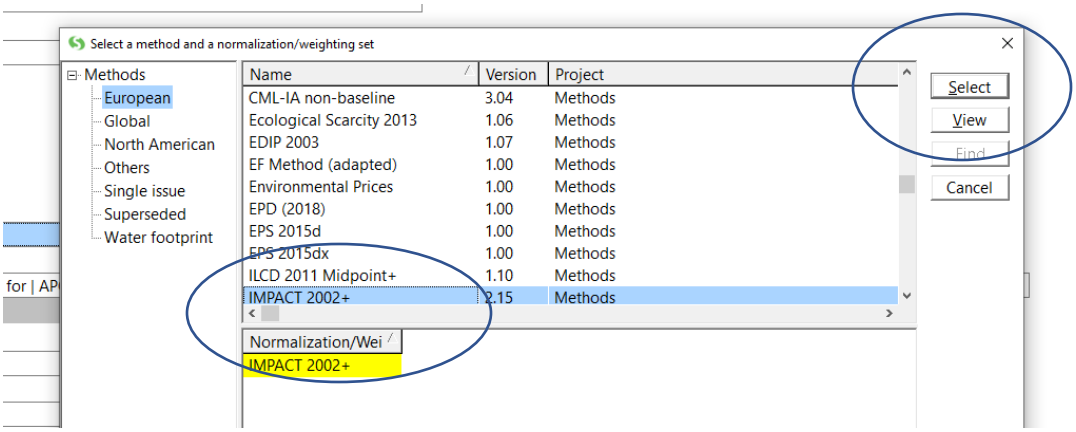
8. Now click on the network icon.



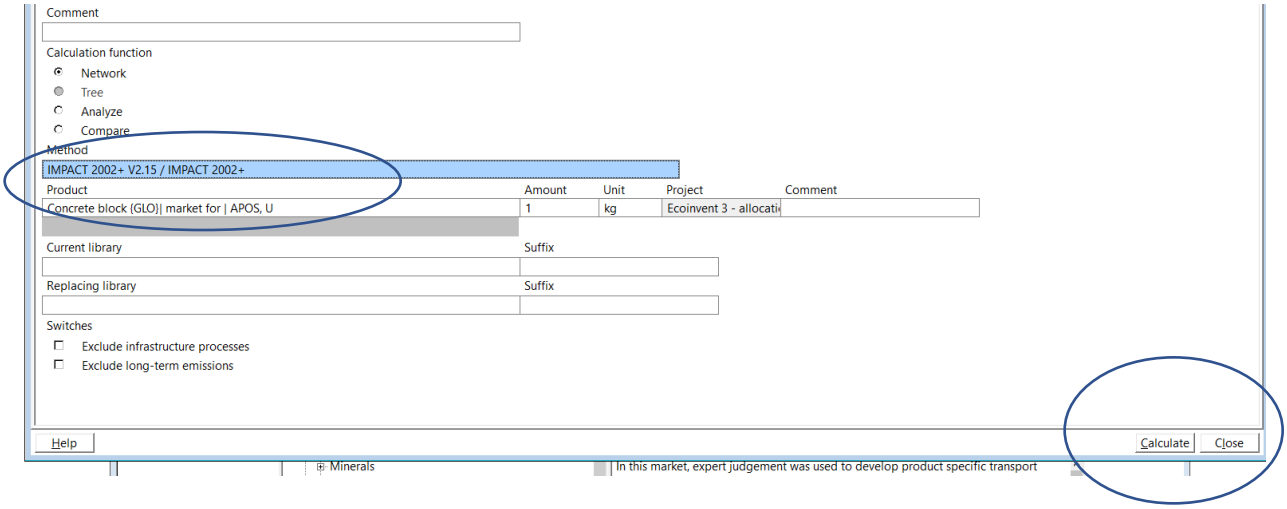
9. Double click on the method line.



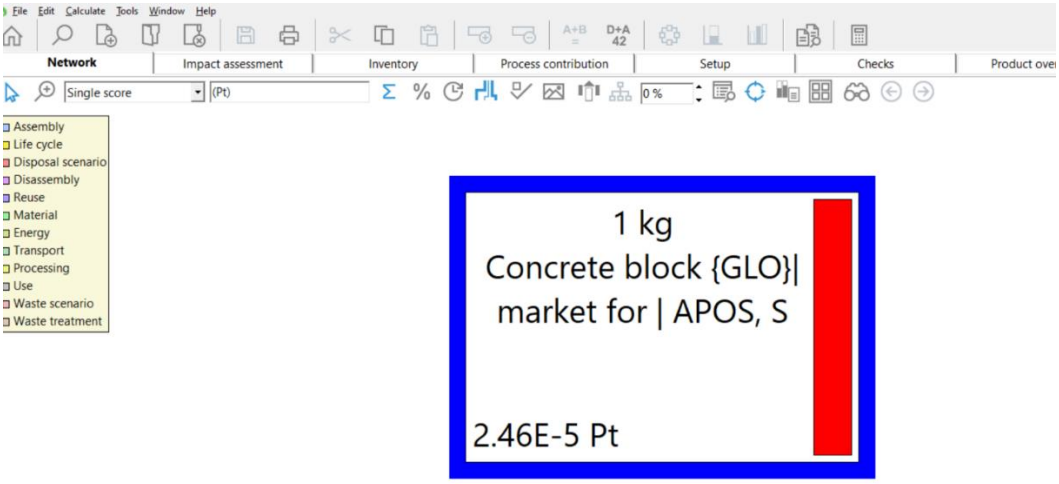
10. Highlight Impact2002+ and click on “Select”



11. When it loads click on “Calculate”. Wait awhile while the program calculates the network tree.



12. You should get the following network tree.

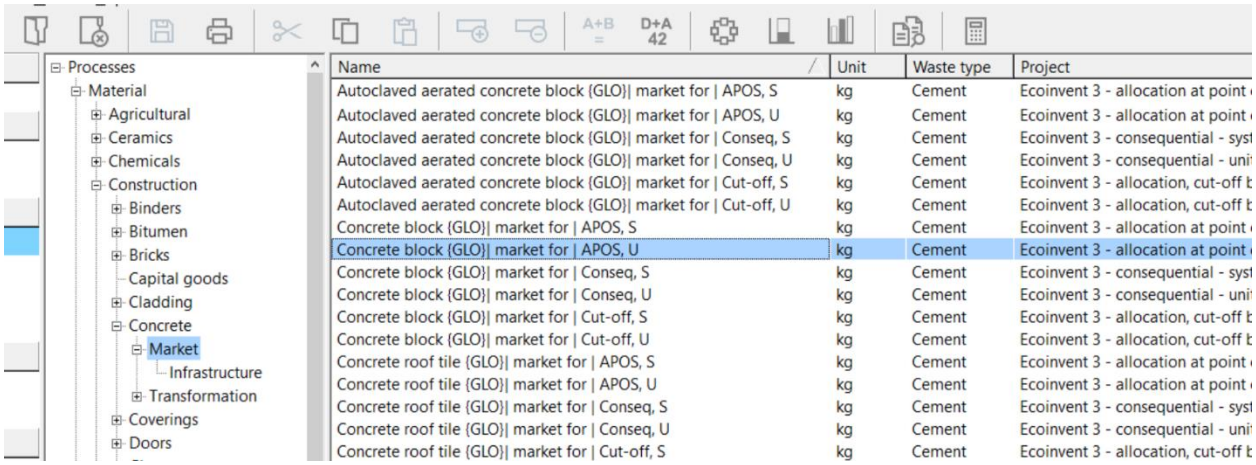


NOTE: You will only get a single "black box" block because we selected the database record with the "system" view (System view is designated as "S"). The **system view** shows the database record as a **black box** and does not show all the underlying unit operations that feed into the complete production of a concrete block.

NOTE: In order to view the network tree that presents all the underlying unit operations that feed into the construction of a concrete block you will need to select the unit view database (i.e. "U").

NOTE: The S version of the database, however, contains all the same inventory data the Unit "U" view uses when estimating the environmental impact.

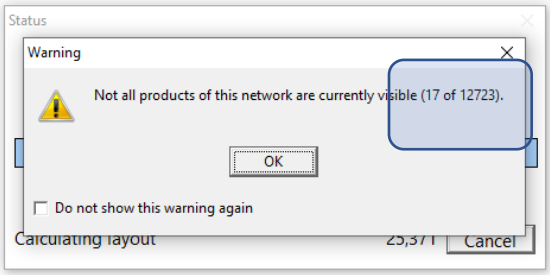
NOTE: If you *want* to see the full Unit U view (i.e. to see all the underlying unit operations that feed into the fabrication of a concrete block) you would need to select the database with the unit view "U" (if off campus be careful what you wish for – see note below).



WARNING: DO NOT SELECT THE UNIT VIEW U DATABASE IF YOU ARE USING AN OFF-CAMPUS INTERNET CONNECTION FROM YOUR HOME.

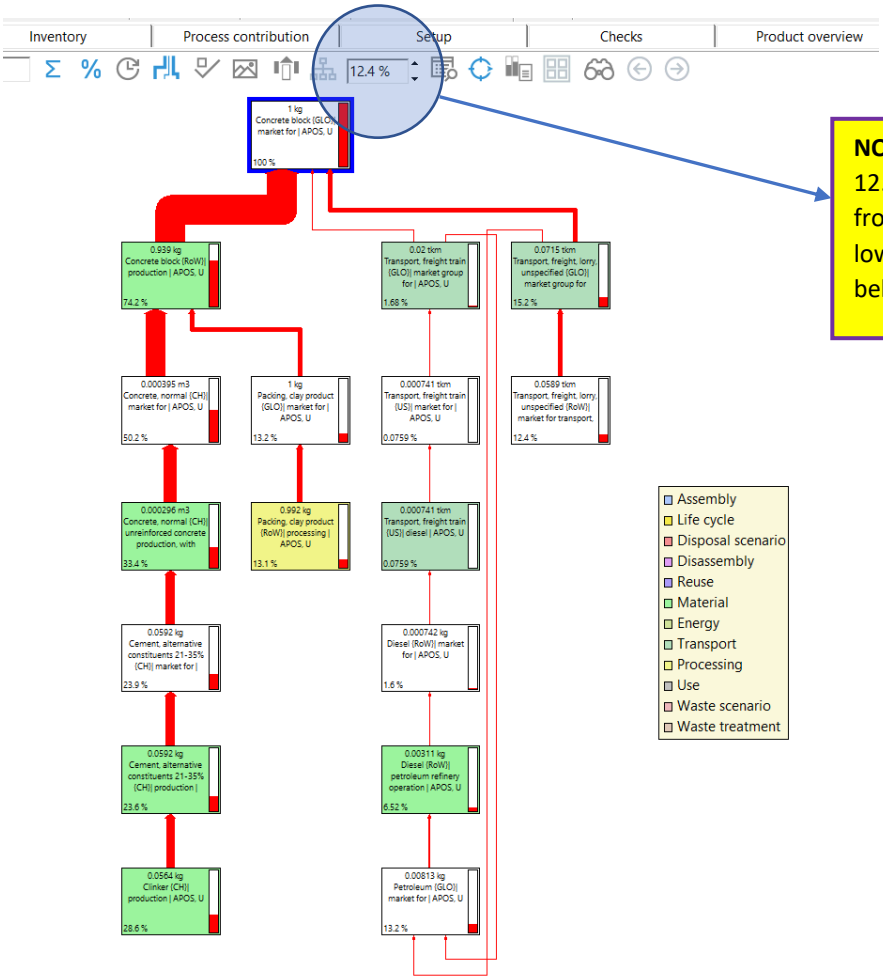
Why? Because selecting the unit "U" view requires that SimaPro to transfer all the data in the database(s). This is a very large amount of data that can cause your off-campus internet connection to take hours to download. If you are using the computers in the SimaPro computer lab or using the computers in the CEE computer lounge via remote access you can go ahead and click on unit "U" view. The downloading will still take some time but nothing like if you were trying this at home over the internet.

NOTE: If you *had* clicked on the unit view database you would get the following window. Click OK.



NOTE: Notice the large number 12,273…this represents the number of unit operations or data inputs that go along with this *single* material (i.e. concrete) database which explains why it can take so long to upload the material databases in the Unit view…because this number of unit operations have to transfer to your computer from the database server.

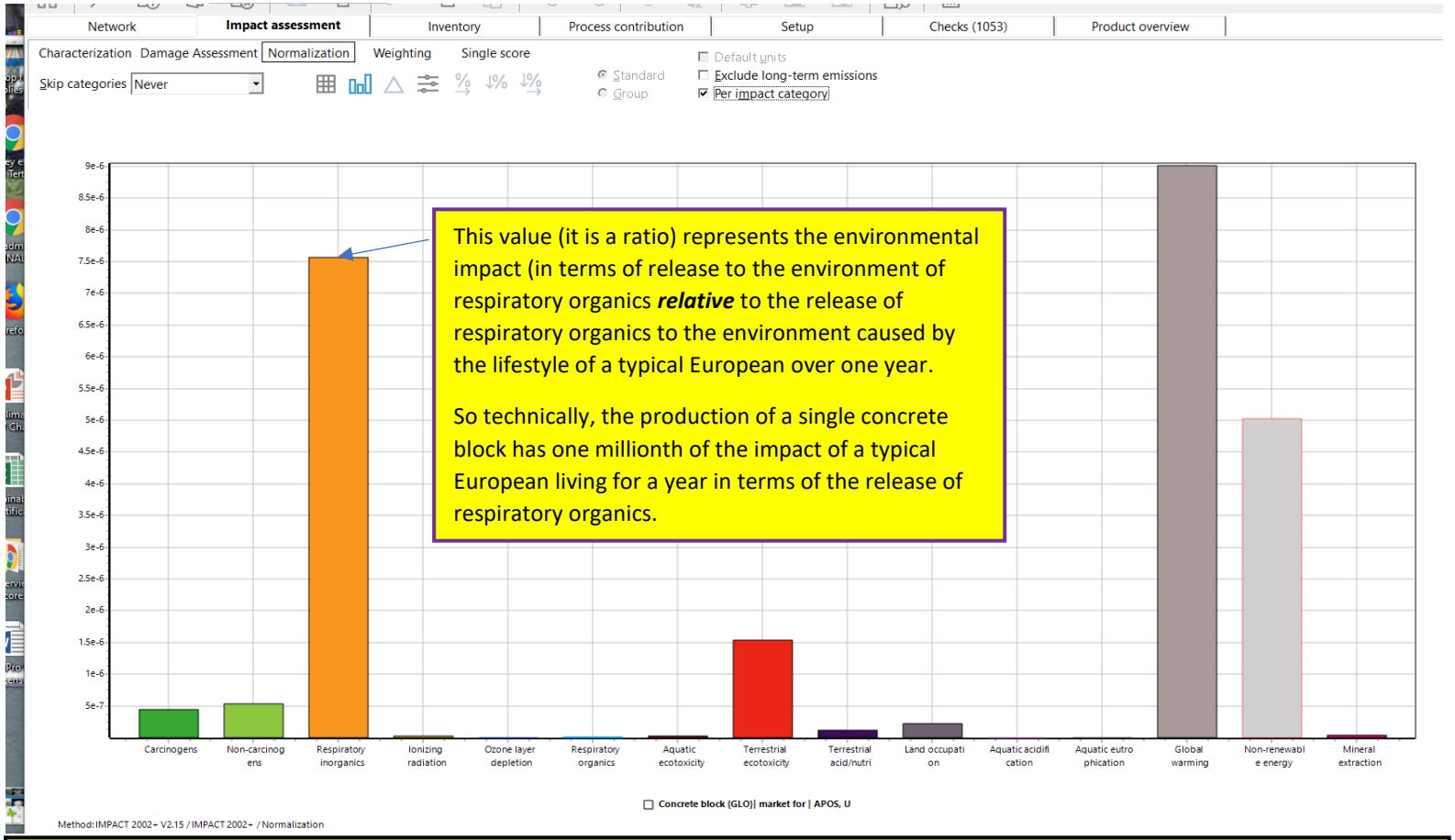
Note: Once loaded you would see the following network tree.



NOTE: The sensitivity should be 12.4% to keep the network tree from getting too large. If you lower it the network tree shown below expands larger and larger.

NOTE: For those of you who are off campus and cannot get the network tree, the network tree generated for Traci 2.1 is provided after the normalization plot (for Impact 2002+) below.

13. Now click on “Impact assessment” , then “normalization”, and then the bar icon to get the following plot.

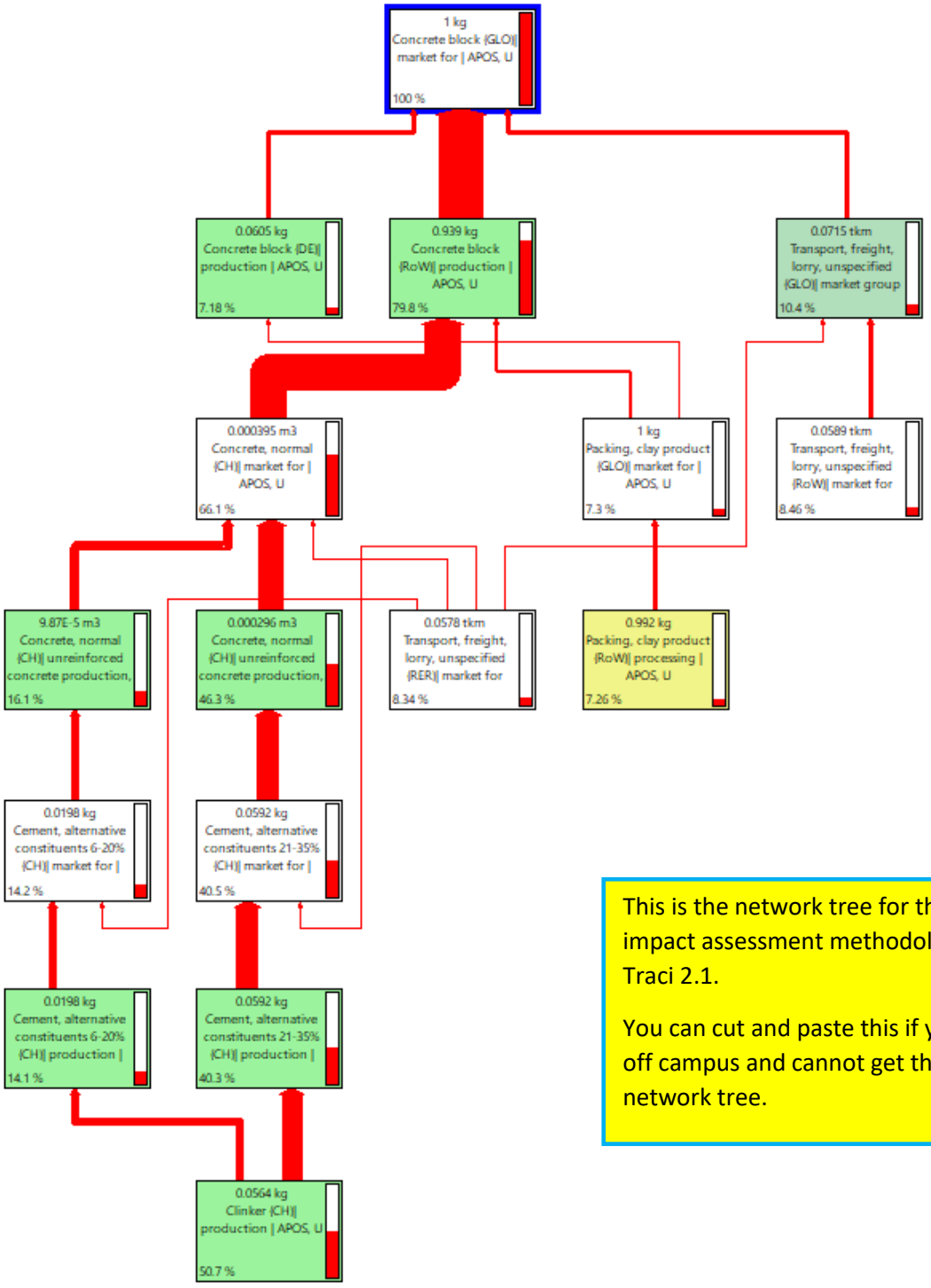


This value (it is a ratio) represents the environmental impact (in terms of release to the environment of respiratory organics ***relative*** to the release of respiratory organics to the environment caused by the lifestyle of a typical European over one year.

So technically, the production of a single concrete block has one millionth of the impact of a typical European living for a year in terms of the release of respiratory organics.

Note: The values of the environmental impact for any of the 15 environmental impact categories shown above will be the same whether you chose the database with the unit “U” view or the system “S” view. The only difference between the two views is whether the software shows you the full network tree (U) or the single black block (S).

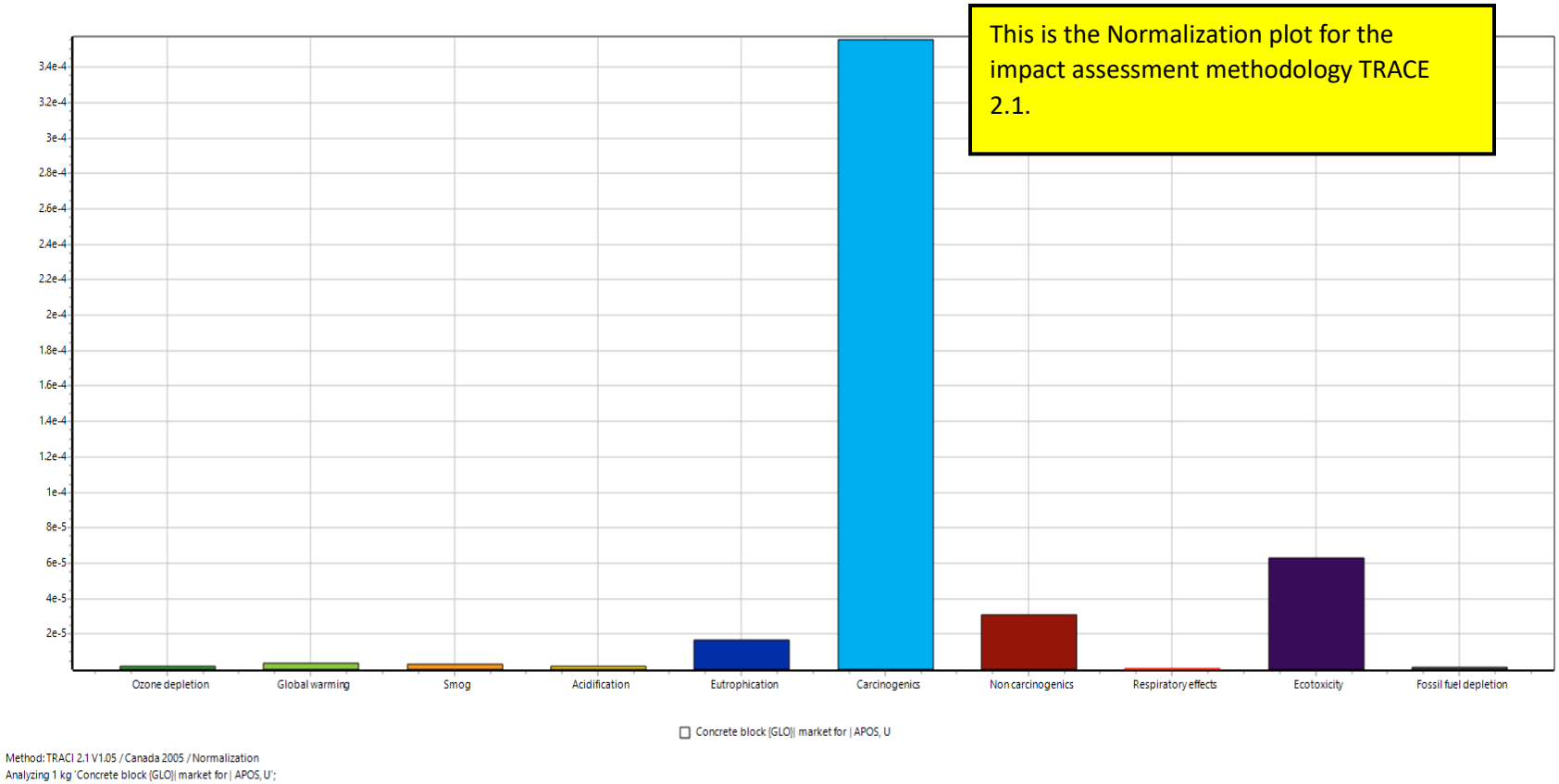
14. To get the network tree for the impact assessment methodology TRACE2.1 repeat step 10 but this time select North American under “Methods” and select TRACI2.1.



This is the network tree for the impact assessment methodology Traci 2.1.

You can cut and paste this if you are off campus and cannot get the network tree.

15. To get the normalization plot for the impact assessment methodology TRACE2.1 repeat step 13.



And the network tree for Traci 2.1 impact assessment methodology (Unit “U” view) is given below