



What's New in SimaPro 9.1

Colophon

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1 Introduction

This document describes the changes in the SimaPro 9.1 software and database. After the previous major software update, the current version provides a number of bug fixes and small improvements. For users, the focus has been on databases - ensuring quality, consistency and accuracy of the data and impact assessment methods. We trust that the 9.1 release offers you enhanced contents in various data libraries.

2 Software updates

A new functionality was added to SimaPro 9.1:

- To facilitate smoother import of your SimaPro desktop project in SimaPro Flow, we created a new export function which automatically selects the correct export settings. In the CSV that is exported, PlatformIDs are included by default, when available. You can access this function by going to File>**Export to Platform**.

The current release holds a number of bug fixes and small improvements, including:

- Improvements to installer
- Extended logging for SimaPro errors, providing more info for technical support
- Fix for internal error when changing chart colors
- Export of parameters is now also guarded, with check for exporting platform id's
- Fix for export to XLSX - when no comment field, the Platform id's are also in the correct place.
- Fix for bug when exporting password protected projects.
- Fix for disappearing result screen.
- Fix for DQI fields when enumerated name is translated.
- Fix for COM issue with substance (substance name was not saved).
- Showing exclude infrastructure option during calculation.

3 Updated data libraries

3.1 ecoinvent 3.6

The sixth iteration of the version 3 ecoinvent database features more than 2,200 new and 2,500 updated datasets related to agriculture, building and construction materials, chemicals, electricity, fishing, metals, refineries, textiles, tourism, transport, waste treatment and recycling, and water supply. As a result, the ecoinvent data landscape now includes 247 more products, has expanded its geographical coverage on numerous countries and regions not covered before, such as Brazil, Colombia, Ghana, India, Peru and South Africa. Below are the highlights:

Agriculture

Version 3.6 introduced updates in the Agriculture sector related to data on a variety of crops produced in different countries and regions. The database now includes:

- Data on the production of sugarcane, soybean, maize, and energy wood from Eucalyptus in Brazil, regionalized per state; data on the production of mango in Brazil;
- Data on different types of rice, cashew, eggplant, cabbage, coriander, pepper, chili and chickpea in India;
- Data on oranges, mandarins, maize, pear and apple in South Africa.



Data on animal husbandry are updated, specifically cattle breeding and raising in Brazil and South Africa.

Building & Construction Materials

This section now incorporates new data on bulk construction materials, such as sand and gravel, gypsum, plaster, mortar, bricks, cement, clinker, concrete. At the same time, more countries are now represented, including Brazil, Peru, Colombia, South Africa and India.

Chemicals

This release contains new data on the production of solar salts. Additionally, updated and disaggregated data from PlasticsEurope on vinyl chloride, polyvinylchloride, polyethylene, polypropylene, purified terephthalic acid and polyethylene terephthalate, are incorporated.

Electricity

With version 3.6 the database includes new data on electricity production in Brazil, reflecting each of the country's five grids, and new data on electricity generation in Argentina, Colombia, Peru and South Africa.

Further, all regional electricity consumption mixes were updated. As a result, the ecoinvent database now reflects the situation in 2016 for all countries, except for Switzerland, where electricity consumption mixes have been updated to reflect the situation in 2017.

Metals

The Metals sector has been updated with newly collected data on mining and processing of a number of metals in Peru, India and South Africa. Supply chains for European aluminium have also been revised to better reflect the current situation. Additionally, version 3.6 includes new metal-specific, regionalized data on the disposal of sulfidic tailings from mining and beneficiation activities in seventeen countries.

Petroleum refineries & products

With version 3.6, the Petroleum Refining sector has been greatly expanded, with new data on coal liquefaction in South Africa and 100 new datasets on the production of a wide range of refined petroleum products in India, Brazil, Colombia, Peru, South Africa and Europe. Among the products covered are diesel; low-sulfur diesel; heavy fuel oil; kerosene; light fuel oil; liquefied petroleum gas; naphtha; and unleaded petrol.

Textiles

The Textiles sector saw a major overhaul in version 3.6, with a large amount of regional data added on a variety of products. Much of this data came from the association's participation in the [SRI project](#). Further, the sector has been updated with primary data from Cotton Inc. to represent global activities.

The database now offers new data on the production of an expanded range of natural and synthetic fibers, such as organic cotton, silk, linen and polyester. Specifically, the sector now includes datasets that cover the following: production of cotton, linen, jute, kenaf, and mulberry data; silkworm rearing (sericulture); yarn manufacturing of all types of fibre; weaving and knitting of textiles; and dyeing and finishing processes.

Tourist Accommodation

The ecoinvent database includes, for the first time, data on a wide range of tourist accommodation types. Based on primary data collected in each country, the database now includes datasets on the construction and operation of hostels, budget hotels and luxury hotels in Brazil and Peru and upmarket hotels in Peru, as

well as various consumer goods required for the operation of facilities, including furniture and electronic devices.

Transport

Version 3.6 introduced a substantial update of the Transport sector: fully updated datasets on sea and air transport; specific datasets for bulk and container transport, with the addition of ship types; new data on air transport of passengers and freight, bringing increased resolution of aircraft types and haul distances; and new data on freight road and rail transport in South Africa, and freight rail transport in India.

Waste Treatment and Recycling

With version 3.6, the Waste Treatment and Recycling sector has been enhanced with newly collected data on informal recycling practices in Ghana and India. Specifically, the sector now offers a range of new datasets on: open burning of cables, tyres and electronic appliances, such as refrigerators, to extract metals; and formal and informal recycling of plastics from e-waste in India.

Water Supply

The Water Supply sector now covers a wider geographical range, with updates and new data in both previously examined and newly added regions. New and updated data on tap water supply are now provided for Brazil, Colombia, India, Peru and South Africa, while data on industrial water supply are now available for fourteen new geographies.

Additionally, the ecoinvent database now distinguishes among three different irrigation technologies, drip, sprinkler and surface irrigation, and hosts new data on irrigation in countries not previously covered, such as Colombia, Morocco, Peru and South Africa.

Obsolete ecoinvent 3.5 data

A number of processes from ecoinvent 3.5 are no longer supported and are considered obsolete. PRé created special replacement files to allow you to change most of these obsolete links in your projects from ecoinvent 3.5 to the correct processes in ecoinvent 3.6 in a fast and easy way. More information on this and on how to use the replacement files is described in the update manuals.

However, please note that replacement is not possible for some processes. Please review the spreadsheet '[List of Obsolete Processes without Replacement ei 3.5 to 3.6](#)' to check the reason why the ecoinvent 3.5 activity does not exist in ecoinvent 3.6 anymore.

3.2 Industry Data 2.0

Three new datasets were included to Industry data 2.0. They have been published by IMOA (Molybdenum association):

- Ferromolybdenum (FeMo)/GLO S
- Molybdenum Tech Oxide Briquette (input to steel)/GLO S
- Molybdenum Tech Oxide powder (input to steel & chemicals)/GLO S

Two datasets from Plastics Europe were corrected, as the previous version contained a number of errors and discrepancies with the reported results:



- Bisphenol A/EU-25
- Polycarbonate granulate (PC)/EU-25

3.3 ELCD

We updated the glass fibre datasets from the Glass Fibre Europe datasets, as the previous datasets in ILCD contained a number of errors and discrepancies with the reported results. We appreciate the cooperation of Glass Fibre Europe, PWC and EY in understanding and solving the issues.

The updated included LCI and metadata for the following datasets:

- Continuous filament glass fibre (assembled rovings), at plant RER S
- Continuous filament glass fibre (direct rovings), at plant RER S
- Continuous filament glass fibre (dry chopped strands), at plant RER S
- Continuous filament glass fibre (wet chopped strands), at plant RER S

4 Changes to impact assessment methods

This release includes two new methods: EF 3.0 method (adapted) and EN 15804 +A2 (adapted) In addition, corrective updates were made in several methods.

For more details on each method, please see the comment section of the individual methods, or the methods manual in SimaPro (via Help> Data Manuals> Methods Manual), also available on the [SimaPro Help Center](#).

4.1 EF 3.0 method (adapted)

The EF method is the impact assessment method of [Environmental Footprint \(EF\)](#) initiative. The implementation is based on EF method 3.0 published for use during the EF transition phase.

Changes from the EF 2.0 method:

- Human toxicity and ecotoxicity impact categories have been replaced
- Land use factors have been recalculated
- Smaller changes to Climate Change (carbon storage), Ozone depletion, Photochemical ozone formation, respiratory inorganics and water scarcity
- Normalization and weighting factors published November 2019 are included
- Adaptations by PRé Consultants are described in the method's comment sections

The method was originally developed to be used with EF-compliant datasets, which use the nomenclature of the ILCD flow list. In order to make it compatible with other datasets provided in SimaPro, we aligned the flow names with SimaPro nomenclature, and removed flows not used by SimaPro libraries, such as regionalized land use flows.

Since the method was modified, it is not suitable for conducting the EF-compliant studies but can be used for other assessments. The original version of the method will be distributed in the dedicated SimaPro EF database.

4.2 EN 15804 + A2 method (adapted)

The EN 15804 standard covers Environmental Product Declarations (EPDs) of Construction Products. The 2019 A2 revision of this standard has aligned their methodology with the EF 3.0 method, except for their approach on biogenic carbon. According to the EN 15804, biogenic carbon emissions cause the same amount of Climate Change as fossil carbon, but can be neutralized by removing this carbon from the atmosphere again.

This method is identical to the EF 3.0 method, except for some characterization factors in both the Climate Change and Climate Change – Biogenic impact categories.

4.3 ReCiPe 2016

For all versions of ReCiPe 2016, a range of corrections was made:

Ozone formation (both impact categories):

- Nitrogen dioxide was added with a factor equal to Nitrogen oxides.

Marine eutrophication:

- Nitrogen, organic bound, Nitrogenous Matter (unspecified, as N) and Ammonia (as N) were added with factors equal to Nitrogen,
- Nitrite was added with a factor equal to Nitrogen dioxide.

Toxicity (all categories):

- Chromium was added with factor equal to Chromium III
- Antimony, Arsenic were added with factors, which are average of their two oxidation states

Additional characterization factors were added to Ozone formation, Marine eutrophication, Toxicity (all three categories) and Global warming. The flow “water, rain” was removed from “Water consumption”.

4.4 EF Method (adapted)

- Water scarcity:
 - factor for 'Water/m3' was corrected,
 - additional 8 water flows were characterised.
- Land use: additional 72 land use flows were characterised. They are not part of the original method and were included to ensure completeness of EF method when applied to other databases provided in SimaPro.



4.5 Other corrections

In addition some corrections to other methods were made. For all details, please see the comment section of the method.

- ILCD: correction of characterisation factors in “Water resource depletion”:
 - emissions to “ocean” set to zero
 - “water, rain” removed
 - Characterisation factor entered for “water, turbine use, unspecified natural origin” (previously factor 0)
- CML-IA baseline/EPD (2018): correction of one characterisation factor in “Global warming”
- Selected LCI results, additional: category “Water” was updated to include all water flows.

5 Contact us

Please contact us or your [local partner](#) if you have questions about these changes in the SimaPro software or database, or if you have any other questions related to the update.

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