SimaPro 9.1.1

What's new?

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Title:	SimaPro 9.1.1 What's new?
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About SimaPro

SimaPro was developed by PRé with the goal of making sustainability a fact-based endeavor. PRé has been a leading voice in sustainability metrics and life cycle thinking development for nearly 30 years, pioneering the field of environmental and social impact assessment. We develop tools that help you create value and drive sustainable change.

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1 Introduction

This document describes the changes in the SimaPro 9.1.1 software and database (compared to the previous release). After the previous major software update, the current version contains a series 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 this release offers you enhanced contents in various data libraries that you are looking for.

2 Software updates

The current release holds a number of bug fixes and small improvements. The most important change you will see is in the SimaPro desktop icon and About window; these now reflect our new branding.

In SimaPro 9.1, we released a new export function (Export to Platform) to facilitate project export to SimaPro Flow. In SimaPro 9.1.1 this feature has been modified to exclude the export of database parameters in the CSV file. Please note - this means if you use database parameters in your model, you will have to add these manually in Flow, as they will not be included in the exported desktop model.

3 Database changes

3.1   Updated database: Agri-footprint 4.1

Agri-footprint 4.1 is an improved version of 4.0 in which some errors are corrected. Moreover, the economic database includes 5 new datasets from Evonik; these are amino acids for feed.

This updated version is only available for users who already had version 4.0, and will not be provided in new SimaPro installations.

3.2   New database: Agri-footprint 5

Agri-footprint is 5 now available in three different libraries in SimaPro, based on mass, energy or economic allocation. It includes linked unit process inventories of crop cultivation, crop processing, animal production systems and processing of animal products for multi-impact life cycle assessments. Agri-footprint also contains inventory data on transport, fertilizer production and auxiliary materials.

The new features of this data library are:

- Focus on more markets: besides the Dutch feed market, now there is a stronger focus for feed materials in European and American markets

- Update on activity data for crop cultivation: Next to an update of the source data, new models have been developed to quantify inputs and emissions in more detail and more consistently throughout the database. These include:

  a. Fertilizer model to estimate the NPK use using most recent industry data

  b. Energy model to estimate energy demand for nine different on field agricultural activities using crop and country specific parameters

  c. Pesticide model to estimate the amount of insecticide, fungicide and herbicides applied using most recent public data

- Market mixes of processed materials: using some 'logic' and trade data on processed feed materials, Agri-footprint now also contains markets mixes of important processed feed materials like soybean meal, rapeseed meal and many others

- Expansion of scope for crops: more countries are included in the new version. For several products co-products at cultivation are also added

- Emission modelling improvements:

  a. Ammonia emissions from fertilizers are based on tier 2 emission

  b. Nitrogen monoxide emission have been added to cultivation inventories

  c. The inclusion of co-production in cultivation has influenced crop residue calculations and associated emissions.

- Amino acids for feed: based on Evonik data (5 new datasets in the economic library)

Users who update will have Agri-footprint 4.1 in addition to Agri-footprint 5. Replacement files are available to help users update their projects from Agri-footprint 4 to the new Agri-footprint 5. More information on these replacement files and how to use them is available in the relevant update manuals.

For more information on Agri-footprint 5, please visit: https://www.agri-footprint.com/2020/08/21/update-afp-5-0/

4 Changes to impact assessment 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).

4.1 AWARE

The method is updated to the most recent version 1.2c. This influences the vast majority of characterization factors.

4.2 GHG protocol

This method is no longer supported and has been moved to the Superseded category. It has been replaced with a new method "IPCC 2013 (with carbon uptake)" as this better reflects the

needs of the impact assessment method to be used with the GHG protocol (see section 4.3).

Nevertheless, some changes have been made to GHG protocol:

- Impact categories are renamed to correspond with the names in GHG Protocol Guideline
- *Carbon dioxide, land transformation* is removed from Fossil category
- *Methane, land transformation* is added to Land transformation category
- Factor of *Carbon dioxide, in air* is changed from 1 to -1 and, consequently, weighting factor for Uptake category is changed from -1 to 1. This does not influence the results.

4.3   IPCC 2013 GWP 100a (incl. CO2 uptake)

We included this special version of the IPCC method which includes CO2 uptake, as accounting for CO2 uptake is relevant for the following standards:

- Greenhouse Gas Protocol
- ISO 14067
- PAS 2050

Please be aware that CO2 uptake must be counterbalanced by end-of-life emissions to avoid strange (negative) results.

Additionally, the results can be calculated cumulatively as Climate change (select Damage assessment in your results) or per category:

- Climate change - fossil
- Climate change - biogenic
- Climate change - CO2 uptake
- Climate change - land use and land transformation

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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