



GaBi
Product Sustainability
Performance

Database Update 2014

Changelog GaBi Service Pack 25 and Database Update

June 2014



PE INTERNATIONAL
SUSTAINABILITY PERFORMANCE

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Introduction

As part of the annual maintenance programme we provide the service pack 25 for GaBi databases. In the course of our on-going quality assurance process at PE INTERNATIONAL some anomalies were discovered in GaBi databases and this update will address these.

GaBi service packs comprise a collection of new items, updates, enhancements or fixes to the following GaBi objects: flows, quantities, units, contacts, interpretations and references/citations. This document provides detailed information on what will be changed/added/deleted with the installation of the Service Pack.

If you need further information or if special questions should arise which have not been adequately described in this document, please feel free to send an e-mail to support@GaBi-software.com.

1. Impact Categories

New LCIA method Swiss Eco-Factors 2013 (UBP 2013) implemented

The new Life Cycle Inventory Assessment method Swiss Eco-Factors 2013 was implemented in GaBi Databases. More about the Swiss Eco-Factors 2013:

<http://www.bafu.admin.ch/publikationen/publikation/01750/index.html?lang=en>

Water depletion in ReCiPe updated

The water depletion categories in ReCiPe 1.07 and 1.08 were adapted to match the newly provided characterization factor list as provided by ReCiPe. PE INTERNATIONAL specific flows that were included in the impact category have been removed from the quantity to improve consistency with the original version.

ReCiPe 1.07 Endpoint (H) - metal depletion corrected

The ReCiPe methodology converts midpoint indicators to endpoint indicators using a set of mid-to-end conversion factors. For resources, there are two different factors; one for metal/mineral resources and one for fossil/energy resources. The metal resource depletion in ReCiPe 1.07 was converted from midpoint to endpoint using the wrong conversion factor for fossil fuel depletion. This was corrected using the right conversion factor for metal depletion.

EI99 HA Resources fossil fuels

Ecoindicator uses 'Surplus Energy' as an indicator for depletion of fossil fuels. Lignite is characterized with 0 MJ surplus energy value in the hierarchical perspective from the original source and is removed from the characterization table.

ReCiPe normalizations stored in correct folder and marked with PE logo

The ReCiPe normalization objects were originally stored in the wrong folder and were missing the PE logo. They were moved into the folder "Normalization" and marked with the PE logo.

2. Flows

Removal of former German currency DM (Deutsche Mark)

The former German currency Deutsche Mark (DM) was still available in the 'Unit of currency [Economic units]'. It will be deleted with service pack 25.

Additional characterization for 'Oil sand (10% bitumen) (in MJ)'

The flow 'Oil sand (10% bitumen) (in MJ) [Crude oil (resource)]' had no characterization factors for 'I02+ v2.1 - Non-renewable energy – Midpoint Resource Depletion, fossil and mineral, reserve Based, CML2002'. These have now been implemented.

Corrected flow type of occupation flows

The flow type of the two flows 'Occupation, agriculture + forest' and 'Occupation, sealed soil' was set from 'none' to 'Inputs'.

Corrected flow type of occupation flows

The flow type of the flow Protect/Interieur [Valuable substances] was changed from 'Outputs' to 'none'

New volume information for flow 'used air'

The emission flow 'Used air' is measured in kg and did not have any volume information attached. The flow now comes with the density information in Nm³ (Normal cubic meters) of 1.29kg/Nm³ (similar to the 'Air' input flow).

Eliminated flow duplicate of Magnesium carbonate

To remove the duplicate flow, the two existing flows have been merged into the flow 'Magnesium carbonate [Inorganic intermediate products]'.

New flows for CO₂ emissions from land use change and peat oxidation

Two separate flows for carbon dioxide emissions from land use change and from peat oxidation have been created and are now accessible as part of the standard PE flow list. Both flows feature the same characterization factors as the standard fossil CO₂ emission flow. They are intended for separate modelling of land use change and peat oxidation CO₂ emissions on inventory level.

Corrected flow naming 'Flooring chaoutchouc'

Within the process 'EU-25 Rubber flooring smooth EN 1817' the product flow was misspelled and is corrected to 'Flooring caoutchouc'.

Completed characterization for three Uranium flows

The flow 'Uranium, 2291 GJ per kg, in ground' is changed from an elementary resource flow to a valuable substance flow. It is renamed to 'Uranium, fuel grade, 2291 GJ per kg' and moved to the folder [Uranium products]. In the 14 affected processes, the flow is exchanged with 'Uranium, in ground [Uranium (resource)]'.

Removal of 'Tribufos [Pesticides to agricultural soil]' flow duplicate

The flow duplicate of 'Tribufos [Pesticides to agricultural soil]' is removed from the database and was replaced. Therefore only one fully characterized emission flow remains.

Flow renaming of 'Perfluoropolyether (unspecified) [Halogenated organic emissions to air]'

The flow name is changed according to the CAS number and is now named: Perfluoropolymethylisopropyl ether [Halogenated organic emissions to air].

Additional characterization factors for US LCI emission flows

The characterization factors of the following US LCI emission flows were updated from USEtox, ReCiPe and TRACI:

- 1,3-dichloropropene [Organic emissions to air (group VOC)]
- 1,3-dichloropropene [Organic emissions to fresh water]
- Copper compounds [Heavy metals to fresh water]
- Dipropylthiocarbamic acid S-ethyl ester [Group NMVOC to air]
- Dipropylthiocarbamic acid S-ethyl ester [Organic emissions to fresh water]
- Nitrogen, total [Inorganic emissions to air]

3. Processes

Corrected inventories for HI-PS and GP-PS by PlasticsEurope

During the database upgrade 2013 a wrong inventory was implemented in two PlasticsEurope datasets (HI-PS and GP-PS). The correct inventory information (as reported within the PlasticsEurope report on Polystyrene) was re-imported into the processes. Therefore the correct inventories are now released.

Reconciled Cotton Inc data inventory

The Cotton Inc datasets in the GaBi Professional Database were differing from the LCI data officially by Cotton Inc online under <http://cottontoday.cottoninc.com/sustainability-about/LCI-LCA-Cotton-Fiber-Fabric/>. The Cotton Inc data in GaBi Databases has been reconciled with the officially published data.

Update documentation

Several processes of the professional/lean and USLCI database (Extensions: XVII & XVIII) have an updated 'Type of quantitative reference' in the documentation tab.