

# Answers to FAQs: “Introduction to ecoinvent Version 3.11” Webinar (December 3<sup>rd</sup> & 4<sup>th</sup>, 2024)

Below are answers to questions asked during the “Introduction to ecoinvent version 3.11” webinars on December 3<sup>rd</sup> and 4<sup>th</sup>, 2024.

Find more information about the ecoinvent database on our [Knowledge Base](#).

| Question                                                                                                     | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Are there any plans to add a greater variety of steel data? Especially coming from the Asian markets.</b> | We aspire to include a higher variety of datasets covering more geographies. Currently, we don't have a schedule ready to be shared publicly on the next datasets that will be added to the database since we have just freshly published the new version.                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Is there a way to obtain results related to the French eco-score for the apparel sector?</b>              | <p>The French eco-score is regulated by ADEME's (<a href="#">The French Agency for Ecological Transition</a>) Textile Reference Framework. For more information regarding their methodology and data, please reach out to them for more appropriate guidance.</p> <p>The ecoinvent database contains multiple datasets for textile products and services. You can browse the full list of our Activities in the <a href="#">Database Overview File</a> and filter for 'Textiles' in the Sector column. This should give you an overview of the textile-related data within our database and whether this would be suitable for your company's needs.</p> |
| <b>How do you choose the new data to be created?</b>                                                         | <p>The ecoinvent database serves as a comprehensive background database, offering average data that covers activities in geographies relevant to the selected product or service. A significant portion of our inventory datasets are generated through dedicated data collection projects focusing on specific economic sectors, countries, or regions. These projects often involve collaborations with external partners worldwide, including research institutes, academia, consultancies, and industry associations.</p> <p>Whenever possible, our external partners contribute primary data obtained through field visits or interviews.</p>       |

Secondary data are sourced from publicly available statistics, peer-reviewed scientific literature, and databases. We also supplement the information with other publicly accessible industry data, such as company reports and emission registers.

Irrespective of the data collection method employed, all datasets undergo rigorous internal and independent external reviews to ensure compliance with ecoinvent's quality and transparency requirements. Only after meeting these criteria are the datasets published in the database.

**Does ecoinvent have a recycled glass entry?**

The database contains datasets for recycled glass, e.g. glass cullets from sorting of waste packaging glass.

**Are the datasets for NMC622 batteries and NMC532 batteries only for automotive applications? Are there battery datasets for industrial stationary batteries or other applications different from cars?**

These new battery datasets were developed based on literature focused on automotive applications. As such, the packs and cells are primarily oriented toward automotive use. However, it may be acceptable for users to repurpose the cells for other applications. You can find more documentation on the respective datasets in [ecoQuery](#).

**How can we better capture the categorization of similar materials and access their alternatives and recycled emission factors? One challenge we've faced is accurately identifying the level of transformation of the materials we are categorizing, such as differentiating between pulp and paper versus newsprint.**

To get an overview of the datasets in the database, you can use the [Database Overview](#) for the undefined version (before linking), which provides a list of all datasets present in the current version of the database. You can filter by processes ("activity name") or products ("product name"), ISIC and CPC classification, geographies, and more.

In the tab "Intermediate exchanges" you can also filter for CAS numbers and synonyms. Moreover, the "Product Information" column provides a short description of each product/service in the database, including information on technical/physical characteristics, possible applications, and how to use it properly. All this information is designed to support you in mapping the flows in the database to the relevant ones in your study.

Furthermore, dataset documentation is freely available in [ecoQuery](#). Fields such as 'general comment', 'included activities start', and 'included activities end' provide more information on the dataset boundaries, background data, etc.

**Are the IPCC impact assessment changes going to be seen in SimaPro as well?**

Please reach out to PRé's support team regarding the method implementation in SimaPro.

Software providers can implement their own methods on top of the ecoinvent data, so they will be able to support you on this.

**Will the "LUC-FLAG Emissions in Agriculture" Excel file be published for ecoinvent 3.11? (like in 3.10)**

Yes, the file will be uploaded as we did last year in ecoQuery under the 'Files' section with the name "LUC-FLAG Emissions in Agriculture v3.11.xlsx".

**How can we find out how the changes, for example for syngas (slide 20), propagate in the value chain downstream and what changes this will cause in which downstream products?**

To find how a change in score propagates in the value chain downstream, there are some options. This can be documented in the Report of Changes, available [here](#).

You can also log in to [ecoQuery](#), search for the dataset of your interest, and open "Consuming activities", to see where the product is directly consumed.

Once you have identified the consumers of the product, you can view the contributors to impact assessment scores in those datasets. Please open "Impact Assessment" on the dataset's page, select a method and an indicator, and then open the *Contributors to impact score* by clicking on the arrow on the right. Here you can see the *Relative contribution (%)* of the exchanges to the total impact of the activity, as well as the *Impact* expressed as absolute value.

**IPCC 2021 (incl. biogenic CO<sub>2</sub>) provides the elementary flow "Carbon dioxide, non-fossil, resource correction" which corrects the difference of the distorted result to the amount before allocation. Where are the "Carbon dioxide, non-fossil, resource correction" or CO<sub>2</sub> uptake corrected data to be found in ecoinvent?**

To address the biogenic carbon imbalances caused by allocation, the exchange "Carbon dioxide, non-fossil, resource correction" was introduced to selected datasets in the Wood & Paper sectors. This approach is described in more detail [in Chapter 2.4 of this report](#). The datasets where the flow was introduced are listed in Chapter 2.4.2.

**Is the indicator GWP - EPD PCR still available in ecoinvent 3.11 EN 15804?**

We have intentionally removed the GWP - EPD PCR indicator for v3.11 as the use of characterization factors (CFs) for biogenic methane is a mistake in this EPD PCR indicator. Unfortunately, the same mistake is present in our EN15804 implementation (see the end of [Knowledge Base - v3.10](#)), which is also why we did not realize when implementing the EPD PCR indicator. In short: the CF for non-fossil methane is larger if biogenic CO<sub>2</sub> is characterized with -1/+1, but not if it is characterized with 0/0 as in the EPD PCR.

Hence, the CF for non-fossil methane suggested in the EPD PCR is too large (see section 16.3.3 in the [LCIA Implementation Report for v3.11](#)).

**Is there a list available in ecoinvent where we can find the activity names that have been added in the 3.11 version?**

With every new database release, ecoinvent publishes a publicly available [Correspondence File](#) which lists all the datasets in the newly released version and the previous version. This file matches corresponding datasets between the versions, making it easy to identify the newly added datasets. In addition to this, we also publish the [Report of Changes](#) which explains in detail all that changed in the new database version.

Both files can be accessed on our [Knowledge Base](#).

**Will the supplementary file “electricity emission factors - scope 2 - 3 in ecoinvent” be updated to v3.11?**

We are currently finalizing the supplementary file “*Electricity Emission Factors – Scope 2 & 3*” for version 3.11. The planned release date is by the end of December. Once the file is published, we will make an official announcement to notify users.

**Will ecoinvent include world steel data?**

Currently, we are evaluating possibilities regarding this opportunity, but we cannot guarantee whether this data will be included or not in the database.

**In 3.10, fossil-based chemicals and hydrogen increased in GWP values. Did the values change (increased or decreased) with the 3.11 update?**

In version 3.10, the GWP scores for base chemicals and hydrogen increased due to dataset updates. These updates involved the disaggregation of the datasets and the expansion of technological and geographical coverage.

In version 3.11, no updates specific to base chemicals or hydrogen were made. However, the scores changed slightly due to changes in the supply chain. For further details on changes regarding chemicals, you can refer to Chapter 7 of the [Report of Changes v3.11](#).

**Could you bring the sorting by location or reference flow option (for example) back to ecoQuery?**

We will soon integrate a grouping option, allowing you to view all activities for a single reference product. However, sorting is not yet planned. We have shared your feedback internally and we will see what we can do—thank you very much for that!

**Will ecoinvent provide energy (fuel and electricity) datasets with separate breakdowns for combustion and upstream emissions to support GHG reporting?**

We are finalizing the file “*Electricity Emission Factors – Scope 2 & 3*”, which includes breakdowns for electricity-related emissions. The planned release is by the end of December, and we will make an official announcement once it is published. Please note, however, that this file is specific to electricity only.

**Is there an ecoinvent community platform where all data users can share best practices and challenges in using LCIA data?**

There is no online community platform specific only to ecoinvent discussions. However, you can follow and join other community platforms dedicated to LCA discussions such as [ask.openLCA](#) and [SimaPro LCA discussion list](#).

In addition to this, ecoinvent publishes a lot of educational resources concerning the database and modeling, which can be accessed on the [Knowledge Base](#). We also have [e-learning modules](#) which cover the fundamentals of the ecoinvent database.

**In which units are the factors available? Per €, per kg, per km, ...?**

The units relate to the reference product of the dataset, e.g. per kg of steel produced, per m3 of wastewater treated etc. We do not provide emission factors per price of the product or service.

**How can we find the correct factor for our product? Is there a searching machine in the database?**

We have impact assessment scores for a wide variety of products and services in the database. You can search the database contents in the search bar on [ecoQuery](#) or via the [Database Overview](#) file.

**I would like to know, which datasets for chemicals were newly added to the database. How can I get them listed?**

To identify new datasets in v3.11, please refer to the materials in our [Knowledge Base](#):

- Report of Changes - provides written documentation for the changes introduced to the new version
- Correspondence File (3.10 to 3.11) - lists all datasets in the two versions and matches corresponding datasets between versions. It contains a column "Dataset in version 3.11 is new" (true/false).
- Database Overview File - provides an overview of all datasets in the new version.

In the "AO" sheets a column "Sector" is provided, which you could use to identify the datasets in the chemical sector.

**With which method is the carbon content of the products assessed?**

The carbon content is a property of a product, and it is typically provided by the data provider. In the chemical sector, where products have a formula, the carbon content is calculated based on the elemental composition (/stoichiometry).

**Do you consider including more recycled plastic streams?**

We are always looking to increase our coverage of polymers and geographies, as well as with additional or novel recycling technologies. Future versions may indeed include further coverage.

In version 3.11, we updated and expanded the mechanical recycling of plastics based on European data and introduced hydrothermal treatment for the UK.

**When will you fix the water balances and regionalization to be able to use the EF 3.1, AWARE water scarcity indicator in a confident way?**

We are working on addressing water imbalances in upcoming versions of the database. We will address both the geographical mismatches in water withdrawal and release, and the mass balances of water.

**As for LCIA methodology ISO 14067 (incl. biogenic carbon), there are some products with high negative values. For example, kenaf fibre has value -4 kg CO<sub>2</sub>. I understand that it is due to allocation. However, I am still curious if the results are correct? and how this -4 will be accounted at EoL (+1)?**

Biogenic carbon uptake ("Carbon dioxide, in air") and emission ("Carbon dioxide, non-fossil") are assessed by the LCIA method "IPCC 2021 (incl. biogenic CO<sub>2</sub>)" from v3.11 onwards. Furthermore, the biogenic carbon flows are characterized in the [Allocation, cut-off, EN15804](#) system model, which is to be used only for Environmental Product Declaration (EPD) studies. In other impact assessment methods, these flows are not characterized.

The methods "IPCC 2021" and "IPCC 2021 (incl. biogenic CO<sub>2</sub>)" are complementary. We recommend using "IPCC 2021", where biogenic carbon dioxide is characterized with 0/0, whenever possible. Scores including biogenic carbon dioxide are subject to potential distortions by allocation and there is a risk of overestimating the carbon dioxide uptake. These scores should be interpreted with caution, especially when negative, and they should never be used as standalone values. Users bear full responsibility for their application and interpretation.

For more information on carbon flow assessment, please refer to our [Guidance on IPCC Methods](#) and the [LCIA Implementation Report](#). Both are publicly available on our online learning platform; [Knowledge Base - v3.11](#). The Guidance on IPCC Methods includes recommendations on the use of these LCIA Methods.

**Is there any update in fluorochemicals? Especially TFE data when do you expect to be updated?**

Regarding fluorochemicals, there are no updates to the existing datasets in version 3.11, including TFE data.

**Based on battery; have you already assessed the dry coating process technology?**

The dry coating process technology is not currently included in the ecoinvent database.

We appreciate your interest and are considering your request for updates and inclusion in these sectors.



At this time, we cannot provide a specific timeline for when these updates might be available.

**There are datasets that exist only for certain regions or for certain technologies. These datasets would need some modifications to get the dataset needed, so how can we request ecoinvent the development of a new dataset?**

The ecoinvent database serves as a comprehensive background database, offering average data that covers activities in geographies relevant to the selected product or service. A significant portion of our inventory datasets are generated through dedicated data collection projects focusing on specific economic sectors, countries, or regions. These projects often involve collaborations with external partners worldwide, including research institutes, academia, consultancies, and industry associations.

Whenever possible, our external partners contribute primary data obtained through field visits or interviews. Secondary data are sourced from publicly available statistics, peer-reviewed scientific literature, and databases. We also supplement the information with other publicly accessible industry data, such as company reports and emission registers.

Irrespective of the data collection method employed, all datasets undergo rigorous internal and independent external reviews to ensure compliance with ecoinvent's quality and transparency requirements. Only after meeting these criteria are the datasets published in the database.

The main objective of the ecoinvent database is to be a reliable and transparent source of background Life Cycle Inventory (LCI) data. To fulfill these requirements all submissions should include a description of a [unit process](#), usually understood to be an independent process or activity that transforms a given input into an output of products or services. A unit process is the smallest element in the life cycle inventory analysis for which input and output data are quantified (ISO 14040).

For an overview of the datasets in the database, you can use the [Database Overview](#) for the undefined version (before linking), which provides a list of all datasets present in the current version of the database.

In essence, data providers are required to gather the necessary data, consisting of process inputs, outputs, and direct emissions. ecoinvent datasets should be consistent, transparent, and available on a unit process level.

If you are interested in submitting data to the ecoinvent database, you can request information on the [data submission process](#) and we can gladly schedule a call for further discussions.

**In the new version 3.11 did you add elastomers like TPU and TPE?**

New datasets for elastomers like TPU and TPE have not been included in version 3.11. However, there have been updates to some of the plastic material datasets. For more detailed information on the updates related to chemicals and plastics, please refer to Chapter 7 of the [Report of Changes v3.11](#).

**Will there be a collaboration between ecoinvent and GaBi? So there is a better comparison between the different EPD reports?**

The main objective of the ecoinvent database is to be a reliable and transparent source of background Life Cycle Inventory (LCI) data. One of the main strengths of the ecoinvent database is that it contains transparent modeling of supply chains. This means that, for each supply chain, every step of the chain can be analyzed. This makes it possible to identify which step is responsible for the environmental impacts. Additionally, the sources of the numbers are well documented, making it possible to understand how the data was obtained.

EN15804 focuses on a standardized and harmonized approach to assess and communicate the environmental impacts of a wide range of products via EPDs. In theory, this should facilitate comparison between products. In practice, EPDs are subjective to many different problems, such as a selection of background databases (which can allow EPD-makers to cherry-pick datasets from different databases) and the fact that infrastructure is not universally used for EPDs.

Nonetheless, the biggest issue is that different system programs have different rules for:

- Attributional and consequential approaches
- End-of-Life scenarios
- Counting of credits for Module D
- Variations in the length of the reference service life
- Variations in specific Product Category Rules (PCR)

These differences lead to different impacts even for the same product, which has been highlighted in a [recent publication](#). This study emphasizes both qualitative and quantitative distinctions between EPDs and their respective system program operators. The take-home message is that multiple EPDs can be acquired for identical products, each compliant with its specific system program. However, the permitted variations



within these programs hinder inter-comparability, highlighting a significant harmonization issue across the entire EPD system. These findings suggest that while EPDs are intended for comparison, the current system allows for various modeling choices that significantly influence the EPD results. In the worst-case scenario, manufacturers could exploit these methodological differences to their advantage. In a pessimistic (but plausible) scenario, manufacturers might deliberately select program operators whose LCA modeling choices favor their products, thereby presenting their products with the best possible environmental performance.

From this perspective, the allowance by certain program operators, such as International EPD, to exclude infrastructure or mix background databases (like IBU) could result in EPDs with lower impacts compared to the same product declared in other system programs (such as EPD Norway) where infrastructure has to be included and mixing databases is not allowed.

**Is it possible to obtain relevant data for FLAG emissions according to SBTi from the updated datasets?**

As we did last year, a FLAG patch will be uploaded in ecoQuery under the 'Files' section with the name "LUC-FLAG Emissions in Agriculture v3.11.xlsx"

The file will be structured like the FLAG patch we released last year, which included only LUC FLAG emissions, but it will also include the new agricultural datasets.

Full FLAG values cannot be recalculated; you need to derive non-LUC emissions from each dataset's inventory.

**When will the version of the database to be integrated into the SimaPro software be available?**

Unfortunately, we cannot provide a definitive date, as we are not responsible for the SimaPro software. PRé Sustainability released v3.10 in April 2024, but it is best to contact [PRé](#) directly for more information.

**What is the geographical coverage of the new agricultural datasets?**

The new agricultural datasets cover three different cultivation zones: plain, hill, and mountain regions, within Switzerland (CH).

**Any plan on implementing a dataset for glass fiber paper and glass fiber media for filter materials?**

The database already contains data on glass fiber production, but further processing into those filtering materials is not currently in the pipeline. If data is available or provided, it may be included in a future version.

**We have seen the update on the 3.10 to 3.10.1. What has also been updated there?**

For an overview of the updates in version 3.10.1, please refer to [Knowledge Base - v3.10.1](#), where the changes are outlined at the beginning of the page. Please note that the sectorial updates mentioned refer to changes introduced in v3.10.

For further details, you can also consult the [Report of Changes](#) and the file titled "*ecoinvent 3.10.1\_Change Report\_including Annex*", which can be found in the Files section of [ecoQuery](#) under *Supporting Documents* for version 3.10.1.

**Will there be any updates of photovoltaic energy soon?**

Thank you for your question. We are aware of the current status and are actively working on improvements. However, we are currently unable to provide a confirmed timeline or specify the version in which these updates will be included.

**Have you considered having the option of disaggregated EFs per GHG as these are being required in several for reporting in several standards and frameworks?**

Currently, on top of the release of ecoinvent database, a separate spreadsheet is published that supports the accounting of scope 2 and 3 emission factors for electricity. The spreadsheet is called the "electricity emission factors – scope 2 – 3.xlsx" and can be downloaded by licensees from the 'Files' section of ecoQuery. In this file, different emissions are reported separately per gas as recommended by the GHG Protocol.

Regarding the other sectors of the database, if you want to report GHG gases separately, you have to do it manually. For this, you will need the LCI results of the dataset you are interested in from ecoQuery, and then multiply them with the Characterization Factors (CFs) of the LCIA method you want to implement. All the CFs are again available to be downloaded in ecoQuery, under "Files", "Supporting Documents", and then look for the folder "ecoinvent 3.11\_LCIA implementation.7z".

Disaggregating GHG emissions for all the datasets is included in our future plans.

However, currently, we cannot commit to any particular deliverable or promise specific updates to come. Thank you for your understanding.