



**Bundesinstitut  
für Bau-, Stadt- und  
Raumforschung**

im Bundesamt für Bauwesen  
und Raumordnung



## Instructions for data delivery to ÖKOBAUDAT via the EPD Editor

### Preface

The ÖKOBAUDAT database comprises life cycle assessment datasets on building materials, construction, transport, energy and disposal processes. The data is subject to strict quality requirements and can be used in many different building assessment systems. ÖKOBAUDAT usually sources its data from EPD programme operators. To ensure high data quality and consistency, all data providers must take into account the “Principles for acceptance of LCA data in ÖKOBAUDAT”. Therefore, a programme operator must apply for acceptance of data and submit all necessary documents before being released for the delivery of data to the ÖKOBAUDAT. Once the programme operator and the datasets to be delivered have been accepted, the data can be delivered to ÖKOBAUDAT.

For further information see <https://www.oekobaudat.de/en/guidance/data-providers.html>

The EPD Editor is an open source option for exchanging data with the ÖKOBAUDAT backend via the standardised ÖKOBAUDAT interface. The editor enables easy generation of – also multilingual – datasets. Optionally, data can be delivered to ÖKOBAUDAT directly via the online interface.

The EPD Editor is available online at

<https://github.com/GreenDelta/epd-editor/releases>

Note: The EPD Editor replaces the previously available plugin for openLCA which will no longer be updated.

The EPD Editor was developed with the support of the innovation programme “Future Building” (Zukunft Bau), a research programme of the Federal Ministry for Housing, Urban Development and Building (BMWSB, formerly BMI).

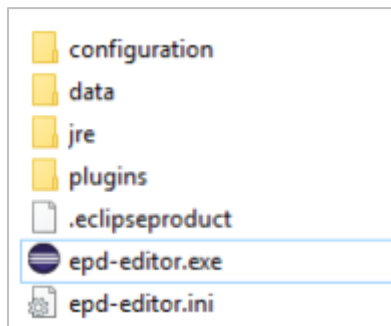


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## 1. Installation

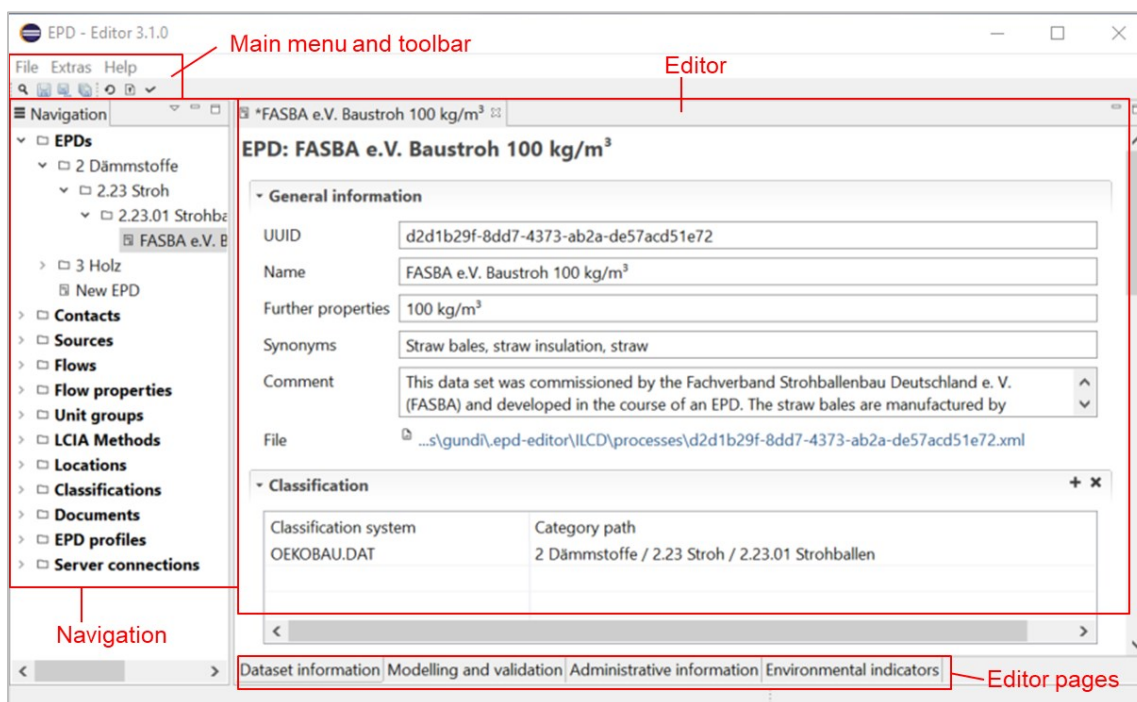
The EPD Editor is distributed as a ZIP package: <https://github.com/GreenDelta/epd-editor/releases>. The package is saved locally in a directory with write access and unpacked. The editor is started with the file "epd-editor.exe":



The data generated with the editor are managed centrally in the user folder, regardless of where the EPD Editor is saved.

## 2. User interface

The user interface of the EPD Editor consists of a main menu with a toolbar, a navigation and an editor area:



### 2.1 Toolbar

The functions

- Search
- Save

## Data delivery to ÖKOBAUDAT via the EPD Editor

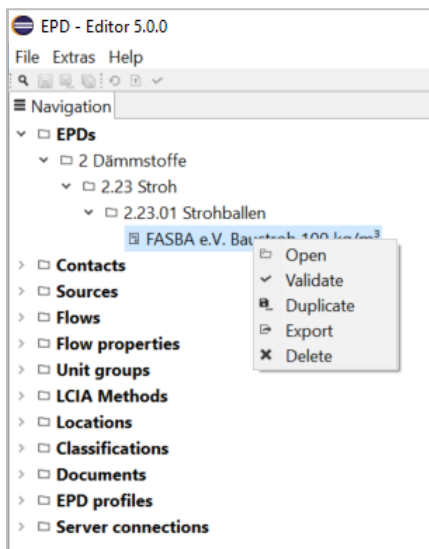
- Save As
- Save All
- Reload
- Upload data set
- Validate data set

are available via the toolbar:



## 2.2 Navigation

The datasets are displayed in their respective categories in the navigation. By right-clicking, various actions can be carried out via the navigation context menu, depending on the selected element:

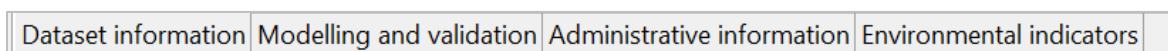


Datasets can also be opened with a double left click.

## 2.3 Editor area

Datasets are edited in the editor area.

An editor can have several pages, between which you can switch using the tabs at the bottom of the editor:



An editor page is again divided into logical areas, such as the general information of a dataset in the upper area of the "Dataset information" tab:

The screenshot shows the 'General information' section of the EPD Editor. It includes the following fields:

- UUID:** d2d1b29f-8dd7-4373-ab2a-de57acd51e72
- Name:** FASBA e.V. Baustroh 100 kg/m³
- Further properties:** 100 kg/m³
- Synonyms:** Straw bales, straw insulation, straw
- Comment:** This data set was commissioned by the Fachverband Strohballenbau Deutschland e. V. (FASBA) and developed in the course of an EPD. The straw bales are manufactured by Baustroh GmbH
- File:** ...s\gundi\epd-editor\ILCD\processes\d2d1b29f-8dd7-4373-ab2a-de57acd51e72.xml

The information in the data fields on the EPD Editor page must be entered as text, as a selection from a specified list, as tables or links.

Another important component is the references to other datasets in the EPD Editor, which can be set by clicking the button; for example, an EPD dataset must refer to a product flow dataset:

The screenshot shows the 'Declared product' section. It contains two input fields:

- Product:** A dropdown menu currently showing 'None' with a selection icon and a close button.
- Amount:** A text input field containing '1' and a button labeled 'Select data set'.

## 2.4 Edit tables

Tables have a context menu and a toolbar for editing the content:

The screenshot shows a table titled 'Data sources'. The table has two columns: 'Source' and an empty column. The first two rows are:

Source	
GaBi database (all versions)	
GaBi database SP30 2016	

A context menu is open over the second row, showing 'Add' and 'Remove' options. A red box highlights the toolbar in the top right corner of the table, containing '+' and 'x' icons.

Depending on the content, particular fields, such as the quantities of the indicator results, can be edited directly in the tables:

The screenshot shows a table titled 'Results' with the following data:

Module	Scenario	Indicator	Value	Unit
A1-A3		Total use of renewable primary energy resources (PERT)	1650.0	MJ
A1-A3		Use of renewable primary energy resources used as raw materials (PE...	1630.0	MJ
A1-A3		Use of net fresh water (FW)	829.0	m3

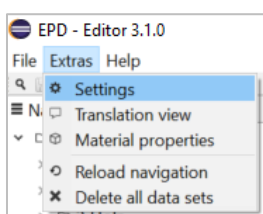
For some tables there are specific functions such as the synchronization, import and export function of the indicator results:



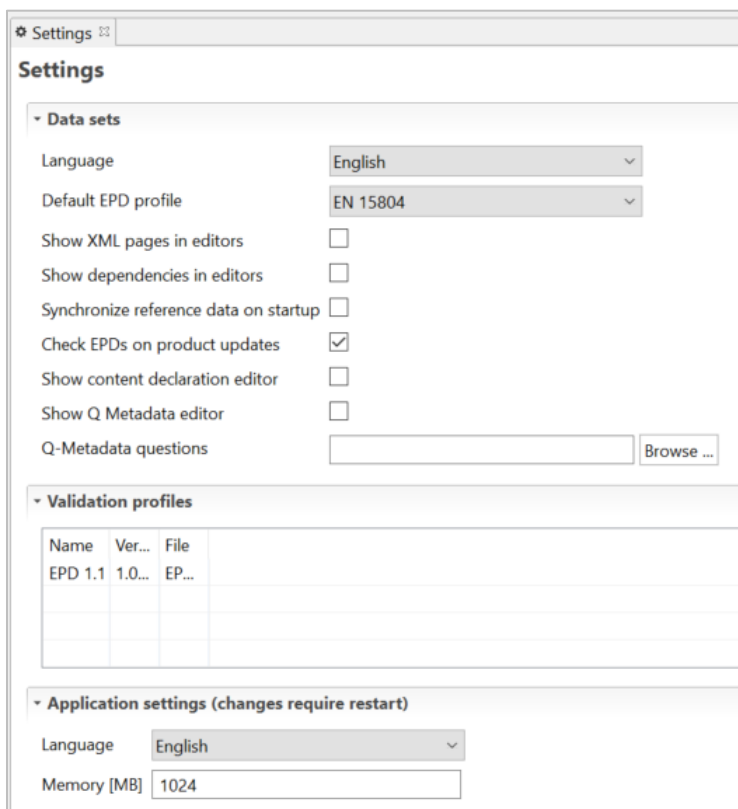
### 3. Settings

The settings can only be changed if the EPD Editor is saved in a directory with write access (see also Chapter 1 Installation).

The general settings can be adjusted via the menu item "Extras > Settings":



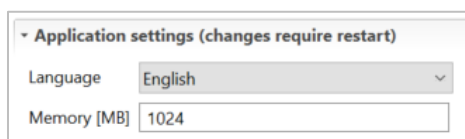
The window is divided into the three areas "Data sets", "Validation profiles" and "Application settings":



Validation profiles see Chapter 6 Validation of datasets.

### 3.1 Application settings

The language of the EPD Editor and the allocated storage capacity can be set under "Application settings" in the lower area of the window:



Changes of the desired language and storage capacity require a restart.

### 3.2 Data set settings

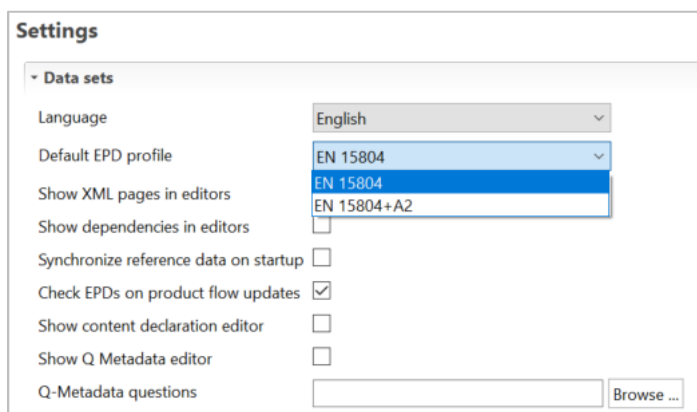
The language in which the text fields of a dataset are to be displayed and edited can be set here. The appropriate language is selected from the list. All data entered in data fields in the editor area are then assigned to the selected language.

Note:

- Opened datasets must be closed and reopened to be active in the newly selected language.
- The information in which language the data set is currently being processed can only be seen in the settings. In the editor area, this can only be recognised on the basis of the data already entered.

The EPD profile is currently set to "EN 15804" by default.

The user can alternatively switch to EN 15804+A2.



Furthermore, various display and update options can be set.

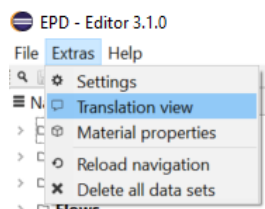
For EPD datasets for ÖKOBAUDAT, "Check EPDs on product flow updates" must be activated.

Information on ingredients can optionally be made by activating "Show content declaration editor".

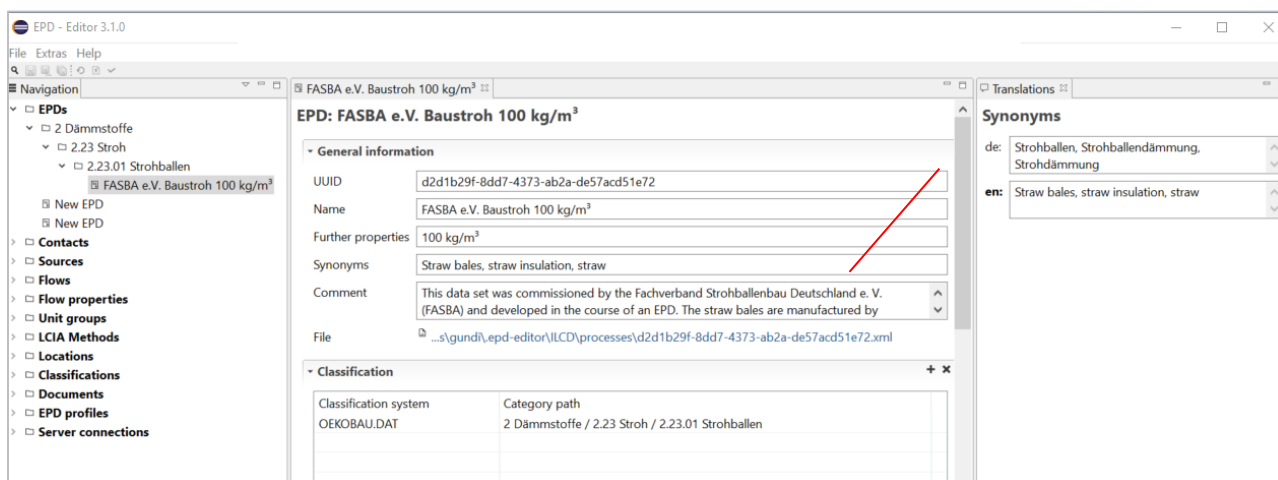
The Q metadata ("Show Q Metadata editor" and "Q-Metadata questions") are not shown in ÖKOBAUDAT.

### 3.3 Multilingual datasets

Via the menu item "Extras > Translation view" the values of a data field can be displayed in different languages, if the field supports this:



In this mode, another area "Translations" is displayed on the right-hand side. If you click in a data field in the editor area, the data are displayed in the translation area in all the languages in which they have been entered:

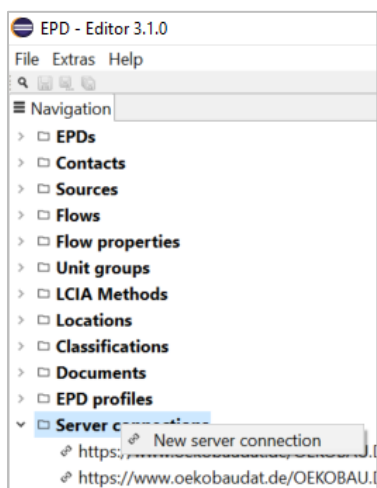




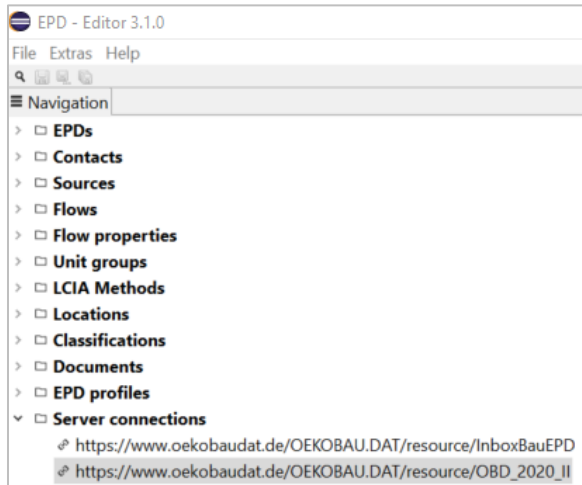
## 4. Server connection to ÖKOBAUDAT

### 4.1 Establish server connection to ÖKOBAUDAT

In technical terms, the ÖKOBAUDAT database is based on the software soda4LCA (<https://bitbucket.org/okusche/soda4lca>) and is equipped with a standardised interface (API) for data exchange. The EPD Editor supports internet-based data exchange via this interface. Such connections can be created or edited via the context menu of the "Server connections" folder:



A link to ÖKOBAUDAT is already stored under "Server connections":

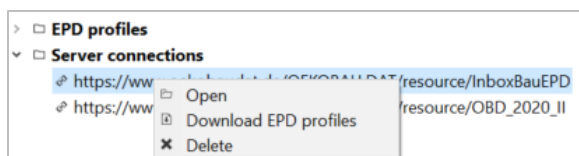


Note: The current URL for ÖKOBAUDAT is:

<https://www.oekobaudat.de/OEKOBAU.DAT/resource>

In version 3.0.1 of the EPD Editor, "**http**" must be corrected to "**https**".

Via the navigation, existing server connections can be opened for editing or deleted with a right click, just like with the other datasets:



## Data delivery to ÖKOBAUDAT via the EPD Editor

A connection to a soda4LCA server consists of a URL to a service endpoint (e.g. <https://www.oekobaudat.de/OEKOBAU.DAT/resource>) and, if applicable, a user name and a password.

The screenshot shows a 'Server connection' dialog box with a 'Connection data' section. It contains three input fields: 'URL' with the value 'https://www.oekobaudat.de/OEKOBAU.DAT/resource', 'User' with the value 'Steinmaurer', and 'Password' with the value '4fhg93k'.

Note: No user account and password are required to connect to generally accessible ÖKOBAUDAT data.

## 4.2 Import of published ÖKOBAUDAT datasets via the server connection

After clicking on the link (default: "not set") a data stock can be selected:

The screenshot shows the 'Server connection' dialog box with the 'Data stock' field set to 'OBD\_2020\_I | 8201b671-10cd-4dc5-9750-0b856d998be4'. A 'Data stocks' dialog box is open over it, displaying a table of available data stocks.

Name	UUID	Description
<input type="checkbox"/> 15804_A2_4_UI_TEST	cbdd4d1...	
<input type="checkbox"/> InData_2018	851a49c...	
<input type="checkbox"/> OBD_150820	2996a68...	
<input type="checkbox"/> OBD_2017_I	cc02f499...	ÖBD Release Stand 26-10-
<input type="checkbox"/> OBD_2019_I	30b63be...	ÖBD Release Stand 21-01-
<input type="checkbox"/> OBD_2019_II	815d897...	ÖBD Release Stand 30-04-
<input type="checkbox"/> OBD_2019_III	0454ab2...	
<input type="checkbox"/> OBD_2020_I	8201b67...	
<input type="checkbox"/> OBD_2020_II	448d109...	
<input type="checkbox"/> OBD_2021_I	402712...	

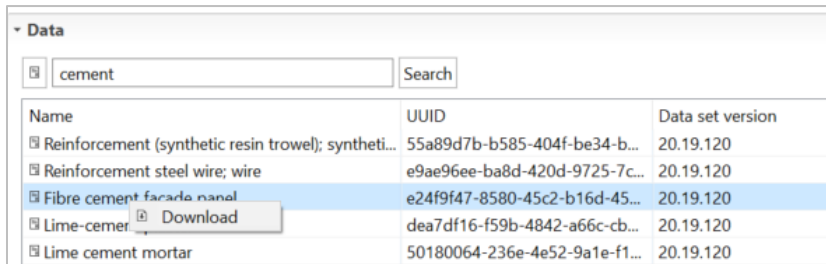
If the data pool is set, data can be searched online using the search field:

The screenshot shows the 'Server connection' dialog box with the 'Data stock' field set to 'OBD\_2020\_I | 8201b671-10cd-4dc5-9750-0b856d998be4'. The 'Data' section is expanded, and a search field containing the text 'cement' is highlighted with a red box. A 'Search' button is located to the right of the search field.

Name	UUID	Data set version
<input checked="" type="checkbox"/> Reinforcement (synthetic resin trowel); syntheti...	55a89d7b-b585-404f-be34-b...	20.19.120
<input checked="" type="checkbox"/> Reinforcement steel wire; wire	e9ae96ee-ba8d-420d-9725-7c...	20.19.120
<input checked="" type="checkbox"/> Fibre cement facade panel	e24f9f47-8580-45c2-b16d-45...	20.19.120
<input checked="" type="checkbox"/> Lime-cement plaster	dea7df16-f59b-4842-a66c-cb...	20.19.120

Note: If "Search" is clicked without a search term, all datasets of the selected database are displayed.

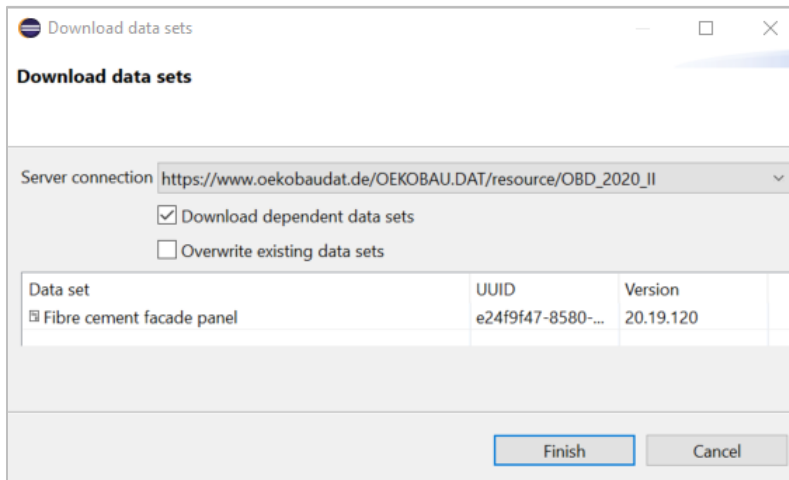
Datasets can be selected from the table and downloaded with a right click.



The screenshot shows a table with the following data:

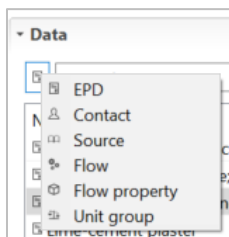
Name	UUID	Data set version
Reinforcement (synthetic resin trowel); syntheti...	55a89d7b-b585-404f-be34-b...	20.19.120
Reinforcement steel wire; wire	e9ae96ee-ba8d-420d-9725-7c...	20.19.120
Fibre cement facade panel	e24f9f47-8580-45c2-b16d-45...	20.19.120
Lime-cemer	dea7df16-f59b-4842-a66c-cb...	20.19.120
Lime cement mortar	50180064-236e-4e52-9a1e-f1...	20.19.120

In the download dialog you can set whether the dependent datasets (for the selected datasets) should also be downloaded and whether local datasets should be overwritten with new datasets from the server, i.e. updated if applicable:



After downloading, all selected datasets including their flows can be found in the navigation tree.

By default, the search function is searching for EPD datasets. By clicking on the selection icon and selecting an option, the user can switch to contacts, sources, flows, flow properties or unit groups:

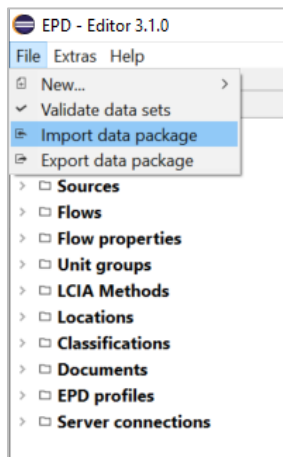


### 4.3 Connection to your own "Inbox" datasets in ÖKOBAUDAT

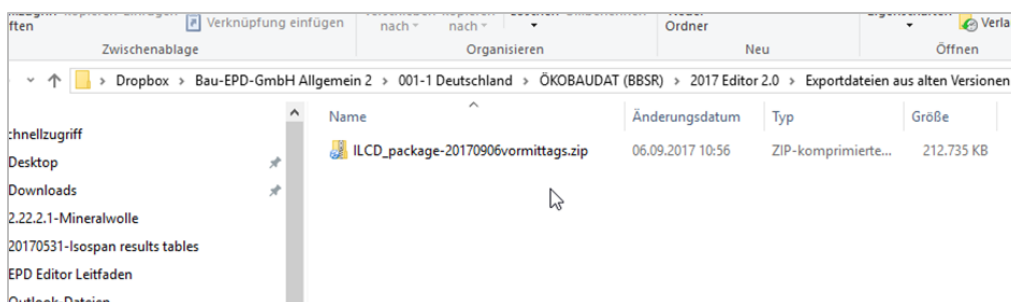
The import and export of datasets from and into the ÖKOBAUDAT backend must be approved by the BBSR. By using a username and password and creating the server connection as described in section 4.2 above, you can use the "Inbox" to exchange your own datasets that have not yet been published. To do this, select your own "Inbox" under "Data stock".

#### 4.4 Import or export data packages / data sets via the main menu

ÖKOBAUDAT data packages or individual datasets can be imported using the context menu of the "Server connections" folder as described in 4.2. Alternatively, a data package can be imported via the main menu item "File > Import data package" or exported via "File > Export data package":



A zip file can be saved with "Export data package". This reflects the status of the "data backup":



A backup saved in this way can be imported into the EPD editor with "Import file".

Note: This menu can be used to import "ILCD packages": The EPD Editor saves data as XML files in ILCD format (<http://eplca.jrc.ec.europa.eu/LCDN/developer.xhtml>). An ILCD package is a ZIP file in which XML files are stored in a specific folder structure.

The data of the latest ÖKOBAUDAT release can be downloaded as a ZIP archive or CSV export: <https://www.oekobaudat.de/en/service/downloads.html>

## 5. Create and edit flows (products) and EPDs

General note: Editor pages are saved using the toolbar.

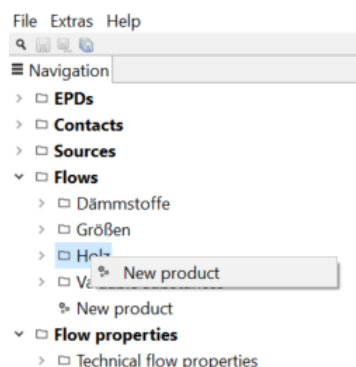


### 5.1 Create and edit flows (products)

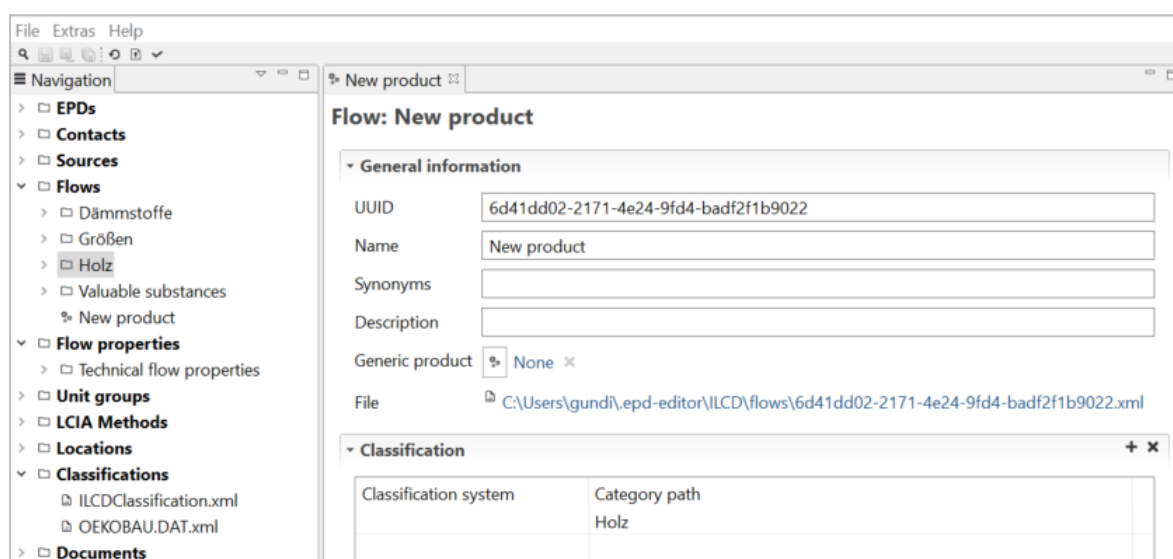
Note: For EPDs (environmental product declarations), "flow" is synonymous with "product". In the EPD Editor, "flows" are therefore usually referred to as "products".

## Data delivery to ÖKOBAUDAT via the EPD Editor

New products can be created by right-clicking on the context menu "Flows" or, if available, on the corresponding category subfolder:



The flow editor field opens on the right:



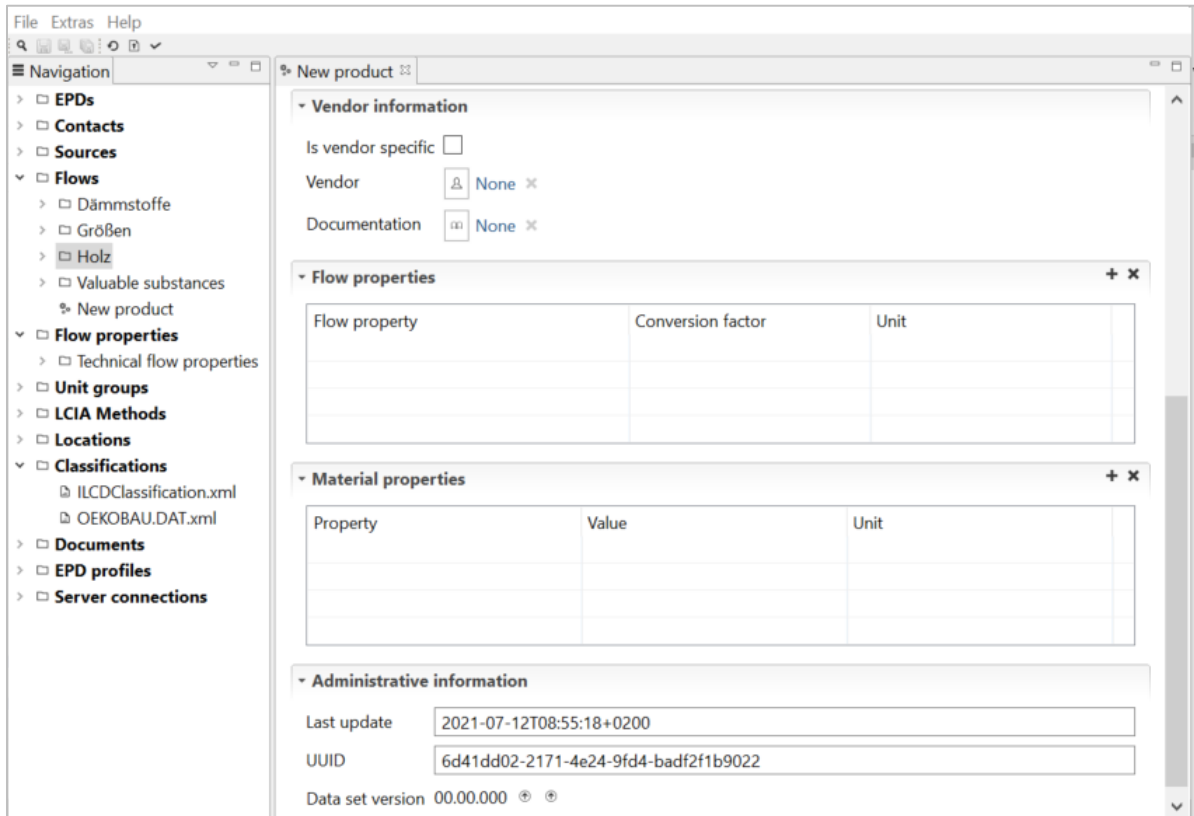
The UUID is generated automatically, name, synonyms and description can be chosen freely.

Under "Generic product" you can optionally choose a generic dataset from "ÖKOBAUDAT" which corresponds to the product type of your own product. This data is not currently in use.

Note: This function is already set up for future use in the EPD Editor, but implementation in ÖKOBAUDAT is still being worked on.

For the selection of categories under the "Classification" menu item, see 5.4 Update categories.

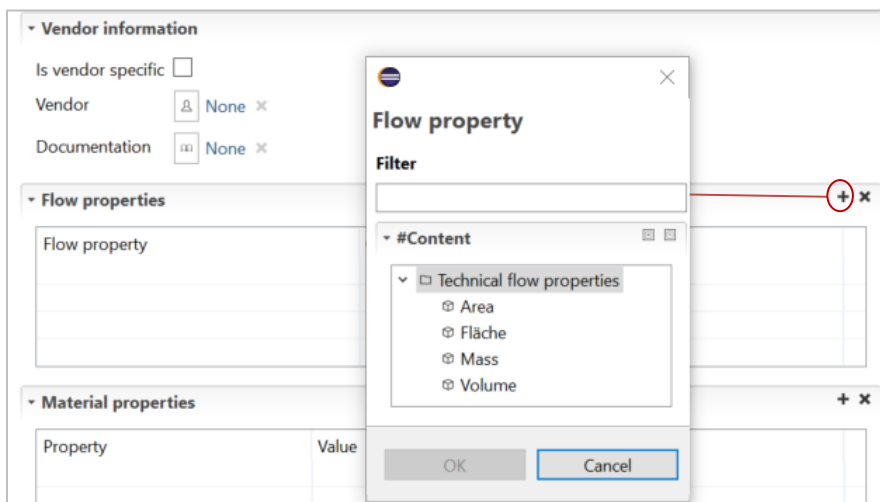
In the lower part of the flow editor field, vendor information, flow and material properties as well as "Administrative information" is entered:



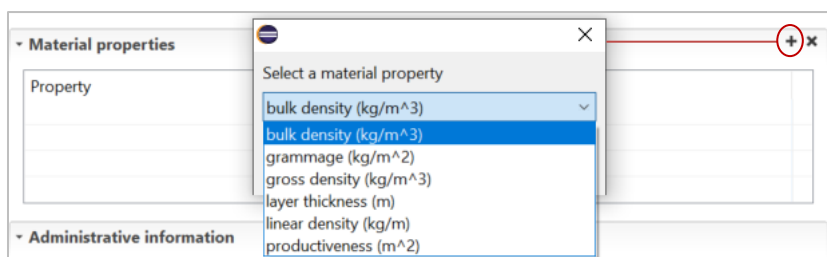
The administrative information is generated automatically.

In the case of vendor specific datasets, a link must be given to the vendor's contact dataset, and a source dataset (e.g. an EPD document) must be stored under "Documentation" (see 5.5 Create contacts, sources, etc.).

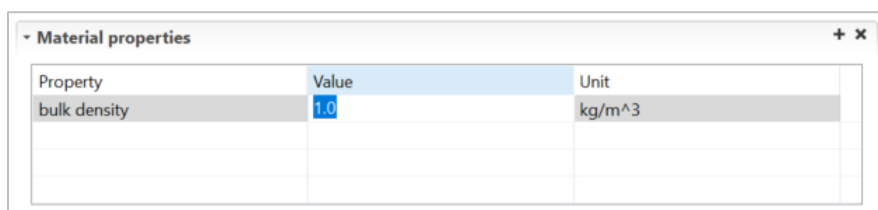
Under "Flow properties", a link is made to the appropriate physical reference quantity for the product flow (for adding new flow properties, see 5.5. Create contacts, sources, etc.):



Under "Material properties" you can choose from a specified list of properties:



The designation and unit of the material properties are fixed. The value can be overwritten by clicking in the field:



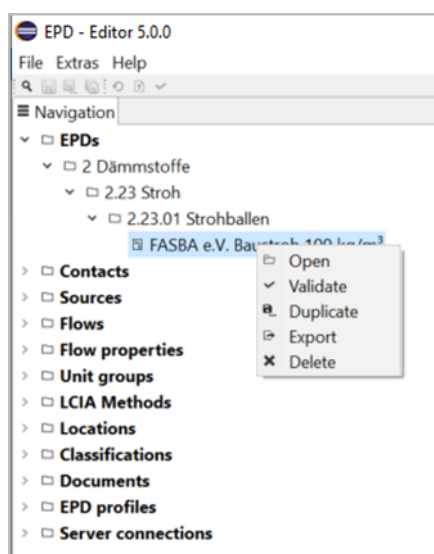
Note: The value of the material properties is entered according to the English writing convention (point instead of comma as decimal separator).

Note: Instructions on the required material information when transferring EPD / life cycle assessment data to ÖKOBAUDAT can be found here: <https://www.oekoaudat.de/en/service/downloads.html> > Technical instructions

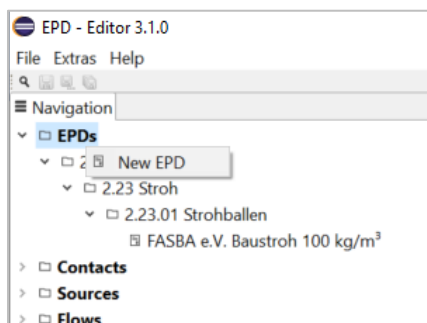
Note: When updating EPDs, existing product flows can be used. If essential properties of the product have changed (e.g. bulk density), a new product must be created.

## 5.2 Open, create or edit EPDs

Existing EPDs can be opened via the navigation tree:



New EPDs can be created by right-clicking on the EPDs folder or, if available, on the corresponding category subfolder:



Note: When generating a new (EPD) documentation, no sources / documentation with umlauts, spaces or special characters in the name are allowed.

Changes to the entries for EPDs and flows can be made in the corresponding fields described in Sections 5.1 and 5.3.

It should be noted that the UUID of the EPDs and flows remain the same, provided that their period of validity does not change. The version numbers increase automatically.

In any case, the data records should be validated as described in Chapter 6.

### 5.3 Edit EPDs

The EPDs are opened by double-clicking or via the context menu of the navigator. The EPD area consists of several folders. The basic structure of the editor area and the basic functions are described under 2.3.

Like the ÖKOBAUDAT, the EPD Editor is based on the ILCD+EPD data format. Detailed information on the ILCD+EPD data format can be found at <https://www.oekobaudat.de/en/service/downloads.html> (Downloads menu, keyword "ILCD+EPD Data format").





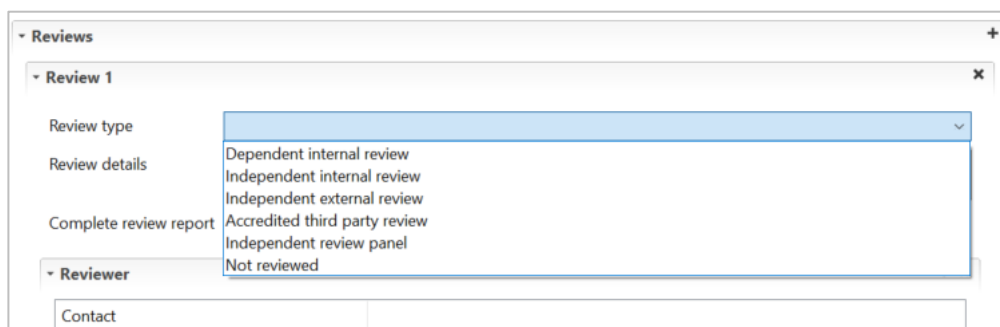
The UUID is automatically generated when a new dataset is created. The remaining fields are to be filled in tab by tab according to the definitions of the ILCD+EPD data format. The definitions are displayed via a "tool tip" function. Some additional guidance for specific data fields is provided below.

#### *Tab "Dataset information"*

- Further properties: Characterising product properties such as the surface weight of a product can be entered in the text field.
- "Name" and "Technical purpose of product or process": For "InData" conformity, these data fields are also required in English.
- Synonyms: can be chosen freely
- Declared product: Here, the corresponding product flow is linked (see 5.1 Create and edit flows (products) and EPDs). The quantity and unit must also be specified.
- External documentation sources: see section 5.5 Create contacts, sources, etc.
- Uncertainty margins: only relevant for generic datasets
- Flow diagrams or pictures: see section 5.5 Create contacts, sources, etc.

#### *Tab "Modelling and validation"*

- LCA method details, Data sources, Compliance declarations: see section 5.5 Create contacts, sources, etc.
- Reviews: The input field "Review 1" appears by clicking on "+":



The screenshot shows a user interface for adding reviews. A dropdown menu is open for the 'Review type' field, listing six options: 'Dependent internal review', 'Independent internal review', 'Independent external review', 'Accredited third party review', 'Independent review panel', and 'Not reviewed'. Below the dropdown, there are input fields for 'Complete review report', 'Reviewer', and 'Contact'.

Review type: For ÖKOBAUDAT, only datasets with the value "Independent external review" are approved.

Review details: Free text entry possible

Complete review report: can be uploaded optionally; see section 5.5 Create contacts, sources, etc.

Reviewer: see section 5.5 Create contacts, sources, etc.

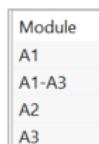
#### *Tab "Administrative information"*

- Last update and Data set version: is generated automatically
- "Documentor" and "Owner": see section 5.5 Create contacts, sources, etc.
- "Data formats": For ÖKOBAUDAT-compliant data sets, "ILCD format" and "EPD Data Format Extensions" must be stated.

#### *Tab "Environmental indicators"*

- EPD profile: "EN 15804" is preselected. It may be changed to "EN 15804+A2" if appropriate.

- Scenarios and Modules: New scenarios or modules are created using the right mouse button "Add" or the left mouse button "+". All table fields can be filled in.
- Scenarios: The scenarios should be given a short, concise name (e.g. "recycling"). A "default" scenario can be determined. Optionally, several scenarios can be combined into a "group".
- Modules: The module designations must correspond to the specified format (only module number without designation):



If several scenarios have been created, the corresponding modules must be created for each scenario, e.g. Module D + scenario "recycling" and module D + scenario "energy recovery".

- Results: The results are best entered via Excel.

#### Import and export result data with Excel

- An Excel file with all modules, associated scenarios and indicators can be created via Export. The values from the life cycle assessment can be entered in this table or the table can be used for comparison with the life cycle assessment table. The finished table of values is read in via import.



#### Notes:

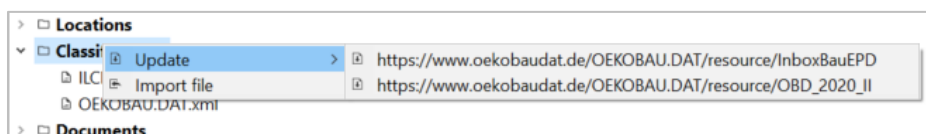
In the exported excel table, the indicators are arranged in alphabetical order and not as in EN 15804. The import excel file can, however, have a different order. Otherwise nothing may be changed in the "Results" worksheet, but there can be links to other worksheets.

Only the first sheet of an import Excel file is imported, even if the file contains several worksheets.

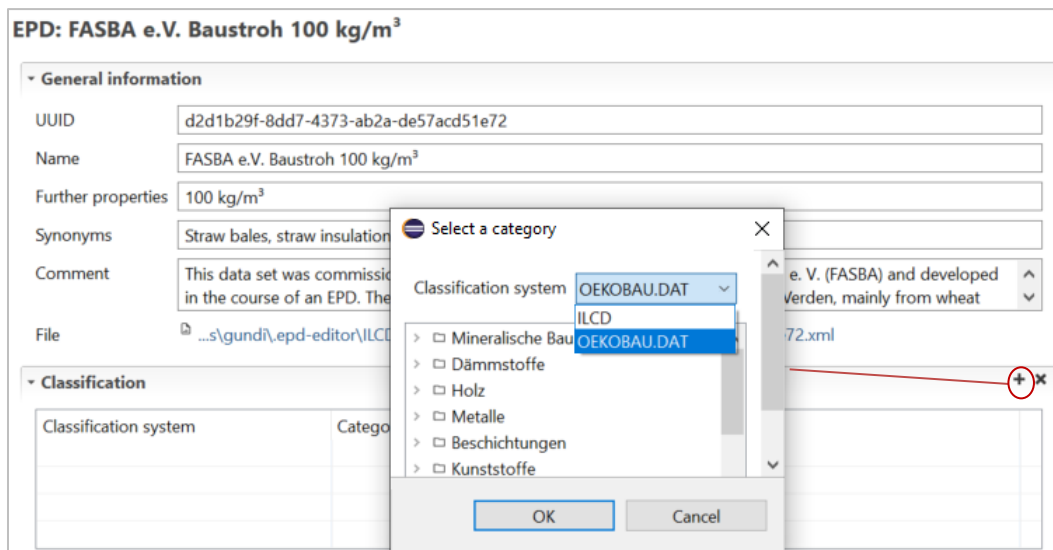
- If modules are to be deleted, the results must first be imported and then a new synchronization must only be carried out with the desired modules via "Import modules".
- Import of several scenarios: These must be assigned by numbers in the import table (1, 2, n). After a successful import, names and descriptions of the scenarios can be entered.

## 5.4 Update categories

ÖKOBAUDAT contains predefined product categories, to which the EPD datasets must be assigned. After a connection to ÖKOBAUDAT has been established under "Server connections" (see 4.1), the ÖKOBAUDAT categories should be updated in the context menu "Classifications" in the EPD Editor:



When creating or editing a product or EPD dataset, the classification system and the appropriate category can then be selected. To do this, a control panel is opened in the "Classification" table with the "+" button" or right-click "Add" and the "ÖKOBAUDAT" classification system is set in it. The corresponding category can be selected in the category list that then appears.



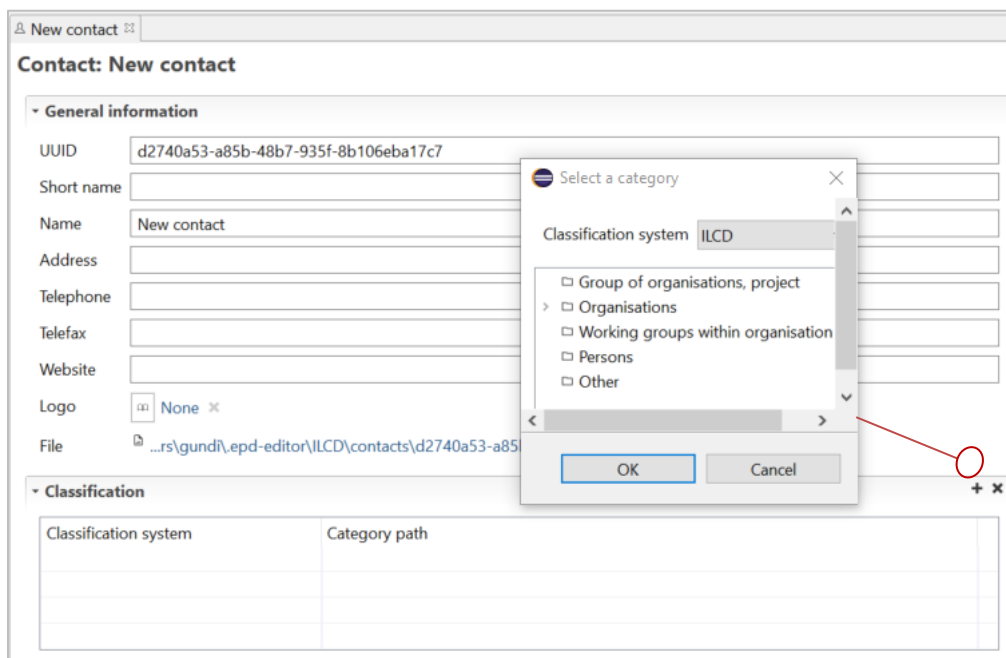
**Note:**

For import into ÖKOBAUDAT, only the "ÖKOBAUDAT" classification system is permitted. Missing product categories can only be added by the BBSR.

## 5.5 Create contacts, sources, etc.

Contacts, data sources, etc. are created in the context menu by right-clicking on the corresponding folder or existing subfolders. The respective editor field opens on the right side. The UUID is always generated automatically as soon as a new dataset is created. The remaining data are entered as text, as a selection from a given list, as tables or links.

In the classification tables, clicking on the "+" symbol opens a classification system with different selection options:



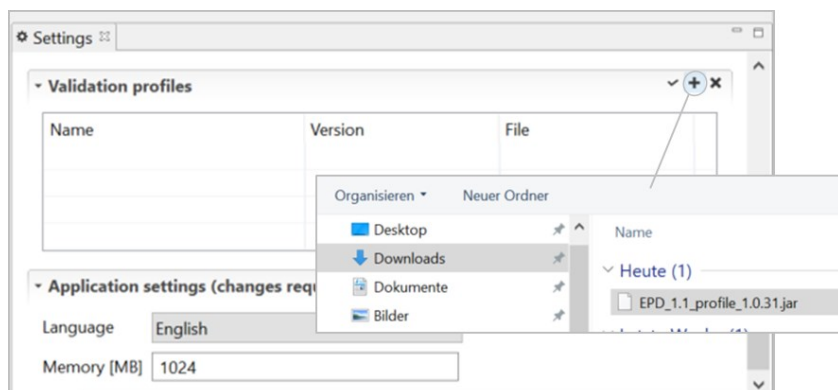
## 6. Validation of datasets

### 6.1 Upload current validation profile

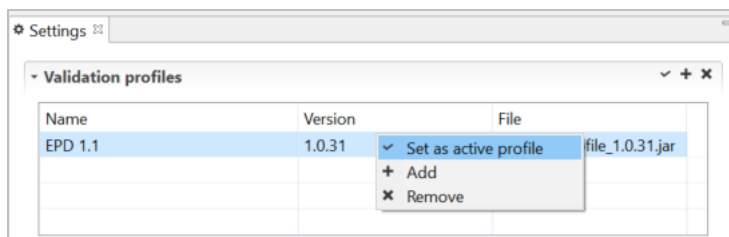
The current ÖKOBAUDAT validation profile (EPD profile) can be downloaded from the following link (keyword "Validation"):

<https://www.oekobaudat.de/en/service/downloads.html>

In the EPD Editor, the current validation profile can be stored under the menu item "Extras > Settings" (see section 3):



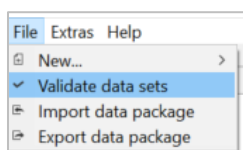
The profile is then set to active:



Subsequently created datasets can be validated.

## 6.2 Validate datasets

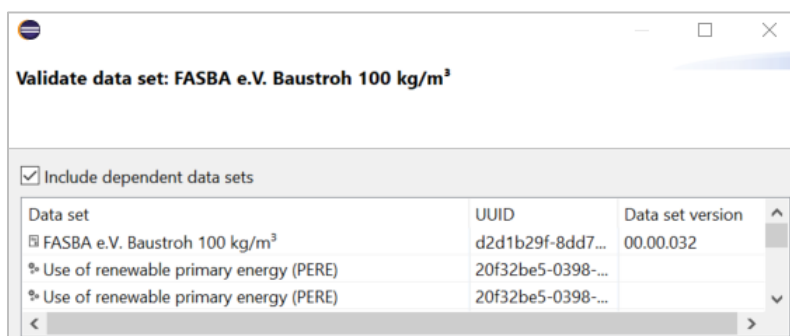
The validation function can be activated via the menu item "File > Validate data sets":



The validation function is also available for individual datasets and can be called up via the context menu in the navigation or the toolbar of an editor:



For a single dataset, it can be decided whether only this dataset or its referenced datasets should be validated:



Note: For EPD datasets for ÖKOBAUDAT, "Include dependent data sets" must be selected in any case.

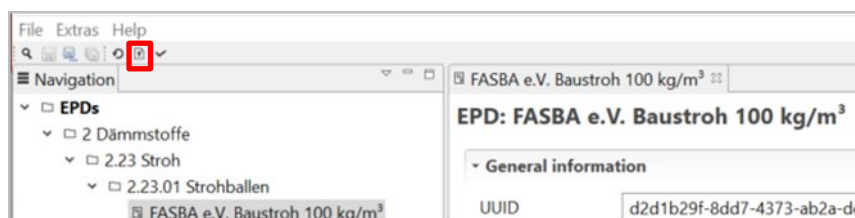
## Data delivery to ÖKOBAUDAT via the EPD Editor

The result of the validation is displayed in a table in which the respective datasets can be opened with a double click:

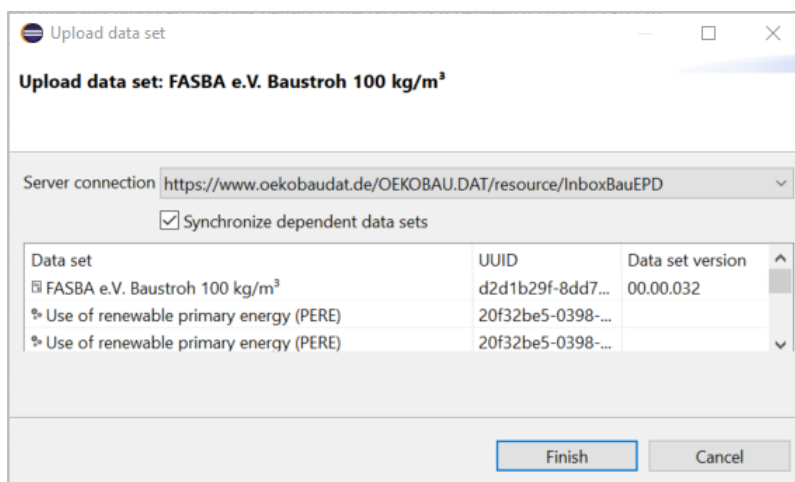
Name	UUID	Data set versi...	Status
☞ Use of non renewable primary energy (PENRE)	ac857178-2b45-46ec-892a-a9a4332f0372	30.00.000	▲ Custom Validity: File not found: ../GaBiCategories.xml
☐ Depletion potential of the stratospheric ozone lay...	06dcd26f-025f-401a-a7c1-5e457eb54637	00.01.000	✖ XML Schema Validity: 21,31 cvc-complex-type.2.4.b: The
☐ Depletion potential of the stratospheric ozone lay...	06dcd26f-025f-401a-a7c1-5e457eb54637	00.01.000	✖ XML Schema Validity: 22,34 cvc-complex-type.2.4.a: Inva
☐ Depletion potential of the stratospheric ozone lay...	06dcd26f-025f-401a-a7c1-5e457eb54637	00.01.000	✖ XML Schema Validity: 23,24 cvc-complex-type.2.4.a: Inva
☐ Depletion potential of the stratospheric ozone lay...	06dcd26f-025f-401a-a7c1-5e457eb54637	00.01.000	▲ Custom Validity: File not found: ../GaBiCategories.xml
☞ Non hazardous waste dispose (NHWD)	b29ef66b-e286-4afa-949f-62f1a7b4d7fa	30.00.000	▲ Custom Validity: File not found: ../GaBiCategories.xml
☞ Components for re-use (CRU)	a2b32f97-3fc7-4af2-b209-525bc6426f33	30.00.000	▲ Custom Validity: File not found: ../GaBiCategories.xml
☞ Materials for recycling (MFR)	d7fe48a5-4103-49c8-9aae-b0b5dfdbd6ae	30.00.000	▲ Custom Validity: File not found: ../GaBiCategories.xml

## 7. Upload datasets to the ÖKOBAUDAT backend

Validated datasets can be uploaded to a data server via the toolbar menu:



In the upload dialog, the user can decide whether referenced datasets should also be synchronized with the server ("Synchronize dependent data sets"), i.e. they are loaded onto the server if they do not yet exist in the given version:



After uploading to the ÖKOBAUDAT backend, an upload confirmation appears. The BBSR will then check at <http://oekobaudat.de/OEKOBAU.DAT/login.xhtml> in the ÖKOBAUDAT inbox whether the datasets have been transferred correctly.