

LCI Review report (reviewed against "ILCD Data Network - entry-level requirements")

Draft template

Table 1: General review reporting items

| REVIEW REPORTING | | | |
|--|---|-----------|-----------------|
| General information | | | |
| Data set name | PET_bottle grade_at plant | | |
| Data set UUID and version number | To be determined | | |
| Data set locator (e.g. Permanent URI, URL, contact point, or database name and version, etc.) | | | |
| Data set owner | CPME aisbl | | |
| Review commissioner(s) | CPME aisbl | | |
| Reviewer name(s) and affiliation(s), contact | Matthias Schulz – Schulz Sustainability Consulting on behalf of DEKRA Assurance Services GmbH | | |
| Review type applied | Independent external | | |
| Date of review completion (DD/MM/YYYY) | 08/08/2017 | | |
| Reviewed against / Compliance system name | ILCD Data Network - Entry-level requirements | | |
| | | | |
| Reviewer assessment: | | | |
| Aspect | Yes | No | Comments |
| Quality compliance (aspects of ISO 14040 & 14044) fulfilled (see table 2) | X | | |
| Method compliance (as in ISO 14040 & 14044) fulfilled and documented in data set | X | | |
| Nomenclature compliance (see table 3) fulfilled | X | | |
| Documentation compliance (see table 3) fulfilled | X | | |
| Review compliance (Independent external review OR independent internal review + review report) fulfilled | X | | |
| Overall compliance with ISO 14040 & 14044 | X | | |
| Overall compliance with "Compliance system" | X | | |
| Date, location, reviewer signature | Stuttgart, 08/08/2017 | | |

Table 2: Specific/detailed review reporting items for LCI data set: Quality compliance (ISO 14040 & 14044). Please note that for aggregated LCI result data sets, this includes key processes in the background system.

| ITEMs | Comments |
|--|---|
| <p>Time-related coverage/representativeness:</p> <p>“age of data and the minimum length of time over which data should be collected”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p> | <p>Good</p> <p>Foreground: 12 month averages representing the year 2015.</p> <p>Background: 2009—2013 (transport 2000-2012),</p> <p>Maximum temporal validity until end of 2020.</p> <p>(p.14)</p> |
| <p>Geographical coverage/representativeness:</p> <p>“geographical area from which data for unit processes should be collected to satisfy the goal of the study”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p> | <p>Good</p> <p>European production average. Primary production data from 12 production lines at 10 production sites in Europe was provided.</p> <p>(p. 14)</p> |
| <p>Technology coverage/representativeness:</p> <p>“specific technology or technology mix”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p> | <p>Very Good</p> <p>Technology mix representing European production (see above).</p> <p>The specific technologies of PET production of the companies are considered.</p> <p>(p. 13)</p> |
| <p>Precision:</p> <p>“measure of the variability of the data values for each data expressed (e.g. variance)”</p> | <p>Good</p> <p>The relevant foreground data consist of primary data or modelled data based on primary information sources of the owner of the technology, such that the best possible precision has been achieved within this goal and scope.</p> <p>The participating companies represent 85% (of installed production capacity) of the European PET production volume in 2015.</p> <p>(p. 18-19)</p> |
| <p>Completeness:</p> <p>“percentage of flow that is measured or estimated”; assessed on level of process</p> | <p>Good</p> <p>In general, the collected and applied data can be stated as complete, because no flows are omitted. However, in cases in which a production unit did not report a value for certain substances, the weighted average value of the reporting units was used. The same approach was used for missing transport distances.</p> |

| ITEMs | Comments |
|---|--|
| | (p. 18) |
| <p>Consistency:</p> <p>“qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis”</p> | <p>Very Good</p> <p>To ensure consistency only primary data of the same level of detail and background data from the databases mentioned under ‘data sources’ were used. While building up the model, cross-checks concerning the plausibility of mass and energy flows were continuously conducted. The methodological framework is consistent throughout the whole model as the same methodological principles are used both in foreground and background system.</p> <p>(p.18)</p> |
| <p>Sources of the data; Appropriateness of use primary/secondary data source</p> | <p>The main data source was a primary data collection from European PET producers, providing site-specific gate-to-gate production data for processes under operational control of the participating companies. Data concerning the main precursors, i.e. PTA and MEG were taken from existing Eco-profiles [CPME 2016 and PlasticsEurope 2012]. All other input and output processes were taken from the Ecoinvent v.3.3 database as well as specific databases of the LCA practitioner.</p> <p>(p.14-17)</p> |
| <p>Uncertainty of the information (e.g. data, models and assumptions).</p> | <p>Variation of single data was not recorded. Variation of the model/dataset not applicable due to vertical average of production lines and technologies.</p> <p>Reliability of the collected primary data can be considered very high due to almost exclusively measured data across the entire sample. Furthermore, the background data can be considered very precise.</p> <p>(p.18)</p> |
| Others | |

Table 3: Specific/detailed review reporting items for LCI data set: Nomenclature and Documentation

| ITEMs | Comments |
|--|---|
| Nomenclature | |
| Correctness and consistency of applied nomenclature (Preferred use of ILCD flows etc.; Correct nomenclature of other flows; Exclusion of not permissible waste flows, sum indicator elementary flows etc.) | Yes – database format is aligned and compatible with ILCD requirements (consistent nomenclature) -- conducted spot checks on the LCI (xls and ILCD xml) |
| Documentation | |
| Appropriateness of documentation (see Document “Documentation of LCA data sets”) | Yes – meta-data completed and appropriate; documentation aligned with ILCD standards. |
| Appropriateness / correctness of documentation form (ILCD Format) | Yes – Database format is aligned and compatible with ILCD requirements (consistent format of meta-data and content) -- spot checks were conducted on dataset. |