Sustainable Recycling Industries
Component A: Life Cycle Inventories

Invitation to tender for LCI data collection and submission to ecoinvent Centre

April 2017
Call for Tenders

for Life Cycle Inventory (LCI) data collection, LCI dataset creation and submission to ecoinvent

This is an open invitation for tender.

1. Background & project description
2. Eligibility Criteria
3. Task description
4. List of deliverables
5. Support during project implementation
6. Reporting procedure
7. Transfer of rights and acknowledgements
8. Schedule and timeframe
9. Budget
10. Application
11. Evaluation
12. Question and answer period
13. Closing date for proposal submissions
14. Submission procedure

Appendix A
1. Background & project description

ecoinvent is the world’s leading supplier of consistent and transparent LCI data of renowned quality. ecoinvent is a proud partner of the Sustainable Recycling Industries (SRI) programme, a programme funded by the Swiss State Secretariat for Economic Affairs (SECO) and jointly implemented by the Swiss Institute for Materials Science & Technology (Empa), the World Resources Forum (WRF) and ecoinvent, through three interconnected programme components:

Component A - Life Cycle Inventories: SRI gathers and provides local LCI data for the assessment of agricultural and industrial activities through the enhancement of local and regional LCA expertise with the aim to provide freely available regionalized LCI data for India, Latin America, and South Africa.

Component B - Recycling Initiatives: SRI improves local capacity for sustainable recycling activities together with private and public institutions, as well as the informal sector in a number of partner countries (Peru, Colombia, Ghana, Egypt, India).

Component C - SRI Roundtable: SRI facilitates a stakeholder consultation for the development of sustainability criteria for secondary raw materials.

ecoinvent is in charge of component A of the SRI project.

Through this call ecoinvent aims to subcontract the task of LCI data collection, dataset creation and submission to the ecoinvent database.

2. Eligibility Criteria

Proposals can be submitted by public and/or private entities which are eligible according to their respective national/regional regulations, such as, but not limited to higher education institutions, public research institutes, private research institutes, companies, etc.

Tender shall come from a consortium of institutions. The consortium shall include institutions from one or several of the geographies of interest for this call (India, South Africa, Brazil, Colombia, Peru). In addition, at least 50% of the budget shall be assigned to the institutions(s) based in the above regions.

The number of project partners should be reasonably balanced to correspond to the aims, duration and deliverables of the project.

No subcontracting of tasks to external institutions is permitted.

3. Task description

The tender shall collect LCI data, to provide new undefined Unit Process (UPR) LCI datasets in ecospold2 format, related to “tourist accommodation services” for the geographies listed in
Table 1. The tenderer(s) shall submit the datasets to ecoinvent through appropriate means as explained in this Call for Tender (CfT). In more detail, the tender shall collect LCI data, construct datasets in the form of undefined unallocated unit process (UPR) activities, validate the constructed datasets to ensure consistency and compliancy with the ecoinvent version 3 quality guidelines, document these datasets, submit them to ecoinvent v3 database by employing the free ecoEditor software, and apply the corrections required by editors and reviewers organized by ecoinvent until the acceptance of the datasets by the ecoinvent in the form of publication in a release of the ecoinvent database.

The data collection activities shall be carried out according to the scope (type of sector and geography) of this CfT, as shown in Table 1. Appendix A contains more technical details on the scope of this CfT.

Table 1: Scope of required LCI data

<table>
<thead>
<tr>
<th>Geography</th>
<th>Global, with focus on Southern Asia (India), Southern Africa (South Africa), and Latin America (Brazil, Colombia, and Peru)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products/services*</td>
<td>Tourism accommodation services</td>
</tr>
</tbody>
</table>

The data provider shall report to and collaborate with the ecoinvent management and respective editors during different phases of the project.

A more detailed task description includes:

a. **Model development and data collection**
   - Acquiring data, which are required for the creation of datasets in the form of undefined unallocated UPR datasets, through appropriate and coherent means, such as field measurements, interviews, questionnaires, literature research, estimations or calculations, for the sectorial data detailed in Table 1. The data represents the information required to create transforming datasets (LCI data), as well as Market datasets. The data collection project has to be carried out in alignment with Data Quality Guidelines for the ecoinvent database version 3.

b. **Datasets creation and entry to ecoEditor**
   - Using the collected data and in accordance with the proposed methodology, construct datasets in the form of UPR activities for tourism activities. The dataset creation has to conform to the instructions provided in the ecoinvent Data Quality Guidelines of version 3 and the submitted datasets shall integrate with and build on top of the existing ecoinvent database.

   The already existing flows in the ecoinvent database can be used to provide the input/outputs to the supplied datasets. The dataset creation has to conform to the instructions provided in the ecoinvent Data Quality Guidelines of version 3 and the submitted datasets shall integrate with and build on top of the existing ecoinvent database.

   - Enter the created datasets in the ecoEditor tool, i.e. the tool to create, edit, review and upload datasets for the ecoinvent database, to create LCI datasets in ecoSpold 2 format.
The software "ecoEditor for ecoinvent version 3" is free to use and can be downloaded from the ecoinvent website.

c. Datasets validation: compliancy and consistency
- Run the off-line and on-line validation checks of datasets created in ecoEditor software, using the respective functions of the software, according to the instructions provided in chapter 12 (Validation and review) of Data Quality Guidelines of ecoinvent version 3.
- Perform an internal review of the created datasets to ensure comprehensiveness, adherence to the quality guidelines (compliancy with ecoinvent version 3), consistency with similar activities in other geographies or using similar technologies, and to eliminate data entry errors.

d. Datasets documentation
- Document the datasets to be compliant with the ecoinvent “good practice for documentation”, as described in section 7 of the Data Quality Guidelines for the ecoinvent database version 3.

e. Dataset submission and integration into ecoinvent database
- Gather the necessary information for submission according to the Data Quality Guidelines of ecoinvent database version 3, and submit the UPR datasets to ecoinvent by using the ecoEditor. The submission process has to be done according to the procedure detailed in Data Quality Guidelines of ecoinvent database version 3.
- Upon receiving the feedback from the ecoinvent editors as well as its external and the technical reviewers, apply for the corrections required by the editors until the final acceptance of the datasets by the ecoinvent. This is an iterative process, and it is concluded when Life Cycle Impact Assessment (LCIA) results are checked and approved by the data provider as well as ecoinvent and the datasets are published in a release of the ecoinvent database.

4. List of deliverables

A set of datasets (undefined unlinked UPRs), in ecospold2 format, which has been constructed, documented and reviewed according to the quality requirements of ecoinvent version 3, submitted to ecoinvent through the ecoEditor, and passed the review and validation phase of ecoinvent management and its editors to be published in a release of the ecoinvent database. The datasets and the related documentation shall be provided in English language.

5. Support during project implementation

Ecoinvent management and its editors, who will be selected based on the type and sector of the LCI data, will provide support and guidance to a certain extent during different phases of data collection, dataset creation, review and submission processes. Table 2 demonstrates the
supporting role of ecoinvent management and its editors in different phases of data collection and submission to ecoinvent.

Table 2: Supporting role of ecoinvent centre during different phases of data submission

<table>
<thead>
<tr>
<th>Data provider</th>
<th>ecoinvent</th>
<th>ecoinvent editors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission of the list of data to be collected and datasets to be developed</td>
<td>Identify and contact the responsible editor</td>
<td>--</td>
</tr>
<tr>
<td>Data collection</td>
<td>Guidance during the data collection and modelling</td>
<td>Guidance during the data collection and modelling</td>
</tr>
<tr>
<td>Dataset creation, entry into ecoEditor, and datasets validation</td>
<td>Guidance during the dataset creation in the ecoEditor and datasets review</td>
<td>--</td>
</tr>
<tr>
<td>Submission of datasets into review</td>
<td>Guidance during the dataset submission</td>
<td>Start reviewing the dataset, enter notes on what shall be corrected</td>
</tr>
<tr>
<td>Final submission of datasets following the review of ecoinvent</td>
<td>- Upload the datasets to ecoinvent database and extract and send out the LCIA results to the data provider</td>
<td>Approval of the dataset</td>
</tr>
<tr>
<td>Checking and Approving the LCIA results after integration of the datasets into the working version of ecoinvent database</td>
<td>- Guidance during the LCIA results verification</td>
<td>Approval of LCIA results</td>
</tr>
</tbody>
</table>

6. Reporting procedure

The project implementer shall report to ecoinvent, through appropriate means such as telephone conversation or written documents, the status and progress of the project according to the original plan of action submitted along with the proposal.

7. Transfer of rights and acknowledgements

During the data submission process, data providers shall grant ecoinvent the non-exclusive right to use the datasets. All copyrights to the submitted data remain with the authors of the dataset. The exact text of this agreement follows:

"I confirm to hold the copyright to the uploaded data and to be entitled to dispose of these copyrights. I hereby transfer the non-exclusive right of use of the uploaded data to the ecoinvent
Centre for publication in the ecoinvent database, including but not limited to the right to publish, republish, transmit, sell, distribute, modify, change, complete and otherwise use the contributed dataset in electronic and print form and in derivative works throughout the world, in all languages, and to license or permit others to do so. This transfer of non-exclusive right of use cannot be withdrawn without a full payment of compensation to the ecoinvent Center to cover damages or a replacement of the withdrawn data. I maintain the right to use the transferred data for my own scientific work as well as to use it with third parties on a non-exclusive basis, including for commercial purposes."

In addition, the funding and supporting institutions in collecting the LCI data and preparing the datasets shall be acknowledged.

8. Schedule and timeframe

It is required that the workload is finalized by the end of November 2017. The tenderers shall provide a precise schedule according to which they would start and finalize each of the tasks described in the “Task Description” section of this call for tender.

Within one month of the start of the project, the data provider shall submit to ecoinvent the updated list of data to be collected and datasets to be developed. This list shall include all the datasets included in the original proposal for the call for tender, as well as any related datasets that will be required to be submitted along with the datasets in the proposal, in order to make the submission version 3-compliant.

Furthermore, early commencement of datasets submission to ecoinvent—e.g. within three months of the start of the project—to allow for a prompt review procedure by the ecoinvent centre and its reviewers, is highly valued.

9. Budget

The funding ceiling to carry out the subcontracted tasks is limited to CHF 50’000 (fifty thousand Swiss Francs), including any applicable VAT. The budget shall include all costs, including personnel and operational costs to carry out the project. The contract will be issued in CHF.

10. Application

The tenderer(s) shall prepare and submit a proposal to ecoinvent to apply for this CfT. The proposal shall contain the list of datasets the tenderer(s) aims to submit to ecoinvent—accompanied by a short description of the main features/contents of datasets—as well as the estimated time (in terms of hours) to create and submit each batch of datasets. Such information shall be provided to ecoinvent by filling-in the Table A.2 provided in the Appendix A of this call for tender. Appendix A also includes the technical details that should be considered in the phase of proposal design.

The tenderers shall also indicate the required budget to carry out the LCI data collection and delivery.

In addition, the tenderer(s) must demonstrate that they possess the resources and thus are competitive enough to fulfill the project. The tenders shall provide the name and CV of all the key
persons who will participate in different tasks of the data collection project, along with their expertise level, estimated time devoted to the project, and their respective charging fee (per day).

11. Evaluation

Step 1: Eligibility validation

Ecoinvent will assess the eligibility of the received proposals according to the following criteria:

- applying institutions and composition of the consortium
  a. at least one partner from list of countries in Table 1
  b. 50% or more of the budget assigned to institutions coming from the countries listed in Table 1
- all required information is correctly provided.

Step 2: Assessment

The assessment to select the project partner(s) will be based on the following criteria:

Expertise and experience of the institution or combination of institutions (60%)

- composition of the Tenderer(s). Higher points are awarded to consortia of institutions which include partners from all or most of the countries listed in Table 1 (20%)
- demonstrated knowledge and expertise in the sector detailed in Table 1 of this call for tender (10%)
- experience in LCA and in LCI data collection activities, specifically related to the activities/sectors detailed in Table 1 (10%)
- experience in working with ecoinvent version 3, the LCI data preparation to create LCI datasets according to ecoinvent Data Quality Guidelines v3, and the submission process to ecoinvent version 3, using the ecoEditor tool (10%)

List and quality of proposed deliverables (40%)

- List of datasets (type, quality, and quantity of the LCI data) the tender commits to submit to ecoinvent database, which shall be related to sector listed in Table 1 (15%)
- a timetable that presents the plan according to which the tender intends to deliver each type of dataset (or batch of datasets), with speedier delivery being considered a bonus (20%)
- required budget to carry out the proposed project, with offers significantly below the maximum offer (50’000 CHF) being rewarded extra points up to the maximum for free offers (5%)
A question and answer period is envisaged for interested parties to submit questions related to the preparation and submission of the full proposal. All such inquiries and technical questions shall be directed to Amir Safaei via email: safaei@ecoinvent.org.

The deadline to register your questions is 24th of April 2017.

13. Closing date for proposal submissions

1st of May 2017

14. Submission procedure

Tenderers shall submit tenders by email to safaei@ecoinvent.org before the closing date for proposal submission indicated above.

The evaluation will be performed within two weeks of the deadline for tender and the bidders will be informed immediately. The draft contract will be issued within 2 weeks after the selection of the successful bidder and work has to start within one week after the signature of the contract.

In case of any questions, please contact Amir Safaei at safaei@ecoinvent.org.
Appendix A
LC Model and Datasets submission templates

The aim of this call for tender is to reach an agreement with a consortium of institutions, to provide the first series of datasets characterizing tourism industry in the ecoinvent database. The datasets relate to “tourism accommodation services”, namely establishments, such as hotels, hostels, resorts, bed and breakfast, etc. which provide short-term lodging services to tourists.

The aim is to characterize life cycle environmental impacts of "tourist accommodation services" in different geographies of interest for this call for tender. The tender shall create and supply LCI datasets representing “tourist accommodation services” within the geographies of interest for this call for tender (Table 1).

To apply for this call, the tenderer(s) shall prepare a proposal with the list of datasets aimed to be created and submitted to the ecoinvent database. In addition to the operation impacts of accommodation services, the impacts of tourist accommodation experiences can be affected by the amenities and services typically offered by the accommodation services. Table A.1 provides a list of primary parameters that can affect the life cycle environmental impacts of accommodation services. It is strongly favorable that most or all of these parameters are considered in the design of the scope of the datasets.

Table A.1: parameters affecting the life cycle environmental impacts of tourist accommodation

<table>
<thead>
<tr>
<th>Parameter Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>building infrastructure (construction and maintenance)*, **</td>
</tr>
<tr>
<td>Building operation: energy—lighting, heating, cooling loads—and water consumption</td>
</tr>
<tr>
<td>capital (white) goods, such as fridge, iron, etc., **, ***</td>
</tr>
<tr>
<td>consumer durables and apparels, such as furniture, beds, etc., **, ***</td>
</tr>
<tr>
<td>Commodities (consumables) available to the customers of accommodation services, such as soaps, shampoos and other amenities**, and the</td>
</tr>
<tr>
<td>services provided by accommodation services such as cleaning, the changes of linens or towel, etc. **</td>
</tr>
</tbody>
</table>

* For building construction, the existing datasets in ecoinvent database can be used as a starting point. Different types of infrastructures are expected depending on the scope and the type of accommodation services (hostels, hostels, resorts, etc.).

** Generally, the type of building complex, and the type and frequency of services offered by the accommodation services (room-cleaning, replacement of consumables, change of towels, linens) are related to accommodation type (hotel/hostel, bed breakfast, resort…) and class (rating e.g. number of stars). Such considerations should be reflected by the tenderer(s) in designing the scope of the LCI datasets for proposal preparation as well as during project...
implementation.

*** To model capital whitegoods and consumables, certain simplifications are acceptable. For instance, a set of (generic) datasets representing the above can be created, and with adaptations, used across different accommodation services and geographies.

Along with the list of datasets, the proposal shall contain information on the

- potential sources employed during the data collection project for characterizing the different LC stages of tourist accommodation services, including both the construction (infrastructure) and operation, as well as
- planned scheme of the workflow and additional useful information which can affect the evaluation phase.

The tenderer(s) shall provide the list of LCI datasets they propose to submit by filling-in the Table A.2. This should be accompanied by a short description of the scope, and main features/contents of datasets—as well as the estimated time (in terms of hours) to create and submit each batch of datasets.

<table>
<thead>
<tr>
<th>Process (activity) name</th>
<th>Number/detail of related UPRs</th>
<th>Hours required to gather/submit data</th>
<th>Proposed delivery date</th>
<th>Similar existing global datasets in ecoinvent (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean production</td>
<td>4 regions, plus required datasets on deforestation and land transformation, as well as 4 datasets for organic fertilizer not present in ecoinvent so far, plus 1 irrigation dataset for India adapted from existing ecoinvent data</td>
<td>48</td>
<td>4 months after contract signature</td>
<td>Soybean production, Soybean production, on land recently transformed</td>
</tr>
<tr>
<td>Chicken production</td>
<td>1 dataset on chicken production, 1 dataset on feed</td>
<td>6</td>
<td>4 months after contract signature</td>
<td></td>
</tr>
<tr>
<td>Cement production</td>
<td>4 states in India, plus required datasets (8 total) on upstream processes of clinker production</td>
<td>20</td>
<td>4.5 months after contract signature</td>
<td>Cement production, Portland, CH 2010</td>
</tr>
</tbody>
</table>