

Best Practice LCA: Water Assessment Methods, December 2nd 2014

Questions and Answers

The following are questions and the corresponding answers from the PE INTERNATIONAL webinar titled “Best Practice LCA: Water Assessment Methods” which took place on December 2nd 2014. The questions are in no particular order.

<p>Q: Characterizing water consumption with water scarcity index (not weighting!!)</p>
<p>A: Correct, that is a better wording.</p>
<p>Q: Issue of averaging between areas with different WSI on the inventory level (forbidden in ISO14046)</p>
<p>A: Correct, the ISO 14046 states: <i>Water inputs or water outputs of different resource types, different quality, different form, different location with different environmental condition indicators or different timing shall not be aggregated in the inventory phase. Aggregation may be performed at the impact assessment phase.</i></p> <p>The issue was covered in part two of the webinar (Water assessment in GaBi). We see this requirement as a challenge because:</p> <ul style="list-style-type: none"> - Disaggregation on country level not sufficient, but often the only available resolution - complexity of models (some have several thousand processes involved); - data availability; - confidentiality; <p>Our approach: Hot spot analyses; PE to provide regionalization of background processes on demand; test kit planned, stepwise update of software and database</p>
<p>Q: Are there any tools available with regards to predicting water quality (physical and chemical parameters such as temperature, metal ions, etc.) for industrial processes?</p>
<p>A: I am not aware of any of such tools. It would also be hard to believe that such a tool could generate meaningful results given the large variety of industrial processes and the large variety in the environmental performance of processes resulting in the same product (e.g. due to the age of the processing equipment or the environmental legislation at the location of the processing). Please refer to the publication <i>Categorizing water for LCA inventory of Boulay et al (2011) Int J Life Cycle Assess (2011) 16:639–651</i> for a (quite complex) method to classify flows according to water quality.</p>
<p>Q: Can you please provide a list of water scarcity indices other than Pfister? I know at least of CIRAIG/Boulay et al. which has social impact of water use.</p>
<p>A: Please refer to <i>Boulay A-M, Motoshita M, Pfister S, Bulle C, Muñoz I, Franceschini H, et al. 2014. Analysis of water use impact assessment methods (part a): Evaluation of modeling choices based on a quantitative comparison of scarcity and human health indicators. The International Journal of Life Cycle Assessment: 1-22.</i></p>
<p>Q: In GaBi it is possible in the balance to obtain a global water consumption: under LCA/material resources/non-renewable resources/water with specification of ground water, lake water, etc. Is it these values that we have to weight with the Water Stress Index to obtain a Water footprint? Thanks</p>
<p>A: Yes, you can use the quantity “Blue water consumption”. That will work perfectly for your foreground system. Please note the issue of aggregation (background data) mentioned in the question above.</p>