

## Insights on social-LCA in practice in Sweden

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### Introduction

The aim of this contribution is to address the interest in better understanding how social life-cycle-assessment (SLCA) can be used in practice (cf., Swedish Life Cycle Center, 2019). Additional insights on developing knowledge about actual (potential) use of SLCA has been expressed by organizations active in Sweden through the Swedish Life Cycle Center (cf., Swedish Life Cycle Center, 2019). In addition, a better understanding of SLCA use can provide valuable input to the development of guidelines, software, and research on SLCA. We are therefore performing a study on SLCA use in Sweden by 11 major organizations that to considerable degrees recently have used life-cycle approaches. The abstract presents preliminary findings. We expect to present definite results at the conference, because the study is planned to be finalized by March 2020.

The knowledge about how industry and other actors use SLCA seems to be very limited (Baumann, 2019). The focus in SLCA research has lied on methodology disagreements regarding, for example, the SLCA step of impact assessment (Chhipi-Shrestha, et al., 2015) and how to use concepts from environmental LCA (lofrida, et al., 2018).

### Methods

The study is an interview study with representatives of organizations active in Sweden at the time of the interviews. Sweden was deliberately chosen as the focus of the study, and this is supported by Baumann (2019). The country was found to have the highest share (12%) of businesses declaring to use a life-cycle perspective in their sustainability reporting (Stewart, et al., 2018). In addition, organizations in Sweden have, as mentioned, stated an interest in SLCA. Through the expert knowledge of among other SLCA-researcher Henrikke Baumann, we were able to identify 13 organizations that at the time of the interviews were active in Sweden and had a considerable interest in life-cycle perspectives.

We have interviewed 14 SLCA experts in 11 of the 13 identified organizations about use of and ideas on SLCA in these organizations. The organizations cover: 6 businesses (BOs); and 6 'intermediary' organizations (IOs) that include research institutes and government agencies. The interviews are treated as dialogues in which all parties try to create their own knowledge through the discussion (Mishler, 1986). The interviews have been, and the analysis is being, directed by the overarching topics of why SLCA has been used where applicable, why it has not been used in other cases, and in which ways SLCA is considered or is not considered relevant onwards. The study runs between October 2019 and March 2020.

### Results and discussion

In this section, we present preliminary results on the 11 organizations regarding the extent to which SLCA has been used, regarding opportunities for SLCA usage, and regarding current limitations; and a discussion of the implications in relation to the size of the study and the scope of the study.

We identify that the organizations have used SLCA to a considerably limited extent: one organization has used SLCA, another organization has likely used SLCA, and for one organization whether they have used SLCA or not could not be determined. In one BO, a few SLCA pilots were used to test if SLCA could be part of an existing framework for communicating environmental performance. In addition, we have indications that one IO primarily have used the methodology through screening-SLCAs in cooperation with businesses. In another IO, one interviewee was not sure whether the organization's SLCAs had been used for decision-making in addition to academic-research purposes.

SLCA as of today or in modified versions could, based on our responses, fill gaps that other approaches to social sustainability do not cover. The starting point for the identified potential usefulness is that issues such as child labor, slave labor, and labor conditions for persons performing the sorting needed for circular economy activities have been highlighted as important by three BOs and one IO. The consideration of social issues is SLCA-relevant because, in several of the organizations, only tier one or short parts of product chains were said to be included in the methods used for handling social sustainability (this was the case for three BOs, and possibly one IO, and not the case for one BO). In addition, one BO representative presented a combined pressure from social sustainability becoming increasingly more important, a problem with many different situations where customers raised questions about social sustainability, and the large number of suppliers to the organization. One BO interviewee also mentioned that the condition of SLCA being a

scientific tool could attract the staff of their research and development unit and therefore be feasible for informing considerations already during product development.

Potential problems with the current SLCA methodology have been identified through the interviews regarding the coverage in SLCA, the procedures of the methodology, how SLCA relates to current business-approaches, and for whom the methodology could be useful. The coverage can be an issue because SLCA has not considered, for example, the global perspective over time (one IO), because SLCA was said being generic when social issues are highly context specific and vary rapidly (three BOs, maybe one IO), and because SLCA maybe enables the user too easily to exclude indicators (one IO). SLCA procedures were said not to allow assessment of improvements at existing product-chain actors but rather focus on the choice between different actors (one BO). Current business approaches may not be compatible with SLCA because it is costly and that its complexity makes it difficult to commission it well (three BOs, one IO, maybe one IO), because it does not consider the focus on risk that businesses have been using recently (4 BOs), and because SLCA-result are difficult to communicate (one BO, maybe one IO). Regarding for whom it could be relevant to use the methodology, the focus this far may have been too much on industries because retailers have a closer contact with consumers (one IO).

The preliminary results from the study have been discussed in relation to representativeness for each organization, and in relation to the relevance of SLCA-use and -ideas in these organizations from an international perspective. The explorative approach that we have used, rather than pre-defined interviews or questionnaires, seems to have enabled a type of interviews where we could get a reasonable understanding of the extent to which the interviewee had a grasp of SLCA-use and -ideas throughout the organization. Except for two minor cases, the interviewees were deemed to have a good or very good grasp of SLCA in relation to the whole organization. The choice of eleven major organizations with and from a country with a reportedly comparatively large focus on life-cycle approaches is by us seen as a sample that is of moderate importance when trying to consider SLCA-use globally.

To conclude, our soon finalized study on SLCA use in Sweden provides preliminary insights on the level of using the methodology, and on its opportunities and potential limitations. The studied organizations are found only to a considerably limited degree to have applied SLCA. SLCA in its current or future shapes could become useful due to a considerable focus on social issues and because other methods cover only short parts of product chains. Identified challenges with the methodology are it not handling sustainability aspects such as from a global perspective over time, being costly to use, not handling the context dependent and rapidly changing social impacts well, maybe is being too easy for the user to exclude indicators, and maybe SLCA addressing industries rather than the retailers to which it could matter more, among other. As a next step, the SLCA-research community may find a range of important aspects to study in order to search for developing SLCA to be in practice feasible for handling the important global social issues.

## References

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