

# Science Communication and Social LCA: Can the twain meet?

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**Abbreviated abstract:** This poster aims to propose a possible integration of science communication debates, on *deficit*, *dialogue* and *participation* between different actors, experts and non-experts, in the study of social LCA. The purpose of such an integration stems from the understanding that through the product chain, there are a wide variety of actors that enable the material product to "flow" and that are working with scientific and sustainability-relevant information.

**Related publications:** Chilvers, J and Kearnes, M. eds. 2016. *Remaking Participation: Science, Environment and Emergent Publics*. London and New York: Routledge.

Irwin, A. 2014. "From deficit to democracy (re-visited)". *Public Understanding of Science* 23 (1): 71–76



# Debates on deficit, dialogue and participation

Early discussions in science communication prescribed educating the (lay) public about scientific truths thereby bridging the gap between experts and non-experts in scientific matters (known as the *deficit* model).

The 2000 House of Lords Report titled 'Science and Society' criticized the 'deficit model' of the previous report and suggested that a two-way communication process between scientists and the public had to be developed so that the latter's voice could be heard.

It is primarily in the last decade of 20th century and with the turn of the millennium that the question of *dialogue* and rendering the public as actors and stakeholders with expertise started to gain prominence.

We find a definite convergence in discussions on participation of various stakeholders in social LCA. Baumann (2011) talks about the need to populate life cycle studies so that actions of actors in different parts of the life cycle can be understood.

Mathe (2014) argues explicitly for a *participatory* and multidisciplinary approach which would capture the plurality of stakeholder interests. De Luca and others (2015) ask for the involvement of local stakeholders and the integration of qualitative techniques in the study of social LCA.

Furthermore, Benoit and Mazijn (2009) argue for the assessment of social impacts in relation to stakeholder categories: which include, worker, local community, society, consumer and value-chain actor.



# Exploratory questions in search of a case study

***So how exactly would science communication debates be placed in the social LCA universe?***

What is proposed is a recognition that stakeholders delineated by social LCA studies are *embedded in a communicative universe*.

This, in turn, leads to questions about the kind of communication taking place between actors: when, where and who use the deficit, dialogue, participation communication models?

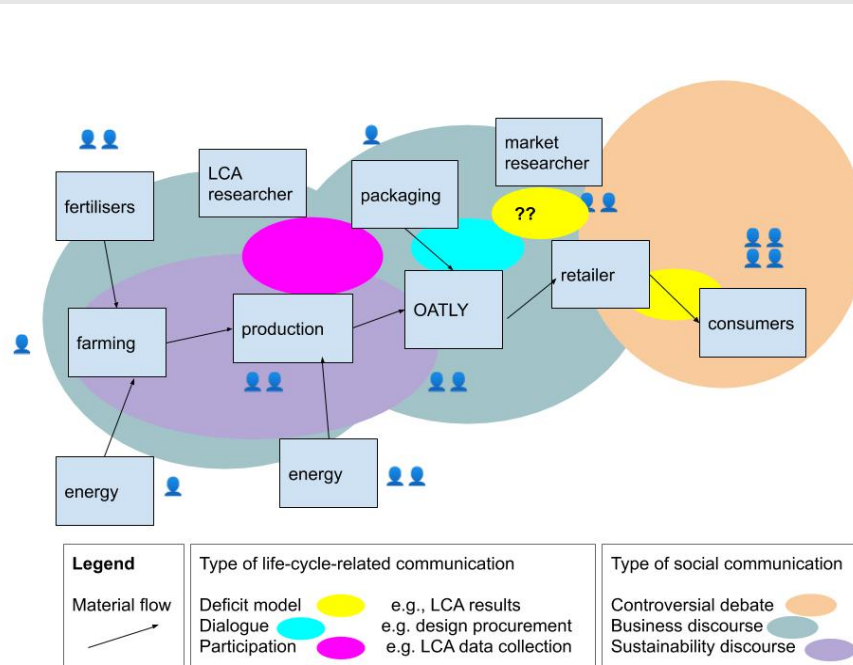
Is 'perfect' participation possible when knowledge is localized and specialized? Do we see cases where experts and non-experts meet each other?

To probe these matters further, we selected the case of Oatly, a Swedish oat drink company, which uses LCA in their own research to produce and improve their product for better sustainability.

The plan was to carry out interviews in May-June 2020. But as that had to be postponed due to the ongoing pandemic, we present a speculative diagram of Oatly's product cycle where we juxtapose the two fields of SLCA and science communication.



# A speculative model: communication boundaries and flows



The contribution seeks to underline that debates in the academic field of science communication could contribute meaningfully to reflect theoretically and methodologically in SLCA.

## ***This diagram presents:***

A preliminary (speculative) model of life cycle communication boundaries in Oatly's product chain.

The life cycle communication is *embedded* in:

- Sustainability discourse
- Business discourse
- Controversial debate

Life cycle communication flows: deficit (one way); dialogue (two-way); participation (many to many)

Analysis can show who gets to shape the life cycle and its impacts (participation mode) and who are left to accept it, or not, (deficit mode).