Organizational Life Cycle Assessment

Guidance for organizations to conduct LCA considering their value chain









This Guidance is the main outcome of the flagship project "LCA of Organizations", within the Phase III of the UNEP-SETAC Life Cycle Initiative. The project aims to demonstrate that the benefits and the potential of the life cycle approach are not limited to the application on products and that the application on organizations is relevant, meaningful and already possible. The nearly 60 participants contribute to the drafting, consolidation and road-testing of the Guidance during the project period (2013-2015).

Context

- The organization-level decision making has an influential role in shaping environmental outcomes.
- For the assessment at the organization level, the most applied and spread approaches have only recently considered the full value chain and mostly concentrate on a single aspect, like carbon footprints.
- The benefits and the potential of the life cycle approach are not limited to the application on products (i.e., goods and services).

Scope of the Guidance

- Highlights potential of organizational perspective within life cycle thinking.
- Builds on existing internationally-agreed guides, methods and standards. It particularly aligns with upcoming ISO/TS 14072.
- Provides recommendations about challenging methodological issues.
- If the organization has already used other environmental systems analysis tools, this previous data may be useful. Several organization's pathways (e.g. organization applied EMS, product-LCAs, GHG Scope1,2&3, etc.) are presented with adapted guidance for the application of O-LCA.
- It does not support comparative assertions intended to be disclosed to the public.

GUIDANCE ON ORGANIZATIONAL LIFE CYCLE ASSESSMENT

Fig. 1: Guidance on Organizational LCA (UNEP, 2015).

"OLCA is a compilation and evaluation of the inputs, outputs and potential environmental impacts of the activities associated with the organization adopting a life cycle perspective" (ISO/TS 14072).

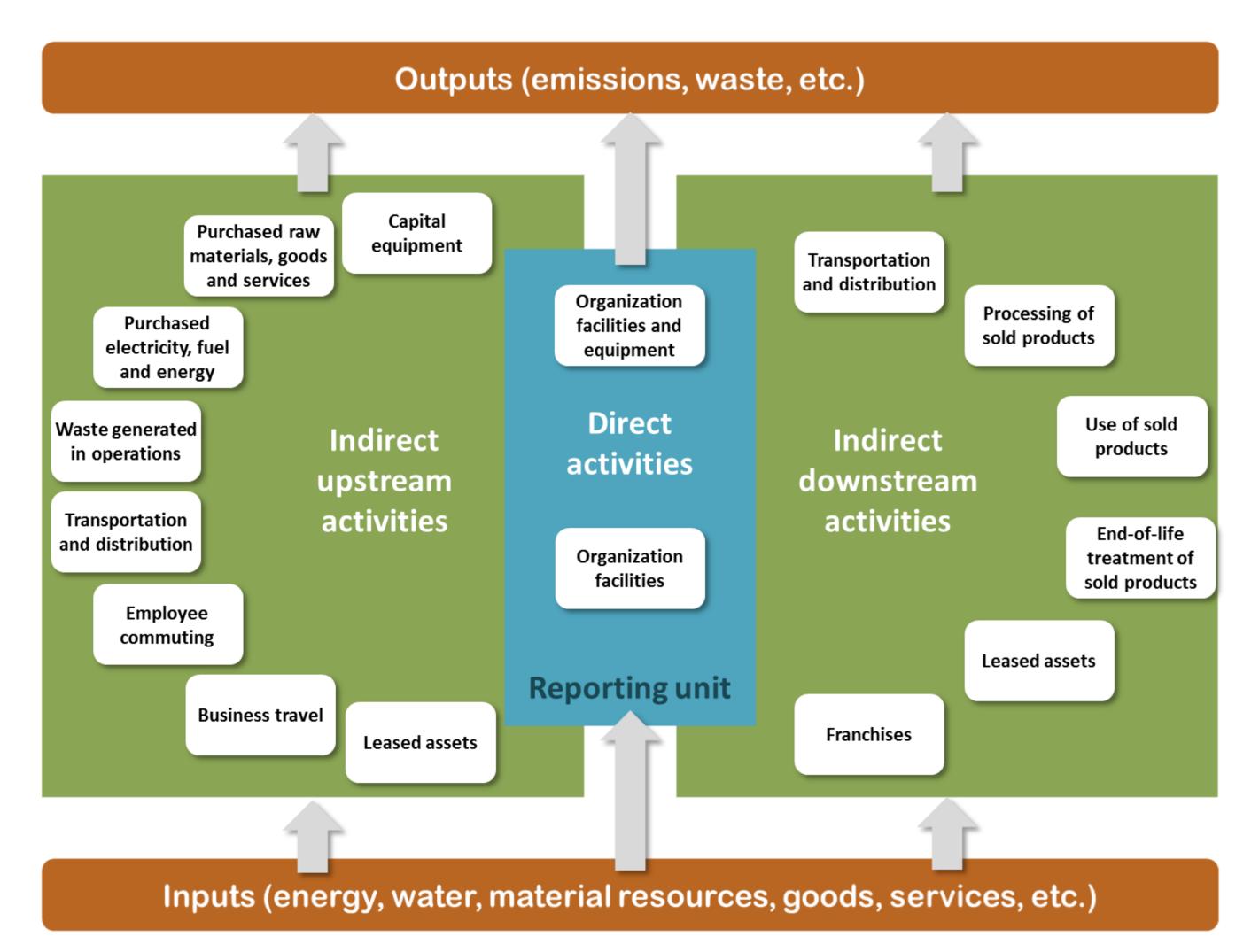
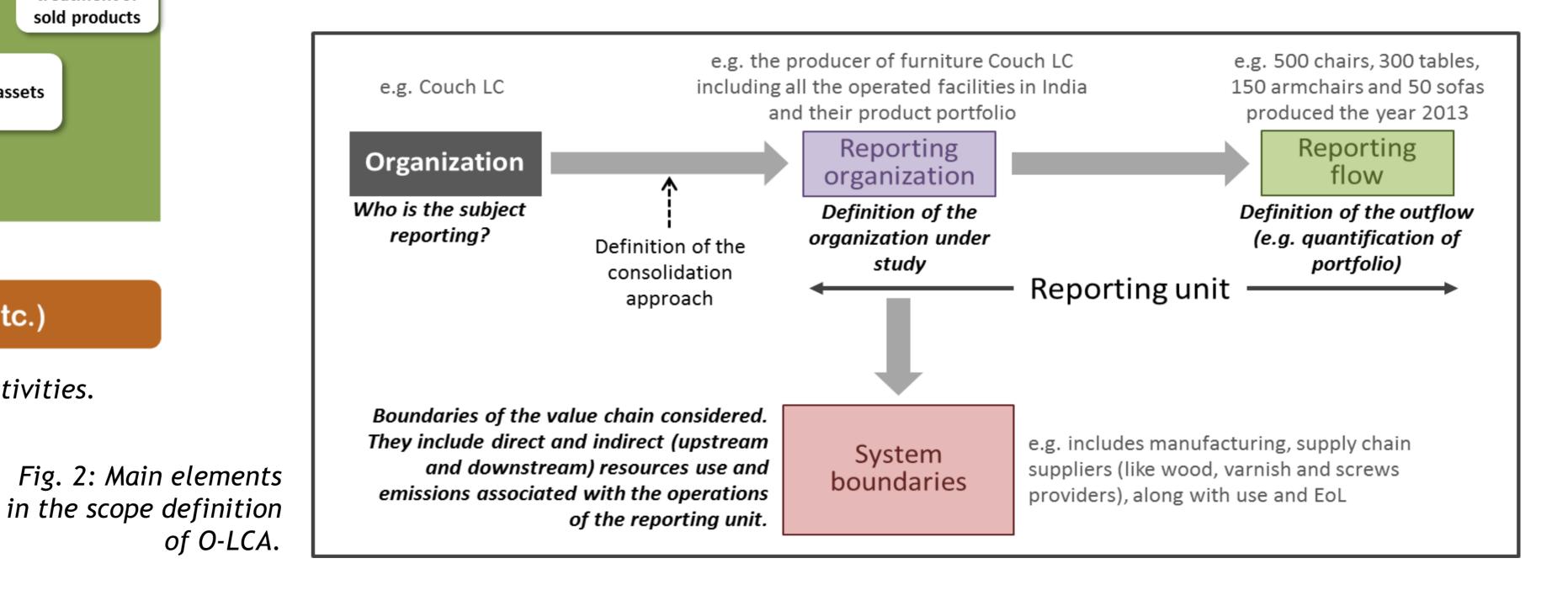


Fig. 3: Organizational system boundaries including direct and indirect activities.

Key methodological issues of O-LCA

- O-LCA differs from previous methodologies because its object of study is the organization; its approach is the life cycle; and it is a multi-criteria environmental assessment.
- The four-step approach of LCA is used: goal and scope, inventory, impact assessment and interpretation.
- Main items that should be transparently described within the scope of O-LCA are summarized in Fig. 2.
- All the resources use and emissions of direct and indirect (upstream and downstream) activities should be taken into account, preferably with primary data (Fig. 3).



Future steps

- O-LCA may overcome some of the barriers for the spread of LCA in developing countries.
- O-LCA approach is a promising field for future advancements on social and economic LCA.
- The Guidance is now road tested by more than 10 organizations, public and private, from different sectors and regions. Outcomes from the pilot project are expected by beginning of 2017.



