Relating the UN Sustainable Development Goals to social LCA indicators

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The 17 Sustainable Development Goals

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END POVERTY IN ALL ITS FORMS EVERYWHERE

1 NO POVERTY

7 Targets (169 in all)

14 Indicators (230 in all)

1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day

1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)

1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

1.2.1 Proportion of population living below the national poverty line, by sex and age

1.2.2 Proportion of men, women and children of all ages living in poverty

Are the SDGs relevant for business?

- Designed to be measured at national level
- Trade-offs and synergies are not explicit
- The large number of targets and indicators implies an obvious risk of cherry-picking

- Weidema, Goedkoop, Mieras. (2018). "Making the SDGs relevant to business. Existing knowledge on the linking of SDGs to business needs and the role of LCA in meeting the needs and filling the gaps": http://lca-net.com/p/3107

What can (social) LCA offer to the SDGs?

- Much knowledge, data and experience to assess products and systems in a bottom-up mode

- Large databases that describes all major relevant supply chains throughout the world

- A concept of cause-effect chains (impact pathways), linking human activities and pressures to natural, social and economic midpoint and endpoint impacts

- Science-based economic valuation methods that allow to make explicit trade-offs between impact categories

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A joint project

- Linking to expressed business needs, we take the best of the LCIA tradition (the cause-effect oriented approach to modelling impact pathways; the inclusion of uncertainty; detailed and complete databases) and bring this to bear on the SDGs, targets, and indicators

- Crowd-funded: https://lca-net.com/clubs/sdg/

- Now under the umbrella of the Life Cycle Initiative

- Jointly performed with PRé consultants

- Building on the experience from our work with social LCA (Social LCA club; Roundtable for Product Social Metrics)
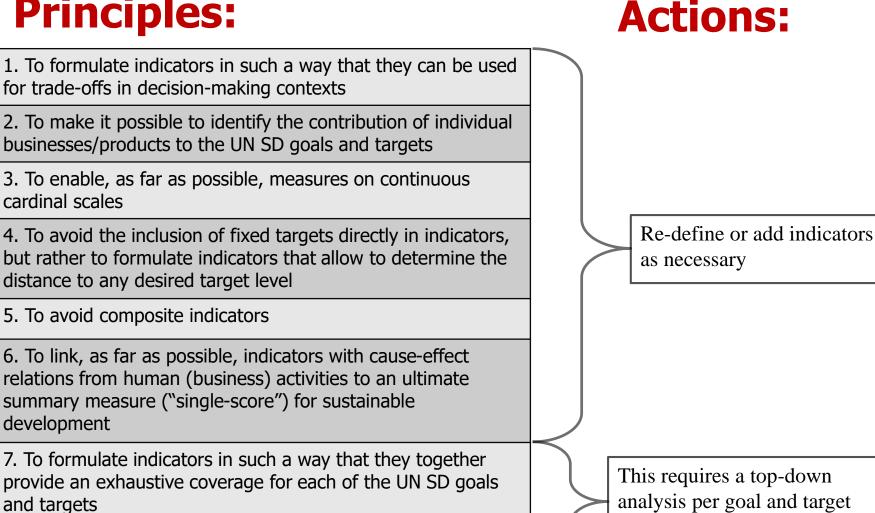
Principles:

Principles
1. To formulate indicators in such a way that they can be used for trade-offs in decision-making contexts
2. To make it possible to identify the contribution of individual businesses/products to the UN SD goals and targets
3. To enable, as far as possible, measures on continuous cardinal scales
4. To avoid the inclusion of fixed targets directly in indicators, but rather to formulate indicators that allow to determine the distance to any desired target level
5. To avoid composite indicators
6. To link, as far as possible, indicators with cause-effect relations from human (business) activities to an ultimate summary measure ("single-score") for sustainable development
7. To formulate indicators in such a way that they together provide an exhaustive coverage for each of the UN SD goals and targets
8. To avoid, as far as possible, overlapping indicators
9. To strive for total set of indicators that, while being practical and manageable, exhaustively cover all current impacts, whether explicitly covered by the SDGs or not.

Actions:

Re-define or add indicators as necessary

This requires a top-down analysis per goal and target

This requires a top-down approach where explanatory factors are identified for the current level of impacts on sustainable development

Example of (social) impact pathways
SDG 2: End hunger, achieve food security, …

Pressure indicators

1. Insufficient paid breaks for breastfeeding

2. Premature return to work after giving birth

3. Underpayment of labour or taxes

4. Extreme underpayment of labour

5. Household gender discrimination

6. Insufficient health care system

7. Food insecurity

Undernutrition midpoints

8. Suboptimal infant feeding practices

9. Childhood and maternal undernutrition

10. Diseases related to undernutrition

11. Reduced cognitive skills

12. Lost productivity

Endpoint

13. Lost utility

SDG 2.1.2
SDG 2.1.1
SDG 2.2.1

- Boxes have **indicators** (1, 2, 3, …)
- Arrows have **characterisation factors** (A, B, C, …)

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Example of characterisation factor

- *Characterisation factor (A):* Additional breastfeeding/female work-year with legal or contractual guarantee of paid breaks for breastfeeding

- Using results from a global study on paid breastfeeding breaks by Heymann: A guarantee of breaks would increase the average rate of breastfeeding by 10% → 5 weeks per child when including continued breastfeeding until 12 months of age

- *Data for regional factors:* Local annual birth rate (children/1000 persons) and the local inverse female labour participation rate (1/(female work-years/1000 persons)

- *Global average:* 0.38 weeks

Thanks for your attention

Join us at https://lca-net.com/projects/show/linking-the-un-sdgs-to-life-cycle-impact-pathway-frameworks/

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