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Linking LCA information to the UN SDGs – a use case







Background and context



























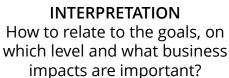




















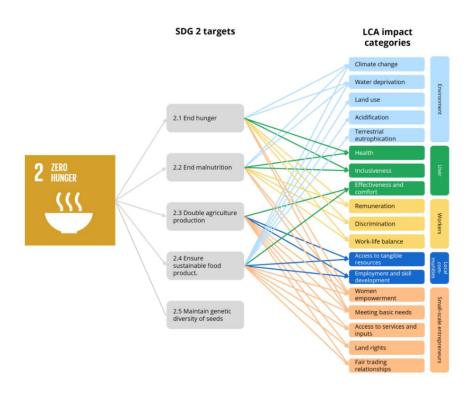


CREDIBILITY

How could these links be made credible and reduce SDG Washing?

An example





LCA impact category	Rationale	Requ SDG	irements to be counted as a contribution to 2
SU	SDG target 2.1 and 2.4 Important threat to productivity	+2	The environmental impact is a lot lower than the reference product (>10%)
Climate change	and irregular food supply, due to extreme weather event and drought	-2	The environmental impact is a lot higher than the reference product (> 10%)
	SDG target 2.1, 2.2 and 2.4 Water deprivation is likely to be a	+2	The environmental impact is a lot lower than the reference product (>10%)
Water deprivation	negative contributor to food production and malnutrition. This is particularly the case in regions with water scarcity.	-2	The environmental impact is a lot higher than the reference product (> 10%)

Stakeholder	Social topics	Rationale	Requir	rements to be counted as a contribution to
		SDG target 2.1 and 2.2 refer to having sufficient and nutritious food. This is	+2	All workers are paid a living wage and receive additional social benefits.
	Remuneration	strongly related to having purchasing power, which is then linked to having at least a living wage.	-2	Not all workers are paid the legal or industry minimum wage.
	<u>Health</u>	SDG targets 2.1 and 2.2 While health is defined under SDG 3, some products containing micronutrients and vitamins that counteract stunting and nutrient needs of adolescent girls, pregnant and lactating woman and old persons	+2	There is solid science-based evidence that normal use of the product enables and contributes to an improved health condition for users in comparison to alternative solutions, AND the company or facility has a continuous user-facing program in place to raise awareness and educate users on health-related issues associated with the product.

Classification

Characterisation

'Heat map' of the links has provided valuable insights



			Environment						User										Wo	rkers			L	Local communitie					Small scale entrepreneurs												
SDG/LCA		Climate change	Land use	Water deprivation	Part matter, ozone form, photochem	Human toxicity	Ecotoxicity	Ionizing radiation	Acidification	Resource use, minerals and metals	Resource use, Tossii Futrophication	Single score (weighted)		User health and safety	Safe products	Inclusiveness	Affordability	Accessability	Responsible communication	Effectiveness and comfort	Privacy	Remuneration	Child labour	Forced labour	Discrimination	neatti and sarety	Freedom of association and coll. bargaining	WOLF-IIIE Datafice Access to material and immaterial resources		Community engagement	Contribution to economic development	Employment and) skill development	Woman empowerment	Meeting basic needs	Access to services and inputs	Land rights	Fair trading relationships	Child labour	Health and safety	number of links with LCA	number of links per target
SDG 1	no poverty	Ť													-				_			3	_	2			2			1	_			3					$\overline{}$	14	2
SDG 2	zero hunger	3	3 1	3					1			1		2		2				2		2			2			2	2			2	4	4	2	2	2	2		39	5
SDG 3	health	4	į.	2	4	1	1	1						4	1	3				3		6			1	1		1				4	4	4						45	3
SDG 4	education																		1			1	2		1			1	1	4		2	1	1	. 4	į.		2	2	21	2
SDG 5	gender equality																								6								6	j						12	1
SDG 6	water	3	į.	4			2					2				2													2	1					1					17	2
SDG7	clean energy										2						1	1				1							1					1	. 1					8	2
SDG 8	decent work		1	1						1	1											3	1	1	1	1	1		2	1	2	2 2	1	1	. 2	1		1	L	24	2
SDG 9	industry												1				1	1				1							1			1			1					7	1
SDG 10	inequality																					1			2							1								4	0
SDG 11	sust. Cities				2		1									3													1											7	1
SDG 12	consumption ∏	1	1	1						1			1						6																		1	l		12	1
SDG 13	climate	1	L																1													2								4	1
SDG 14	life below water	1					1		2			2							1										1							1				9	1
SDG 15	life on land	6	6	6	6		6		6			6																	7	6		6		6	1	7				74	6
SDG 16	peace justice strong institutions																						1	1	1		1			1								1	L	6	1
SDG 17	partnerships															4						1										1			2		2	2		10	1
	sum of number of links # SDGs linked to this topic	19	9 9	17		1			9		3 1	1 1		6	1	14	2	2	9	5	0	19	4	4 :				4 1		2 12		2 21		5 20					0		
				-		_	_	-		-			_	-	-	-	-	-	-	-	-	_	_	_		-		-					_		-		-	_			

The links between LCA and the SDGs



These SDGs link to many LCA impact categories

These LCA categories are key in contributing to the SDGs



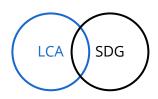
SDG's that are well-covered by LCA

15 (life on land), 2 (zero hunger), 3 (health), 6 (water), 8 (decent work)

SDG's that are less covered by LCA

5 (gender equality), 10 (inequality), 13 (climate action), 16 (peace, justice), 17 (partnerships)

These SDGs require different indicators than LCA



LCA topics that are highly relevant for the SDG's

Climate change, water deprivation, remuneration and meeting basic needs, contribution to economic and skills development

LCA topics that are less relevant for the SDG's

Human toxicity, ionizing radiation, resource use, privacy (not linked at all), health and safety

These LCA categories are less important when assessing the SDGs

Overview of case studies



		Innovative Solutions for Energy and Environment JAPAN NUS CO., LTD.	Corbion Keep creating	Arcelor Mittal
Product	T-shirt production	Ammonia from plastic waste	Meat preservative	Passenger car component
LC Scope	Full lifecycle	Waste processing and ammonia production	Supply chain, manufacturing, use phase	Direct activities
SDG scope	Environmentally linked SDGs	All SDGs	SDG 2, 3 & 12	SDG 3, 5 & 6
Collected data	Environmental LCA results	Existing LCA results and new PSIA results	Identification of benchmark for LCA and PSIA results	PSIA results

Learnings from case study applications





Positive contribution to the SDGs compared to the benchmark due to 100% reusage of material in fabric production and phasing out of coal from the energy inputs in processing steps



Recycled material production lines don't always have lower negative contributions to the SDGs



Assumption that there is a straightforward way to do the assessment but, the SDGs should be better understood. Deeper knowledge of the actual definition of the SDGs enriched the process



The choice of the reference product makes a big difference in the result



Not all links are always relevant – context should be considered

Benefits of the methodology





Using pre-existing data to inform strategy development

Easy to apply with existing results and more able to support claims related to the sustainability strategy f the company

Focus on relevant SDGs and determine a way to report, monitor and improvement products

Focus on a set or subset of SDGs that are relevant to the company or find out which are most relevant given the LCA results available

Standardised and structured approach with more credible links

The rationale for classifying and characterizing the links is given and substantiated via the best current information available.

Ease of communication

Reporting and internal communication is easy to non-LCA experts. SDGs can tie in with existing company goals and targets

A more integrated way to show environmental and social impact information together

Next steps in methodology **O** development

- The methodology is ready for use and application to case studies
- We are creating free tools to make the assessment more automated
- We are working on a journal publication with the complimentary SDG assessment impact pathway approach methodology
- We are aiming to improve the robustness of the linking process

LCA-based assessment of the Sustainable Development Goals

Final report for the life cycle screening approach developed in the project "Linking the UN Sustainable Development Goals to life cycle impact pathway frameworks"





Thank you for listening, do you have any questions?



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