

# Linking LCA and SDG 13

Goal 13. Take urgent action to combat climate change and its impacts

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### Get in touch with us

Do you have a sustainability challenge for us? We would be happy to discuss it together.

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# 13 Goal 13. Take urgent action to combat climate change and its impacts

## 13.1 Introduction

The impending destruction of climate change is already being felt by much of the world's population in the form of natural disasters, large localised changes in temperature, rising sea levels and many disturbances to natural geochemical cycles causing food and water insecurity. Our way of life is being threatened should we be unable to act collectively and urgently. The effects are concentrated in population that are least resilient such as poor, vulnerable, and marginalised groups.

Should there be no change to the effects of climate change, this will exacerbate effects further and therefore cost much more financially, with regarding to human life lost and loss of virtues such as prosperity, equality and liveability.

Many countries have aligned their strategy with that of the Paris Agreement by agreeing to a goal of reaching net zero CO<sub>2</sub> emissions by 2050. As of 31 December 2020, 190 parties (189 countries plus the EU) communicated their first Nationally Determined Contributions (NDCs). These NDCs illustrate that countries are articulating more quantified targets and indicators for adaptation, and identifying links between adaptation, SDGs and other frameworks.

As of March 2021, 125 of the 154 developing countries are undertaking measures for national adaptation plans (NAPs) and are prioritising these. More LDCs have a draft NAP are on track to completing and submitting these by 2021.

In order to limit global warming to 1.5°C, scientists recommend a cut of global emission of 45% compared to 2010 levels. With reference to 2010, emissions from developed countries fell by approximately 6.2% in 2019, while emissions from developing countries rose by 14.4% in 2014 (United Nations, 2021).

Financial support for climate-specific activities has been continually increasing and has reached as annual average of \$48.7 billion in 2017-2018. This is an increase of 10% over the previous 2015-2016 period in comparison. More than half of this was targeted towards mitigation actions however the amount of adaptation support is growing and being prioritised (United Nations, 2021).

Even so, there is a large push towards companies understanding their own contribution to carbon emissions. Commitments to science based targets have been growing amongst companies. However only 2% of CEOs have validated their targets using this method in line with

the 1.5 °C trajectory. In October of 2021, the Science-Based Targets Initiative (SBTi) has launched the first framework for companies to set net-zero targets<sup>1</sup>.

## 13.2 Targets and indicators of SDG 13

It is of utmost importance that nations collaborate on this goal and address their responsibility in contributing to its effects. This requires appropriate investment, policy and education as solutions to tackle this highly complex issue.

Looking at the targets, this goal has the primary aim of reducing climate change and therefore its effects through several activities which include 1) strengthening the resilience and adaptation capacity of countries and integrating this into appropriate policy, 2) improving education and awareness of climate change, 3) increasing the investment capacity form developing countries towards developing countries to address climate change and lastly 4) promoting inclusive climate change management.

The relevant links with environmental LCA mostly concern the impact category “Climate change” which describes the emissions element of environmental impact.

The relevant links to social LCA concern communication and skills development around climate change effects to communities and users.

This goal overlaps with several other SDGs and most strongly with goal 7: affordable and clean energy, goal 12: responsible consumption and production, goal 14: life below water and goal 15: life on land.

Table 1. The targets and indicators defined for SDG 13

Target	Indicator
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people
	13.1.2 Number of countries with national and local disaster risk reduction strategies
	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with

<sup>1</sup> Science-Based Target Initiative (2020): Annual Progress Report. <https://sciencebasedtargets.org/>

	national disaster risk reduction strategies
13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula  13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	13.a.1 Mobilized amount of United States dollars per year starting in 2020 accountable towards the \$100 billion commitment
13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities* Acknowledging that the United Nations Framework Convention on Climate Change is the primary	13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and

international, intergovernmental forum for negotiating the global response to climate change.

management, including focusing on women, youth and local and marginalized communities

## 13.3 Classifying the links between SDG targets and LCA impact categories

Asterisk (\*) represents a link that is established under specific condition outlined under the target.

Underlined topics represent those that are deemed critical by the SDG Assessment methodology.

### 13.3.1 Targets 13.1 and 13.2 strengthen resilience and adaptive capacity to climate-related hazards and strategic establishment of policies to align with national plans

*Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries*

*Target 13.2 Integrate climate change measures into national policies, strategies, and planning*

#### Environmental LCA:

- **Climate change:** when a company contributes integrates measures to lower their greenhouse gas emissions, they can contribute to target 13.2, for which indicator 13.2.1 mentions low greenhouse gas emissions. The link with the targets as how they are defined by the UN is not ultimately direct, but the importance of this link is obvious.

#### Social LCA:

- **Local community's skill development\*:** when a company contributes to this topic, they are fostering a better relationship with the local community through informing and empowering them. This link is only valid if this takes the form of disaster-related educational programs or strengthening the knowledge base in the community about their climate-related impacts. This builds procedural resilience and strengthens knowledge about the impact of climate-related risks linking to target 13.1.

### 13.3.2 Target 13.3 improve education on climate mitigation, adaptation and impact reduction

*Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning*

## Social LCA:

- **User’s responsible communication\***: this link is only valid if the claims made about the products performance of companies regard climate change mitigation and sustainability performance related to climate issues, and when these claims are credible and science-based. This aids the user in making more sustainable decisions about their purchases therefore linking to target 13.3.
- **Local community’s skill development\***: when a company contributes to this topic, they can improve awareness around climate change. This link is only valid if the skill indeed relates to education, awareness-raising and capacity building around climate related issues. In that case, a link can be made to target 13.3.

### 13.3.3 Overview of links

Figure 1 the overview of the links between LCA impact categories and SDG 13 is shown.

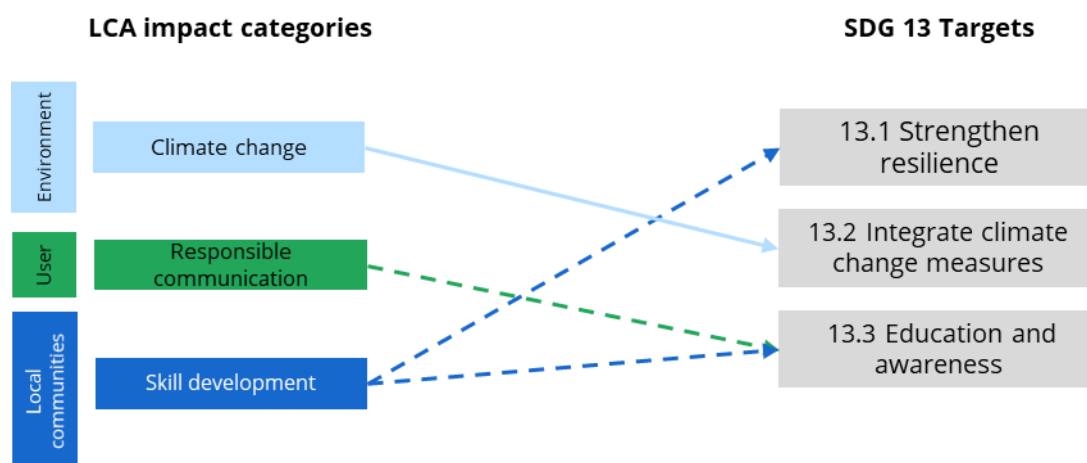


Figure 1 Overview of links between LCA impact categories and SDG targets for SDG 13

## 13.4 Characterizing the relation between LCA and SDG 13

In this paragraph, the nature of the relation between the impact categories and the targets of SDG 13 are defined. This step determines the score needed to qualify as a contribution to a target, per target and impact category. The first section describes how environmental impact category indicator results can be linked; the second section does the same for social metrics.

Asterisk (\*) represents a link that is established under specific condition outlined under the target.

Underlined topics represent those that are deemed critical by the SDG Assessment methodology.

### 13.4.1 Environmental LCA

Table 2 environmental topic linking to SDG 13



LCA impact category	Rationale	Requirements to be counted as a contribution to SDG 13	
<b>Climate change</b>	Climate change links to target 13.2, which relates to integrating climate measures	+2	The environmental impact is a lot lower than the reference product (>10%)
		+1	The environmental impact is a lot lower than the reference product (>5%)
		-1	The environmental impact is a lot higher than the reference product (> 5%)
		-2	The environmental impact is a lot higher than the reference product (> 10%)

## 13.4.2 Social LCA

Table 3: Social topic linking to SDG 13

Stakeholder	Social topics	Rationale	Requirements to be counted as a contribution to SDG 6	
<b>User</b>	Responsible communication*	Responsible communication links to 13.3 when the communication concerns climate related information	+2	Claims made in marketing and product documentation regarding the performance and sustainability are not only recognised all backed up with science-based evidence, but they inspire and enable the user to adapt a more sustainable lifestyle
			+1	Claims made in marketing and product documentation regarding the performance and sustainability are all backed up with science-based evidence, 3rd-party market research or research following international and national standards. The evidence is publicly available and easy to access for all users and potential users.

		-2	Deliberate attempts are revealed to mislead authorities, laboratories and users on the key characteristics of the product This includes claims about sustainability, health, but also aspects regarding safety and technical performance.
Local communities	<u>Skill development</u> *	+2	The company actively invests in reducing the skills mismatch in the region, and invests in a public private partnership or invests in other activities that significantly increases training capacity and quality in the region for most members of the local community, not specifically guided by the companies own needs.
	Skill development links to target 13.1 if the skills are related to climate resilience and adaption, and the topic links to 13.3 if it relates to climate change awareness.	+1	The company actively contributes to reducing the skills mismatch, by offering skill development for a relevant share of members of the local community.
		-2	There is a significant skill-gap between the future needs of the company and the skill levels of local community members. The company is not doing anything to improve this situation.

### 13.5 Scoring matrix for SDG 13

Based on the tables above, the following summary can be made as a checklist for determining if the LCA results can support a contribution to SDG 13.

Asterisk (\*) represents a link that is established under specific condition outlined under the target.

Underlined topics represent those that are deemed critical by the SDG Assessment methodology.

Table 4: Scoring matrix for determining whether the LCA results can indeed support SDG 13

SDG 13	Red flag (-2) or blocking (🚫)	Contributing
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#### Target 13.1 Strengthen resilience

Skill development*	-2			+2
<b>Target 13.2 Integrate climate change measures</b>				
Climate change	-2	-1	+1	+2
<b>Target 13.3 Education and awareness</b>				
Responsible communication*	-2		+1	+2
<u>Skill development*</u>	⊘		+1	+2

## 13.6 References

United Nations, Economic and Social council. Progress towards the Sustainable Development Goals, Report of the Secretary-General, 2021. See: [https://sustainabledevelopment.un.org/content/documents/27610SG\\_SDG\\_Progress\\_report\\_2021.pdf](https://sustainabledevelopment.un.org/content/documents/27610SG_SDG_Progress_report_2021.pdf)