How to Set Science-Based Targets Aligning with 1.5°C Pathways

ESSENTIALS GUIDE

The purpose of this guide is to help you apply your learnings within your company.
Forwarding is encouraged! To view the entire session, please visit: academy.unglobalcompact.org.

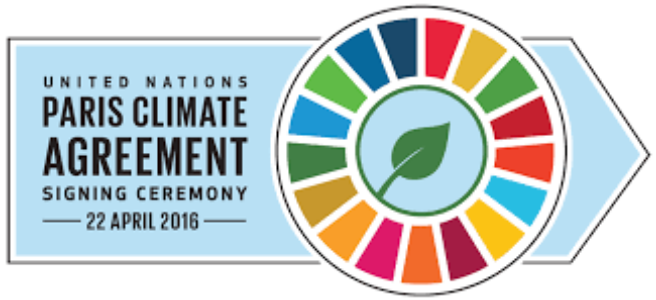
UN Global Compact Academy

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Key topics covered in this guide:

The UN Global Compact and partners are **calling on all companies to raise ambition and align with 1.5°C** through their mitigation and adaptation measures to deliver a net-zero economy by 2050. This essentials guide shows how companies can set their science-based targets with this new level of ambition.

- The **Paris Agreement** on climate change sets the objective of limiting global warming to well below 2°C above pre-industrial levels and to pursue efforts to limit global temperature increase to 1.5°C. To achieve this, **global emissions need to peak and be curbed by 2020.** This requires urgent action, as the scale and pace of current mitigation action remains insufficient.
- The **Science Based Targets initiative (SBTi)** champions science-based target-setting, i.e., setting targets that align companies' actions with the goals of the Paris Agreement, as a **powerful way to catalyze ambitious climate action** and prevent the worst impacts of climate change. The initiative is a collaboration between CDP, the UN Global Compact, WRI and WWF, and it is one of the WMB commitments.



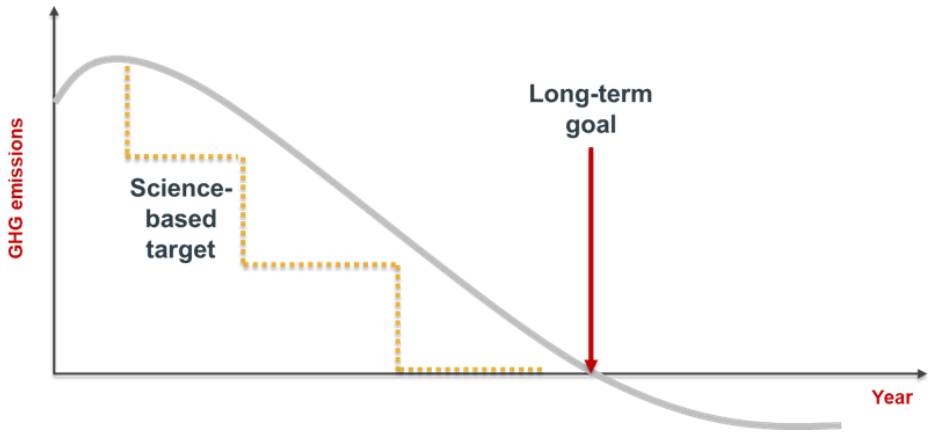
WHAT IS A SCIENCE-BASED TARGET?

Science-based targets are greenhouse gas (GHG) emissions reduction targets that are consistent with the level of decarbonization that, according to climate science, is required to keep global temperature increase within 1.5°C to well-below 2°C compared to pre-industrial temperature levels.

- Consistent with the long-term goal of reaching net-zero emissions in the second half of the century
- Covering the most relevant sources of emissions within the corporate boundaries (95% of direct and electricity-related emissions; 2/3 of value-chain emissions)
- Timeframe that drives short-term action and enables accountability (5 to 15 years)

A SCIENCE-BASED TARGET IS ALSO:

- A business-modelling, strategic planning and decision-making tool for a carbon-constrained world
- A clear pathway for companies to future-proof growth in the face of physical / political / regulatory / financial risk
- A tool that allows companies to demonstrate to policy makers/ regulators/ investors that the company's long-term growth is sustainable
- A challenge to companies to transform their business and help create and prepare for a low-carbon economy
- A concrete and effective way for companies to play their part in combatting climate change

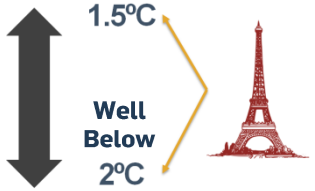


HOW TO SET SCIENCE-BASED TARGETS ALIGNING WITH 1.5°C PATHWAYS

THREE MAIN STEPS FOR DEVELOPING A TARGET

STEP 1

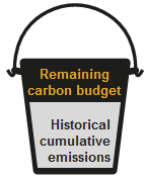
SELECT AN EMISSION REDUCTION **SCENARIO**



- A well-below 2°C-aligned emissions scenario
- A 1.5°C-aligned emissions scenario

STEP 2

SELECT AN **ALLOCATION** APPROACH AND METHOD



- **Sector-based approach:** The global carbon budget is divided by sector, and emission reductions are allocated to individual companies based on its sector's budget.
- **Absolute-based approach:** The percentage reduction in absolute emissions required by a given scenario is applied to all companies equally.
- **Economic-based approach:** A carbon budget is equated to global GDP and a company's share of emissions is determined by its gross profit (only recommended for scope 3 emissions).

STEP 3

ANALYZE THE SITUATION OF YOUR COMPANY

- Sector and regional spread
- Initial carbon intensity
- Location
- Expected organic **growth**
- Planned **investments / divestments**

HOW TO SET SCIENCE-BASED TARGETS ALIGNING WITH 1.5°C PATHWAYS

INVENTORY AND VALIDATION CRITERIA FOR SCOPES 1 & 2

In preparation to set a science-based target, you need to complete an inventory of all seven major greenhouse gases in concordance with GHG protocol standards, including:

Scope 1 – Direct emissions on site (e.g., on-site energy use)

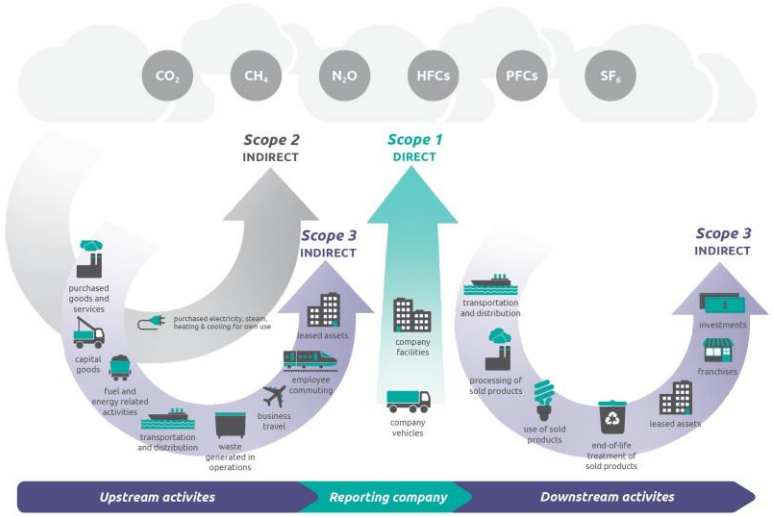
Scope 2 – Emissions from purchased electricity, heat, steam, water

Scope 3 – All other indirect emissions along the value chain

The SBTi lists 23 validation criteria that must be met for a climate target to be approved as science-based. They cover boundaries, timeframe, ambition, requirements for dealing with scope 2 and 3 emissions, reporting and recalculation.

The additional 13 recommendations provided ensure transparency and best practices. These validation criteria serve as guidelines to develop your science-based target. Once the target is submitted, a technical working group will review the submitted target against the criteria to ensure it is in concordance with them.

Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain



SELECTED CRITERIA* ON BOUNDARIES, TIMEFRAME AND AMBITION:

C1 – SCOPES: The targets must cover company-wide scope 1 and scope 2 emissions, as defined by the GHG Protocol Corporate Standard.

C5 – BASE AND TARGET YEARS: All emissions reduction targets must cover a minimum of five years and a maximum of 15 years.

C7 – LEVEL OF AMBITION: At a minimum, the target will be consistent with the level of decarbonization required to keep global temperature increase to well-below 2°C compared to pre-industrial temperatures, though we encourage companies to pursue greater efforts towards a 1.5°C trajectory.

C8 – ABSOLUTE VS. INTENSITY: Intensity targets are only eligible when they lead to absolute emission reduction targets in line with climate scenarios for keeping global warming well below 2°C or when they are modelled using an approved sector pathway or method approved by the Science Based Targets initiative (e.g., the SDA)

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***Note that the SBTi criteria will be updated on a regular basis.**
Make sure you are using the latest version of the criteria when developing your targets.

VALIDATION CRITERIA FOR SCOPE 3

If a company has significant scope 3 emissions, it should set a scope 3 target.
Scope 3 targets generally need not be science-based, but should be ambitious, measurable, and clearly demonstrate how a company is addressing the main sources of GHG emissions within its value chain in line with current best practices.

SELECTED CRITERIA FOR SCOPE 3 TARGETS:
C16 – REQUIREMENT TO HAVE A SCOPE 3 TARGET: Companies must complete a scope 3 screening for all relevant scope 3 categories. If a company's scope 3 emissions are 40% or more of total scope 1, 2 and 3 emissions, a scope 3 target is required.
C17 – BOUNDARY: Scope 3 targets must cover at least 2/3 of scope 3 emissions.
C18 – TIMEFRAME: Emission reduction targets must cover a minimum of five years and a maximum of 15 years.
C19 – LEVEL OF AMBITION: Emission reduction targets are considered ambitious if they fulfill any of the following: • Absolute emission reduction targets that are consistent with the level of decarbonization required to keep global temperature increase below 2°C compared to preindustrial temperatures • Economic intensity targets that result in at least 7% year-on-year reduction of emissions per unit value added • Intensity reductions aligned with the relevant sector reduction pathway within the Sectoral Decarbonization Approach; or targets that do not result in absolute emissions growth and lead to linear annual intensity improvements equivalent to 2%, at a minimum.
C19.1 – SUPPLIER OR CUSTOMER ENGAGEMENT TARGETS must meet specific conditions regarding formulation, boundary, timeframe and level of ambition.

SCOPE 3 TARGET-SETTING

As scope 3 activities are not under the direct control of the reporting company, ambitious reductions in scope 3 emissions can be more difficult to realize than reductions in scope 1 and scope 2 emissions. Therefore, the minimum level of ambition here is 2°C. We encourage companies to go beyond this minimum level. Companies can either set absolute reduction targets or intensity reduction targets. A third option is to set supplier engagement targets, meaning that a company commits to drive the adoption of SBTs among its suppliers and customers.

Absolute Reduction Target

METHOD	WHAT IS IT
ABSOLUTE CONTRACTION	Requires companies to reduce absolute emissions at the same rate: • 2°C: Min. 1.23% annual linear reduction • Well-below 2°C: Min. 2.5% annual linear reduction • 1.5°C: 4.2% annual linear reduction

Intensity Reduction Target

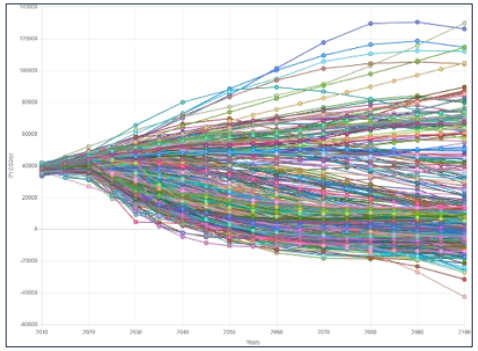
METHOD	WHAT IS IT
PHYSICAL INTENSITY	**Option 1:** Targets set using SDA if an applicable pathway is available **Option 2**: Targets modelled in such a way that they reduce absolute reductions in line with 2°C scenarios at a minimum.
OTHER PHSYICAL INTENSITY	Physical intensity targets that do not lead to growth in absolute emissions and reduce emissions intensity by a linear average of at least 2% per year over the target period.
ECONOMIC INTENSITY	Economic intensity targets that reduce emissions intensity by at least an average of 7% year on year over the reduction period using the GEVA method.

WHY SHOULD YOUR COMPANY RAISE AMBITION?

IPCC SPECIAL REPORT ON 1.5°C

- IPCC's (Intergovernmental Panel on Climate Change) latest report is a stark reminder of both the immense stakes involved in a changing climate and the dramatic scale and pace of the transition required.
- Companies are already developing business strategies that are aligned with the Paris Agreement's goal of limiting temperature rise to well-below 2°C. As these companies recognize that greater ambition reaps greater benefits, some are now also pursuing 1.5°C-aligned emissions reductions targets and committing to be net-zero by 2050.

A significant number of mitigation pathways underpinning the IPCC SR15 became available providing a greater understanding of greenhouse gas emission trajectories consistent with limiting warming to 1.5°C.



SELECTION OF GROUPS	CLASS NAME	NO. OF SCENARIOS
1.5°C	Below 1.5°C	9
	1.5°C low overshoot	44
	1.5°C high overshoot	37
2°C	Lower 2°C	74
	Higher 2°C	58

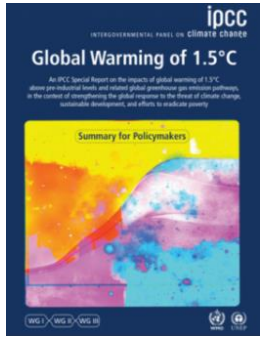
> At the UN Global Compact, we are calling on all companies — across sectors and regions — to set their science-based target with a new level of ambition — one that aligns with 1.5-degrees Celsius pathways.
>
> *Lise Kingo, CEO & Executive Director, UN Global Compact*

91 Authors

133 Contributing Authors

6000+ Scientific References

42000+ Expert and Government Review Comments



ANNOUNCE THE TARGET AND TAKE ACTION

Join the SBT movement!

1. SELECT AN EMISSION REDUCTION SCENARIO

2. DEVELOP YOUR TARGET

3. SUBMIT YOUR TARGET FOR VALIDATION

4. ANNOUNCE YOUR TARGET

For a list of companies taking action and case examples on how companies got buy-in to the targets as well as the benefits and some of the innovations that are helping them achieve their goals, visit the SBTi's website.

"Targets based on science are the only effective way to meet the challenges we face. Around the world, hundreds of businesses are already showing that this is possible with substantial benefits to brand reputation and the bottom line. I urge all other companies to join this initiative immediately; the time for science-based action is now."

- Anand Mahindra, CEO of the Mahindra Group

"Mapping a company's carbon footprint, or the emissions it produces, and measuring its progress in this area is an important and growing part of our portfolio analysis. Over the long-term investors are saying to these companies that we want them to align their business strategy with the Paris Agreement."

- Anne Simpson, Investment Director, Sustainability at California Public Employees' Retirement System

"When it comes to internal decision making in the company, we have used science-based target setting to drive innovation in product development. As a company, when you talk about strategy in the future, you try to make a lot of projections. We don't know anything about the future, except that the world will become warmer and that we will have a problem if we do not do something. This is a challenge and an opportunity."

- Mats Pellbäck Scharp, Head of Sustainability, LM Ericsson

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NEW AND UPDATED RESOURCES

Building on the IPCC's Special Report on Global Warming of 1.5°C, the Science Based Targets initiative has introduced new technical resources in April 2019 to enable companies to set emissions reduction targets in line with global trajectories to keep warming at 1.5°C.

Science-Based Target Setting Tool

This tool is intended to enable companies to model targets against 1.5°C and well-below 2°C. It also allows modelling of scope 3 targets aligned with SBTi criteria.

Foundations of SBT Settings

This document describes the climate scenarios used for determining ambition levels and methods used for target-setting under Criteria V4.

Science-Based Target Setting Manual

This manual provides stepwise guidance and recommendations for setting SBTs.

Target Validation Protocol

The Target Validation Protocol was created to describe the steps and procedures that are followed during the target validation process for both official and preliminary target submissions.

Criteria and Recommendations

Provides updated criteria for setting targets aligned with 1.5°C or well-below 2°C, plus recommendations and advice on best practices.

FAQs

The comprehensive *Frequently Asked Questions* by SBTi provide information on the Call to Action, Developing a Target, Target Validation, SBTi Criteria, and CDPs 2019 Climate Change Questionnaire.

For further information on the initiative: sciencebasedtargets.org

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STAY CONNECTED

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