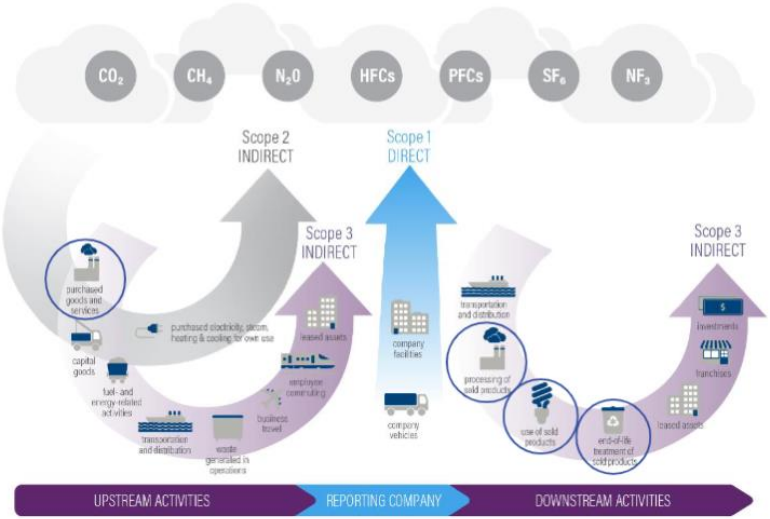
SBTi and the science behind climate target setting

22/05/2024

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



The Paris Agreement triggers an increasing number of stakeholders to voice themselves in favour of climate neutrality: Cefic members

*„Shell supports the European Commission's Strategy for achieving a **climate neutral** economy by 2050."*

*„Bayer is on a path to become **climate neutral** by 2030 in its own operations."*

*„Perstorp is committed to the SDGs and Agenda 2030 and we aim to provide solutions that support a **climate neutral world** [...] We are working to become **Finite Material Neutral**."*

*„BASF has set itself an ambitious goal of **climate neutrality** by 2050."*

*„We are working to do our part to **reduce our carbon footprint** and **develop solutions that will advance a low-carbon economy**."*

*„Repsol aims to achieve **net zero emissions** by 2050."*

*„Neste is committed to reaching **carbon neutral** production by 2035."*

*„Eastman is committing to achieve **carbon neutrality** by 2050."*

*„DuPont has committed to making its entire operation **carbon-neutral** by 2050."*

*„With our vision to become **climate neutral** by 2050, we have set ourselves ambitious targets."*

*„We want to become **climate-neutral** by 2040."*

*„We are announcing our new Climate Ambition to get to **net zero** by 2050."*

*„Bondalti wants to contribute to the long-term strategy defined by the EU, for an economy with a **neutral impact on climate**."*

*„This takes us a significant step forward in our ambition to be **climate neutral** by 2045."*

*„Dow will reduce its carbon emissions and intends to be **carbon neutral** by 2050."*

*„The Group is committed to reducing the carbon footprint of its operations to ensure it is **climate neutral** by 2050 or sooner."*

CDP
DISCLOSURE INSIGHT ACTION

$37 trillion pressure group tells big emitters to meet 1.5°C goal

October 25 2022

- 318 financial institutions and multinational firms write to high impact companies requesting science-based targets for reducing emissions.[1]
- **BASF**, **Caterpillar**, **FedEx**, **General Electric**, **JD.com**, **Nintendo**, **Qantas**, **Rio Tinto**, **Wal Mart de Mexico** and **Wilmar International** among businesses targeted.
- Despite net-zero momentum, **nearly half** (**44%**) of MSCI All Country World index still without credible targets.[2]
- Companies with targets approved by the Science Based Targets initiative (SBTi) typically cut emissions by **8.8%** per year – well above the pace needed for a 1.5°C path.[3]
- Growing **30%** since last year, the **SBT Campaign** is the world's biggest campaign engaging companies to set 1.5°C targets through the SBTi.

REUTERS®

2 minute read · March 24, 2023 5:59 PM GMT+1 · Last Updated 5 days ago

Investors urge European chemical makers to take action on emissions

Reuters

BusinessGreen™

'Decarbonisation isn't optional': Chemical firms urged to end reliance on fossil fuels

Energy Monitor

Industry | 27 March 2023

Weekly data: how ambitious is the chemicals sector about setting decarbonisation targets?

Chemicals companies face urgent investor calls to accelerate their decarbonisation plans. Energy Monitor digs into their existing targets to see how they compare with other sectors.

‘Integrity matters’: UN expert group moves to stamp out net-zero greenwashing at COP27

One of the recommendations

- A non-state actor should be considered and recognised as net zero aligned (or have independent validators following and adhering to a set of commonly accepted assurance standards confirm that its " net zero pledge is on/off track") when:
  - its pledge, targets and pathway to net zero are generated using a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot verified by a third party (for example by the Science Based Targets Initiative (SBTi), the Partnership for Carbon Accounting Financials (PCAF), The Paris Agreement Capital Transition Assessment (PACTA), The Transition Pathway Initiative (TPI), the International Organization for Standardization (ISO), among others);
  - its pledge and progress reporting should cover all scope emissions and all operations along its value chain in all jurisdictions (any omission needs to be properly reported);
  - it is ~~demonstrating progress by achieving or~~ exceeding its interim targets with reports that are verified by a credible, independent third party based on publicly available data.

Scene setting

Targets and pathways to net zero are generated using a robust methodology consistent with limiting warming to 1.5˚C with no or limited overshoot verified by a third party

- UN-body
- Assessing the science related to climate change
- Emission budget till 2050

- WRI & WBCSD
- provides standards & guidance to measure & manage emissions
- Emission calculation rules scope 1, 2 & 3

- CDP, UN Global Compact, WRI, WWF
- enabling organizations to set science-based emissions reduction targets
- Verified aligned target setting approach

- Not-for-profit charity
- runs global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts
- Listing of companies and governments based on transparency and action

Governments

- Directives & regulation
- EIA & permits

Downstream users

- Scope 3 calculation
- Procurement policy

Investors

- Sustainable Finance Disclosures
- Investment policy

DRAFT EUROPEAN SUSTAINABILITY REPORTING STANDARDS
ESRS E1
Climate change

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Climate change

What are Science-Based Targets?

- Science based targets provide a clearly defined pathway for companies to reduce greenhouse gas (GHG) emissions, helping prevent the worst impacts of climate change and future proof business growth.
- Targets are considered ‘science based’ if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement limiting global warming to well below 2 C above pre-industrial levels and pursuing efforts to limit warming to 1.5 C.
- Since July 2022, SBTi only accepts targets aligned with the 1.5 C level of ambition

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DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Partnership Organizations

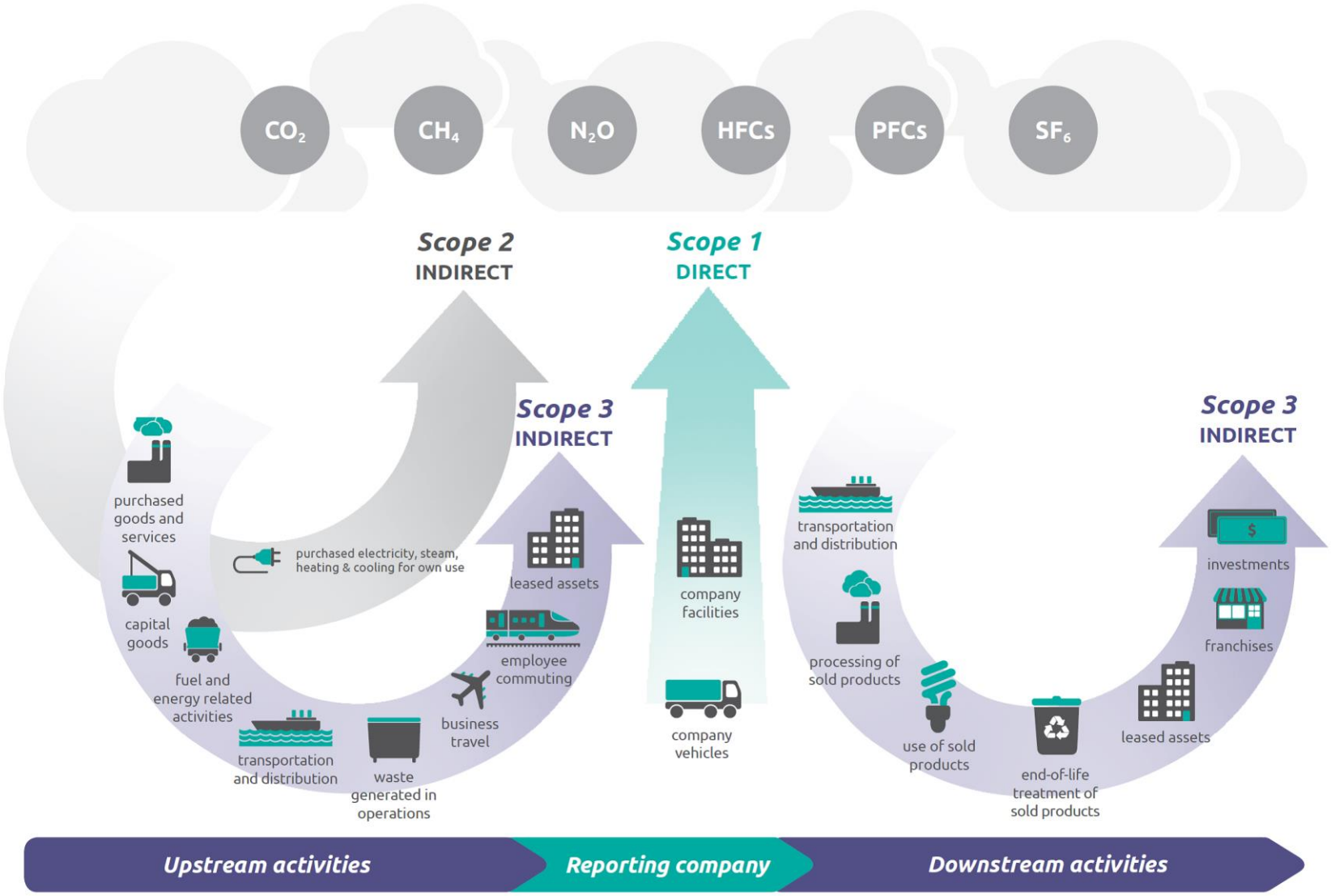
CDP DISCLOSURE INSIGHT ACTION

United Nations Global Compact

WORLD RESOURCES INSTITUTE

WWF

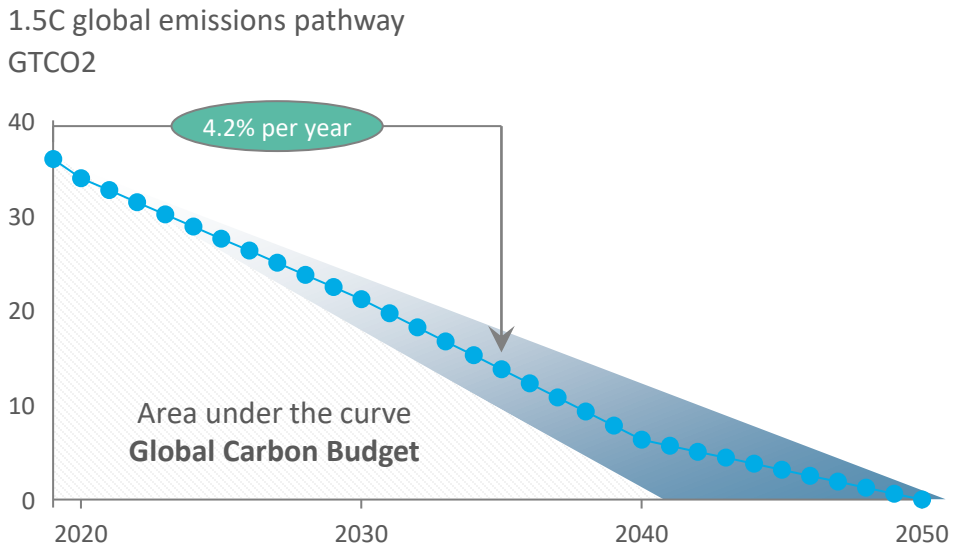
Scope 1, 2 and 3, what is it about?



Two commonly used approaches for climate target setting; our focus is on development of sectoral targets using the SDA

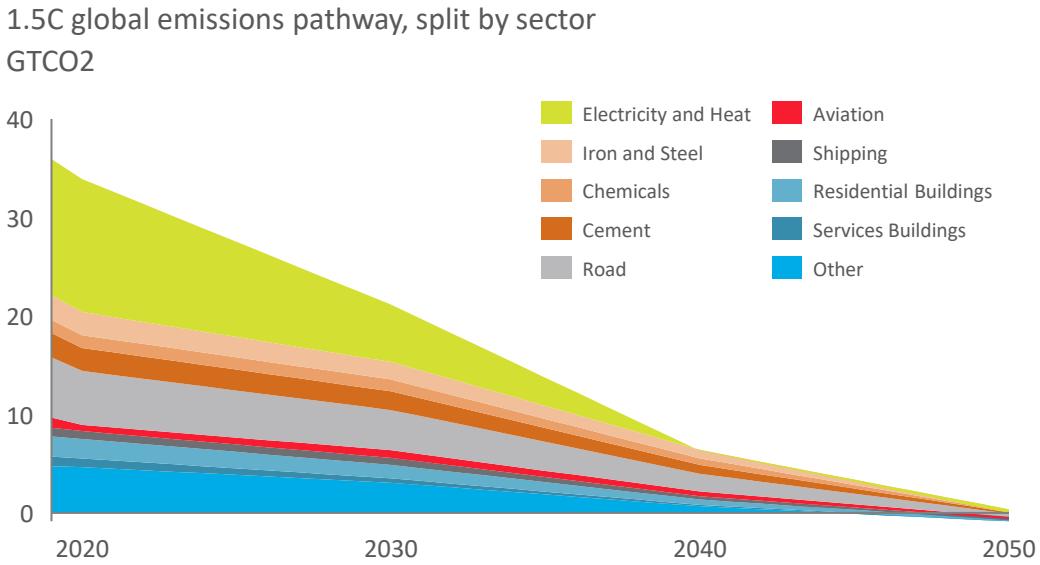
Absolute Contraction (ACA)

Assumes companies decrease absolute emissions at the same rate as the global average 1.5C pathway



Sectoral Decarbonization Approach (SDA)

Divides the global carbon budget across sectors based on decarbonization difficulty



Source: SBTi foundations; SBTi SDA; BCG analysis

SBTi Guidance on sector level

- Currently, companies in all sectors (apart from oil and gas) can set science-based targets, aligned with the SBTi criteria
- Sector guidance is developed to:
  - provide a range of resources to support businesses in setting targets
  - Develop a Sectoral Decarbonization Approach (SDA)
- 8 sectors with finalized guidance methods
  - e.g. for Forest, Land and Agriculture
- 5 sector guidance's under development
  - e.g. for chemicals and oil & gas

https://sciencebasedtargets.org/sectors
Status 22 May 2024

Sector	Status	
Aluminum	→ Scoping Phase	VIEW MORE
Apparel and footwear	Finalized	VIEW MORE
Aviation	In Development	VIEW MORE
Buildings	In Development	VIEW MORE
Chemicals	In Development	VIEW MORE
Cement	Finalized	VIEW MORE
Financial institutions	Finalized	VIEW MORE
Forest, Land and Agriculture (FLAG)	Finalized	VIEW MORE
Information and Communication Technology (ICT)	Finalized	VIEW MORE
Land Transport	In Development	VIEW MORE
Maritime	Finalized	VIEW MORE
Oil and Gas	In Development	VIEW MORE
Power	Finalized	VIEW MORE
Steel	Finalized	VIEW MORE

Chemicals sector emissions scenarios

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- SBTi has identified a carbon budget for the chemicals industry as part of our Net Zero Standard development
- See our Pathways to Net Zero paper for details

Sector	2019 CO_2 emissions (GT CO_2)	2020-2050 CO_2 budget used by the SBTi to assess 1.5°C pathways (GT CO_2)	Share of 2020-2050 energy and industrial processes CO_2 budget relative to sector's share in 2019 (%)
Energy supply	**15.3**	**115-146**	**59-75**
Electricity and heat	13.8	102-133	58-76
Transport	**8.3**	**100-129**	**95-123**
Road transport	6.1	73-91	92-117
Maritime transport	0.9	12-16	101-143
Aviation	1.0	15-19	110-147
Industry	**8.9**	**134-153**	**116-135**
Iron and steel	2.5	20-40	62-126
Cement	2.5	35-41	109-131
Chemicals	1.3	13-26	73-153
Buildings	**3.0**	**30-41**	**75-107**
Residential buildings	2.0	20-30	74-117
Service buildings	1.0	10-11	76-89
Cross-sector total (CO_2 only)	**35.5**	**450-480**	**-**

Table 1. *2020-2050 CO_2 emissions budgets used by the SBTi for the energy supply, transportation, industry, and buildings sectors. Budgets cover direct emissions only (i.e., scope 1) but when setting SBTs, companies must set targets that also cover indirect emissions (i.e., scopes 2 and 3). Due to expected mitigation trade-offs across sectors, the lower bound of "Total" CO_2 emissions is higher than aggregating the lower bound of all sectors. 2019 CO_2 emissions data are sourced from IEA (2021). Sector-specific pathways in-line with the budget ranges in this table do not automatically qualify for use by the SBTi.*

This budget applies to scope 1 emissions only. It demonstrates the upper bound of sectoral carbon budgets that must not be exceeded by target-setting pathways

This budget does not define emissions scenarios. It does not allocate emissions to chemicals subsectors.

SBTi is asking for input on sector and subsector emissions scenarios and growth scenarios that align with our criteria

SBTi as a target setting framework

- **Target setting aspects**
  - Sectoral decarbonization approach for ammonia, methanol and HVC
  - Mandatory target setting for scope 3.1 in addition to the overall scope 3 target when you purchase primary chemicals
  - Mandatory alternative feedstock targets
- **Accounting aspects**
  - Robust accounting of lice cycle emissions associated with biogenic materials is crucial
    - GHG protocol as guidance
    - Companies must factor in emissions from land sector attributable to the biogenic material acquired (e.g emissions due to land use change, net biogenic CO2 emissions from land management)
    - Reference also made to Forest, Land and Agriculture (FLAG) guidance)
  - Cefic proposed an end-of-life accounting incentivizing the use of alternative feedstocks

https://sciencebasedtargets.org/news/the-sbti-opens-consultation-and-call-for-experts-to-advance-its-chemicals-sector-project

Target alternative feedstock shares draft SBTi chemical sector guidance

SCENARIO	2030	2040	2050
Minimum target (based on the combination of Systemiq's LC-ME and LC-NFAX scenarios)	14 wt.% C	26 wt.% C	44 wt.% C
Recommended target (based on Systemiq's LC-NFAX scenario)	16 wt.% C	38 wt.% C	83 wt.% C

LC = Low-Circularity demand scenario

HC = High-Circularity demand scenario

ME = Most economic supply scenario

NFAX = No Fossil new build supply scenario

Biobased and carbon neutral circular chemistry

- Global frameworks related to accounting and target-setting are gaining increased importance, e.g. SBTi and GHG protocol
- Biobased is playing an important role, but ongoing discussions related to accounting are ongoing
- Cefic strives to give aligned input in the discussions, acknowledging the role that biobased takes in the transition
- Important question what types and volumes of biobased feedstock are available now and in the future for the chemical sector?

Thank you.

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About Cefic

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.1 million jobs and account for 15% of world chemicals production. Cefic members form one of the most active networks of the business community, complemented by partnerships with industry associations representing various sectors in the value chain. A full list of our members is available on the Cefic website.
Cefic is an active member of the International Council of Chemical Associations (ICCA), which represents
chemical manufacturers and producers all over the world and seeks to strengthen existing cooperation with global organisations such as UNEP and the OECD to improve chemicals management worldwide

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