Factsheet

Plotting the right course:

Five steps to setting an achievable science-based target

ecoact

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Introduction: Science-based targets and the journey to net-zero

The global community faces a historic challenge: achieving net-zero emissions by 2050 at the latest in order to halt global temperature rise and avoid the worst impacts of climate change.

According to the latest climate science, we need to halve emissions by 2030 to avoid exceeding a rise of 1.5°C compared with pre-industrial levels – the tipping point of predicted catastrophic climate impacts. We have already reached an average global temperature rise of 1.3°C in 2023.

A science-based target (SBT) is an emissions reduction target that provides organisations with a trajectory for decarbonisation aligned with this science for limiting global warming.

Since their inception in 2015, SBTs have quickly become best practice in terms of climate target setting, recognised by key sustainability reporting frameworks, such as the investor-led CDP, and a signifier of corporate climate leadership.

Defined, validated and championed by the Science- based Target initiative (SBTi), the movement for SBTs continues to build momentum. As of November 2024, over 6,600 organisations have had targets validated by SBTi.

As our climate goals grow ever urgent, pressure for ambitious climate action is mounting on organisations from seemingly every angle: the general public, government legislation, climate groups, corporate customers and investors. The world is beginning to mobilise around the global goal of net-zero.

In October 2021 the scope of science-based targets was further extended and the SBTi published its Net-Zero Standard. This Standard outlines ambitious guidelines for setting both near- and long-term science-based targets for net-zero, consistent with limiting global warming to 1.5°C.

The Net-Zero Standard is currently undergoing a major revision ahead of the release of version 2.0 in 2026. This will ensure the standard aligns to the latest scientific consensus and addresses challenges companies are facing when it comes to setting SBTs. The key areas being reviewed that will serve as an input into the revised standard are:

- The challenges in Scope 3 target setting and implementations
- Scope 3 target setting options
- The role of certification and environmental attribute certificates in addressing Scope 3 emissions.

This international standard remedies the wide disparity and lack of comparability of previous net-zero commitments. It also makes plain the requirements for

"The only way that we will achieve net-zero is if we all work to rapidly reduce our emissions in line with climate science and share the available resources for carbon removals to eliminate only those emissions we cannot reduce. A science-based emissions reduction target is therefore integral to a credible net-zero strategy."

Laurie Edwards, Managing Consultant at EcoAct

deep decarbonisation in order to meet our climate goals, and the challenge that lies ahead to decarbonise our organisations.

Therefore, the role of SBTs on our journey to net-zero is now crucial, and it is more important than ever that we put in place robust plans to ensure we meet our targets and rise to the urgent climate challenge.In this guide, we provide a clear and structured approach to tackling science-based targets in five steps.

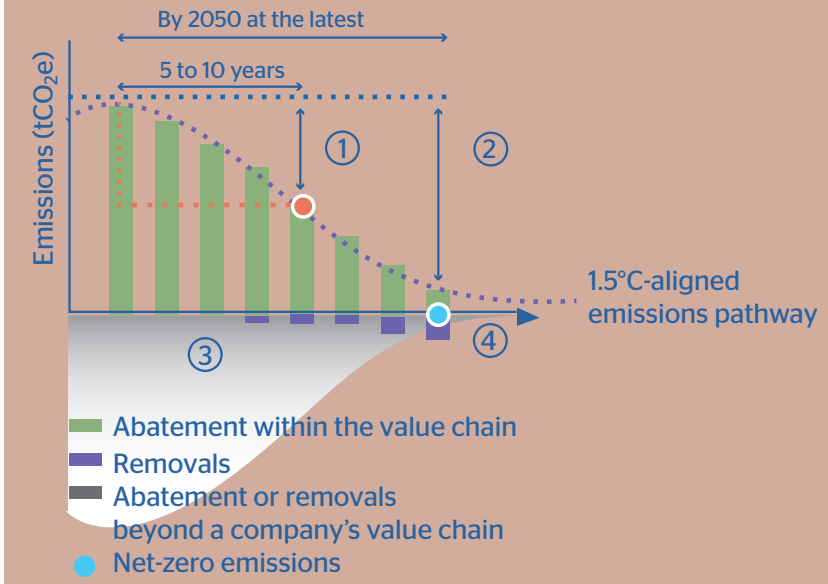
It is important to remember that SBTs do not exist in a vacuum and should be considered more than a tick-box exercise.

Throughout our guide, we will demonstrate how SBTs should be placed within a wider climate strategy as well as the important considerations that need to be made according to each unique organisation.

Setting the target itself is relatively straight forward. Some of the most challenging aspects of the process will be gaining buy-in from business stakeholders, understanding how to achieve the target and how much it will cost. For this we hope to provide some direction.

To achieve an SBT, and indeed net-zero, requires transformational change to an organisation. It is an ambitious undertaking, but for those organisations that start this journey now, the rewards will be great.

A science-based pathway to net-zero emissions



1. Near-term SBTs
2. Long-term SBTs
3. Beyond value chain mitigation
4. Neutralisation of residual emissions

Adapted from the SBTi

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

The Science Based Target initiative (SBTi)

The Science Based Target initiative is a joint organisation founded by CDP, the World Resources Institute (WRI), the UN Global Compact (UNGC), and the World Wide Fund for Nature (WWF). Its role is to define the criteria for science-based targets, promote best practice target setting, as well as to provide technical assistance and resources for organisations and sustainability professionals.

Step 1: Laying solid foundations

First things first...

We could dive straight in to setting an SBT. However, this is not necessarily going to result in an achievable target. We would recommend a step back to look at the bigger picture, to examine what it is you want to achieve, where you are on your wider climate and sustainability journey, and to engage your internal stakeholders in the process from the outset.

Understanding the drivers for change

We recommend a benchmarked approach in order to understand wider context across relevant sectors/peer groups. This is a valuable exercise that often helps to establish the objectives for embarking on a science-based target.

Are you looking to keep up with your peers or to set yourself apart as leaders? Do you have your ambitions set on net-zero?

A horizon scan can be helpful for presenting to the business the risks of getting left behind and the opportunities of stepping ahead on the journey.

This will help in understanding the drivers for change within your own organisation and building the beginnings of a strong case for ambitious emissions reduction targets with which to engage internal stakeholders.

Engaging the right people

It is worth engaging your stakeholders early in the process and educating them on the importance of your ambitions.

Getting prior commitments from and engaging with operations will allow a bottom-up analysis, taking account of the challenges and demonstrating the achievability of SBTs.

Like many sustainability initiatives, for an SBT to be successful, the targets must be aligned with the wider corporate objectives and you will need to make the business case for setting SBTs to the organisation (further steps on this later). SBTs require long-term thinking. Senior management must be engaged from the outset and awareness will need to be raised across the organisation to ensure an aligned commitment to the new goals.

Considering the wider climate journey

Given that an SBT is an ambitious emissions reduction target, it is vitally important to first consider where you are on the wider climate journey.

In order to set a robust and achievable target, there may be some foundation work to undertake, depending on the level of maturity of your organisation's existing climate and sustainability programme.

Our ACTR approach offers a complete journey from foundation level to net-zero with steps applicable to any climate strategy.

However, the following are key elements to consider for target setting:

Data

An SBT requires a certain level of maturity in terms of carbon data collection. To calculate emissions and monitor progress to a target, you will need robust processes and systems for climate data in place. A target that has its basis on mostly estimated data is going to be much more challenging to successfully achieve and to substantiate to stakeholders.

At a minimum Scope 1 & 2 data must conform to the following criteria:

1. Scope 1 & 2 emissions inventory, as defined by the GHG Protocol Corporate Standard, must be screened

2. The reduction target must cover at least 95% of Scope 1 & 2 emissions

Scope 3

If value chain emissions account for more than 40% of the total organisational footprint, which they do for a significant proportion of companies, then an SBT must include a target for the reduction of these emissions. Scope 3 is a challenging area for organisations in terms of data collection and reduction initiatives so we would recommend that a strategy for Scope 3 be in place.

Companies must complete Scope 3 screening for all relevant Scope 3 categories in order to determine their significance as per the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

SBTI Scope 3 criteria require that at a minimum Scope 3 data should conform to the following critieria:

1. Scope 3 emissions inventory, as defined by the GHG Protocol Corporate Standard, must be screened

2. Should Scope 3 emissions represent >40% of total Scope 1, 2 & 3 emissions, a Scope 3 target must be set

3. The Scope 3 near-term reduction target must cover at least two thirds (66.6%) of Scope 3 emissions

4. The Scope 3 long-term reduction target must cover at least 90% of Scope 3 emissions

Risks and opportunities

Climate risk and opportunity assessment is fast becoming expected of organisations. In fact, the British Government announced in November 2020 that climate risk disclosure would become mandatory for large organisations in the UK by 2025. Therefore, this exercise can only be of benefit in order to meet future compliance regulations.

This is also a valuable exercise because it should not only be about the risks of climate impacts to your organisations but the risks and, importantly, the opportunities of the low carbon transition itself. Setting a target is one thing, but how are you going to meet that target, where will the challenges lie and where are the most valuable opportunities? Understanding this will help to formulate a robust plan for making your target a compelling investment for your organisation, and ultimately, a success.

Near-term science-based targets

Formerly called “science-based targets”, these are 5-10-year GHG mitigation targets aligned with 1.5°C pathways.

The aim of near-term science-based targets is to support action required for substantial emissions reductions to be reached by 2030. Near-term emissions reductions are crucial to staying within the global emissions budget and are not interchangeable with long-term targets.

Long-term science-based targets

These targets show businesses how much they must reduce value chain emissions in line with reaching net-zero at the global or sector level in eligible 1.5°C pathways by 2050 or earlier.

These targets aim to drive economy-wide alignment and long-term business forecasting to achieve the level of global emissions reductions needed for climate goals to be met based on science.

A company may not claim to have reached net-zero until emissions have been reduced to the degree required by the company’s SBT and all residual emissions are neutralised using permanent carbon removals.

Step 2: Identifying a target setting approach

Target setting methodologies

There are three available methods for defining a company-wide Scope 1 and 2 target, and five for Scope 3.

Scope 1 & 2

Absolute Emissions Contraction Method

This method requires companies to reduce absolute GHG emissions by a given percentage. Through this approach, all companies, regardless of the size of their carbon footprints, must reduce emissions at the same rate. However, this does mean higher emitting organisations will have a larger amount of absolute emissions to reduce. It is applicable for most organisations and sectors.

Renewable Electricity

This approach requires companies to reach 100% renewable electricity usage by 2030 and is aligned to the RE100 framework. A separate Scope 1 target must be submitted, thus putting increased emphasis on Scope 1 reductions compared to a Scope 1 & 2 combined absolute target. Only available for near-term targets

Sectoral Decarbonisation Approach (SDA)

The SDA divides a global carbon budget based on each sector's projected level of economic activity and potential for emissions reductions. The SBTi has developed this sectoral approach for the following sectors: power, service and residential buildings, cement, aviation, maritime, finance and more recently FLAG (Forest, Land and Agriculture). Other sector methodologies are planned, such as steel and oil and gas and the updating of existing methodologies to be aligned with 1.5°C scenario.

Scope 3

Absolute Emissions Contraction Method

As defined for Scope 1 & 2.

Sectoral Decarbonisation Approach (SDA)

As defined for Scope 1 & 2.

Physical Intensity Approach

Applicable for companies who produce tangible products (e.g. manufacturing) or are predicted to grow significantly over the target timeline, the physical intensity approach enables the setting of an emissions reduction target based on physical intensity metrics (e.g. per tonne of sold product or FTEs). This method can offer greater flexibility to company growth than an absolute approach.

Economic Based Approach

This method is applicable for all companies., However it is best suited for those with high-growth projections. In this approach, companies can get an emissions reduction target per unit of value-added (e.g. gross profit). Dependant on your company's growth rate, this methodology might offer the most flexibility.

Supplier Engagement Approach

This method requires quick uptake of SBTs by key suppliers covering two thirds of Scope 3 emissions. Only available for near term targets and must be achieved within five years (it is the only Scope 3 methodology with restricted timelines) and see targeted suppliers set targets aligned with latest SBTi criteria. It is most applicable to companies with smaller supply chains and/or a reliance on a limited number of materials/services.

SBTs for SMEs

Any company, no matter its size, can set an SBT.

In order to make the target-setting process attainable for as many organisations as possible, there are now specific criteria and resources for SBT setting for small to medium-sized businesses (SMEs).

The SBTi defines an SME as any organisation that meets 3 or more of the following criteria:

- Less than 250 employees
- Turnover of less than €50 million
- Total assets of less than €50 million
- Not in a mandatory FLAG sector

These companies are required to set 'off-the-shelf' Scope 1 & 2 targets for 1.5°C and sign a target setting letter. Unlike larger companies, the near-term option does not require SMEs to set targets for their Scope 3 emissions. However, SMEs must commit to measure and reduce their Scope 3 emissions.

Long-term targets must include Scope 1, 2 & 3 reductions from a predefined base year & a commitment to neutralise remaining emissions

Click here for more information on the SBTi's guidance for SMEs.

Step 3: Defining the target

First, establish your baseline...

Base year selection is an integral part of the SBT setting process. Not only does the base year form your baseline emissions, it also dictates what level of emissions reductions are required for your target. This is due to the SBTi assessing target ambition over two separate periods:

1. Timeframe ambition: Base year to target year

2. Forward-looking ambition: Most recent year to target year

This is so companies can't solely rely on historical emissions reductions when setting an SBT, but instead are incentivised to continue decarbonisation and business transformation towards net-zero emissions.

Having the right system in place to map and track your target

The right tools at your disposal are going to make the next steps much easier. We have worked with a wide range of businesses to set their targets, gain buy-in and plot their emissions reduction trajectories. Through this we have developed specialist software that supports this process and provides visual outputs to aid decision-making.

Our Carbon Reduction and Feasibility Tool (CRaFT) has the capabilities to house and visualise:

- Emissions data by business unit or geography
- Specific service or product footprints
- Projected business growth
- The latest emissions factor projections
- Existing, planned and potential emissions reduction initiatives with costings and the associated impacts to your emissions
- An SBT target trajectory
- Offsetting programmes to compensate for emissions and/or for a net-zero target

The system helps to build a series of scenarios to help summarise your options and find the most effective path in terms of reductions and costs to reach your target.

Then calculate the target

Targets are only considered ‘science-based’ if they are in line with the ambition level required to limit global warming to 1.5°C.

A target must be 5-10 years for near-term targets and then 2050 latest for net-zero targets.

Part of the commitment to set an SBT, particularly if aiming for SBTi validation, will be to disclose emissions and progress against the target on an annual basis. Once a target has been publicly announced, stakeholders will likely expect to see this progress.

Having used the appropriate methodology to calculate the target, we would then recommend plotting this against a business-as-usual emissions trajectory to understand the level of reductions required.

Step 4: Mapping your reduction trajectory and gaining approval

Setting a target is the first step. But how are you going to achieve it?

Before making any public declarations or moving towards target validation, we would recommend you begin with modelling and developing a clear roadmap of how to achieve the ambitious reductions required of the organisation. This helps to gain senior approval of the target and buy-in from the wider business.

Project business-as-usual emissions

Once you have calculated your base year emissions, we recommend plotting a business-as-usual emissions scenario into the future as well.

This scenario should consider and include expected business growth, operational business changes such as acquisitions or divestments and, where possible, account for external influences such as the impact of global grid greening at country level.

This will provide an accurate baseline from which you can compare the impact of different reduction initiatives and scenarios going forward.

Find opportunities for emissions reductions

If you don't already have reduction initiatives in place, we recommend focusing first on the emission hotspots across the value chain. The most emission intensive areas are often where the biggest gains are likely to be achieved and thus, where initial efforts should be focused.

Also, it may be beneficial to consider up-and-coming legislative changes alongside customer and other stakeholder priorities which might require certain actions needing to be prioritised over others e.g. energy efficiency or low carbon transportation.

Throughout this process, our EcoActors will be on hand to help guide you, highlighting which business areas will have key stakeholders to engage with and what kind of data is required in order to accurately estimate potential future carbon and energy savings, timelines and financial impact

Forecast and compare emissions reduction scenarios

When building different reduction scenarios, a key consideration will be that of the respective cost benefit of different initiatives that make up a scenario. We want to know which initiatives, planned or potential, will offer the greatest emission reduction for the lowest overall cost.

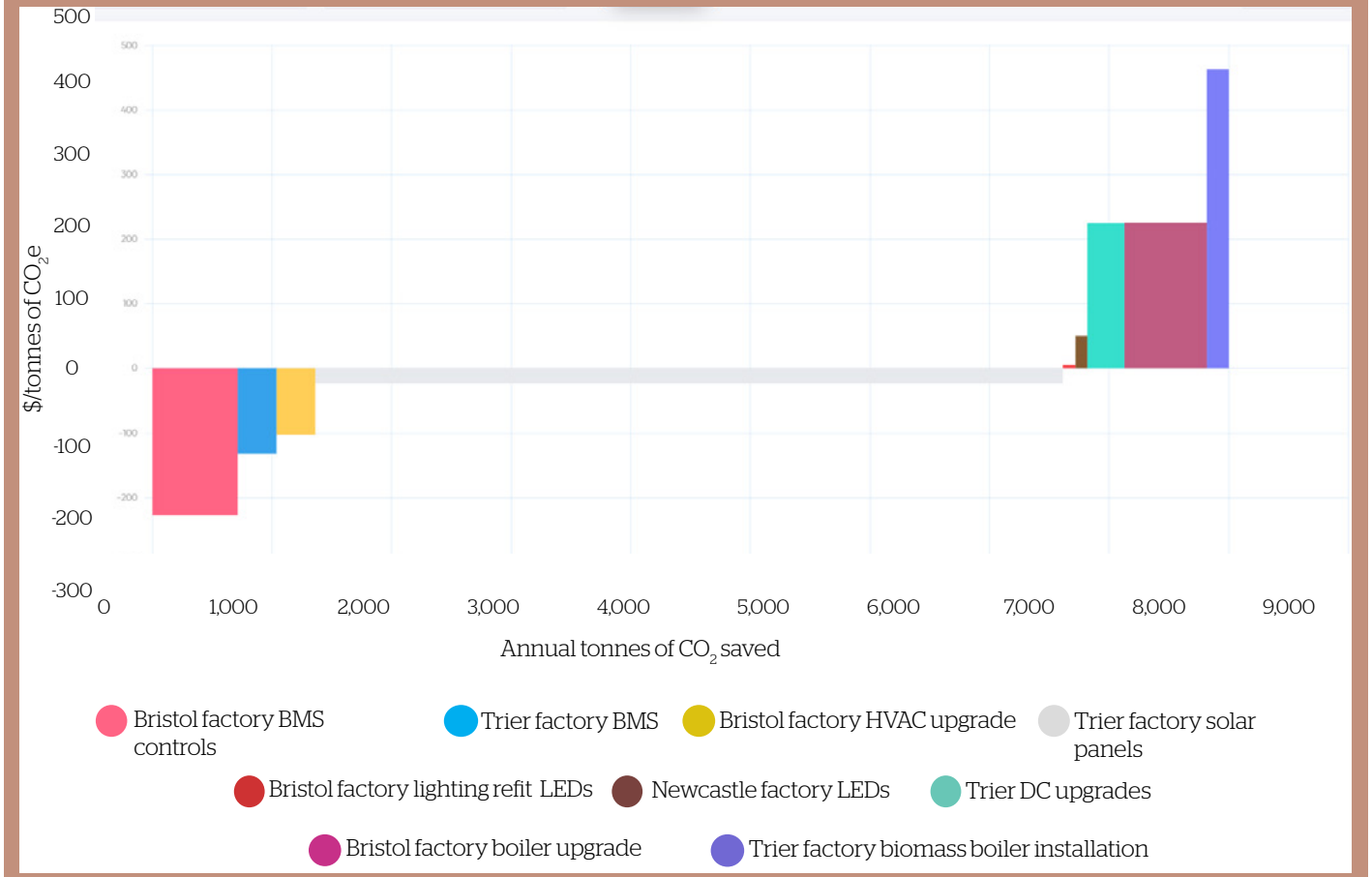
Utilising the inbuilt MACC (marginal abatement cost curve) functionality within CRaFT, we can support companies to do this. We can directly compare, over varying time frames, the overall impact and relative cost of individual initiatives.

From this we can then easily build emission reduction scenarios that provide the ability to simply 'switch on and off' different initiatives to demonstrate how they will impact overall emissions trajectories into the future.

For example: You are considering phasing in 100% electric vehicles by 2030. What does this do to your future emissions? How does this compare to a commitment to 100% renewable energy for your direct operations by the same date? What happens if you implement both? Are both affordable?

By building a series of scenarios to visualise how each impacts the emissions scenario on your dashboard and compare potential costs, you can provide your business with the information it needs to understand what their new target means, how it is going to be achieved and assist in gaining approval for the target ahead of validation stage.

Assessing the cost of investments per tonne of CO_2



Example output from CRaFT

Armed with all the information and a decision on a clear roadmap to work towards your SBT, you can move forward on your target journey with confidence.

Download our CRaFT Factsheet to learn more.

Step 5: Gaining SBTi validation

SBTi validation

Gaining validation is not mandatory but there are of course reputational benefits and it is highly recommended to demonstrate the credibility of a commitment.

To gain validation it is important to ensure that the target is checked and has met the full criteria for the SBTi. There is a cost involved in validation and gaining subsequent re-assessment.

As of October 2024, companies are required to submit targets via SBTi Services. This subsidiary of SBTi provides a new validation portal that aims to streamline the target-setting process. Companies will now need to register with SBTi Services to begin the target-setting journey.

We have helped over 115 companies obtain validation and worked with a diverse range of sectors supporting companies to meet the required SBT criteria and provide the documentation for submission.

Rebaselining

As part of annual reviews, the SBTi requires companies to set a recalculation threshold of 5% or lower per Scope. So if there is a methodological or organisational change in a reporting year, or a series of cumulative changes across year, that exceeds this threshold, the base year should be recalculated to ensure like-for-like comparisons. If these reviews lead to a change in target method or ambition, the target will need to be formally re-submitted to SBTi.

Future reviews

The SBTi requires that targets be reviewed every five years. Note that the SBTi aligns itself with the latest climate science and science is always evolving. There is currently an option for companies with existing science-based targets to add net-zero targets to align with the Net-Zero Standard.

The level of ambition required by the standard may be challenging for companies. However, with a narrowing window of time for action and a waning carbon budget to keep us within this limit, increasing climate ambition is essential.

This is likely the strongest argument for all of us to embark on the SBT journey today and work together to reach our collective climate goals.

EcoAct's SBT credentials

From banks to hotels, we have a wide range of experience supporting organisations to set SBTs, map their target trajectories and gain SBTi validation.

Global Gold level partner and accredited SBT supplier with CDP

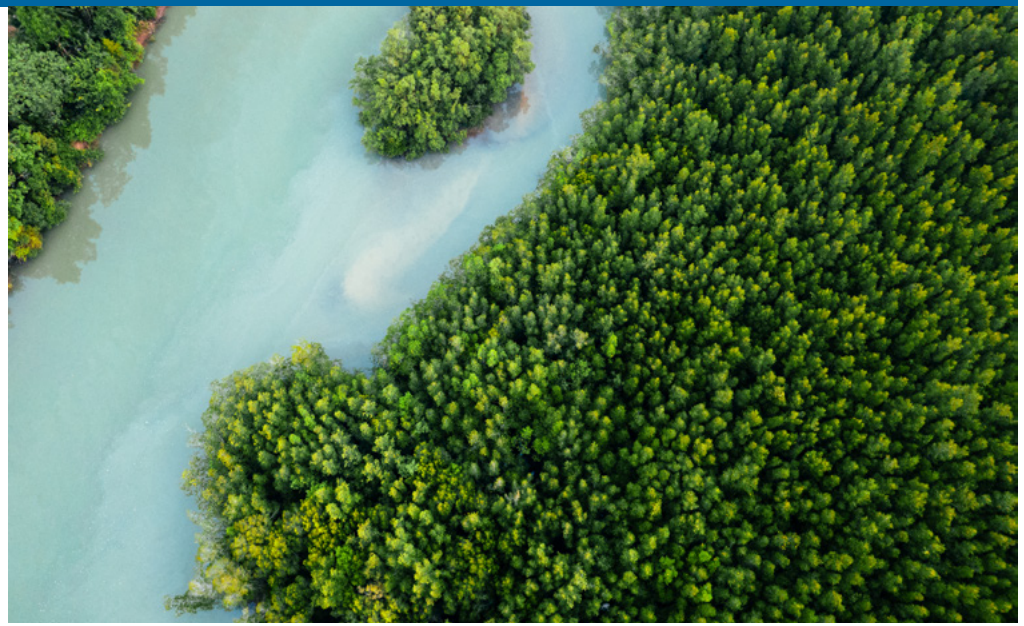
Diverse range of SBT clients supported in setting a target and successfully gaining SBTi validation

Part of the SBTi FI working group to establish an SBT methodology for the Financial Sector.

Here are a few of our SBT clients:

IBERDROLA legrand informa

Berkeley Group RED ELÉCTRICA DE ESPAÑA



Factsheet

Your climate experts.
Your partner for positive change.

Together with our clients, we act to put climate and nature centre stage to drive sustainable corporate transformation within planetary boundaries.

EcoAct is an international sustainability consultancy and project developer with 18+ years of industry experience and 360+ climate experts globally. Founded in France in 2006, the company now spans three continents with offices in Paris, London, Barcelona, New York, Montreal, Munich, Milan and Kenya.

EcoAct's core purpose is to lead the way in developing sustainable business solutions that deliver true value for both climate and client. Data is the cornerstone of our consulting practice, supported by our dedicated Climate Data Analytics and Research & Innovation teams.

At EcoAct we are driven by a shared purpose to make a difference. To help businesses implement positive change in response to climate and environmental sustainability challenges, whilst also driving commercial performance.

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