GEP Environmental
a Mabbett company

Legal Update March 2023

Pete Schofield

Director & Principal Environmental Consultant

General Legislative Updates
March 2023

- **Environmental Targets (Biodiversity) (England) Regulations SI 2023/91**

- **Long-term biodiversity target (species extinction risk):** to reduce the risk of species' extinction by 2042, when compared to the risk of species' extinction in 2022.

- **Long-term biodiversity target: (wildlife-rich habitat restoration or creation):** in excess of 500,000 hectares of a range of wildlife-rich habitats are to be restored or created by 31 December 2042.

- **2030 species abundance target:** the overall relative species abundance index in 2030, indicates that the decline in the abundance of species has been halted.

- **Long-term biodiversity target to reverse the decline of species abundance:** to reverse the decline of species abundance by 2042 and ensure species abundance is
    - higher than the overall relative species abundance index for 2022; and
    - at least 10% higher than the overall relative species abundance index for

General Legislative Updates

March 2023

- **Environmental Targets (Woodland and Trees Outside Woodland) (England) Regulations SI 2023/90**
    - They establish legally binding targets relating to woodland cover and trees outside woodlands, as required under the Environment Act 2021.
    - By the end of **2050** at least **16.5% of all land in England** must be **covered by woodland and trees outside woodland.**

General Legislative Updates
March 2023

- **Environmental Targets (Marine Protected Areas) Regulations SI 2023/94**
  - They establish legally binding targets in the area of biodiversity, specifically marine protected areas, as required under the Environment Act 2021.

  - The target is that before the end of 31 December 2042:
    - the number of protected features which are in **favorable condition** within all relevant MPAs is **not less than 70% of the total number of all protected features** within relevant MPAs; and
    - all other protected features within relevant MPAs are in **recovering condition**.

General Legislative Updates
March 2023

- **Environmental Targets (Residual Waste) (England) Regulations SI 2023/92**
  - They establish legally binding targets in the area of resource efficiency and waste reduction, as required under the Environment Act 2021.

  - By the end of **2042**, the total mass of **residual waste** for the calendar year 2042 must not exceed **287 kilograms per head of population in England**.

General Legislative Updates
March 2023

- **Environmental Targets (Water) (England) Regulations SI 2023/93**
  - They establish legally binding targets in the priority area of water, as required under the Environment Act 2021, along with requirements for the measurement and reporting of these targets.

  - These targets include:
    - an agriculture water target (reducing nitrogen, phosphorus, sediment);
    - a waste water target (reducing phosphorus);
    - an abandoned metal mines water target (reducing metals pollution);

General Legislative Updates

March 2023

- **Environmental Targets (Fine Particulate Matter) (England) Regulations SI 2023/96**
  - They establish legally binding targets for air quality relating to the reduction of levels of fine particulate matter (PM) in ambient air, as required under the Environment Act 2021, along with requirements for the measurement and reporting of these targets.
  - **Annual mean concentration target for $PM_{2.5}$**
    - By 2040, the annual mean concentration target level of particulate matter $PM_{2.5}$ in ambient air must be equal to or less than 10 µg/m³ (“the target level”).
  - **Population exposure reduction target for $PM_{2.5}$**
    - By 2040, the population exposure reduction target is at least a 35% reduction in population exposure, to $PM_{2.5}$, as compared with the average population exposure in the three-year period from 2016 to 2018.

GEP Environmental
a Mabbett company

The Science-Based Targets Initiative – SME Pathway

Peter Schofield

Director & Principal Environmental Consultant

Science-Based Targets initiative (SBTi)

The Science Based Targets initiative (SBTi) drives ambitious climate action by enabling organizations to set science-based emissions reduction targets.

More than 4,000 businesses and financial institutions are working with the SBTi to reduce their emissions in line with climate science.

FOUNDING PARTNERS

CDP DISCLOSURE INSIGHT ACTION

United Nations Global Compact

WORLD RESOURCES INSTITUTE

WWF

IN COLLABORATION WITH

WE MEAN BUSINESS COALITION

Science-Based Targets
Setting and accreditation

Can work together:
e.g., a company with an established SBT can use that as a starting point for net zero

SBTi Net Zero Standard

What does a Science-Based Target do?

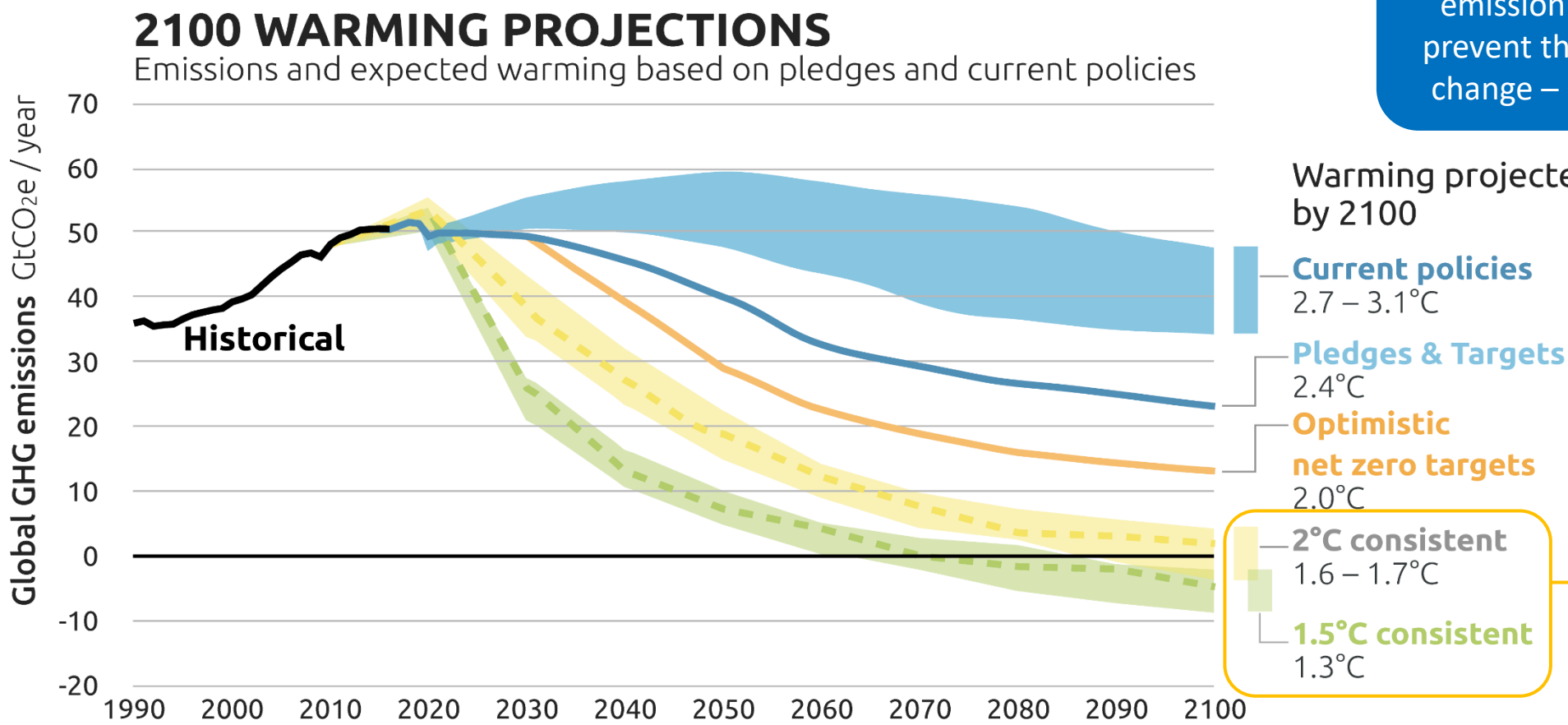
Science-based targets help companies determine **how much** and **how fast** they need to reduce GHG emissions to align with efforts **to limit warming to 1.5°C**

Near-term science-based targets are deemed the most critical targets as they are actionable and provide accountability

The SBTi enables companies to set targets in line with the Paris Agreement, **with 1.5°C representing the highest level of ambition**. Currently only targets relating to emissions coming from companies' direct operations (i.e. Scope 1 and 2 emissions) receive a temperature classification.

What is a Science-Based Target?

Science-based targets show organisations greenhouse gas (GHG) emission reductions necessary to prevent the worst effects of climate change – i.e., pathway for net zero



Science-based targets are aligned with these scenarios

A target is considered 'science-based' if it is in line with the level of decarbonisation required to keep global temperature increases below 2°C compared to pre-industrial temperatures (Paris Agreement goals).

The science behind aiming for 1.5°C

	1.5°C	2.0°C	2°C impacts
Global population exposed to severe heat at least once very 5 years	14%	37%	**2.6x worse**
Number of ice-free artic summers	At least 1 every 100 years	At least 1 every 10 years	**10x worse**
Further decline in coral reefs	70-90%	99%	**Up to 29% worse**
Decline in marine fisheries	1.5M tonnes	3M tonnes	**2x worse**

Despite understanding the **severity** of climate change impacts, current policies put us on track for **between 2.7 - 3.1˚C.**

Implementing a SBTi Science-Based Target

COMMIT

Submit a letter establishing your intent to set a science-based target

DEVELOP

Work on an emissions reduction target in line with the SBTi's criteria

SUBMIT

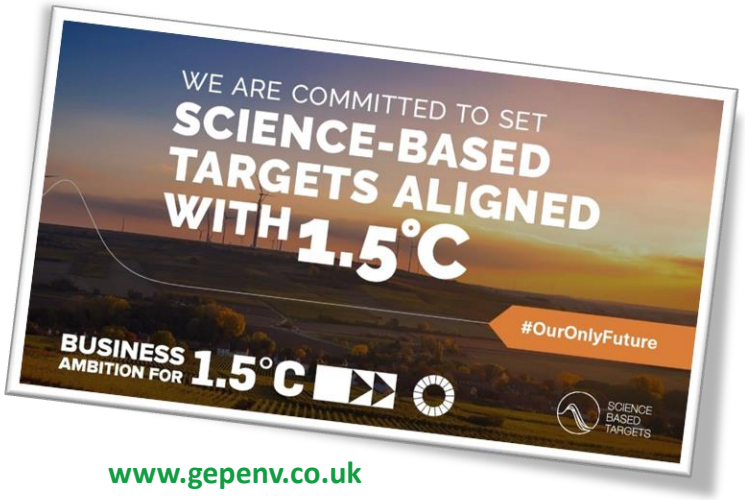
Present your target to the SBTi for official validation

COMMUNICATE

Announce your target and inform your stakeholders

DISCLOSE

Report company-wide emissions and progress against targets on an annual basis



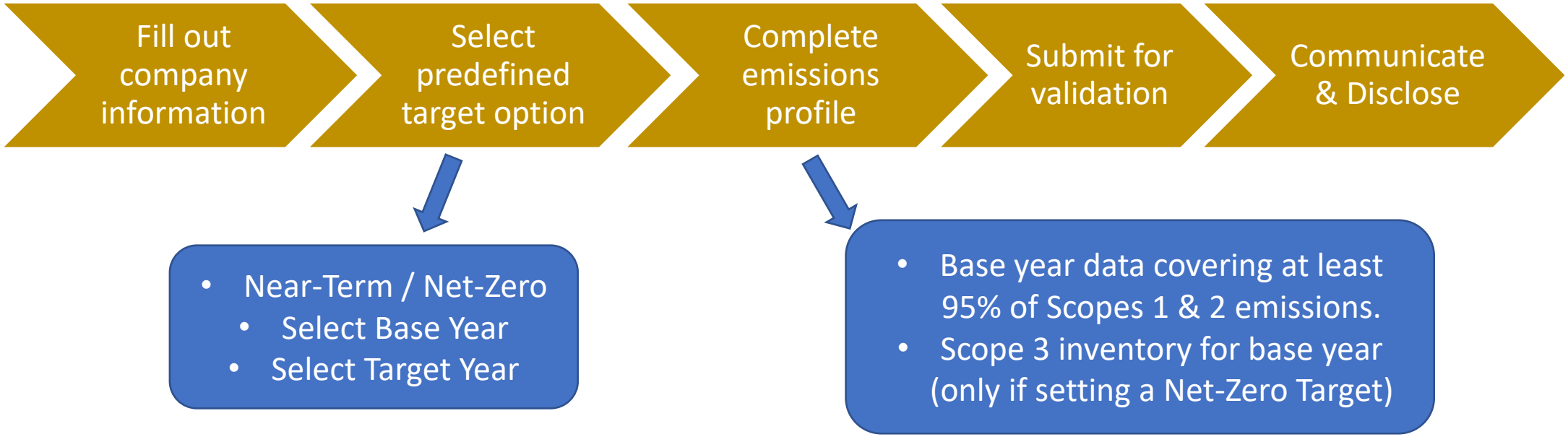
SME's are able to submit targets through a streamlined validation process, enabling them to bypass the initial 'commit' phase.

Implementing a SBTi Science-Based Target – SME's

For the purposes of target validation by SBTi, an SME is defined as **a non-subsidiary, independent company with fewer than 500 employees**.

The SBTi invites SMEs to submit targets through a **streamlined target validation route** exclusive to SMEs. This route enables SMEs to bypass the initial step of committing to set a science-based target and the regular target validation process and to **immediately set near-term science-based targets** for Scope 1 & 2 emissions, and, optionally, **net-zero targets**, by choosing from one of several **predefined target options**.

Implementing a SBTi Science-Based Target – SME's



The entire process is managed through the SME Target Setting System:
http://form.jotform.co/targets/sme-target-validation.

Target Selection: Near-Term v's Net-Zero Targets

Target options for SMEs:

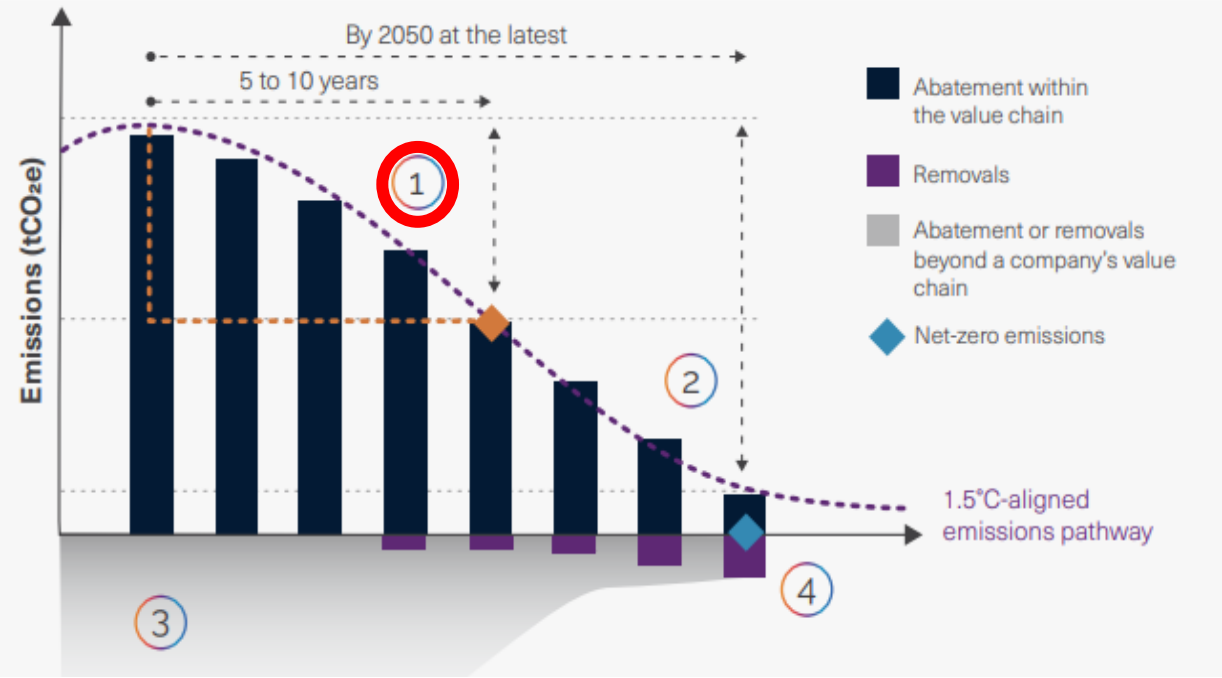
- **Near-term science-based targets** are absolute scope 1 and 2 GHG emissions reduction targets that should be achieved by 2030, from a predefined base year.
- **Net-zero targets*** include:
  - Long-term science-based targets which are absolute scope 1, 2 and 3 GHG emissions reduction targets that should be achieved by 2050, from a predefined base year.
  - A commitment to neutralize any unabated emissions when the long-term science-based target is achieved.

***SMEs must set targets aligned to a 1.5°C near-term science-based target to be eligible to set a net-zero target.** This means that setting a net-zero target includes setting both near-term and long-term science-based targets, and the near-term target must be aligned to 1.5°C pathways.

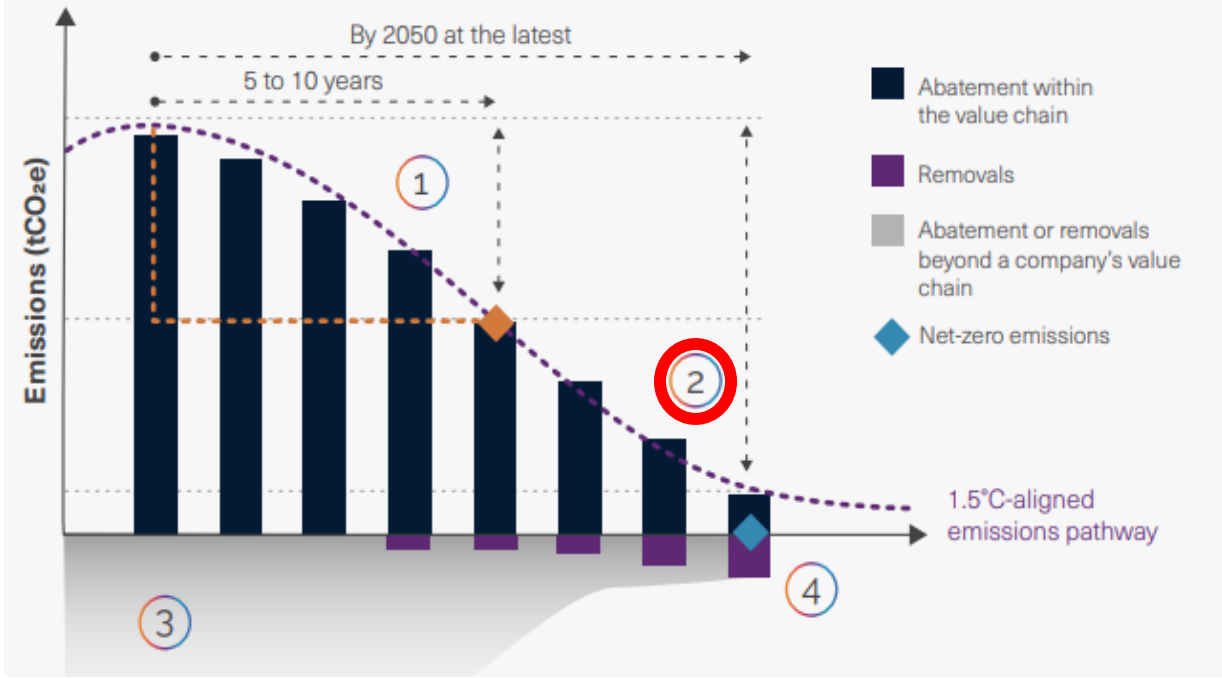
Selected Service	Price
Setting new near-term targets or replacing previous near-term targets.	$1,000 USD
Setting new net-zero targets ONLY (only companies with previously set 1.5C near-term targets are eligible for this option)	$1,000 USD
Setting near-term targets AND net-zero targets.	$2,000 USD

Target Selection: Near-Term v's Net-Zero Targets

Near-Term Targets



Net-Zero Targets



Target Selection: Near-Term Requirements

By setting a near-term target, your company commits to:

- Achieve the chosen target in accordance with the rules of the **Greenhouse Gas Protocol** within the specified timeframe.
- Measure and reduce **scope 3 emissions** following the Greenhouse Gas Protocol Value Chain (Scope 3) Accounting and Reporting Standard. The SBTi **does not** have a requirement for specific near-term scope 3 targets to be set by SMEs.
- Publicly report its company-wide scope 1 and 2 GHG emissions inventory and progress against published targets on an annual basis. Companies shall follow the **Greenhouse Gas Protocol Corporate Accounting and Reporting Standard** and **Scope 2 Guidance**.

Predefined target options

"Our company commits to reduce absolute scope 1 and scope 2 GHG emissions _____% by 2030 from a 20____ base year, and to measure and reduce its scope 3 emissions."

- 50% from a 2018 base year
- 46% from a 2019 base year
- 42% from a 2020 base year
- 42% from a 2021 base year
- 42% from a 2022 base year

Target Selection: Net-Zero Requirements

By setting a net-zero target, your company commits to:

- Achieve the near-term and long-term targets in accordance with the rules of the **Greenhouse Gas Protocol** within the specified timeframe.
- Achieve the near-term and long-term targets in accordance with the **SBTi's Net-Zero Standard and Criteria**, which requires companies to directly reduce absolute emissions across scopes 1, 2 and 3 at least 90% by 2050.
- Publicly report its company-wide scope 1, 2 and 3 GHG emissions inventory and progress against published targets on an annual basis. Companies shall follow the **Greenhouse Gas Protocol Corporate Accounting and Reporting Standard**, the **Scope 2 Guidance** and the **Greenhouse Gas Protocol Value Chain (Scope 3) Accounting and Reporting Standard**.

<u>Predefined target options</u>

"Our company commits to reach net-zero by 2050. As part of this, it commits to reduce absolute scope 1, 2 and 3 GHG emissions __% by 20__ from a 20__ base year"

- 90-100% of emissions
- Base Year between 2018-2021
- Target Year of 2050 or earlier

SME Target Submission – How much does it cost?

Selected Service Price Setting new near-term targets or replacing previous near-term targets	$1,000 USD
Setting new net-zero targets ONLY (only companies with previously set 1.5°C near-term targets are eligible for this option)	$1,000 USD
Setting near-term targets AND net-zero targets	$2,000 USD

Benefits of setting SBTs

Brand Reputation

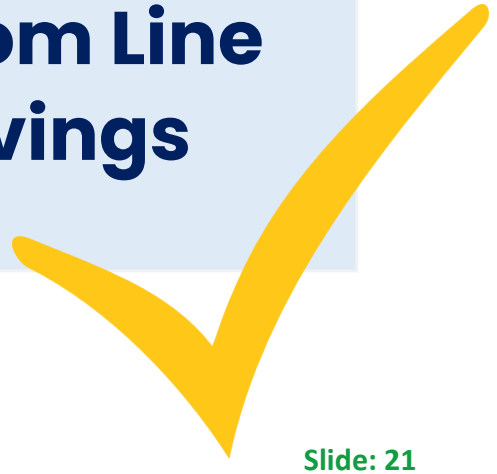
Investor Confidence

Resilience Against Regulation

Increased Innovation

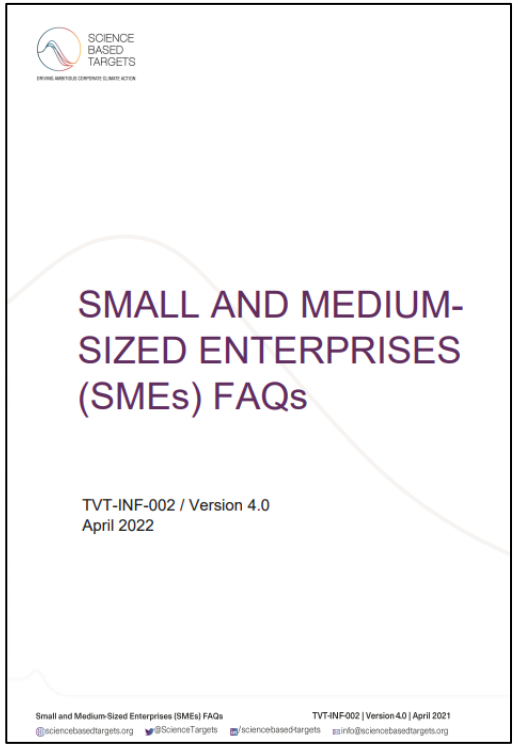
Competitive Edge

Bottom Line Savings



SME Target Submission – Key Resources

[SME Target Validation Booking System (jotform.com)]



[FAQs-for-SMEs.pdf (sciencebasedtargets.org)]

Contact Us

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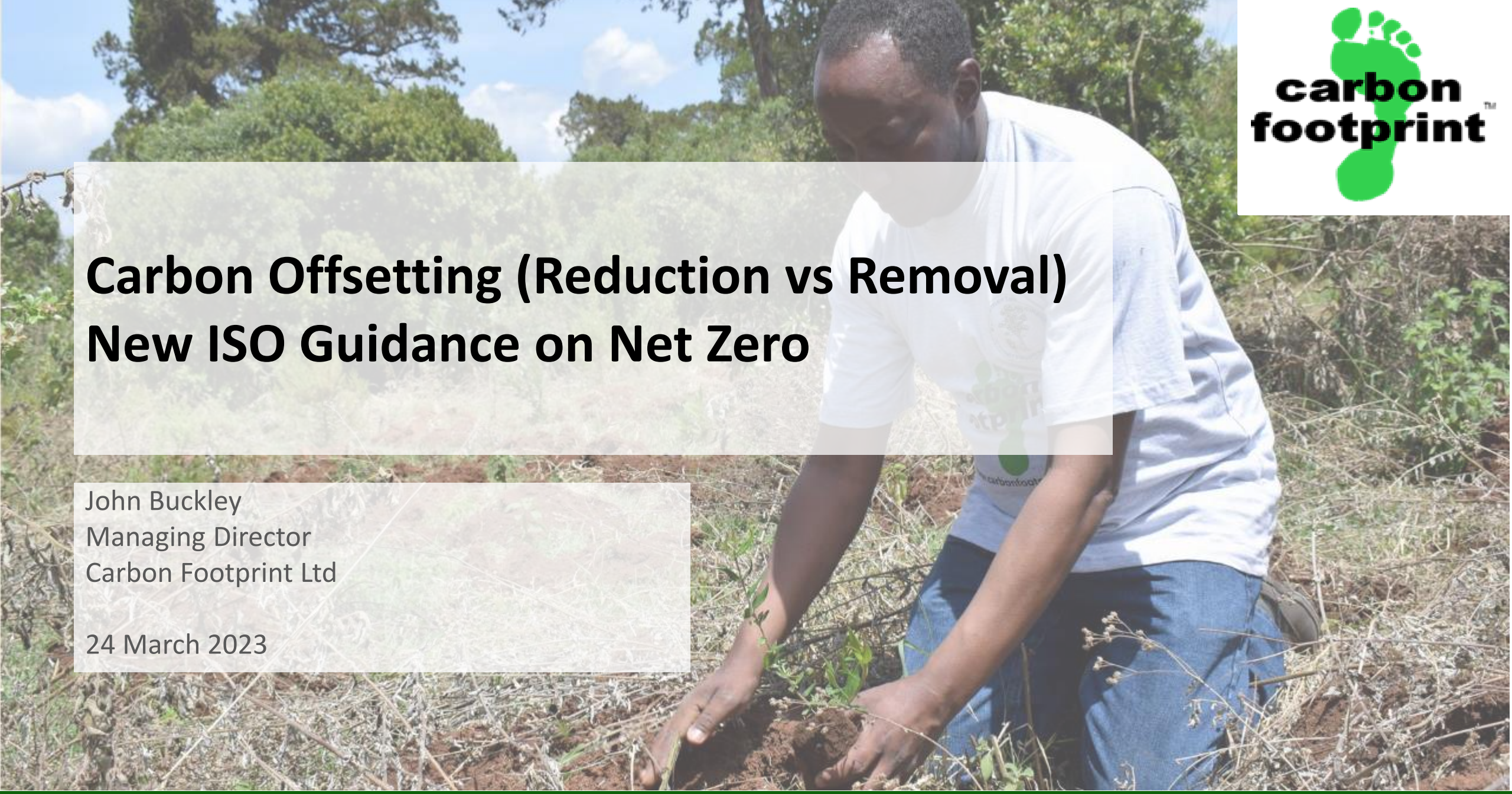


Carbon Offsetting (Reduction vs Removal)
New ISO Guidance on Net Zero

John Buckley
Managing Director
Carbon Footprint Ltd

24 March 2023

What is Carbon Offsetting?

Carbon offsetting

is a way to financially **support projects** that need additional funding around the world that **reduce** greenhouse gas emissions or **remove** greenhouse gases (usually CO_2) from the atmosphere

The role of Carbon Offsetting?

“We know we have a limited carbon budget. On some measures we only have 10 years left at current emissions rates before we have blown through 1.5 degrees of warming and moved to more catastrophic levels. So we need to preserve and extend that budget as much as possible. Carbon offsets help do that.

The vast majority of offsets will flow to emerging and particularly developing economies for reforestation, for nature-based solutions and for the development of renewable power and other low-carbon sources, potentially on a scale of $100 billion plus a year for parts of the world that need it the most.

So it is an incredibly important market, but as with everything with climate we need to put it in perspective. **In no way is this a silver bullet that removes responsibility from anyone for reducing absolute emissions.** ”

UN Special Envoy on Climate Action and Finance, Mark Carney. United Nations

2 Broad Categories of Carbon Offsetting



Reduction

- Renewable Energy
- Energy Efficiency
- Reduction Deforestation

- Afforestation / Reforestation
- Direct Air Carbon Capture
- Biochar
- Enhanced Weathering
- Etc.

Removal

Current costs and availability

Decreasing availability

Carbon Reduction

Carbon Removal

Increasing Price per tonne CO_2

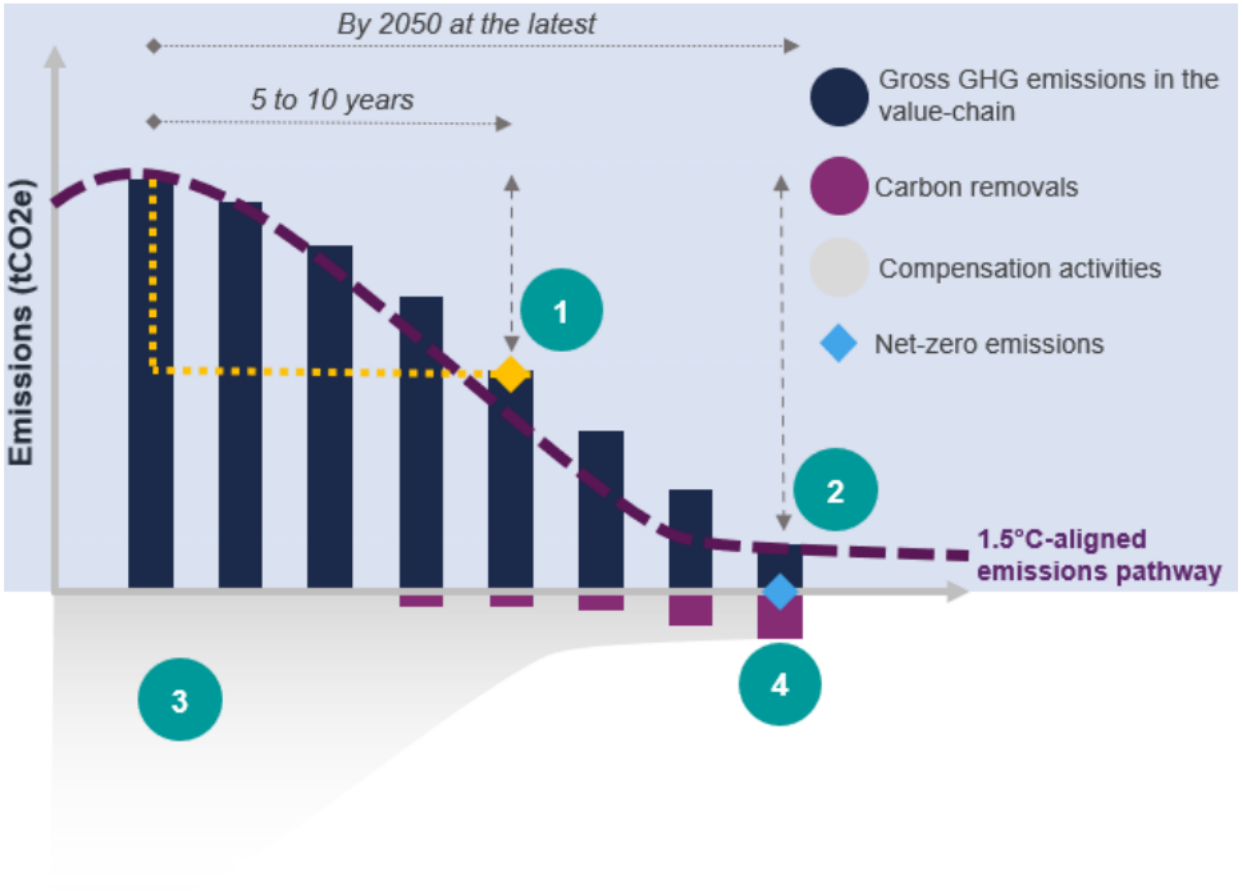
The Oxford Principles for Net Zero Aligned Carbon Offsetting (Sept 2020)

"An immediate transition to 100% carbon removals is not necessary, nor is it currently feasible, but organisations must commit to gradually increase the percentage of carbon removal offsets they procure with a view to exclusively sourcing carbon removals by mid-century [i.e. 2050]."

1. Cut emissions, use high quality offsets, and regularly revise offsetting strategy as best practice evolves
2. Shift to carbon removal offsetting
3. Shift to long-lived storage
4. Support the development of net zero aligned offsetting

Science Based Targets Initiative (SBTi) – Net Zero

Figure 2. *Graphical representation of a near-term SBT (1), long-term SBT (2), additional compensation (3) and the point of reaching net-zero (4) when residual emissions are balanced with carbon removals.*



Net Zero vs Carbon Neutral

Net Zero

net zero GHG condition in which **human-caused residual GHG** emissions are **balanced by** human-led **removals** over a specified period and within specified boundaries

Definition from IWA 41-2022

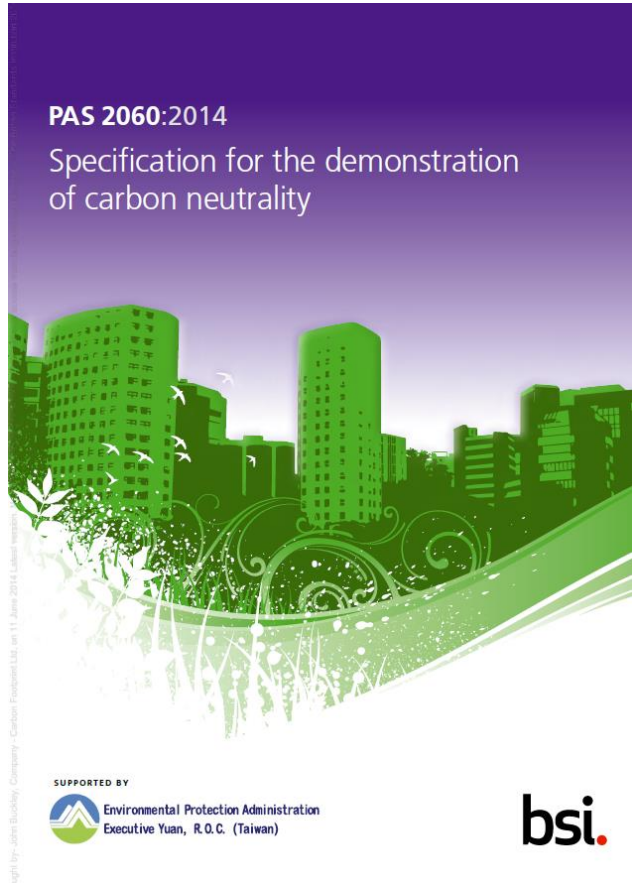
Carbon Neutral

condition in which during a specified period there has been no net increase in the global emission of greenhouse gases to the atmosphere as a result of the greenhouse gas emissions associated with the subject during the same period

Definition from BSI PAS 2060

BSI's PAS 2060:2014
Specification for the demonstration of carbon neutrality

- Quantify emissions (Scope 1, 2 & 3)
- Develop a Carbon Management Plan
- Take Action to Reduce
- Declaration of a commitment to Carbon Neutrality
- Offset residual emissions using verified carbon offsets
- Produce a Qualifying Explanatory Statement (QAS)



Net Zero Guidelines
IWA 42-2022(E)

"This document provides guiding principles and recommendations to enable a common approach with a high level of ambition, to drive organizations to achieve net zero GHGs as soon as possible and by 2050 at the latest."

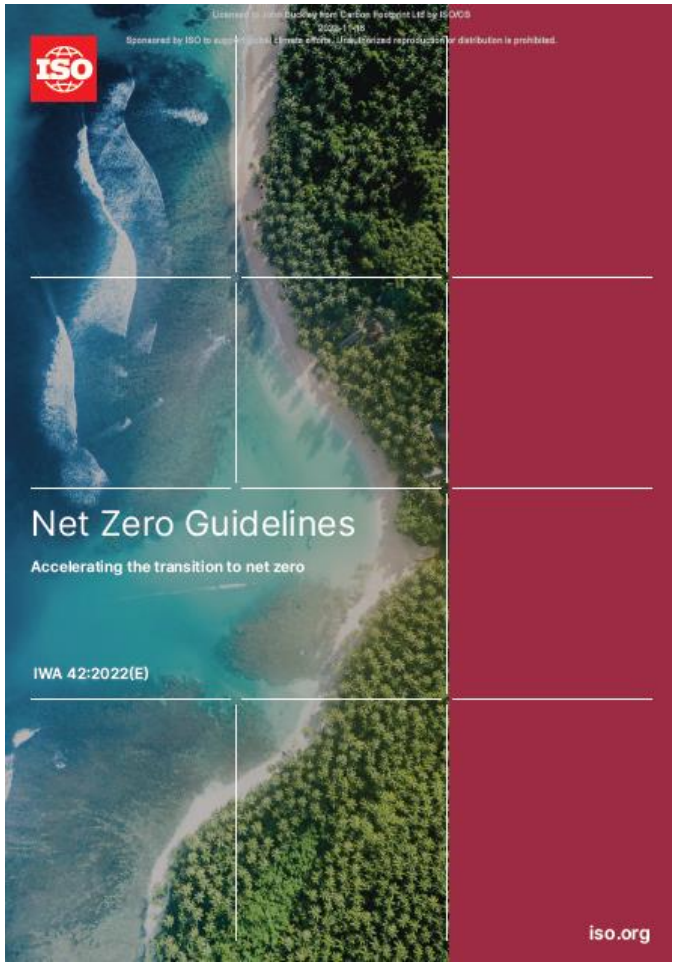
<u>Definitions from IWA 41-2022</u>

net zero

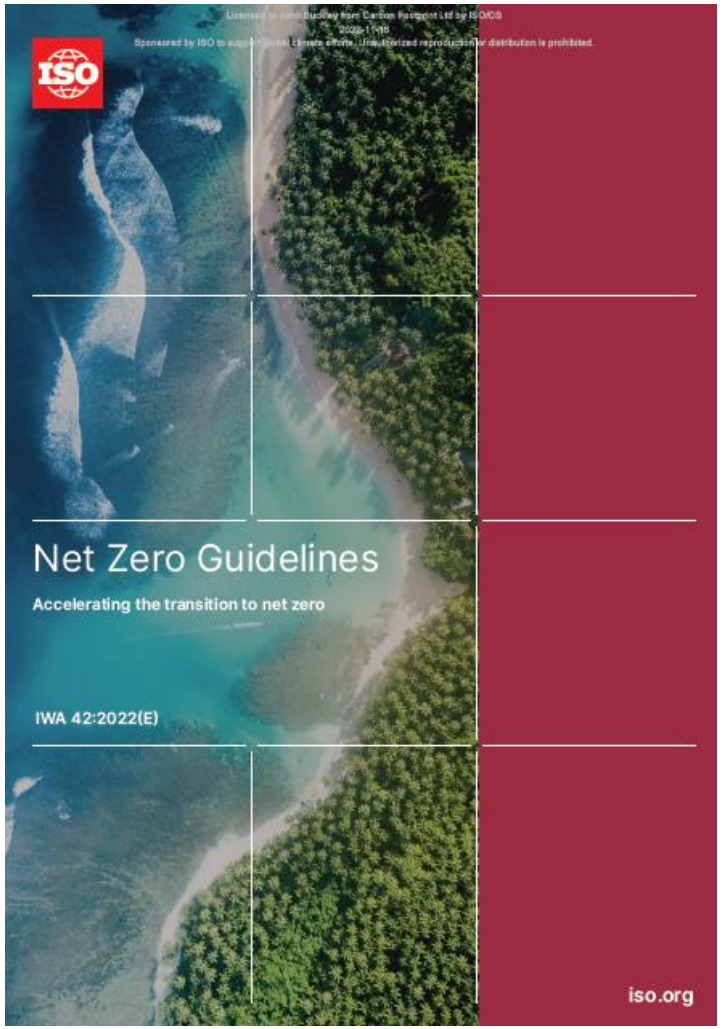
net zero GHG condition in which human-caused *residual GHG emissions* are balanced by **human-led *removals*** over a specified period and within specified boundaries

Human-led removals include ecosystem restoration, direct air carbon capture and storage, reforestation and afforestation, enhanced weathering (mixing soil with crushed rock), biochar and other effective methods.

Offset *emissions reduction* or *removal* resulting from an action outside the *organization's* boundaries used to counterbalance the organization's *residual emissions*



Net Zero Guidelines
IWA 42-2022(E)



Targets:

The organization should set targets consistent with **50% global GHG emissions reductions by 2030** (from a 2018 global baseline), achieving **net zero by 2050 at the latest**, and supporting global efforts to limit global warming to 1,5 °C above pre-industrial temperatures.

Net zero targets should include emissions related to all relevant GHGs and all Scope 1, Scope 2 and Scope 3 emissions, as appropriate.

Test of any good Carbon Offsetting project

- Emission Reductions & Removals need to:
  - Be **Additional** (to business as usual – require additional funding to happen)
  - Be **Measurable**
  - Be **Verifiable**
  - Be **Permanent**
  - **Avoid leakage** (stopping emissions being moved to another place)
  - **Avoid double counting**

Leading International Standards

- Provide and maintain methodologies for projects to follow
- Validation process - to check projects meet the requirements
- Ongoing Verification (by independent verifiers) – to verify the carbon savings achieved
- Registries to issue, transfer and retire credits on (preventing double counting)
- Issuance of Carbon Credits
  - 1 Carbon Credit = 1 tonne of CO_2e saved
- Standards are continuingly evolving – methodologies are reviewed on regular cycles

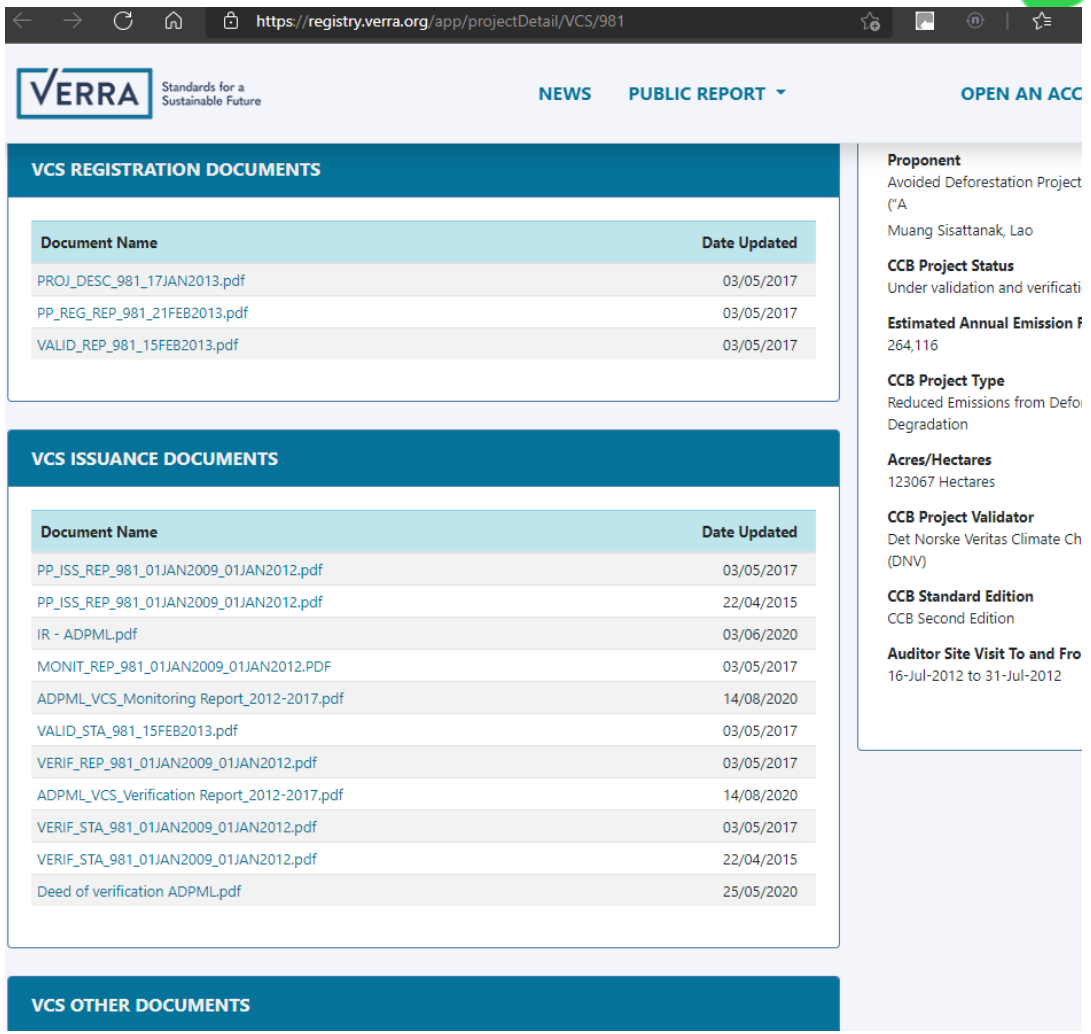
Verified Carbon Standard

Gold Standard
Climate Security & Sustainable Development

UNFCCC

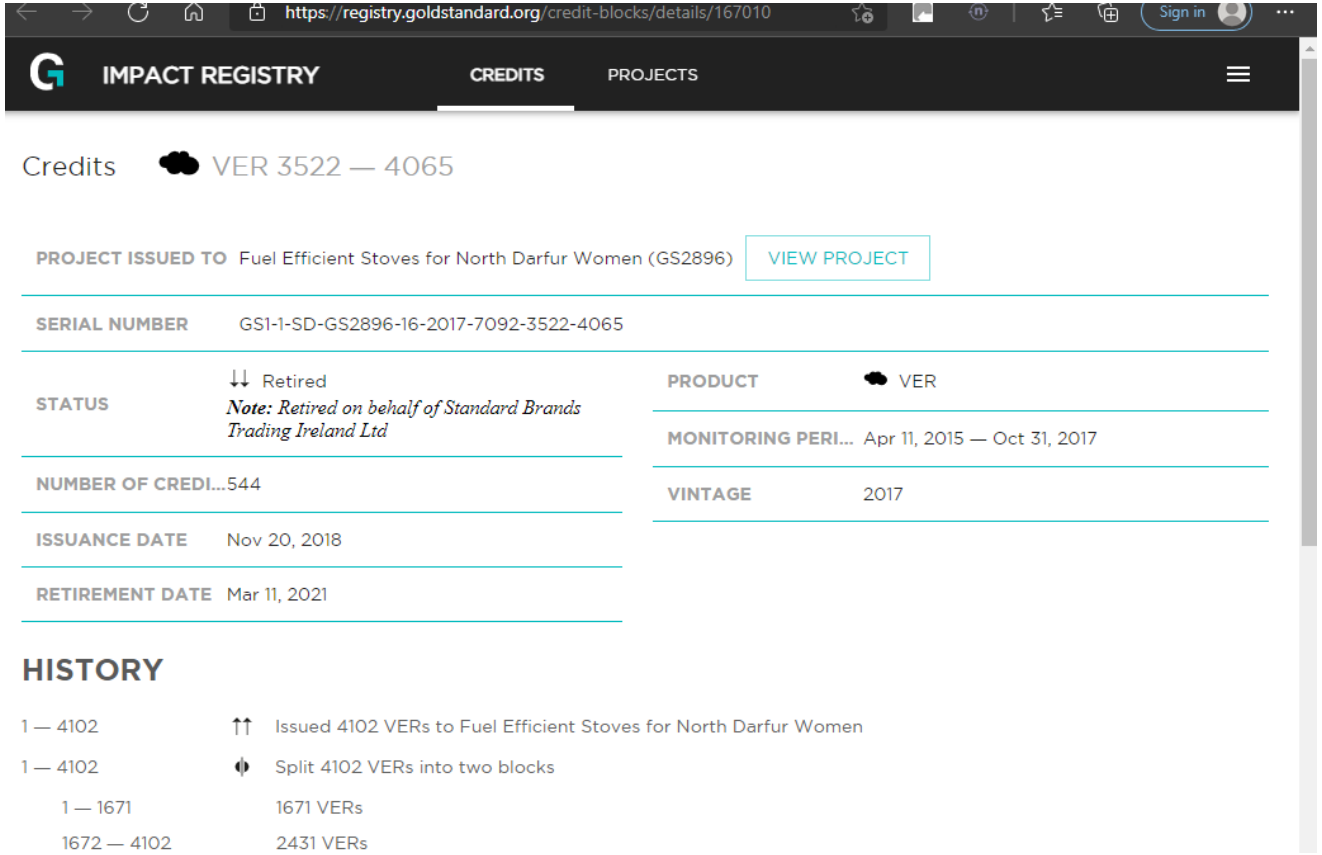
Full records and visibility of project documentation

- Registration Documents
  - Project Description Document (PDD)
  - Validation Documents
- Credit Issuance Document
  - Verification Documents
  - Monitoring Report
  - Issuance Deeds



Carbon Registries

- Registry accounts hold issued carbon credits
- Allow transition of ownership (e.g. Project developer to Carbon Offset Provider)
- Allow credits to be retired /cancelled (e.g. on behalf of the end customer)
- Allow transparency (publicly viewable)
- Audit trail (showing retirement, serial numbers, verification documentation etc.)



Gold Standard®
Climate Security & Sustainable Development

Summary

- Keep following the current best practice / guidelines as they evolve
- Set Net Zero Targets for your organisation:
  - 50% reduction by 2030
  - At least 90% reduction by 2050 (at the latest)
  - Plan to use Removal projects for the final 10%
- You can be Carbon Neutral on the way to Net Zero
  - Keep reducing emissions as much as you can (Scope 1, 2 &3)
  - Offset residual emissions each year using high quality Carbon Reduction and / or Carbon Removal
  - Gradually increasing the % of Carbon Removal

It is time to start on your Net Zero pathway and offset residual emissions on the way

Thank You!

John Buckley

Managing Director, Carbon Footprint Ltd

john.buckley@carbonfootprint.com

Sustainable Business Network

Amy Bompas
Durrell Wildlife Conservation Trust

24 March 2023

Photo credits: Durrell, IPE, Biotropicos

Our vision of the future

A wilder, healthier, more colourful world

"We have inherited an incredibly beautiful and complex garden, but the trouble is that we have been appallingly bad gardeners…
By neglecting our garden, we are storing up for ourselves, in the not very distant future, a world catastrophe as bad as any atomic war, and we are doing it with all the bland complacency of an idiot child chopping up a Rembrandt with a pair of scissors. We go on, year after year, all over the world, creating dust bowls and erosion, cutting down forests and overgrazing our grasslands”

Gerald Durrell, 1966

Impactful nature based solution

- Sequestering carbon for 60 years by saving habitat
- Species-rich forest sequester 40 x more carbon than monoculture
- Link climate and biodiversity concerns
- Project designed with local community
- Longstanding relationship with local partners
- Reforestation – not avoided deforestation

More than just carbon

- Reduce Carbon
- Revive Ecosystems
- Recover Species
- Rebuild Livelihoods

Transparency & Integrity

Project Design Document – based on Plan Vivo standard

Maximum funds to nature (>90%)

Registered Charity

In-house carbon registry avoids reselling or double counting

Regular reports to business partners

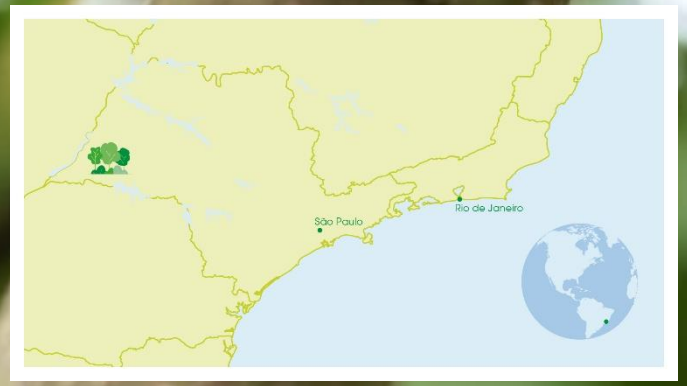
Each funder knows where trees are planted

Project data publicly available on www.restor.eco

Impact over certification

- Expensive
- Slow process – 2 years
- Diverts funds from nature
- Outside consultants rather than local experts

Atlantic Forest - Brazil



Atlantic Forest - the challenge

One of world's richest, most biodiverse habitats

7% of world's species, many endemic

6% of forest remains, in isolated fragments

Habitat loss leads to reduced genetic diversity

Risk of fatality for animals attempting to move between fragments

Connectivity essential to wildlife

Challenges for landless community

Poverty up to 47% in project region

In the absence of carbon finance, forest would not be restored due to lack of funding

Planting methodology

Field diagnosis to identify potential of land and most appropriate methodology

Active planting and assisted natural regeneration

Seedlings cultivated in local nurseries

2000 trees planted per ha

100+ native species

Fast growing and diversity species

Maintained for 3-4 years until 80% forest cover /3000 trees per ha

State legislation - guidelines and criteria for ecological restoration;

Agreement with landowner – responsible for fencing, protecting land

Agroforestry "stepping stones"

Carbon methodology

Carbon sequestration potential estimate
383 tonnes CO2 / ha over a 30 year period

Based on local datasets and research

20% reduction in calculations to allow for error

20% insurance buffer

Annual remote sensing of forest

Use of LIDAR to monitor biomass of trees

Regular tests to monitor belowground biomass

Dead wood and litter not included

No carbon leakage expected from project activities

Risk analysis and mitigation strategies in place

Monitoring Protocols

Robust and science driven

Close collaboration with local partners

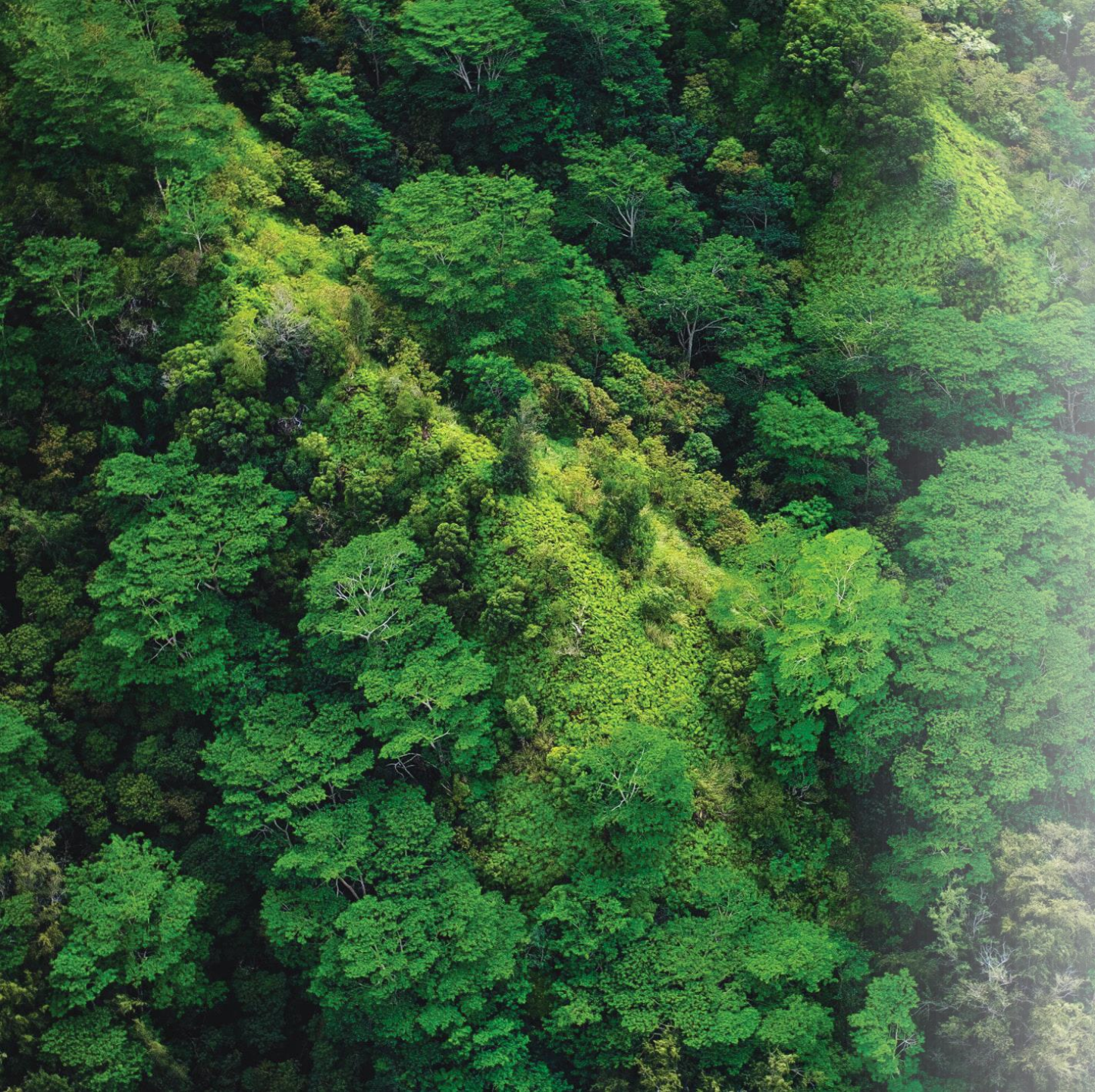
Protocol adapted from WRI Sustainability Index for Forest Landscape Restoration

Effectiveness monitoring based on Conservation Standards / Theory of Change

Verra standard monitoring protocols

January 2021

January 2023



Carbon impact

1,915,709 tonnes total carbon stock

383,141 tonnes risk buffer (20%)

35,220 tonnes retired

- To be absorbed from atmosphere
- Based on average 383 tonnes / ha over 30 years

1,497,348 tonnes carbon stock available

*Data 31 Dec 2022

Reforestation impact

178,846 trees planted and being nurtured

92 native species

86 hectares forest under restoration

*Data 28 Feb 2023

Biodiversity impact

Corridors create lifelines

Immediate benefit to biodiversity

Provide cover for mammals in 1-2 years

Contribute to conservation of:

- 100 mammal species
- 439 birds
- 30 amphibians

Durrell's first member of staff in Brazil to coordinate and scale up our work

Biodiversity projects funded

Black lion tamarins

- Canopy road crossings
- Nest boxes
- Translocation between forest fragments

Bromeliad frogs

Armadillos

Giant Anteaters

Durrell work with local partners

Community impact

62 jobs in community nurseries (29 of which are women)

13 jobs in forest restoration

32 families benefit from additional salaries

Up to GBP 2,000 extra income per month

Mean monthly income of rural family in project region is GBP 629

*Data 31 Dec 2022

More information?

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www.durrell.org/get-involved/rewild-carbon


RE
WILD
CARBON