



# Global Position on Net Zero Tea



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# Introduction

Climate change is one of the greatest challenges we face globally and is having unprecedented and destructive impacts on livelihoods worldwide. The Global South, where tea is often produced, is facing the effects of climate change at an increasing rate, and if we fail to reduce emissions swiftly, these impacts will continue to worsen.

At ETP, our [Strategy2030](#) is committed to working towards a tea industry that has minimal environmental impact. Net zero is one of three focus areas within our work on environmental sustainability, alongside climate-resilient agriculture and zero deforestation. Our aim is to support tea farmers and businesses in lowering their emissions and transitioning to more sustainable and efficient practices.

This paper outlines ETP's position on net zero in the tea industry. It describes some of the challenges to achieving net zero tea and ETP's approach to catalysing change.



# Terms and Definitions



## Net zero

Net zero is when the amount of greenhouse gases (GHGs) emitted into the atmosphere – such as carbon dioxide, methane, and nitrous oxide – are equal to those removed.

Companies committed to net zero must lower their emissions as much as possible and ensure any 'residual emissions' are removed from the atmosphere. This removal occurs naturally as trees and oceans absorb gases. It can also be achieved through technology and human activities such as tree planting and forest restoration.

Corporate net zero targets include global scope 1, 2 and 3 emissions along the entire supply chain.

## Climate change mitigation

Climate change mitigation describes any human activity that reduces or prevents the emission of GHGs. In the tea sector, mitigation can include a number of different activities, from improving energy efficiency to informing farmers about correct fertiliser use.

At ETP, we work on both climate change mitigation and adaptation. This means that we help the tea industry reduce its environmental impact whilst also preparing for, and managing, the impacts of climate change.

## Carbon footprint

A carbon footprint is the total amount of GHGs emitted by the actions of an individual or entity, or during the lifecycle of a product or service. Carbon footprints take into account not only carbon dioxide but also other GHGs, and are measured in kilograms of carbon dioxide equivalent (CO<sub>2</sub>e). They include:

- direct emissions, such as those released from fuel combustion during manufacturing (referred to as scope one emissions);
- indirect emissions, which include those emitted by energy providers to create the electricity used in production (known as scope two emissions); and
- emissions from the production of the products and materials used by companies, which are known as scope three emissions.

## Carbon offsetting

Carbon offsetting schemes are commonly used to reach net zero, allowing individuals and organisations to balance their emissions by investing in projects that remove GHGs from the atmosphere. While offsets can be useful in some cases, they should not be seen as a substitute for reducing emissions at their source. If offsets are used, they should be high-quality, ideally from projects that remove carbon from the atmosphere, and be verified for credibility.

ETP encourages businesses to instead look for opportunities for [carbon insetting](#), which involves taking responsibility for reducing emissions in their own supply chain and operations by implementing nature-based solutions like reforestation, agroforestry, renewable energy, and regenerative agriculture.



# Human Rights and International Frameworks

## Climate change and human rights

ETP recognises that climate change poses a severe threat to the enjoyment of various rights enshrined in the United Nation's Universal Declaration of Human Rights, such as the right to life, health, food, water, sanitation, housing, and development. Climate change adversely affects crop yields, increases poverty, and causes widespread displacement.

Natural disasters and increased occurrences of diseases caused by climate change also present a significant threat to life. These impacts disproportionately affect rural communities that depend on agriculture and vulnerable groups such as women, children, and people living in poverty.

The relationship between human rights and climate change is outlined in the Paris Agreement, which was adopted as part of the [United Nations Convention on Climate Change \(UNFCCC\)](#). The agreement says states "should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights." As per the UN's Guiding Principles on Business and Human Rights (UNGPs), we believe it is important for businesses to adopt a similar approach and consider climate change impacts and interventions through a human rights lens while also prioritising environmental protection.

Our efforts towards achieving a net-zero tea industry also align with several international frameworks and bodies. These include the [United Nations Sustainable Development Goals](#), the [Science Based Target Initiative \(SBTi\)](#), the GHG Protocol, and research published by the [Intergovernmental Panel on Climate Change \(IPCC\)](#).

## Science-based targets

We strongly encourage our members and other stakeholders in the tea industry to adopt credible, science-based targets that align with the [Science Based Targets Initiative \(SBTi\)](#).

Establishing credible targets that correspond with the latest climate science is vital for the private sector to decarbonise and mitigate the most severe consequences of climate change. Adopting science-based targets for greenhouse gas (GHG) emissions ensure businesses take accountability for their scope 1, 2 and 3 emissions and decrease them at a rate that is in line with the Paris Agreement's objectives of limiting global warming to well below 2°C, and striving for less than 1.5°C.

In addition to setting targets to reduce emissions, we urge businesses to adopt [science-based net zero targets](#) as an additional step. These targets are more comprehensive and encompass not only emissions reduction but also the neutralisation of any remaining emissions that cannot be eliminated through mitigation.



# Challenges

Tea contributes to emissions at multiple stages of its lifecycle, from cultivation in the field to consumer preparation. We know that achieving full industry wide decarbonisation will require tea brands and retailers to address emissions from a range of sources, including transportation, packaging, and consumption.

While we recognise that significant efforts are needed to reduce emissions across the supply chain, ETP's primary focus is on tea-producing regions. Specifically, we aim to assist smallholder tea farmers and producing companies to implement more efficient and sustainable practices. Some of the main challenges to achieving net zero in the supply chain are highlighted below:

## Data gaps

The limited availability and quality of emissions data from suppliers presents a major challenge for companies wanting to achieve net zero. Many organisations must rely on estimations taken from broader sector and national-level emissions data. By relying on estimates it is difficult for companies to pinpoint emissions hotspots in their supply chains and understand where they should invest to achieve net zero.







## High energy demand during tea processing

The tea industry relies on large amounts of energy for tea processing. Heat, derived from burning fossil fuels (oil or coal) or biomass, which is not always sourced sustainably, is used to dry tea leaves, and electricity from the national grid powers factory machines.

A substantial portion of grid electricity is generated from fossil fuels, although the extent depends on the national supply of renewable energy. In addition to this, tea factories often have outdated machinery, and upgrading to newer and more energy-efficient equipment, or switching to on-site renewable energy sources, is often beyond producers' financial capacity.

## Fertiliser use

Chemical fertilisers are typically the main source of emissions on tea farms and estates. The production and transportation of inorganic fertilisers require large amounts of energy from fossil fuels, causing carbon emissions, while applying nitrogen-based fertilisers on tea bushes can result in nitrous oxide emissions, a potent greenhouse gas.

Improper and excessive use of fertilisers by farmers will increase the overall carbon footprint of tea. Fertilisers also present a risk of groundwater contamination, which can have negative local impacts on both human health and ecosystems.

## Deforestation

Forests are an important carbon sink, capturing carbon dioxide as they grow and helping mitigate climate change. Deforestation, therefore, results in a loss of a valuable means of carbon storage, and it also generates emissions, as felled trees release carbon dioxide into the atmosphere. In the tea industry, deforestation arises mainly due to land clearance for planting new tea bushes and the unsustainable sourcing of fuelwood for tea factories and tea workers' homes.

## Lack of finance, awareness, and incentives

Limited awareness and access to information are other barriers to achieving net zero. Farmers and producers are not always familiar with alternative practices that can lead to lower emissions, their benefits, or how to implement them properly. Examples include sustainable fuelwood sourcing, appropriate fertiliser application, effective soil management techniques, and pesticide use.

In addition to this, transitioning to new practices typically requires an upfront investment, which can discourage farmers and producers, especially in the context of low profit margins and incomes. The need for sufficient financial incentives, such as income opportunities from agroforestry, creates additional barriers to change.



# Our Approach

ETP's approach to net zero tea is focused on convening tea industry stakeholders to support a transition away from unsustainable energy sources and practices in favour of cleaner, more efficient ones. To achieve this, we use a systems change approach, which is reflected in our [Strategy2030 and Theory of Change](#). This means acknowledging that the issues we work on are interconnected and require broad-based efforts to achieve progress, combining on-the-ground projects, policy work, and private sector engagement.

We are committed to the following actions to enable change towards a net zero tea sector:

## Supporting tea farmers and producers

Through our projects, we collaborate with farmers and producers, strengthening their understanding of climate change while also encouraging and assisting them to adopt more sustainable practices. We offer hands-on training and on-site demonstrations on farming techniques, including optimal fertiliser use, effective pest management, and agroforestry. These practices help improve crop yields, safeguard livelihoods, and reduce farm emissions.

We also assist tea producers to reduce their overall energy consumption and lower their emissions by gathering GHG emission data from tea-producing regions, conducting research, sharing best practice and supporting the application of low-carbon technologies and practices. As part of this, we develop training materials that outline best practices for energy efficiency and emissions reductions in tea factories.

To accelerate the transition to net zero, we seek to highlight the benefits of net zero for businesses. This includes creating business cases for lower-carbon fuel alternatives, such as biomass briquettes, and identifying opportunities for cost-saving and improved operational efficiency.

## Engaging in multistakeholder collaboration

Climate change is a global problem that requires a joint effort from all actors, including businesses, governments, and civil society. We believe that a net zero tea industry is achievable through sector-wide collaboration in setting science-based targets and developing robust methodologies to meet net-zero commitments.

Collaboration is particularly important in identifying and overcoming shared barriers such as financial limitations or insufficient knowledge of low-carbon practices. Through our work, we bring together tea industry stakeholders and corporate leadership to pool resources, share perspectives, and accelerate efforts and commitments towards a net zero tea industry.

We work closely in partnership with several organisations to achieve net zero, including the Food and Agriculture Organisation of the UN (FAO), and the German Society for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ).



We're partnering with the FAO on a [low-carbon tea program in Kenya](#), which aims to reduce carbon emissions in the tea value chain by promoting a supportive market and policy environment, and testing low-carbon technologies in tea production.

The project will help establish a resilient, low-carbon tea sector and support Kenya in achieving its climate goals.

## Brokering shared learning and influencing

The principle of shared learning, an important foundation of ETP's Strategy2030, is central to our approach to net zero. We recognise that driving change at the scale and speed required involves sharing best practices and lessons learned from across the global tea sector.

Leveraging the extensive experience of our on-the-ground teams and insights gleaned from our work on climate change mitigation, ETP is uniquely positioned to capture and disseminate knowledge across different tea-producing regions.

We remain committed to monitoring and evaluating the efficacy of low-carbon technologies and practices and sharing data and insights with the private sector, civil society organisations, and governments to influence change. In addition, we examine policies and legislation to ensure they support the changes necessary to achieve net zero, and we create evidence-based papers and recommendations to raise awareness of challenges and solutions.

## Promoting greater transparency

Given the urgency of the climate crisis, it is critical for tea industry stakeholders to embrace transparency in their approaches to measuring carbon emissions, publishing their climate strategies and reporting on their performance. In particular, we encourage businesses to be accountable and non-competitive in their efforts towards net zero by making their supply chain emissions data open source.

By sharing their emissions data, companies can advance the sector's understanding of emissions hotspots and work together towards achieving net zero. By avoiding proprietary behaviour, businesses also increase the consistency of data collection across the sector, making it easier to monitor and quantify progress.

## Creating the right conditions for change

ETP takes a holistic approach to overcome the barriers preventing the transition to net zero. This means that to achieve long-lasting change, we believe it is essential we address social and economic, and systemic challenges, alongside our efforts to mitigate climate change. For example, gender inequality and disparities in access to finance, information, and resources limit women's ability to adopt low-carbon practices or influence others to do so.

Income levels and profit margins can also determine one's ability and willingness to lower their emissions. Therefore, in addition to our many projects that focus on improving equality and livelihoods, we ensure that we consider the concerns and experiences of women when designing our climate initiatives.

We also explore opportunities to financially incentivise tea farmers and producers, such as implementing Payments for Ecosystem Services (PES) and facilitating access to new markets through low-carbon certifications.



In a [research partnership with the UK Government's Work and Opportunities for Women \(WOW\) Programme](#), we explored the link between climate change and gender in the tea sector. In response to the findings, we're partnering with WOW to pilot a project that provides financial incentives to women tea farmers in Malawi to reforest areas surrounding their farms. Together, we're empowering women and creating a more sustainable future for the tea industry.

# Conclusion

As the impacts of climate change become increasingly severe, efforts towards net zero are needed more than ever. All actors must take urgent action to reduce emissions across the entire supply chain.

Our objective is to support tea farmers and producers to implement more efficient and sustainable practices by taking a holistic approach that addresses social, economic and environmental issues jointly.

ETP has expertise in bringing together diverse stakeholders and will continue to strive to share learning and best practices, promote transparency, and foster multistakeholder collaboration to improve the industry's understanding and progress towards net zero.



# Resources

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