we • soda

Case for Change

Global trends that have shaped WE Soda's Sustainability Plan

Edition 1 | December 2025

Executive Summary

This document is one part of a trilogy of documents that shapes WE Soda's approach to sustainability.

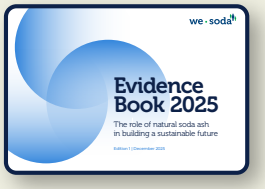
Our sustainability philosophy is based on three principles: that all soda ash makes a contribution to sustainable development (Principle 1), that primary solution mined natural soda ash has better sustainability credentials than synthetic soda ash (Principle 2), and the global trends we face and have outlined in this document mean there is a clear and robust need for us to change our processes and how we work in our communities and with our people. This is Principle 3, or our 'case for change'.

Our first document, the Evidence Book, provides the evidence for Principle 1 and 2; the Sustainability Plan explains how we will achieve those improvements, with concrete targets, milestones, and actions.

About this Document

This document provides an overview of how global trends shape, and will continue to shape, WE Soda's product offer and operating context. Our main conclusion from the evidence outlined in this report is that the global trends of climate change, water scarcity, biodiversity loss, resource circularity and social inequality are interconnected and escalating challenges with far-reaching consequences that have shaped, and will continue to shape, the soda ash industry and society more broadly. Staying abreast of the latest science is essential to safeguard and extend our competitive advantage. It also forms the basis of our Double Materiality Assessment which we summarise in our Annual Report.

Download the Sustainability Plan from **wesoda.com/information**



Download the Evidence Book from **wesoda.com/information**

Principle 1

Soda ash makes an important contribution to sustainable development
= Evidence Book

Principle 2

Primary solution mined natural soda ash has better sustainability credentials than synthetic soda ash
= Evidence Book

Principle 3

Global trends require a proactive response – business as usual is no longer viable, creating both opportunities and risks for WE Soda
= Case for Change

Principle 1 + Principle 2 + Principle 3 = WE Soda's Sustainability Plan

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A Word from our CSO – Alan Knight

The mandate for businesses to reduce their negative impacts on the environment and make a positive contribution to sustainable development could not be stronger.

Sustainability requires coordination, collaboration and alignment across the value chains for all the products and services of modern life. While the consumer brands seek change, much of the required innovation and change can only occur within the many links in the supply chain. Likewise, companies deep in the supply chain may have the ability of clever innovation to drive change, but if their customers are not responsive that progress will be stifled. However, this starts with understanding what companies across the value chain are responding to. That will be unknown unless companies share their evidence and thinking. This is what this publication is meant to achieve.

Collating the evidence into one document ensures that WE Soda's stakeholders can see that our Sustainability Plan is based on sound science and long-term thinking.

This document is a high-level survey of issues, trends and themes that are relevant to WE Soda's goal of contributing to sustainable development. To uphold our values of transparency, cross-value chain collaboration, and encourage debate and feedback we have made this document public.

The research was also crucial to our Double Materiality Assessment, which considers WE Soda's impacts on these trends, and which ones will be crucial for us to pay particular attention to as we look to implement our Sustainability Plan.

Our intention is to update the Case for Change with continuous reviews of the science and other global trends, ensuring that our key decision-makers are able to access the information that keeps WE Soda at the forefront of sustainability. While this work was completed by the WE Soda sustainability team with help from sustainability experts, we are grateful to the members of our newly created Independent Advisory Panel for their review, providing valuable advice on both our conclusions and how to present them. They will remain a key part of this process.

Alan Knight OBE, PhD. HonFSE
Chief Sustainability Officer, WE Soda

Introduction

Global trends require a proactive response – business as usual is no longer viable, creating both opportunities and risks for WE Soda.

Planetary Boundaries Framework

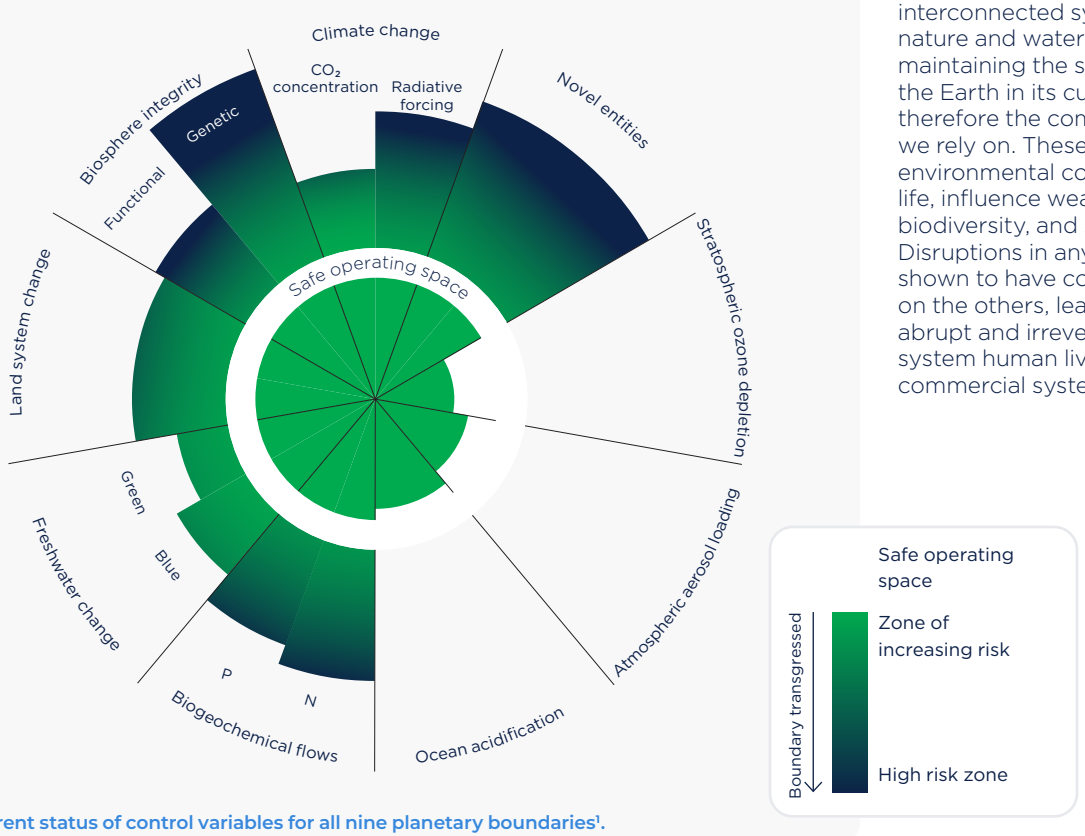


Figure 1 Current status of control variables for all nine planetary boundaries[1].

Our Case for Change starts not so much with the business case, but the planet, the challenges which face us all. The population is growing, and the population is using more resources. All those resources are built on fundamental principles such as plentiful supply of resources, clean air and water, and that healthy natural systems replenish the resources we rely on.

Despite its vast size, the planet is finite and operates through a nexus of interconnected systems – including climate, nature and water – that are crucial for maintaining the stability and resilience of the Earth in its current habitable state, and therefore the complex commercial systems we rely on. These systems regulate the environmental conditions that support life, influence weather patterns, maintain biodiversity, and sustain water supplies. Disruptions in any of these systems are shown to have compounding effects on the others, leading to potentially abrupt and irreversible change. On this system human lives and the complex commercial systems we rely on are built.

In 2009, a scientific framework known as the Planetary Boundaries Framework was introduced, identifying nine planetary boundaries that delineate a 'safe operating space' for humanity. These boundaries are thresholds for critical Earth processes, where crossing them could result in severe, destabilising impacts for ecosystems and consequently human society. Recently, an update to the Planetary Boundaries Framework concluded that six of the nine boundaries have now been transgressed (Figure 1)[1].

A critical concept in understanding planetary systems is the idea of tipping points – thresholds beyond which environmental changes become self-reinforcing, accelerating the transition to an entirely new state. Crossing these tipping points can result in abrupt, substantial and potentially irreversible changes, fundamentally altering ecosystems, threatening life, society and our commercial systems as we know them.

Therefore, these planetary boundaries, particularly those in the rising risk zone that are approaching their tipping points, serve as a clear foundation for guiding sustainability efforts. That said, the interconnected nature of these boundaries and their respective systems means that impact, either positive or negative, in one area can have effects on others, reinforcing the importance of a holistic approach to sustainability strategies.

The following section outlines and examines the evidence that highlights the urgent need for transformative action for all businesses, and the increasing societal and business imperative to act decisively on sustainable development.

1. Linking Global Trends with a Double Materiality Assessment

1.1 What is Double Materiality?

Over the last three decades, materiality from a corporate and sustainability perspective has evolved[2]. Historically, it has largely sat in the finance function of companies and, therefore, has focused on the external financial impact of societal, technological and regulatory changes, and investor demands, on the company. However, in recent years, materiality has become a key function and tool used by sustainability teams to drive change and manage risk[2]. This is, in large part, due to the growing acceptance that the impacts of sustainability, and climate change in particular, on company operations will be material.

Materiality has been further refined and developed through emerging regulations such as the Taskforce on Climate-related Financial Disclosures (TCFD), the Corporate Sustainability Reporting Directive (CSRD), and the International Sustainability Standards Board (ISSB). These frameworks have led to an increased acknowledgment that a company's impact on the climate – or any other aspect of sustainability – can be considered material[3]. This has led to the concept of double materiality, which recognises that a company can both affect and be affected by sustainability issues. It considers materiality from two dimensions: the financial dimension (external impacts on the company) and the impact dimension (the company's impact on the external environment)[4]. Double materiality considers both a company's own operations as well as its upstream and downstream value chain[5].

The European Sustainability Reporting Standards (ESRS) define these two aspects of materiality as:

- **Impact:** 'An impact perspective when it pertains to the company's material actual or potential, positive or negative impacts on people or the environment over the short-, medium- and long-term. Impacts include those connected with the company's own operations and the upstream and downstream value chain, including through its products and services, as well as through its business relationships.'
- **Financial:** 'A financial perspective if it triggers or could reasonably be expected to trigger material financial effects on the company. This is the case when a sustainability matter generates risks or opportunities that have a material influence or that could reasonably be expected to have a material influence on the company's development, financial position, financial performance, cash flows, access to finance or cost of capital over the short-, medium- or long-term'[6].

By capturing both dimensions, double materiality enables companies to understand material sustainability impacts, risks and opportunities which, subsequently, provide vital insights to inform strategy development.

In November 2024, WE Soda undertook a comprehensive review and adaptation of our Double Materiality Assessment. This process led to the identification of 47 key sustainability issues that both impact WE Soda and are, in turn, impacted by our operations. These issues formed the foundation for a structured framework that guided our research into emerging trends and supporting evidence.

Building on this foundation, we developed the concept of the Five Ps (Planet, Product, Process, Place, and People) which now shape our long-term Sustainability Plan. Each pillar reflects a distinct dimension of our sustainability strategy, and together they encompass the 47 identified topics. These topics vary in their degree of positive and negative materiality across environmental, societal, and business dimensions. To visualise and prioritise these impacts, each pillar is represented by its own materiality matrix, or 'dartboard', where the most material issues, whether financial or sustainability led, are placed at the centre, with less consequential topics positioned towards the outer rings.

In the overall assessment of the 47 specific sustainability topics that we identified as material to our business, the most material topic areas are:

1. Climate Change – this both impacts our product offer and our processes.
2. Water – water is an input, and water shortages will have a sudden and material impact on our processes.
3. Place – without a licence to operate from our neighbours, efficient operations will be challenged.
4. Our People – the safety and wellbeing of our people is key.

This document therefore focuses on the evidence behind these issues, giving us a deep understanding of the science. This then supports our ability to understand our product offer and the sustainability credentials outlined in our Evidence Book. From our analysis of these trends, we conclude that there is a strong 'case for change' – despite our existing sustainability credentials, we must always push for a more sustainable future. This conclusion is the driver behind our Sustainability Plan, which outlines how we will address the key issues.

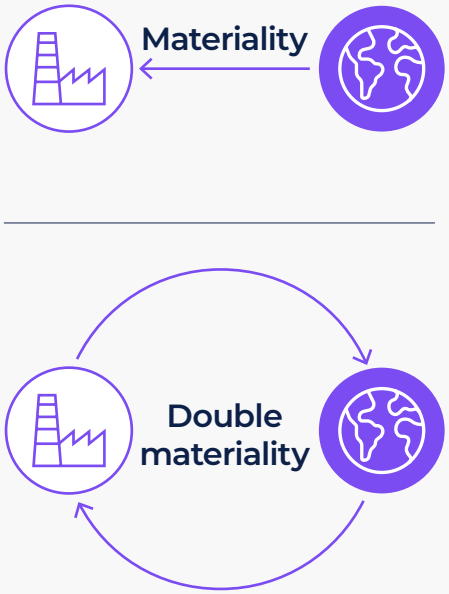
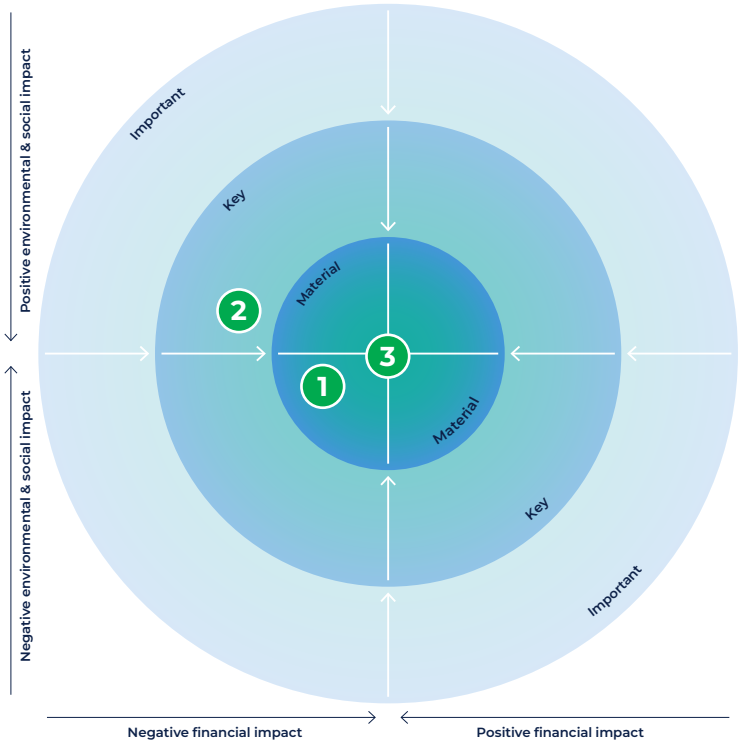


Figure 2 Visual representation of materiality and double materiality[5].

1. Linking Global Trends with a Double Materiality Assessment continued

1.2 WE Soda's Results

Our approach to double materiality is to position each of the 47 trends on what we call dartboards. The closer it is to the centre of the dartboard, the more material the issue is. WE Soda created dartboards of the results for each of the Five Ps. The findings can be seen below and viewed on our website:



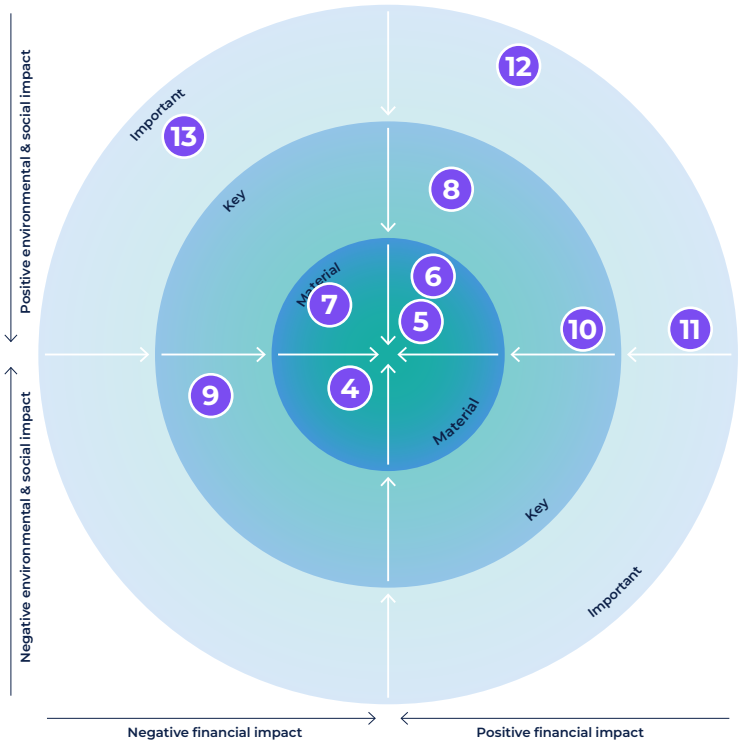
#	Topic name / EU theme	Materiality	Time period	Strategic response	ESRS Topic
1	Impact of climate change		Long	▪ Long-term sustainability plan ▪ Climate scenario analysis	**E1** (climate change)
2	Trust in green claims		Short	▪ Greenwashing policy ▪ Public affairs capability	**G1** (business conduct)
3	Politics and regulation		Long	▪ Public affairs capability	**G1** (business conduct)

Key

Positive impact | Positive & negative impact | Negative impact

Figure 3 WE Soda double materiality dartboard for the Planet pillar[7].

1. Linking Global Trends with a Double Materiality Assessment continued



#	Topic name / EU theme	Materiality	Time period	Strategic response	ESRS Topic
4	Carbon pricing use of product Scope 3		Short	▪ ETS challenge ▪ Public affairs capability	**E1** (climate change)
5	Market growth from solar PV and Lithium carbonate		Medium	▪ Product menu	**E1** (climate change)
6	Carbon footprint products vs. competitors		Medium	▪ Reducing carbon emissions ▪ Product menu	**E1** (climate change)
7	Carbon pricing (Scope 1 and 2)		Medium	▪ Public affairs capacity ▪ Reducing carbon emissions	**E1** (climate change)
8	Water use vs. competitors		Short	▪ Water reduction strategy	**E3** (water and marine resources)
9	Logistics carbon emissions		Long	▪ Net-zero roadmap ▪ Langh Tech	**E1** (climate change)
10	Product contribution to a circular economy		Short	▪ Net-zero roadmap ▪ Langh Tech	**E5** (resource use and circular economy)
11	Use of cullet in glass making		Long	▪ Product menu ▪ Developing new ways to make carbonate	**E1** (climate change)
12	Competitor carbon innovation		Long	▪ Developing zero carbon offer ▪ Net-zero roadmap	**E1** (climate change)
13	Product impact on consumer health and safety		Short	▪ Maintain and expand product safety certification	**S4** (consumers and end-users)

Key

Positive impact | Positive & negative impact | Negative impact

Figure 4 WE Soda double materiality dartboard for the Product pillar[7].

1. Linking Global Trends with a Double Materiality Assessment continued

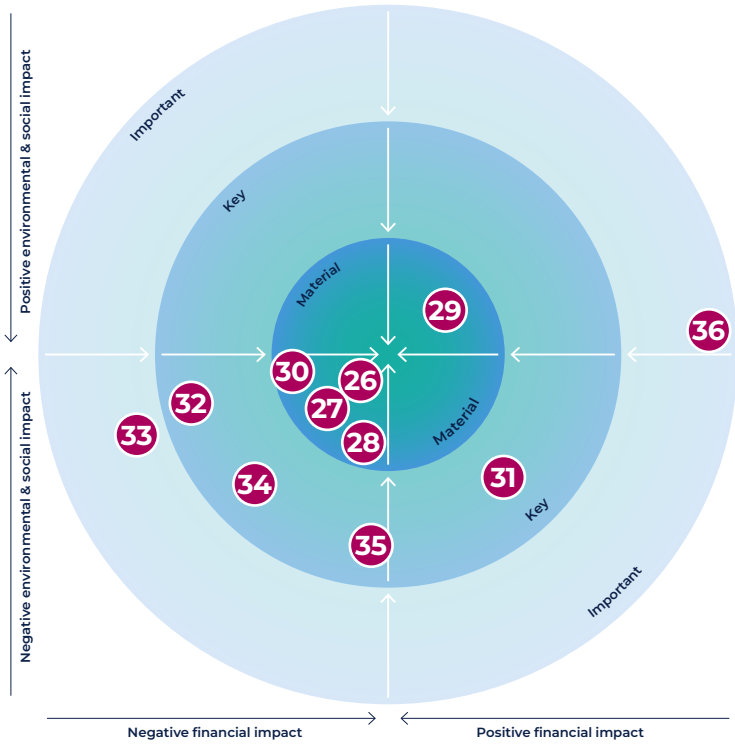
#	Topic name / EU theme	Materiality	Time period	Strategic response	ESRS Topic
14	Scope 1 and 2 emissions		Long	▪ Net-zero pathway	**E1** (climate change)
15	Toward net zero		Short	▪ Net-zero pathway	**E1** (climate change)
16	Use of coal		Short	▪ Coal phase-out	**E1** (climate change)
17	Water use		Long	▪ Water reduction pathway	**E3** (water and marine resources)
18	Use of natural gas		Long	▪ Net-zero pathway (CCU, CCS or alternative)	**E1** (climate change)
19	Waste utilisation		Short	▪ Waste Delivery Group	**E5** (resource use and circular economy)
20	Water reduction initiatives		Short	▪ Water reduction pathway	**E3** (water and marine resources)
21	Hazardous materials and waste		Long	▪ Waste Delivery Group	**E2** (pollution)
22	Wastewater discharge		Short	▪ Water stewardship	**E3** (water and marine resources)
23	Use of plastic		Long	▪ Waste Delivery Group	**E2** (pollution)
24	Waste generated		Short	▪ Waste Delivery Group	**E5** (resource use and circular economy)
25	Tailings		Short	▪ Waste Delivery Group	**E5** (resource use and circular economy)

Key

Positive impact | Positive & negative impact | Negative impact

Figure 5 WE Soda double materiality dartboard for the Process pillar[7].

1. Linking Global Trends with a Double Materiality Assessment continued



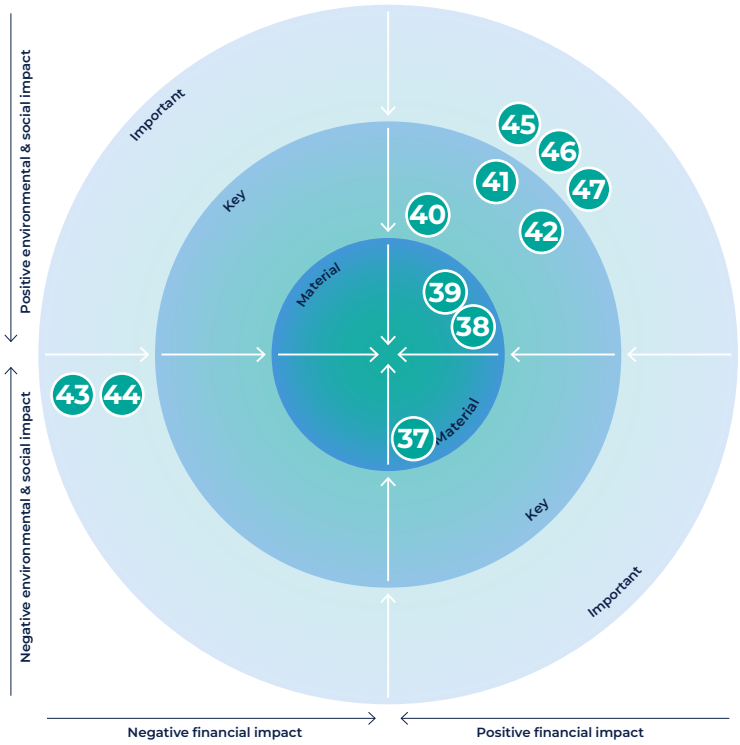
#	Topic name / EU theme	Materiality	Time period	Strategic response	ESRS Topic
26	Water scarcity		Long	▪ Water resilience ▪ Water stewardship	**E1** (climate change)
27	Impact on water quality		Short	▪ Water stewardship	**E2** (pollution)
28	Readiness for closure		Long	▪ Life beyond WE Soda	**S3** (affected communities) **E4** (biodiversity and ecosystems)
29	Being a good neighbour		Long	▪ Knowing our impact ▪ Being a good and proactive neighbour	**S3** (affected communities)
30	Biodiversity		Medium	▪ Proving we are kind to nature	**E4** (biodiversity and ecosystems)
31	Supply chain risks		Short	▪ A responsible supply chain ▪ High risk product standards	**S2** (workers in the value chain)
32	Supplier management		Short	▪ A responsible supply chain	**G1** (business conduct)
33	Supply chain emissions		Long	▪ Sustainable procurement ▪ Reducing Scope 3 category 1	**E1** (climate change)
34	Air quality		Short	▪ Knowing and reducing any impact	**E2** (pollution)
35	Impact on land		Long	▪ Proving we are kind to nature ▪ Life beyond WE Soda	**E4** (biodiversity and ecosystems)
36	Endangered species		Long	▪ Endemic species protection area	**E4** (biodiversity and ecosystems)

Key

Positive impact | Positive & negative impact | Negative impact

Figure 6 WE Soda double materiality dartboard for the Place pillar[7].

1. Linking Global Trends with a Double Materiality Assessment continued



#	Topic name / EU theme	Materiality	Time period	Strategic response	ESRS Topic
37	Labour practices (employee satisfaction)		Short	▪ Policies and procedures ▪ WESpeakUP	**S1** (own workforce)
38	Health and safety		Short	▪ Safety excellence journey	**S1** (own workforce)
39	Gender equality, DE & I		Short	▪ Policies and procedures ▪ WESpeakUP	**S1** (own workforce)
40	Corporate culture		Short	▪ Policies and procedures ▪ WESpeakUP	**G1** (business conduct)
41	Attracting and retaining talent		Short	▪ WESpeakUP ▪ Competitive compensation	**S1** (own workforce)
42	Governance structures		Short	▪ Review of governance structure	**G1** (business conduct)
43	Potential of workplace violence		Short	▪ Safety excellence journey	**S1** (own workforce)
44	Anti-corruption and bribery		Short	▪ Policies and procedures ▪ WESpeakUP	**G1** (business conduct)
45	Whistleblowing		Short	▪ Policies and procedures ▪ WESpeakUP	**G1** (business conduct)
46	Skills training and development		Short	▪ Expansion and enhancement of training programmes	**S1** (own workforce)
47	Protection of employee privacy		Short	▪ Policies and procedures ▪ WESpeakUP	**S1** (own workforce)

Key

Positive impact | Positive & negative impact | Negative impact

Figure 7 WE Soda double materiality dartboard for the People pillar[7].

2. Global Trends – The Big Picture

2.1 Climate Change and Greenhouse Gas Emissions

2.1.1 Global Drivers and Trends

Each year, the Earth's atmosphere is changing in unprecedented ways. Air pollution in some areas is significant, and oceans are becoming more acidic and less biodiverse. Communities face rising threats from violent and unpredictable weather

Greenhouse gas (GHG) emissions are atmospheric constituents that absorb and emit infrared radiation, contributing to the greenhouse effect and the warming of the Earth's atmosphere. The primary GHGs – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases – each vary in atmospheric lifetime and radiative force[8]. For instance, CO_2 can remain in the atmosphere for centuries, while methane, though shorter-lived, is significantly more potent in its heat-trapping capacity. The increasing concentrations of these gases in the atmosphere have been recognised as a key contributor to climate change[8].

Atmospheric CO_2 levels in 2023 – 419.3 ppm – were higher than at any point in the last two million years, with concentrations of methane and nitrous oxide the highest in 800,000 years[9]. Anthropogenic activities, particularly since the onset of the Industrial Revolution, have drastically elevated the atmospheric concentrations of these gases; pre-industrial levels of CO_2 are estimated at around 280 ppm, but today, the National Aeronautics and Space Administration (NASA) states this figure is closer to 430 ppm[10]. Moreover, the National Oceanic and Atmospheric Administration (NOAA) concludes that not only is CO_2 now at the highest level in millions of years, but the rate at which it is accumulating in the atmosphere is accelerating to unprecedented levels[11]. Fossil fuel combustion for energy production, industrial processes (such as cement and steel manufacturing), agricultural practices (notably enteric fermentation and synthetic fertiliser use), and deforestation have been widely identified as the main contributors to this rise[12].

GHG emissions are harming the Earth's capacity to provide ecosystem services.

- 2025 has been confirmed as the third hottest year on record[13].
- Ocean heat content, sea-level rise, and Antarctic sea-ice loss have all reached unprecedented levels. Climate models indicate that, as the planet continues to warm and the climate changes, extreme weather events, including heatwaves, floods, and prolonged droughts, will intensify[14].
- Reflecting this trend, the World Economic Forum now ranks extreme weather and critical change to Earth systems among the top global risks over the next decade[15].
- For decades, natural carbon sinks — such as forests, soils, and oceans — have absorbed approximately 56% of human-generated CO_2 emissions, helping regulate the Earth's climate and mitigating climate change impacts. However, according to the International Panel on Climate Change (IPCC), as CO_2 emissions continue to rise, these land and ocean carbon sinks are becoming less effective at capturing carbon[16].
- This reduced absorption efficiency is one example of a dangerous positive feedback loop — a self-reinforcing cycle exacerbated by climate change. Higher GHG emissions lead to rising temperatures, which are then absorbed by the oceans; in turn, warmer oceans absorb less CO_2, leaving more CO_2 in the atmosphere and driving temperatures even higher. These feedback loops heighten the risk of reaching critical tipping points, where stable systems may suddenly and irreversibly shift into new, unpredictable states[17].

To avoid the worst impacts of climate change, global warming must be limited to 1.5°C above pre-industrial levels.

- The IPCC concludes that GHG emissions must peak before 2025 and decline 43% by 2030[18]. Carbon – specifically CO_2 – has, on account of its high concentrations, become the focal point in the efforts to slow and limit the trajectory of climate change.
- Despite efforts to address climate change at an international scale, progress does not seem to match the scale of the problem[19]. There is an apparent need for companies to take more substantial and transparent actions towards reducing their GHG emissions.

Net Zero targets have emerged as a defining feature of global climate action.

- More than 140 countries, including the world's largest emitters have set Net Zero targets, collectively accounting for approximately 87% of global emissions[20].
- Alongside national policies, corporate action is gaining momentum (driven by increasing pressure from consumers, investors, regulators and civil society), with nearly 60% of publicly listed companies tracked by Net Zero Tracker (NZT) having set Net Zero goals[20].
- Furthermore, the percentage of companies with specific Scope 1, 2 and 3 targets is likely far higher. However, despite this progress, fewer than 5% of these pledges meet NZT's full criteria for integrity[20], highlighting the practical challenges of implementing ambitious targets with credible pathways for achieving them.

2. Global Trends – The Big Picture continued

Fossil fuels under pressure.

- The IPCC has stated that, to limit global warming to 1.5°C, coal use should fall by nearly 75% between 2020 and 2030 and unabated coal use should be completely phased out by 2040[21].
- According to the International Energy Agency (IEA), achieving Net Zero emissions by 2050 would require global oil demand to decline by around 75% and natural gas demand by approximately 55% from current levels[22].
- Despite these decarbonisation targets, global fossil fuel demand and consumption remain high. Coal demand reached a record 8.70 billion tonnes in 2023 and grew by a further 123 million tonnes in 2024[23]. Similarly, oil and gas demand has yet to show a significant long-term decline. The continued reliance on these fuels underlines the challenges that countries and companies face in transitioning to clean energy sources at the pace and scale required to limit climate change.

Global primary energy consumption by source

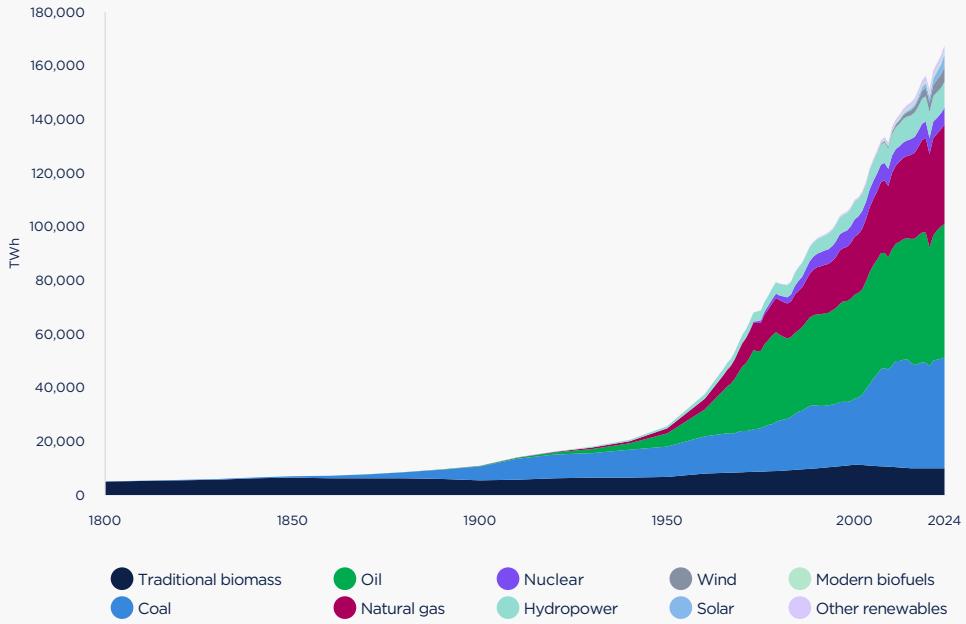


Figure 8 Global primary energy consumption by source[128].

Renewable energy has emerged as a critical pathway for addressing climate change.

- Unlike fossil fuels, renewables produce little to no GHG emissions during operations, offering a clear path to decarbonisation, particularly in the energy sector which accounts for about 74% of global emissions[24]. This is vital given global electricity demand continues to trend upward, growing by 2.5% in 2023[25].
- Solar and wind energy have become one of the most affordable sources of electricity, with solar costs falling nearly 90% since 2010, making them competitive with, and often cheaper than, fossil fuels[26].
- Consequently, global annual renewable capacity is expected to rise from 666 GW in 2024 to almost 935 GW in 2030, with solar and wind projected to account for 95% of this growth[27].

On its own, renewable energy is not enough to keep global temperature rises below critical thresholds.

- This is predominantly a consequence of hard-to-abate residual emissions and the already high atmospheric levels of carbon.
- Considering these factors, the IPCC has highlighted the importance and unavoidability of deploying technologies and solutions that remove CO_2 from the atmosphere[28] indicating that up to 660 Gt CO_2 will need to be captured and stored by 2100 to keep global warming under 1.5°C. In short, to achieve Net Zero emissions, many now believe we need carbon dioxide removals and emission reductions.
- There are a wide range of options being explored in these sectors. Typically, they fall into two categories, engineered and nature-based solutions:

Newly emerging engineered solutions include:

- **Carbon Capture and Storage (CCS):** Captures CO_2 from industrial emissions and stores it underground. Examples of this include Bioenergy with Carbon Capture and Storage and Direct Air Capture and Storage (BECCS).
- **Carbon Capture and Utilisation (CCU):** Captured CO_2 is repurposed and utilised in industries that require CO_2, such as fuel production, chemicals and soft drink manufacturers. To be a truly viable carbon removal solution, however, the carbon should be locked into highly stable products such as minerals.

Nature-based solutions:

- Equally, the International Union for Conservation of Nature (IUCN) concludes that nature-based solutions, such as reducing the destruction of forests and other ecosystems, restoring them, and improving the management of working lands, serve as an integral piece of the required global response to climate action[29].

The evidence is clear: rising atmospheric emissions present an existential threat to human life on Earth. While the challenge is immense and the path forward daunting, solutions are within reach. The technology exists, and climate action is a rare cause that has united many global leaders, corporations, and citizens in a shared commitment. Climate scientists and environmental leaders are cautiously optimistic that, with continued collective effort, the planet may soon reach a turning point where emissions will stabilise and ultimately begin to decline.

2. Global Trends – The Big Picture continued

2.1.2 How Climate Change Relates to WE Soda

As demonstrated above, climate change is not a distant challenge – it is a reality that is reshaping economies, supply chains, and competitive landscapes. For WE Soda, understanding and addressing the impacts of GHG emissions is both an environmental and a strategic business imperative. In fact, 'Climate Change' was the most material issue identified as part of our Double Materiality Assessment.

Below, we outline the key reasons why GHG emissions and the broader climate crisis are especially relevant to our operations and long-term success. Our steps to address this can be found in the Sustainability Plan.

Customer Commitments and Market Demand

- **Alignment with Customer Sustainability Goals:** Many of our key customers have set ambitious public targets to reduce their carbon footprints. As these customers increasingly seek low-carbon and sustainable inputs, our natural soda ash could become a critical component in helping them achieve their own Scope 3 emission reductions.
- **Growing Demand for Sustainable Products:** With soda ash playing a pivotal role in sectors such as energy-efficient construction and solar panel and battery manufacturing, our low-emissions sustainability credentials could open new market opportunities and allow us to command premium pricing.
- **Industry Movements and Benchmarking:** Reflecting this, competitors are rapidly moving towards decarbonisation. For example, some synthetic producers have achieved 100% renewable energy at specific facilities, reducing their CO_2 emissions by 65%. Highlighting that other key industry players view carbon as a key differentiator.

Regulatory and Policy Shifts

- **Impending Carbon Pricing and European Union Emissions Trading Scheme (EU ETS) Impacts:** The regulatory environment is tightening. Initiatives such as the EU ETS already place a premium on low-carbon production methods. With Türkiye planning to adopt EU ETS rules into national law, the emissions financial landscape continues to shift. By maintaining a much lower CO_2e intensity, WE Soda reduces its exposure to escalating carbon costs and can better manage the associated financial risks.
- Furthermore, although soda ash is not initially subject to the Carbon Border Adjustment Mechanism (CBAM), our lower emissions profile means WE Soda would face lower cost adjustments compared to synthetic soda ash producers, should regulations expand.

2. Global Trends – The Big Picture continued

Operational Resilience and Cost Management

- **Energy Cost Volatility and Transition Risks:** Approximately 60% of our production costs are tied to energy – primarily fossil based. As global energy markets evolve and fossil fuel prices become increasingly volatile, our commitment to phasing out coal and decarbonising our power and heat sources is a proactive measure. Investments in renewable energy (e.g., our recently installed solar capacity) not only reduce our carbon footprint but should also protect our operations against future cost increases.
- **Mitigating Physical Climate Risks:** The operational impacts of climate change, such as drought and extreme heat events, pose risks to operational availability, worker safety, supply chain reliability, and increased cooling and water usage costs. By investing in water resilience and reduction technologies, energy-efficient processes and renewable energy, WE Soda enhances its resilience against these physical risks, ensuring stable and predictable operations even as climate change intensifies. On a broader scale, due to the distance and time it takes to transport our product to customers, combined with the essential nature of our product in production processes and the relatively small quantities of product inventory which our customers typically hold at their facilities, the reliability of our customer supply chain is critical. Therefore, any increase in transportation costs or interruptions to our customer supply chain could negatively impact our financial performance and customer relationships. Climate change's impact on supply chains is therefore a risk.

Supporting the Energy Transition

- **Soda Ash as an Enabler of Decarbonisation:** Soda ash is critical for modern technologies, from virgin flat glass for energy-efficient buildings to components for solar panels and lithium-ion batteries in electric vehicles. As global demand for soda ash is forecast to grow significantly (with a substantial portion driven by applications that contribute to sustainability), our low-carbon production methods contribute directly to the decarbonisation of these key sectors. This not only supports our customers' sustainability journeys but also reinforces our role in the broader energy transition.

WE Soda Response

Carbon mitigation is a key part of our Sustainability Plan. We have a target to be Net Zero by 2050, with pathways for each production site and our distribution network. In addition, we have a commitment to always produce soda ash with the lowest carbon footprint.

The material topics that are relevant to this section are the following:

1	Impact of climate change
2	Trust in green claims
3	Politics and regulation
4	Carbon pricing use of product Scope 3
5	Market growth from solar PV and lithium carbonate
7	Carbon pricing (Scope 1 & 2)
9	Logistics carbon emissions
14	Scope 1 & 2 emissions
15	Towards Net Zero
16	Use of coal
18	Use of natural gas
31	Supply chain risk
32	Supplier management
33	Supply chain emissions
42	Governance structures

2. Global Trends – The Big Picture continued

2.2 Water Scarcity and Stewardship

2.2.1 Global Drivers and Trends

Water is essential for life, yet it is increasingly becoming one of the planet's most strained resources. The hydrological cycle, which governs the movement and availability of water worldwide, is being disrupted by human activities and climate change. Deforestation, intensive agriculture and urban development are altering precipitation patterns, depleting terrestrial water storage, and increasing the frequency of severe droughts and floods.

Although the Earth has abundant water, only 3% of it is freshwater, and only 0.5% is both usable and accessible for human needs[31]. This limited supply is under unprecedented pressure, as global water demand continues to rise due to population growth, economic development, and industrial expansion. According to the United Nations Environment Programme (UNEP), at least 4 billion people experience water shortages for one month or more each year, and this number is projected to increase[32]. Water scarcity, driven by overuse, pollution and climate change, is exacerbating social challenges, including migration, conflict and regional instability.

For example, it is estimated that 700 million people could be displaced by severe water scarcity by 2030[33]. Additionally, drought can heighten the risk of wildfires and dust storms, increase pollutant concentrations, and limit available nutrition for animals, leading to fauna die-off and the spread of disease.

The pressures on water availability and its impacts are complex and multifaceted, reflecting a combination of environmental, economic and social factors. Addressing these challenges requires integrated water management strategies, investments in technologies that enhance efficiency, and localised approaches that consider the varying water resources across regions. Unfortunately, current efforts are limited and undermining global progress[34]. The World Benchmarking Alliance (WBA) reports that only 29% of the companies reviewed are reporting reductions in water use or disclosing water usage from stressed areas[35].

Water scarcity is a worsening global challenge.

- Water scarcity refers to the volumetric abundance, or lack thereof, of freshwater resources[36].
- The global urban population experiencing water scarcity is expected to double from 930 million in 2016 to between 1.7 and 2.4 billion by 2050[37]. and, according to the IPCC, roughly half of the world population is already currently experiencing severe water scarcity for at least part of the year[38].
- Climate change is a major amplifier of this, as rising temperatures and altered precipitation patterns reduce freshwater availability. Consequently, a global temperature increase of 2°C could expose an additional 800 million to 3 billion people to water scarcity[39].
- Water scarcity disproportionately impacts vulnerable communities, particularly in regions such as the Middle East and North Africa, where some countries face year-round scarcity[34].

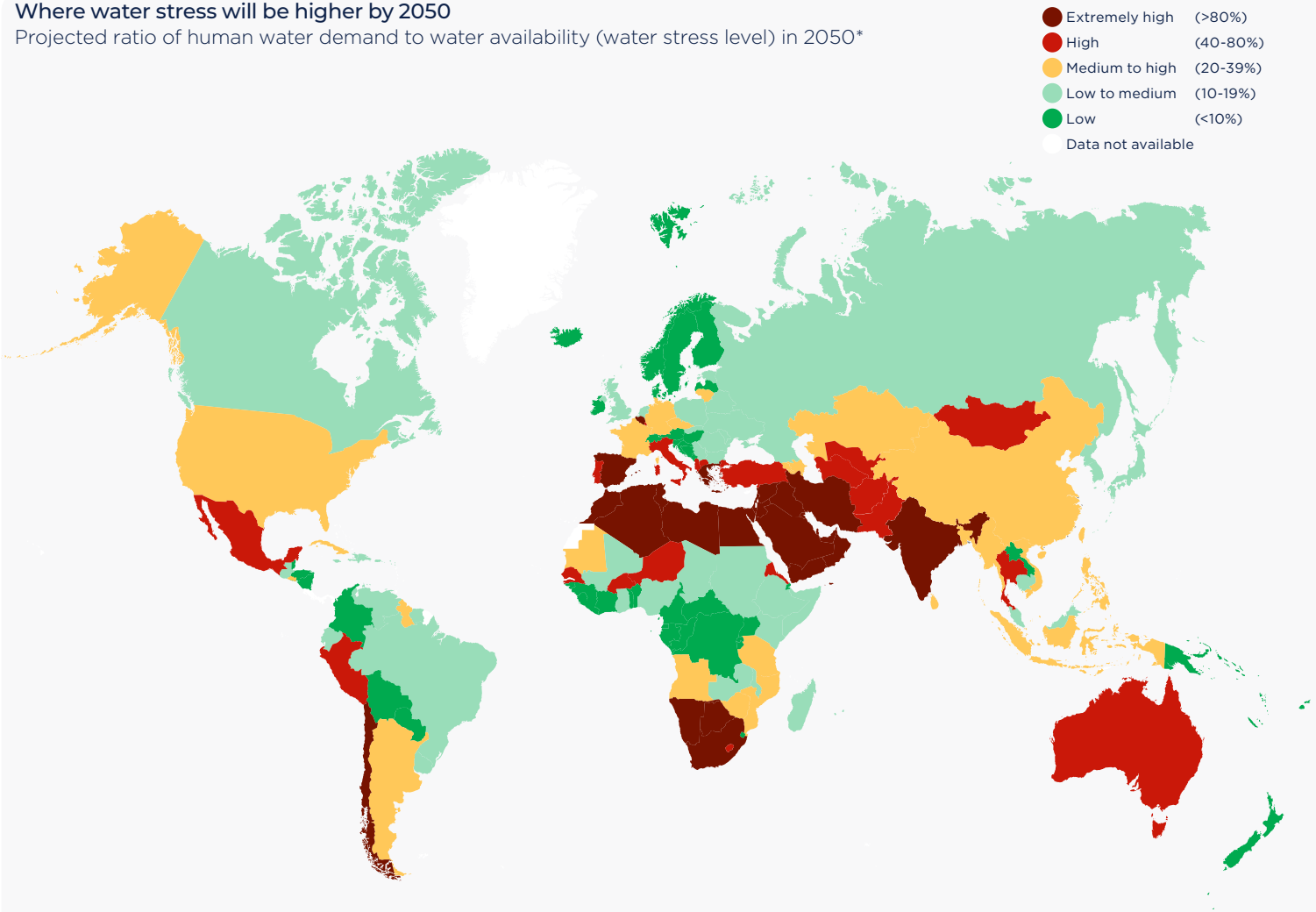
2. Global Trends – The Big Picture continued

Rising demand for water, coupled with shrinking resources, is intensifying water stress.

- Water stress occurs when water demand exceeds the available amount during a certain period of time, or when poor quality restricts its use[40]. Typically, this occurs when a region uses 25% or more of its available freshwater resources. Currently, 5 out of 11 global regions exceed this threshold[41].
- Driven by a combination of socio-economic developments and accelerating patterns of consumption, freshwater usage has grown steadily by nearly 1% a year since the 1960s[34].
- Agriculture remains the largest consumer of water, accounting for 70% of global freshwater withdrawals. Industry uses 20%, while domestic consumption makes up the remaining 10%[34].
- The domestic sector has seen the sharpest increase, growing by over 600% from 1960 to 2020. Industrial demand has also risen significantly, with withdrawals increasing by nearly 300% in the same period[42].
- Some regions are making strides in water-use efficiency. From 2015 to 2021, global water-use efficiency rose by 19.3%, driven by innovations in agriculture, industry and infrastructure[43]. However, progress remains uneven across the world.

Where water stress will be higher by 2050

Projected ratio of human water demand to water availability (water stress level) in 2050*



* According to "business as usual" scenario=middle-of-the-road future where temperatures increase by 2.8°C to 4.6°C by 2100

Source: World Resources Institute

Figure 9 Projected ratio of human water demand to water availability[44].

2. Global Trends – The Big Picture continued

Declining water quality is becoming a growing global risk.

- Global water quality is deteriorating due to pollution from industrial, agricultural and urban activities, further increasing water stress[45]. Concerningly, poor water quality not only limits usability but also poses serious risks to ecosystems and human health.
- Untreated wastewater is one of the key causes of this growing issue, with just 38% of industrial wastewater safely treated[45] and 42% of household wastewater not treated properly[46].
- Additionally, only 15% of companies reviewed by the WBA are reporting metrics on discharged pollutants, and just 4% have set targets to reduce them[47].
- As a result, by 2030, the UN estimates that the health and livelihoods of 4.8 billion people could be at risk if current water quality monitoring is not improved[45].

Unlike GHG emissions, the impacts of water challenges are highly localised. While the drivers of water scarcity and stress may be global – climate change, population growth and industrialisation – the solutions, in most cases, require site/region-specific approaches. In short, water stewardship strategies must be tailored to reflect the conditions and contextual nuances of the regions.

2.2.2 How Water Scarcity and Stewardship Relate to WE Soda

Water is fundamental to WE Soda's production efficiency. Water was the second most material issue in our Double Materiality Assessment, featuring in the top five of our Product, Process and Place dartboards.

Water is not only a critical input into our production process (playing an essential role in trona ore extraction, brine preparation, crystallisation and cooling systems) but, as the first company to use solution extraction to dissolve trona in commercial volumes, it is intrinsically tied to our identity.

Our production process uses a substantially closed-loop system. Water consumption occurs in the extractive stage; pumping is required, and steam is produced during evaporation and drying. Very limited wastewater is released to the environment. A consequence of this is that we operate with significantly lower water intensity compared with synthetic soda ash producers.

While our water intensity is significantly lower than that of synthetic soda ash producers (see our Evidence Book), we operate in regions already experiencing water stress, making efficient water management both a business necessity and a sustainability priority.

Impact on Operational Resilience, Cost and Revenue

Rising water scarcity presents a direct risk to our production continuity, increasing the potential for operational disruptions, higher costs and evolving regulatory requirements. As a result:

- By 2030, WE Soda could face up to $250 million in potential annual revenue loss and up to $2 million in additional annual operating costs due to water scarcity and drought.
- By 2050, these risks could rise to $550 million in potential annual revenue loss and up to $3 million in additional annual operating costs, highlighting the long-term financial exposure if water risks are not effectively managed.
- See more from our 2024 Sustainability Report.

WE Soda Response

To mitigate these risks, WE Soda is improving efficiencies, looking for new sources of water, and working with others to improve resilience at site level and where others are willing, at the water-catchment level. You can read more about these initiatives in our Sustainability Plan. By prioritising water efficiency and responsible water stewardship, we are not only securing the long-term resilience of our business but also playing our part in safeguarding water resources for the regions we operate in. Our aim is to be water neutral by 2040.

The material topics that are relevant to this section are the following:

2 Trust in green claims
3 Politics and regulation
17 Water use
20 Water reduction initiatives
22 Wastewater discharge
26 Water scarcity
27 Impact on water quality
31 Supply chain risks
32 Supplier management
42 Governance structures

2. Global Trends – The Big Picture continued

2.3 Biodiversity and Ecosystem Decline

2.3.1 Global Drivers and Trends

The natural world – comprising biodiversity, ecosystems, ecosystem services and natural resources like water, soil and air – is in rapid decline. Biodiversity loss and ecosystem collapse, in particular, rank among the top three global risks for the coming decade, according to the World Economic Forum[15]. WWF's 2024 Living Planet Report highlights the alarming state of nature: terrestrial ecosystems are decreasing by 2.3% annually, freshwater ecosystems by 3.8%, and marine ecosystems by 1.6%[48]. This escalating degradation of nature threatens the resilience and viability of the Earth's biosphere, which underpins all life and human activity.

Nature is foundational to human societies and the global economy. Healthy ecosystems provide critical services – such as water filtration, breathable air, pollination and climate regulation – that every individual, industry and nation rely upon. Yet, the strain of this reliance, coupled with accelerating land use change, pollution and climate change, has driven natural systems towards critical tipping points, with some ecosystems nearing total collapse.

Unsustainable extraction of resources, driven by current global consumption, is driving the collapse. The UNEP estimates that meeting humanity's current consumption patterns requires the equivalent of 1.6 Earths annually, a rate that is fundamentally incompatible with planetary boundaries. Today, 75% of the Earth's land surface has been significantly altered by human activities, with large swathes of forests, wetlands, and grasslands converted to agricultural or urban uses[49].

However, the challenge is not simply to reduce consumption — it is to do so in a way that ensures equitable access to resources and does not hinder the progress of developing countries. Every individual deserves the quality of life they aspire to reach, yet achieving this necessitates radically innovative approaches to how society produces, consumes, and interacts with nature. To achieve this, transformational shifts in technology, policy and behaviour are essential.

The global economy is dependent on nature, ecosystems and natural capital.

- According to the WBA's 2024 Nature Benchmark, of the 816 companies across 20 sectors reviewed, only 5% of companies have carried out an assessment of the impact of their operations on nature and less than 1% have conducted an assessment to understand their dependencies on nature[47].
- Many would argue that since we are reliant on nature for survival, then so is our economy, but some economists have made more specific calculations. The consequences of this on the global economy could be significant. Over 50% of the world's Gross Domestic Product (GDP) — equivalent to more than $44 trillion — is highly or moderately dependent on healthy ecosystems[50]. Furthermore, 85% of companies listed in the S&P Global 1200 index rely significantly on natural resources within their core operations[50].
- Protecting these ecosystems is not only essential for environmental sustainability and economic stability; it also presents massive economic opportunities. According to recent estimates, proactive investment in nature could generate business opportunities worth over $10 trillion and create 395 million jobs globally[52].
- Certain industries are particularly dependent on natural resources. Construction ($4 trillion), agriculture ($2.5 trillion), and food & beverage ($1.4 trillion) are the three most nature-reliant industries worldwide[50]. Larger economies like China, the EU and the US have the highest absolute economic value tied to nature-dependent sectors[51].

2. Global Trends – The Big Picture continued

The natural world is under stress, and many natural systems are at risk.

- According to the World Wide Fund for Nature (WWF), if current environmental trends persist, multiple global 'Earth Tipping Points' (ETPs) could be reached, posing significant threats to Earth's life-support systems[48]. These tipping points mark thresholds where ecosystems can no longer recover from rising pressures, triggering sudden and permanent shifts in climate and biodiversity. ETPs, once crossed, could lead to irreversible changes that would endanger humanity and countless species.
- A recent study further elaborates on the potential impact of some of these and other global nature tipping points (Table 1), emphasising the broad, cascading consequences for ecosystems, the economy, and climate stability[53].
- Many of these tipping points initiate self-reinforcing feedback loops, amplifying impacts that extend beyond ecological systems. For instance, critical carbon sinks like the Amazon rainforest, tropical peatlands, and mangroves collectively sequester approximately 220 Gt of carbon[53]. If compromised, they could shift from carbon stores to sources, further accelerating climate change.

ETP	Key ecosystem services at risk	Economic impacts and sectors implicated	Direct drivers and main economic sectors implicated[i]
Amazon dieback	▪ Decline in global climate regulation (diminished carbon sequestration abilities) ▪ Decline in regional climate regulation (reductions in rainfall, increased local temperatures) ▪ Reduced flood and storm protection ▪ Reduced soil erosion control ▪ Pollinator decline ▪ Diminished disease and pest control ▪ Loss in provisioning (timber, Non-Time Forest Products (NFTPs), genetic material) ▪ Lack of opportunities for recreation and tourism	▪ Agriculture of all types (production losses, physical damages, asset value declines) ▪ Power generation, hydro (production losses, asset value declines) ▪ Long-haul transport (productivity losses) ▪ Households (health impacts, labour productivity declines, asset value declines, relocation costs) ▪ Value chain effects (as above, plus supply chain disruptions, increased costs of inputs)	Land use change: ▪ Beef ▪ Soy ▪ Forestry (timber, rubber) ▪ Oil and gas ▪ Mining ▪ Hydropower ▪ Palm oil Climate change: ▪ Carbon-intensive sectors, such as energy, materials, utilities and industrials
Boreal forest transitions	▪ Loss in provisioning (timber, NTFPs) ▪ Decline in global climate regulation (complex carbon and albedo effects) ▪ Decline in regional climate regulation (increased local temperatures) ▪ Diminished pest control	▪ Forestry (production losses, property value declines) ▪ Households (health impacts, labour productivity declines, direct damages, relocation costs) ▪ Value chain effects (as above, plus supply chain disruptions, increased costs of inputs)	Land use change: ▪ Forestry (timber) ▪ Oil and gas ▪ Mining ▪ Hydropower Climate change: ▪ Carbon-intensive sectors
Coral reef die-off	▪ Loss in provisioning (fisheries, genetic material) ▪ Reduced flood and storm protection ▪ Loss of mass stabilisation and erosion control ▪ Lack of opportunities for recreation and tourism	▪ Fisheries (production losses) ▪ Tourism (demand shocks) ▪ Real estate (physical damages, asset value declines) ▪ Infrastructure (physical damages, asset value declines) ▪ Households (asset value declines, relocation costs) ▪ Value chain effects (as above, plus supply chain disruptions, increased costs of inputs)	Climate change: ▪ Carbon-intensive sectors Overexploitation: ▪ Fisheries Pollution: ▪ Agriculture ▪ Aquaculture ▪ Oil and gas ▪ Real estate and infrastructure
Mangrove dieback	▪ Decline in global climate regulation (diminished carbon sequestration abilities) ▪ Loss in provisioning (timber, fisheries) ▪ Reduced flood and storm protection ▪ Mass stabilisation and erosion control ▪ Lack of opportunities for recreation and tourism	▪ Fisheries (production losses) ▪ Real estate (physical damages, asset value declines) ▪ Infrastructure (physical damages, asset value declines) ▪ Value chain effects (as above, plus supply chain disruptions, increased costs of inputs)	Land use change: ▪ Aquaculture (shrimp) ▪ Agriculture (rice, palm oil) ▪ Real estate and infrastructure Climate change: ▪ Carbon-intensive sectors
Tropical peatland collapse	▪ Decline in global climate regulation (diminished carbon sequestration abilities) ▪ Loss in provisioning (water, fisheries, food) ▪ Reduced flood and storm protection ▪ Reduced mass stabilisation and erosion control ▪ Loss of fire prevention ▪ Disease and pest control	▪ Agriculture (production losses, physical damages, asset value declines) ▪ Households (health impacts, labour productivity declines, lost livelihoods) ▪ Infrastructure (physical damages, asset value declines) ▪ Value chain effects (as above, plus supply chain disruptions, increased cost of inputs)	Land use change: ▪ Agriculture (palm oil, pulpwood) ▪ Forestry (timber, rubber) ▪ Oil and gas ▪ Mining Climate change: ▪ Carbon-intensive sectors

i See appendix for the literature used to identify drivers and implicated sectors.

Table 1 How Earth Tipping Points could generate physical risks through losses to ecosystem services[53].

2. Global Trends – The Big Picture continued

Biodiversity is in decline.

- Habitat degradation, deforestation, pollution and climate change are the primary drivers of biodiversity loss[48]. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) reports that approximately 1 million species are currently at risk of extinction within the coming decades if these drivers persist[54]. As measured by the Living Planet Index, over the past 50 years, the average size of monitored wildlife populations has already shrunk by 73%. This has occurred globally, with the pace of decline varying from 35% in Europe and Central Asia, to 95% in Latin America and the Caribbean[55].
- Land use changes, particularly for agriculture and urban expansion, impact more than 70% of the global, ice-free land surface[56]. Similarly, marine ecosystems and populations – which have declined by over 56% – are impacted by overfishing, plastic pollution and ocean acidification.
- Industrial activities, including mining, contribute directly to habitat fragmentation and ecosystem degradation, especially in biodiversity-rich areas. A study by UNEP highlighted that unsustainable extraction of natural resources, including minerals and fossil fuels, accounts for over 90% of biodiversity loss and water stress worldwide[57].

The rise of 'nature positive'.

- In recent years, the term 'nature positive' has emerged as a guiding principle and central concept for governments, businesses and civil society in global efforts to address biodiversity loss and ecosystem degradation.
  - The IUCN described nature positive as halting and reversing the loss of nature measured from its current status, reducing future negative impacts alongside restoring and renewing nature, to put both living and non-living nature measurably on the path to recovery.
- The emergence of nature positive has, in large part, been driven by the proliferation of cross-sector initiatives, funding and policies that focus on proactive strategies rather than just reduction and mitigation measures. For example, in 2022, 196 nations agreed to the Kunming-Montreal Global Biodiversity Framework, which aims to halt and reverse nature loss by 2030. The agreement seeks to conserve or protect 30% of global land and sea by 2030, as well as restore 30% of degraded places by the same target year[58].
- One of the biggest challenges in implementing nature positive strategies is the difficulty of measuring progress towards biodiversity and ecosystem health. Unlike GHG emissions which are relatively straightforward to measure and quantify, the impact on nature is complex and multi-dimensional, encompassing variables such as species diversity, ecosystem health and genetic variety.
- However, the implementation of Taskforce on Nature-related Financial Disclosures (TNFD) and the development of satellite imagery are providing businesses with the tools and capabilities to better understand and therefore address their impact on nature.

2. Global Trends – The Big Picture continued

2.3.2 How Biodiversity and Ecosystem Decline Relate to WE Soda

Our underground and cavern-based solution extraction method allows us to operate with limited land use and biodiversity disruption. This is best evidenced by our co-existence with surrounding farming communities and avoiding the need for extensive land rehabilitation upon decommissioning. However, we recognise that biodiversity loss and ecosystem degradation present growing risks to all businesses reliant on natural resources. While our operations have a relatively low impact, we recognise that global biodiversity trends and increasing regulatory scrutiny could affect costs, supply chain stability and our social licence to operate. For example:

- **Regulatory and Compliance Risks:** Emerging policies, such as the Kunming-Montreal Global Biodiversity Framework, signal a shift towards mandatory biodiversity impact assessments. Aligning with frameworks like the TNFD, will not only ensure compliance but also strengthen our leadership in sustainable operations.
- **Market and Investor Expectations:** Environmental, social and governance (ESG)-focused investors and customers are increasingly prioritising nature positive businesses. Demonstrating leadership in biodiversity stewardship will enhance our reputation and support access to sustainable financing.
- **Operational Risks:** Healthy ecosystems provide essential services, from water filtration to soil stability. By proactively investing in nature-based solutions around our plants, we can mitigate long-term risks that could impact production efficiency and costs while supporting the local community.
- **Achieving Net Zero Through Nature-Based Solutions:** Nature-based strategies, such as reforestation and ecosystem restoration, will play a role in our broader carbon reduction initiatives. Integrating these into our sustainability and decarbonisation roadmap will provide co-benefits for both climate and biodiversity goals.

WE Soda Response

We have committed to adopting the principles of nature positive.

As global attention on biodiversity grows, WE Soda must continue demonstrating leadership in nature stewardship. Investors, regulators and local communities expect businesses to play an active role in reversing nature loss. By embedding biodiversity conservation into our operational strategy, we not only reinforce our commitment to sustainability but also future-proof our business against evolving environmental and economic risks.

The material topics that are relevant to this section are the following:

2 Trust in green claims
3 Politics and regulation
22 Wastewater discharge
28 Readiness for closure
29 Being a good neighbour
30 Biodiversity
31 Supply chain risks
32 Supplier management
34 Air quality
35 Impact on land
36 Endangered species
42 Governance structures

2. Global Trends – The Big Picture continued

2.4 Resource Use and the Circular Economy

2.4.1 Global Drivers and Trends

Over the last six years, the global economy has extracted and consumed nearly as many materials as it did throughout the entire 20th century. Driven by the dominant linear economic model, annual virgin material extraction now exceeds 100 billion tonnes[59]. This 'take-make-dispose' approach relies on extracting resources, transforming them into products, and, after use, disposing of them as waste. This model not only contributes to resource depletion but also results in high levels of pollution and GHG emissions[60].

Furthermore, as the global population grows, this unsustainable approach is placing ever-increasing pressure on natural ecosystems and resource availability[60].

Currently, humanity is consuming natural resources 1.7 times faster than the planet's biocapacity can regenerate[61]. This consumption is unevenly distributed, with some nations operating at a severe resource deficit to maintain current lifestyles. Should current consumption rates continue, the Global Footprint Network suggests that, by 2030, humanity will require the capacity of two Earths to meet global resource demand.

The circular economy presents a promising alternative to address these challenges. It aims to create closed-loop systems where waste is minimised, and resources are continuously cycled back into production. By extending product lifespans through reuse, repair and recycling, circular economies seek to retain the value of materials within the economy, reducing dependence on virgin resource extraction[62]. The model generally rests on three core principles: eliminating waste and pollution, keeping products and materials in use, and regenerating natural systems[63].

The world is not enough

Selected countries. Calculated based on 2022 data estimates

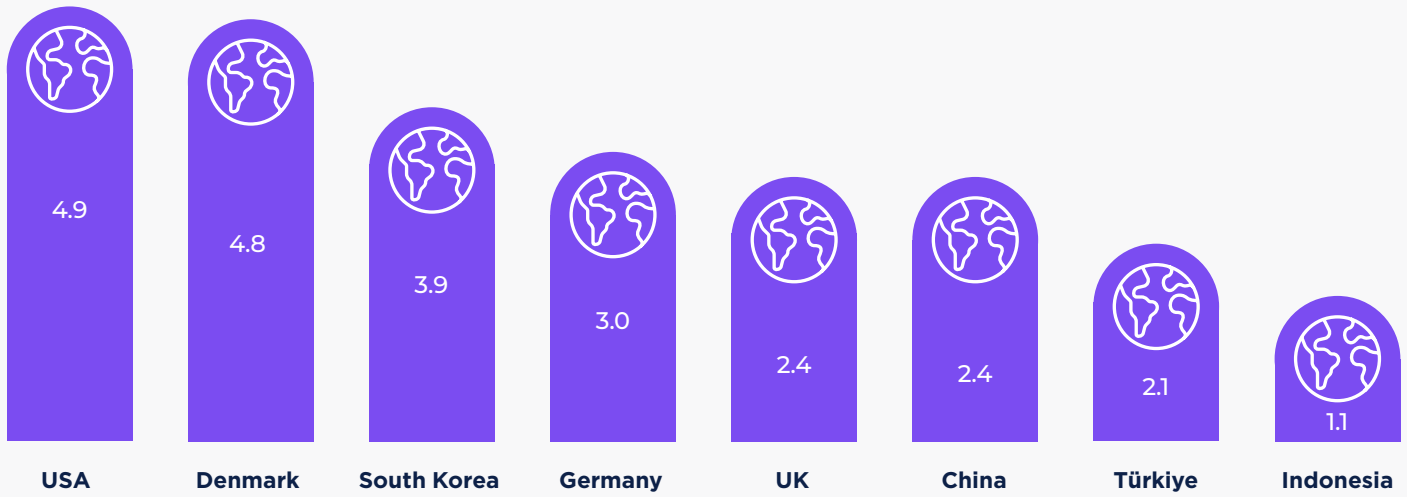


Figure 10 The number of Earths/its resources needed if the world's population lived like the displayed countries[68].

Recycling and material circularity remains a critical gap.

- Despite advancements in waste management and recycling technologies, the global economy remains largely linear. Only 7.2% of materials are part of circular systems, meaning most products are discarded rather than reused or recycled[64]. This figure has declined by 1.9% since 2018, in part, due to:
  - **Increasing Material Extraction:** Growing demand for raw materials has led to a sharp increase – 400% since 1970 – in material extraction with estimates suggesting that this could increase by a further 60% by 2060[65].
  - **Material Inefficiencies:** Many recyclable materials, including plastics and metals, fail to re-enter the economy because of contamination, lack of sorting, or inefficient recovery systems.
  - **Recycling Challenges:** While recycling rates for materials like paper and metals are relatively high in some regions, plastics recycling lags, with only 9% of the plastic ever produced having been recycled globally[66].
  - **E-waste:** Electronic waste, one of the fastest-growing waste streams, contains valuable materials like gold and rare earth metals, yet only 22% of e-waste is currently effectively recycled[67].

2. Global Trends – The Big Picture continued

A circular economy requires action at all stages of a product's value chain.

- While circularity is often associated with end-of-life operations, such as recycling, achieving a truly circular economy demands innovation and adjustments across all stages of the value chain – from design and manufacturing to distribution, use and disposal[69]. Key areas for consideration include:
  - **Circular Design:** Products designed for circularity can significantly extend their lifespan and ease of recycling. For instance, the Ellen MacArthur Foundation estimates that 80% of a product's environmental impact is determined at the design stage, highlighting the importance of building durability, repairability and recyclability into products from the outset[70].
  - **Raw Material Selection:** Sustainable sourcing can reduce dependence on finite resources. For example, substituting virgin plastic with recycled alternatives can cut GHG emissions between 30 and 80%[71], while choosing renewable or bio-based materials can further lessen environmental impact.
  - **Manufacturing Processes:** Modernising manufacturing processes can reduce waste and energy use. For example, chemical manufacturing is estimated to produce up to 30% waste by weight, including unused materials, by-products, and cleaning residues.[72]
  - **Distribution and Use:** Making distribution systems more efficient and sustainable is crucial. Packaging waste is a significant issue, with Europeans generating approximately 190 kg of packaging waste per capita annually[73]. Redesigning packaging to be reusable or reducing materials can drastically cut waste. Moreover, optimising supply chains can lower transportation-related emissions, which account for roughly 8% of global GHG emissions[74].
- The circular economy also offers other advantages and opportunities, for example, recycling raw materials mitigates the risks associated with supply, such as price volatility, availability and import dependency[62].

2. Global Trends – The Big Picture continued

The circular economy industry has seen significant growth, but progress remains limited.

- The worldwide revenue of circular economy transactions was estimated to total roughly $339 billion in 2022. This is forecasted to more than double by 2026, reaching $712 billion[75]. The Asia-Pacific region is anticipated to experience the fastest growth due to its heavy industrial base and increasing environmental regulations[76].
- The circular economy sector employs 2.2 million individuals worldwide, with a significant addition of 125,000 new employees in 2024. Leading countries driving this growth include the US, the UK, Germany, India and Italy[77].
- Projections by the World Economic Forum highlight the opportunities for recycling, reuse, and remanufacturing, suggesting that by 2025, these practices could result in annual resource savings of $1 trillion[75].
- However, despite this perceived momentum, more than 90% of extracted materials remain either wasted, lost or unavailable[64].

Several countries have incorporated the circular economy into their national policies, with regional variations in how each country interprets and implements the principles.

- The EU sees the circular economy reducing waste and resource dependence through initiatives like the Circular Economy Action Plan, a building block of the European Green Deal. These policies emphasise sustainable product design, waste reduction and the development of markets for secondary raw materials[78].
- China, which frames it differently, has an industrial and environmental strategy that promotes resource efficiency and waste reduction, particularly within high-polluting sectors. Policies, like the Circular Economy Promotion Law, encourage recycling and green manufacturing, focusing on creating closed-loop supply chains within its dominant manufacturing sector. The outcome for the EU and China is the same: new business models, new ways of designing and making products and more reuse and recycling[79].

Integrating circular economy principles is increasingly recognised as fundamental to achieving carbon reduction goals at the global and business levels.

- In the EU, 78% of industrial carbon emissions come from the steel, plastics, aluminium and cement sectors. Circular economy strategies targeting these sectors – such as recycling, reusing and improving material efficiency – have been identified as key solutions to help the region meet its 2050 Net Zero targets[80].
- For the EU, these opportunities could cut an estimated 56% of emissions from these sectors by 2050[81].
- A 2023 study found that 55% of large businesses have made commitments to circularity. However, the same study notes that more than half of circularity initiatives are limited to recycling or waste management[82].

The circular economy presents a promising framework for reducing waste and resource use, but achieving a fully closed-loop system is challenging. The laws of thermodynamics, unavoidable material losses, process inefficiencies, and the limitations of current technologies mean that this ideal cannot be realised. As such, virgin material extraction will, to varying degrees, always be necessary. Therefore, alongside increasing circularity, it also remains crucial to focus on making the input to the economy as sustainable as possible.

Corporate circularity initiatives focus mainly on recycling and waste management

Source: Company reports and Bain analysis

Figure 11 Distribution of companies with circularity commitments and the nature of those commitments[82].

2. Global Trends – The Big Picture continued

2.4.2 How the Circular Economy Relates to WE Soda

At WE Soda, our commitment to circularity is not just about waste reduction — it is increasingly becoming a fundamental part of our product offer and how we operate. By recovering, reusing, and recycling by-products, we optimise our resource efficiency and enhance our long-term business resilience.

Products

Glass is seen by many as vital to the circular economy. Container glass enjoys high recycling rates in many parts of the world, while window glass and windscreen recycling rates are beginning to rise. It is hard to imagine a circular economy without glass. But to recycle glass, you need to make glass for the first time, so soda ash has many opportunities within the circular economy. Most glass manufacturers, including those who use a high proportion of recycled materials, prefer to include new glass, to top up supply and maintain quality. We are looking to see if WE Soda can make a contribution in collecting and distributing recycled glass.

For batteries, soda ash is used to neutralise toxic materials during recycling, so making a useful contribution to circular batteries.

Finally, there are companies who are creating new technologies to reprocess waste, such as plastic, into new materials that include soda ash. Likewise, for carbon capture technologies. We will track these developments to see if we have a contribution to make.

Mitigating Risk in Operations

A circular economy approach presents opportunities for cost reduction, regulatory compliance, and operational stability. Key considerations for WE Soda include:

- **Regulatory and Compliance Risks:** With tightening environmental regulations, aligning with circular economy frameworks and reducing our waste streams ensures compliance and strengthens our sustainability leadership.
- **Operational Resilience:** Reducing waste and repurposing materials minimises exposure to raw material volatility and enhances long-term production stability.
- **Market and Investor Expectations:** By embedding circularity into our operations, we enhance our reputation and access to responsible investment.

Leveraging Circular Economy for Competitive Advantage

WE Soda has already integrated circular economy principles into its core operations. These efforts can be expanded to drive further efficiencies and competitive differentiation. Key initiatives include:

- **By-Product Utilisation:** Sodium bicarbonate production using recycled CO_2, reuse of purge streams in caustic soda manufacturing, and refinement of sodium chloride into industrial salt.
- **Waste Repurposing:** Selling fly ash to cement producers and calcium carbonate for flue gas desulphurisation, ensuring materials are continuously cycled back into productive use.
- **Infrastructure Investment:** Projects such as the second calciner unit at Kazan and the upcoming sodium chloride re-processing unit will enhance material recovery and waste reduction.

The Future of WE Soda in a Circular Economy

As global momentum behind circularity grows, WE Soda is well-positioned to lead in sustainable production practices. Our long-term strategy includes:

- Scaling up waste repurposing initiatives to eliminate residual waste streams.
- Innovating new applications for soda ash by-products to maximise material efficiency.
- Exploring partnerships with circular economy innovators to push the boundaries on what circular soda ash looks like in the future.

The material topics that are relevant to this section are the following:

2	Trust in green claims
3	Politics and regulation
10	Product contribution to a circular economy
11	Use of cullet in glass making
19	Waste utilisation
21	Hazardous materials and waste
23	Use of plastic
24	Waste generated
25	Tailings
31	Supply chain risks
32	Supplier management
42	Governance structures

2. Global Trends – The Big Picture continued

2.5 Social Inequality and Inclusive Development

2.5.1 Global Drivers and Trends

Human development has made extraordinary strides over the last century. Global life expectancy has increased[83], extreme poverty rates have fallen significantly[84], and advances in technology and medicine have transformed the quality of life for billions of people. However, these improvements have not been equitably distributed. The progress that had been made has begun to stagnate and, in some cases, reverse[85]. The COVID-19 pandemic, conflict in Europe and the Middle East, and climate change contributed to an increase in poverty for the first time in decades in 2022.

Inequality is defined as the lack of fairness or equality in the distribution of wealth, opportunities, or rights within society[86], and remains a significant, but inconsistent global challenge. In 2024, the number of economies with high inequality reached a 24-year low[85], yet the global goal of cutting the extreme poverty rate to 3% by 2030, at the current rate, is not expected to be met for another three decades[85].

This persistent inequality is starkly reflected in global income and wealth distribution. According to the World Inequality Report, 10% of the global population earns 52% of global income and controls 75% of its wealth, while the bottom 50% earn only 8.5% and own 2% of global wealth[87]. Moreover, the disparity in income within countries has also widened, with the income gap between the top 10% and bottom 50% of individuals doubling from 8% to 15%[87].

That said, it is just as important, if not more, to remember that inequality and its impacts come in many forms, not just wealth distribution. For example, the world's poorest countries are underrepresented on a systemic level regarding economic decision-making[88]. Gender inequality remains considerable at the global level, with women accounting for only 35% of global labour incomes[89]. And the distribution of those facing hunger is unequally spread, with current projections stating that, by 2030, almost 60% of world hunger will be concentrated in Africa[90].

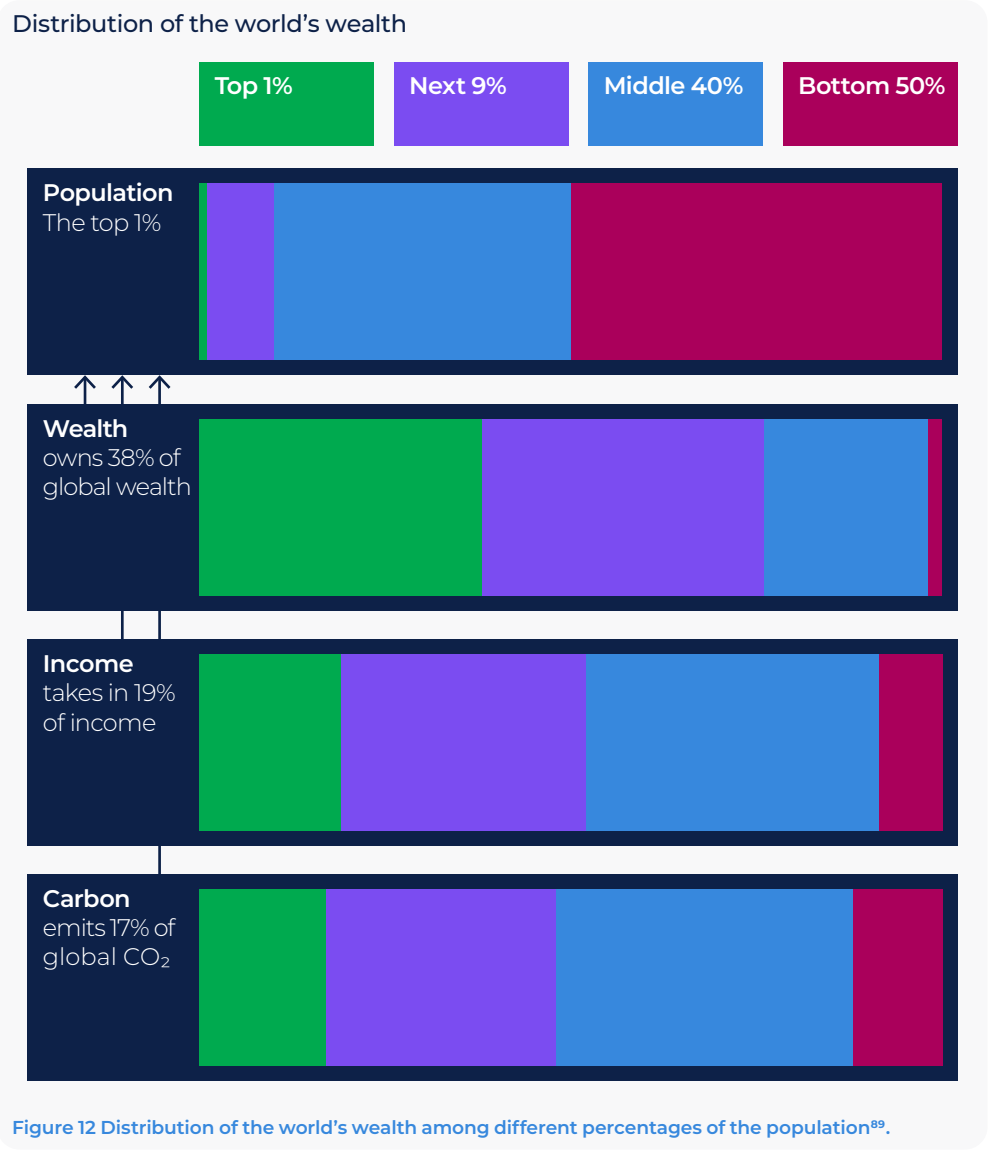


Figure 12 Distribution of the world's wealth among different percentages of the population[89].

2. Global Trends – The Big Picture continued

A better life starts with access to essential services such as healthcare, education, and secure livelihoods.

- Yet, in many regions, these remain unattainable for vast portions of the population. For example, over 251 million children are currently out of school, disproportionately in low-income countries, where education systems are underfunded and overburdened[91].
- Meanwhile, nearly 9% of the global population, or nearly 700 million people, still live on less than $3.00 per day, the World Bank's measure of extreme poverty[92].
- Health inequality also illustrates the urgent need for improved living conditions. The life expectancy gap between high-income and low-income countries is staggering, with individuals in low-income countries living 18.1 years less on average[93]. This disparity is further compounded by preventable diseases such as malaria, which killed over 600,000 people in 2024, with 95% of deaths occurring in Africa, despite being curable and preventable[94].

Unequal access to energy further entrenches inequality, hindering development and exacerbating vulnerabilities.

- Between 2000 and 2022, 47 countries achieved universal access to electricity.
- However, population growth has recently outpaced access and progress remains uneven; 660 million people are projected to lack access to electricity by 2030, with 85% concentrated in Sub-Saharan Africa and Oceania, perpetuating economic stagnation[95].
- Moreover, over 2 billion people will continue to rely on harmful and polluting cooking fuels – the use of which is a leading cause of premature death and serious health issues[96].
- Progress against these figures is being further hindered by uncertain macroeconomic levers such as high levels of inflation, debt distress, supply chain bottlenecks and the rise of energy prices[95].

2. Global Trends – The Big Picture continued

Despite the world's poorest countries contributing the least to climate change, they are the most vulnerable to its effects[97].

- The top 20 high-income nations, including the US, EU, India, and China, account for 83% of global GHG emissions[97].
- However, emissions vary significantly within these nations on a per capita basis. For example, the US emits 18 tCO_2e per capita, whereas India emits only 2.9 tCO_2e per capita – highlighting the influence of both population size and lifestyle on emission levels.
- In stark contrast, Least Developed Countries (LDCs) which collectively contribute only around 3% of global emissions are already facing disproportionate impacts from climate change, such as extreme weather events, food insecurity and health crises[98].
  - The World Bank, for example, notes that compared to the 1980s, these vulnerable nations have experienced a substantial increase in natural disasters over the past decade[99].
  - Research shows that 3.6 billion people already live in areas highly susceptible to climate change. Between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from undernutrition, malaria, diarrhoea and heat stress alone[100].
  - Carbon inequality is a growing concern, with estimates predicting that climate change could push 120 million more people into poverty by 2030[101].
  - By 2040, fragile states – states that are failing, or in danger of failing, with respect to authority, comprehensive socioeconomic entitlements or governance legitimacy[102] – could face 61 days a year of temperatures above 35 °C.[103]

	Total GHG emissions in 2023	Change in total GHG emissions, 2022-2023	Per capita GHG emissions in 2023	Historical CO_2 emissions, 1850-2022
	$MtCO_2e$ (% of total)	%	tCO_2e/capita	$GtCO_2e$ (% of total)
China	16,000 (30)	+5.2	11	300 (12)
United States of America	5,970 (11)	-1.4	18	527 (20)
India	4,140 (8)	+6.1	2.9	83 (3)
European Union (27 members)	3,230 (6)	-7.5	7.3	301 (12)
Russian Federation	2,660 (5)	+2	19	180 (7)
Brazil	1,300 (2)	+0.1	6.0	119 (5)
African Union (55 members)	3,190 (6)	+0.7	2.2	174 (7)
Least developed countries (45 countries)	1,720 (3)	+1.2	1.5	114 (4)
G20 (excl. African Union)	40,900 (77)	+1.8	8.3	1,990 (77)

Table 2 Total, per capita and historical emissions of selected countries and regions[98].

Rising temperatures, already higher in fragile and conflict-affected states, endanger human health and productivity

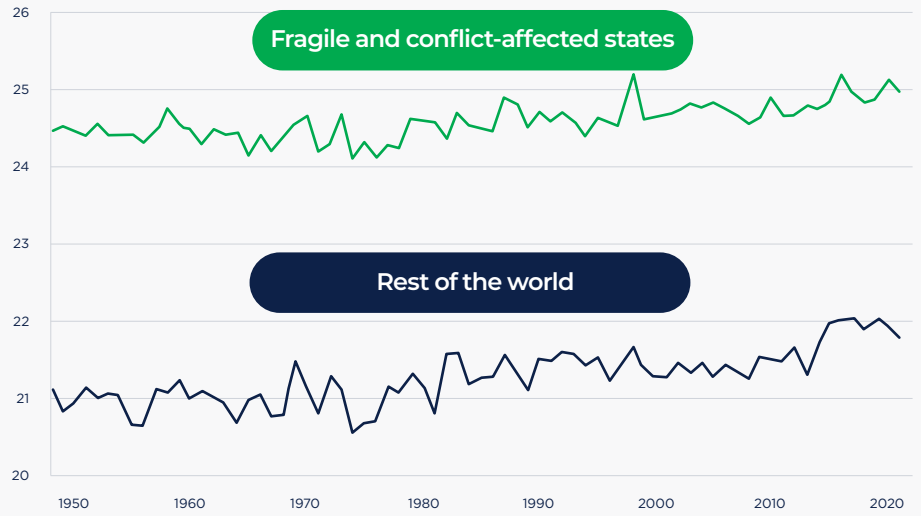


Figure 13 Medium temperatures (°C) over time in fragile and conflict-affected states vs. the rest of the world[105].

- This underscores a critical reality: while climate change is a global issue, its effects are not felt equally. Paradoxically, the countries that are among the lowest contributors to GHG emissions are facing the highest risks.
- Despite their limited economic power, the world's poorest nations are at the forefront of climate action. The United Nations Development Programme (UNDP) reports that 93% of LDCs and Small Island Developing States (SIDS) have submitted or plan to submit enhanced national climate pledges, a much higher proportion than their wealthier counterparts[104].

Addressing these inequities requires prioritising inclusive policies and investments that empower individuals and communities. Enhanced international cooperation, equitable resource allocation, and targeted programmes that address systemic barriers can lay the foundation for a more equitable future. For instance, investing in universal education, healthcare infrastructure and sustainable job creation can transform millions of lives while bolstering global economic and climate stability. The need to improve lives for more people is not just a moral imperative but a pragmatic necessity.

2. Global Trends – The Big Picture continued

2.5.2 How Social Inequality and Inclusive Development Relate to WE Soda

At WE Soda, we believe that economic opportunity and social equity are essential to our success as a global business. Tackling inequality and making a positive impact in the communities where we work is not just the right thing to do, it creates lasting, shared value. This is why, wherever possible, WE Soda looks to go beyond compliance by creating safe, inclusive workplaces and supporting local education and healthcare programmes. This, in turn, ensures that both our employees and the communities we serve benefit from our presence, and we continue to earn the trust that lets us continue to operate responsibly. Two of our Five Ps are Place and People, and you can read more about our strategic initiatives in our Sustainability Plan.

Impact on Social Licence, Operational Resilience, and Reputation

Prioritising the wellbeing of our employees and communities mitigates social and operational risks, fosters resilience and strengthens our reputation. For example:

- **Social Licence to Operate:** Our local communities and broader stakeholders rightly expect us to contribute to inclusive growth. Investing in community projects, supporting education and healthcare, and promoting diversity in our workforce helps foster and sustain positive community relations.
- **Operational Continuity:** By maintaining a fair, safe and inclusive environment for our people, we reduce turnover, enhance productivity, and ensure a stable, skilled workforce.
- **Reputational Advantages:** Customers and investors are placing growing emphasis on companies' social impact. Demonstrating a genuine commitment to tackling inequality enhances our credibility with all stakeholders.

Our Commitment to Social Equity & Community Engagement

We consider ourselves part of the communities where we operate. By addressing inequality, we aim to elevate living standards and contribute to the well-being of our employees, residents, and society at large. Our core initiatives include:

- **Fostering a Safe, Inclusive Workplace:** Through our three-year 'Safety Excellence Journey,' we are working with consulting group dss+ to embed a world-class safety culture. We also uphold an inclusive, performance-based employment policy, ensuring opportunities are available to all, regardless of gender, ethnicity, religion or disability.
- **Supporting Local Communities:** In 2023, we contributed approximately $4.9 million in financial and in-kind support to community projects in Türkiye and the UK, with plans to expand similar initiatives to the US. These efforts focus on youth education, women's empowerment, community support and building a sustainable future.
- **Investing in Our People:** By 2035, WE Soda aims to achieve an equal number of women and men within senior and middle management roles. We also provide internships and development programmes to encourage young talent, with 36% of our workforce currently under 30.
- **Protecting Human Rights:** We have zero tolerance for child, forced, or bonded labour and uphold the Universal Declaration of Human Rights across our operations. We actively screen suppliers through platforms like Sedex to maintain responsible supply chains.

Stakeholder Expectations and Looking Ahead

Moving forward, we plan to:

1. **Expand Community Engagement:** Build on our successful partnerships such as the Special Education School in Beypazarı, Türkiye, and the Sweetwater County Food Bank in Wyoming.
2. **Enhance Diversity & Inclusion:** Continue to improve the representation of women in leadership, and strengthen talent pipelines for underrepresented groups.
3. **Strengthen Accountability & Transparency:** Publish regular updates on our social impact programmes and maintain robust governance structures to ensure that our actions align with global best practices.

By actively confronting inequality and striving to improve lives in the regions where we operate, WE Soda is not only attempting to meet social responsibilities but also ensuring our long-term resilience and value creation.

The material topics that are relevant to this section are the following:

3 Politics and regulation
29 Being a good neighbour
31 Supply chain risks
32 Supplier management
37 Labour practices
38 Health & safety
39 Gender equality, DE&I
40 Corporate culture
41 Attracting and retaining talent
42 Governance structures
43 Potential workplace violence
44 Anti-corruption and bribery
45 Whistleblowing
46 Skills training and development
47 Protection of employee privacy

3. The World's Response to the Above Trends

3 The World's Response to the Above Trends

3.1 Civil Society and Activism

Environmental Non-Governmental Organisations (NGOs) play a pivotal role in the modern fight against climate change, biodiversity loss, and other pressing challenges. Defined as independent, nonprofit organisations that focus on environmental and social issues, these entities have grown significantly in size, sophistication and influence over the past several decades. In the US alone, there are 32,507 environmental organisations employing 151,472 people, generating over $30 billion in annual revenue, and controlling assets valued at $86 billion[106].

This financial and human resource base marks a significant shift from climate activism's earlier days as small, grassroots efforts driven by passionate individuals. Today, NGOs leverage cutting-edge tools like satellite imagery, AI-driven analytics, and global research networks[107] to monitor and expose environmentally harmful practices in real time. Consequently, these groups can have substantial impacts on people and their environments, both on the ground through project implementation and through influence on policy from the local to international levels[108].

Public campaigning and protests have long been a part of policy change, but since 2018 and the publication of the IPCC's report on limiting global temperature increase to 1.5°C, there has been a marked increase in the number, scale and coverage of high-profile protests[109].

3.2 The NGO Landscape

Environmental NGOs can be broadly classified into three main types based on their strategies, methods and approaches to working with businesses: **Solutionists**, **Activists** and **Hybrids**.

1. **Solutionists:** Solution-oriented NGOs focus on collaboration and practical implementation of environmental initiatives. Organisations like WWF exemplify this category. While they are willing to campaign and critique businesses or governments, their primary approach is cooperative. They are more likely to partner with corporations to fund projects and mutually beneficial solutions to ecological challenges. Solutionists balance advocacy with action, maintaining a reputation for constructive engagement.
2. **Activists:** Activist NGOs adopt a more provocative stance. Groups like Friends of the Earth and Just Stop Oil are known for their more uncompromising methods, including protests, direct action and media campaigns aimed at drawing attention to urgent environmental issues. These organisations often eschew partnerships with corporations, viewing them as complicit in ecological degradation. Their aggressive tactics can alienate businesses and governments, but they excel at mobilising public opinion and pressuring decision-makers.
3. **Hybrids:** A newer category, hybrids blend the strategic campaigning of activists with the cooperative problem-solving of solutionists. Mighty Earth is a prime example of this approach, combining public pressure with behind-the-scenes collaboration to push for sustainable practices in sectors like agriculture and energy. Hybrids reflect a pragmatic evolution within the NGO landscape, recognising the value of engaging all stakeholders to achieve systemic change.

Developing technology – like satellite technology, social media and the democratisation of the internet, has armed environmental NGOs with sophisticated tools to apply pressure to businesses. Amplifying their campaigns can create immediate reputational risks for companies that fail to meet environmental standards. Furthermore, NGOs are increasingly focusing on supply chain vulnerabilities, targeting not only the end company but also its partners, suppliers and financiers. This approach pressures businesses to adopt comprehensive sustainability practices and strategies to avoid becoming the focus of negative campaigns. Some NGOs also engage in shareholder activism, purchasing small stakes in companies to influence policies from within, or leveraging proxy votes to push for environmentally conscious resolutions at annual general meetings.

Another effective tactic is coalition building. By partnering with like-minded organisations, activists and even consumers, NGOs amplify their impact, creating a broad, unified voice against unsustainable business practices. This has resulted in significant campaigns targeting industries such as agriculture, energy and fashion, where collaborative efforts among NGOs have built the case for corporates to develop policies on sustainability. For example, public pressure campaigns against deforestation have led companies to commit to zero-deforestation pledges within their supply chains. Hybrid NGOs, particularly, excel in adopting a dual approach that combines behind-the-scenes engagement with public-facing advocacy, creating a mix of pressure and partnership that has proven highly effective.

3.3 Engaging with Businesses

For businesses, effectively managing relationships with NGOs requires a proactive and transparent approach. The first step is openness to dialogue. Companies should engage with NGOs early and consistently, fostering relationships that focus on shared goals rather than conflict. By opening clear channels of communication, businesses can gain valuable insights into environmental concerns and even collaborate on finding solutions. This approach can pre-empt potential public conflicts while demonstrating a genuine commitment to sustainability.

3. The World's Response to the Above Trends continued

Transparency is equally critical. Companies that openly share data on their environmental performance, challenges and progress are better positioned to build trust with NGOs and the public. Attempts to conceal or downplay environmental issues can backfire, drawing harsher scrutiny from NGOs and eroding stakeholder trust. Instead, businesses should embrace accountability by publishing detailed sustainability reports, setting measurable goals, and being honest about their limitations or setbacks.

Finally, businesses must demonstrate a commitment to continuous improvement. This means not only adhering to existing regulations but actively pursuing innovative solutions to minimise environmental impact. Partnering with solutionist or hybrid NGOs can be a strategic move, as these organisations often bring technical expertise and innovative ideas to the table. By engaging constructively with NGOs, businesses can transform potential adversaries into allies, aligning corporate objectives with broader environmental goals and enhancing their reputation as responsible, forward-thinking organisations.

3.4 Regulation and Voluntary Markets

Environmental regulation is not a new phenomenon. As early as 80 AD, the Roman Senate passed laws to protect the city's supply of clean water. In 14th-century London, legislation attempting to control air pollution was introduced[110]. And in 1681, the leader of the English colony of Pennsylvania ordered that one acre of forest be preserved for every five acres cleared for settlement[112].

From these early efforts, awareness among policymakers has gradually grown, but it was not until the 1960s that momentum truly accelerated. Driven by mounting scientific evidence (as outlined above) and the growing influence of environmental NGOs, the urgency of addressing environmental threats expanded, giving rise to the complex web of laws, rules, frameworks and regulations we see today – aimed not only at combating climate change but also at protecting nature, air quality and water resources[112].

While today's mix of environmental regulation, led currently by the EU's regulatory framework, is complex, and while it is encouraging businesses to disclose more than ever before, a relative lack of clarity and cohesion is also invoking frustration.

Rise of Comprehensive Compliance Requirements

Modern regulations mandate companies to justify, prove and monitor their sustainability claims with increasing rigour. For example, the incoming CSRD regulation introduces the concept of double materiality (as outlined in Section 1), requiring businesses to assess and disclose how ESG issues impact their financial performance and how the company's activities, in turn, affect the environment and society. Furthermore, under the regulation, companies must disclose granular sustainability data, often extending beyond their direct operations to encompass their entire supply chains. Similarly, the recently delayed EU Deforestation Regulation (EUDR) will require firms to demonstrate the precise origin of in-scope commodities to ensure compliance with environmental safeguards[113].

Transparency is a central theme of many of these modern regulations. As data requirements extend across entire supply chains, compliance increasingly demands both robust data management systems and a willingness to expose previously opaque areas of business. While compliance failures pose financial and reputational risks, proactive alignment with such regulations offers a competitive edge.

Regulations now exist at global, regional and national levels. At the global level, agreements like the Paris Agreement set advisory goals for nations to combat climate change collectively. Regionally, instruments such as CBAM enforce mandatory compliance, targeting carbon-intensive imports to incentivise cleaner production methods. Nationally, the UK Climate Change Act binds governments to ambitious emission reduction goals, serving as a template for other countries seeking to legislate accountability for climate action.

Voluntary Markets

While mandatory legislation provides a baseline of disclosure for most companies, governments are often slow to act and implement. Business- or NGO-led voluntary frameworks and certifications have often been ahead of the curve, shaping the sustainability agenda for high-impact sectors. Standards such as the Forest Stewardship Council (FSC) and the Initiative for Responsible Mining Assurance (IRMA) establish benchmarks that often exceed regulatory demands. Consequently, frameworks such as these are becoming prerequisites for doing business in markets where buyers and investors increasingly seek assurances of ESG credentials.

3. The World's Response to the Above Trends continued

This is creating a dual challenge for companies that must navigate a complex patchwork of mandatory and voluntary standards – with all their accompanying definitions and nuances – while ensuring coherence and impact in their sustainability strategies. That is not to say, however, that the rise of legislation and voluntary frameworks should be viewed as a negative development. On the contrary, the development of a robust, clear and large uptake framework can provide a roadmap for leadership, offering opportunities for industries, and the companies that sit within them, to build trust, reduce risk and future-proof their existence in an increasingly green market.

3.5 International Collaboration

In recent decades, landmark international agreements have come to define the global response to climate change and the key trends discussed above. In 2014, the IPCC concluded that two characteristics of climate change make international cooperation essential: that it is a global common problem that needs to be addressed in a coordinated fashion at the global scale; and that there are economic efficiencies associated with cooperative solutions. Much of the progress made in these areas has stemmed directly from UNEP and the 1992 United Nations Framework Convention on Climate Change (UNFCCC).

For example, key milestones in international climate cooperation include:

1988: Establishment of the Intergovernmental Panel on Climate Change (IPCC)

The IPCC was established to provide policymakers with regular scientific assessments of the current state of knowledge about climate change. Since 1988, the IPCC has had six assessment cycles and delivered six Assessment Reports. The next Assessment Report is not expected until 2029. The first report, published in 1990, played a critical role in the creation of the UNFCCC. In addition to Assessment Reports, the IPCC has produced a range of Methodology Reports, Special Reports and Technical Papers in response to requests for specific scientific and technical information from the UNFCCC, governments and international organisations.

1992: Adoption of the United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC is a multilateral treaty adopted in 1992 with the objective of stabilising GHG concentrations at a level that would prevent dangerous anthropogenic interference with the climate system. Today, there are 198 Parties to the Convention, reflecting its near-universal acceptance.

1995: First Conference of the Parties (COP)

The inaugural COP was held in Berlin, marking the beginning of regular global climate negotiations under the UNFCCC. COP serves as the supreme decision-making body of the UNFCCC. It brings together representatives from all Parties to assess progress in dealing with climate change, negotiate future commitments, and discuss implementation strategies. Over the years, the COP meetings have grown into critical forums for global cooperation on climate action, with landmark agreements such as the Kyoto Protocol and the Paris Agreement emerging from these gatherings.

In addition to the climate-focused COP under the UNFCCC, there is now a parallel Conference of the Parties addressing biodiversity. Known as the Convention on Biological Diversity (CBD) COP, this process focuses on protecting and restoring ecosystems, conserving biodiversity, and ensuring sustainable use of natural resources. These two COPs, on climate and on nature, highlight the interconnected challenges of environmental protection and the need for integrated global strategies.

1997: Kyoto Protocol

Adopted under the UNFCCC, the Kyoto Protocol was the first legally binding commitment to reduce GHG emissions. The protocol sought to cut GHG emissions in 38 industrialised countries with key contributors such as Japan, the US and the EU pledging to cut their emissions by 7%, 8%, and 9% respectively. Some argue that it achieved measurable reductions in emissions among developed nations and set the stage for innovations in carbon markets and low-carbon technologies. However, others question its effectiveness given that it followed the UN's differentiated responsibility principle that saw developing countries, irrespective of their current emission levels, exempt from any emission reduction commitments.

3. The World's Response to the Above Trends continued

2010: Cancun Agreements

The Cancun Agreements represented a significant step forward in operationalising international climate action. Key achievements included:

- **Green Climate Fund (GCF):** The establishment of the GCF was a pivotal moment, providing a financial mechanism to support developing countries in both mitigating climate change and adapting to its impacts. By mobilising financial resources, the GCF aims to help vulnerable nations transition to low-emission and climate-resilient pathways.
- **REDD+ (Reducing Emissions from Deforestation and Forest Degradation):** Formal backing was given for REDD+, a programme aimed at incentivising developing countries to conserve and sustainably manage forests. This marked a shift towards integrating forest preservation into the global climate agenda.
- **Enhanced Transparency:** Agreements on improved mechanisms for monitoring, reporting and verification of climate actions by nations, ensuring greater accountability and trust in international efforts.

2015: Paris Agreement and Sustainable Development Goals (SDGs)

The Paris Agreement marked a turning point in global climate governance, bringing all nations into a common framework for climate action. Key provisions included:

- **Nationally Determined Contributions (NDCs):** Countries set their own emission reduction targets, tailored to their unique circumstances and capabilities, and committed to reviewing and strengthening these targets every five years.
- **Temperature Goals:** The Agreement set ambitious objectives to limit global warming to well below 2°C above pre-industrial levels, with efforts to cap warming at 1.5°C to minimise catastrophic climate impacts.
- **Global Stocktake:** A periodic assessment process to evaluate collective progress towards achieving the Agreement's long-term goals.
- **Climate Finance:** Wealthier nations reaffirmed their commitment to mobilise $100 billion annually to support developing countries in their climate efforts, with provisions to scale this support over time.

Adopted alongside the Paris Agreement, the Agenda for Sustainable Development introduced the SDGs — 17 interlinked goals aimed at eradicating poverty, protecting the planet, and ensuring prosperity for all by 2030. The SDGs and the Paris Agreement are mutually reinforcing, recognising the interconnectedness of climate action and sustainable development.

3.6 What are Businesses Doing?

Businesses around the world are responding to the challenges and opportunities presented by climate and sustainability trends through a variety of strategies:

- **Climate Action Plans:** Companies are increasingly developing comprehensive climate action plans that incorporate climate risk assessments, as well as adaptation and mitigation strategies. These plans enable organisations to identify vulnerabilities and dependencies, reduce emissions, and enhance resilience to climate impacts.
- **Goals and Targets:** Many businesses are adopting science-based targets and embedding sustainability into their frameworks, by aligning with global benchmarks and initiatives such as the Science Based Targets initiative (SBTi), and the Science Based Targets Network (SBTN).
- **Internal Carbon Pricing:** To drive decision-making and signal the financial implications of emissions, companies are implementing internal carbon pricing mechanisms. This approach not only incentivises low-carbon choices but also prepares businesses for future regulatory environments.
- **Offsetting:** While focusing on reducing their direct emissions, businesses are also investing in carbon offsetting projects, such as reforestation and renewable energy initiatives, to neutralise their remaining footprint.
- **Finance:** Climate finance has emerged as a critical area, with businesses accessing green bonds, sustainability-linked loans, and other innovative financial instruments to fund their transitions to sustainable practices. This approach underscores the financial viability of aligning economic growth with environmental responsibility.

Conclusion

The result is clear. Business as usual is not enough; sustainability is an ever-expanding and evolving global challenge that will continue to affect WE Soda. While these trends are global in nature, their impact and solutions are often localised. Understanding and embedding the latest science in decision-making is vital to understanding future developments and the subsequent impact on WE Soda.

From Evidence to Action

- Together, the Evidence Book and our Double Materiality Assessment have informed the development of our Sustainability Plan, ensuring that our future actions are rooted in sound evidence and focused on what matters most.
- To ensure transparency, credibility and alignment with best practice, WE Soda has established a new Sustainability Advisory Panel, composed of independent experts, to provide external peer review and guidance on our sustainability claims, data and performance.
- The content in this document has been reviewed by the Panel and our internal experts, and each iteration will be reviewed to ensure that WE Soda continues to be aligned with the latest science.

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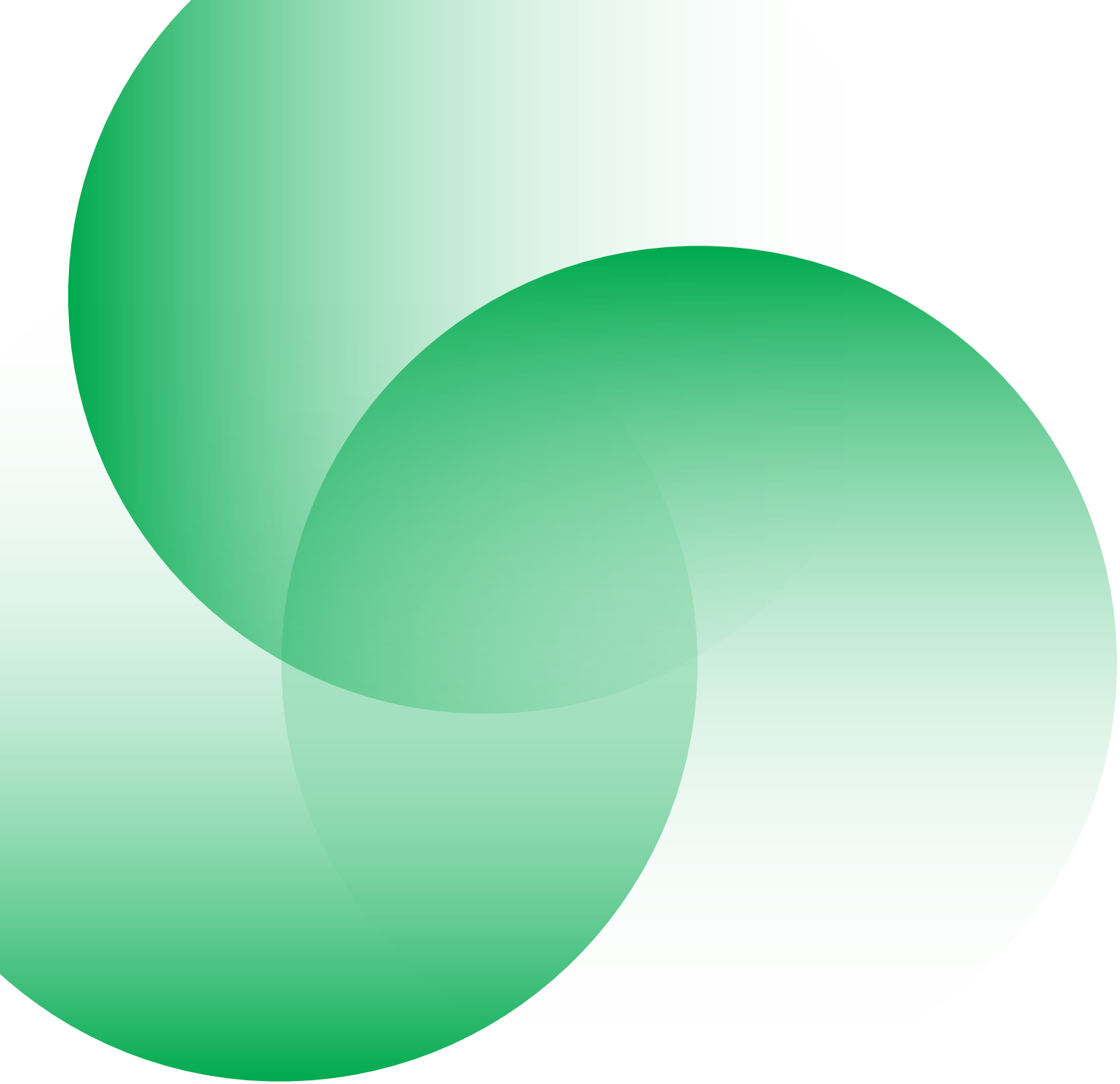

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