Ceres Accelerator for Sustainable Capital Markets

November 10, 2022

Secretary Vanessa Countryman
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: The Enhancement and Standardization of Climate-Related Disclosures for Investors, Release No. 33-11042, 34-94478; File No. S7-10-22

Dear Ms. Countryman:

I am writing with a supplement—*Corporate Leaders Measuring, Disclosing & Reducing Scope 3 Emissions*—to Ceres' response to the SEC's March 21, 2022 proposed rule, The Enhancement and Standardization of Climate-Related Disclosures for Investors.

In Ceres' June 17, 2022 response to the SEC's proposed rule, we endorse the proposed Scope 3 disclosure requirement. We discuss statements from Ceres Investor Network members, the TCFD, FSOC, the EPA and others about the importance of Scope 3 assessment and disclosure. We also submitted a "Statement of Essential Principles for SEC Climate Change Disclosure Rulemaking" on behalf of over 500 investors, companies, foundations, NGOs, and individuals that states, "Disclosure rules should include Scope 1, 2, and 3 greenhouse gas emissions, which are needed to assess the full range of climate change risks facing companies".

Most recently, the IFRS' International Sustainability Standards Board (ISSB) announced "the ISSB voted unanimously to require company disclosures on Scope 1, Scope 2 and Scope 3 greenhouse gas (GHG) emissions, applying the current version of the GHG Protocol Corporate Standard. As part of these requirements, the ISSB will develop relief provisions to help companies apply the Scope 3 requirements." The announcement noted that the ISSB intends to issue final climate and general sustainability disclosure standards as early as possible in 2023. Because the IFRS' accounting standards are used by regulators in over 140 countries, and because of IOSCO's support for the ISSB's efforts, we believe it likely that the ISSB's Scope 3 disclosure requirements will be adopted globally in coming years.

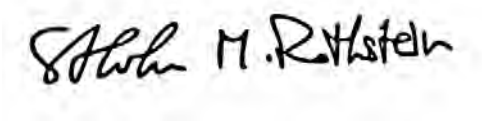
We are submitting this collection of articles because they represent business leadership in measuring, disclosing, and reducing Scope 3 emissions and reflect the risks investors face from not having a clear picture of Scope 3 emissions. These companies have set science-based targets set to reduce emissions, including Scope 3 emissions produced by a company's supply chain or use of its products and services. CDP has found that GHG emissions in a company's supply chain are, on average, 11.4 times higher than its operational emissions.[1] Because of the

[1] See CDP, Engaging the Chain: Driving Speed and Scale: CDP Global Supply Chain Report 2021 (February 2022) at 3, 4, 10.

financial risks posed by climate risk issues in supply chains, investors have been calling for mandatory, standardized disclosure on companies' GHG emissions for years.[2]

Thank you very much for your consideration of our comments. We welcome the opportunity to provide additional background and resources if it would be useful.

Sincerely,



Steven M. Rothstein
Managing Director, Ceres Accelerator for Sustainable Capital Markets, Ceres
99 Chauncy St. 6th Floor
Boston, MA 02111
[redacted]

[2] See Laura Draucker Ph.D. and Nako Kobayashi, Ceres, The Strong Business Case for Measuring, Reporting, and Reducing Scope 3 Emissions (September 19, 2022).

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Meet the Companies that are Leading the Way on Scope 3 Emissions

November 8, 2022 | Randi Mail

Over the past few months, there has been a lot of buzz about the benefits and challenges to companies of measuring, disclosing, and reducing the greenhouse gas (GHG) emissions in their supply chains – what's known as scope 3 emissions. The reality is that leading companies are tracking and tackling both upstream and downstream supply chain emissions because it makes good business sense.

With the U.S. Securities and Exchange Commission's proposed rule to standardize and enhance disclosure of climate risks, and a proposed global standard from the International Financial Reporting Standards' International Sustainability Standards Board, some skeptics are asking if measuring and disclosing scope 3 emissions is too hard.

Well, maybe it's time to listen to some companies describe their experiences. At Ceres, we've collected stories highlighting corporate leaders who recognize the business case for acting on scope 3. Their experiences illustrate that businesses that measure and disclose climate-related risks and opportunities improve risk

Ceres

There is a clear business advantage for companies to understand and manage their scope 3 emissions. Only publicly listed companies - current SEC registrants - are subject to the SEC disclosure rule.

This collection of Scope 3 leadership among major companies should be incredibly helpful to their industry peers and anyone interested in best practices and lessons learned. It features Mars, McCormick, HP, Apple, Unilever, Gap, Ford, General Mills, Ikea, JLL, General Motors, Walmart, AstraZeneca, Moody's, Etsy, Allbirds, and Everlane. Companies, investors, and policy makers can also find resources from Ceres, World Resources Institute, Science-Based Targets Initiative, CDP, and Guidehouse.

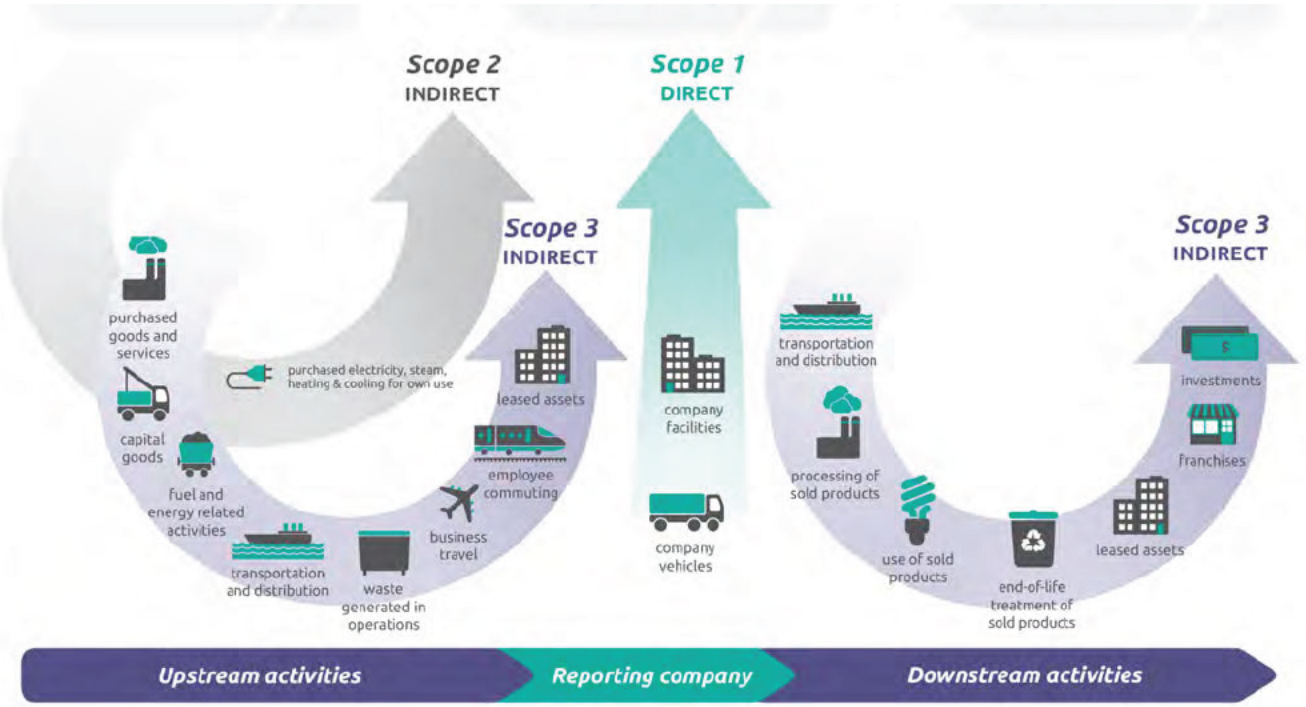
Hear from leading companies on why they are working to address their Scope 3 emissions:

- Mars: "Five years into its Scope 3 work, Mars is assuredly making progress. The company is already working with major suppliers that account for a third of its total emissions, primarily raw material and logistics providers. It has reduced its Scope 3 emissions by 6% compared to 2015 levels over a period in time where the company has seen significant growth."
- HP: "With our supply chain representing over two-thirds of our emissions, our mandate was clear: To reduce the footprint of our printers, computers, and monitors, we had to reduce the footprint of the components, manufacturing, assembly, and transportation of those items. We have hundreds of suppliers, so we needed to take a data-based approach to this problem. We examined our supply chain data and found that our 30 largest partners were responsible for nearly 80% of the Scope 3 emissions from our directly-contracted-suppliers' operations."
- Unilever: "We have a CEO who really believes in this commitment. Commitment from the top is essential, and you need to live and breathe the commitment from the top level to make it work... Our operations are only 5 percent of our total carbon footprint. The majority of emissions come from

influence on how our customers use our products."

- Ford: "We address Scope 3 by tackling our biggest emissions categories first. Those categories are the use of our vehicles (75 percent of our Scope 3 emissions) and our suppliers' emissions (17 percent). Everything else will be addressed over time. Would we like to address 100% of our emissions? Absolutely, and we will over time, but our immediate focus is to address our biggest sources first."
- JLL: "By focusing on Scope 3 emissions, science-based targets push companies to consider emissions throughout their supply chain, from construction to procurement and beyond. For JLL, with over 96% of its emissions arising from the consumption of natural gas and electricity in the real estate managed for clients, collaboration is fundamental. Taking all clients on their own climate action journeys is critical.
- Walmart: "As a large omni-channel retailer with millions of customers worldwide and a global sourcing footprint, Walmart is able to lead by reducing emissions in our operations and supply chain while galvanizing collective action across our industry. We believe a strong climate action strategy will help us manage the physical and transition risks associated with climate change, strengthening the resilience of our business and helping us create value for stakeholders... We focus on achieving our science-based targets for emissions reduction in our global operations and supply chain in ways that strengthen the performance and resilience of our business."

These corporate leaders understand that tackling value chain emissions makes good business sense. We hope that their leadership inspires their peers to learn from their examples and to act. We urge trade groups and business associations to recognize that their own members are leading the way on measuring and disclosing scope 3 emissions. Investors are seeking the best practices from their portfolio companies, and the public wants to know which companies are doing the most to reduce greenhouse gas reductions and how. Please share these stories. Let's flip the script.



Source: WRI/WBCSD Corporate Value Chain (Scope 3) Accounting and Reporting Standard (PDF), page 5.

Meet The Experts

WORLD RESOURCES INSTITUTE | 40 YEARS

Trends Show Companies Are Ready for Scope 3 Reporting with US Climate Disclosure Rule

June 24, 2022 By **Shannon M. Lloyd**, **Maida Hadziosmanovic**, **Kian Rahimi** and **Pankaj Bhatia**

Project Update

Region **North America**

In March 2022, the United States Securities and Exchange Commission (SEC) proposed a new climate disclosure rule which would require companies registered with the SEC to disclose climate-related information so that investors can consider climate-related financial risks when making investment decisions. This includes

physical risks from the impacts of climate change and transition risks from moving to a lower carbon economy, including pressure to reduce greenhouse gas (GHG) emissions.

The public comment period for the draft SEC rule closed on June 17. This article reflects some of the key points that WRI and Concordia University shared in our respective comments with SEC.

The proposed rule would require companies to disclose Scope 1 emissions (from direct sources) and Scope 2 emissions (from purchased electricity, heat or steam), whereas

it would require disclosure of Scope 3 emissions (from other sources in the value chain) when deemed material to investors or when the company has emissions targets that encompass Scope 3 emissions. **But scope 3 emissions are an important source of climate-related financial risk across the business value chain and should be reported by all registrants under the SEC proposed climate disclosure rule.**

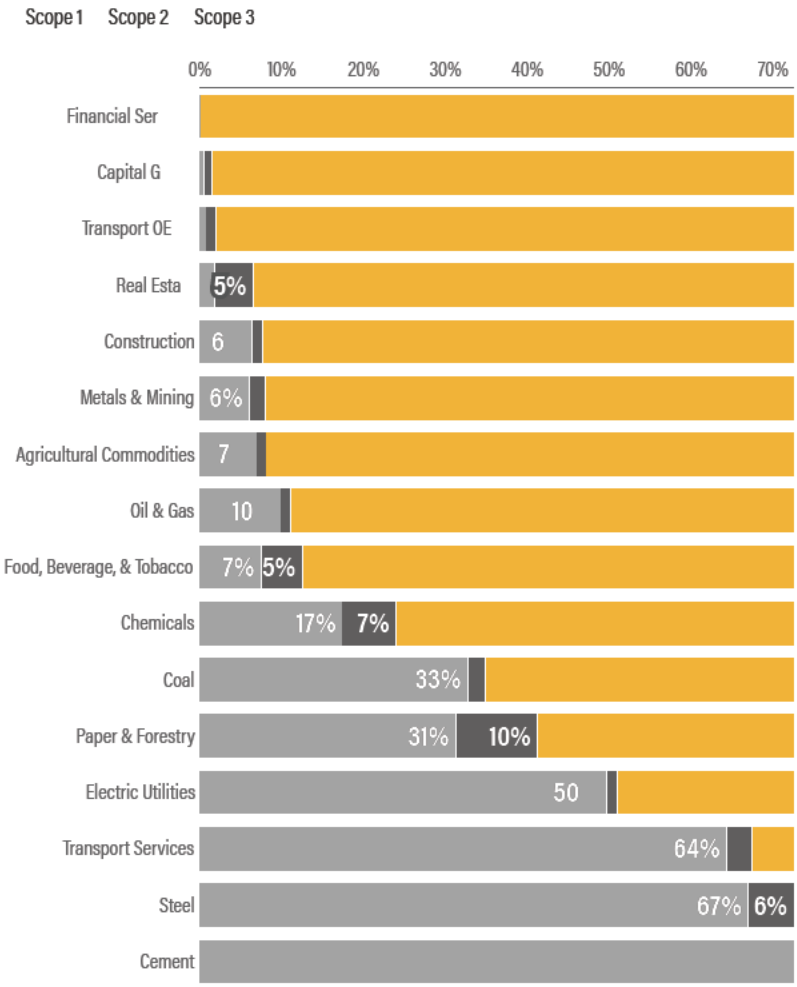
Scope 3 emissions account for the largest share of most companies' GHG emissions, and investors report that Scope 3 estimates are useful for informing their financial decisions, reflecting the SEC's

definition of financial materiality. The SEC's proposed approach aims to "balance the importance of scope 3 emissions with the potential relative difficulty in data collection and measurement." But many companies already estimate scope 3 emissions, and the SEC's procedures for disclosing material assumptions and uncertainties in financial accounting could be applied to scope 3 emission estimates.

Scope 3 emissions account for 75% of companies' greenhouse gas emissions on average

The CDP estimated that Scope 3 emissions account for an average of three-quarters of a company's emissions. But the importance of Scope 3 emissions varies considerably by sector and can approach 100% of a company's emissions (Scope 3 emissions were estimated to be 99.98% on average for companies in the financial services sector). Other studies show that the supply chains of eight sectors account for half of the world's GHG emissions and provide evidence that Scope 3 emissions from energy-intensive industries are increasing faster than their Scope 1 and 2 emissions.

Share of Scope 3 Emissions to Total Emissions, by Sector



Source: Data is from CDP. Research and analysis of the data was conducted by Concordia University.

WORLD RES

Scope 3 emissions are too important to omit

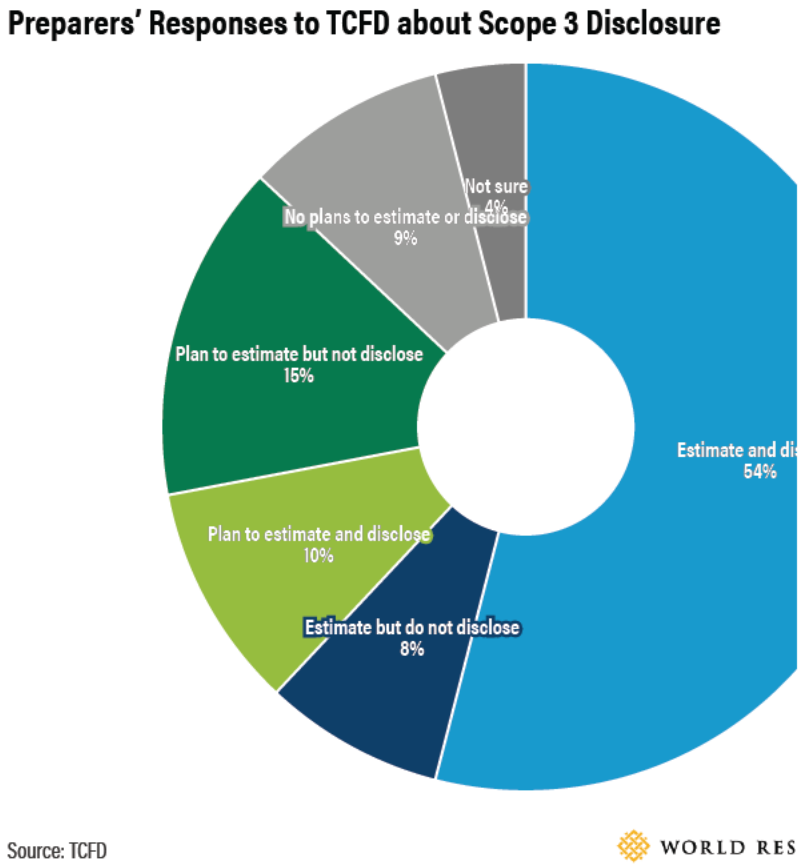
Arguments against reporting Scope 3 emissions focus on data collection and accounting challenges (e.g., lack of primary data, a reliance on industry average data, or potential double-counting of emissions between reporting entities) and the inability to control the actions of value chain partners. Counterarguments emphasize the

Counterarguments emphasize the importance of Scope 3 emissions in understanding climate-related financial risks, facilitating actual emissions reductions within the value chain, preventing companies from claiming lower emissions and related liabilities by outsourcing carbon intensive activities (i.e., 'moving' emissions from Scope 1 or 2 to Scope 3), and preventing companies from skirting responsibilities to be transparent to their shareholders about their overall risk exposure, which is especially relevant for industries with a majority of their emissions classified as Scope 3. Proponents also point to existing Scope 3

accounting practices and advancements in Scope 3 data collection as enablers of Scope 3 disclosure.

The debate over importance versus accounting challenges for Scope 3 emissions was evident in public consultations conducted by the Task Force on Climate-related Financial Disclosures (TCFD) in 2021. TCFD surveyed and obtained feedback from 100 climate-disclosure users, 106 climate-disclosure preparers, and 46 other respondents. Nearly all (95%) users responded that Scope 3 emission disclosures are useful for decision-making and most preparers (87%) responded that

preparers (87%) responded that they estimate or plan to estimate scope 3 emissions.



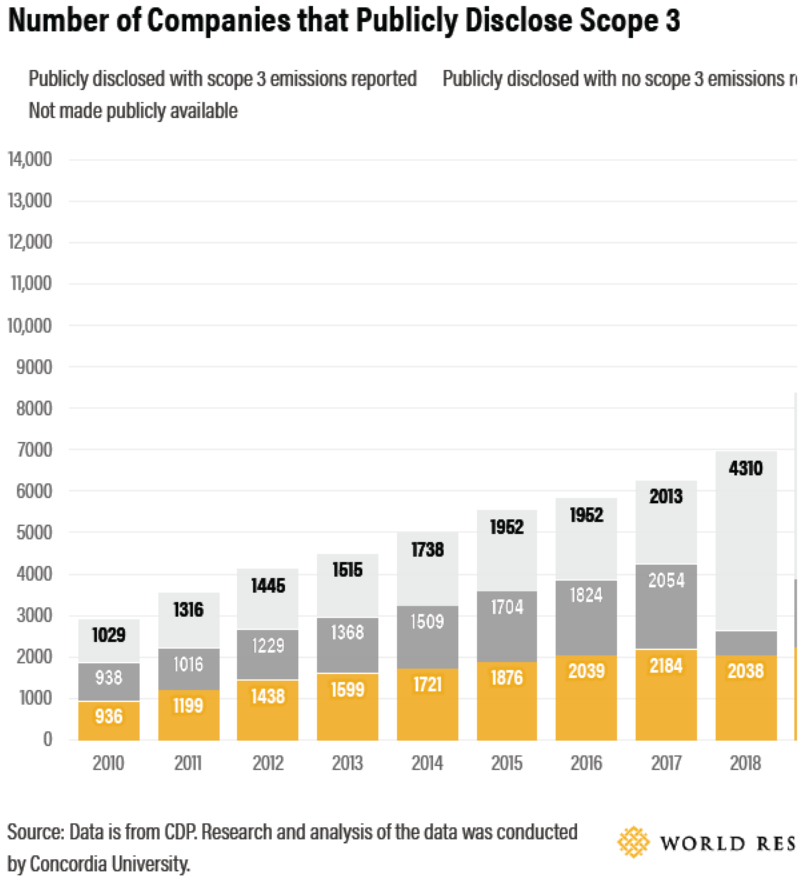
Preparers identified Scope 3 emissions as one of the more difficult metrics to disclose, with 39% specifying it as very difficult, 42% as somewhat difficult, and only 20% as not at all or not very difficult. The most common challenges identified included

difficulty accessing relevant data (83%), challenges selecting or applying calculation methodologies (60%), and lack of internal expertise or resources for calculating Scope 3 emissions (29%). Almost all respondents (90%) expressed support for Scope 3 disclosure (47% irrespective of materiality and 43% based on materiality).

Despite data challenges, thousands of companies publicly disclose Scope 3 emissions estimates

As part of a research study commissioned by World Resources Institute (WRI) — a co-convener of the GHG Protocol — Concordia researchers evaluated the current Scope 3 accounting practices of companies that disclosed climate information to CDP's global environmental disclosure system and agreed to their data being publicly available. The number of companies that reported Scope 3 emissions in the public CDP dataset increased from 936 companies in 2010 to 3,317 companies in 2021. In 2021, more than half (55%) of companies did not agree to their data being publicly available in 2021. If these companies reported Scope 3 emissions at the same rate as those in the public data set, we would expect the actual number of

expect the actual number of companies reporting Scope 3 emission estimates to CDP to be higher than 7,000. Also, as seen in the TCFD consultations, more companies estimate emissions than disclose emissions. We would therefore expect an even higher number of companies that estimate Scope 3 emissions.

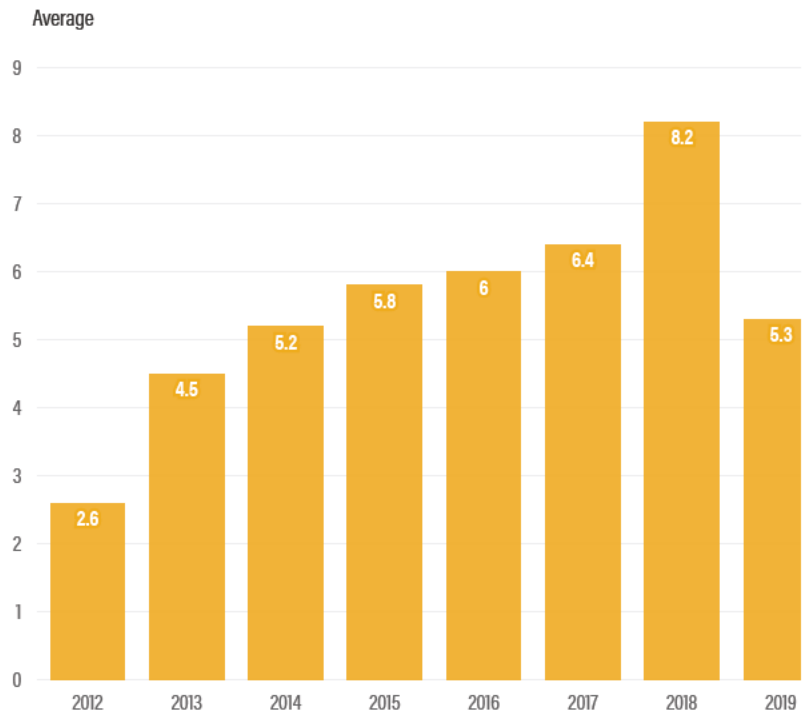


Source: Data is from CDP. Research and analysis of the data was conducted by Concordia University.

We consider companies to report scope 3 emissions if they report emissions for one or more of the fifteen scope 3 categories identified in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. On average, these companies reported

emissions for 5-6 scope 3 categories in recent years.

Average Number of Scope 3 Categories Reported



Source: Data is from CDP. Research and analysis of the data was conducted by Concordia University.

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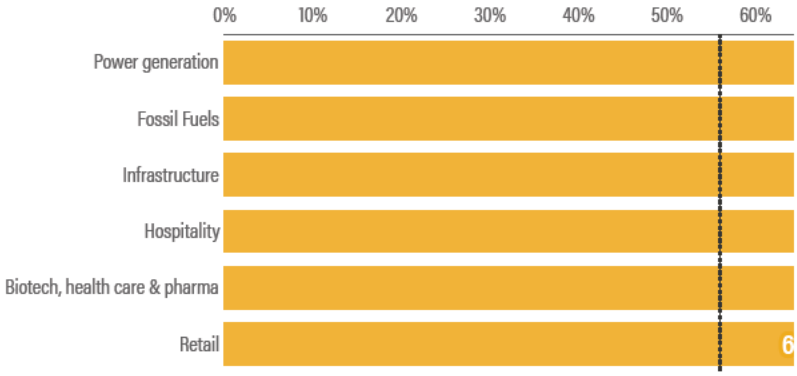
In many industries, most companies already report Scope 3 emissions

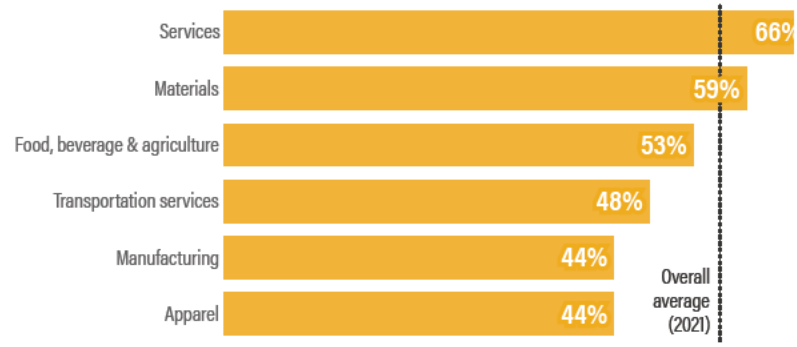
Two-thirds of companies or more reported Scope 3 emissions in most

industries in 2021, with the highest percentage (84%) of companies reporting Scope 3 emissions in the power generation industry. This suggests industry-specific capability and emphasis on Scope 3 reporting, which can be leveraged for SEC Scope 3 reporting.

The industries with lower scope 3 reporting rates include those with supply chains that account for half of the world's GHG emissions, including food, fashion, freight, as well as electronics and automotive (which fall under the manufacturing industry in CDP's dataset). For companies in these industries, scope 3 emissions will likely be deemed material, necessitating reporting under the SEC's proposed rule. Requiring these companies to report scope 3 emissions would ensure that companies with carbon-intensive value chains provide more complete information about their exposure to climate-related financial risks.

Scope 3 Reporting by Industry (2021)





Source: Data is from CDP. Research and analysis of the data was conducted by Concordia University.

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US companies report Scope 3 emissions at a lower rate than their counterparts

The percentage of companies that report Scope 3 emissions also varies by geography. Companies from

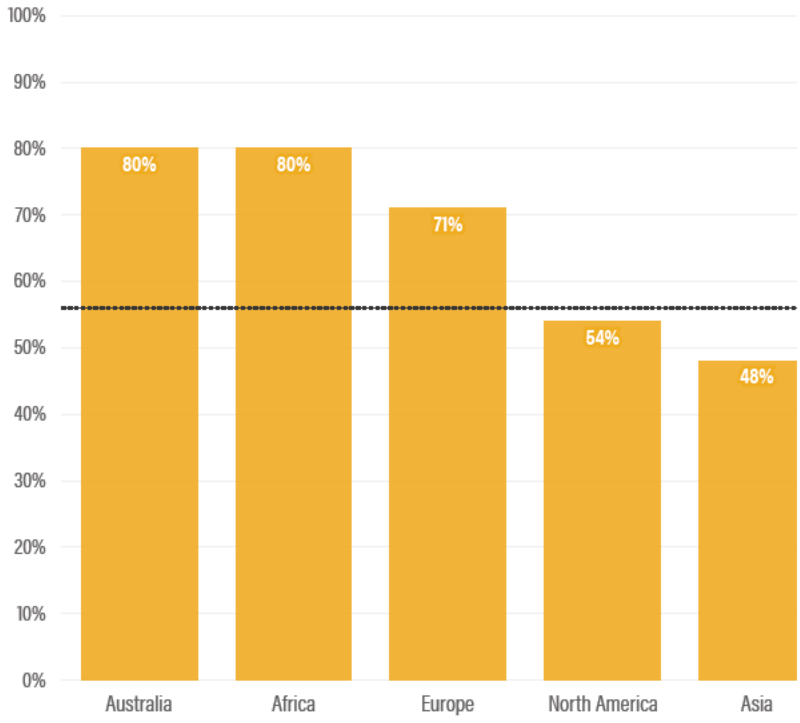
other Global North regions are more likely to report Scope 3 emissions in their climate disclosures than companies in the U.S.

In 2021, 71% of European companies and 80% of Australian companies that disclosed emissions to CDP reported Scope 3 emissions. The lower global average reporting rate is heavily influenced by companies in the U.S., China, and Brazil, which have a high number of disclosing companies, but a lower rate of Scope 3 emissions reporting. Companies in the U.S. accounted for the highest percentage (19%) of disclosing companies and had a Scope 3

companies and had a Scope 3 reporting rate of 56%; companies in China accounted for the second highest percentage (14%) of disclosing companies and had a Scope 3 reporting rate of 27%; and companies in Brazil accounted for the fifth highest percentage (6%) of disclosing companies and had a Scope 3 reporting rate of 37%.

Consequently, U.S. companies may be at a disadvantage with investors who are increasingly concerned with climate-related financial risks, particularly risks associated with transitioning the economy away from fossil fuels.

Scope 3 Reporting by Region (2021)



Source: Data is from CDP. Research and analysis of the data was conducted by Concordia University.

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Requiring scope 3 emissions reporting would better inform investors of climate-related financial risk

For over two decades, companies have been gaining GHG accounting experience, and thousands of companies now estimate and publicly report Scope 3 emissions each year. For the majority of companies, Scope 3 emissions represent a large source of transition risk.

Although Scope 3 emissions can require assumptions, rely on imperfect estimation methods, and are uncertain, this is no different than many current financial accounting disclosures. Estimation is common and necessary in financial accounting, which is why the SEC requires disclosure of significant assumptions that go into accounting estimates. A high-quality audit that probes these estimates and assumptions for

management bias is critical to reliable financial reporting. With similar process controls over estimation of Scope 3 emissions, checked by an independent auditor, companies should be able to provide investors informative data on how dependent their full value chains are on emissions and their

progress toward addressing transition risks in their business models.

By requiring Scope 3 emissions disclosure, the SEC would provide investors with more complete information about their exposure to climate-related financial risks.

Relevant Work

CLIMATE

The Draft US Securities and Exchange Commission Climate Disclosure Rule: Eight Myths Debunked

Insights JUNE 16, 2022

CLIMATE

The SEC's New Climate Rule is Plain Common Sense

Insights JUNE 16, 2022

FINANCE

What Investors Want from Sustainability Data

Insights FEBRUARY 12, 2019

It's Time for US Federal Contractors to Measure their Carbon Footprints

Insights AUGUST 25, 2016

The Strong Business Case for Measuring, Reporting, and Reducing Scope 3 Emissions

September 19, 2022 | Laura Draucker Ph.D. and Nako Kobayash

n s mp est terms, a corporate va ue cha n s a ser es of act v t es nvo ved n de ver ng va ue to customers. S nce the phrase was co ned over 30 years ago, bus ness experts agree that, by understand ng and max m z ng effic enc es n ts va ue cha n, a bus ness can add va ue to ts products and serv ces and, u t mate y, ts bottom ne. Compan es that work to m n m ze r sks and max m ze opportun t es up and down th s va ue cha n nc ud ng w th the r supp ers and consumers who aren't under the r d rect contro stand to ga n a compet t ve advantage.

or many compan es, the r va ue cha n s a key source of c mate r sk. The greenhouse em ss ons (GHG) from everyth ng from the transportat on and d str but on of raw mater a s and fina products, to the grow ng, ra s ng, and produc ng raw mater a s, to the mpact supp ers operat ons have on forests and and these are just some of the act v t es that exp a n why scope 3, or the nd rect em ss ons assoc ated w th a company's va ue cha n, are on average over 11 t mes arger than the em ss ons that stem from a company's own operat ons, accord ng to the CDP.

By contr but ng to c mate change, these GHG em ss ons pose phys ca , financ a , and regu atory r sks to compan es. So, just as va ue cha ns can be opt m zed to ncrease va ue to the fin shed products or serv ces, they can and must be opt m zed to reduce c mate r sk and rea ze opportun t es to create and offer new products and serv ces that support a ower em ss ons future.

or years, nvestors have been ca ng for mandatory, standard zed d sc osure on compan es' GHG em ss ons. nvestors want standard zed, dec s on usefu nformat on so that they can understand the fu exposure that a company has to c mate r sks, eva uate nvestment opportun t es, and make nformed financ a dec s ons. That s why, just th s week, 532 nst tut ona nvestors represent ng $39 tr on n assets under management

ssued the most amb t ous nvestor ca for government act on on c mate r sk, nc ud ng a c ear ca for mandatory c mate d sc osure. ndeed, w th the U.S. Secur t es and Exchange Comm ss on (SEC) propos ng to strengthen financ a d sc osure requ rements for scope 1, 2, and 3 greenhouse gas em ss ons by pub c compan es to the r nvestors, measur ng and manag ng supp y cha n em ss ons are a cr t ca pr or ty for pub c y he d compan es n the U.S.

The SEC's proposed ru e w enab e the U.S. to jo n peer regu ators n Be g um, Canada, Ch e, rance, Japan, New Zea and, Sweden, and the Un ted K ngdom who have mandated TC D a gned c mate re ated financ a d sc osures. The SEC's effort a so comp ements the nternat ona nanc a Report ng Standard's fast mov ng workstream to create a g oba c mate d sc osure standard that w nfluence 140 jur sd ct ons.

nvestors g oba y are ca ng for d sc osure of mater a Scope 3 em ss ons upstream and downstream w th compan es prov d ng context and spec fic ty about the most s gn ficant Scope 3 em ss ons. Th s nformat on s necessary for nvestors to deve op a fu p cture of trans t on r sk exposure to nform effect ve nvestment dec s ons and cap ta a ocat on.

nvestor pressure as de, forward ook ng and bus ness savvy compan es are rea z ng that c mate r sks n the va ue cha n cannot be gnored. n the push to ensure the r operat ons are res ent n the face of c mate re ated financ a r sk, many compan es say the bus ness case s stronger than ever for tack ng the r scope 3 em ss ons. n just the past five years, near y 20% of ortune 500 compan es have set amb t ous targets for reduc ng GHG em ss ons across the r ent re va ue cha ns nc ud ng em ss ons from the r supp ers and consumers us ng the r products. Th s creates market pressure for compan es w th n supp y cha ns to fo ow su t or r sk os ng out on contracts and market share f they are unab e to show the r bus ness customers that they are address ng the r own GHG em ss ons.

Th s year, Ceres nterv ewed execut ves at Mars and McCorm ck, two of the wor d's ead ng food and consumer brand compan es, about th s atest and perhaps most cha eng ng front er n corporate efforts to address c mate r sks and opportun t es. Both d sc ose scope 1, 2, and 3 em ss ons to the Carbon D sc osure Project (CDP), have 1.5°C a gned near term targets set and ver fied through the Sc ence Based Targets n t at ve (SBT), and have comm tted to a net zero target through SBT , wh ch requ res em ss on reduct ons by more than 90% across the r va ue cha ns by 2050 at the atest.

Armed w th the data show ng where the r em ss on hot spots are a ong the r va ue cha n and targets show ng them how much they need to reduce, they have begun to take act on. Not surpr s ng y, th s requ res s gn ficant focus on scope 3. Wh e acknow edg ng the enorm ty of the task curb ng em ss ons from tens of thousands of supp ers scattered wor dw de the execut ves are n strong agreement about the urgency and mperat ve.

" t's an enormous cha enge and strateg c mperat ve," sa d Adr enne G fford, who co eads McCorm ck's susta nab e sourc ng efforts, not ng that scope 3 em ss ons account for 96.5% of the sp ce company's tota em ss ons, nc ud ng 63% for raw mater a s a one. "But f we want to ach eve our overa c mate goa s and be a good steward of the p anet, then we have to address em ss ons n our supp y cha ns."

McCorm ck and Mars are work ng to better engage w th supp ers on reduc ng carbon em ss ons. They have partnered w th n ne other g oba consumer brands on the Supp er Leadersh p on C mate Trans t on (LoCT) consort um, an n t at ve that s fund ng the engagement of the r b ggest g oba supp ers on carbon em ss ons foot pr nt ng, goa

sett ng, and on the ground educat on and tra n ng.

The partnersh p makes good sense because the member compan es, nc ud ng Coca Co a, Peps Co, and Nest e, use many of the same supp ers. By work ng together, they can deve op shared expectat ons on how supp ers shou d be measur ng, report ng, and reduc ng the r em ss ons. Over t me, they can move n ockstep n ra s ng those expectat ons.

"There's on y a fin te number of supp ers that are grow ng a our food and process ng a our food," G fford sa d. " orm ng an a ance w th other compan es w th whom we share a common supp y space s rea y he pfu ."

"We rea y need supp ers' who e bus nesses to be on the same page, mov ng n the same d rect on towards net zero," says Autumn ox, who s ead ng susta nab e sourc ng efforts at Mars, a pr vate y he d company that se s dozens of candy products nc ud ng Sn ckers and M&M's.

ve years nto ts scope 3 work, Mars s assured y mak ng progress. The company s a ready work ng w th major supp ers that account for a th rd of ts tota em ss ons, pr mar y raw mater a and og st cs prov ders. t has reduced ts scope 3 em ss ons by 6% compared to 2015 eve s over a per od n t me where the company has seen s gn ficant growth. St , the company s we short of ts nter m goa of a 27% reduct on by 2025. " t s a cha enge, et's not sugar coat t," ox sa d.

Wh e the task at hand can seem daunt ng, these compan es be eve measur ng, report ng, and reduc ng the r scope 3 em ss ons s poss b e and makes good bus ness sense whether they are pub c y sted or pr vate.

n add t on to dent fy ng ways to reduce scope 3 em ss ons, th s ncreased v s b ty nto supp y cha ns can he p compan es m t gate future bus ness vu nerab t es, ensure the ong term stab ty of the r supp y cha ns, and support the r supp ers' ab ty to respond to esca at ng c mate r sks.

That s why, he p ng growers n the r va ue cha n, espec a y sma ho der farmers, strengthen the r c mate res ence and overa v ng cond t ons s another key pr or ty for these two compan es. or examp e, McCorm ck s partner ng w th deve opment agenc es, the U.S. Agency for nternat ona Deve opment and G Z, the German office of nternat ona deve opment, to he p van a growers n Madagascar, a g oba van a hub that has been devastated n recent years by cyc ones.

By understand ng wh ch raw mater a s have the most c mate r sks, compan es can ensure these efforts are focused n the r ght p aces.

Longer term, the compan es see enormous va ue n a gn ng the r bus ness strateg es w th g oba c mate object ves. "Recogn z ng that a of our carbon footpr nt matters and that t needs to be reduced now w he p us bu d the r ght bus ness p an and be compet t ve compared to others that don't [reduce the r em ss ons]," ox sa d.

Whether t's mprov ng farmer ve hoods or reduc ng the r scope 3 em ss ons, the compan es are comm tted to work ng co aborat ve y and pat ent y w th the r g oba

supp ers, wh e ma nta n ng a sense of urgency toward m t gat ng c mate change.

Laura Draucker Ph D
Director, Corporate Greenhouse Gas Emissions

Nako Kobayashi
Manager, Food Emissions 50

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All Industries

Climate Action for Suppliers Helps Make HP's Supply Chain More Sustainable

With one of the largest supply chains in the IT industry, reducing upstream emissions benefits the value chain and the planet.

NEWS RELEASE BY **HP INC.**

Northampton, MA | July 14, 2022 12:00 PM Eastern Daylight Time

By James McCall, Chief Sustainability Officer

In 2021, HP announced **a range of ambitious climate action targets**, including a commitment to be net zero by 2040 — a full decade ahead of the Paris Agreement. We've published our **Sustainable Impact Report** for over 20 years and have actively worked to reduce our footprint for decades. That's because it's in our company's DNA to push toward the goal of being the most sustainable and just tech company in the world.

We've had many successes. Last year HP was one of only 14 companies worldwide, and the sole tech firm, to receive a prestigious **Triple A rating** in Climate, Water, and Forest benchmarks from the not-for-profit Carbon Disclosure Project (CDP) — our third year in a row. And because consumers care about their footprint and want their purchases to have a positive impact, whether they're buying a new computer, printer, or coffee machine, sales related to our sustainability efforts have more than tripled, hitting $3.5 billion in fiscal year 2021.

But we realize there is more to be done to reach our goal of cutting our absolute greenhouse gas emissions 50% by 2030, which means minimizing Scope 1, 2, and 3 emissions across our end-to-end value chain.

Scope 1 emissions are from HP's direct operations. Scope 2 are indirect emissions, such as the electricity that powers our operations. Scope 3 relates to activities not controlled by HP, such as "upstream" emissions from our supply chain and "downstream" emissions from customer use of our products. Together, Scopes 1, 2, and 3 represent the cradle-to-grave emissions of our products, and nearly all our emissions (99%) are Scope 3, with almost 70% of those coming from our supply chain and 30% from customer use.

Tackling Scope 3 emissions

With our supply chain representing over two-thirds of our emissions, our mandate was clear: To reduce the footprint of our printers, computers, and monitors, we had to reduce the footprint of the components, manufacturing, assembly, and transportation of those items. We have hundreds of suppliers, so we needed to take a data-based approach to this problem. We examined our supply chain data and found that our 30 largest partners were responsible for nearly 80% of the Scope 3 emissions from our directly-contracted-suppliers operations. If we could assist those 30 companies in becoming more eco-friendly, the results would be far-reaching. To help these suppliers reach the next level of success, we leaned into the philosophy of "If you give a man a fish, you feed him for a day. If you teach a man to fish, you feed him for a lifetime." Not only would helping the suppliers help HP, but it would benefit their bottom line, other customers, the communities where they operate, and the planet as a whole. So we got to work.

Sharing knowledge

Because HP has stressed responsible sourcing, human rights, and sustainability as part of our supplier selection, many of our partners already had a strong base but needed extra support. Building off our real-world learnings within HP, we partnered with them to create environments where they could adopt long-lasting environmentally conscious approaches that would be best for their unique businesses.

Over the last two years, HP has brought in top-tier environmental groups such as the CDP and World Wildlife Fund (WWF) to host virtual workshops for those 30 suppliers. Participants learned about energy efficiency, renewable energy, setting science-based targets, external reporting, and more.

At the same time, we asked our partners to disclose their footprint using CDP Supply Chain reporting tools. Nearly 200 suppliers (representing over 95% of our yearly spending) are currently doing so. This transparency helps HP better understand our footprint and informs the broader tech industry utilizing this supply chain.

Tackling the rest

The results have been incredible: Twenty of our top 30 suppliers have formally committed to setting meaningful greenhouse gas reduction targets following the **Science Based Targets Initiative**. We are also proud that 100% renewable electricity now powers the final assembly of over 95% of our worldwide PC and display products. HP and our supply chain partners are making substantial progress, but there's still much more to do. It's vital that we address the "upstream" supply chain adding to our footprint. However, we cannot reach net zero without also tackling the 30% of our emissions generated during the ongoing customer use of our products. The good news is that customers are actively seeking sustainable choices on shelves, online, or as part of enterprise purchase for printers, computers, and monitors. Our goal is to help them do just that—to make the home, office, or hybrid work setup of the future the most sustainable ever.

How HP is building a sustainable and ethical supply chain

Hundreds of suppliers make up HP's supply chain — one of the largest in the IT industry — and the company's commitment to make ethical, sustainable, and resilient products protects its business and brand, strengthens customer relationships, and creates opportunities to innovate.

Raw materials

HP works with peers across the IT industry to engage the entire supply chain in efforts to eradicate minerals that directly or indirectly support armed groups and to promote responsible sourcing of minerals regardless of origin. In the European Union, for example, we support the Conflict Minerals Regulation, which focuses on responsible smelter sourcing regardless of country of mineral origin, including conflict-affected and high-risk areas (CAHRAs) worldwide.

Components

We summarize supplier performance using Sustainability Scorecards, designed to incentivize suppliers and drive ongoing improvement through consistent, comprehensive, and actionable feedback. The results contribute to a supplier's overall procurement score, which impacts their relationship with HP and ongoing business.

Final assembly

In collaboration with NGO partners and other external organizations, we provide programs designed to help suppliers continually improve along their sustainability journey. These programs focus on areas such as worker well-being, rights and responsibilities, and environmental, health, and safety (EHS) awareness. In 2021, there was a 114% increase in factory participation in HP's Supply Chain Sustainability Programs.

Logistics

We partner with logistics suppliers that have the same environmental mindset as HP to provide solutions to reduce CO2 impact, such as biofuels for ocean freight and electric vehicles for road freight. We are also investigating Sustainable Aviation Fuel for air freight. Additionally, in the United States, HP is a Gold Level Sponsor of Truckers Against Trafficking (TAT), which helps combat human trafficking by educating and mobilizing our trucking supplier network, in coordination with law enforcement agencies.

Distributors

Our **Amplify Impact program** invites partners to help drive meaningful change across the global IT industry. Partners that pledge will tap into our extensive knowledge, training, and resources to assess and work to improve their own sustainability performance. To date, 1,400 channel partners have been trained, educated, and empowered through HP Amplify Impact.

Retail sale / Customer use

HP Planet Partners is the company's return-and recycling program for computer equipment and printing supplies. HP ink and LaserJet cartridges returned through HP Planet Partners go through **a multiphase "closed loop" recycling process**. Recycled plastic from empty cartridges is used to create new Original HP cartridges and other everyday products.

Post-sale / End-of-use

We develop services that aim to keep products in use longer, offer service-based solutions, and recapture products and materials at end of use. For instance, through our **HP Device Recovery Service** we buy used devices securely to give them new purpose, extend their life spans, and reduce negative environmental impact. Customers receive reverse logistics, data sanitization with a certificate, a sustainability benefit report, and the fair-market value of the device.

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SUPPLY CHAIN & THE CIRCULAR ECONOMY

From Promise to Action on Net Zero

Unilever Partners with Suppliers and Consumers to Deliver Net Zero Ambition

← Thinking

'From Promise to Action on Net Zero' is a series of publications and events exploring how companies are translating net zero emissions goals into practice. This interview presents one of our discussions with senior executives responsible for delivering on their companies' climate ambitions.

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Authors

Emily Farnworth
Global Director of Low Carbon Transition at ERM

Aiste Brackley
Head of Research at the SustainAbility Institute by ERM

Consumer goods company Unilever is widely recognized as a global leader on sustainability and climate change. The Unilever Sustainable Living

Plan was launched in 2010 with a focus on improving the health and wellbeing of people, reducing environmental footprint, and enhancing livelihoods for millions. The company recently announced plans to achieve net zero emissions from all products by 2039 and 100 percent renewable energy across its operations by 2030.

Emily Farnworth, Global Director of Low Carbon Economy Transition at ERM, recently spoke with Marc Engel, Chief Supply Chain Officer at Unilever, who leads Unilever's key initiatives to reduce the company's global carbon footprint to find out the secret of their success.

Emily Farnworth: What does a net zero goal mean for Unilever?

Marc Engel: For Unilever, the drivers behind net zero are all about responding to the climate crisis and creating a socially inclusive world. As a company, we care about improving the health of the planet for citizens of society.

> **In a net zero environment, the social component and the regeneration of nature are closely linked together.**

We realize we need to get through the COVID-19 crisis, but we also need to show our understanding that climate change and social inequality are still important, and that we still have net zero as a global goal.

Our internal driver is business with a purpose, but there are also external factors. Brands with a purpose grow faster. But having a purpose is not possible if we don't care about the health of our planet and the citizens of our society.

The notion that the benefit of the product is only for the individual is changing as consumers are driving businesses to be more socially and environmentally responsible. As a result, those companies that are leading in sustainability are gaining more preference from customers, investors, and employees, and this is a way that they will remain 'future fit.'

Business needs to go first to raise the ambition to reach net zero by 2050.

What response do you see from your consumers in relation to your net zero ambition?

There are two consumer groups that are most engaged with the topic. We find that millennials are much more aware, and they follow brands that are more sustainable as long as no additional cost is incurred.

Generation Z is totally driven by sustainability, and this steers their buying decisions. Sustainability is the price of relevance; without this, you'll lose Gen Z's attention. The baby boomers are disinterested, and Generation X is only just starting to get it.

Another indicator of changing attitudes has been a major shift in talent acquisition trends, where employees and potential candidates want to see a bigger purpose from the company. This is a marked change from ten years ago.

What are the critical steps you have taken to achieve your net zero goal?

> **We are taking a clear four-part approach to putting our net zero action plan into place.**

We started from the inside out. We've been taking action since 2018, and our carbon footprint has shrunk by about 70 percent in our internal operations.

However, our operations are only 5 percent of our total carbon footprint. The majority of emissions come from across our value chain, which includes Scope 3 upstream and downstream. About 30 percent of our total carbon footprint is from our customers. Upstream, we have a greater influence on our suppliers, but downstream we have far less influence on how our customers use our products.

With electricity we have reached a tipping point for renewable power. We see that the market is there and progress has been made.

> **There is no excuse for any company not to convert to green energy now – everyone should be able to do that across markets.**

In 2016, we implemented an internal carbon price. Based on the factory footprint, we were able to calculate the cost of carbon and put that into an investment fund to make energy savings. Energy used per metric ton of product was reduced by 26 percent.

The more challenging part in our operations has been converting out of gas. We are converting a lot to biomass, but we need to make sure we're not contributing to a

problem here. Financial payback on energy savings projects is very good usually – typically under two or three years.

What has enabled you to make progress?

Unilever is driven to reach our net zero target, and we recognize that there are some key critical aspects to being successful.

> **Ten years ago, we made the commitment to our Unilever Sustainable Living Plan. Back then, we didn't know how we would achieve it, and no other company our size had launched such an ambitious plan.**

What has worked well is making the commitment and trusting that our managers would develop creative solutions that will be financially viable in terms of costs and paybacks.

Unilever also has a CEO who really believes in this commitment. Commitment from the top is essential, and you need to live and breathe the commitment from the top level to make it work.

Sometimes the younger generation has a greater understanding of the value of innovation, but without top level commitment, it's difficult to move. It should be seen as an investment with a return, not merely a cost.

What challenges do you anticipate you might face as you continue to push to net-zero?

We have had a smooth ride on progress through our operations for the past 12 years. It has been great to cut emissions in our operations, but only three to five percent of our total emissions has been reduced.

Our suppliers also need to be on the net zero journey.

> **Unilever wants to see the carbon footprint noted on the invoices, just like we see nutritional information noted on consumable products.**

Consumers also need net zero behaviors in their own life which is a big challenge. Part of this is having more awareness about the day-to-day choices they make and understanding how these choices impact the carbon footprint.

With 48,000 suppliers on the journey to a bigger goal, they have a large implementation challenge to declare a footprint on everything. They need to know what interventions to make, what responsibilities to take, and what resources are needed to understand the interconnection.

> **We need to help suppliers understand that it's not a cost, it's an investment, and how implementation will make them more competitive.**

This becomes a balance between the carrot and the stick, and involves business development, working together, and giving credit publicly to those who do it.

There are many initiatives focused on reducing carbon emissions in the digital tech world. Partnerships with organizations such as the World Business Council on Sustainable Development are essential. The cost to go it alone would be prohibitive for Unilever, and for success we need the support of many.

What is your advice to other companies that are currently going through this process?

As a first step, I advise companies to map their own carbon footprint. Artificial intelligence is getting better at accurate extrapolation to help with this.

Also, look for easy strategies for saving energy - the cheapest and cleanest options are sometimes not those in use, and you will quickly get pay back from energy cost savings. Once you've done it yourself, you're more credible talking to your suppliers when you need them to do the same.

Develop products that are green and that don't compromise on functionality. Provide consumers with the benefit that by using the product, they will save time and lower their carbon footprint – it's important to marry the two. Consumers won't purchase the product without the benefit, so create a way to promote time and convenience while reducing energy consumption.

Looking ahead to 2040-2050, what are your biggest challenges and opportunities?

One of our biggest opportunities and challenges is the need to finish off the deforestation work and look at regeneration of nature as it is part of our net zero strategy.

Alternative fuels are also important. There is a particular view on the role of hydrogen and what it will be. It is very influential. We are in the process of switching to electric vehicles as part of our commitment to the EV100 initiative.

Options for short-range distances are great, but not great in the long-distance range, as it's not obvious where we need to go there.

Another challenge for Unilever is in the reformulation of our products such as laundry products. We also use a lot of plastic, which comes from petrochemicals. This will be a challenge for us in the next ten years. It is a big part of our journey.

What role do partnerships play?

Unilever has had success with EV100, RE100, and other coalitions where we can work with others to find solutions for electric vehicles and renewable power. Microsoft is helping us map our data, but turning it into useful insight is difficult.

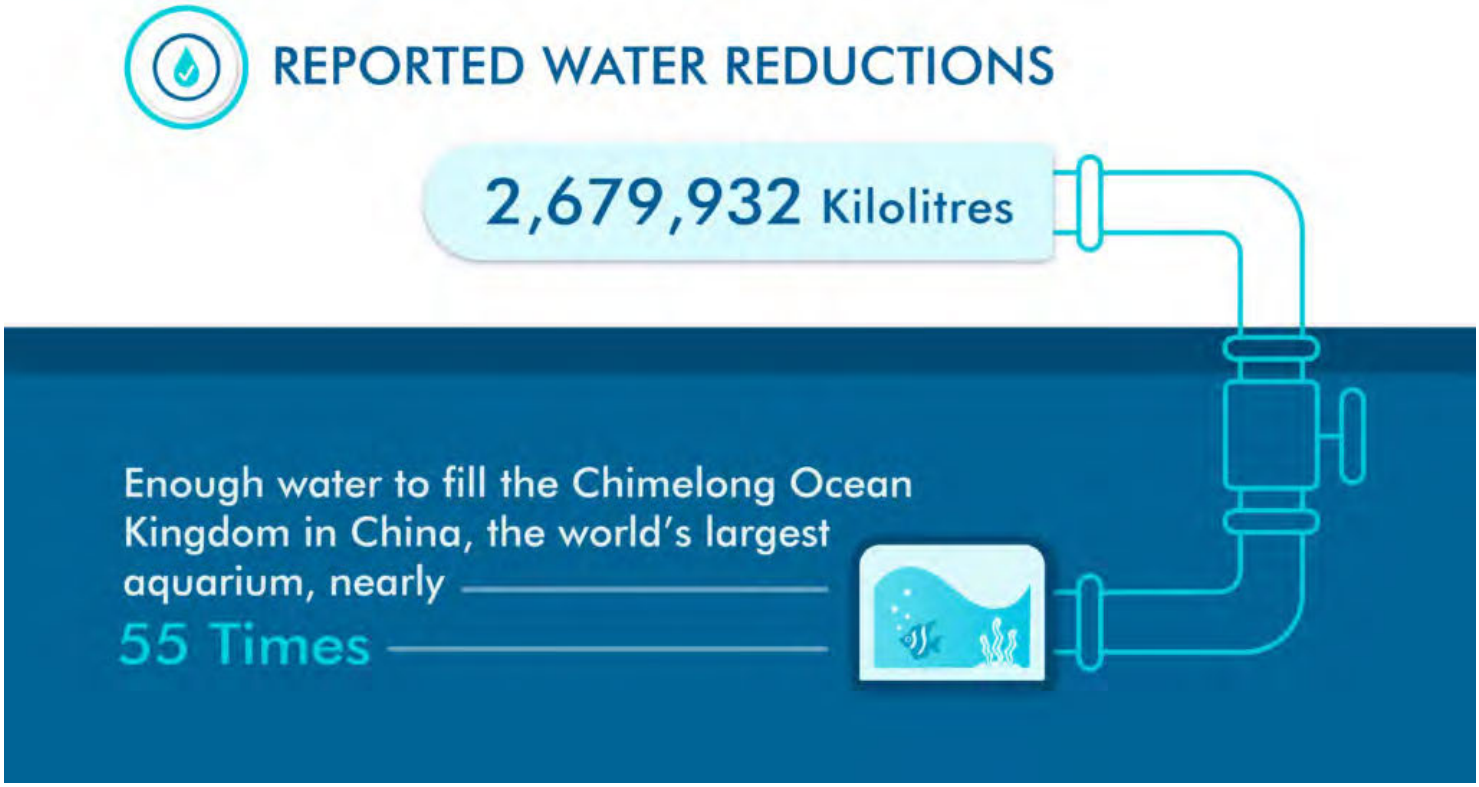
There is a very big market for the type of consultancy provided by ERM. We are seeing there is sometimes a lack of ownership around how to implement strategies that are developed at a high level. Consulting on the technical implementation is a big part of partnership.

Collaboration is what the world needs. The alignment of climate, nature, and social livelihoods – these three things are difficult to mind map but are vital.

Exceeding Energy-Efficiency Goals with Supplier Participation

In 2017, Gap Inc. pledged to save 10 billion liters of water by 2020. Taking its 2014 usage as a baseline, the retailer became involved with the Clean by Design program as a way to meet this considerable goal. Because Clean by Design consists of 10 best practices, it is proven and yields measurable impact results and return on investment to the mills, while being easy to understand, adopt and execute. Gap Inc. recognized that Clean by Design would be low-hanging fruit for its suppliers to save water, so the company started proactively nominating its strategic facilities to participate.

Fast forward to Earth Day 2020 – Gap announced that it had exceeded its goal by saving 11.2 billion liters of water since 2014 – 10.2 billion with resource energy-efficiency programs and 1 billion through processing and product innovation. Without question, the Clean by Design program played a significant role in Gap's outstanding figures.



How Gap Did It

Gap had been working with Clean by Design, which was first administered by the Natural Resources Defense Council (NRDC), since 2013 and had nominated facilities for each Clean by Design cohort. During the years of implementing Clean by Design, Gap intensified its involvement in sustainability, later serving as one of the founding

members of Aii. In the early years, a unified approach to sustainability programming was missing from the industry. Aii's management of the Clean by Design program changed that by promoting partnership, collaboration and transparency.

Between 2013 and 2021, Gap has nominated 52 facilities to participate in programs, including Clean by Design, Clean by Design Plus, Chemistry & Wastewater Management (in India) and Carbon Leadership. These facilities, which are responsible for Tier 1 (finished product assembly) and Tier 2 (material production) of the supply chain, have been located in Mainland China, Vietnam, India, Pakistan and Taiwan Region.

Thanks to these broad-reaching efforts, Gap has reported significant reduction in carbon, energy and water. Even better, the results provided the company with multiple synergistic benefits. While Gap had entered the Clean by Design program as a way to save water, the company soon realized that it was also saving energy, making it well positioned when setting science-based targets for Scope 3 GHG reduction

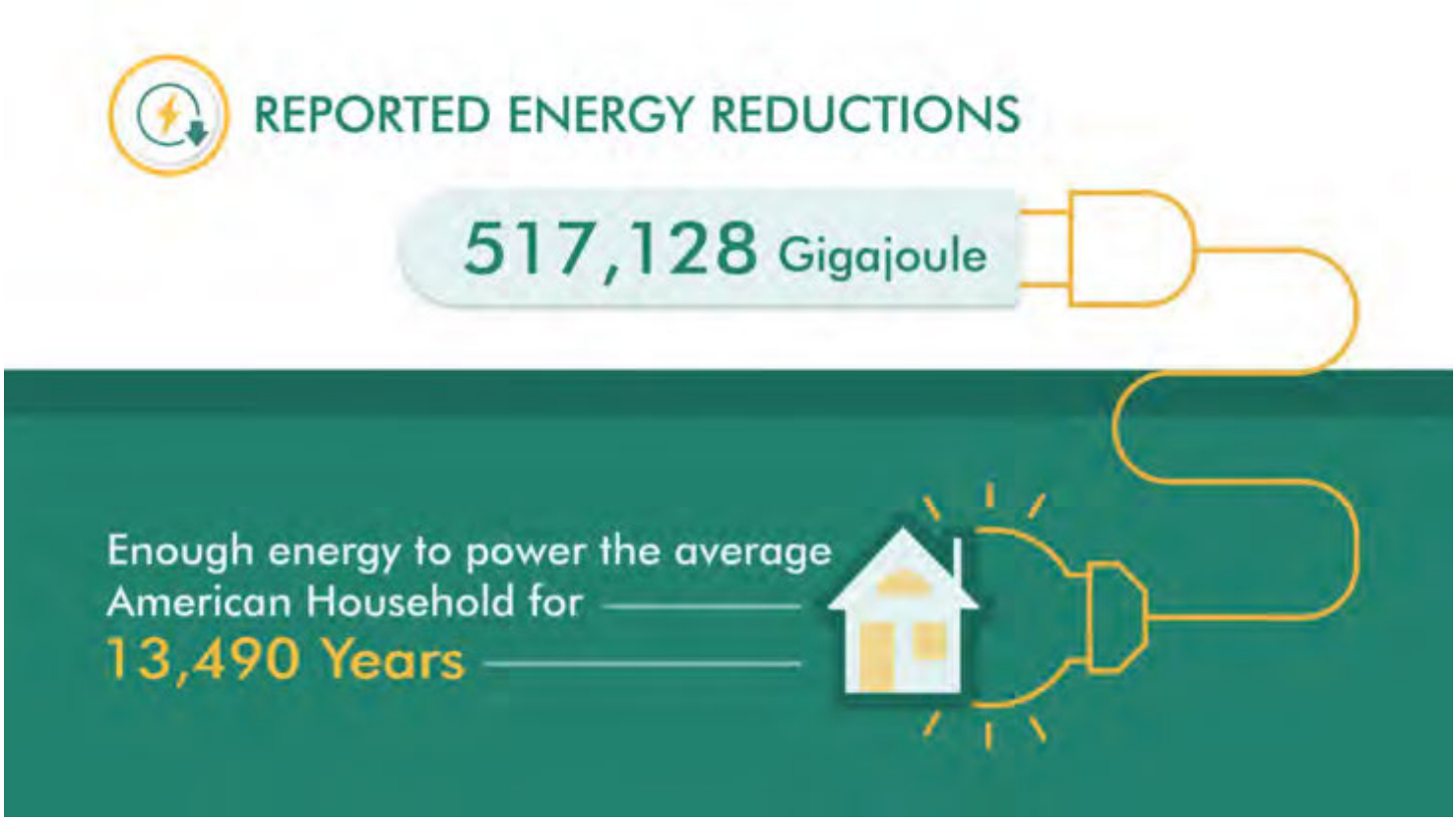
"Gap understands that efficiency programs are a win-win, good for the brand and good for our suppliers because saving energy and water results in cost-savings," said Agata Smeets, Director of Global Sustainability at Gap.

Development for Aii

Implementing the Clean by Design program didn't just benefit Gap's efficiency efforts and suppliers' bottom lines. The company's work has supported the industry's expansion of standardized impact programs globally.

In fact, Gap has taken a leadership role, along with Aii, in piloting the initiatives for program expansion to India, Vietnam and Taiwan Region. Gap also championed and drove the development of Aii's Clean by Design+ program, which supports wet processing facilities ready for more advanced-level programming.

“The Clean by Design partnership is flexible and focused on always improving and expanding,” said Aaron Tam, Senior Manager of Gap’s Environmental Capability Building team. “We understood that some facilities were ready for more and just needed support, so we were excited to be able to offer that. Likewise, we knew that meeting our ambitions SBTs would take more than just going after that low-hanging fruit.”



The Future

Gap’s priorities remain focused on water, climate and waste, and Aii’s programs are vital for meeting the brand’s climate goals. The company has been working along with Aii on strategies to meet its Scope 3 SBTs (30% of GHG emissions from 2017 baseline by 2030).

“We are driving all of our efficiency work through Aii and are super excited that Aii is now also expanding their programs to include additional impact initiatives to aggregate renewable energy procurement and coal phase-out projects – key levers in our climate strategy,” said Smeets. “Our advice would be to just start. When we started, we were flying by the seat of our pants, and Clean by Design was a credible program that helped us structure our supply chain strategies.”

Today, launching and joining collective impact programs in different geographies is a lot easier than it once was. When Gap first started doing this environmental work, the company had to develop and run its own programs because none were available in certain geographies.

“With Aii, we were able to fold these programs into one another,” said Smeets. “We created an aligned approach, invited other brands to participate and introduced Aii to additional service providers like environmental consultants who could help put Aii’s objectives into action on the ground.”

Thanks to convenors like Aii, standardized metrics and aligned methodologies are more available and transparent, making results more predictable and replicable. Collective action is now recognized as the way to reach climate goals.

“It’s important to not underestimate communication channels with your suppliers that you’re nominating for these programs,” said Tam. “A supplier’s mindset is key to achieving success and results, and provides great programs through which to approach suppliers to urge them to undertake this work.”

Gap's purpose is to be "inclusive by design." What consumers may not realize is, it's also to be "clean by design."

From Promise to Action on Net Zero

An Interview with Ford

← Thinking

From Promise to Action on Net Zero **is a series of research publications, interviews, and events exploring how companies are translating net zero emissions goals into practice. This interview presents one of our discussions with senior executives responsible for delivering their companies' climate ambitions.**

Aiste Brackley, Head of Research and Insights at the SustainAbility Institute by ERM, spoke with Mary Wroten, Director, Global Sustainability & ESG at Ford Motor Company, about Ford's commitment to reaching net zero.

Aiste Brackley: In 2020 you announced a goal to reach net zero emissions globally by 2050. What were Ford's motivations for setting this goal?

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Mary Wroten: Before announcing our net zero commitment, we were committed to reducing our CO_2 emissions in line with the Paris Agreement goals. We found that people outside of the sustainability space did not know what Paris-aligned meant, but they were a lot more familiar with what it meant to become carbon neutral. With this realization, we tapped a cross-functional team to develop a method through which we could commit to Paris and communicate this commitment in a manner that resonates with our customers and key stakeholders.

It took about a year for our team to come up with an answer as it's not as simple as just picking a commitment and date. It was important for us to understand where our emissions came from so we knew where we should start. We also benchmarked ourselves against other companies to compare and contrast our commitments and actions. From there, we considered a myriad of different factors and questions: What would energy availability look like through to 2050? If we are to go the electric vehicle (EV) route, is there enough electric capacity and related infrastructure to power our vehicles? How do we address technology concerns like battery costs and range? How do we address different consumer needs like charging requirements, range limitations, and so on?

From these considerations, we came to our net zero commitment, which is housed in three main buckets: First, our net zero by 2050 commitment. Second, we set 2035 science-based targets for our vehicles and facilities and made other mid-term announcements. Lastly, the actions

we are taking now: we committed $30 billion toward EVs by 2025, we are electrifying our most iconic vehicles, and we are establishing a closed-loop battery recycling program.

AB: 2050 is very far away, so how do you go about breaking down your commitment into manageable steps and actions?

> **MW: When you set your long-term goal, that is your North Star. Then you have to break that goal into interim actions. Companies skip over the "act now" piece because it is hard to do some things today.**

In the automotive industry, for example, EV charging infrastructure is not built out to the extent needed for the transition. At Ford, we are bypassing this whole argument by making the vehicles and partnering with electricity companies to help build all of the elements that are required to make the EV transition happen.

AB: Scope 3 emissions are a big part of Ford's carbon footprint. What are the key challenges you face with Scope 3 emissions and how are you planning to address them?

MW: We address Scope 3 by tackling our biggest emissions categories first. Those categories are the use of our vehicles (75 percent of our Scope 3 emissions) and our suppliers' emissions (17 percent). Everything else will be addressed over time. Would we like to address 100 percent of our emissions? Absolutely, and we will over time, but our immediate focus is to address our biggest sources first.

To address our vehicle emissions, we are electrifying our most iconic vehicles, we are shifting our entire product portfolio to clean energy, and we are considering carbon capture and sequestration. There is not a one-size-fits all solution for suppliers, but we do require suppliers to report their emissions and set science-based targets through our Supplier Code of Conduct and terms and conditions.

AB: So far in your net zero journey, what have been your biggest challenges?

MW: The last time our industry was disrupted this much was when we went from horse and buggy to the internal combustion engine. Now we are going from internal combustion engine to electrification, so we have to rebuild everything all over again and learn from the successes and failures of prior technologies.

> **First, we need to make sure our vehicles are zero emissions. Then we need to make sure the grid is zero emissions because our net zero commitment is a well-to-wheel commitment, and we need to ensure we reduce both the emissions of our products and the energy used to propel our products.**

One part that we have not really dived into yet is bringing the customer along in the transition. If the customers are not a part of this journey, the automakers will make great vehicles but no one will want to buy them. In order to change that, we need to get customers into the vehicles. When a customer experiences a vehicle and sees how easy it is to charge at their house, and how easy they fit into their lifestyle, they will want to buy one.

AB: With COP26 upcoming, what do governments need to be doing more of to encourage EV adoption? What would Ford like to see?

MW: We expect to see more companies set net zero goals globally to keep the world within 1.5°C of global warming. We are hoping to see countries contributing more financial support to those most vulnerable to climate change. We also hope to see all countries uniting and working together to achieve the net zero future that we need to have. Right now, Europe is the ideal model for government action from both the supply and demand perspectives to incentivize EV adoption.

AB: What is the role of partnerships and collaboration in achieving net zero?

MW: Partnerships and collaboration are so critical because no one company can achieve net zero by themselves. This is why Ford has collaborated and developed strategic partnerships in order to help us achieve net zero all the way down to raw material extraction.

We joined **IRMA** (Initiative for Responsible Mining Assurance) and the **Responsible Business Alliance**, and we invested in Redwood Materials (an EV battery recycling company). We are also focused on industry partnerships. In this space, we work with **Drive Sustainability** in Europe and the **Automotive Industry Action Group** in the U.S.

AB: What do you think is your biggest success so far on your journey to net zero?

MW: First is making the commitment. When we first made ours, it made people uncomfortable because we did not have every aspect figured out yet. It is okay to not have

everything figured out, but it was so important to set a North Star and have the recognition from our leadership team. Just by having our leadership commit to the net zero goal without having clarity of every single step was a success. And now we are determining the steps and we know it will take time to get all of the answers, and that is okay.

AB: Do you have any advice for companies who are still trying to bring their leaders on board?

MW: Use data – not just for GHG emissions for your company but external data from the Intergovernmental Panel on Climate Change (IPCC) and data about climate change in general. You need to zoom out and look at the planet and what changes are happening.

A lot of the education for our leaders happened when we developed our scenario analysis report. In the report, we took the two words of climate change and connected them to what it might mean for Ford and our customers. Companies need to do a scenario analysis to understand the implications of climate change to the planet, to their industry, and to their business. This will help make climate change and its impacts real to their executive teams.

AB: Did you have any final thoughts you wanted to share?

> **MW: A sustainable future is a journey, and it will not all happen overnight. Set the North Star and then figure out how you are going to accomplish your goal. Be ambitious and make people uncomfortable.**

Sustainability professionals are always talking about how urgent a transition to a sustainable future is. And while it is urgent, it takes time to figure everything out. You want to do things right, and you want to make sure you land on the right solution.

Business

General Mills Partners with Regrow Agriculture to Monitor Agriculture at Scale

June 14, 2022, 9:30 AM EDT

General Mills Partners with Regrow Agriculture to Monitor Agriculture at Scale

Business Wire

MINNEAPOLIS -- June 14, 2022

Today, General Mills and Regrow Agriculture announced a multi-year partnership to monitor agricultural practices and their environmental impacts across 175 million acres of farmland in North America, Europe, and South America. One hundred and seventy-five million acres represents General Mills' estimated supply sheds – the regions where the company sources its key ingredients, like wheat, oat, and dairy. Within the total acreage being monitored, General Mills sources its ingredients from roughly three million acres of farmland each year.

Regrow Agriculture supports General Mills' commitments to advance regenerative agriculture on one million acres of farmland by 2030, reduce absolute greenhouse gas emissions – 60 percent of which are from agriculture – across its value chain (scopes 1, 2 and 3) by 30 percent by 2030, and ultimately achieve net zero emissions by 2050.

General Mills will leverage Regrow Agriculture's software platform, Sustainability Insights, and its technology and data capabilities, including Operational Tillage Information System (OpTIS) and DeNitrification-DeComposition (DNDC), to monitor trends and estimate impacts where regenerative agriculture principles are being advanced on farmland.

OpTIS is a remote sensing technology that uses satellite imagery to monitor and verify regenerative agriculture techniques, such as tillage reduction and cover-crop adoption. The information from OpTIS is then fed to DNDC, which models nutrient cycling in the soil to estimate changes in net greenhouse gas emissions.

Regrow Agriculture's dynamic monitoring and modeled outputs will integrate with General Mills' existing regenerative agriculture and climate tracking systems. The collaboration will also enable General Mills to update its key ingredient emission factors and deliver a more accurate emissions baseline. Emission factors will be updated annually and will incorporate estimated

changes in soil carbon due to changes in farm management techniques and land-use. General Mills and Regrow detailed this new approach to improving corporate climate inventories in a white paper with SustainCERT earlier this year.

“We believe regenerative agriculture is the most promising solution to reach our climate goals and create positive planetary outcomes,” said Mary Jane Melendez, chief sustainability and global impact officer. “As we advance regenerative agriculture, quantifying the environmental outcomes is essential. Our goal is to show how outcomes, like soil health and carbon sequestration, improve as farmers transition to regenerative agriculture systems. We have confidence that through our partnership with Regrow Agriculture, we can track the advancement of regenerative agriculture at scale, benefitting General Mills and the broader industry, as well as understand trends in adoption and where to bring future investment.”

In 2018, General Mills and Dagan, now Regrow Agriculture, launched a pilot to understand tillage reduction and cover-crop adoption in Western Manitoba, Canada, and North Dakota oat supply sheds. Regrow’s OpTIS technology remotely sensed crop residue and plant growth to document prevalence of tillage reduction and cover-crop adoption. This farm management information was then fed to the DNDC data model to estimate changes in net greenhouse gas emissions. In 2021, General Mills and Regrow Agriculture partnered to scale monitoring of agricultural practices and greenhouse gas emissions reductions for the entire state of Kansas. These two projects helped shape General Mills’ regenerative agriculture and greenhouse gas measurement and reporting strategy, ultimately leading to this expanded partnership.

“We are excited to support General Mills’ leadership of a supply shed-based approach to corporate scope 3 emissions and commitment to direct impact monitoring and modeling to deliver on their net-zero goals,” said Anastasia Volkova, chief executive officer, Regrow Agriculture. “Regrow’s scalable science and technology platform continues to serve agriculture and food industries, bringing transparency and scalability to monitoring, and measurement of greenhouse gas emissions.”

General Mills and Regrow Agriculture will also explore joint research opportunities to add additional insights into the platform over time, like water quality, biodiversity, and supply chain resiliency. The partners plan to share insights from their new approach with other interested stakeholders over the next several years. The two organizations see opportunity for additional companies to adopt a similar approach to supply shed impact quantification and hope the collaboration sparks collective action to accelerate regenerative and climate-resilient agriculture movements.

About General Mills

General Mills makes food the world loves. The company is guided by its Accelerate strategy to drive shareholder value by boldly building its brands, relentlessly innovating, unleashing its scale and being a force for good. Its portfolio of beloved brands includes household names such as Cheerios, Nature Valley, Blue Buffalo, Häagen-Dazs, Old El Paso, Pillsbury, Betty Crocker, Yoplait, Annie’s, Wanchai Ferry, Yoki, and more. Headquartered in Minneapolis, Minnesota, USA, General Mills generated fiscal 2021 net sales of U.S. $18.1 billion. In addition, the company’s share of non-consolidated joint venture net sales totaled U.S. $1.1 billion.

About Regrow Agriculture

Regrow Agriculture's mission is to make resilient agriculture ubiquitous on every acre, globally. Their vision is for agriculture to be driven by science and technology to restore the environmental balance globally and to nourish the population and to be equitable for everyone. Read more at www.regrow.ag

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The climate footprint across the IKEA value chain

By 2030, we are committed to becoming climate positive by reducing more greenhouse gas emissions than the IKEA value chain emits, while growing the IKEA business. This is how we contribute to limiting the global temperature increase to 1.5°C by the end of the century.

To become climate positive, we need to reduce the climate footprint of the total IKEA value chain in line with the 1.5°C target – including halving emissions by 2030 and reaching net-zero at the latest by 2050. To reduce more than we emit, we will go beyond the IKEA business and contribute to additional reductions in society by taking an extended responsibility for emissions generated by our customers and suppliers, and in our sourcing areas – not just the part for IKEA.

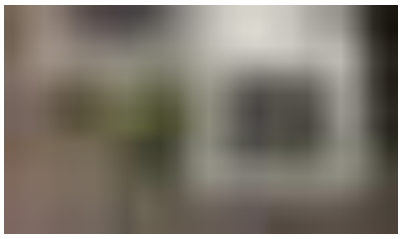
The impact of COVID-19 on our footprint

In FY21, the total IKEA climate footprint decreased by almost 1.6 million tonnes of CO_2 eq in absolute terms compared to baseline FY16, a reduction of 5.8%, while IKEA sales surpassed previous highs. This means that we are on track towards our 2030 goal. We have reached one-third of the goal with two-thirds of the time remaining. The effects of the pandemic during FY20, make the footprint in relation to last year difficult to compare and as expected our footprint has increased in FY21 compared to FY20 since the sales have picked up.

Download the IKEA Climate Report FY21 (PDF, 3 MB)

The climate footprint from materials

(52.2% of the total IKEA value chain footprint in FY21)



HÅLLBAR waste bins are made from post-consumer recycled material collected from household packaging waste on a commercial scale – 40% is from post-consumer waste and 40% from pre-consumer waste.

The materials with the largest climate footprint

The biggest portion of the IKEA climate footprint comes from raw material extraction and processing materials used in the IKEA range. To reduce our climate footprint, we focus on the materials we use the most and those that have the largest climate footprint: wood, metals, paper, textile furnishings and plastics, representing 90% of our material needs and climate footprint.

Although wood represents the largest material share, metals have a higher climate footprint since they are more energy-intensive to produce. As a result, we aim to significantly increase recycled metal content while securing that for all materials, we have a complete portfolio of actions to reach the required reductions by 2030. To reduce the pressure on the world's forests, we have set a new goal to use one third recycled wood in IKEA products by 2030.

Goal for 2030: Goal under development.

Read more about our transformation towards recycled polyester

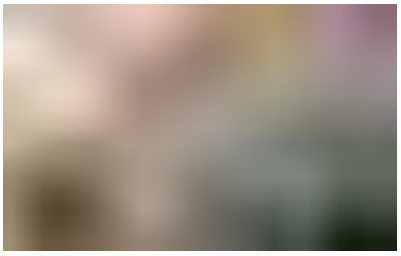
IKEA to phase out plastic from consumer packaging by 2028

12.1	11.8	13.6
FY16 (Baseline)	**FY20**	**FY21**

Climate footprint (Million tonnes CO_2 equivalent). All climate footprints are not yet heading in the right direction. Since FY20, the climate footprint of materials has increased by 15%. The main reason is that sales recovered as the IKEA business recovers from the COVID-19 pandemic – increasing the amounts of products sold and the materials used. Compared to the baseline FY16 the footprint is now 13% higher.

The climate footprint from food ingredients

(2.7% of the total IKEA value chain footprint in FY21)



In FY21, VÄRLDSKLOK, a plant-based mince, was launched. As with HUVUDROLL, our plant-based meatball alternative, VÄRLDSKLOK is based on pea-protein and will provide a similarly small climate footprint.

In FY21, IKEA restaurants and other foodservice touchpoints continued to operate at a reduced capacity, while the Swedish Food Markets remained open. This impacted the overall sales of food, which in turn reduced the absolute climate footprint. A better indicator for FY21 is tracking the development of the relative climate footprint per kg food ingredient (excl. sold drinking water), which has decreased by 13.4% since the baseline FY16.

The positive development in relative measures is supported by trends in the share between plant-based and meat-based food options.

- The volume of beef and pork sold in relation to other food decreased from 15% in FY20 to 14.3% in FY21.
- Compared to our meat-based balls, the sales of plant balls and veggie balls in our restaurants increased from 11% to 14% in sales quantity and from 13% to 24% in the Swedish Food Market, mainly due to the launch of the plant ball.
- Compared to the meat-based hotdogs, the number of veggie hotdogs sold in the bistro increased from 10% to 13%.

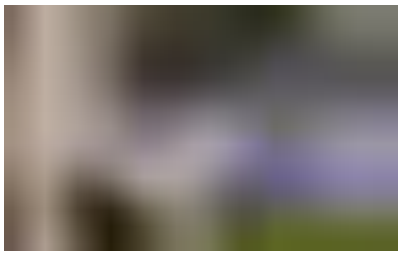
Goal for 2030: To reduce the food-related greenhouse gas emissions in absolute terms by 25%, or a 38% relative reduction in food-related greenhouse gas emissions per calorie, compared to FY16.

IKEA restaurant meals: 50% plant-based by 2025

Climate footprint (Million tonnes CO_2 equivalent).

The climate footprint from production

(7.9% of the total IKEA value chain climate footprint in FY21)



Despite the continuing challenges of COVID-19 during the year and stops in production, significant progress was made regarding greenhouse gas emissions reductions at suppliers. Large movements in securing 100% renewable energy for purchased electricity took place. By securing renewable electricity in Russia and China, all IKEA owned factories as of 1st January 2021 only consume renewable electricity – globally.

Goal for 2030: To reduce the absolute greenhouse gas emissions by 80% compared to FY16.

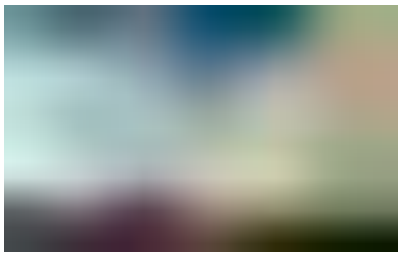
Read more about how we are accelerating supplier transition to 100% renewable electricity

2.9	2.5	2.1
FY16 (Baseline)	FY20	FY21

Climate footprint (Million tonnes CO_2 equivalent).

The climate footprint from product transport

(4.3% of the total IKEA value chain footprint)



In FY21, the climate footprint for product transport decreased in absolute terms by 2.8% compared to the baseline year FY17. However, compared to the previous FY20, the absolute climate footprint increased by 12.9% due to more transports as the world started to recover from the COVID-19 pandemic.

The relative emissions per shipment stayed at more or less the same level compared to last year. On a positive note, our land transport relative emissions decreased by 2.2% compared to FY20 due to an increase in intermodal solutions from 41% to 45%. We also managed to maintain the filling rates of our containers.

However, during FY21, the progress in using biofuels in ocean shipping did not meet our expectations. This was mainly due to the turbulence in the transportation industry and constant network adjustments, followed by high cost pressures from the supply chain challenges. Consequently, the overall share of alternative fuels decreased from 3.3% to 0.8%.

Goal for 2030: To reduce the absolute greenhouse gas emissions from product transport by 15% compared to FY17.

Find out more about zero-emission fuels for ocean shipping

Our view on decarbonising transport

Climate footprint (Million tonnes CO_2 equivalent).

The climate footprint from IKEA retail and other operations

(2.3% of the total IKEA value chain footprint)

While the climate footprint from IKEA retail and other operations is still larger than baseline FY16, it decreased compared to the previous year. This is mainly due to an increase in the share of renewable electricity from 64% to 73% between FY20-21. This is especially true in retail markets where we achieved 100% renewable electricity in FY21 (Canada, Denmark, Estonia, France, Russia, Slovenia, Spain: the Canary and Balearic Islands), and markets where we made significant progress, such as the United Arab Emirates (+24.3% percentage points).

However, the share of renewable energy for the non-electric energy consumption – heating, cooling and fuels – decreased from a 17% renewable energy share in FY20 to 15% in FY21, compared to 17% in the baseline FY16. This decrease is mainly driven by retail expansion, where new stores don’t have 100% renewable heating and cooling solutions in place.

We are working to secure that we only consume renewable electricity by 2025. We are also addressing energy used for heating and cooling that requires large investments in technologies such as ground and air source heat pumps and biogas or biomass boilers.

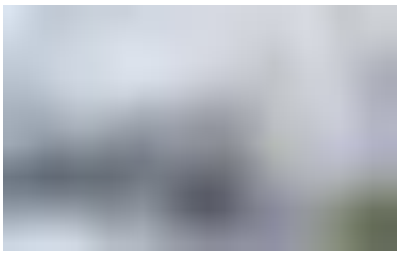
Goal for 2030: To reduce the absolute greenhouse gas emissions from retail and other owned operations by 80% compared to FY16.

0.53	0.60	0.59
FY16 (Baseline)	**FY20**	**FY21**

Climate footprint (Million tonnes CO_2 equivalent).

The climate footprint from customer travel and home deliveries

(5.7% of the total IKEA value chain footprint FY21)



The climate footprint from customer travel and home deliveries decreased by 0.9% in FY21 compared to FY16. During FY21, the goal to install charging stations at all stores in 32 markets was reached.

Although the share of deliveries made via electric trucks increased from 9.6% to 11%, the climate footprint from home delivery increased by 46% in absolute terms between FY20 and FY21. This is mainly due to the COVID-19 pandemic, online shopping and customer demand for delivery.

Goal for 2030: To reduce the greenhouse gas emissions from customer travel and home deliveries by 50% in relative terms (per store customer) compared to FY16.

1.50	1.51	1.49
FY16 (Baseline)	**FY20**	**FY21**

Climate footprint (Million tonnes CO_2 equivalent).

The climate footprint from product use at home

(17.1% of the total IKEA value chain footprint in FY21)

The second-largest part of the IKEA climate footprint after materials comes from the electricity needed for lighting and home appliances in our customers' homes. A small part of the climate footprint comes from gas-driven hobs, refrigerants used for refrigerators and freezers, and the burning of candles.

Since FY20, the climate footprint from product use at home has decreased by 3%, mainly due to improved energy efficiency of our LED bulbs and despite an increase in sales as the IKEA business started to recover from the impact of the COVID-19 pandemic.

The share of renewable electricity that our customers are using has increased by 5% percentage points since the baseline FY16. This highlights the importance of advocating for policies and regulations that enable our customers to consume renewable electricity at home.

Goal: under development

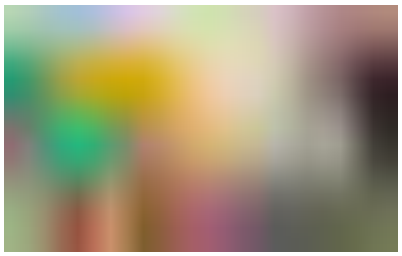
Learn more about the SOLHETTA LED bulbs

6.4	4.6	4.5
FY16 (Baseline)	**FY20**	**FY21**

Climate footprint (Million tonnes CO_2 equivalent).

The climate footprint from product end-of-life

(6.7% of the IKEA value chain footprint in FY21)



Despite using significantly larger material volumes today, our climate footprint from product-end-of-life has increased by only 1.0% compared to FY16. But our ambitions are much bigger. By **transforming into a circular business**, we are securing the use of renewable or recycled materials while prolonging the life of our products through reuse, repair and recycling. Becoming a circular business also means designing our products to be recycled, generating secondary raw materials for ourselves and others. As a result, our products are less likely to end up in landfills or be incinerated – reducing our climate footprint from product end-of-life.

In addition, products can’t be recycled if no infrastructure exists. We are working together with communities and societies to increase the possibilities to prolong the life of our products and enable recycling. This is done by supporting the development of responsible waste management set-ups, circular product loops and creating work opportunities in neighbourhoods in connection to product care and recycling. Ultimately, we want to source at least as much recycled materials as the IKEA products generate at end-of-life.

Progress FY21: The climate footprint from product-end-of-life has increased by 1.0% compared to FY16.

Climate footprint (Million tonnes CO_2 equivalent).

Co-worker commuting and business travel

(0.6% of the total IKEA value chain footprint in FY21)

Co-worker commuting and business travel have been heavily affected during the COVID-19 pandemic. Many of us have been working from home, and business travel has been restricted to business-critical travel. This has caused the climate footprint from business travel to decrease by 92.3%. The co-worker commuting has been less affected since most co-workers work in the IKEA stores and has increased by 2.6% in FY21 compared to FY16, after decreasing by 18.6% in FY20. In this 'new normal', it's difficult to draw conclusions regarding progress versus the set goal. Instead, we have new guidelines for business travel as we return to our offices.

Goal for 2030: To reduce the greenhouse gas emissions from co-worker travel by 50% in relative terms per co-worker compared to FY16.

Climate footprint (Million tonnes CO_2 equivalent).

Learn more about our sustainability efforts

Read more about the highlights in the Sustainability Report FY21

Download the full IKEA Sustainability Report FY21 (PDF, 9 MB)

Download the full IKEA Climate Report FY21 (PDF, 3 MB)

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A clear framework for emissions reduction

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shapes business strategies and aligns companies with global climate goals

April 26, 2022

With deadlines for international sustainability commitments focusing attention on the need for action, more real estate companies are turning to **science-based targets** to help mitigate the worst impacts of climate change and future-proof businesses.

Over 150 real estate firms such as JLL, Landsec, Canary Wharf Group and New World Development (NWD) have now committed to emissions-reduction targets based on criteria set by the Science Based Targets Initiative (SBTi). These aim to limit global warming to 1.5°C (2.7 F°) above pre-industrial levels, in line with Paris Agreement goals to halve greenhouse gas emissions by 2030 and reach net zero by 2050.

Targets cover both direct and indirect emissions from a company's operations, as well as those generated throughout its supply chain. Companies then plan the reductions they need

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to achieve over a particular timeframe.

“Science-based targets provide a robust framework and clear pathway to mitigating emissions so the fact they’re being embraced by real estate is a positive move,” says Richard Batten, Chief Sustainability Officer at JLL and member of the SBTi advisory board.

“By defining types of emissions and the reductions that the industry needs to make to meet the 1.5°C (2.7 °F) trajectory, the initiative pushes companies to set milestones and take a long-term approach to sustainability.”

An industry shift

Companies that have set science-based targets are starting to significantly reduce the direct and indirect emissions from their operations, known as a company’s Scope 1 and 2 emissions.

British Land, which reduced its Scope 1 and 2 emissions by 73 percent between 2009 and 2020, has announced science-based targets for a further 51 percent reduction by 2030, as part of a sustainability strategy that includes a net zero target for all its offices and real estate by 2030.

JLL is committed to reaching net-zero greenhouse gas (GHG) emissions across scopes

1, 2 and 3 by 2040. JLL has a near-term target to reduce emissions 51% by 2030, and a long term target to achieve 95% by 2040 from a 2018 base year. For JLL, scope 1 emissions arise mostly from the operation of our vehicle fleet; scope 2 emissions result mainly from the operation of our office portfolio; and the vast majority of our scope 3 emissions come from the operation of those buildings which we manage on behalf of our clients.

JLL's target is certified to the Net-Zero Standard, which brings the latest climate science to net-zero target setting. It is the first global science-based standard to guide organizations setting net-zero targets and encourage them to follow the principles of the mitigation hierarchy. Effectively, this means that companies should prioritize implementing strategies to reduce their emissions before engaging in emissions abatement through carbon sequestration projects or purchasing carbon offsets.

"The environmental impact of the built environment means that changes in the real estate sector can have a significant influence on emissions reduction," says Batten. "Using science-based targets has given a rigor to how firms report operations data and make assessments to understand how they can

mitigate emissions."

Where some net zero definitions permit offsetting emissions with carbon-reducing activities, science-based targets don't. Instead they require businesses to mitigate emissions through measures such as improving the efficiency of their operations.

Hong Kong-based NWD, for example, is ramping up its sustainability efforts to further decarbonize its operations by 2030 by setting science-based targets in 2023.

"Science-based targets are the gold standard for emissions reductions, signposting the sustainability changes that a company needs to make and thus paving the way for a real net zero trajectory," says Batten.

Let's shape the future of work

Ideas, research and solutions

Decarbonizing real estate supply chains

For real estate services firms, which typically advise on more space than they occupy themselves, one particular challenge is reducing the emissions in their value chain that are outside their direct control. Known as Scope 3 emissions, these include emissions produced by buildings managed on behalf of clients, as well as those generated by suppliers in the

to address the tough questions facing business leaders today.

Read more

procurement of products and services.

“Many real estate firms have capitalized on implementing the most straightforward measures to improve efficiency in their own buildings and within their own operations. Further progress to reduce emissions across the value chain will require larger interventions, and that’s where science-based targets have a real impact,” says Batten.

By focusing on Scope 3 emissions, science-based targets push companies to consider emissions throughout their supply chain, from construction to procurement and beyond.

For JLL, with over 96% of its emissions arising from the consumption of natural gas and electricity in the real estate managed for clients, collaboration is fundamental. “Taking all clients on their own climate action journeys is critical,” adds Batten.

JLL has invested in the continued development of products to provide a broader complement of globally scalable, consistent services to meet a surging demand from investors, occupiers and city leaders. This more comprehensive suite of services is supported by a robust JLL technology platform, enabling greater automation, tracking and management.

Corporate action towards Race to Zero

It's not just real estate taking action; the adoption of **science-based targets doubled** in 2020 compared with the period 2015-2019 and continues to gain momentum. To date, over 2800 companies across a range of industries are taking action in line with science-based targets as corporates increasingly prioritize sustainability. There is a recognized need for climate action and putting the onus on industry leaders to make their business practices and supply chains more sustainable.

"We've seen countries and governments come together to firm up plans for delivering net zero and resilient economies," says Batten. "There is an increasing realization that the real hard work has to be done by the private sector."

Greater transparency that requires firms to publicly disclose the action they're taking will help progress, he adds, while activism among shareholders can drive change at a board level. Legislation that enshrines the SBTi – which is currently voluntary – will also be a vital next step for wider adoption.

While many companies are starting to make progress, others are lagging behind – with a

knock-on effect on overall progress to meet 2050 net zero timeframes.

“The cost of inaction is so high,” says Batten. “This isn’t just about doing the right thing for the world we all live in; **there’s a strong business case** for companies to demonstrate their commitment to a net zero future – to their shareholders, customers and a modern workforce that increasingly demands sustainable practices.”

SECTOR > CONSUMER June 1, 2022

updated 03 Aug 2022 9:20am

How GM is setting the pace for Scope 3 reductions

Although the automotive industry has a poor record with sustainability, General Motors has a supplier pledge to help its Scope 3 emissions.

By Adrian Murdoch

General Motors is working with key suppliers to reduce carbon emissions in a bid to lower its Scope 3 emissions. (Image by Vadim Shechkov via iStock)

Although 83% of global automotive suppliers have defined sustainability targets, only 7% have started to implement carbon emissions-abatement programmes.

General Motors has asked suppliers to commit to carbon neutrality, social responsibility programmes and sustainable procurement practices.

The car manufacturer is hoping the pledge will help reduce the 14% of its own Scope 3 emissions that come from purchased goods and services.

The auto industry has a troubled relationship with sustainability. An April report from management consultancy McKinsey revealed the industry is far from embracing ESG.

Although most suppliers of parts to car manufacturers (83%) now have defined sustainability targets, only 7% are actually starting to implement carbon emissions-abatement programmes.

This is not helped by the fact that some car manufacturers themselves have had their heads in the sand.

In early April, for instance, Germany's Volkswagen (VW) rejected a shareholder proposal from seven European investors that wanted details of how the German car manufacturer's lobbying activities help it address climate risks.

Others are merely tinkering around the edges. In mid-May, BMW splashed a deal with BASF, the world's largest chemical producer, to use a more sustainable paint that cuts emissions by 40% per coating layer, and reduces the amount of carbon dioxide emitted in the plants by more than 15,000t by 2030 – a tiny fraction of the 200 million tonnes the Munich-based car manufacturer has

committed to removing by the end of the decade.

The industry was not helped when, in mid-May, S&P Global unceremoniously dumped Tesla from its main ESG index.

Although the removal of the Austin-based automotive and clean energy company had to do with incidences of racial discrimination and poor working conditions, Elon Musk, chief executive of Tesla, fumed on Twitter that “ESG is an outrageous scam”.

Eric Balchunas · May 18, 2022
@EricBalchunas · **Follow**
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Here are the top holdings of the index, which no longer include Tesla

Elon Musk
@elonmusk · **Follow**

ESG is an outrageous scam!

Shame on @SPGlobal

12:07 PM · May 18, 2022

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But some car manufacturers are taking the move to sustainability more seriously. Detroit-based General Motors (GM), the largest automotive manufacturer in the US and best-known for its iconic marques Buick, Cadillac and Chevrolet, in January last year said that it wants to become a zero-tailpipe-emissions car manufacturer by 2035 and to become carbon-neutral in its global products and operations by 2040.

GM has been putting its money where its mouth is. At the start of this year, it said that it would invest $7bn in four factories in Michigan to expand its electric vehicle (EV) battery and electric truck manufacturing capacity (at the time creating 4,000 new jobs); it said that it would convert sites in Tennessee and Ontario to focus on EV-related manufacturing.

Both are part of the group's $35bn investment programme in EVs between 2020 and 2025. It also announced a three-year $750m investment programme for EV charging facilities across the US and Canada.

Signing the Scope 3 pledge

At the end of April, GM went one step further. The largest global automotive company to do so, it decided to tackle Scope 3 emissions – those connected with a company but outside its direct control – by asking suppliers to commit to carbon neutrality, social responsibility programmes and sustainable procurement practices.

It has joined car manufacturers like Japan's Honda, which was, in 2012, the first car company to target and publish Scope 3 emissions, and its compatriot Toyota, which in 2015 said that it would reduce all emissions throughout the life cycle of its cars by 25% by 2030.

Other car manufacturers have made Scope 3 commitments, but they are not as far-reaching.

BMW, for example, is looking for a 20% cut in Scope 3 emissions from upstream suppliers by 2030 but although it has committed to being climate-neutral by 2050, it does not define what this means in terms of reductions.

VW is particularly amorphous. Although it has committed to reducing the total life-cycle emissions intensity of vehicles by 30% between 2015 and 2025, these will be achieved by carbon offsets. It is notable that at Cop26 in Glasgow last year, VW refused to commit to the same zero-tailpipe emissions that GM did.

The pledge is a commitment for them to achieve Scope 1 and 2 carbon neutrality by 2025 for suppliers that are

professional services, by 2035 for manufacturing and by 2038 for raw materials and logistics. Paris-based provider of business sustainability ratings EcoVadis is managing the process.

This has long been seen as the industry's Holy Grail. In a LinkedIn post at the end of May, Angela Hultberg, global director in the sustainability team at Chicago-based management consultancy Kearney, called Scope 3 emissions "the next frontier" in the automotive industry.

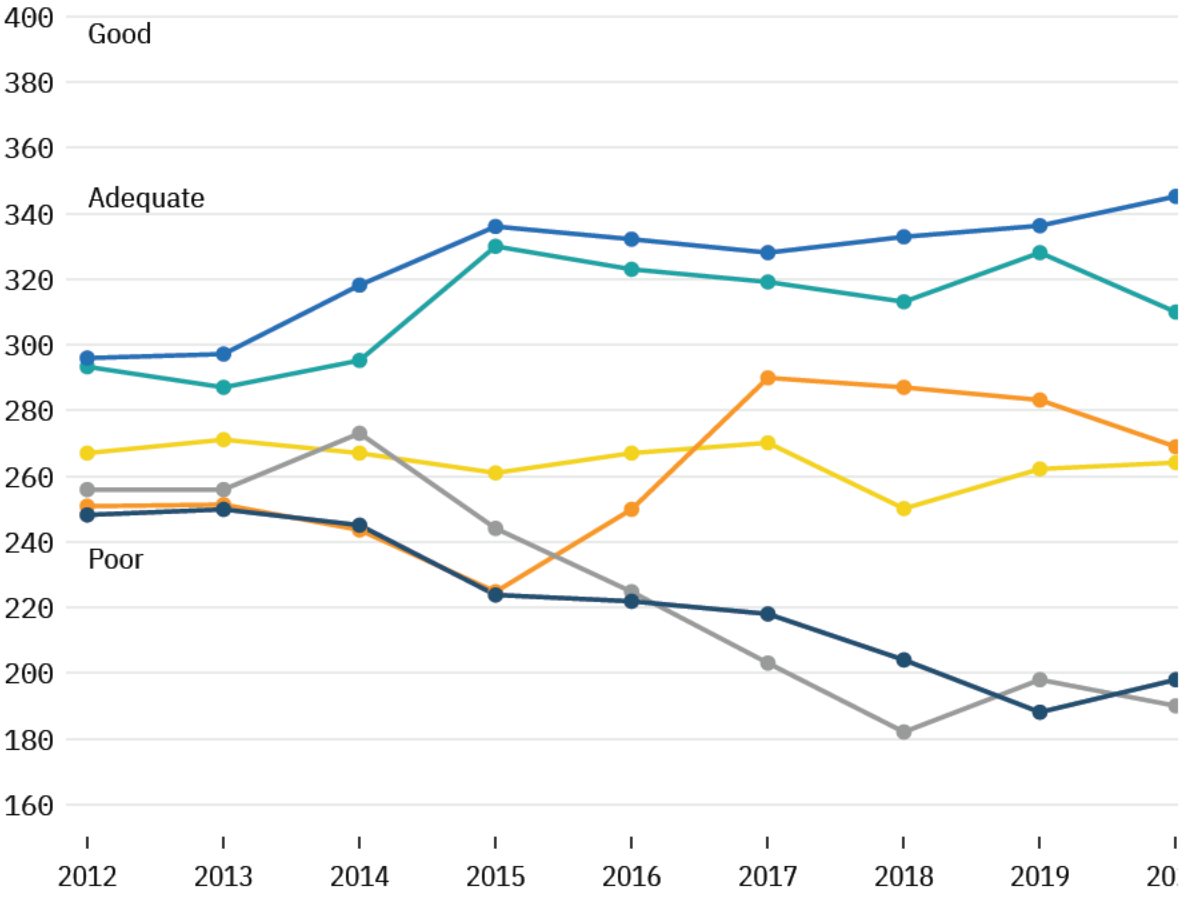
Although Fred Gersdorff, GM's senior manager of socially responsible and sustainable supply chains, tells *Capital Monitor* that "there's no stick to this pledge", suppliers representing 53% of the company's $76bn direct material annual purchase value last year have already signed on. The company has 18,940 suppliers.

This success he puts down to "education and outreach" over the past couple of years, but details to "shape this pledge" were worked on with a focus group of 11 suppliers in the third quarter of last year, before a more formal document was sent to all suppliers in April.

Certainly, GM has been putting in the effort with its suppliers. According to the 2021 Plante Moran Working Relations Index [see chart below] which measures supplier relationships in the auto industry, GM saw a 20 point improvement last year and is now ranked third in North America behind Toyota and Honda.

Improving supplier relationships

Plante Moran's annual North American working relations index of car manufacturers with suppliers



Source: Plante Moran

CAPITALMONITOR

Gersdorff explains that the different milestones for professional services, manufacturing and for raw materials and logistics emerged after it became clear that "for some, a later date would be quite easy to attain while for others, a very close date wouldn't".

He would not be drawn on specifics, but the mining and rubber industries fall into the latter category. In mid-April, GM signed a multi-year deal for an undisclosed amount with Anglo-Swiss mining company Glencore to buy cobalt from its Murrin Murrin mine in Western Australia to use

in its EV batteries.

Glencore itself is no stranger to ESG controversy. On 24 May, the company agreed to court payments in the US, UK and Brazil of more than $1bn to settle long-term investigations of bribery and market manipulation.

Gersdorff's approach is conciliatory. Rather than criticising any individual sector, he again emphasises that GM is not forcing its pledge on suppliers and says that harder-to-abate industries needed "understanding".

He spoke to *Capital Monitor* on the sidelines of a mining conference in Oxford, UK, and said that his role was to have "side conversations and meetings" with mining companies and their executives to articulate GM's position.

"It starts with having that relationship and then seeing what we can do together to get them on board," he says.

Ethical pillars

As well as asking suppliers to limit Scope 1 and 2 emissions, part of the pledge is also to have a minimum score of 50 in the EcoVadis Labor & Human Rights, Ethics and Sustainable Procurement pillars by 2025.

Bettina Grabmayr, methodology and institutional relations director for EcoVadis in Brussels, describes the GM initiative as "a really good example" of what such a pledge should look like.

To reach a score of 50, she explains, companies should have “a good [methodological] skeleton in place” and a formalised reporting system that covers policies, actions and results across all their sustainability issues – results that EcoVadis will track and to which both GM and suppliers will have access.

Although reaching these targets will require what Gersdorff admits is “substantial” work – he estimates that the supplier average score is around 44 – Grabmayr is yet to see any pushback from suppliers.

“Companies which really see the value, understand that this could be a competitive advantage for them,” she says.

Industry dinosaur

Gersdorff acknowledges that the pledge is not altruistic. Any supplier improvement helps its own targets. He says that 14% of the company’s Scope 3 emissions are currently related to purchased goods and services and that “as our suppliers reduce their carbon emissions, it will impact our Scope 3 emissions”.

It’s unclear whether GM’s Scope 3 efforts are being recognised by investors, however. In a detailed case study at the end of last year investment manager Federated Hermes ($669bn AUM at the end of 2021) described GM’s pivot towards ESG as “underappreciated” by investors who still categorised the company as an “industry dinosaur”.

"We feel that GM will indeed succeed in their transition to EV, and likely earlier than anticipated," Federated Hermes noted.

Capital Monitor is hosting the Webinar series, Making Sense of Net Zero. Find out more information on NSMG.live.

Adrian Murdoch

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An award-winning financial markets specialist, Adrian Murdoch is focused on how companies around the world are raising and using sustainable capital.

Climate Change

SASB: CG-MR-130a.1, CG
GRI: 103-1; 103-2; 103-3; 305-4;305-5
TCFD: See table
UN SDGs: 7; 13

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Our Aspiration

Walmart has committed to science-based targets for emissions reduction, including achieving zero emissions in our operations by 2040 and engaging suppliers through our Project Gigaton™ initiative to reduce or avoid supply chain emissions by 1 billion metric tons by 2030. We aim to galvanize collective action across the retail and consumer goods sector through our advocacy, supplier engagement, philanthropy and innovation in product supply chain practices, while taking steps to strengthen the resilience of our business against the effects of climate change.

Key Goals & Metrics

Metric	FY2020	FY2021	FY2022
Goal: Achieve zero emissions across global operations by 2040 • Sub-goal: Reduce absolute global scopes 1 & 2 GHG emissions 35% by 2025 and 65% by 2030 from 2015 base year[1] (approved as science-based and classified as 1.5°C-aligned,Science Based Targets initiative (SBTi)) • Sub-goal: Power 50% of our global operations with renewable sources of energy by 2025 and 100% by 2035			
Annual greenhouse gas (GHG) emissions (million metric tons carbon dioxide equivalent – MMT CO_2e)[2]	CY2019 Total: 17.20 Scope 1: 6.85 Scope 2 (market-based): 10.35	CY2020 Total: 15.93 Scope 1: 7.25 Scope 2 (market-based): 8.68	CY2021 Total: 13.99 Scope 1: 7.37 Scope 2 (market-based): 6.62
Percent change in annual scopes 1 & 2, compared to 2015 baseline[3]	CY2019 11.3% decrease	CY2020 17.8% decrease	CY2021 23.2% decrease
Percent change in scopes 1 & 2 annual emissions (vs. previous year)[3]	CY2019 2.7% decrease	CY2020 7.3% decrease	CY2021 6.6% decrease
Carbon intensity (scopes 1 & 2) (MT CO_2e per $M revenue)[2, 4]	CY2019 32.83	CY2020 28.49	CY2021 24.42
Percent change in carbon intensity, per revenue (vs. previous year)[2, 4]	CY2019 4.8% decrease	CY2020 13.2% decrease	CY2021 14.3% decrease
Estimated percentage of global electricity needs supplied by renewable sources[5]	CY2019 29%	CY2020 36%	CY2021 46%
Goal: Reduce or avoid one billion metric tons (MT) of scope 3 CO_2e emissions by 2030 (Project Gigaton™)[7,8]			
Reduced or avoided CO_2e emissions reported by suppliers cumulatively since CY2017	>230 million MT	>416 million MT	>574 million MT
Reduced or avoided emissions reported by suppliers in reporting year	>136 million MT	>186 million MT	>158 million MT
Number of suppliers reporting	>1,000	>1,500	>2,500

Percentage of U.S. product net sales dollars represented by reporting suppliers[9]	Not available	60%	>70%

See all data and progress toward goals and commitments in our ESG Data Table.

Relevance to Our Business & Society

Climate change is one of the greatest challenges of our time, profoundly affecting all regions of the world and all sectors of society. Without mitigation or adaptation, climate effects such as warming, flooding, drought, extreme weather events and rising sea levels are projected to reduce agricultural yields, force people from their homes, endanger livelihoods and destroy infrastructure in the coming decades.

To avoid the worst effects of climate change, the Intergovernmental Panel on Climate Change (IPCC) has called for the world to reduce global greenhouse gas (GHG) emissions to net zero by 2050. Achieving this moonshot goal requires immediate action from all parts of society, including business. Companies need to be part of the solution to manage physical and transition risk, maintain societal license to operate and create value for business and society through mitigation and adaptation initiatives that draw on unique business capabilities.

As a large omni-channel retailer with millions of customers worldwide and a global sourcing footprint, Walmart is able to lead by reducing emissions in our operations and supply chain while galvanizing collective action across our industry. We believe a strong climate action strategy will help us manage the physical and transition risks associated with climate change, strengthening the resilience of our business and helping us create value for stakeholders.

Walmart's Approach

We seek to lead on climate action. We focus on achieving our science-based targets for emissions reduction in our global operations and supply chain in ways that strengthen the performance and resilience of our business. We also advocate for and support initiatives to accelerate progress toward net zero by 2050 across the industry, and society more broadly, by drawing on our capabilities as an international retailer — our ability to engage suppliers across many categories, our retail and supply chain expertise, our digital capabilities, our leadership role in industry and multi-stakeholder coalitions and forums and strategic philanthropy through Walmart.org. Our efforts include:

- Governing our climate strategy through accountable leadership and assessing climate risk;
- Mitigating emissions through approved science-based targets, covering both our global operations (aiming for zero emissions by 2040) and suppliers (through Project Gigaton™);
- Adapting our business (e.g., facilities and sourcing) to be more resilient in the face of climate risk;
- Advocating for 1.5°-C-aligned public policy through direct advocacy, engagement with trade associations and consortia, and corporate communication; and
- Reporting on our progress with transparency, verifiable data, and science-based methodologies, and encouraging our suppliers to set ambitious targets and report on their progress with equivalent diligence.

Key Strategies & Progress

Governance | Climate Risk Assessment | Mitigation | Adaptation | Advocacy | Reporting

Governance

Management Oversight

Climate strategy is a key part of Walmart's Environmental, Social and Governance (ESG) strategy. Walmart's corporate sustainability team leads the development of the company's climate strategy, working with a cross-functional team including finance, real estate, operations, merchandising, strategy, and public policy. Our climate strategy is reviewed at least annually by the Walmart executive leadership team.

The company assesses climate risk annually as part of our Enterprise Risk Management process. Periodically, we conduct an in-depth, scenario-based climate risk assessment (first completed in 2017; updated in 2020). Merchants and operators have goals that support our climate mitigation and adaptation strategies, including emissions reduction initiatives.

Board Oversight

The Nominating and Governance Committee (NGC) of the Board of Directors oversees Walmart's climate strategy. In 2021, the NGC and management discussed Walmart's climate risk assessment; integration of climate mitigation and adaptation into the company's long-range plans, annual operating plans and Enterprise Risk Management; Walmart's climate policy positions, advocacy strategy and external engagement; and climate disclosure strategies. Highlights of the committee's discussions with management are shared with the full Board of Directors.

Climate Risk Assessment

To inform the company's climate mitigation and adaptation strategies, Walmart periodically conducts a scenario-based climate risk assessment, aiming to align with the scenario guidance set forth by the Task Force on Climate-related Financial Disclosure (TCFD). We updated the physical risk analysis in 2020 with the help of a third-party consultant, considering climate-related risks in the short-, medium- and long-term.

Scope of Analysis		
Physical Risk Assessment (RCP 8.5)		
Modeled Risk	**Climate Variables**	**Considerations for Mitigation and Adaptation**
Retail Stores and Retail-Related Facilities • Increased heating and cooling cost • Damage to buildings and inventory	• Heat • Extreme wind • Extreme precipitation • Flooding (riverine and coastal)	• Disaster preparedness and response • Energy initiatives • Refrigeration maintenance and conversions • Real estate: facilities siting; construction specifications
Supply Chain • 11 commodities (avocados, animal feed, milk, oranges, rice, coffee, cocoa, cotton, beer hops, almonds and shrimp) considered at risk from climate change • Commodity shortages due to temporary or permanent yield reductions (e.g., coffee, cotton and cocoa) • Disruption in production and distribution of products reliant on agriculture (e.g., cotton textiles)	• Heat • Drought • Extreme precipitation • Flooding (riverine and coastal) • Extreme wind	• Surety of supply initiatives • Local sourcing efforts • Country of origin assessments • Resilient produce sourcing • Sustainable commodities initiatives
Communities • Displaced associates and customers, reducing their proximity to retail stores • Physical and mental health impacts • Financial well-being	• Flooding (riverine and coastal) • Heat • Extreme wind	• Disaster preparedness and response • Selection of sites for future stores • Public policy advocacy
Transition Risk Assessment		
Cost of scope 1 & 2 emissions	Price on carbon	Zero emissions
Read more about the additional factors we considered qualitatively but did not formally model below.		

Methodology & Findings

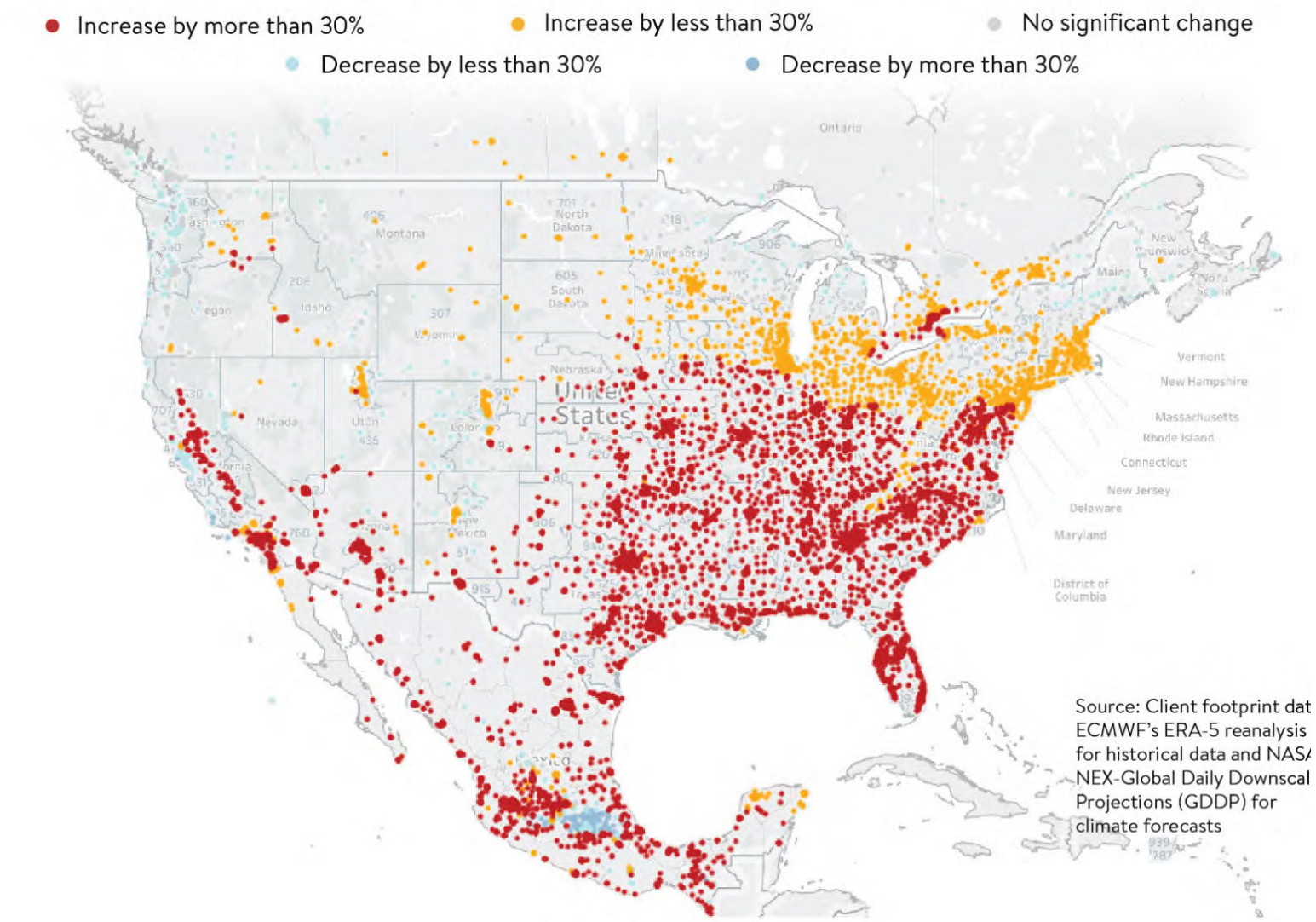
To assess physical risk, we used Representative Concentration Pathway (RCP) 8.5, a GHG concentration scenario adopted by the United Nations Intergovernmental Panel on Climate Change that assumes the absence of further decarbonization on the planet (and is therefore an indicator of the inherent/unmitigated risk of climate change). We analyzed the impact of five associated climate effects — flood (riverine and coastal), heat, drought, extreme precipitation, and extreme winds — across five key geographies (Canada, China, India, Mexico, and the United States) for 2030 and 2050. We evaluated direct impacts of climate change on Walmart's physical assets (retail stores and retail-related facilities), supply chain, and communities.
Such climate risks and potential impacts are not unique to Walmart; they will affect food and general merchandise retailers as well as other businesses and communities around the world. While the limitations of the analysis[10] mean it cannot be used to predict the net impact on Walmart's financial results of operations or business operations, and the improbable nature of the RCP 8.5 scenario mean it cannot be used to determine the materiality of climate-related risks and opportunities to the business, it nevertheless provides helpful insights into the relative impact of various climate effects and the relevance of Walmart's mitigation and adaptation strategies. And while no single climate risk appears to be consequential for Walmart due to the long-term nature of the risks and Walmart's relatively large scale, taken together, they paint a sobering picture of potential impact to people and the planet and underscore the need for immediate business action to help prevent the worst effects of climate change.

Insights provided by the climate risk assessment help us set long-term strategy and drive innovation. Leaders from across the company, including merchandising, real estate, operations, and supply chain, discussed the results of the physical risk assessment and incorporated findings into their operating plans.

Retail Stores & Retail-Related Facilities

The climate risk assessment identified potential variables that could affect Walmart's facilities over the next three decades: flooding and extreme storms, with potential damage to buildings and inventory; and temperature changes, which the modeling suggests could increase heating and cooling costs in two-thirds of Walmart locations by 2030 and 80% of locations by 2050 — underscoring the relevance of Walmart clean energy initiatives and other mitigation and adaptation efforts.

Changes to historical location heating and cooling costs[10]—predicted for 2050



Supply Chain

By 2050, climate change is likely to affect the production, distribution and (in some cases) the viability of food and other consumer products that depend on agriculture. We analyzed the potential climate exposure of 25 commodities. For the 11 goods that face the highest overall impact from climate change, we assessed three factors: land suitability, farming conditions for animal products and heat stress for people. The analysis suggested that some commodities (e.g., coffee, cocoa and cotton) may face significant challenges due to future climate effects, while others (e.g., avocados, animal feed, milk, oranges and rice) may remain largely unaffected. Our merchants and global sourcing teams are working with suppliers to implement more sustainable practices that promote resilience, such as cultivating heat resistant crops to prevent future sourcing challenges. The analysis underscores the relevance of Walmart sustainable commodity initiatives and other initiatives focused on enhancing the resilience of supply chains.

Communities

We modeled the potential impact of several climate variables on Walmart U.S. store communities: flooding (from either coastal or riverine sources), extreme wind (e.g., hurricanes) and heat. Our analysis suggests that ~50% of communities currently served by Walmart U.S. facilities may face significant, long-term disruption by 2050. If these areas become less habitable, people could be forced to relocate — creating challenges to physical, financial, and emotional well-being

for our customers and associates, and potentially requiring shifts to our store and eCommerce footprint. The financial well-being of a community may deteriorate due to the loss of jobs and homes after a hurricane, and in some vulnerable U.S. counties, there could be an up to 230% increase in household power costs.

ANew York Timesanalysis found that summer temperatures in cities such as Dallas, Miami and New York can be warmer in poorer neighborhoods than in wealthier ones, where populations are generally whiter. Our own analysis also suggests that climate change has the potential to disproportionately impact vulnerable populations, including communities of color. We continue to advocate for climate solutions that advance equity. For example, in Florida, we worked with utility companies, advocates and regulators to help negotiate the largest shared solar program in the country, which authorizes nearly 40 megawatts of clean energy for low-income Floridians.

Additional Transition Risks Considered

Regulation (current and emerging)

Examples

- Changes to carbon pricing regimes (e.g., RGGI, CA AB 32, WCI and country level carbon taxes)
- State and federal level energy targets and requirements (e.g., Renewable Portfolio Standard (RPS), clean energy standards)
- Changes to HFC refrigerant regulations (e.g., Kigali Agreement, U.S. American Innovation and Manufacturing Act, California Air Resources Board HFC Reduction Measures Act, E.U. F-Gas)
- Policy targets, fuel and engine standards, subsidies and incentives associated with increasing usage of zero emissions vehicles and infrastructure (CA ACT rule, Interstate ZEV MOU, federal vehicle emissions standards)
- Changes to energy and water efficiency standards for buildings and equipment
- Changes to subsidies and incentives related to demand-side energy management and renewable energy generation (e.g., U.S. ITC, CPUC Net Energy Metering 3.0 proceeding, PTC, feed-in-tariffs)
- Introduction of product taxes, labeling regulations, and design standards for carbon- or water-intensive product categories (e.g., meat, dairy, nuts, produce, appliances)

Approaches to Managing Risk

- Policy monitoring and modeling, integration into business and financial planning
- Engagement in stakeholder forums associated with regulatory processes and rulemaking
- Advocacy on climate policy proposals and creation of policy principles to assess and endorse position statements developed by external partners
- Emissions reduction initiatives; energy efficiency, renewables, phasing out of HFC refrigerants, transitioning to zero emission vehicles, Project Gigaton™

Technology

Examples

- Advances in fossil-fuel mining and petroleum production that keep fossil-fuel prices low, thereby adversely affecting the economics of emission reduction initiatives
- Changes in low-carbon technology and manufacturing that cause existing assets to decrease in value, competitiveness or become absolute (e.g., onsite EV chargers become underutilized if hydrogen becomes dominant for passenger vehicles)
- Advances in low-carbon and renewable generation and manufacturing that bring down the levelized cost of energy (LCOE) making existing long-term power purchase agreements less valuable in comparison (e.g., older generation wind farms)

Approaches to Managing Risk

- Monitoring technology trends and forecast scenarios
- Building flexibility into infrastructure changes
- Leasing assets rather than investing directly
- Advocating for technology-neutral emission reduction policies

Legal

Examples

- Patchwork of disparate city or state level regulations (e.g., energy regulations) rather than consistent national regulations, making compliance more complex and costly
- Risk of events in the wake of climate-related extreme weather events, such as looting, harm to employees or customers and shareholder concerns

Approaches to Managing Risk

- Monitoring and assessing regulations and legal risks on an ongoing basis
- Advocating for consistent, science-based, environmentally and economically effective federal level climate policy

Market

Examples

- Changes in energy and commodity prices driven by climate-related weather events, consumption behaviors and policies, resulting in higher costs
- Changes in refrigerant pricing and supply volumes affecting costs and availability
- Changes in consumer demand for low carbon products and services
- Changes in demand for gasoline and automotive replacement parts (e.g., motor oil) due to shifts in transportation technology mix (e.g., rising penetration of electric vehicles)
- Prolonged climate-related events affecting macroeconomic conditions with knock-on effects on consumer spending and confidence
- Changes in investment preference toward companies with leading environmental and emissions performance

Approaches to Managing Risk

- Monitoring market trends
- Emission and energy reduction initiatives; energy efficiency, renewables, phasing out of HFC refrigerants, transitioning to zero emission vehicles
- Scenario modeling as part of energy/emissions opex and capex planning
- Closely monitoring consumer trends
- Report climate and environmental performance to investors

Reputation

Examples

- Customer perception of climate issues and Walmart's climate action, including how we design and run our stores and the products we offer, affecting customer loyalty
- Stakeholder perception of Walmart's response to climate-related crisis (e.g., hurricanes, floods, fires, power outages) at community and national levels
- Stakeholder perception of Walmart's engagement in climate-related policies, affecting license to operate
- Associate perception of Walmart climate action and management of climate-related issues, affecting our ability to recruit and retain talent

Approaches to Managing Risk

- Monitoring customer, investor and stakeholder sentiment via digital and traditional media engagement and coverage
- Engaging regularly with stakeholders to understand and address their perspectives, building awareness regarding climate strategy into communications and marketing initiatives
- Continuously improving Walmart capabilities in climate mitigation and adaptation

Mitigation

Walmart's climate change mitigation strategy centers on achievement of ambitious goals:

- To achieve zero emissions across our global operations (Scopes 1 & 2) by 2040; and
- Our goal to help reduce or avoid one billion metric tons (a gigaton) of greenhouse gases in the global value chain (Scope 3) by 2030.

Emissions From Our Global Operations (Scopes 1 & 2)

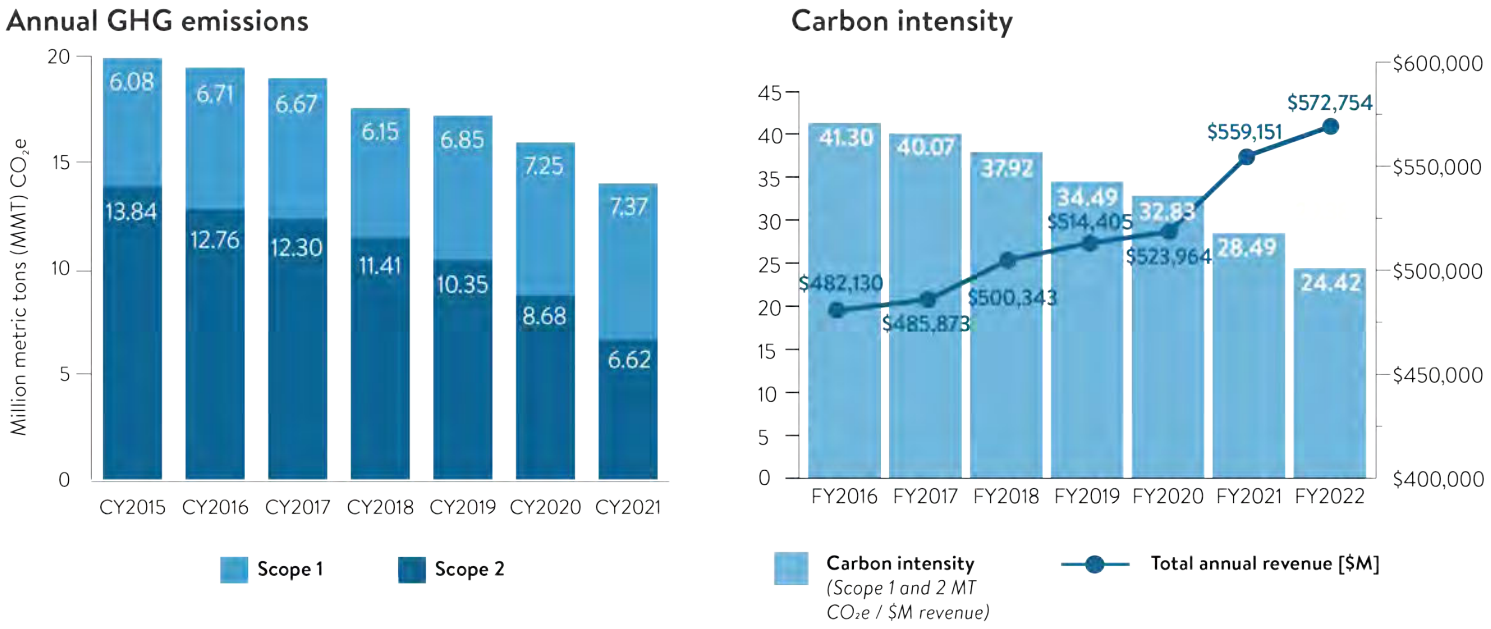
In 2020, we raised our aspiration to reduce emissions in our operations (Scopes 1 & 2) by realigning our science-based target to a 1.5-degree Celsius trajectory,

the highest ambition approved by the SBTi. Our goal is to achieve zero emissions across Walmart's global operations by 2040, which includes our SBTi-approved interim goal of reducing absolute Scopes 1 and 2 GHG emissions by 35% by 2025 and by 65% by 2030 from our 2015 base year. We were the first U.S. retailer to make a zero emissions commitment that does not rely on carbon offsets. We achieved a 23.2% reduction in combined Scopes 1 and 2 emissions between our 2015 calendar year baseline and 2021.[3]

While Scope 2 emissions in 2021 declined by 19% over 2020, 2021 Scope 1 emissions increased by approximately 9%.[3] The primary driver of the increase in Scope 1 emissions was increases in onsite refrigerants. Our plans to address these factors are addressed below.

Walmart's Progress on Operational Emissions (Scopes 1 & 2) [2, 3, 4]

Between our 2015 baseline and 2021, we reduced our absolute Scopes 1 and 2 GHG emissions by 23.2%. Over the same period, we also reduced our carbon intensity by 40.9%, as measured by MT CO_2e per $M revenue.



Despite the continued rise in Scope 1 emissions, momentum in Scope 2 reductions has meant that, through CY2021, our combined Scope 1 and 2 emissions reduction has tracked the downward trajectory of our science-based target. This may not be the case each year, as the pace and scope of our investments in emissions reduction and realized reductions are not linear. To continue to move toward our science-based target, we continue to work towards reducing our emissions through five primary workstreams:

- Renewable energy
- Energy efficiency
- Refrigeration
- Transportation
- Stationary fuels

While the relative contribution of each workstream toward emissions reduction will vary over time based on operational, financial, and technological considerations, they all matter for us to achieve our zero-emissions ambition and interim targets.

Walmart's Annual Emissions
Million metric tons (MMT) CO_2e [2]

*Mobile refrigerants make up **0.3%** of scope 1 emissions
District heating makes up **0.002% of scope 2 emissions

Renewable Energy

Electricityis the biggestcontributor to our operational emissions, accounting for nearly 100% of our Scope 2 emissions and approximately 47% of our overall operational emissions in 2021. To achieve our overall goal of zero emissions across global operations by 2040, we aspire to power 50% of our global operations with renewable sources of energy by 2025 and 100% by 2035. In 2021, an estimated 46% of our global electricity needs were supplied by renewable sources.[5] Walmart directly procured an estimated 28% of our global electricity needs through Renewable Energy contracts in 2021.[6]

We make progress through a combination of onsite generation and power purchase agreements:

- As of the end of 2021, we had more than 600 onsite and offsite renewable energy projects in operation or under development in over 10 countries.[5] According to the U.S. EPA Green Power Partnership Top 30 Retail Ranking, Walmart was the top retail partner in terms of annual green power usage in the U.S. as of July 2022.
- In 2021, we contracted to purchase additional renewable energy, including 50 MW of a 129 MW community solar project in New York that will supply renewable energy to 36 facilities.

We also participate in and support coalitions like the Clean Energy Buyers Association (formerly REBA),RE100,and others to help shape energy policies and advance cost-effective sustainable options in the regions where we operate.

Walmart's Inaugural Green Bond and Green Financing Framework

In September 2021, Walmart issued a $2 billion, 10-year green bond, the first under our Green Financing Framework. The Framework outlines the types of sustainable financing Walmart can issue and the uses to which proceeds may be put with eligible spend categories including renewable energy, high-performance buildings, sustainable transport, zero waste and circular economy, water stewardship and habitat restoration and conservation.

When published, reporting on the allocation and impact of bond proceeds can be found on our Investor Relations site for ESG Investors.

Energy Efficiency

Our energy efficiency strategy includes both new facility design and construction and retrofitting existing facilities:

- We are incorporating efficiency into new store designs inlighting, heating, ventilation and air conditioning (HVAC), refrigeration, and other categories such as plug loads.
- As our existing buildings and equipment age, we aim to replace or upgrade older equipment with the latest in high-efficiency technology.
- We use technology to monitor and optimize energy use in our buildings, and have installed energy meters at thousands of our facilities around the world. This allows energy managers to monitor energy consumption in almost real time at our retail stores and distribution centers. This data is used in several ways, including compiling monthly store reports, triggering variance alarms, diagnosing equipment problems and validating performance of new equipment tests.

Transportation

Our fleet (transport fuel and mobile refrigerants) contributed approximately 21% of our Scope 1 emissions (and approximately 11% of our overall operational emissions) in 2021. Electrifying our fleet and reaching net-zero emissionsfrom all our vehicles and transportation network, including long-haul trucks in the U.S. and Canada, is a key priority for reaching our zero-emissions target.

In 2021, Walmart received the U.S. EPA's SmartWay Excellence Award, which honors top shipping and logistics company partners for superior environmental performance. This was the fifth year Walmart was honored.

We use four strategies to accelerate this work:

Enhancing Our Fleet: Between 2005 and 2015, we improved our truck fleet efficiency—almost doubling it in 10 years—in collaboration with equipment manufacturers, policymakers, utilities, transportation working groups and other organizations. While efficiency remains a focus, we are now working within our fleet to evaluate potential solutions to help us substantially reduce our emissions, including testing heavy-duty zero-emission vehicles, battery electric vehicles and hydrogen fuel cell vehicles. We test certain new technologies through conversion to low-carbon fuels and technologies—such as transitioning diesel-operated forklifts to electric ones. These conversions are facilitated by Low Carbon Fuel Standard credit programs, such as those in California and Oregon, which provide a financial benefit for transitioning equipment.

Last Mile: As much as possible, we are seeking to electrify our last-mile offerings to customers. Walmart U.S. announced plans to purchase 1,100 Ford E-Transit electric vans in 2022 and has reserved 5,000 BrightDrop electric delivery vans, which will hit the road as early as 2023. Walmart also announced an agreement

with Canoo in 2022 to purchase 4,500 all-electric last-mile delivery vehicles with the option to purchase up to 10,000 units. These vehicles will be part of our growing last-mile delivery fleet. In India, our Flipkart business joined the EV100 initiative and committed to using electric vehicles for delivery by 2030.

Class 8 Heavy-Duty Truck Innovations: Currently, there is no scalable solution to decarbonize long-haul/heavy-duty Class 8 tractors. We believe multiple technologies could play a role in the future, including renewable diesel, electric battery and hydrogen fuels. We support the development of these technologies by participating in feasibility testing and providing feedback to manufacturers to ensure vehicle technology meets the needs of Walmart's fleet and other large fleets. For example:

- Walmart Canada announced that it has reserved 130 Tesla Semi trucks, electric trucks that are designed to use less than two kilowatt-hours of energy per mile at Gross Vehicle Weight and highway speed.
- We are currently using seven electric yard trucks with a plan to increase the number of electric yard trucks in operation by the end of 2022. Currently, our electric yard trucks provide approximately 50% emissions reduction compared to diesel trucks.
- In 2023, Walmart plans to test several electric and hydrogen fuel powered Class 8 vehicles in its operation.

Public Policy: Walmart supports public policy that will create an enabling environment for the development, adoption and scaling of zero-emission commercial transportation fleets. Collaborating with PepsiCo, Walmart released a set of public policy principles to convey to federal and state policymakers the types of policy interventions, planning and guidance that can support this transition. These principles reflect our business strategy, promote efficiency and optimization as a reduction pathway and take a technology-neutral approach so that we can align our distribution network outcomes with environmental and community benefits.

Read more about how we are working to reduce emissions in our transportation network.

Stationary Fuels

Stationary fuels, including fossil fuels used for heating, cooling and backup power, contributed approximately 20% of our Scope 1 emissions (and approximately 11% of our overall operational emissions) in 2021. A key part of our decarbonization strategy is to reduce our dependence on these fuels by increasing efficiency, transitioning to cleaner fuels, and electrifying equipment. For example, at our U.S. stores we have added electrical connection points to power units (such as our refrigerated trailers), which provide temporary storage capacity during peak seasons.

Onsite Refrigerants

Onsite refrigerant emissions contributed approximately 58% of our Scope 1 emissions (and 31% of our overall operational emissions) in 2021. Global Scope 1 onsite refrigerant emissions increased 17% from 2020 to 2021. Our analysis suggests that the continued increase in our onsite refrigerant emissions remains primarily due to ongoing maintenance of refrigeration equipment using R-404A, a widely used refrigerant introduced in the mid-1990s as a replacement for ozone-depleting refrigerants.[11] As our equipment ages and is retired from service, we are replacing it with lower Global Warming Potential (GWP) alternatives. We anticipate a continued rise in onsite refrigerant emissions in the near term until this equipment is converted.

We are addressing these emissions in three ways:

Managing Leaks: We continue working to minimize refrigerant gas leakage through repairing and maintaining our existing equipment, as well as by working with industry-leading consultants to implement innovative solutions for reuse. Such efforts have resulted in an average leak rate across our U.S. store operations that is *lower* than the supermarket industry average stated by the U.S. Environmental Protection Agency (EPA).

Implementing Low-GWP Systems: We operate more than 100 facilities (stores and distribution centers) using ultra-low GWP refrigerants including carbon dioxide (CO_2), glycol and ammonia. These systems are used in new construction where commercially available. For example, in November 2021, we opened a store in Yaphank, New York that is the first to fully utilize CO_2 technology for the store's refrigeration needs. Most systems across our U.S. retail footprint, however, currently utilize high-GWP refrigerants. Those systems still need to be converted to low-GWP systems to reach our zero emissions target. Our ongoing strategy is to replace these systems as they reach their end-of-life, balancing the investment and replacement schedule with our zero-emissions commitments.

Advocacy to Support Scaled Adoption of Low-GWP Technology: Walmart supports federal policy that would require the phasing out of high-GWP refrigerants, as that would support market changes necessary to implement low-GWP systems at scale and at reasonable cost. Walmart joined members of the Air-Conditioning, Heating, and Refrigeration Institute in endorsing a petition to the EPA regarding the adoption of rules to prohibit the use of refrigerants with high GWP. Walmart also submitted a letter to the EPA supporting regulatory actions for stationary refrigeration equipment that are environmentally effective (e.g., limiting new commercial systems with charges over 50 lbs. to use refrigerants with a GWP of 150 or less) and nationally consistent.

Supply Chain (Scope 3)

Walmart's science-based target includes Project Gigaton™, an ambitious effort to engage suppliers, NGOs and other stakeholders in climate action with a goal to reduce or avoid one billion metric tons (a gigaton) of greenhouse gas emissions in the global value chain by 2030. Aligned with the Paris Agreement's original 2-degree Celsius warming scenario and designed in consultation with World Wildlife Fund (WWF), Environmental Defense Fund (EDF) and CDP, Project Gigaton's™ success would represent a substantial reduction of Scope 3 emissions within Walmart's and our suppliers' value chains.

Beyond Project Gigaton™ action and reporting, Walmart estimates and reports certain Scope 3 categories — including purchased goods and services and use of sold products — through our annual CDP submissions; Walmart's 2021 submission can be viewed here.

Project Gigaton Key Highlights [2, 7, 8, 9]

- Part of Walmart's approved science-based target and aligned with the 2-degree Celsius warming scenario.
- Achieving the target would be equivalent to at least a 30% reduction of the estimated Scope 3 footprint Walmart used as the basis for the initiative.
- Target and accounting methodology developed in partnership with experts including CDP, the World Wildlife Fund (WWF) and the Environmental Defense Fund (EDF).
- Intended to get immediate traction with suppliers on actions to reduce and avoid emissions, with 2030 serving as an interim milestone toward the Paris Agreement's 2050 date.
- Serves as a platform to engage with and encourage our suppliers to take action in arenas key to net-zero supply chains: energy, nature, waste, packaging, transportation and product use & design.
- Annual opportunity for suppliers to report on specific actions taken that are translated via calculators into metric tons of CO_2e. Calculators created in collaboration with WWF and EDF.
- Suppliers determine the scope of their efforts to report—e.g., total company actions or Walmart's proportional share. Select supplier submissions reviewed by WWF and EDF as part of the data review.
- >2,500 suppliers reporting
- Reporting from suppliers representing >70% of U.S. product net sales
- >574 MMT cumulative emissions reduced or avoided (2017 through 2021)

Project Gigaton™ and Walmart's Scope 3 Footprint

Achieving the Project Gigaton™ goal of reducing or avoiding 1 billion metric tons of CO_2e emissions by 2030 would represent a substantial, Paris-aligned reduction of Scope 3 emissions from Walmart's and our suppliers' value chains.

For a retailer like Walmart, Scope 3 emissions include multiple upstream and downstream categories, including purchased goods and services and use of sold products. Examples include the emissions associated with washing and drying an article of clothing over its lifetime or emissions from growing, harvesting, transporting, eating and disposing of fresh produce. Many factors impact an item's footprint and there are no precise ways to measure these emissions, so estimates must be employed.

Walmart's objective in creating Project Gigaton™ was to start the consumer goods industry on the path toward decarbonization by spurring immediate, concrete action to avoid or reduce upstream and downstream emissions. Methods used today to calculate Scope 3 emissions did not exist at the time; to set an ambitious and science-based target, we began with an estimate that approximately 95% of a retailer's emissions were in Scope 3. Using Walmart's 2015 Scopes 1 and 2 emissions as a baseline (originally reported to CDP as 21.04 MMT CO_2e), we assumed that our 2015 Scope 3 emissions were approximately 400 million metric tons CO_2e.[12] A Paris-aligned reduction of 2.5% per year would represent a cumulative reduction of approximately 1 billion metric tons (one gigaton) of emissions over the life of the initiative.

The Science-Based Targets initiative approved Project Gigaton™ as part of Walmart's original science-based target in 2016. We then worked with CDP, WWF, and EDF to design a methodology to capture the real-world emissions avoidance and reduction impacts of supplier action, which is set forth in the Project Gigaton Accounting Methodology. Project Gigaton™ was officially launched in 2017.

We remain focused on the success of Project Gigaton™ and driving real, measurable progress with our suppliers as part of our ambition to play a leading role in helping the world achieve net zero emissions by 2050.

With respect to Walmart's own supply chain and Scope 3 footprint, Walmart has been reporting estimated Scope 3 emissions in its two largest categories — (1) purchased goods and services and (2) use of sold products — using CDP-approved methodologies and reporting them through CDP. For 2020, we reported that our estimated emissions for these categories for Walmart U.S. were 130.2 and 32.2[13] MMT CO_2e, respectively.[14]

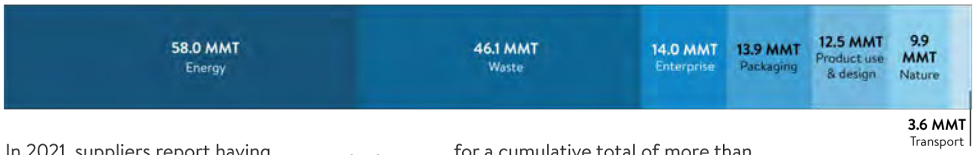
In 2022, we are reassessing our overall Scope 3 footprint, action plan, measurement methodologies, and disclosures.

Project Gigaton™ Results[7, 8]

We work with suppliers through Project Gigaton™ to set targets and take science-based, measurable action in six arenas critical to decarbonizing value chains. Since launch, more than 4,500 suppliers have signed up, making Project Gigaton™ one of the largest private sector consortia of its kind. Suppliers are invited annually to report through Project Gigaton™ and choose whether to report, as further set out in the Project Gigaton TM Accounting Methodology. During the 2021 reporting cycle:

- More than 2,500 suppliers reported through the Project Gigaton™ platform. WWF and EDF review select suppliers submissions under Project Gigaton™.
- Suppliers reported having reduced or avoided more than 158 MMT of CO_2e, for a cumulative total of more than 574 MMT of CO_2e since 2017.

Project Gigaton™ Action Areas[14]
Million Metric Tons (MMT) CO_2e



In 2021, suppliers report having reduced or avoided more than **158 MMT of CO_2e in 2021**

for a cumulative total of more than **574 MMT of CO_2e reduced or avoided since 2017**

Supplier Engagement Through Project Gigaton™

Project Gigaton™ is designed to catalyze real, measurable impact in product supply chains. It works in the following ways:

Democratizing Climate Action: The Project Gigaton™ platform is designed to accommodate suppliers who vary in their readiness and capability of undertaking intensive GHG reduction efforts. The platform offers resources such as guidance on goal-setting, workshops on best practices and playbooks and other documents that help companies get started. In 2021, suppliers reporting to Project Gigaton™ ranged in size from $1 million to $14 billion in U.S. product net sales.

Driving Decarbonization of the Most Critical Parts of the Supply Chain: The platform encourages suppliers to take action across the six areas that are the most critical in reaching zero emissions and most relevant to our suppliers' businesses: energy use, nature, waste, packaging, transportation and product use and design.

Providing Access to Science-Based Resources: Project Gigaton™ includes useful tools including calculators, playbooks and programs to guide action and inspire innovation. For example, suppliers can answer a series of questions about packaging changes, and our calculators will help them determine the emission factor used, enable them to report accurate information for Project Gigaton™ and provide data to spark ideas for additional improvements. We also host workshops for suppliers with coaching from NGOs on how to best use the calculators to further their efforts, co-created a collaborative Power Purchase Agreement open only to Walmart suppliers, and worked with CDP and HSBC to provide an early-payment program for suppliers who set science-based targets or have achieved certain score thresholds from CDP.

Ratcheting Ambition: The program is designed to promote increased ambition over time through recognition. Suppliers can sign up, start setting goals, take action, strive to achieve Sparking Change status and then strive to achieve Giga Guru status:

- **Sparking Change:** Suppliers that have set SMART (Specific, Measurable, Achievable, Relevant and Time-limited) goals, agreed to share them publicly and reported reducing or avoiding emissions in the most recent reporting year. In 2021, more than 750 suppliers were recognized for Sparking Change.
- **Giga Gurus:** Suppliers that have set SMART goals in three pillars, agreed to share them publicly and reported reducing or avoiding emissions in three pillars during the most recent reporting year. To keep the level of ambition high, we increased the requirements to qualify for Giga Guru status in 2021 from setting goals and reporting in one pillar to setting goals and reporting in three pillars. In the 2021 reporting year, we recognized more than 1,000 suppliers as Giga Gurus.

Walmart publicly recognizes suppliers achieving these milestones to thank them for their efforts and to inspire others to join and increase their ambition.

Project Gigaton™ is designed to drive decarbonization of the most critical parts of the value chain

Action Area	Actions We Encourage Suppliers to Take	Example Walmart Support
Energy	Avoid energy-related emissions in two ways: 1) reduce energy demand through optimization and efficiency and 2) transition to energy sources that are renewable and emit little to no carbon.	Energy procurement is often a key source of a business' greenhouse gas emissions. We provide resources for suppliers to reduce energy demand through optimization and efficiency and transition to renewable energy sources. • Walmart launched theGigaton PPA(GPPA) in 2020, an initiative to accelerate renewable energy adoption by offering suppliers the opportunity to participate in aggregate, utility-scale power purchase agreements (PPAs). In 2021, the first Gigaton PPA cohort was formed and the project is progressing through the development process. Since 2021, the program has educated more than 100 Walmart suppliers on renewable energy topics. In late 2021, Walmart began engaging suppliers to form the second Gigaton PPA cohort. • Walmart has to help companies get started on both energy efficiency and renewable energy procurement, including the Department of Energy's Better Buildings Alliance and the Clean Energy Buyers Association. • Walmart developed a Factory Energy Efficiency tool to assist factories in becoming more energy efficient, tracking energy use and reductions and converting those savings to GHG reductions; over 900 factories have signed up for this tool to date.
Nature	Protect, manage and restore forests through certification, monitoring, sustainable sourcing regions, collaborative action and advocacy. Adopt regenerative agriculture and best practices in agriculture, such as	Scientists estimate that restoring, renewing and replenishing nature can provide one-third of the solution to climate change. Walmart and the Walmart Foundation have set a goal to help protect, more sustainably manage, or restore at least 50 million acres of land and one million square miles of

	manure management, methane emissions from animals' digestive processes management, feed management and other activities, including efficient fertilizer use in crop production.	ocean by 2030. We are using several levers to make progress toward our nature goal, including: • Working with suppliers to improve the environmental sustainability of their products, including through certifications. • Committing to work with suppliers to promote pollinator health through a new Pollinator Policy. • Hosting a sustainable row crop summit in 2021 and inviting our suppliers and others to join us in promoting more sustainable practices in animal agriculture and row crops, including through theMidwest Row Crop Collaborative(MRCC). The MRCC brings together retailers, suppliers and conservation organizations to help farmers in the U.S. heartland adopt farming practices that can reduce greenhouse emissions, improve soil health and water quality and lower costs. • In 2020, The Walmart Foundation invested over $1 million in improvements to the World Resources Institute's (WRI) Global Forest Watch tool, a publicly accessible global platform for monitoring deforestation, and funded $2 million for the MapBiomas project through a grant to the Institute for Climate and Society to produce more accurate estimations of land use-related GHG emissions. Read more:Regeneration of Natural Resources: Forests, Land, Oceans
Waste	Address food, product and material waste that come from factories, warehouses, distribution centers and farms and contribute to GHG emissions.	Reducing and diverting waste from landfills can have a significant impact on GHG emissions, increase operating efficiency and in some cases, lower costs. • In 2020, Walmart joined the"10x20x30" initiative, in which 10 of the world's largest food retailers will engage 20 of their priority suppliers to halve food loss and waste by 2030. Since joining, we have engaged 21 suppliers. • The Walmart Foundation is supporting the World Resource Institute (WRI) to provide training and technical assistance on reducing food waste and loss, and will support WRI to share learnings across the food industry. Read more:Waste: Circular Economy
Packaging	Reduce unnecessary packaging, use better packaging materials and increase packaging reuse and recycling. Walmart is taking specific aim at plastics with expanded waste reduction commitments for our U.S. private brands.	Walmart's efforts to reduce packaging waste directly support supplier engagement and progress in Project Gigaton™. Examples include: • Walmart's publicly-availableWalmart Recycling Playbookand related resources include tools, trainings and informative videos for consumer goods companies to make packaging changes that can reduce waste and emissions. • With the support of Walmart, The Recycling Partnership and SYSTEMIQ came together to help accelerate industry adoption of circularity commitments through the development of PlasticIQ, a scenario-modeling tool to help U.S. companies set effective circularity strategies. • In 2021, we held a virtualPackaging Innovation Summitwith more than 4,000 people either attending or accessing the replay online. • To reduce reliance on plastic bags, we became a Founding Partner of Closed Loop Partners'Beyond the Bageffort, a three-year initiative that aims to identify, test and implement viable design solutions and more sustainable models for retail bags. Read more:Waste: Circular Economy
Transportation	Improve fleet efficiencies, optimize routes and introduce zero-emission vehicles to avoid carbon emissions in the supply chain.	Fossil-fuel powered vehicles produce greenhouse gas emissions during their operation and are typically a major source of value chain emissions. While Walmart has long provided references to third-party sources to help suppliers optimize efficiency through its energy pillar, Walmart introduced the transportation pillar in 2021 focusing on fleet efficiency, including reduced miles and zero-emission vehicles.
Product Use & Design	Design products to reduce emissions throughout the product lifecycle, from use of raw materials in manufacturing the product (e.g., incorporating recycled content) through consumer use (e.g., LED lightbulbs).	Product use and design impacts several key scope 3 categories, including use of sold products and end-of-life treatment of sold products. Walmart supports product manufacturers in their efforts to offer customers innovative, more sustainable products, including by: • Working with suppliers to increase the use of recycled content in products and increasing energy efficiency of products (in 2021, 750 Walmart suppliers reported increasing the use of recycled content). • Creating and disseminating the Sustainable Packaging Playbook.

Read more about Project Gigaton™.

Adaptation

Our climate strategy includes adapting our operations and sourcing to enhance resilience. Examples include:

Disaster Resilience

Walmart's Emergency Management Department uses predictive analytics to gauge the path and likely severity of seasonal weather events that can impact operations and supply lines. The Emergency Management team helps our operations and supply chain teams prepare for and mitigate the effects of such events. If disaster strikes, the Emergency Management team operates out of Walmart's Emergency Operations Center, engaging associates, local governments, NGOs and others as needed. The team deploys associates with specialized expertise as well as mobile generators, fuel resources, trucks and other resources to manage crises on the ground. Storms impacting larger geographies, such as the February 2021 winter storm across the southern U.S., contributed to this trend.

Walmart and the Walmart Foundation also work to build capacity for preparedness and response in vulnerable communities through engagement of stakeholders, best practice sharing and philanthropic investments. For example, in FY2022 the Walmart Foundation granted $3 million to build capacity in underrepresented and vulnerable communities to help them prepare and mitigate against the impact of disasters, including to BIPOC-led organizations like the Institute for Diversity and Inclusion in Emergency Management.

Read More:Disaster Preparedness & Response

Real Estate

When designing facilities in storm-prone locations, we incorporate certain precautionary measures to help facilities withstand storms and recover as quickly as possible with minimal disruption in service. To help sustain access to electrical power when we need it most, we have invested in a fleet of permanent and mobile generators to support our distribution centers, stores and clubs during hurricanes, wildfires, winter storms and day-to-day power surges. For example, given the probability of storms impacting stores in the U.S. Gulf Coast and along the eastern seaboard, nearly all stores within a certain range of the coast have a generator or quick connects for mobile generators. Because permanent generators are not financially justifiable at all stores, we take other measures, including staging mobile generators and refrigerated trailers, to reduce the time it takes to respond to power outages. In 2021, we proactively staged over 1,200 refrigerated trailers at over 700 locations ahead of extreme weather events. Additionally, mobile generators kept stores, clubs and distribution centers powered to serve communities for more than 10,000 hours while grid electricity was not available. These measures not only enable us to serve customers when we would ordinarily need to close stores, but also help to reduce food loss by avoiding hours of power loss. As climate-related events increase in frequency and severity, we aim to stay in front of issues by preparing for what lies ahead.

Read More: Disaster Preparedness & Response

We have prioritized incorporating energy efficiency into new store designs and upgrading older equipment where economically feasible with higher-efficiency technology which will help us adapt to a warming climate. We also use technology to monitor and optimize energy use in our buildings. Energy—including electric and gas—is one of our top operating expenses and optimizing energy use can help us control both expense and emissions. A few degrees of rise or fall in average temperature can translate to considerable costs, as HVAC and refrigeration systems must work longer and harder to keep temperatures in stores and product cases at optimal levels.

Sourcing: Surety of Supply

Managing Day-to-Day Disruptions

Our merchants use a variety of tools to manage volatility and surety of supply day-to-day. Our sourcing teams manage food commodity supply risks by building upstream capacity, diversifying our sourcing regions and exploring new technology and innovation. For example, our merchants use predictive weather data to adjust product deployment and replenishment rates in the short term, as well as leverage historical data on sales performance and customer buying patterns to inform product assortment shifts over time. This helps ensure that as the climate changes, we continue to offer the right products for our customers at the right time.

Country of Origin Strategies

While about two-thirds of what Walmart U.S. spends on products comes from items made, grown or assembled in the U.S. (according to data from our suppliers), globally sourced items face the risk of climate-related disruption. Walmart's Global Sourcing team regularly reviews risks and opportunities related to the country of origin of the products they source. The Global Sourcing team works with Walmart merchants and third-party experts to develop mitigation strategies, including measures to enhance supply chain resilience within countries of origin, as well as diversification of sources of supply.

Transforming Product Supply Chains for Long-Term Sustainability

Because agricultural commodities can be especially susceptible to severe weather events and to climate change, Walmart has prioritized strategic initiatives to enhance commodity supply chain sustainability and resilience. Walmart's efforts include setting sourcing requirements and product specifications for suppliers, engaging suppliers in measurement and best practice sharing, supporting industry collaboration, engaging our customers, public policy advocacy, and philanthropy.

Read More:Product Supply Chains: Sustainability Overview

Managing Transition Risks

Transitioning to a net-zero economy will bring about regulatory, technological, legal, market and reputational changes that will likely impact companies, including ours. (See Climate Risk Assessment above.) We evaluate these risks as part of the company's annual Enterprise Risk Management (ERM) process that considers strategic, operational, reputational, financial, and regulatory and compliance risks. The assessments include mitigation plans against critical risks, and ongoing or new issues are addressed through the strategic planning process. The results of these assessments are shared with Walmart's Governance Risk Committee (GRC) and with the Audit Committee of the Walmart Board of Directors.

In addition to the ERM process, individual business segments and functions also assess climate-related policy issues as part of developing their annual strategic and operating plans. For example, regulation often affects costs in our operations and value chain. Walmart has established policy councils to assess potential new legislation/regulations and commitments within and across key markets. The policy councils include internal stakeholders from various parts of the organization (e.g., Government Affairs, Legal, Real Estate, Communications, and Compliance).

Another reputational risk comes from customer perception of Walmart's climate action, including how we design and run our stores and the products we offer. Our corporate affairs teams monitor sentiment across customers, investors, associates, and other stakeholders via digital and traditional media engagement and coverage. Our stakeholders help us understand climate risks and opportunities so that we can develop more effective solutions.

Read more about our climate risk assessment section above and in our CDP Response.

Advocacy

We believe a strong climate strategy across government, business and civil society will help everyone manage the physical and transition risks associated with climate change, contributing to the resilience of our business and the communities we serve. We advocate for climate policy through engagement of policy makers, industry associations and multi-stakeholder coalitions, as well as through corporate communications.

Governance and Transparency

Climate Policy Priorities

Walmart is committed to policy advocacy aligned with the Paris Climate Agreement. Our advocacy has been consistent with that agreement since 2016. In 2021,

we memorialized our commitment in a Board-approved Statement on Climate Policy. The Statement frames our advocacy around achieving 1.5° Celsius-aligned, science-based national and international climate policies that are consistent with achieving net-zero emissions by 2050 and that equitably address the needs of all stakeholders.

We believe market-based and economy-wide emissions-reduction policies, like a price on carbon, are critical to achieving ambitious reductions in greenhouse gas emissions while supporting economic prosperity. We also recognize that market-based, technology-neutral approaches for hard-to-decarbonize sectors can play a valuable role in the absence of economy-wide action.

Climate Policy Oversight

By charter, the Nominating and Governance Committee (NGC) of the Walmart Inc. Board of Directors — a Board committee comprised of independent directors — oversees our public policy strategies and activities, including those related to climate change. Management provides regular updates at least annually to the NGC concerning the company's public policy strategy and highlights of the committee's discussions with management are shared with the full Board of Directors. In 2021, NGC/management discussions included Walmart's planned U.S. federal government affairs and policy priorities for 2021-2022 and a review of 2020-2021 activities, including engagement with and through key trade associations on climate change and other priority topics.

Walmart's Government Relations Policy (updated in 2022) governs the company's interaction with elected officials and legislative and regulatory bodies at all levels. As relevant to climate advocacy, the policy:

- Delineates roles and responsibilities with regard to interactions with public officials and legislative bodies;
- Sets parameters on the use of funds for political purposes;
- Defines the criteria for evaluation of trade association memberships in light of their policy positions and/or political advocacy;
- Commits the company to annual discussions between management and the NGC; and
- Commits Walmart to annual reporting on policy priorities, strategies, activities, and trade association memberships.

Transparency

Walmart is committed to transparency regarding public policy activities, including climate advocacy. Our disclosures include:

- Quarterly reporting on lobbying activities and expenditures, which include climate advocacy.
- Discussions regarding our public policy priorities, advocacy strategy and engagements in our ESG reporting (since 2013).
- State and federal lobbying information on our Investor Relations website (since 2015).
- Our philosophy on trade association memberships and approach to dealing with trade association policy misalignments (see below and our Engagement in public policy ESG brief).
- A list of trade associations to which Walmart Inc. contributes funds in an amount of $25,000 or more; we will update this list at least annually.

Read more: Engagement in Public Policy

Direct Engagement of Policy Makers

Walmart directly engages U.S. policy makers on climate-related policy in line with our Statement on Climate Policy. We employ federal and state registered lobbyists and registered lobbyist consultants and engage in lobbying contacts as defined under the U.S. Lobbying Disclosure Act (LDA). Our quarterly reports to Congress include lobbying expenditures, the specific legislative items and public policy issues that were the topics of communication and the registered lobbyist who lobbied on behalf of the company. Review of Walmart's reports discloses direct advocacy on climate and other environmental-related topics.

Recent examples of our direct public policy advocacy on major climate policy debates at the federal level in the U.S. include:

- Actively advocating, including meeting with key lawmakers, in support of the climate provisions of the Inflation Reduction Act (IRA), and assisting our key trade associations to develop constructive positions on these climate provisions.
- Engaging lawmakers to support the Infrastructure Investment and Jobs Act, which our major trade associations also supported, and which includes federal investments in the energy and transportation sectors and to support climate resilience.
- Speaking out publicly and engaging lawmakers directly to emphasize the importance and urgency of the climate provisions in the Build Back Better legislation, as well as conveying support for carbon pricing and sector-based, technology-neutral approaches to decarbonize sectors like agriculture.
- Recognizing bipartisan action on climate and submitting a letter of support to the U.S. Senate regarding the passage of the Growing Climate Solutions Act, which provides technical resources to farmers and ranchers to invest in nature-based climate solutions.
- Joining members of the Air-Conditioning, Heating, and Refrigeration Institute in endorsing a petition to the U.S. Environmental Protection Agency (EPA) regarding the adoption of national rules to prohibit the use of refrigerants with high global warming potential. We believe this will create a valuable national approach to phasing out the most harmful refrigerants in an expeditious fashion. Walmart also submitted a letter to the EPA supporting regulatory actions for stationary refrigeration equipment that are environmentally effective (e.g., limiting the use of refrigerants in new commercial systems with charges over 50 lbs. to those using refrigerants with a GWP of 150 or less) and nationally consistent.
- Collaborating with PepsiCo to release a set of public policy principles to convey to federal and state policymakers the types of policy interventions, planning and guidance that can support the efficient and economical transition to zero-emission commercial transportation fleets. These principles reflect our business strategy, promote efficiency and optimization as a reduction pathway and take a technology-neutral approach so that we can align our

distribution network outcomes with environmental and community benefits.

Walmart has also advocated for Paris-aligned climate policy on the global stage. For example, prior to COP26, we joined key public-private sector initiatives led by U.S. Special Envoy on Climate John Kerry. The first, Glasgow is Our Business, showcased strong CEO-level sector support for a successful COP26 agreement. The second, the Clean Energy Demand Initiative, works to convey demand and policy signals from large private sector buyers to drive clean energy investment in crucial global markets. We actively participated in business dialogues during COP26 and represented the official business observer groups in encouraging support and action on measures to solidify global carbon market rules and other policy elements in the Glasgow Climate Pact. And Walmart is active in statehouses across the United States, including joining other businesses to advocate for net-zero emissions in Maryland by 2045.

Corporate Communications

Through corporate communications, Walmart regularly engages the public to make the case for climate action and encourage others to raise their ambitions. Recent examples include:

- Speaking with key climate reporters
- Authoring blogs, op-eds and articles advocating for climate policy
- Sharing climate stories, articles and milestones via social media
- Participating in videos and podcasts
- Engaging in forums such as the New York Times Climate Hub at COP 26, Greenbiz's Verge Net Zero conference, Fortune's Global Sustainability Forum, the WSJ Pro Sustainability Forum and the Financial Times' Moral Money Summit: America's Edition.

Engagement Through Trade Associations

Beyond direct advocacy on climate-related policy, Walmart is also a member of trade associations and coalitions that the company believes can assist us in achieving our long-term strategic objectives. These organizations and coalitions allow us to work with other companies on issues that impact the retail sector and beyond.

Walmart's Approach to Engaging Trade Associations

Walmart supports trade associations for many reasons, including development and sharing of best practices on matters important to the industry, advocacy on behalf of industry interests, promotion of public policy and/or general support for an organization's mission. Walmart's engagement model depends on the role the trade association plays in helping Walmart achieve its strategic objectives, and may include varying levels of financial support, involvement at the board and/or with key committees or targeted financial support for key initiatives within a broader organization.

As Walmart transforms its business and trade associations reevaluate their priorities, misalignments may occur. Where they do, we directly engage our trade associations to help them understand our priorities and positions. We also periodically reevaluate our memberships and engagement models to ensure alignment.

- **Engagement:** We communicate our strategic priorities and perspective on matters of public policy with our trade associations, policymakers and — as appropriate — the public so that our positions are known. For example, we have shared our views on climate policy with key trade associations, the public and lawmakers (see below).
- **Membership and Financial Support Reviews:** We periodically review our memberships in trade associations and determine if any adjustments are needed in our membership status or the financial support we provide to the organization. Where we generally support the organization's priorities and the positions the organization has taken on major issues, we may maintain general membership in the organization while working to influence the organization's direction as necessary. For example, we maintain general membership in the Business Roundtable and work to influence the organization as described elsewhere in this brief. In other instances, we may elect only to provide financial support for particular organizational initiatives. For example, we do not pay general membership dues to the U.S. Chamber of Commerce but financially support certain specific U.S. Chamber of Commerce initiatives including the Institute for Legal Reform, Rule of Law Coalition and Workforce Freedom Initiative. If a relationship — on balance — does not align with our priorities, we would end ties with the organization altogether.

Engagement with Major Trade Associations on Climate Policy

We have not identified any material misalignments with our major trade associations with respect to climate policy matters. Nevertheless, in line with the overall approach described above, we engage trade associations on climate and related policy issues to help them understand our perspective. Examples include:

- **Business Roundtable:**The Business Roundtable advocates for public policy that promotes the U.S. economy and expanded opportunities for Americans. Walmart President and CEO Doug McMillon served as Business Roundtable's Chairman in 2020-2021. We have endorsed Business Roundtable's call for aU.S. national climate policy solutionto reduce U.S.-based emissions by at least 80% by 2050 through a market-based mechanism that includes a price on carbon. Walmart worked with Business Roundtable on its statement expressing support for the climate provisions in Build Back Better and to craft a global statement on climate action that was endorsed by business groups in Australia, Canada, the European Union and Mexico.
- **National Retail Federation:** The National Retail Federation (NRF) is the largest retail trade association in the U.S., representing large and small retailers with a variety of business models. NRF represents the retail industry across a broad range of policy areas including taxes, workforce and sustainability. In January 2022, in partnership with Walmart and other leading retailers, NRF released the "Retailers Reaching for Net-zero" guide, a document developed with the NRF Sustainability Council (of which Walmart is a member). The guide makes the business case for reducing greenhouse gas emissions, provides a pathway for setting science-based greenhouse gas emission reduction targets and provides an extensive resource list to assist retailers in reaching their own sustainability goals. In January 2022, Walmart U.S. President and CEO John Furner was elected chairman of the board of NRF. In this capacity he will further

the engagement of the association in priority policy areas, including climate.

- **Retail Industry Leaders Association:** The Retail Industry Leaders Association (RILA) brings together the nation's leading retailers to advance the industry through public policy advocacy and operational excellence and innovation. In April 2021, RILA released a set of climate priorities that summarize the member perspective and considerations on greenhouse gas emission reduction strategies and categories that closely intersect with the industry operations and that receive policy attention at the state and federal level. Walmart provided insights to RILA to help develop this report and supported its release. In February 2022, RILA released its Retail Climate Action Blueprint, which provides guidance applicable to retail organizations' climate action strategies. Walmart provided feedback on the Blueprint and was quoted in the press release announcing its release.
- **International Chamber of Commerce:** The International Chamber of Commerce (ICC)promotes international trade, responsible business conduct and a global approach to economic regulation. ICC has been the official Focal Point for Business in the United Nations Framework Convention on Climate Change (UNFCCC) process since its inception in 1992. At COP26, Walmart actively engaged and supported the Business and Industry NGO group (BINGO) managed by ICC. On behalf of this group, Walmart delivered a statement to the Parties during one of the high-level segments, which included language encouraging action on Article 6 and formalizing rules for global carbon markets.
- **Business at OECD:**Recognized as the voice of business at the Organization for Economic Cooperation and Development (OECD),Business at OECD(BIAC) conveys business perspectives and expertise to policymakers on a range of economic and policy issues. Walmart is a Vice Chair of the Environment and Energy Policy Group, which helps OECD guide member governments to design and implement evidence-based policies that address environmental challenges and promote green growth. BIAC has provided feedback to the OECD in support of international discussions on climate, including the UN Framework Convention on Climate Change (UNFCCC), the G7 and the G20. The group has also provided feedback on how governments can best align economic stimulus measures related to COVID-19 with ambitions on climate change.

Multi-Stakeholder Coalitions

In addition to working to shape climate strategies and advocacy within the groups discussed above, we are members of other coalitions advocating for an enabling policy environment, including:

- **Race to Zero – Retail Campaign:**We supportthe effortto achieve net zero emissions in the retail sector by 2050. That includes our role as co-lead of the Retail Race to Zero campaign along with IKEA, H&M, Kingfisher and Best Buy. In FY22, we represented the coalition at COP26 in Glasgow, where we welcomed several new signatories to the campaign and announced a new Accelerator program.
- **We Are Still In:**We are asignatoryto the coalition, which demonstrates our long-standing commitment to the Paris Climate Agreement. We also signed theWe Mean Business/Ceresletter that supports a U.S. goal to cut emissions by at least 50% by 2030 and achieve net zero emissions by 2050. The group also endorsed the bipartisan Growing Climate Solutions Act, which reflects a valuable strategy for increasing carbon sequestration opportunities in the agricultural supply chain.
- **Clean Energy Buyers Association (CEBA):** Walmart is a long-time member of CEBA (formerly REBA), a collaboration of clean energy buyers, energy providers and service providers that, together with NGO partners, seek a transition to a zero-carbon energy future. The group advocates for policies such as wholesale energy market expansion, flexible financing for renewables, retail access and a federal carbon green grid. We advised and endorsed CEBA's statement on Build Back Better, which emphasized market and policy-based measures to decarbonize the grid.
- **Business for Nature (BFN):** We are members of BFN, a global coalition that brings together business and conservation organizations to call for governments to adopt policies to reverse nature loss in this decade. In 2020, we supported BFN'sCall to Actionto reverse nature loss by 2030. BFN has been mobilizing members to provide official comment to inform the global biodiversity framework, which is set to be negotiated at the UN COP15 in 2022. We have actively participated in the drafting and development of these policy recommendations, have been a strong proponent of language that highlights that the climate and nature dialogues should be strongly linked and recognize the critical role nature plays in climate mitigation.
- **LEAF Coalition:** Walmart.org participates in the LEAF Coalition, a coalition bringing together the private sector and governments to provide finance for tropical and subtropical forest conservation commensurate with the scale of the climate change challenge, to learn along with our peers.

Read More: Engagement in Public Policy

Reporting

We believe that transparency cultivates trust, helps hold ourselves accountable and – we hope – inspires others to act. We provide an annual update on our climate progress here through our ESG Reporting.We also report to organizations such as CDP. Walmart estimates its scopes 1, 2 and partial scope 3 GHG emissions in accordance with theGHG Protocol Corporate Accounting and Reporting Standardand has disclosed this and other climate-related information annually since 2006. See our third-party assurance statement for our CY2021 Scope 1 and 2 emissions verification report here.

We encourage suppliers to report to CDP and have integrated CDP and Project Gigaton™ to make it easier for suppliers to report on metrics. We also support the Taskforce for Climate-related Financial Disclosure (TCFD) and use its reporting and guidance for climate risk assessment.

CDP Climate Change Questionnaire	Year			
	2018	2019	2020	2021
Walmart Inc.: Response Score	A-	A	A	A-
Walmart Inc.: Supplier Engagement Rating (SER)		A	A	A

Challenges

- Climate change is one of the greatest challenges of our time, profoundly affecting all regions of the world and all sectors of society. While Walmart can play a leading role in its own business, supply chain and beyond, achieving the Intergovernmental Panel on Climate Change (IPCC) goal of reducing global greenhouse gas (GHG) emissions to net-zero by 2050 requires action from all parts of society.
- Certain factors beyond Walmart's control impact Walmart's ability to achieve its own targets, including changes to local energy grids; our physical presence in geographic areas without available necessary technology, equipment or capabilities; and weather patterns increasing the number of days requiring facility heating and cooling.
- Achieving our targets will require innovation and technology that is not available today, including the evolution and accessibility of refrigeration, electric vehicle (including Class 8, heavy-duty, long-haul tractors), renewable energy, manufacturing and agricultural technologies. A critical mass of potential consumers of these new technologies is a necessary precondition to their development, deployment and scaling.
- Walmart is dependent on the cooperation and performance of certain third parties, including business partners providing clean/green services and suppliers' capacity and willingness to implement and measure emissions reductions projects.
- Public policies may not support actions aligned with Walmart's Science-Based Targets or the ambitions of the Paris Climate agreement, including by not encouraging the development and deployment of low-carbon or low-emissions technologies at scale and public policies that can negatively impact the supply or cost of renewable energy projects at scale.
- Walmart's business will continue to evolve and grow. This growth and changes in our model may require additional facilities and/or an expansion of our footprint, which may create pressure on our targets.
- The capital and operating costs of implementing projects will be a factor (e.g., transitioning to low-GWP refrigerants). Low market prices and volatility of the price of fossil fuels can complicate the cost/benefit analyses.
- Value chain (scope 3) emissions measurement and reporting remains an immature field; lack of standardized approaches and comprehensive data sets limit the ability to generate comparable, reliable and decision-useful information.
- National and global catastrophic events, including pandemics, can exacerbate many of the above factors.

Revision History:
August 2022: Updated to reflect 2021 GHG emissions and related metrics.

About Our Reporting

Additional Resources

Endnotes

1. In 2020, we raised our aspiration to reduce emissions in our operations (scopes 1 & 2) by realigning our science-based target to a 1.5 degree Celsius trajectory, the highest ambition approved by the SBTi. Our goal is to achieve zero emissions across Walmart's global operations by 2040, reducing absolute scopes 1 and 2 GHG emissions 35% by 2025 and 65% by 2030 from our 2015 base year.

2. Annual scopes 1 and 2 GHG emissions and carbon intensity metrics are updated from time to time in this ESG Climate Brief to account for changes in emission factors or the availability of more accurate activity data. Flipkart emissions data is excluded from Walmart's Scope 1 and 2 emissions footprint and progress calculation. We believe excluding Flipkart's data will have negligible impact on the overall reporting.

Our emissions footprint in CO_2e and carbon intensity per revenue are calculated to include emissions for our operations for the period which we owned the operations in the reporting year. This may result in updated emissions reported in the ESG Climate Brief not corresponding to results reported to CDP for our annual Climate Change questionnaire.

We engage Lucideon CICS to independently verify Walmart's reported scope 1 and scope 2 emissions as reported to CDP annually, pursuant to ISO 14064-3 (the international standard for verification of Greenhouse Gas inventories). The GHG Protocol outlines three emissions sources (referred to as "scopes") that provide the framework for operational boundaries. The three scopes are:

Scope 1, "Direct Emissions," represent emissions from the combustible fuels and other sources that

occur directly on sites (e.g., refrigerants,) and mobile emissions sources.

Scope 2, “Indirect Emissions,” represent emissions that occur off-site to produce electricity or steam purchased for use at corporate locations.

Scope 3, “Other Indirect Emissions,” represents emissions from activities down or upstream from a company’s core business such as product use, waste disposal, commuting, and business travel.

3. Annual scopes 1 and 2 GHG emissions are updated from time to time for changes in emission factors or activity data when more accurate information become available. This may result in updated emissions reported in the ESG Climate Brief that may not correspond to results reported to CDP for our annual Climate Change questionnaire. Flipkart emissions data is excluded from Walmart’s Scope 1 and 2 emissions footprint and progress calculation. We believe excluding Flipkart’s data will have negligible impact on the overall reporting.

We engage Lucideon CICS to independently verify Walmart’s reported scope 1 and scope 2 emissions as reported to CDP annually, pursuant to ISO 14064-3 (the international standard for verification of Greenhouse Gas inventories). We follow Walmart’s Greenhouse Gas Inventory Methodology in calculating our GHG emissions, which is consistent with the principles and guidance of the World Resources Institute and the World Business Council for Sustainable Development’s Greenhouse Gas Protocol Initiative (“The GHG Protocol”) for corporate GHG accounting and reporting. Scope 2 (market-based) emissions include the carbon reduction value of renewable electricity procured from onsite and offsite projects. To account for structural changes in our business, we strive to adjust our emission reduction progress on scope 1 and 2 emissions to add or subtract emissions for entities acquired or divested in the year the acquisition or divestiture took place, including adjusting for previous years (including the baseline year).

4. Carbon intensity (scope 1 and 2 per revenue) calculation is based on calendar year emissions (January 1-December 31) and normalized by total annual revenues as measured by Walmart’s fiscal year (February 1-January 31).

5. This includes generation from active renewable and low-carbon projects. It considers the combined contribution of power generated from on-site and off-site projects as well as renewable energy generation feeding into the grids where our sites are located. Third-party-verified energy consumption data is one year in arears for the CY2019 and CY2020 years. For CY2021, the latest energy consumption data was used. This was used in combination with the electricity procured from our renewable energy projects and the most recent grid fuel mix information obtained from the International Energy Agency for the regions where we operate. This estimate does not include energy data for our Flipkart business. We believe excluding Flipkart data will have a negligible impact on our estimate.

6. Calculated in accordance with the RE100 technical criterial. RE100 defines renewable electricity consumption as the ability to make unique claims on the use of renewable electricity generation and its attributes.

7. Calculated in accordance with Walmart’s Project Gigaton Accounting Methodology, available on the Walmart Sustainability Hub. Suppliers submit information during a Project GigatonTM reporting season; figures reported are for the reporting season that took place during the corresponding fiscal year.

8. Because Walmart does not restrict suppliers to reporting only on emissions avoidance and reduction efforts that are attributable to the suppliers’ business with Walmart, actions taken and reported through Project Gigaton cannot be used to measure Walmart’s scope 3 emissions, either absolutely or in year-over-year reductions.

9. The U.S. net sales figure used for the calculation includes Walmart U.S. and Sam's Club product net sales for the 52-week period prior to survey reporting window. The percentage represents U.S. product net sales of suppliers that reported to Project GigatonTM in the reporting year versus all U.S. product net sales. The calculation excludes Walmart International segment product net sales from the calculation.

10. We considered each climate variable in isolation; we did not adjust for second- or third-order effects or interdependencies with other variables. We also did not consider potential offsetting impacts of new technologies, mitigating actions, or new business opportunities.

11. For additional information on R-404A

12. More recent CDP estimates for the retail sector confirm this baseline assumption. Walmart has not estimated its full, global scope 3 emissions for all scope 3 categories but has estimated scope 3 emissions for certain categories, including for two relevant categories—purchased goods and services and use of sold products—for its Walmart U.S. business using CDP methodologies. See Walmart's 2021 CDP submission for more details on the methodologies used to prepare these estimates.

13. The 2020 calculation for use of sold products was based on 2018 product data.

14. For more information on the assumptions and methodologies used to prepare these estimates, see Walmart's original CDP submissions (linked under Additional Resources at the end of this page). Walmart reserves the right to employ different methodologies in the future and may restate these figures retroactively. Walmart has not estimated its full, global scope 3 emissions for all scope 3 categories but has estimated scope 3 emissions for certain categories, including for two relevant categories—purchased goods and services and use of sold products—for its Walmart U.S. business using CDP methodologies.

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Walmart

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Case studies

AstraZeneca: Using purchasing power to accelerate action

AstraZeneca is a global science-led biopharmaceutical company that has been disclosing through CDP for over a decade and has been ranked on the CDP A List for both climate change and water security for six consecutive years.

Since 2015, AstraZeneca has delivered a 59% reduction in their Scope 1 and 2 emissions and in October 2021, AstraZeneca became one of the first companies worldwide to have its emissions reductions targets verified by the Science Based Targets initiative's new Net-Zero Standard.

With action on Scope 1 and 2 GHG emission reductions well underway, AstraZeneca has accelerated action with its suppliers to reduce Scope 3 emissions, aided by its CDP Supply Chain membership.

Ambition Zero Carbon

AstraZeneca has set an ambitious target to halve their entire value chain footprint (from 2015 baseline) by 2030 leading to a 90% reduction by 2045 (from 2019 baseline).

“Our Scope 3 footprint is more than 20 times greater than our Scope 1 and 2 footprint, and our ambitions will only be achieved through close collaboration with our supply chain partners,” says Jenny Perrie, AstraZeneca’s Scope 3 lead in the Global Procurement team.

“We cannot do this alone; we need to know our suppliers are on the same road to net-zero. So we have set the goal that, by 2025, 95% of our key suppliers and partners should have verified science-based targets, and we are working closely with our sector peers to support the progression to a low carbon economy.”

Perrie emphasized the role of CDP Supply Chain membership in achieving supply chain decarbonization: “We rely on our suppliers’ CDP submissions to gain consistent insight into our Scope 3 emissions. We want our suppliers to use a robust third-party platform so that when our suppliers submit data for AstraZeneca’s Scope 3 programme, it can also be used with their other

with our suppliers using the data to create sustainability engagement plans to reach net-zero.”

Perrie continued, “We create opportunities to engage with our suppliers on sustainability, to raise awareness and share lessons learned by AstraZeneca, to reduce GHG emissions across all the procurement categories across our

supply chain. In 2021, we invited our top 250 suppliers to participate in the CDP Supply Chain program, and more than 70% of those suppliers disclosed their climate change data, including many suppliers who had never disclosed through CDP before. In 2022, we have stepped up our action further as we recognize the need to accelerate change in this critical decade of delivery against global climate goals. In April 2022, we held a supplier engagement conference 'Accelerating Sustainability' for our key suppliers, setting out our clear expectations for 2022. We have now invited over 700 suppliers to report through CDP – nearly three times the number invited last year. The support given by CDP to educate and on-board our suppliers to the Supply Chain program has been essential to achieve this rapid ramp up."

P**urch**a**sing p**o**wer**

"We recognize that every purchasing decision has an impact," says Perrie, "And we have a responsibility to use our significant purchasing power to support our sustainability goals of developing a healthy society, healthy people and a healthy planet. Through our Positive Sourcing Program, we are embedding sustainability into end-to-end procurement processes, underpinning our delivery of a more sustainable future business," explains Perrie.

"The sustainable development of our company cannot be separated from that of our suppliers. CDP Supply Chain membership is giving us deeper visibility into our suppliers' year on year GHG reduction and is an efficient way for us to consistently engage with our suppliers. CDP Supply Chain membership is helping us to drive action towards our 2025, 2030 and longer-term net-zero goals" says Perrie.

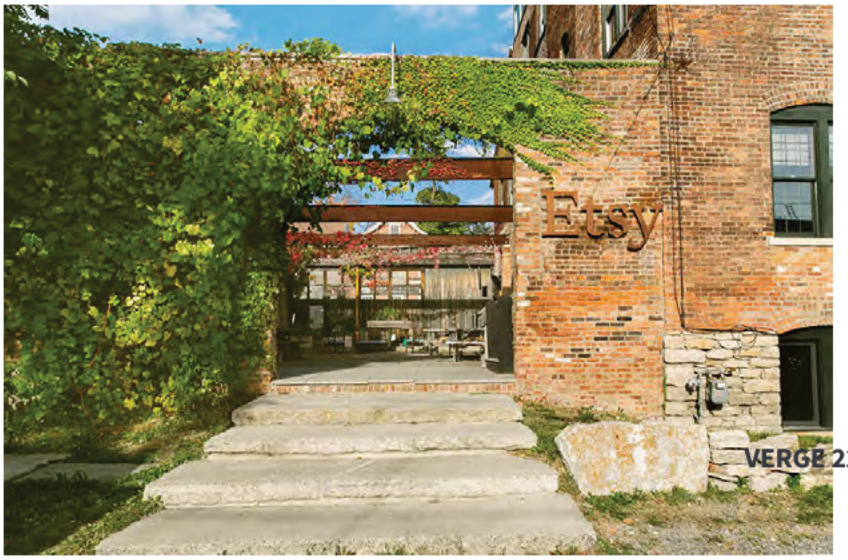
Along with disclosure and CDP Supply Chain membership, it is the recognition of the interconnection between all areas of sustainability that drives

AstraZeneca's ambitious social, ethical and environmental sustainability strategy – one of the most innovative in the sector.

Etsy takes aim at shipping and packaging in setting 2030 net-zero goal

The e-commerce site also has set science-based targets that are pending validation.

By **Deonna Anderson** March 16, 2021



E sy s a ex off ce Hudso , New Yo k. Cou esy o E sy.

Deonna Anderson
Sen or Ed tor
GreenB z Group
@iamDEONNA

Scope 3 em ss ons are the hardest em ss ons for compan es to address when sett ng goa s But often, they are the most em ss ons to take on For Etsy, the e commerce marketp ace known for handmade tems such as jewe ry, art and appare , Scope 3 em ss ons make up 99 percent of the company s carbon footpr nt hat s why t s pr or t z ng engagement w th se ers n ts marketp ace to dr ve down em ss ons

he amb t on s part of the company s net zero carbon em ss ons by 2030 goa , wh ch t set n February

know many compan es have d fferent def n t the Sc ence Based argets n t at ve's (SB) fo zero, sa d Che sea Mozen, d rector of susta na t

susta nab ty n res nas ne ped bu d ts strateg

t has been a rea y fun journey over the past s d on our own operat on, so gett ng our own hous

n add t on to the net zero goa , the e commerce s te has set two sc ence based targets us ng a base ne year of 2019, pend ng va dat on from the SB hey ca for

1 a 50 percent abso ute reduct on n Scope 1 and 2 greenhouse gas em ss ons by 2030, nc ud ng Etsy s off ce operat ons and purchased energy
2 a 13 5 percent abso ute reduct on n Scope 3 greenhouse gas em ss ons by 2030, nc ud ng se er sh pp ng and fu f ment

he company's most recent 10 K form for the f sca year that ended Dec 31, wh ch t f es annua y w th the U S Secur t es and Exchange Comm ss on, a so noted a 2021 goa to offset 100 percent of measured Scope 1, 2 and 3 greenhouse gas em ss ons annua y

n a b og about the new net zero p edge, Etsy CEO Josh S verman wrote, We're comm tted to ho d ng ourse ves accountab e and ma nta n ng transparency as we push toward a net zero 2030

Mozen sa d that as the company makes ts way toward the net zero goa , t w cont nue the pract ce of report ng a of ts susta nab ty metr cs n ts 10 K form, as we as w th n ts Susta nab ty Account ng Standards Board (SASB) and ask Force on C mate re ated F nanc a D sc osures (CFD) d sc osures On y 10 percent of compan es are ntegrat ng susta nab ty metr cs nto 10 K f ngs, accord ng to SASB A coup e of years ago, when Etsy f rst started nc ud ng such metr cs n ts f ngs, former Etsy Sen or Susta nab ty Manager H ary Young, who st works at the company n a d fferent ro e, wrote, Key non f nanc a metr cs around our econom c, soc a and eco og ca mpact are an ntegra part of how we run Etsy t just makes sense for us to report those metr cs n the same p ace

> *" The idea was that we know with the urgency of the climate crisis, we wanted to do something to immediately address that impact while we work towards long term reductions. "*

n order to be transparent about ts susta nab ty work, Etsy has to do the re evant work beh nd those reports n recent years, Etsy has been work ng on address ng the carbon mpact of ts marketp ace, wh ch s made up of near y 4 5 m on se ers w th more than 85 m on tems ava ab e for sa e, as of December

Back n 2019, Etsy aunched ts f rst n t at ve focused on reduc ng the carbon em ss ons of ts marketp ace by ntroduc ng carbon offset sh pp ng o offset sh pp ng, Etsy est mates the em ss ons created by each product so d by ook ng at data such as the d stance between a se er and buyer for each order and the expected we ght of the tems Etsy then works w th 3Degrees, a carbon offset and renewab e energy company, to nvest n em ss ons reduct on projects such as w nd and so ar farms or forest protect on

Mozen sa d th s was an obv ous step for the company to address the em ss ons for the marketp ace because t s the source of Etsy s argest measured carbon mpact n 2020, Etsy offset 404,439 metr c tons of carbon n tota and sh pp ng a one was 303,218 metr cs tons CO2 equ va ent n 2020, accord ng to the company

he dea was that we know w th the urgency of the c mate cr s s, we wanted to do someth ng to mmed ate y address that mpact wh e we work towards ong term reduct ons, she sa d

he th rd argest area of Etsy's footpr nt s purchased goods and serv ces n ts corporate supp y cha n, accord ng to Mozen Between now and 2030, Etsy sa d t p ans to deepen ts engagement on c mate w th vendors and w cont nue to pr or t ze partners that share s m ar carbon standards

Here s a recent examp e of how Etsy a ready has done th s n 2020, the company comp eted ts m grat on to Goog e C oud, wh ch comb ned w th a 15 year power purchase agreement he ped n reach ng ts goa to be 100 percent renewab y powered by 2020

From 2018 to 2020, our energy use for comput ng decreased by 23 percent And that s arge y thanks to the eff c ency of Goog e C oud P atform compared to what we have n our own co ocated data centers, Mozen sa d

And n tota , ast year, 81 percent of the money Etsy spent n ts supp y cha n went to compan es that have set a greenhouse gas em ss ons reduct on goa

But a ot of the focus w be on other areas of Etsy s bus ness, over wh ch t doesn t necessar y have d rect nf uence, she added For examp e, n 2020, 75 percent of Etsy's carbon footpr nt came from sh pp ng, wh ch t doesn't have contro over ts se ers sh p d rect y to buyers

But we w be ook ng at that footpr nt, sa d Mozen, who noted that the company th nks one way to address sh pp ng em ss ons s through pub c po cy

here s been a ot of moves n the space r ght now And we ve been very act ve n t, she sa d We re go ng to doub e down on advocat ng for the decarbon zat on of the og st cs sector And that, for the next few years, w be very mportant as we head towards 2030

n 2020, Etsy advocated for the ransportat on and C mate n t at ve, for wh ch t rece ved an award from the Ceres B CEP Network, as we as the Ca forn a A r Resources Board (CARB) Advanced C ean rucks Ru e and other reg ona po c es that the company be eves have the potent a to acce erate decarbon zat on of the transportat on sector

Etsy a so p ans to address the second argest contr butor to ts footpr nt, packag ng, wh ch t started measur ng n 2020, Mozen sa d

We re hopefu that prov d ng more too s for [se ers] w he p dr ve some of these decreases n our carbon footpr nt, espec a y n the packag ng space, she sa d We re hop ng that partnersh ps for more susta nab e packag ng that w be affordab e for our se ers w he p reduce that footpr nt

She sa d Etsy s a so nterested n d gg ng nto the c rcu ar packag ng space h s wou d be ear y days for us But that s where hope that we can make some ga ns

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ENTREPRENEURS

With New Sustainability Commitments, Allbirds Accelerates A 'Cradle-To-Grave Approach' That Incorporates Consumers And Supply Chain

Christopher Marquis Contributor ⓘ
I write about how companies are creating a more resilient and sustainable capitalism.

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Jul 1, 2021, 10:39am ED

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Allbird's new sustainability goals include obtaining 100% of its wool from regenerative

sources. DEAN MACKENZIE

As a large collective source of carbon emissions, businesses have a key role to play in addressing the climate crisis. The accelerating threats to the planet have more companies pledging action to reduce their environmental impact, including some goals aligned with the Paris Agreement that incorporates a net zero emissions target for 2050. But other businesses see a more urgent need and are accelerating their climate work to go beyond reduced emissions and establish methods and materials that enhance the environment—taking responsibility to ensure our planet's health for future generations.

One business leading through regenerative innovation and a commitment to sustainability is Allbirds, a footwear and apparel company known for its innovative materials and carbon neutral commitment. The company recently announced new, aggressive sustainability commitments for 2025 and 2030, including a 50% reduction in its per-product carbon footprint in 2025 that expands to a near-zero per-unit carbon footprint by 2030. These goals translate to a science-based target to reduce absolute scope 1, 2, and 3 emissions by 42% by 2030—and Allbirds aims to bring others along to amplify this impact.

Hana Kajimura, Head of Sustainability at Allbirds, says the company will focus on regenerative agriculture, renewable materials, and responsible energy use to meet 10 quantitative commitments for its materials and practices by 2025. These include getting 100% of its wool from regenerative sources, reducing the use of raw materials by 25%, sourcing 100% renewable energy at facilities it owns and operates, as well as educating consumers on lower-impact ways to clean footwear and apparel.

“We really took the cradle-to-grave approach to our footprint, which includes product use, end of life, and corporate emissions,” she says. “We think we should be accountable to the impact of our product even after it leaves our door. For example, on customer use, there are a few things that we have control over and then there are a few things that we can do our best to influence.”

In announcing the new commitments, Kajimura and others at Allbirds acknowledge the significant challenge—and that the company’s individual impact has its limits. So, as it has done with product development and as a member of the Certified B Corporation community, Allbirds will share information about the quantitative process behind its new climate goals through open collaboration and assist companies and growers in its supply chain with transitions to clean energy or regenerative practices.

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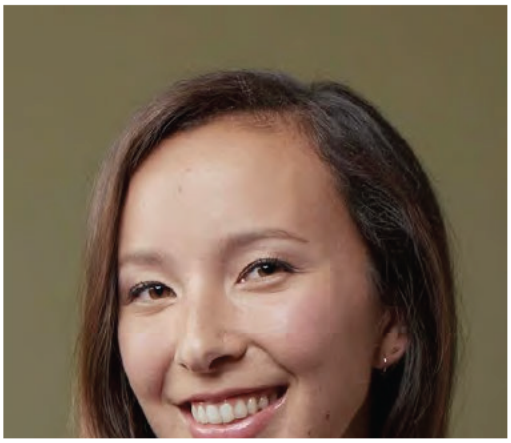
“Our ambition is to reverse climate change through better business,” Kajimura says. “Targets for 2050 are beyond the scope of any one sustainability person’s career or the public’s attention span. Those goals are important to set that long-term ambition, but so is near-term accountability, and that’s why we have 2025 as the focus.”

Kajimura shared more about the importance of science-based climate

goals and how the company has become a sustainability leader in only five years during our recent conversation as part of my research on purpose-driven business. Excerpts from our conversation follow.

Chris Marquis: How did Allbirds develop these new sustainability commitments—with many of the targets for 2025 as well as some in 2030?



Hana Kajimura: I've been at Allbirds now for almost four years of our five-year history. We've done a lot of amazing work, but this is the first time that we're making forward-facing commitments, which I think we can

Hana Kajimura, Head of Sustainability at Allbirds ALLBIRDS

only do because we've demonstrated such a strong track record over the last few years. As we neared our fifth birthday, which was just this March, we started to think about what the next five years would look like and felt ready to make commitments toward that future.

This work really logically built off our initiative to label all of our products with their carbon footprint, because in large part that was done to hold ourselves accountable to showing that number come down over time. Now we are committing to reduce our per-unit or per-product carbon footprint by 50% by the end of 2025 and by 95% by 2030—that's all relative to what that per-product number would have been in 2025 without further action to limit the emissions.

We have really anchored the message and storytelling around that per-product footprint, because it aligns with that label you see on our product. What that means quite practically is that in 2030 that label on our product will be less than 1 kilogram of CO2 per product. As the world conversation really shifts toward this idea of true zero emissions—take offsets off the table and take action to reduce our impact—we wanted to see how much we could reduce our emissions.

Marquis: In pursuit of that goal, how do you consider how individual components of footwear or apparel contribute to emissions?

Kajimura: Most companies set the target in line with science-based targets, which is what are needed to keep warming below 1.5 or 2 degrees C, and then they work backward on how to get there. That takes a long

time; you put the target out there and it takes years to figure out how you're actually going to achieve it. It leaves you with this big question mark—an innovation gap.

We actually did the opposite and looked at that stacked bar of our product's carbon footprint broken down across the phases of materials, manufacturing, transportation, product use, end of life, offices and retail stores, and even our growth rate. We just started shaving that bar down by saying: What if our wool was all regenerative agriculture? What if our factories ran on 100% renewables? What if our customers were washing and drying our product less often? How much would each of those things contribute to a reduction in our carbon footprint?

That's how we arrived at the 50% by 2025 and 95% by 2030. We can only do that because we've built such an infrastructure around data collection and really knowing the impact of each of our products. We were helped by the fact that we have a relatively limited number of products and a relatively contained supply chain to really have our arms around the exact impact—truly down to the lace level.

Existing materials can always be better. We have this target now to do 100% of our wool farmed regeneratively. Wool today actually has a pretty high carbon footprint, although it's a renewable and natural material. But through regenerative practices we could imagine it will become carbon negative, so that's one bucket of innovation. Others are around increasing bio content while maintaining performance. That's the real unlock for the whole footwear industry, honestly, is how do we increase the level of bio content in our foams—whether it's the sole of the shoe or the insole—without degrading performance, without making it like a stiff, heavy

product.

Marquis: The goals incorporate some broad shifts across very different types of activities. For example, moving to all regenerative agriculture for your wool is very different than getting consumers to wash their shoes less frequently—a consumer education issue. Across those different areas, what do you see as most challenging and how do you plan to address those challenges?

Kajimura: They do take different approaches. Regenerative agriculture requires working directly with farmers on the ground in New Zealand to have specific conversations about what it would take to get you to where you need to be. Similarly, it requires conversations with our manufacturing partners to ask if they have looked into on-site solar and suggesting some financing mechanisms to help them get there.

The 10 specific targets for 2025 collectively contribute to that 50% reduction. The hardest one of all is material innovation because effectively we're committing to 75% of our total material use being from sustainably sourced natural or recycled materials, as well as about a 25% reduction in the carbon intensity of the materials that we're using. Achieving those targets is going to take inventing materials that currently do not exist. We have a track record of that; SweetFoam is a great example, because it led to a pretty substantial reduction in our per-unit carbon footprint. But we have to do that again and again over the next five years.

A big part of getting to this point where we're ready to make these commitments public was doing a very detailed feasibility assessment to understand the investment required. The rhetoric of sustainability being more expensive is certainly true to an extent. Because when we looked at

the numbers, something like material innovation, the “green premium” that’s associated with recycled materials or natural materials is real and it is a significant investment. But other initiatives that also help with sustainability—like shipping predominantly through ocean versus air or just using fewer materials and minimizing waste and becoming more efficient—save so much money that this whole strategy taken together saves us money on a per-product basis. Yes, sustainability can be expensive and it can take longer and it’s harder and newer. But when you look at it holistically, it can actually be good for business as well.

Marquis: You mentioned factors like people like washing less and also accounting for end of use. It seems to be a big challenge to control those items which happen after the product leaves your possession. Can you say more about how you will address those issues?

Kajimura: We really took the cradle-to-grave approach quite seriously because we think we should be accountable for the impact even after it leaves our door. So on customer use, there are a few things that we have control over and then there are a few things where we can do our best to influence them.

In terms of what we have control over, we can create products that require less care such as materials that reduce odor so maybe you don’t have to wash your T-shirt as often. Secondly, we can provide education on how to do this. Some of our apparel hang tags now give recommendations for low-impact care, and we plan to ramp that up. We also can incentivize consumers to switch to renewable energy sources where that’s an option.

We’re really looking at end of life through the perspective of carbon. So we are doing things like increasing the lifetime of our products or minimizing

and recycling scrap and waste, as well as exploring business models for e-commerce to keep our product in use for longer.

Marquis: How does the company plan to drive their pursuit throughout the organization and supply chain—the workers who are important stakeholders and crucial for the company's success?

Kajimura: While the 10 goals are going to be managed by the sustainability team, we have direct authority and accountability over none of them. It's our product teams, material teams, supply chain teams. In creating the goals, we wanted to make sure the whole process was as inclusive and stakeholder based as possible. It started with outreach and interviews to our employees, our investors, our suppliers, our customers and asking them what we should do, what we are doing well, what we could do better. When we reached out to our strategic suppliers, they thanked us for asking because they said changes are usually just pushed on them.

Once we have the strategy created, we have to determine how we're going to hold ourselves accountable. It starts at the highest level with our public benefit corporation status and B Corp status. They help ensure that there's a certain level of employee buy-in because almost all of our employees came to work at Allbirds to work on this mission. They're excited to have part of their day-to-day role be so explicitly tied to sustainability. On the legal side it ensures that the business has a legal mandate to be looking out for all stakeholders, including the environment.

We still have to make the business case and show that pursuing these sustainability goals also helps with margins and financial performance. Our employee bonus is tied to achieving reductions in our carbon target.

We have an internal carbon tax that decisions are evaluated against. We have accountability with the customer through labeling on our products that holds all of us internally accountable as well.

We also hope our existing supply base will be in support of us achieving these goals and we will do everything in our power to make sure that that happens. But also in the future, we'll be looking for vendors that align with our values and goals and those will be the companies we give the business to.

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Christopher Marquis

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ENTREPRENEURS

Everlane Maps Out Its Path To Becoming A Net-Zero Company

Esha Chhabra Contributor
I write about the growing "industry" of social innovation.

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Oct 31, 2021, 09:00pm ED

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Everlane announces new steps towards a net-zero future. EVERLANE

Everlane wants to drive down its emissions and carbon footprint — and with greater transparency.

Using Science Based Targets, an initiative that emphasizes data and standardization in a company's efforts to reduce their carbon footprint, Everlane is moving towards becoming a net zero company by 2050.

"It's a globally recognized initiative designed to encourage change and reduce misinformation," Michael Preysman, Executive Chair and Climate Activist of Everlane, says. "By no measure is carbon measurement a perfect science, but with SBTs we can be simple, clear and consistent."

Through this new initiative, Everlane will take a three tiered approach: scope 1 and 2 focuses on their stores and headquarters with a goal to reduce absolute emissions by 46% by 2030; scope 3 looks at their products, with a target of reducing product emissions by 55% by 2030. By 2050, the company aims to fully reach net zero emissions.

"Everlane's footprint from our own employees and stores is very small in the grand scheme of our total impact," Preysman explains. "We've done tremendous work there to run stores on renewable energy, reduce travel and ensure our team is engaged, but ultimately our focus is on our manufacturing. The pieces we produce through factory partners and with materials from around the world, represent almost our entire impact."

To be exact, the company states that 99% of their total greenhouse gas emissions (GHG) footprint comes from scope 3. In its manufacturing, Everlane earlier committed to transitioning to organic cotton and eliminating virgin plastic from their supply chain. They're getting close to

those goals, Preysman, who served earlier as Everlane's CEO, says: "Today, we have transitioned 90% of apparel materials that contained virgin plastic to recycled materials made from plastic water bottles, fishing nets, and other items destined for the waste stream. The real work and focus now is solving for that final 10% - and Everlane can't do it alone."

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He's referring to the manufacturing and packaging industry, which he argues, has to innovate as well as the brands. That's why some of these targets are further off: because it will require industry-wide change.

When asked why 2050 and not sooner, Preysman says, "2050 is the target set by the Science Based Targets initiative. I agree, it's too far off. At the same time, the technology isn't fully there to make it happen today. If we were to go to net zero, we'd be out of business. We're on a fast pace to make change and I believe we can get there faster, but we want to make sure we keep our promises, so 2050 it is. For now."

Till they get there, Everlane will make much of this data public: consumers can follow on everlane.com.carbon. A full impact report will be published in 2022.

“Consumers deserve to know how the products they buy are impacting the environment. Unfortunately too many companies aren't doing enough,” he adds.

And instead of using terms to define their eco-attributes or achievements, Everlane professes to using data and facts.

“The word sustainability has been completely greenwashed,” Preysman notes. “There are zero regulations around its use and companies are applying it to products that have minimal efforts towards improving our planet. Nothing is sustainable. The definition of sustainability means

'meeting our own needs without compromising the ability of future generations to meet their own needs.' Show me a fashion brand that claims it is sustainable, and I will show you a fashion brand that is not honest. One can be 'more sustainable' but nothing is truly sustainable."

This week as COP26 takes off, the theme of climate change is on everyone's minds, and fashion is one of the topics to be discussed. Preysman argues that while individual actions are needed and welcomed at the household level, they ought to be coupled with transformations in the most polluting industries: "It requires companies and governments to make change, and fast. We have to create a new form of capitalism, one that is lower impact and focused on longevity."

This is Everlane's attempt to be on that path as an apparel brand, and an influencer in the space.

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Competitors Agree: GHG Action Along Supply Chains Is Good for Business

Apr 18, 2018 | Ju e Nash, Ph.D. | OLD C mate Cr s s

Extreme weather events cost the g oba economy a record $320 b on n 2017. ood systems are exper enc ng more shocks than ever before, yet they a so cause about one quarter of g oba greenhouse gas em ss ons. Eager to s ow c mate change and decrease the r own carbon footpr nts, major food compan es are expand ng susta nab ty comm tments to reduce greenhouse gas em ss ons n the r supp y cha ns.

n fact, major brands that compete n the same marketp ace are transcend ng r va r es and ncreas ng y comm tt ng to c mate change m t gat on and env ronmenta susta nab ty by reduc ng the r b ggest source of greenhouse gas em ss ons **Scope 3**.

Scope 3 em ss ons, nd rect em ss ons that occur n a company's va ue cha n, are cha eng ng to est mate and manage. n the food and beverage sector, most Scope 3 em ss ons come from agr cu ture, so compan es often ach eve Scope 3 em ss on reduct ons through mproved agr cu tura pract ces and effic ent management systems.

Here's how s x we known r va s are comm tt ng to reduc ng supp y cha n em ss ons.

Target and Walmart. Two of the most w de y recogn zed brands n the U.S. reta market, **Target** and Wa mart cont nue to grow as they compete for customers n stores and on ne. The breadth and vo ume of the r reta food offer ngs trans ate nto tremendous potent a to nfluence em ss on reduct ons a ong mu t p e supp y cha ns.

- Through the **Science Based Targets** n t at ve, **Walmart** a ms to reduce d rect em ss ons by 18 percent by 2025 (from 2015 eve s), reduc ng em ss ons by 4 m on metr c tons of carbon d ox de equ va ent per year, wh ch s the rough y the same as tak ng about 900,000 cars off the road annua y. But most mportant y, Wa mart s work ng w th supp ers to reduce em ss ons by 1 g gaton (1 b on tons) from the

product on and use of the products t se s between 2015 and 2030; that's the equ va ent of tak ng 214 m on cars off the road for a year. One way Wa mart ntends to ach eve th s target s by work ng w th farmers to use fert zer opt m zat on p ans and best management pract ces on 76 m on comm tted acres of U.S. farm and by 2025.

- Last year, **Target** comm tted to deve op ng sc ence based targets for Scopes 1, 2 and 3 em ss ons to a gn ts corporate goa s w th the **Paris Agreement**. As a first step, Target set goa s to reduce ts abso ute Scope 1 and 2 greenhouse gas em ss ons by 25 percent be ow 2015 eve s by 2025, and to mp ement projects n ts owned brand manufactur ng fac t es that w resu t n the avo dance of 2 m on metr c tons of Scope 3 em ss ons *annually* by 2022. W th n a year, Target w deve op an add t ona Scope 3 goa cover ng agr cu ture (raw mater a s) as one of ts five focus areas for ach ev ng the company's comm tments.

General Mills and Kellogg. U.S. consumers face the r va ry of these two g ants each t me they buy cerea . **Wheaties** or **Special K**? **Cheerios** or **Mini Wheats**? **Lucky Charms** or **Fruit Loops**? As consumers turn the r attent on to breakfast products that are hea thy and env ronment fr end y, both Genera M s and Ke ogg have comm tted to reduce Scope 3 greenhouse gas em ss ons n the r supp y cha ns.

- n 2015, Genera M s set a sc ence based goa to reduce abso ute GHG em ss ons by 28 percent by 2025 across ts fu va ue cha n from farm to andfi , w th a onger term goa to ach eve susta nab e em ss on eve s n ne w th sc ent fic consensus by 2050. To meet th s comm tment, Genera M s s partner ng d rect y w th farmers to measure and reduce the mpact of resource ntens ve ngred ents such as row crops and da ry, work ng to advance pract ca conservat on pract ces and nvest ng n prom s ng ong term so ut ons such as regenerat ve agr cu ture and so hea th.
- Ke ogg set a th rd party approved, sc ence based target to reduce Scope 3 greenhouse em ss ons by 50 percent by 2050 from a 2015 base ne, by act ve y promot ng c mate smart agr cu ture n t at ves w th ts farmers. By 2020, Ke ogg a ms to enab e 500,000 farmers to mp ement more susta nab e farm ng pract ces us ng c mate smart agr cu ture, support 15,000 sma ho der farmers to adopt c mate smart agr cu ture, and deve op programs to he p women farmers and agr cu tura supp y cha n workers.

Mars and Nestlé. Mars and Nest é compete n the confect onery market w th we known choco ate cho ces **M&Ms**, **Snickers** and **Dove** (Mars); and **KitKat**, **Crunch** and **Butterfinger** (Nest é). And the r ong r va ry goes far beyond choco ate; Nest é acqu red the pet food brand **Ralston Purina** n 2001 and Mars acqu red **Royal Canin** n 2002. But these food sector r va s are both eaders n reduc ng Scope 3 em ss ons.

- Mars has p edged to nvest $1 b on over the next few years to fight c mate change. t a ms to contr bute to the 2 degree goa by focus ng on ts agr cu tura supp y cha n, wh ch accounts for 80 percent of ts tota em ss ons. W th ts **Sustainable in a Generation plan** and n t at ves n agr cu ture focus ng on beef, fert zer use, pa m o and r ce, Mars has comm tted to freeze em ss ons unt 2020, ach eve a 27 percent reduct on by 2025, and ach eve a 67 percent reduct on by 2050.
- Nest é, the argest food company n the wor d s nce 2014, has been transparent about how c mate change poses r sks to ts supp y cha n, part cu ar y agr cu tura product on. Hav ng estab shed em ss ons base nes n 2014, Nest é comm tted to an nter m goa to reduce Scope 3 em ss ons 8 percent from 2014 eve s by 2020, and s current y deve op ng a 2050 goa that w be n ne w th the Par s Agreement to m t c mate change to 2°C.

What is changing the competitive dynamics?

C mate change w cont nue to sh ft the ndustry andscape, un t ng compet tors n estab sh ng em ss on reduct on targets and transcend ng norma jockey ng for compet t ve advantage.

Compet ng reta and consumer compan es recogn ze that c mate change poses s gn ficant r sks to the r supp y cha ns. Because quant fy ng and m t gat ng Scope 3 em ss ons requ res carefu ana ys s, deta ed project ons and a w de range of strateg es that can be mp emented by arge and sma farmers and producers around the g obe, r va s can benefit from cooperat on.

R va s' comm tment to reduce Scope 3 em ss ons s creat ng a andscape for shar ng, earn ng and cooperat on to deve op ow em ss on techno og es. **Engage the Chain** ays out some of these opt ons for decreas ng em ss ons n commod t es nc ud ng beef, da ry, soybeans, corn and pa m o .

Yes, these food compan es are compet tors; but they a share a comm tment to reduc ng greenhouse gas em ss ons and an opportun ty to benefit from more stab e food systems.

*At the **Ceres 2018 Conference**, April 24 26 at the Park Plaza Hotel in Boston, **Julie Nash** will moderate a panel on Reducing Greenhouse Gas Emissions in the Food Sector **Matthias Beninger** of Mars Inc , **Katherine Neebe** of Walmart and **Bill Gill** of Smithfield Foods will join the panel to discuss steps they are taking to measure and reduce greenhouse gases in their supply chains*

Read the or g na b og on Susta nab e Brands

Meet The Experts

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