In this report

This year, we reflect on our progress towards our ambitious 2030 goals: to be carbon negative, water positive, and zero waste, while protecting ecosystems. Since we announced our goals in 2020, we have made meaningful progress and we remain resolute in our commitment not only to meeting our climate goals but to empowering others with the technology they need to build a more sustainable future.

Reporting disclosure

A key principle of our work is transparency. This report, published annually, includes our strategy, progress against our goals, and key challenges and trends we see in this work. We also publish our environmental data, which is included in the separate Environmental Data Fact Sheet. Deloitte & Touche LLP performed a review relating to specified information within Section 1 of the Environmental Data Fact Sheet. Read about how we report in Appendix A.

Explore more

→

www.microsoft.com/
corporate-responsibility/
sustainability/progress

Foreword

Accelerating progress to 2030

Brad Smith
Vice Chair and President

Melanie Nakagawa
Chief Sustainability Officer

"Microsoft remains steadfast in our dedication to achieving the company's 2030 environmental sustainability commitments."

As Microsoft continues to grow and innovate, our commitment to environmental sustainability remains a core value. This year, we reflect on our progress towards our ambitious 2030 goals: to be carbon negative, water positive, and zero waste, while protecting ecosystems. As we enter the second half of the decade, Microsoft remains steadfast in our dedication to achieving the company's 2030 environmental sustainability commitments.

Since we announced our goals in 2020, we have made meaningful progress while seeing major changes in both the technology sector and in our understanding of what it will take to meet our goals. We are learning as we go, and we are proactively working to address sustainability challenges and accelerate solutions. We remain resolute in our commitment not only to meeting our climate goals but also to empowering others with the technology they need to build a more sustainable future.

At the heart of our approach is an understanding that sustainability is not simply a set of isolated initiatives, but a fundamental principle that must be integrated into every aspect of our business. Our cross-company Climate Council brings together leaders from across Microsoft to drive innovation, accelerate progress, and identify ways to build sustainability into our operations, products, and partnerships.

We remain pragmatically optimistic because of the promise of new sustainability technologies, innovations in AI, and market solutions that are emerging which can accelerate progress across challenging sectors like steel, concrete, and energy transitions. This annual report is our opportunity to share our learnings to help accelerate these markets, be transparent about our progress, and explore how we can ultimately scale solutions across our value chain.

We are sharing details about the progress made in each of our core commitment areas: carbon negative, water positive, zero waste, and protecting ecosystems. Our report also highlights a number of our breakthrough innovations, drawing insights from the leading edge of climate innovation.
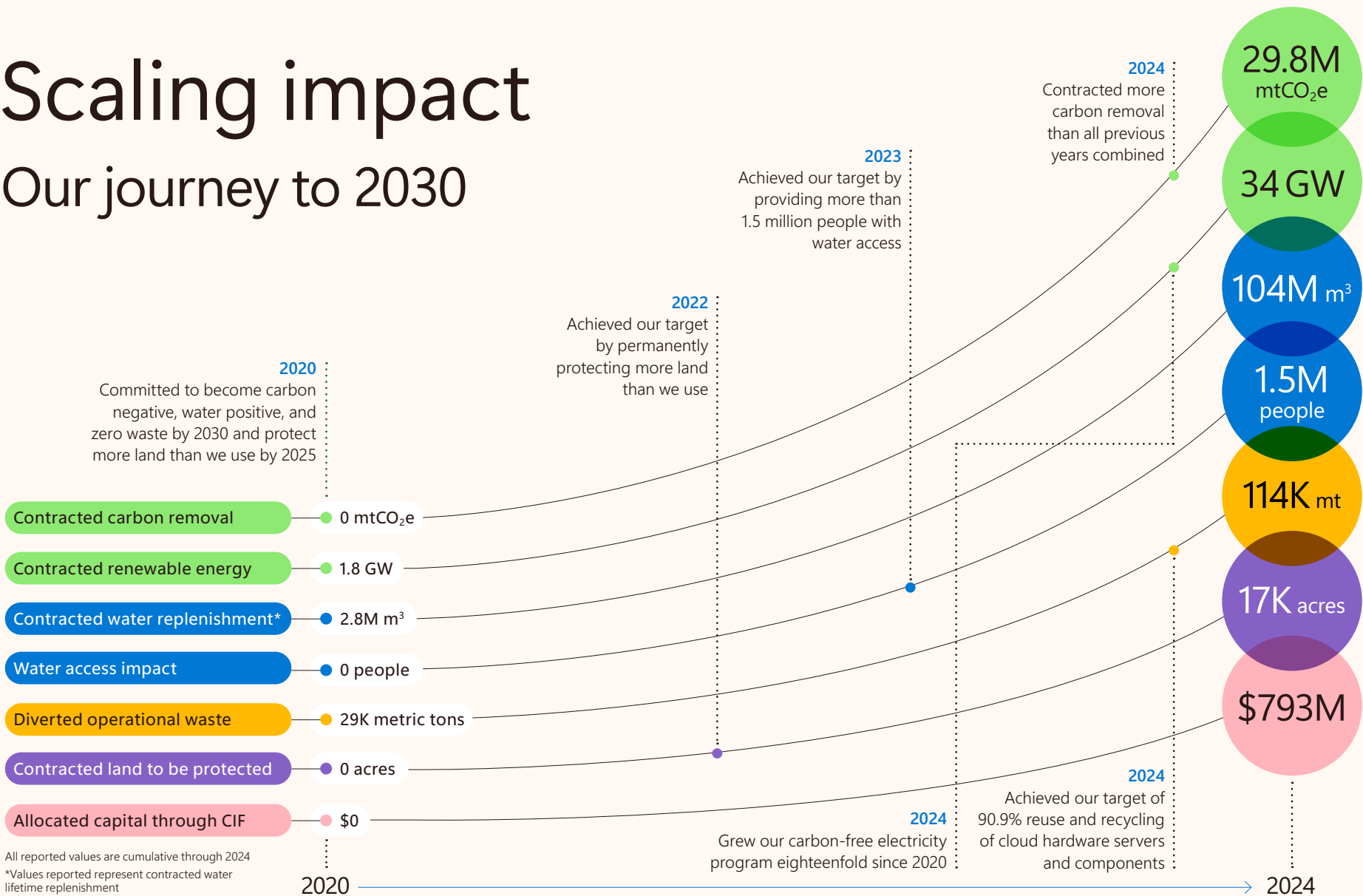
Our progress

In 2020, Microsoft made bold sustainability commitments. At this halfway point to our 2030 goals, we are reaching key milestones and making progress that includes:

- **Ecosystems.** In 2022, we met our target of protecting more land than we use by 2025, a target we've since exceeded by more than 30%. AI innovation is now driving biodiversity conservation through research efforts led by the AI for Good Lab and tools like the Microsoft Planetary Computer.

- **Zero waste.** We exceeded our annual target to divert 75% of construction and demolition waste six years early by diverting 85% of this waste in FY24. We have also surpassed our target for our reuse and recycling rate for servers and components, reaching 90.9%. The Surface Copilot+ PCs now feature our most sustainable packaging design yet. Packaging from over 30,000 server racks was processed through recycling programs in FY24—diverting over 2,500 metric tons of waste from landfills.

- **Water positive.** We met our target to provide more than 1.5 million people with clean water and sanitation solutions. We are also on track to replenish more water than we consume across global operations and improve datacenter water use efficiency, including through a new innovative datacenter design that optimizes AI workloads and consumes zero water for cooling to avoid the use of an estimated 125,000 cubic meters annually per facility.

- **Carbon negative.** To date, we have contracted 34 gigawatts (GW) of carbon-free electricity (CFE) across 24 countries, about an eighteenfold increase since 2020. We have also entered long-term agreements to procure nearly 30 million metric tons of carbon removal since the start of this program.

Scaling impact

Our journey to 2030

2024 — Contracted more carbon removal than all previous years combined

2023 — Achieved our target by providing more than 1.5 million people with water access

2022 — Achieved our target by permanently protecting more land than we use

2020 — Committed to become carbon negative, water positive, and zero waste by 2030 and protect more land than we use by 2025

	2020	2024
Contracted carbon removal	0 mtCO$_2$e	29.8M mtCO$_2$e
Contracted renewable energy	1.8 GW	34 GW
Contracted water replenishment*	2.8M m^3	104M m^3
Water access impact	0 people	1.5M people
Diverted operational waste	29K metric tons	114K mt
Contracted land to be protected	0 acres	17K acres
Allocated capital through CIF	$0	$793M

All reported values are cumulative through 2024
*Values reported represent contracted water lifetime replenishment

2024 — Grew our carbon-free electricity program eighteenfold since 2020

2024 — Achieved our target of 90.9% reuse and recycling of cloud hardware servers and components

2020 → 2024

How are we progressing to 2030?

- Advancing more energy-efficient datacenter design technologies.
- Optimizing power efficiency and expanding carbon-free electricity.
- Collaborating to scale sustainable practices and decarbonize key sectors.

- Launching datacenters that minimize water, energy, and environmental impacts.
- Improving water use efficiency across our global operations.
- Supporting water-positive solutions and innovative technologies.
- Advocating for effective water policy and sustainable water management.

- Reducing the amount of materials we use.
- Replacing materials with more sustainable alternatives.
- Scaling circularity for our products, packaging, and devices.

- Applying AI and data platforms to accelerate ecosystem protection.
- Partnering to support biodiversity and habitat protection.
- Continuing to integrate biodiversity in how we plan, build, and operate.

Overview | Microsoft sustainability | Carbon | Water | Waste | Ecosystems | Customer sustainability | Global sustainability | Appendix

2025 Environmental Sustainability Report   11

Our approach continued

Our targets and progress

Target

Progress

→ In progress   ✓ Achieved

Carbon negative

By 2030, Microsoft will cut its emissions by more than half compared to 2020 and remove more carbon than it emits. By 2050, we will remove the same amount of carbon we have emitted operationally since our founding in 1975.

Reducing direct and indirect emissions

We will reduce our Scope 1 and 2 emissions to near zero against a 2020 baseline by increasing energy efficiency, decarbonization of our operations, and reaching 100% renewable energy by 2025.

Reducing value chain emissions

By 2030, we will reduce our Scope 3 emissions by more than half from a 2020 baseline.

Expanding carbon-free electricity

By 2030, 100% of our electricity consumption will be matched by zero carbon electricity purchases 100% of the time.

Removing the rest of our emissions

By 2030, Microsoft will remove more carbon than it emits. By 2050, we will remove an amount of carbon equivalent to all our historical operational emissions.

→ **Scope 1 and 2 emissions**

Our Scope 1 and 2 emissions decreased by 30% from the 2020 base year. This result is driven by our ongoing work to advance clean energy procurement, green tariff programs, and use of unbundled renewable energy certificates.

→ **Scope 3 emissions**

Our value chain or Scope 3 emissions increased by 26% from our 2020 baseline. Microsoft continues to work to scale carbon-free electricity markets across our supply chain and invest to decarbonize need-to abate sectors, including steel, concrete, and other building materials used in our datacenters, as well as fuels.

→ **Expanding carbon-free electricity with renewable and nuclear energy**

In 2024, we contracted an additional 19 GW of new renewable energy across 16 countries, further diversifying our energy portfolio. Microsoft also expanded into nuclear energy with the signing of our first large-scale nuclear energy PPA with the Crane Clean Energy Center in September 2024. This agreement will enable the restart of an 835-MW nuclear facility in Pennsylvania, retired in 2019, providing a significant supply of new, reliable, CFE to the PJM power grid—a critical energy region for Microsoft's datacenters.

→ **Contracted carbon removal**

In FY24, we contracted an additional 2.8 million metric tons of carbon removal expected to be delivered toward FY30.[3] In addition, we contracted 17.4 million metric tons that we expect to apply toward carbon negative goals after 2030 and/or our 2050 goal.

Our approach continued

Carbon Table 2

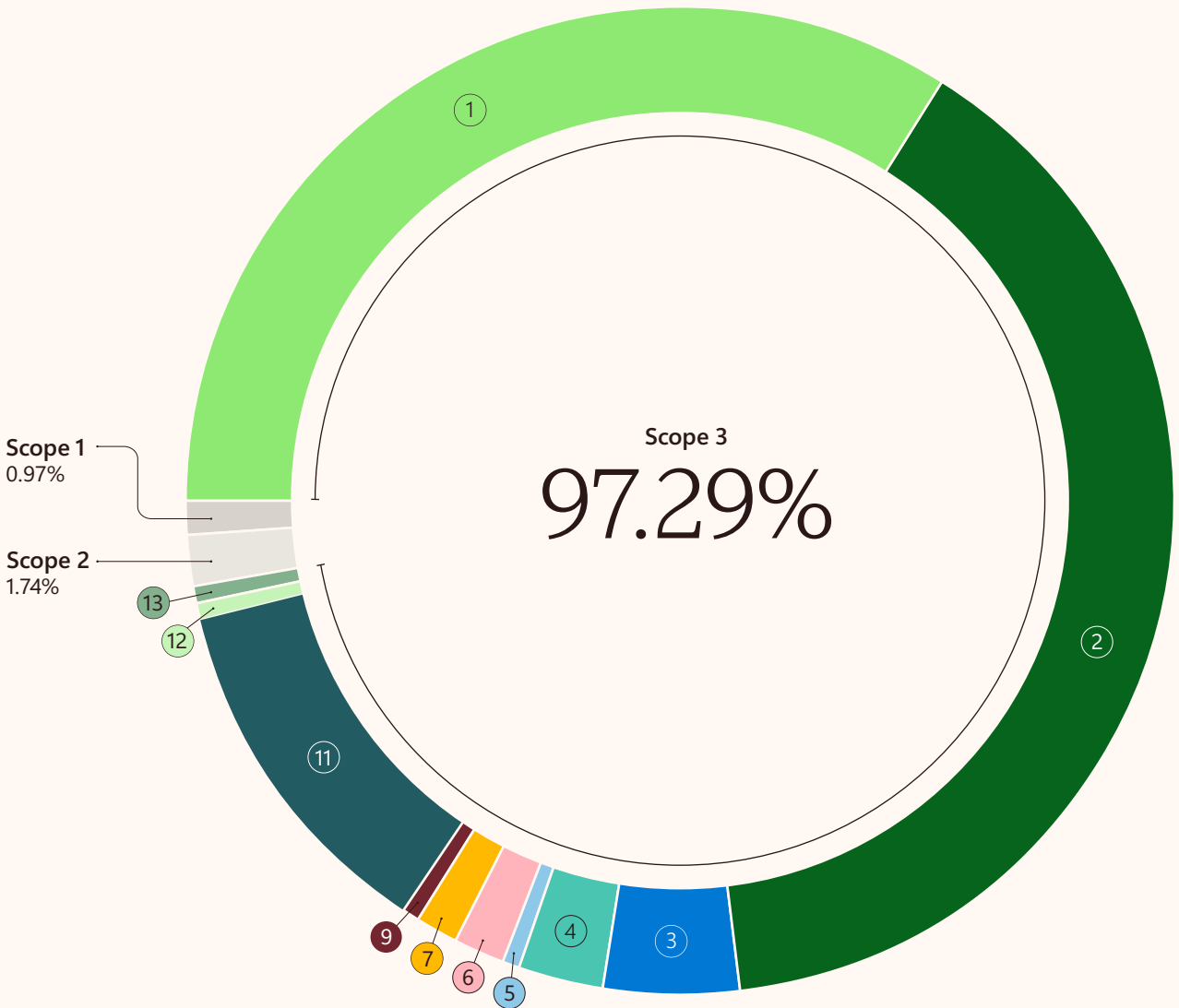# Breaking down our FY24 Scope 3 emissions by source

Microsoft's Scope 3 emissions continue to account for more than 97% of our total emissions. Tackling Scope 3 means decarbonizing industrial processes such as steel, concrete, and other building material production for use in our campus and datacenter construction, as well as jet fuel for business travel and logistics, with the vast majority of these emissions coming from two categories upstream, Purchased Goods and Services (Category 1) and Capital Goods (Category 2), and one downstream, Use of Sold Products (Category 11).

Scope 3 Categories

1	Purchased Goods and Services	34.04%
2	Capital Goods	40.83%
3	Fuel- and Energy-Related Activities (Market-Based)	4.40%
4	Upstream Transportation and Distribution	2.69%
5	Waste Generated in Operations	0.05%
6	Business Travel	1.70%
7	Employee Commuting	1.40%
9	Downstream Transportation and Distribution	0.29%
11	Use of Sold Products	11.83%
12	End-of-Life Treatment of Sold Products	0.02%
13	Downstream Leased Assets	0.04%

Find out more in our Data Fact Sheet

Scope 2 and 3 emissions included in this chart are market-based.
Scope 3 emissions are management's criteria values.

Scope 1
0.97%

Scope 2
1.74%

Scope 3
97.29%

Availability continued

In FY24, Microsoft entered long-term agreements to procure more carbon removal than all previous years combined—22 million metric tons. That's the equivalent of taking 4 million cars off the road for a year.[7] Our diversified portfolio spans multiple pathways, including: afforestation, reforestation, and revegetation (ARR); bioenergy with carbon capture and storage (BECCS); and DAC. Eight of the projects signed last year will start delivering over 100,000 metric tons annually by 2030, supporting our carbon negative milestone year.

Building first-of-a-kind technology and planting millions of trees each present common and distinct challenges, and we seek to drive development of projects that can come online quickly to deliver at scale. Key examples include:

- **Stockholm Exergi (BECCS)**—a 10-year agreement to purchase over 3 million metric tons of carbon removal from the planned BECCS facility in Vartan, Sweden. Using sustainably sourced forest biomass, Stockholm Exergi captures carbon dioxide from flue gas and stores it for thousands of years under strict measurement, monitoring, reporting, and verification (MMRV) standards.

- **re.green (ARR)**—a 15-year agreement supporting the planting of over 10 million seedlings across 16,000 hectares in Brazil, encouraging natural regeneration across the Atlantic and Amazon Forests. Microsoft will purchase 3 million metric tons of carbon removal, with all restoration activities using native species and building on the foundational work of previous scientific studies in the region.
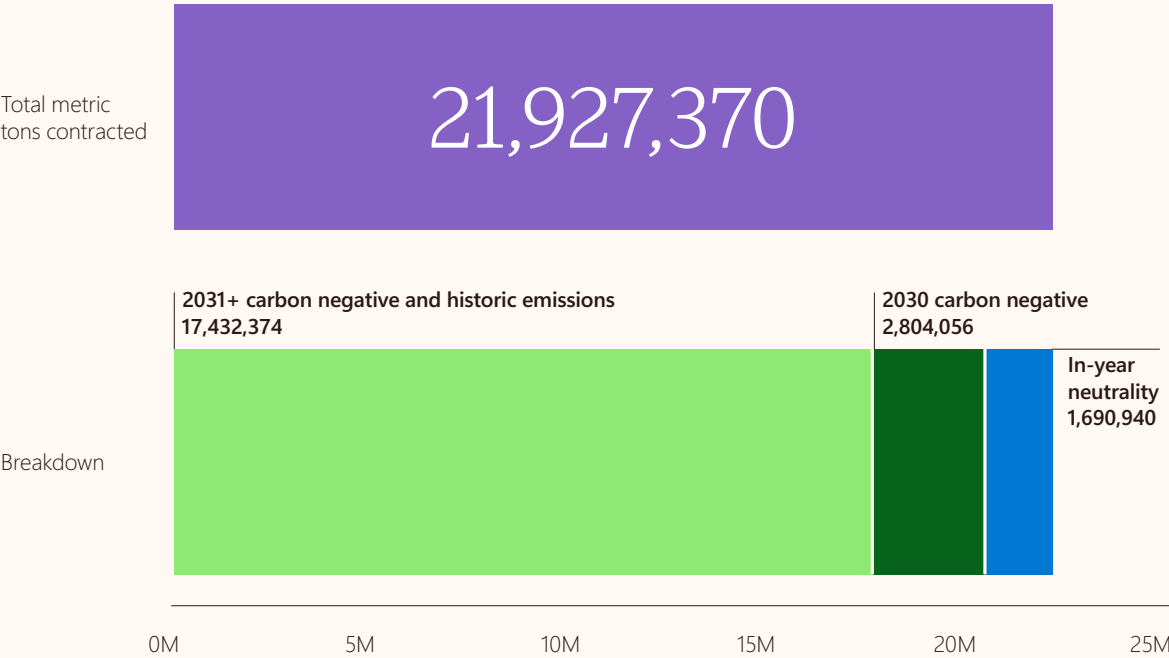
Strengthening carbon removal markets

Microsoft is committed to building the markets we buy from, translating leading science into commercial innovation and regularly updating our Criteria for High-Quality Carbon Dioxide Removal. In FY24, thousands of hours of third-party due diligence for our portfolio further informed which project design and operational characteristics are high integrity.

In Panama, Microsoft collaborated with Ponterra to structure an innovative offtake agreement that aligns buyers, developers, and financiers early in the project life cycle. By ensuring clear investment pathways from the outset, this agreement created confidence among stakeholders and accelerated the development of impactful carbon removal projects.

Carbon Table 3

Tracking progress toward carbon negative by 2030

In FY24, we contracted nearly 22 million metric tons of carbon removals to be delivered at various points over the next 15+ years. This includes 2.8 million metric tons that we expect to be delivered in our FY30 goal year for carbon negativity and many more tons toward carbon negativity for FY31 and beyond.

Total metric tons contracted: **21,927,370**

Breakdown:
- 2031+ carbon negative and historic emissions **17,432,374**
- 2030 carbon negative **2,804,056**
- In-year neutrality **1,690,940**

(Axis: 0M, 5M, 10M, 15M, 20M, 25M)

Find out more in our Data Fact Sheet

Getting to water positive

Microsoft is leading efforts to develop and scale the water replenishment market while driving innovation in water solutions.

Read more about our learnings on the journey to water positive in our white paper.

Water is essential to life and an important part of our sustainability journey. In 2020, we set the ambitious commitment of becoming water positive by 2030. To achieve this commitment, we are taking action to reduce water use, replenish water in critical regions, improve global water access and sanitation, drive innovation in water management, and advocate for effective water policy. Our approach is designed to mitigate water stress, safeguard critical watersheds, and support global resilience.

Our approach

As we continue our work to be water positive by 2030, we are focusing on progress in three core areas:

- **Increasing efficiency.** Microsoft's newest datacenters feature advanced direct-to-chip liquid cooling systems that recycle water in a closed-loop design, eliminating the need for evaporation.

By adopting these innovations, each datacenter saves over 125,000 cubic meters of water annually, reducing freshwater reliance even as AI workloads drive increased compute resource needs.

- **Reducing dependence on freshwater.** As an ongoing effort across our global operations, we are continually investing in improving the design and operation of our datacenters to minimize water use, including implementing water recycling projects and rainwater harvesting.

- **Increasing restoration and reuse.** We continue to fund projects that restore, reuse, and reduce freshwater consumption in water-stressed locations where we operate. Across approximately 40 priority locations worldwide, we invest in solutions such as rainwater harvesting, groundwater replenishment, and irrigation modernization, delivering measurable social and environmental benefits while addressing local water challenges.

As we progress, our water positive strategy is evolving—integrating new ideas, technologies, and approaches to address global water challenges. Microsoft is leading efforts to develop and scale the water replenishment market while driving innovation in water solutions. A key challenge since setting our replenishment target in 2020 has been the limited availability of initiatives ready for investment and implementation in priority locations. To overcome this, we are building and scaling replenishment efforts by supporting projects through non-governmental organizations (NGOs) and pioneering first-of-their-kind initiatives with private sector partners. As of 2024, private sector projects accounted for 17% of our replenishment portfolio, reflecting our resolve to foster a diverse, collaborative ecosystem to achieve water sustainability.

Today, four principles guide our replenishment work:

1. Prioritize investments in areas with high water stress and high operational water consumption.

2. Don't just count drops; invest in locally relevant projects that offer co-benefits.

3. Keep community needs and impact at the forefront.

4. Focus on innovation with an aim to build project supply and scale.

Overview | Microsoft sustainability | Carbon | Water | Waste | Ecosystems | Customer sustainability | Global sustainability | Appendix

2025 Environmental Sustainability Report ☰ 28

Our approach continued

Our targets and progress

Target

Progress → In progress   ✓ Achieved

Water positive

As we work to be water positive, we continue to scale our efforts to reduce water use across our operations, while increasing procurement from alternative sources and investing in innovative replenishment and access projects.

Replenishing more water than we use by 2030

We will replenish more water than we consume across our global operations, with a focus on water-stressed regions where we work.

Increasing access to water

We will provide 1.5 million people with access to clean water and sanitation services by 2030.

Reducing our water intensity

We will make progress against our target to improve water use efficiency by 40% across our global, owned datacenter operations by 2030, from a 2022 baseline.

→ **Over 100 million cubic meters of water replenishment volume**

In FY24, we increased the number of projects we have funded by over 50%, funding 27 replenishment projects that are estimated to provide more than 50 million cubic meters in volumetric water benefit over the lifetime of these projects. Since the inception of this program, projects contracted are estimated to provide more than 100 million cubic meters of replenishment volume over their lifetime.

✓ **Over 1.5 million people with water access**

In FY24, we added seven new projects, bringing our portfolio to 13 initiatives that when fully implemented will serve over 1.6 million people across Brazil, India, Indonesia, Mexico, Chile, the United States, Malaysia, Kenya, and Nigeria.

→ **Improving water efficiency**

Since our baseline year of 2022, operational datacenters have achieved an 18% reduction in water intensity progressing towards our 2030 target to reduce water use intensity by 40%.

Advancing water replenishment

Delivering support in an emerging field

Water replenishment encompasses a broad range of interventions aimed at improving watershed health. These activities focus on enhancing water quantity and quality through measures such as reducing water use, recharging local aquifers, restoring aquatic ecosystems, and conserving critical land resources. By driving these efforts, we aim to not only meet our own environmental sustainability commitments but also catalyze progress across industries and communities worldwide.

Water replenishment remains an emerging field with limited historical guidance and data to inform corporate investment strategies. This nascence translates to a limited supply of projects and a reliance on new or early-stage organizations entering the space. As corporate demand for replenishment investments grows, there is a pressing need to build supply and scale efforts.
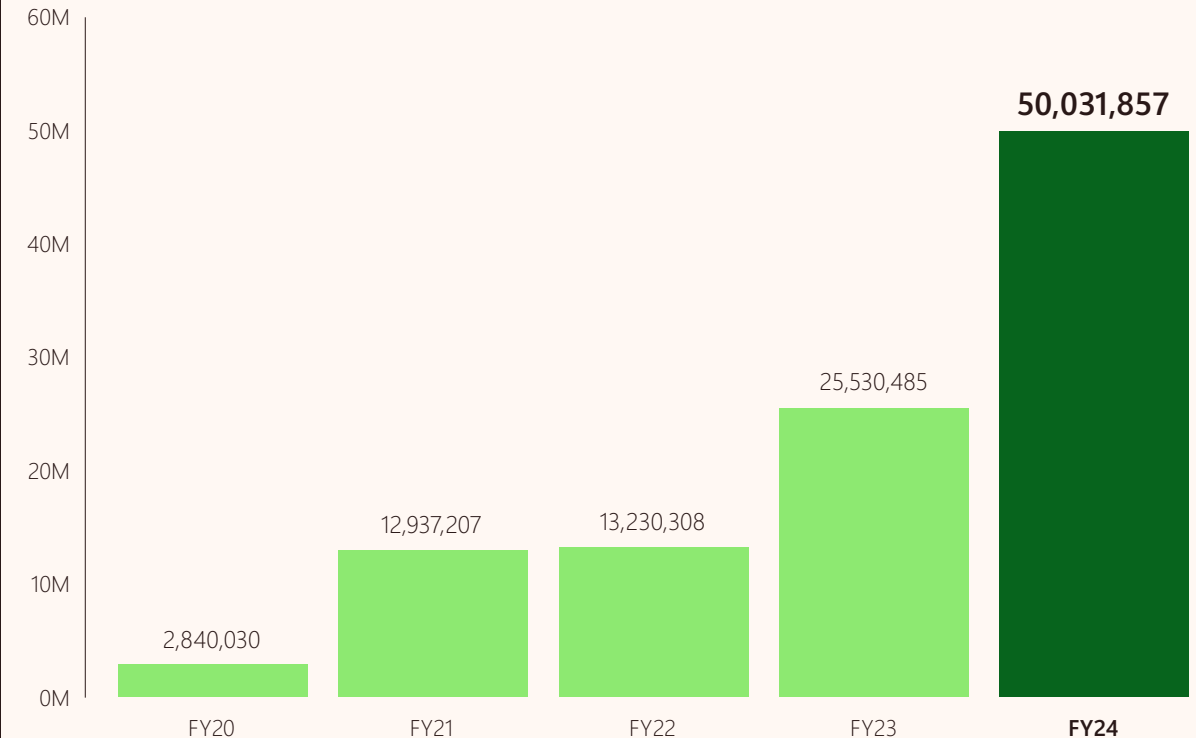
To address this gap, Microsoft is working to empower new project implementers and help scale the water replenishment market through collaborative partnerships with NGOs and private sector entities. While implementers may not initially specialize in replenishment, their expertise in water management or related solutions can be adapted to align with replenishment objectives, driving innovation and creating scalable models for success.

Water Table 1

Replenishing more water than we consume

Since the program's inception, we have contracted 76 replenishment programs in water-stressed basins, which are expected to deliver more than 100 million cubic meters of replenishment volume over their lifetime.

Total contracted volume water replenishment
Water m³

Fiscal Year	Water m³
FY20	2,840,030
FY21	12,937,207
FY22	13,230,308
FY23	25,530,485
FY24	50,031,857

Find out more in our Data Fact Sheet

All historic values reported have been adjusted to exclude projects that are considered no longer viable. Projects become no longer viable due to a range of different factors such as unexpected changes in the conditions of the project site.

Advancing water replenishment continued

Building a robust and effective portfolio

The outcomes of projects tied to natural systems can be inherently unpredictable. Volumetric water benefits, for instance, may fluctuate due to changing weather patterns—rainwater harvesting projects, for example, might yield less water than anticipated during droughts or unexpectedly exceed expectations in periods of heavy rainfall. To address these challenges, Microsoft has implemented a proactive and strategic approach for our water portfolio:

1. **Build a diverse portfolio**. We mitigate risk by diversifying across a variety of locations, project types, and partners, ensuring resilience against variability.

2. **Invest early**. By building a robust portfolio early, we create the runway needed to achieve our replenishment target by 2030.

3. **Use data-driven forecasts**. We collaborate with partners to use conservative, realistic estimates in forecasting project outcomes.

4. **Evaluate progress continuously**. Annual progress reports from partners help us verify project health, address challenges, and support timely resolutions.

[Learn more about our water access and replenishment projects here](#)

In FY24, we significantly expanded our replenishment efforts, contracting 27 new projects and increasing our total portfolio by more than 50% to 76 projects. This represents a cumulative investment of more than $34 million, with 62% of these projects using nature-based solutions and 47% providing critical biodiversity co-benefits. For example, we are supporting a project with Conservation International to conserve and restore the Lake Xochimilco wetlands in Mexico City, Mexico. This wetland is home to 5% of Mexico's described species, including the critically endangered axolotl salamander.

+50%

We increased our water replenishment portfolio by more than 50% in FY24.

Water Table 2

Replenishment activities

Our water replenishment portfolio works to improve watershed health through a broad range of activities that are not limited to nature-based solutions. The following table shows replenishment activities by percentage of our total portfolio which enable us to not only meet our own environmental sustainability commitments but also catalyze progress for people and nature.
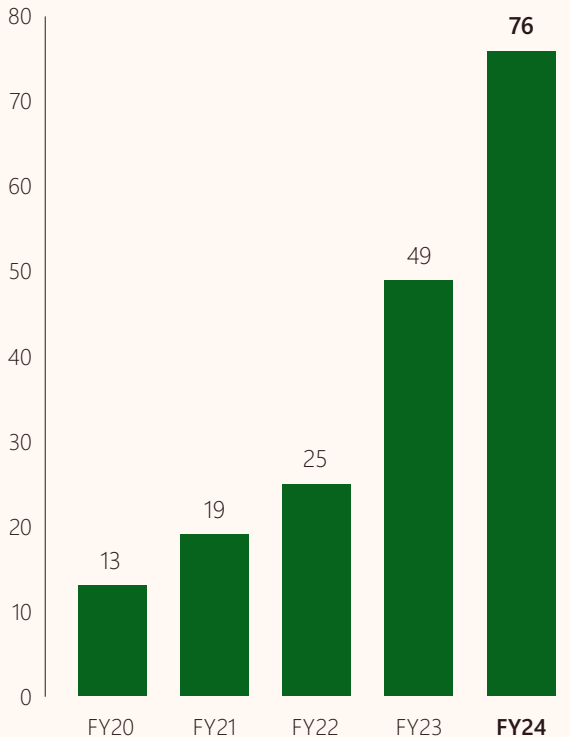
Activity	%
Wetland restoration and creation	29%
Agricultural water demand reduction measures	17%
Land cover restoration	9%
Operational efficiency measures	8%
Leak repair	8%
Rainwater harvesting	7%
Legal transactions to keep water in-stream	4%
Agricultural best management practices	4%
Water reuse	3%
Constructed wetland treatment systems	3%
Land conservation	3%
In-stream barrier removal	3%
Floodplain inundation / reestablish hydrologic connection	3%
New water supply for crop irrigation	1%

Water Table 3

Replenishment projects

Our project portfolio continues to grow. We are supporting 76 water replenishment projects—working with partners, communities, and innovators to drive lasting impact in water-stressed areas where we operate.

Cumulative total of projects contracted

FY	Projects
FY20	13
FY21	19
FY22	25
FY23	49
FY24	76

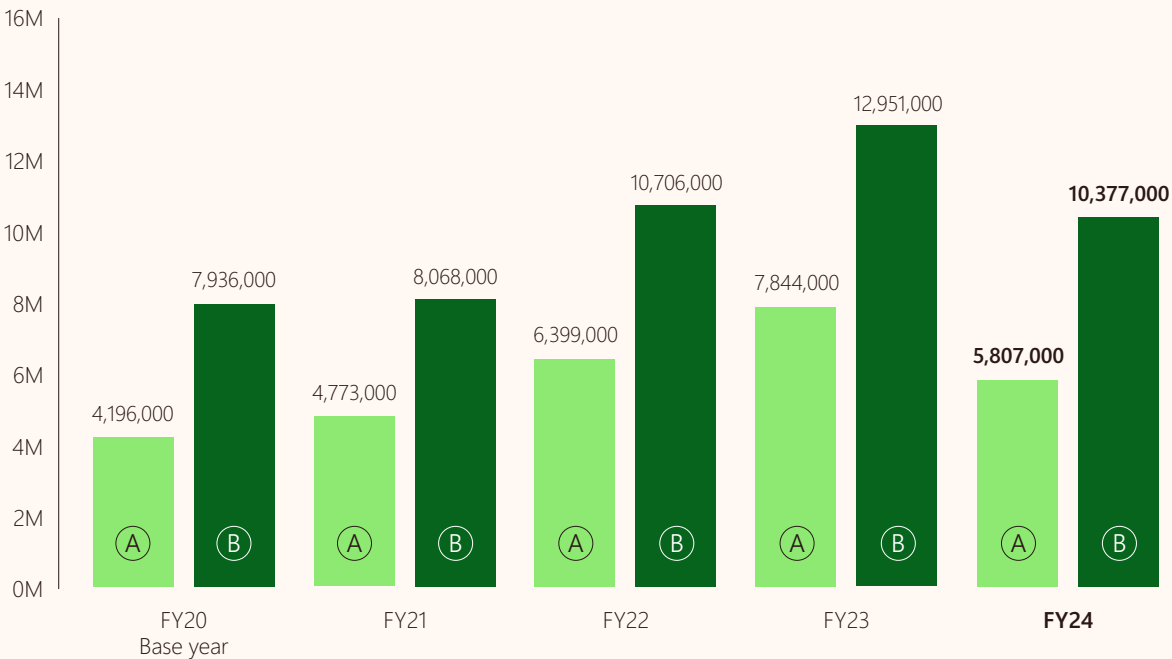**Improving efficiency and reducing water use** continued

Water Table 5

Measuring our annual water consumption informs our replenishment targets

Our water consumption and withdrawal trend has shown an increase over the years, in alignment with our business growth. The consumption data from our operations informs the amount of water we need to replenish.

Total water consumption and withdrawal
Water m³

Ⓐ Consumed   Ⓑ Withdrawn

	FY20 Base year	FY21	FY22	FY23	FY24
Ⓐ Consumed	4,196,000	4,773,000	6,399,000	7,844,000	5,807,000
Ⓑ Withdrawn	7,936,000	8,068,000	10,706,000	12,951,000	10,377,000

We use primary data to calculate water withdrawal and consumption volumes. We use estimates where primary data is not available. Starting in FY24, reported values incorporate an updated approach based on water use efficiency metrics to estimate how much we withdraw and consume for datacenter locations where data actuals are not available, as outlined in the methodology section of our Data Fact Sheet. Prior years were not adjusted to reflect this change due to data availability limitations. Find out more in our Data Fact Sheet.

Water efficiency across campuses

Efforts to improve water efficiency extend beyond our datacenters to our campuses, where a range of water-saving projects are underway. These include installing low-flow fixtures, dual-flush toilets, and smart irrigation systems; capturing rainwater; and reusing treated water. At our Beijing, China campus, collaborative conservation efforts with dining services partners—including purchasing fresh products to reduce water needed for thawing frozen goods—led to a 15% reduction in kitchen water use in 2024. Similarly, our India campuses are treating water to a tertiary level, enabling reuse for restrooms, landscaping, and chiller equipment.

At sites in water-constrained regions, Microsoft is also exploring new ways to source water without placing additional strain on local supply. In 2024, we installed an air-to-water system at our Hyderabad, India, campus. Powered by sunlight, the system extracts water vapor from the air and converts it into clean, drinkable water. With plans to install approximately 300 panels, the campus anticipates generating over 1,600 liters of water per day.

Our approach continued

Our targets and progress

Target

Progress   → In progress   ✓ Achieved

Zero waste

As we work to achieve zero waste, we are taking an increasingly circular approach to materials management to reduce waste and carbon emissions.

Driving to zero waste building and operations

We will achieve 90% diversion of operational waste at owned datacenters and campuses, and 75% diversion for all construction and demolition projects, by 2030.

Increasing reuse and recycling of servers and components

By 2025, 90% of servers and components for all cloud hardware will be reused and recycled with support from our Circular Centers.

Sustainable product packaging

By the end of 2025, we plan to eliminate single-use plastics in all Microsoft primary product packaging. Additionally, by 2030, we aim to design all Microsoft product packaging to be 100% recyclable in OECD countries.

Increasing circularity of our products

We are focused on increasing use of recycled content, improving device repairability, and improving data quality of device recycling.

Innovating cloud packaging

We are focused on advancing sustainable cloud packaging to minimize waste.

→ **25,603 metric tons of operational waste diverted**

In FY24, we diverted 25,603 metric tons, or 88.1%, of operational waste from landfills and incinerators across our owned datacenters and campuses.

✓ **85.3% construction and demolition waste.**

We also diverted 85.3% construction and demolition waste, achieving our target early.

✓ **90.9% reuse and recycling**

Our reuse and recycle rates of servers and components across all cloud hardware reached 90.9% in FY24, achieving our annual target a year early.

→ **94.8% in product packaging recyclability**

On our way to eliminating single-use plastics in Microsoft product packaging by the end of 2025, we achieved a usage rate of 4.0% single-use plastics across Microsoft's product packaging portfolio in FY24. In the same year, we used 53.8% recycled content in our product packaging and achieved a packaging recyclability rate of 94.8%.

→ **Designing in recycled content and revolutionizing repairability**

Our Surface Copilot+ PCs now feature 100% recycled aluminum alloy in the enclosures, and 100% recycled rare earth metals in magnets.[8] Our new devices are some of the most repairable laptops and tablets in the industry, hosting at least 11 replacement components.[9] The new Surface Pro 11th Edition and Laptop 7th Edition achieved an 8/10 repairability score from iFixit.

→ **Increasing circularity of cloud packaging**

In 2024, we began to reduce the hard-to-recycle plastic-based expanded polyethylene (EPE) foam in cloud hardware packaging, replacing it with more recyclable paper and pulp alternatives. We also diverted over 2,500 metric tons of packaging waste from landfills.

Tracking zero waste: Building a data-driven foundation for accountability and impact

The progress we've made toward our zero waste commitments is underpinned by robust methodologies and data governance processes designed to ensure transparency and accountability.

This journey began in 2020 with an enterprise-wide waste baselining initiative to establish a clear starting point for our zero waste commitment. From there, we developed methodologies to guide our collection and extrapolation efforts, collaborating with standards organizations to define diversion and prevention calculations to guide our reporting.
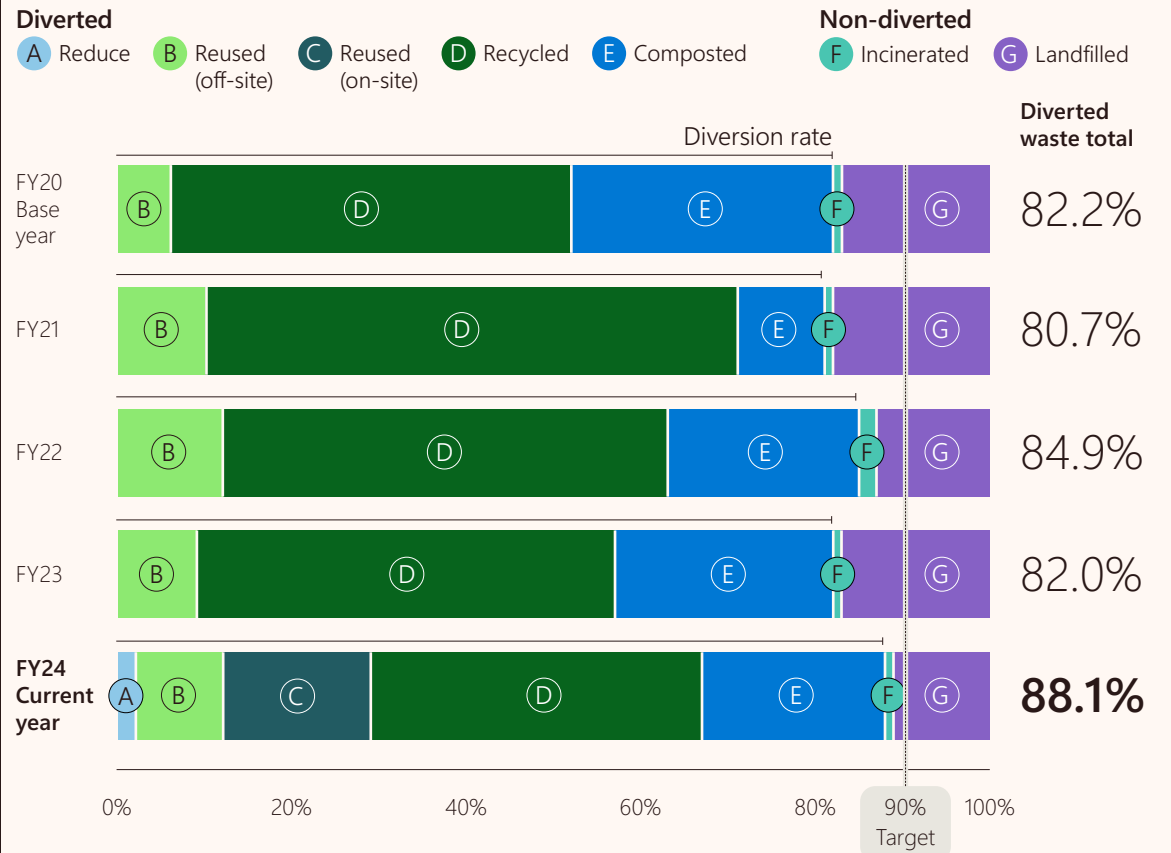
As our data capabilities expanded, including more granular insights from recycler utilization rates, we evolved our processes to better capture, track, and report on the impact of our program. These refinements enable us to identify geographical and material-specific opportunities for intervention, ensuring our strategies remain focused and effective.

Our dedication to data quality drives greater visibility into waste streams, empowering us to prioritize waste prevention efforts and enhance the integrity of our zero waste program. By continually refining our methodologies, we uphold the spirit of zero waste while laying the groundwork for long-term sustainability.

Waste Table 1

Diverting operational waste from landfills and incinerators

In FY24 we diverted approximately 26,000 metric tons of waste from being landfilled or incinerated across our owned datacenters and campuses.

Diverted
A Reduce | B Reused (off-site) | C Reused (on-site) | D Recycled | E Composted

Non-diverted
F Incinerated | G Landfilled

Year	Diversion rate	Diverted waste total
FY20 Base year	B D E F G	82.2%
FY21	B D E F G	80.7%
FY22	B D E F G	84.9%
FY23	B D E F G	82.0%
FY24 Current year	A B C D E F G	**88.1%**

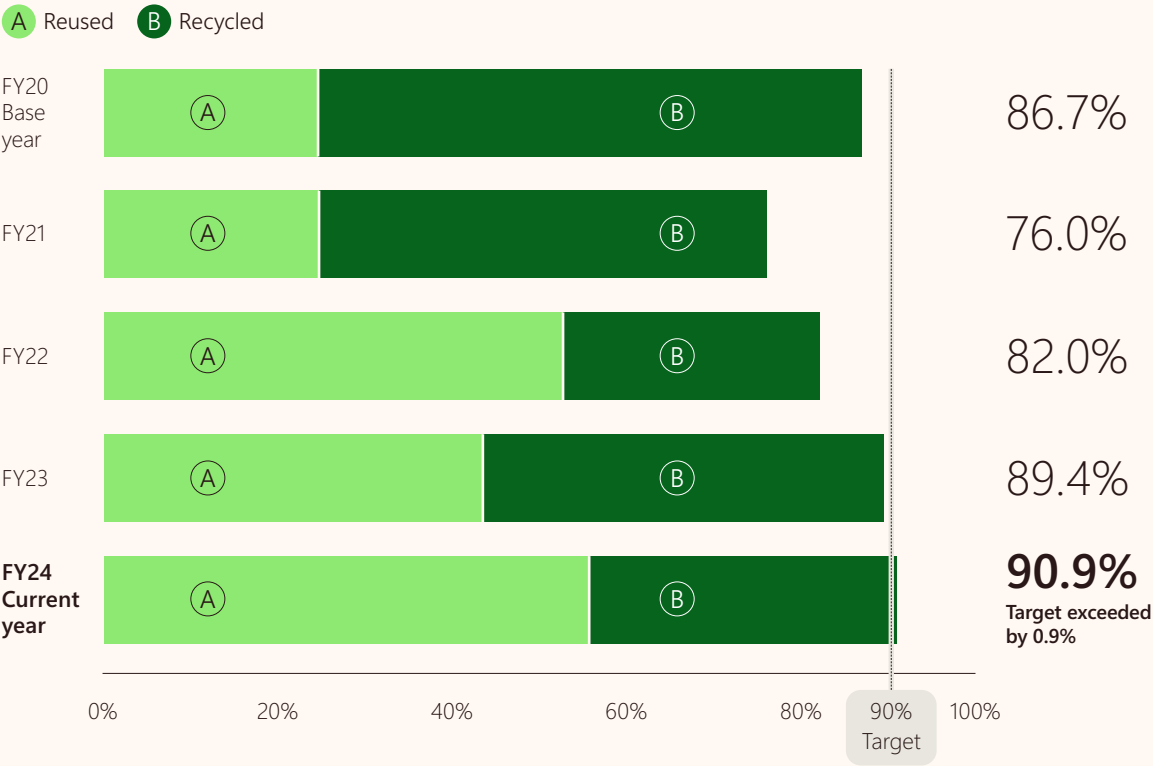0% | 20% | 40% | 60% | 80% | 90% Target | 100%

Starting in FY24, the reported values now include the weight of reduction and on-site reuse in addition to off-site reuse which was reported in prior years. The weight associated to on-site reuse and reduction represents the impact from our waste prevention activities as disclosed and defined in the Data Fact Sheet. With respect to this waste diversion target, the inclusion of on-site reuse and reduction directly effects the diversion percentage alongside our off-site reuse, recycling, and compost activities. Find out more in our Data Fact Sheet.

Reducing waste at our campuses and datacenters continued

Waste Table 2

Improving reuse and recycling of servers and components for all cloud hardware

In FY24 Microsoft increased reuse and recycling of servers and components to 90.9%, exceeding the 90% target.

Ⓐ Reused   Ⓑ Recycled

FY20 Base year	Ⓐ Ⓑ	86.7%
FY21	Ⓐ Ⓑ	76.0%
FY22	Ⓐ Ⓑ	82.0%
FY23	Ⓐ Ⓑ	89.4%
FY24 Current year	Ⓐ Ⓑ	**90.9%** Target exceeded by 0.9%

0%   20%   40%   60%   80%   90% Target   100%

Find out more in our Data Fact Sheet

We're proud to partner with organizations in the communities where we operate and work together to drive a circular economy approach locally. In FY24, we worked to improve donation pathways for our datacenters. This resulted in over 1.5 metric tons of donated items including furniture, office supplies, laptops, ladders, and fan motor control equipment. Donation recipients include a food bank in Texas, a community college in Virginia, and a primary school in Dublin, Ireland.

Recognizing that employee participation can accelerate our zero waste impact, we are engaging our workforce to play an active role in these efforts. In 2024, we introduced an online training course covering global waste issues, circular economy principles, and ways employees can drive impact in their day-to-day roles. We also coordinated local zero waste engagement events that reached hundreds of datacenter employees, fostering a culture of sustainability across datacenter operations.

PROGRESS TOWARDS TARGETS

LinkedIn

Advancing waste reduction

LinkedIn contributed to our zero waste achievements by advancing waste reduction across its offices and datacenters. In 2024, LinkedIn's San Francisco office earned UL Gold Zero Waste Certification by diverting over 97% of operational waste. Other sites engaged in partnerships to upcycle or donate 46.7 metric tons of carpet and repurpose over 600 pieces of furniture, which diverted 11.3 metric tons of waste and avoided 29.6 metric tons of carbon emissions.

Advancing circular cloud hardware and packaging continued

Increasing circularity of cloud packaging

In addition to advancing hardware circularity, Microsoft is dedicated to reducing the environmental impact of packaging. In 2024, we began to reduce the hard-to-recycle plastic-based expanded polyethylene (EPE) foam in cloud hardware packaging, replacing it with more sustainable paper and pulp alternatives. These efforts are part of a broader strategy that includes developing a multinational recycling program for datacenter server packaging waste and transforming server rack packaging through our Sustainable Rack Packaging System.

Last year, packaging from over 30,000 server racks was processed through our recycling program, diverting over 2,500 metric tons of waste from landfills. The program has now expanded to include packaging used to transport the new generations of AI server racks, and additional datacenter geographies.

Understanding and transforming the packaging landscape

With over 150 OEMs supporting our fleet of datacenters, improving packaging sustainability requires systemic change across the supply chain. In 2024, the Sustainable Packaging Supplier Engagement Program was launched, working with high-volume suppliers, including the major hubs who ship IT hardware to our datacenters, to ensure packaging aligns with environmental sustainability goals from the earliest stages of hardware design.
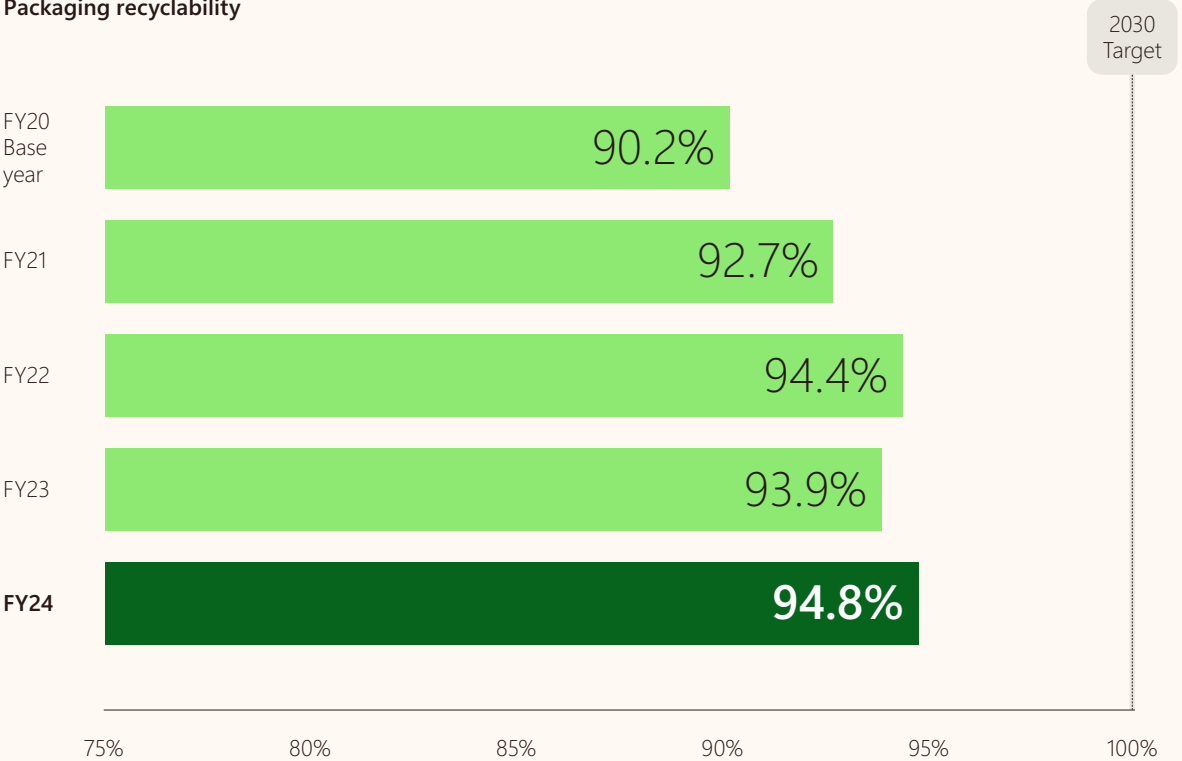
Looking ahead, efforts will focus on addressing difficult-to-eliminate packaging materials such as rigid plastic trays and soft plastic foams, while continuing to develop technologies to track and transform packaging programs more effectively. Pilots are already underway with our systems integrators, who construct our racks, to provide circular applications for plastic trays. These initiatives reflect an ongoing commitment to advancing circular solutions for both hardware and packaging.

Waste Table 3

Designing our product packaging for circularity

In FY24 we achieved a rate of 94.8% recyclability across all Microsoft product packaging.

Packaging recyclability

2030 Target

FY20 Base year	90.2%
FY21	92.7%
FY22	94.4%
FY23	93.9%
FY24	**94.8%**

75%   80%   85%   90%   95%   100%

Find out more in our Data Fact Sheet

Protecting ecosystems

Land protection

>30%

In 2022, we met our target of protecting more land than we use by 2025, a target we've since exceeded by more than 30%.

Healthy ecosystems are essential for life on Earth. They provide clean air, water, food, and countless other benefits that sustain communities, economies, and ecosystems globally. Yet these ecosystems face mounting threats from climate change and biodiversity loss, and require urgent and coordinated action.

Our approach

Microsoft recognizes the interconnectedness of ecosystem health with all aspects of sustainability. From supporting pollinator habitats at our campuses to integrating biodiversity into datacenter designs, we are embedding ecological considerations into our operations. Through partnerships with conservation organizations and the application of innovative technologies, we are helping to monitor, protect, and restore ecosystems, driving meaningful environmental impact at both local and global scales.

Find out more in our Data Fact Sheet

Total land protected
15,849 acres

Microsoft land use footprint
11,900 acres

Total land contracted to be protected
17,439 acres

Meeting our target of protecting more land than we use by 2025

As of FY24, Microsoft has contracted to protect 17,439 acres of land, and 15,849 acres were designated as permanently protected.

By 2025, we'll protect more land than we use.

Our target
Taking responsibility for our land footprint

We will take responsibility for the ecosystem impacts of our direct operations by protecting more land than we use by 2025.

Our progress

✅ **15,849 acres permanently protected**

We have exceeded our land protection target of 11,900 by more than 30%.

Customer sustainability

Accelerating progress through technology

Microsoft is committed to providing innovative technology to help build a more sustainable world. We're working to empower our customers and partners across industries with Microsoft for Sustainability, by continuously innovating AI solutions that help accelerate climate technologies. We're also advancing greener software and reducing carbon intensity to improve device sustainability, and helping organizations to measure and manage the health of the planet's natural ecosystems with the Microsoft Planetary Computer.

$\rightarrow$

Shaping policy for a sustainable future: Microsoft's global advocacy for change

We believe that Microsoft has an important role to play in advocating for effective and innovative sustainability policy. When we announced our commitment in 2020 to become carbon negative by 2030, we also pledged to use our voice on public policy issues to help advance global decarbonization efforts. Since then, we've developed policy priorities to guide government engagements around our environmental sustainability commitments, published briefs to outline key carbon, electricity, carbon-free power, and AI policy principles, and successfully advocated to support Microsoft's goals.

As part of this effort, we have informed, endorsed, and supported the implementation of landmark policies to expand carbon-free electricity, scale markets for carbon removal and low carbon materials, and enable robust interoperable reporting. These policies include:

- In the United States, the implementation of the Inflation Reduction Act and Bipartisan Infrastructure Law, California Carbon Accounting laws, and regulatory efforts to improve interconnection to the grid and transmission expansion.

- In the European Union, CSRD, updates to the Renewable Energy Directive and the Energy Efficiency Directive, and the Carbon Removal Certification Framework.

As Microsoft's business grows, we are strengthening our policy engagement in the United States and European Union as well as with governments across Asia, Latin America, and Africa to expand carbon-free electricity and grid infrastructure to support Microsoft and our suppliers.

We've identified three primary policy opportunities to unlock carbon-free electricity supply across operating markets:

1. Expand and reform grid planning, interconnections, and infrastructure development.

2. Unlock carbon-free electricity generation development and corporate procurement pathways.

3. Accelerate new carbon-free electricity technologies.

These markets vary greatly depending on the size of the grid, availability of carbon-free electricity, and relevant regulatory frameworks.

To navigate these differences, we embed three foundational principles in our policy advocacy:

1. Driving tangible near-term progress on the pathway to global net-zero emissions by 2030.

2. Approaching policy and the markets where we operate with a flexible, rather than a one-size-fits-all, strategy.

3. Using the importance of digital technology and AI to enable a resilient, reliable, and low-carbon grid, encourage innovation, promote transparency, and enable comparability.