eunomia

Impact Report

January - December 2024

Table of contents

Welcome	3
Our mission	5
Our values	6
Our timeline	7
Purpose beyond profit	8
Environmental impact	9
Social impact	12
Sabbatical stories	13
Community impact	14
Our global reach	16
Circular economy	17
Natural economy	25
Low carbon economy	33
Thank you	38

Welcome

Joe Papineschi
Chairperson of Eunomia Research & Consulting

I'm Joe Papineschi, co-founder and Chair at Eunomia. My colleagues and I are passionate about building harmony between people and the planet through our work. Our impact report provides a snapshot of the journey we took in 2024, a year where we focused on investing more in our people. In a world full of highlights reels, it's important to say this report isn't exhaustive. The Eunomia team and its partners have delivered so many impactful projects and actions that there are too many to list here. The report gives a summary of where we are on our journey and where we have had a significant influence in 2024.

The principal way we create impact is by helping our clients turn their sustainability goals into actions that, one by one, move the needle towards a sustainable future for us all.

We conduct research that influences policymakers and stakeholders to balance the needs of the environment, business, and people. Our projects inform strategies that improve business models and governance structures. We develop implementation plans that turn visions of sustainability into reality.

In 2024, five of our projects influenced INC-5 discussions for the UN Global Plastics Treaty. As this report goes to press, dialogue is ongoing. Our projects also supported packaging supply chains to shift closer to circularity, decision makers to engage further with the natural economy, and a broad spectrum of clients to understand and reduce their carbon emissions. The case studies in this report showcase the breadth of impactful projects we have delivered.

With only five years remaining to hit our net zero target, in 2024 we tightened our carbon reporting in line with best practice. We also cut the amount of water we use and the quantity of waste we produce in our head office. We're currently recalculating our carbon baseline so that we can report more accurately on decarbonisation progress next year. We'll also be revisiting our Carbon Fund strategy in 2025.

We continue to stand staunchly by our values and our policies to make sure we treat all staff equally and everyone feels valued and welcome. In 2024, we invested even more in our people and became a Disability Confident Committed Organisation, achieving Level 1 status well ahead of schedule. Ever conscious of the gender pay gap, we have been putting in the stepping stones to create a better mechanism for reporting on this next year.

Staff wellbeing is always a priority, so in 2024, we launched the new company-wide Alltogether platform, which brings together all our benefits in one place. We also introduced a team of seven Mental Health First Aiders to give employees initial support, encouragement, and signposting to professional help when they need it.

We supported several charities by donating staff time to help at food banks, community gardens, and nature recovery projects via

their allotted volunteering days. In 2025, we'll be introducing a new volunteering policy that allows people more flexibility in how they choose to donate time, along with a new feedback mechanism to capture what motivates their choices.

In terms of governance, in 2024 we introduced seven new committees, each with organisational objectives for 2025. These committees bring together expertise from across the consultancy to raise the bar in digital technology, technical knowledge transfer, employee engagement, Equality, Diversity and Inclusion, and more.

Last year saw us push forward on various fronts, both externally and internally, in our mission to drive positive, regenerative change. In 2025, we'll be working to meet the newly published B Corp standards to manage our impact more holistically, and with even greater public transparency and clarity. We're excited about rising to the challenge!

With much to accomplish and anticipate, we're pausing here to look back on last year's achievements and reflect on what they mean for our collective progress towards a future where we live within planetary boundaries, in proper balance with the natural world.

Our mission

At Eunomia, we are social-environmental problem solvers and researchers with a difference.

We combine real-world consulting experience and deep technical knowledge to proactively shape policy and develop pragmatic, science-led solutions for a sustainable future.

Our mission is to drive positive, regenerative change by delivering policy insights and solutions for the circular, low carbon, and natural economies.

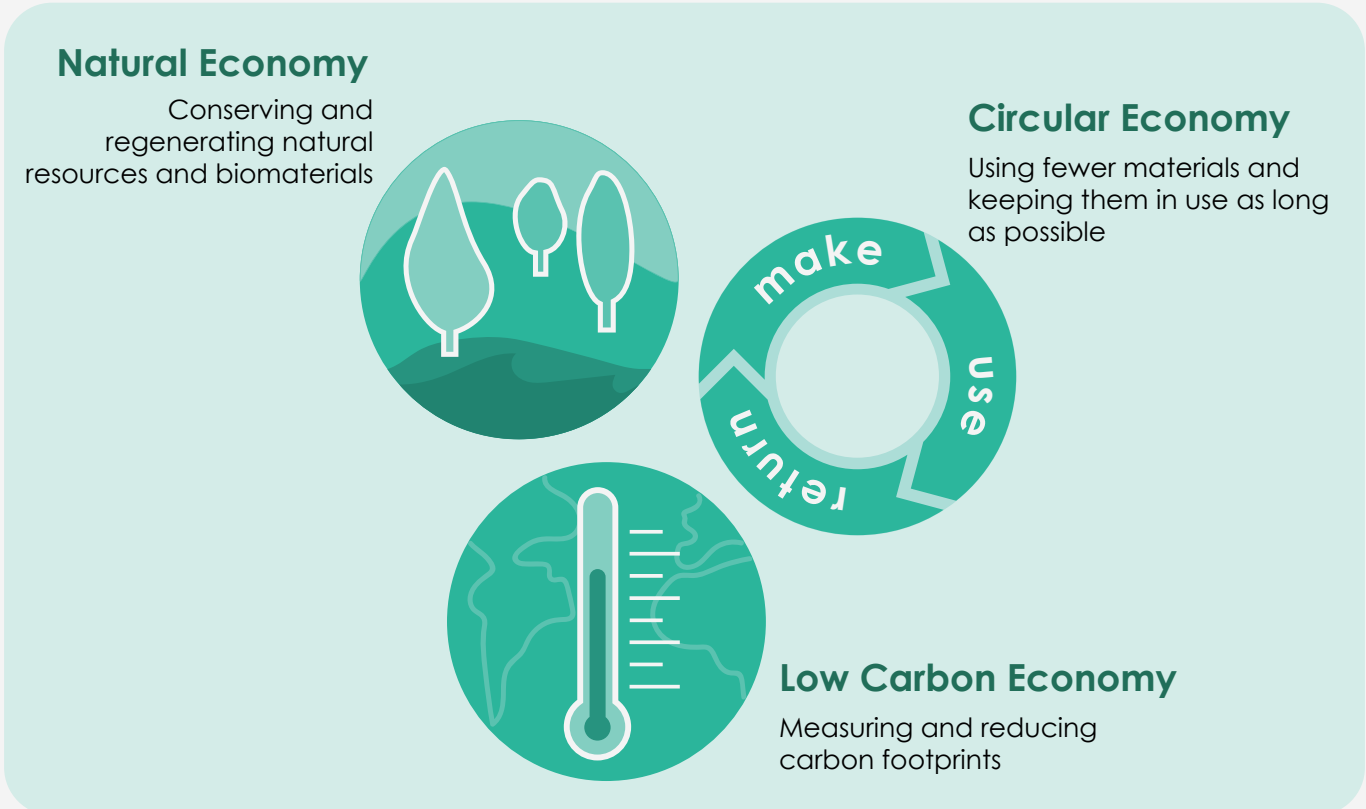
At its heart, the word 'economy' refers to how we manage resources wisely for the wellbeing of people, including the next generations. But today we live in a situation of mismanagement.

We are living through a triple planetary crisis: climate breakdown, the collapse of biodiversity, and a wave of pollution and waste. These aren't isolated symptoms – they're signs of a deeper systemic misalignment.

We believe it's time to build a new economy that is circular by design, grounded in natural systems, and powered by low carbon principles. These aren't three separate strategies. They are interdependent, overlapping, and mutually reinforcing.

Our work sits at the intersection of these transitions. We help organisations move beyond incremental change and reimagine value, growth, and progress. Through systems thinking, deep collaboration, and bold imagination, we guide strategies that don't just adapt to the future – but help shape it.

Our role is to challenge the status quo, ask the right questions, and get to the heart of the issues impacting our clients' businesses and our society.



Our values

Our team is unfailingly passionate about the future of our planet and society. That's why, every day, we strive to do work that leaves the world in a better place for the next generation.

To ensure we are all aligned, everything we do is underpinned by our five core values. These capture the essence of Eunomia and why we exist, as well as our ambitions to keep improving and progressing.

Maximise our impact

We are passionate about changing how the world works and contributing to the restoration and regeneration of the planet.

Provide solutions

We solve problems and challenge the status quo through evidence-based research and innovation, within a culture centred on critical thinking and continuous learning.

Walk the talk

We demonstrate the behaviour we hope to see in others through our own actions.

Behave with integrity and respect

We acknowledge and respect the diversity of views and perspectives that we encounter, within a culture that encourages speaking truth to power.

Be actively inclusive

We value everyone's contributions and strive to better reflect the diversity of human experience.

Our timeline

eunomia

2030
Achieve net zero carbon emissions

2030
Reduce waste generated in Bristol office by 25%

2030
Achieve 85% average annual recycling rate in Bristol office

2030
Reduce absolute water use in Bristol office by 10%

2026
Achieve B Corp re-certification

2025
Update carbon reduction plan

2025
Revisit carbon fund strategy

2025
Launch the new volunteering policy

2024
Became a Disability Confident Committed organisation

2024
Launched EDI priorities

Dec 2023
B Corp certification achieved

Oct 2023
EDI committee re-formed

Sept 2023
North Star guiding principle embedded

May 2023
Carbon reduction plan established

2022
Volunteering policy introduced

2021
SBTi targets set

2018
US office opens; expansion of work in North America

2008
Carbon fund established

2001
Eunomia's journey begins

Purpose beyond profit

When we received global B Corp™ certification in December 2023, we were one of the first sustainability consultancies to do so.

Our B Corp certification demonstrates that people and planet matter to us, not just profit – a commitment we have embedded in our company articles.

To secure it, we had to provide evidence of our responsible practices in terms of energy supplies, waste and water use, worker compensation, diversity, and corporate transparency. The certification shows that we meet high standards of verified social and environmental performance across five areas: Governance, Workers, Community, Environment, and Customers.

As a B Corp, we have joined a growing group of more than 7,000 companies worldwide that are reinventing business to use it as a force for positive change – including The Guardian, innocent, The Body Shop, and organic food pioneers Abel & Cole.

Environmental impact

We work diligently to keep direct environmental impacts from our operations as small as possible, as we've done since our founding 24 years ago.

We have signed up to the Science Based Targets initiative, which defines a clear pathway for reducing our greenhouse gas emissions and helping limit global warming to 1.5°C. Our Carbon Reduction Plan commits us to reaching net zero emissions by 2030; specifically, this means a 90% reduction in Scope 1 and 2 absolute emissions and a 97% reduction in Scope 3 emissions per employee by that year.

During 2024, we worked on improving our carbon reporting according to best practice, with a particular focus on collecting data from our supply chain. We're currently re-establishing our carbon emissions baseline to encompass our international offices and additional Scope 3 categories, in line with the GHG Protocol Corporate Standard, and so we can track our future decarbonisation as accurately as possible. We'll report on our progress towards net zero next year.

These are some of the ways we reduced our environmental impact last year:

	Targets for our head office	2024 progress compared to FY 2023-24 baseline
	Reduce absolute water use by 10%	Our water use dropped by 16.5%
	Recycle an average 95% of waste	We recycled 86% of our waste, up from 84%
	Reduce waste generated by 25%	We generated 7% less waste than in 2023/24

We embed sustainability into our procurement practices. This means we look for durability, reusability, recyclability, and energy efficiency in everything we buy. We also assess the carbon footprint of different laptops, monitors, and headphone models before deciding what to purchase. We buy refurbished IT and office equipment where possible, and we encourage staff to use their working from home equipment allowance to do the same.

Believing that little choices help build momentum for bigger shifts in the ways we consume, we help combat food waste by buying produce that would otherwise be thrown away. Each week, a box of delicious but wonky-looking or surplus fruit arrives for head office staff from fellow B Corp Oddbox.

Staff in our New Zealand office work with local environmental trusts to enhance natural habitats, with 200 trees planted so far. Over in the US, the team frequently breathe life into unwanted items that neighbours are throwing out. In 2024 they rescued several plants, lamps, and chairs that would otherwise have been thrown into landfill. The US team also has a pool of reusable bowls they use to carry delicious food from the local salad place and taco truck back to their office – a space redeveloped from a 19th-century pencil factory.

For business travel, we follow a travel hierarchy

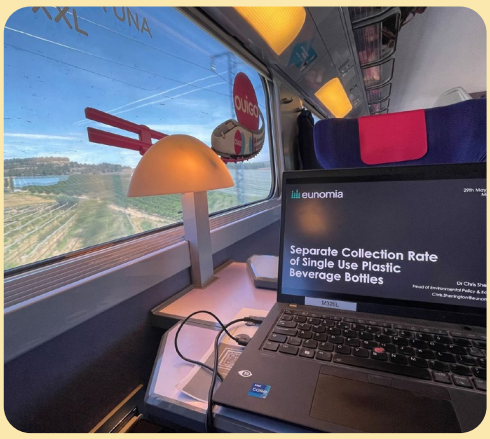
that prioritises active modes like walking and cycling, followed by public transport, over car and air travel wherever possible. We operate a flight checklist to help track business travel and make sure any flights we take are absolutely necessary.

Here are some stories of how the team weaves sustainable travel into their working life.

In June 2024, I travelled to Madrid to present Eunomia's study for Zero Waste Europe on the separate collection rate of single-use plastic bottles in Spain.

A return journey by plane from Bristol to Madrid would have emitted 464 kg of CO2 – enough energy to power the lights on the Eiffel Tower for six days!

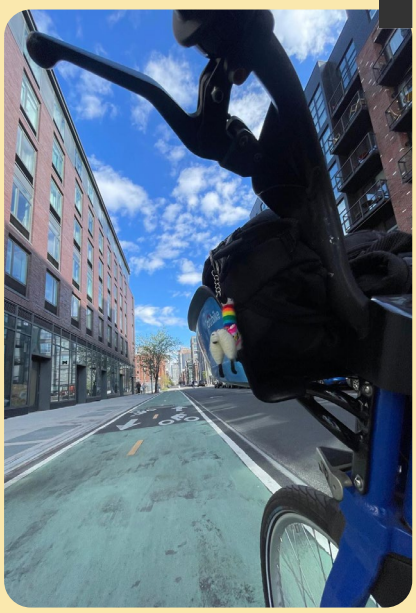
Instead, I travelled by train – taking the Eurostar from London, catching the sleeper from Gare d'Austerlitz to Latour-de-Carol on the Spanish border, then taking a local train to Barcelona-Sants, and finally a high-speed service to Madrid. That journey emitted just 6 kg of CO2 – only enough to keep the Eiffel Tower lights on for an hour.



The journey took much longer, certainly – about 30 hours compared to 7-8 hours for air travel (including check-in). But with excellent wifi on the trains, I was able to work en route, and I slept well in four-berth first-class sleeper couchettes. All the trains ran on time, and it didn't cost the earth.

Between trains, I even had time for a walk along the Seine and a glimpse of the actual Eiffel Tower!

– Dr Chris Sherrington, Head of Environmental Policy & Economics, based remotely in Wales.



My cycle to work is a 10-minute ride, and I use New York City's bike sharing system: Citibike. Our office is on the same block as a Citibike dock, so it's super convenient to get to work.

I love the flexibility of using the bike sharing system, because it means I always have the option to bike one-way; most often, this means cycling to work in the morning when I'm a bit more pinched for time and taking a leisurely walk home to unwind at the end of the day.

I'm also really lucky in that I live a couple blocks off Berry Street, which became a Bike Boulevard to enhance cyclist and pedestrian safety in 2023. I bike up Berry for a few blocks, then cross over to another two-way cycling path along the East River that is protected from car traffic, and I take this all the way to our office.

– Kaitlin Reese, Consultant, based in the New York office.

We frequently work in Belgium and the Netherlands, and I usually commute there by train from central Scotland, using the sleeper to London when I can. In November 2024, I had travelled to the Netherlands on Eurostar for a workshop, but no return train would have got me back to London in time for the last train to Scotland. Instead of flying home or spending an extra night in a hotel, I decided to catch the ferry to Newcastle.

Walking along the docks of Ijmuiden in a business suit was slightly surreal – the ferry carries more tourists and freight than commuters – but the experience was seamless. Comfortably settled in a cabin with a view of the sea, I had time to finish some work and read a book.

Leaving the Netherlands behind, we passed a vast wind farm array. This part of the North Sea is shallow – the deepest point on the route is only 60 metres – and before about 8,000 years ago, the current seabed was a landscape of gentle hills, wooded valleys, and lagoons that linked Britain and mainland Europe. Global warming at the end of the last Ice Age gradually flooded it.

Now the North Sea links the land masses in a different way: as a heavily used sea route for container ships and ferries like the one that carried me overnight to Newcastle, where I caught a train to central Scotland.

– Daniel Stunell, Managing Consultant, based remotely in Scotland.

I live in Bristol and my commute to the head office is either a 30-minute walk or a 10-minute cycle. I choose active travel as I find it cheaper, often faster, and more enjoyable than if I drove or took the bus.

Eunomia supports active travel by having dedicated bike space in front of the office and by offering the cycle to work scheme, which I used to buy my current bike along with a lock, lights, tyres, helmets, and a pump! Purchasing through the scheme was a no brainer; you pay less for the bike and equipment, and there are no upfront costs (a major barrier to cycling)!

– Connie Vickers, Junior Consultant, based in the Bristol office.

In July 2024, I travelled by train to attend the 28th International Association for People-Environment Studies conference in Barcelona to present a paper and take part in a panel discussion. I left Guildford for London at 7 in the morning, changed trains in Paris, and then travelled directly to Barcelona, arriving around 9 in the evening.

The journey through France was beautiful, especially the part from Montpellier to Perpignan, which passes very close to the sea. On the way back I saw flamingos! I paid a bit extra (10 euros) for first class, so I had plenty of room to work as well as enjoy the scenery. I did travel backwards from Paris to Barcelona (which took 7 hours), but that was ok! I got so much more from going via train and had a good discussion with colleagues at the conference about sustainable travel. It made me want to take the train more often.

– Dr Clare Twigger-Ross, Principal Consultant, based in the London office.

Social impact

Our team works hard to deliver solutions to planetary challenges, and their passion, talent, and dedication are vital to our success. To do this effectively, they need a working environment that helps them feel content, supported, and valued.

To encourage better work-life balance, we operate a nine-day fortnight working pattern: the company closes on alternate Fridays, giving all staff an extra day off every two weeks. We also have two days' extra leave over the Christmas period, in addition to annual leave. Everyone receives a monthly wellbeing allowance to spend on hobbies, gym memberships, and outdoor activities that help us feel happier and healthier. Making our benefits easily accessible was top of the priority list for 2024, with a new benefits platform going live for all staff.

Our Flexible Working Policy allows hybrid office-home working patterns and, under our Work from Anywhere Policy, colleagues can work from any place in the world for up to four weeks each year. After five years' service, staff are entitled to a three-month partly paid sabbatical, which they can extend by using annual leave.

In the belief that having fun brings out people's ingenuity, Eunomia has a dedicated socials committee and budget. We offer the team frequent opportunities to connect and relax – from office breakfasts, pizza parties, and game nights to the annual weekend away.

While some businesses are scaling back their Equality, Diversity, and Inclusion (EDI) commitments in response to political shifts, we hold proudly to the values that define us. Making sure everyone feels included, treated equitably, and valued for their unique qualities is a strategic priority for us.

Year on year, our management team aim for a 50:50 gender mix. Across the entire team, women make up 62% of our staff. We have historically gathered gender pay gap data, despite not being legally required to. In 2024, we adopted a new pay platform that lets us easily report on this, and from October 2025 it will show our gender pay gap report annually.

In 2024, our EDI Committee met every second month to review our working practices and promote ways to celebrate our values across the company. We conduct Fairness Factor background checks during annual salary reviews. Eunomia is a Living Wage Employer.

As one of our main pillars of focus last year, we achieved Disability Confident Employer level 1 status and are committed to increase this to level 2 in the next 12-24 months. In collaboration with the EDI Committee, the People Team created an EDI survey for all staff and are now able to report on our EDI statistics. This includes disclosing disabilities and/or mental health conditions so that the business can better support people who may be struggling.

A team of Mental Health First Aiders was trained, qualified, and launched in 2024. They run initiatives and support colleagues who need it, all in a bid to break the stigma around talking about mental health challenges.

Sabbatical stories

I spent two months travelling to three countries I'd never visited before – Japan, Australia, and New Zealand. I experienced a wide variety of things, from visiting shrines and temples in the Japanese countryside, to hiking around Mount Ngauruhoe (Tolkien's Mount Doom) and seeing distant humpback whales off the coast of New South Wales, Australia. It was a fantastic trip that gave me experiences I'll carry with me for a long time to come.

– Emilie Craddock, Business Operations Coordinator, based in our Bristol office.

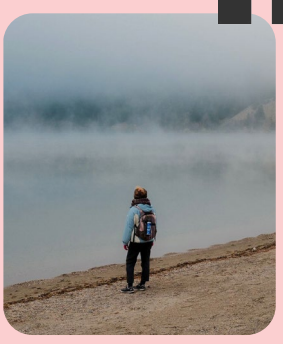
I took an extra four weeks off to spend time with my son before he started school. It was really special to have some one-on-one time with Henry and to be there to drop him off and pick him up from all his settling-in sessions, without having to worry about fitting in work between them!

- Camilla Durant, Senior Consultant, based in our Bristol office.

For my career break, I joined my uncle and auntie on their sailing circumnavigation of the globe. For my part, I island hopped between the Caribbean islands, traversed the Panama Canal (three times), visited the Galapagos, and nipped across the Pacific Ocean to French Polynesia. In total I covered over 5,000 nautical miles with them.

It was certainly an adventure of a lifetime, testing nerves, patience, and a few sailing skills. I am so grateful that I was able to take this career break and return to Eunomia. Seeing the San Blas islands already contending with rising sea levels and the desertion of people's homes was a sobering reminder of the state of affairs and that our work matters.

– Will Wilson, Consultant, based in our Bristol office.



I spent my sabbatical travelling across Canada, making my way from Montreal in the east to Vancouver Island in the west. The best discoveries were a) the wildlife – seeing wild eagles, a lynx (I think!), and killer whales and b) the local food and drink. I am a convert to the bloody Caesar – a superior take on the bloody Mary! I feel so grateful to have had this time to see so much of such a huge country.

– Lily Chapman, Consultant, based in our Bristol office.

Community impact

We are committed to bringing about positive change and supporting the economic and social wellbeing of the communities we serve.

Opportunities to volunteer enable staff to live up to our values by helping a charity or good cause that matters to them. Each person can donate two days of work time per year (pro rata) to volunteer.

Along with company-organised volunteer activities, staff have used their volunteering hours to teach climate change lessons in local primary schools, plant trees, and help out at community-owned and fully sustainable farms.

Here are some snapshots of how our staff delivered community impact through volunteering in 2024.

> *I did four half-day shifts at the Felix Project Deptford Depot in south London as a warehouse assistant. The Felix Project is an amazing charity that fights both food waste and food poverty by redistributing surplus supermarket food to people and community groups in need.*
>
> – Kat Rowland, Senior Consultant

> *I spent one of my days at Richmond Park National Nature Reserve in London, supporting their citizen science initiative. This involved surveying areas of the park for mammals, reptiles, and moths to feed into the scientific understanding of how biodiversity is changing across the park, as well as some ground management to help improve the habitat for the animals (including red and fallow deer, skylarks, and some very cute wood mice).*
>
> *It was really enjoyable understanding the 'hidden' biodiversity of a park where I spend so much of my free time, particularly given that these species are often overlooked in favour of the larger deer. Being able to contribute to keeping it a special place for wildlife felt like an incredibly valuable way to spend a day.*
>
> – Tom Raven, Senior Consultant

I wanted to spend my volunteering day doing something which was both outdoors and active – what better way of doing so than spending a day harvesting organic veg and weeding at community market garden Lush Greens in Hengrove, Bristol? This is a not-for-profit social enterprise that collaborates with volunteers from the local community to collectively help tackle food insecurity and champion food justice in the area.

The day was a great way for me to learn about sustainable farming practices and appreciate how hard the work is, and it felt great to help out with an initiative that gives back to the local community with healthy, locally grown fruit and veg .

– Emiliano Lewis, Senior Consultant

I set up and now run Chew Stoke Community Bloom. Our aim is to work as a community to make our village look its best while promoting environmental stewardship and community wellbeing. We have planted flowers (wild and cultivated), planted native trees and hedges, repaired street furniture, and litter picked, among other things. We even won a Silver Gilt award in the RHS South West in Bloom competition !

– Nicola Ainger, Senior Consultant

Our global reach

Circular economy

The way we use materials is pushing planetary boundaries to breaking point. Our systems for extracting, manufacturing, transporting, using, and disposing of materials are contributing heavily to the triple planetary crisis – generating high emissions, depleting natural resources, and damaging ecosystems.

The solution lies in moving from a material-hungry, linear economy to a circular economy in which we extract fewer virgin resources, regenerate natural systems, minimise waste, and keep products and materials in use as long as possible.

This is a complex journey, but an achievable one. It demands policies that enable transformation from a take-make-waste approach towards a closed-loop, regenerative system. It means redesigning products, processes, and business models for greater material efficiency and lower environmental impact.

We work at the leading edge of circular economy thinking and practice.

We provide thought leadership and hands-on design for innovative policies to enable the transition to a circular economy in the European Union and countries around the world.

We apply our technical expertise to devise and model practical solutions to real-world circularity challenges, from reuse systems to recycling specifications.

We also work with clients in the private sector to assess and redesign their business practices, so they can reduce waste and improve outcomes for both the environment and commerce.

Delivering a more sustainable takeaway packaging system

To support the delivery of Uber Eats' sustainability goals, we produced a white paper recommending actions for all stakeholders to build a more sustainable packaging system that has lower environmental impacts. Our white paper is helping to inform the company's position on packaging policy issues and to shape the guidance it provides to restaurants.[1]

Restaurant takeaway and delivery are on the rise, generating ever more packaging. Most of this ends up in landfill or burned as waste, with environmental impacts ranging from greenhouse gas emissions to pollution from litter and microplastics and the release of methane from landfills. Chemicals in food-grade packaging can cause public health problems. Single-use takeaway packaging also comes with high economic costs for businesses and waste managers, particularly through the loss of material value to landfill or incinerators.

Decreasing the quantity of packaging generated and scaling waste management systems to process compostable and recyclable materials will help minimise the takeaway sector's environmental impact and keep valuable materials in use for longer. This is a critical opportunity to make sustainable packaging more accessible and affordable, one that demands systems-level solutions. Uber Eats is committed to helping businesses shift to sustainable packaging and net zero emissions globally.

Our analysis focused on single-use plastic (both conventional and compostable), fibre-based (made from cardboard, bagasse, and other natural fibres), and metal packaging (aluminium). While reuse systems have high potential to accelerate the circular economy, they currently pose challenges in terms of scalability and logistics.

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[1] Eunomia 2024 *Delivering a more sustainable takeaway packaging system.* Report for Uber Eats. Available at: https://eunomia.eco/reports/delivering-a-more-sustainable-takeaway-packaging-system/

Our recommendations to optimise the system focussed on five priorities:

- Reducing the generation of packaging
- Producing more sustainable packaging
- Making more sustainable packaging options feasible for restaurants
- Ensuring consumer knowledge, engagement, and proper disposal of packaging
- Creating viable end-of-life pathways for reprocessing packaging

We put forward recommendations for policies that governments – which are uniquely positioned to drive change – can implement to improve economies of scale and lower costs for restaurants. These could include banning harmful materials, requiring consumer opt-in for service ware, and providing incentives for the use of sustainable alternatives.

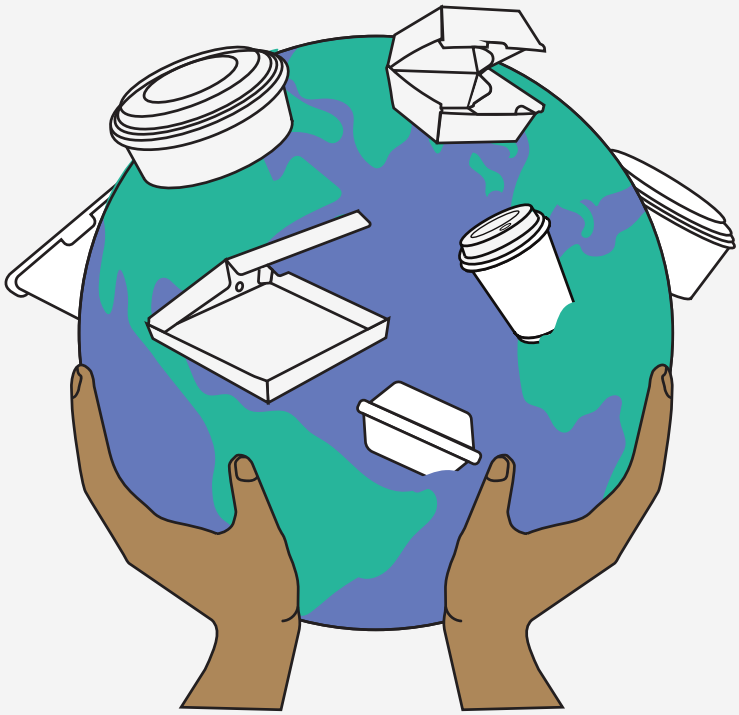
We also highlighted the potential effectiveness of policies as funding mechanisms, particularly when paired with consumer education campaigns driven by NGOs and third-party delivery platforms, as well as cross-industry partnerships involving all stakeholders. Grant programmes, green loans, taxes, levies, and extended producer responsibility (EPR) laws can all stimulate the production of more sustainable packaging.

We presented a high-level call to action for nine different audiences, including: governments, third-party delivery platforms, restaurants, consumers, NGOs and industry associations, packaging producers and distributors, and waste providers. We also outlined key challenges and market-specific recommendations for six countries: France, Australia, the UK, Japan, Taiwan, the US, and Canada.

Our white paper makes the case that enacting systems-level solutions to address prohibitive cost barriers will enable increased adoption, reduce costs to restaurants, and minimise the environmental impact of takeaway packaging. This has equipped Uber Eats with the information they need to support the development of sustainable businesses and policies around the globe.

On working with Eunomia, Uber Eats said:

"Great experts, solution driven, very good knowledge of policy, technology, and market related issues of circular economy – especially in the US market."



Plastic money: Turning off the subsidies tap

This study, conducted with the Quaker United Nations Office (QUNO), demonstrated that reducing subsidies for primary polymer production could reduce the amount of plastic in circulation with minimal impacts on consumer prices. Our report, Plastic Money, generated debate about the role of subsidies in the growth of plastic production and pollution at the fifth round of Global Plastics Treaty negotiations in Busan, South Korea in November 2024.[2]

Synthetic plastic polymers are incredibly versatile – light, malleable, inexpensive to produce – and they form the building blocks of many products used every day across the domestic, industrial, and agricultural spheres. However, about 99% of plastics derive from fossil fuels, so each stage of the plastics lifecycle exacerbates the triple planetary crisis of climate change, pollution, and biodiversity loss.

One possible measure is to end subsidies for primary polymer production. Subsidies bring down the cost of producing plastics and encourage new investment in manufacturing. This in turn lowers the cost of commodities for consumers and means that plastic products like packaging can easily compete with other, more sustainable materials. Eliminating subsidies could thus dampen the appetite for making plastics in the first place – something most experts agree is needed alongside demand-side measures and better waste management.

Until the publication of this study, the nature and extent of subsidies for primary polymer production have remained opaque. The lack of detailed data has been a significant barrier to eliminating subsidies and it stands in contrast to subsidies for fossil fuel production and consumption, for which good data are available.

We conducted research to understand the extent of subsidies for primary polymer production and the potential impact of removing these. We modelled scenarios across 71 economies and seven primary polymers, comparing a baseline scenario with a scenario in which subsidies are removed.

Our study collated information about primary polymer production subsidies to fill the data gap, building upon the research we conducted for a Phase 1 report. Both reports focus on the industry segment dedicated to processing the raw materials for plastic (steam cracking of naphtha, isolating alkanes from raw natural gas and converting coal to gas), manufacturing basic resins and compounding and extruding them as plastic pellets. This segment is geographically concentrated and dominated by a few very large enterprises, some of them state-owned.

We undertook this study with support from Dalberg Catalyst through grant funding from the Rockefeller Foundation.

This research was widely cited during discussions at the Global Plastic Treaty negotiations, and in subsequent media coverage.

[2] Eunomia & QUINO 2024 *Plastic Money: Turning off the subsidies tap – Phase 2 summary report.* Report for Dalberg Catalyst. Available at: https://eunomia.eco/reports/plastic-money-turning-off-the-subisides-tap-phase-2-summary-report/

Analysis of compliance with the targets for the separate collection rate of plastic beverage SUPD bottles up to 3 litres in Spain

Our independent assessment of the separate collection rate for small plastic bottles in Spain revealed the actual rate was much lower than previously reported – and well below legally mandated targets. After the release of our study, the Spanish government committed to introducing a deposit return system (DRS). We know from our extensive research on the impacts of DRS that this will significantly reduce plastic pollution and increase recycling rates in the country.[3]

Both Spanish Waste Law and the EU Single-Use Plastics Directive (SUPD) require the separate collection of single-use plastic bottles up to three litres in size, with a 70% collection rate required in 2023 under Spanish law. The SUPD also sets out reporting requirements and detailed calculation rules.

According to figures released by Ecoembes, the producer responsibility organisation for lightweight packaging in Spain, 71% of these bottles were collected in 2021. Our calculations – based on EU calculation and reporting requirements and employing good practice used in other major European economies – showed the Ecoembes figures were a substantial over-estimate.

We conducted a thorough assessment of data sources and engaged with a range of

[3] Eunomia 2024 *Analysis of compliance with the targets for the separate collection rate of plastic beverage SUPD bottles up to 3 litres in Spain.* Report for Zero Waste Europe. Available at: https://zerowasteeurope.eu/wp-content/uploads/2024/05/ZWE_May29_Report_Analysis-of-Compliance-with-the-Targets-for-the-Separate-Collection-Rate-of-Plastic-Beverage-Bottles-up-to-3-Litres-in-Spain_ENG.pdf

stakeholders to support cross-checking of data sources, calculations, and assumptions. To frame the analysis, we also reviewed key pieces of EU and Spanish legislation relating to the separate collection of single-use plastic beverage bottles.

Our assessment produced a best estimate that just 36% of small plastic bottles were collected in 2021 (the most recent year for which data then available) – far short of the 70% target set in Spanish law for 2023. The Spanish Government's estimate of the 2023 collection rate reflected our approach and confirmed the target was missed by a wide margin triggering the legal requirement to introduce a DRS.

The study also revealed opacity in Spain's packaging waste data and monitoring processes, which weakens confidence in reporting system. We found that the methods used to calculate the reported separate collection rate were not consistent with EU best practice.

Our report recommended that Spain introduce a deposit return scheme, which would enable the country to move rapidly from the 2021 36% collection rate to meet the 77% target set for 2025, as well as help it comply with EU reporting requirements.

In November, six months after the publication of our report, the Spanish government announced plans to introduce a deposit return scheme for single-use plastic bottles – a promising step forward for the country's circular economy.

Plastic credits – exploring plastic credit schemes: scope, risks, and uncertainties

In a report released ahead of the INC-5 negotiations for a Global Plastics Treaty, we presented a critical, impartial analysis of plastic credit schemes, which proponents present as a way to fund the collection and recovery of plastic waste, particularly in low- and middle-income countries.[4] Our findings have equipped the NGO Fauna & Flora with a solid evidence base for influencing future discussions on how to fund plastic waste management and end plastic pollution.

In a plastic credit scheme , a credit is typically issued to the developer of a plastic waste collection, recycling, and/or recovery project for a specific quantity of waste collected, recycled, or otherwise managed. This credit can then be sold, either to the voluntary market or (in a few countries) to demonstrate compliance with extended producer responsibility (EPR) regulations .

We gathered information on how these schemes work in practice, their governance structures and financial flows, and the associated scope, risks, and uncertainties.

Our research identified a suite of problems with plastic credit schemes:

- They provide only piecemeal, unreliable funding for waste management projects, which can hamper the scaling up of systems and infrastructure, particularly in countries that need it most.
- No direct link exists between the purchase of a credit and the amount of plastic waste collected or managed. Because a credit's sale price does not necessarily match the cost of waste management, there is no guarantee that a credit issued to a project will actually be sold and bring it income.
- Some schemes use terminology (such as 'plastic offsets' and 'plastic neutrality') that could mislead consumers if companies use these labels to promote their products.

[4] Eunomia 2024 *Plastic Credits – Exploring plastic credit schemes: Scope, risks and uncertainties.* Report for Fauna & Flora. Available at: https://eunomia.eco/reports/plastic-credits-exploring-plastic-credit-schemes-scope-risks-and-uncertainties/

Effective systems for managing waste require predictable income streams that cover the full costs of waste management and ensure they can work holistically over the long term.

Based on the findings, we recommended that policymakers focus on more stable financial mechanisms, such as mandatory EPR, which ensure polluters pay the full costs of managing waste. Corporates should join EPR schemes where they exist, make sure any plastic credits they do buy go to transparent and environmentally responsible projects, and avoid using misleading language in communications to consumers .

Fauna & Flora highlight that plastic credit schemes are often sold as circular systems that support waste management in less developed countries and reduce plastic pollution, but in practice they often shift the burden of pollution that originates in the Global North onto countries that lack the capacity to manage waste safely.[5]

Our report featured in five media articles and was shared with over 70 stakeholders before and during INC-5, including delegates from at least 16 countries as well as non-governmental organisations, academics, and businesses.

This research provides more valuable evidence for the argument that extended producer responsibility is one of the key policies available to stakeholders in the transition to a circular economy.

> *"Eunomia's analysis has been incredibly helpful in providing an evidence-based foundation to inform discussions of innovative instruments to channel funding towards tackling plastic pollution – including at the INC-5.2 negotiations for the UN Global Plastics Treaty."*
>
> – Catrin Norris, Programme Officer, Marine Plastics, Fauna & Flora

[5] Fauna & Flora 2024 Plastic credits: dispelling the myth – The risks, uncertainties & recommendations.

Natural economy

Our complex, beautiful natural world is essential to our wellbeing and survival. We rely on clean water, fresh air, healthy soils, and thriving biodiversity for food, drinking water, energy, and climate regulation.

Many economic sectors – from farming to fishing, renewable energy to tourism – also rely on these assets. Our natural economy expertise has developed to encourage better investment that will protect and improve them for our future.

Our work in this sphere supports clients to protect and regenerate the environment and manage precious natural resources in sustainable ways.

We help shape public policy that will manage and balance competing land use demands.

We work with private sector clients to decarbonise their operations and develop food systems that minimise impacts on the natural environment.

We support non-profit organisations by providing robust evidence to challenge the status quo and drive urgent policy change.

We also deploy our understanding of the needs and perspectives of different stakeholders and our skill in finding common ground to design approaches that successfully navigate conflicting needs.

Emerging environmental and other issues impacting our ability to achieve a water-resilient Europe by 2050

Directorate-General Environment

To equip policy makers with evidence-based foresight on Europe's future water resilience, we worked with Milieu Consulting and Cranfield University to gather evidence for the main emerging risks and clusters of disruptive change.[6] We also highlighted key questions for policy makers to consider as they plan for a fair and equitable transition to a water-resilient Europe.

As Europe experiences more frequent drought and water scarcity, the EU needs to use water more efficiently and sustainably across all seasons and sectors to meet environmental, economic, and social needs – all without exhausting resources.

Since 2022, our team has been annually conducting horizon scanning and engaging with experts on policy-relevant environmental topics to support the European Commission to implement the European Foresight System for the Environment (FORENV).

This study will help inform ongoing research by the EU Policy Lab and a planned publication on values for a cross-cutting, holistic, systemic EU water policy.

Our report highlights questions for policy makers to consider for mitigating risks and maximising opportunities.

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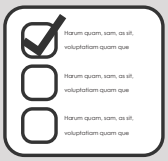
[6] White, O, Sadauskis, R, Geraci, M, Garnett, K, & Zamparutti, T 2024 *Emerging environmental and other issues impacting our ability to achieve a water-resilient Europe by 2050 – Final Report of 2022-23 Annual Cycle*. Report for European Commission. Available at: https://eunomia.eco/reports/emerging-environmental-and-other-issues-impacting-our-ability-to-achieve-a-water-resilient-europe-by-2050/

Harnessing win-wins for a water-resilient future:

- How can policy integrate cross-sectoral perspectives that consider how actions in one area affect others?
- How can they harness innovation and aquapreneurship, while managing risks and avoiding unintended consequences?

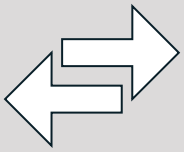


Planned or enforced change in sectoral use of water:

- How can the EU proactively transition to water resilience and efficiency before scarcity forces disruptive change?
- How can policies promote cross-sectoral cooperation on water resources, such as the agriculture and energy sectors?
- What mechanisms can ensure that integrated water management policies mitigate risks to all sectors' productivity and economic viability?

Understanding water's role in Europe's just green and digital transition:

- How can policies ensure water resilience without hampering technological progress?
- Will future water management needs facilitate or hamper green and digital transitions?
- What policies can ensure that these transitions do not exacerbate social and economic inequalities or harm the natural environment?



Navigating the complex challenges for water governance in the EU:

- Can current EU water management policies ensure equitable governance at different scales in a water-scarce future?
- What strategies will maintain effective and peaceful transboundary water management?

At Eunomia, we know it's through asking lots of questions, and daring to go where others won't, that we find innovative solutions to the challenges we face. This research will support EU policy makers and facilitate conversations that aim to produce collaborative ideas and solutions for future water management.

Communicating climate change information for flooding and coastal erosion

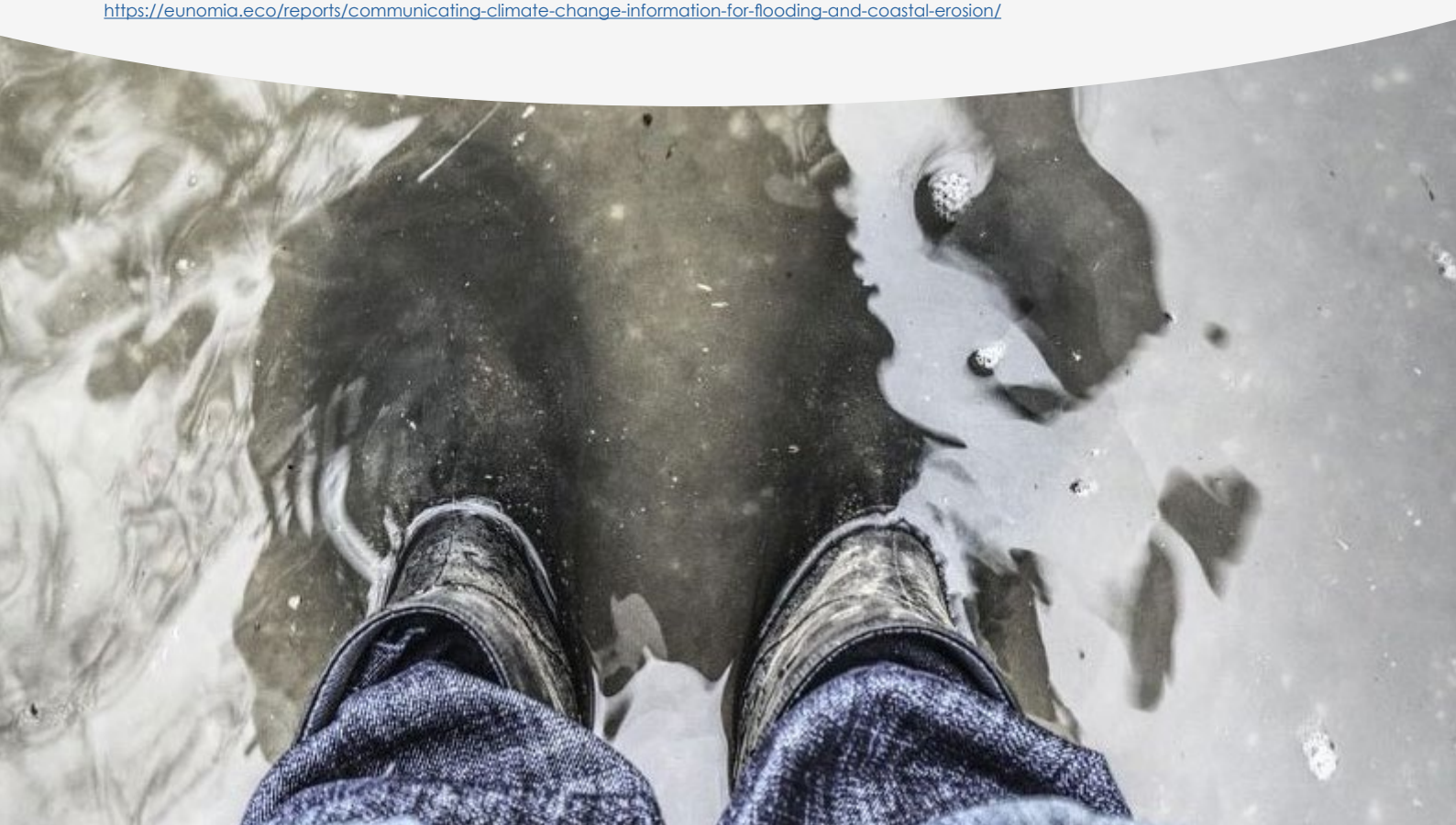
Our research identified effective ways for public organisations to help people process information about long-term climate change and take action to build resilience to flooding and coastal erosion. Our findings have been fed into UK Environment Agency publications and maps, used to inform the development of new training for staff, and shared with other programmes.[7]

As climate change brings more frequent flooding to the UK and intensifies coastal erosion, effective communication strategies are essential to raise public awareness, foster understanding, and encourage proactive responses.

For this study, we reviewed academic and practitioner evidence communicating climate change information, focused on flooding and coastal change. Our research integrated insights from the UK Environment Agency and other experts in government, academia, and practice. We also reviewed the evidence for what types of communication and information – particularly about longer-term climate risks – can best increase understanding and support action for building resilience.

The findings highlight the multiple connections between awareness, understanding, and action. We found that social and psychological processes work best in combination. While the topic is complex, we identified ways to improve current methods of communication to enhance understanding and encourage action: providing clear, open information about the science, understanding values and emotions, tailoring information to audience needs, and engaging in multi-way conversations.

[7] Eunomia 2024 *Communicating climate change information for flooding and coastal erosion.* Report for the Environment Agency. Available at: https://eunomia.eco/reports/communicating-climate-change-information-for-flooding-and-coastal-erosion/



We produced recommendations on good practice for both one- and two-way communication. For example, understanding the target audience, presenting information that is engaging and accessible to a range of audiences, and making sure the intended audience trusts the source of information are all key to effective one-way communication. When communication is in both directions, actively connecting people through participatory approaches and presenting risk scenarios effectively can help ensure success.

To disseminate the findings, our project team also presented the study to an audience of 150 stakeholders across local and national government and its agencies, academia, and environmental NGOs at a webinar hosted by the Environment Agency.

The Environment Agency has used our research to:

- Inform National Flood Risk Assessment (NaFRA 2) and National Coastal Erosion Risk Maps (NCERM 2) publications, in particular the National Assessment of Flood & Coastal Erosion Risk report;
- Develop maps and present information on coastal erosion risk and climate change for NCERM 2, again with our support;
- Develop new training for Environment Agency staff, specifically how to respond to questions from the public about complex data and ideas – for example, by using stories, principles of good communication, and behavioural insights, and tailoring information to audience needs;
- Share knowledge and offer advice via other work programmes on adaptation pathways and scenario development, as well as the Flood & Coastal Resilience Innovation programme.

The project was commissioned by the Environment Agency's FCERM Directorate as part of the Defra/Environment Agency/Welsh Govt/Natural Resources Wales joint Flood and Coastal Erosion Risk Management Research and Development Programme.

The UK Environment Agency plans to continue using our findings to inform how it addresses concerns and questions from members of the public that arise through its national platforms and area teams and from local authorities.

What's in store for the planet: The impact of UK shopping baskets on climate & nature – 2024

We worked closely with leading global environmental charity WWF-UK to measure the environmental impacts of food shopping in the UK, analysing complex, wide-ranging sustainability data collected from major UK retailers. The report highlights the need for collective, accelerated action by industry and government to achieve systemic change.[8]

The global food system generates over 30% of anthropogenic greenhouse gas emissions and causes 60% of biodiversity loss. Meeting UK demand for commodities like palm oil and soy requires 21.3 million hectares of land overseas (about ten times the size of Wales), while domestic food production is driving the degradation of nature.

In 2021, the WWF Basket initiative announced a set of outcomes and measures to support the goal of halving the environmental impact of UK shopping baskets by 2030. The WWF Basket focuses on seven of the most urgent environmental issues affected by the food system: climate, deforestation and conversion, diets, agriculture, marine, food waste, and packaging. The data collected is also used by WRAP and the Food Foundation.

For this study, the third so far in an annual series, we analysed a unique data set provided by 10 out of 11 major UK food retailers representing over 90% of the country's grocery market. Seven of these ten have signed the WWF Retailers' Commitment for Nature – a commitment to work with WWF to meet the Basket initiative goal.

[8] WWF-UK & Eunomia 2024 *What's in store for the planet: The impact of UK shopping baskets on climate & nature – 2024.* Available at: https://www.wwf.org.uk/sites/default/files/2024-12/whats-in-store-for-the-planet-report-2024.pdf

This year, the data showed that most retailers have made some progress since 2022, such as sourcing certified sustainable seafood and moving closer to meeting Scope 1 and 2 emission targets. However, in areas that require systemic change, progress is much slower – particularly in sourcing verified DCF soy and cocoa and shifting consumers towards healthier, more sustainable diets. Retailers' ability to understand and report the environmental impact of their supply chains is also improving over time.

For each of the seven areas, the report highlights specific actions for retailers and supply chains to advance progress in 2025. These range from investing in supply chain verification systems to promoting science-based fisheries management and engaging with farms to understand the sources of food.

We will be working with WWF again in 2025 to produce the next annual report, continuing to evaluate and support retailers to progress towards more sustainable shopping baskets.

Deforestation- and conversion-free (DCF) commodities such as palm oil, soy, and cocoa are grown on land that has not been deforested or converted from natural ecosystems like peatlands.

Our study shows that, in the absence of immediate action, retailers look unlikely to meet the first major milestone for the WWF Basket: achieving 100% verified DCF agricultural commodity supply chains by 2025. On average, only 4.5% of soy entering the UK food retail value chain (mainly as food for chickens, pigs, farmed fish, and dairy cattle) is verified DCF. The figure for palm oil is higher (75% on average), but cocoa is a vanishingly low 0.3%.

Habitat conversion and deforestation exacerbate climatic changes, droughts, wildfires, flooding, landslides, and soil degradation. Failing to meet this milestone will have severe local environmental impacts in parts of the world that produce these commodities, as well as being bad news for global climate and biodiversity goals.

Understanding buyers of ecosystem services in voluntary markets

We identified motivations and barriers for UK buyers of ecosystem services, along with the need for clear direction on nature markets from government.[9] The results of our study are being used to inform policy and support local project partners in the Nature Returns Programme to develop effective green finance strategies.

Voluntary nature markets for emerging ecosystem services – around water quality, natural food management, and biodiversity, for example – are nascent compared to markets for carbon credits, Biodiversity Net Gain, and nutrient neutrality.

To understand why, we conducted interviews and a literature review, exploring the perceptions, motivations, incentives, and barriers for buyers in these markets.

We learned that UK buyers in voluntary markets are driven mainly by business outcomes and opportunities to enhance their reputation with shareholders and customers. However, this does not currently motivate buyers sufficiently to achieve government targets for scaling up private finance for nature recovery.

At the same time, uncertainty over policy, markets, the benefits of these services, and how to measure outcomes all constitute barriers. Project factors such as lack of scale and limited understanding of legal agreements can also discourage buyers. We conducted research to expand knowledge within the nature finance sector and support the development of new nature markets and standards. This built an evidence base that will help Nature Returns local partnership projects find buyers for their ecosystem services.

Our report, published by Natural England, highlighted the need for clear, strong, decisive direction on nature markets by the UK government to build buyer confidence, increase transparency, and promote learning.

The UK government's £17.5 million Nature Returns Programme seeks to increase cross-government collaboration and address society's most challenging problems, including biodiversity loss, climate change, and land use change.

Our expert Rob Daniel presented the findings of this research at the Nature Returns Conference in February 2025 to an audience of over 200.

[9] Eunomia 2024 *Understanding buyers of ecosystem services in voluntary markets.* Report for the Forestry Commission. Available at: https://eunomia.eco/reports/understanding-buyers-of-ecosystem-services-in-voluntary-markets/

Low carbon economy

Around the world, societies have set goals to reduce emissions to the point where we are removing the same quantity of planet-warming gases as we produce. So far, progress towards net zero is patchy and the pace is slow, but – with carbon dioxide levels in the atmosphere rising fast[10] – the imperative is stronger than ever.

Fossil fuels have been powering industry, providing energy, and driving supply chains for over 200 years, and now carbon is woven through most of the product, material, and energy flows that enable daily life.

Decarbonisation demands a detailed grasp of emission scopes, unique policy insights, and forward-thinking business acumen – all of which we bring to our laser-sharp focus on meeting this challenge.

Working with organisations in the private, public, and third sectors, we use our detailed knowledge of emissions from land and material use to measure their carbon footprints, identify low-carbon solutions, and design their pathways to net zero.

We analyse supply chain emissions using a systematic, integrated approach to minimise net environmental impacts and keep our clients delivering the goods and services a thriving society needs – in ways that are profitable for them.

Leveraging our policy insights and our role as trusted, independent advisors to governments and NGOs, we advise private sector players on how to influence, respond to, and anticipate the transition to net zero.

[10] Milman, O. 9 May 2024 *'Record-breaking increase in CO2 levels in world's atmosphere'*, The Guardian. Available at: https://www.theguardian.com/environment/article/2024/may/09/carbon-dioxide-atmosphere-record

Social and environmental impacts of emerging greenhouse gas removal technologies

We partnered with the UK Environment Agency (EA) to explore the environmental and social implications of five specific emerging greenhouse gas removal (GGR) technologies. Our research built a strong evidence base to inform decisions on using these technologies in ways that balance the need for carbon removal with the protection of local communities and ecosystems.

GGR technologies will play a critical role in the UK's drive to reach net zero by 2050. However, some broader impacts of their implementation remain uncertain. The EA sought to deepen its understanding of these technologies to inform its future role and identify gaps in evidence for the impacts of each technology.

Our research focused on five key technologies: ocean alkalinity enhancement, enhanced rock weathering, biochar, bioenergy with carbon capture and storage (BECCS), and direct air capture with carbon storage (DACCS).

We began with a comprehensive review of existing research and data sources, to synthesise the current understanding of the potential environmental impacts and social implications of each technology. Our structured methodology enabled us to critically evaluate the reliability of the data, including both academic and grey literature. A steering group of academics and EA experts contributed to the development of the research.

For each technology, we produced an in-depth technical report and a non-technical executive summary report, to ensure that the research outputs were accessible and impactful for a variety of audiences. The reports provided an overview of how each technology achieves greenhouse gas removal and summarised the non-carbon impacts across the life cycle of each including feedstock sourcing, transportation and storage, processing, and deployment.

Each report also highlighted areas requiring further evidence, such as the impact on soil biome from repeated biochar or enhanced rock weathering applications. In addition, we developed an overall executive summary across all technologies and presented a summary seminar to stakeholders at the EA and the Department for Environment, Food & Rural Affairs (Defra).

Through this collaboration, the UK Environment Agency is now better equipped to navigate the complex landscape of GGR technologies and identify areas that need further research before they can be more widely implemented. Our work provided a solid foundation of evidence to support future decisions on GGR technologies that address their social and environmental impacts as well as carbon reduction ambitions.

Rural Estate Net Zero Roadmap

We helped Cambridgeshire County Council in England better understand the GHG emissions arising from agriculture and land use across its 33,000-acre farming estate, identified natural capital opportunities, and provided it with a high-level roadmap to achieving net zero by 2045. Our findings informed the Council's Sixth Annual Carbon Footprint Report. [11]

Cambridgeshire County Council has set a target to reduce its direct Scopes 1 and 2 emissions to net zero and halve its indirect Scope 3 emissions (compared to 2018) by 2030, with the aim of reaching net zero across all scopes by 2045.[12]

The council's extensive rural estate is let out to over 160 tenant farmers, mainly as cropland along with some livestock grazing; it also owns nature reserves, woods, and areas of built-up land. The council needed to understand how the rural estate was contributing to its Scope 3 emissions and how it could sequester more carbon, as well as support biodiversity and address other environmental issues.

Decarbonising the rural estate is complicated, because more than half of it sits on peat soils. The estate lies in the Cambridgeshire Fens, a highly productive area that grows about one-fifth and one-third of England's crops and vegetables, respectively. Draining the peat – which makes this productivity possible – has released (and still does release) large amounts of carbon from the soil. This means that significant decarbonisation could decrease farming yields.

To tackle this challenge, we assembled a cross-sector team that brought together our carbon and natural economy expertise. We weighed up the decarbonisation of farming practices versus the restoration of peatland to maximise sequestration opportunities. We produced a strategic action plan that included decarbonisation actions and natural capital opportunities across the whole estate. We also provided the council with a route map to meet its own decarbonisation targets while preserving its role in national food security.

We used our in-house Estate Decarbonisation Model (EDeM) to measure the carbon footprint of the rural estate. This showed that, while farm practices influence emissions, the key factors are whether a farm lies on peat soil and its use of nitrogen as fertiliser; the latter is easier to influence. Our detailed analysis allowed the council to target priority farms for more efficient decarbonisation.

To help Cambridgeshire County Council meet these targets, we delivered carbon literacy training sessions for local SMEs and council officers. We also provided the council with a tool training session, technical appendix, and guidance to carry the work forward.

Our meticulous data-gathering and expert advice has equipped Cambridgeshire County Council with the evidence and guidance it needs to decarbonise at the appropriate pace and scale, in alignment with its Climate Change and Environment Strategy.

[11] Cambridgeshire County Council 2 Sept 2024 Annual Carbon Footprint Report. Available at: Appendix 1 - CCC Annual Carbon Footprint Report 2023-24.pdf

[12] Cambridgeshire County Council 2022 Net Zero Cambridgeshire 2045: Cambridgeshire County Council's Climate Change and Environment Strategy 2022. Available at: part-1-climate-change-and-environment-strategy-2022.pdf

Carbon baseline and net zero pathway

We provided a full emissions footprint for National Children's Bureau and developed a Net Zero pathway to inform the organisation's strategy, along with recommendations for interventions to achieve its decarbonization target.

National Children's Bureau (NCB) was founded over 60 years ago to bring together government bodies, professionals, the charity and community sector, and children themselves to improve childhoods across the UK. It encompasses several membership groups, including Anti-Bullying Alliance, Research in Practice, Childhood Bereavement Network, Council for Disabled Children, and Schools' Wellbeing Partnership. NCB is committed to achieving Net Zero emissions by 2045.

We worked with NCB initially to measure the carbon footprint of their Scope 1 and 2 emissions along with a subset of Scope 3 emissions. We also developed a Carbon Management Plan that complies with standards for NHS suppliers (PPN 06/21). In a second phase, after NCB acquired Research in Practice, we produced a full carbon baseline covering all emission scopes.

Through a process of data gathering and stakeholder engagement, we reviewed NCB activities to determine their organisational and operational boundary. We developed a full carbon emissions baseline using our in-house modelling tool, EDeM.

We then mapped out a pathway to Net Zero for NCB that aligns with Science-Based Target initiative guidance. This involves working towards a 42% reduction in total emissions by 2030 and a 90% reduction (with 10% residual emissions offset) by 2045.[13]

We also developed intervention recommendations for each emission source NCB needs to tackle to achieve decarbonisation. Each came with its own red-amber-green rating according to the likely costs, its impact on emission reduction, and the level of control or influence NCB has over the source.

National Children's Bureau is now progressing with initial changes, such as procuring a renewable electricity contract, while putting plans in place for long-term decarbonisation.

> *"A perfect combination of professionalism and enthusiasm. Clarity and timeliness throughout the process. Everyone I worked with was professional, knowledgeable and brought infectious enthusiasm about their work, which inspired us."*

[13] 2024 National Children's Bureau Carbon *Reduction Plan.*

Unlocking resource efficiency

Working in consortium with WSP and the University of Leeds, we led a programme of research to identify resource efficiency measures for UK industrial sectors and understand their associated challenges and opportunities. The findings are being used to update modelled emissions savings potential for resource efficiency, feeding into the government's modelling of carbon budget delivery pathways and informing the development of the UK government's Circular Economy Strategy.

Resource efficiency has a critical role to play in UK government efforts to meet its legally binding net zero target and decarbonise industry. The 2021 Industrial Decarbonisation Pathway sets out how industry will cut 8 $MtCO_2e$ in emissions annually by 2035, amounting to 25% of the industrial carbon savings needed for Carbon Budget 5 (2028-32) and 20% for Carbon Budget 6 (2033-37).

Optimising material use means requiring fewer material inputs to meet society's needs. Resource efficiency measures can reduce demand for raw materials and energy. They can also decrease waste and emissions from industrial processes and keep products and materials in circulation for longer.

Given sizeable gaps in the evidence base for resource efficiency, DESNZ and Defra required further research to build an evidence base that would inform the development of policies to deliver it. To address these gaps, we conducted detailed studies of resource efficiency across 11 UK industrial sectors with high potential for carbon and material footprint savings: steel, cement, vehicles, construction, textiles, chemicals, glass, paper, plastics, electricals, and food and drink.

The project team drew up a preliminary list of resource efficiency measures and then expanded this through a comprehensive literature review. We identified expert stakeholders for each sector, including academic researchers as well as industry actors across the value chain, and held interviews and workshops with them. This engagement process developed consensus around the current, maximum deliverable, and maximum technical levels of efficiency for each measure.

Based on the evidence and expert opinion gathered through this process, we then estimated every measure's current, maximum, and business-as-usual levels of efficiency. We provided a red-amber-green rating for each level of efficiency, reflecting the strength of the supporting evidence, and explained the current and anticipated barriers and drivers affecting improvements for each measure.

Our research, presented in 15 reports available to download from DESNZ and Defra, built a solid evidence base for further stakeholder engagement by DESNZ and Defra to inform effective policies to bring about resource efficiency in UK industry.

Thank you

Thanks very much for reading this report and for accompanying us on our journey so far. We spent 2024 focusing on supporting our clients by working collaboratively to push the boundaries of what's possible and drive positive, regenerative change for society and the planet.

We also laid the groundwork for exciting governance plans that will hugely amplify our impact in the future. Watch this space for more developments!

We've been developing and nurturing our team in a new organisational structure that allows us to more effectively link the interdependent, overlapping, and mutually reinforcing spheres of the circular, natural, and low carbon economy.

Along the way, in 2024 we held memorable send-offs for some valued Eunomians who moved on to new pastures. We also welcomed some extraordinary new talent into the company, as well as some equally impressive returning Eunomians who are once again sharing their skills to advance our collective mission.

If you're a current or potential client or partner and you're interested in the exciting plans we have for the year ahead, please do get in touch. We'd love to chat with you about being part of the new economy that is circular by design, grounded in natural systems, and powered by low carbon principles.

Joe Papineschi
Chairperson