

A close-up photograph of a person's hands holding a plant root system. The person is wearing a white lab coat and a white face mask. The background is blurred, showing what appears to be a laboratory or greenhouse setting with plants and equipment.

CRODA

Focused on impact

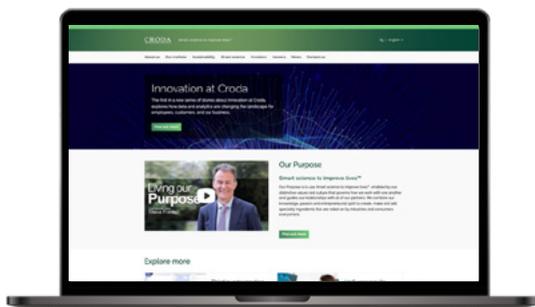
Delivering more for climate, nature and society

Sustainability Impact Report 2023

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→ Visit [croda.com](https://www.croda.com) for updates to our impact work throughout the year

Limited Assurance^A

^Aindicates where metrics have been assured (limited assurance) under ISAE (UK) 3000 and ISAE 3410 by KPMG, our independent assurance provider and reflects the position for the year ending 31st December 2023. See www.croda.com/sustainability for details.

Key progress in 2023

Scope 1 & 2 emissions (TCO₂e)

101,246^Δ
(2022: 121,122)

Scope 3 upstream emissions (TCO₂e)

674,234^Δ
(2022: 918,810)

Land area saved

58,815
Hectares (versus 2019 baseline)

Lives sustainably improved by Croda Foundation projects

22.8 million
(since launch in 2021)

Sales

£1,694.5m
2022: £2,089.3m

Adjusted profit before tax (PBT)

£308.8m
2022: £496.1m

Total Recordable Injury Rate

0.72
(2022: 0.74)

Water use reduction

35%
(versus 2018 baseline)

Where we publish on sustainability

	Annual Report	Sustainability Impact Report	Reporting Data Pack	www.croda.com
Sustainability Commitment progress	✓	✓	✓	✓
Non-financial information statement	✓			
TCFD	✓			
GRI			✓	
SASB/ISSB review			✓	
Principal Adverse Impact Statement			✓	
Limited Assurance Opinion and Reporting Criteria				✓



CEO statement



Steve Foots
Group Chief Executive

“It will be the fantastic efforts of all our employees that will deliver the positive impacts we strive to achieve, and I thank everyone at Croda and our partners for their commitment, hard work and positive approach to delivering against our goals.”



2023 presented another turbulent year in a post-Covid world, where the twin shocks of high inflation and extended destocking impacted Croda's business. Beyond this frame, in addition to the visible impacts of climate change, geopolitical issues and the technological risks and opportunities of Artificial Intelligence dominate the short-term global risk agenda¹.

However, as a leader, I am as interested in the longer-term risks and how our strategy reflects and acts upon them today. The most important 10-year risks remain connected to the sustainability agenda – social inequality, environmental degradation, and the climate crisis. This reconfirms the importance of living our Purpose, Smart science to improve lives™, and delivering the right impacts on climate, nature and society through our Commitment launched in 2020, to become Climate, Land and People Positive by 2030. With this in mind we have decided from this year to focus this report on the impacts of our activities, bringing to life outcomes of the work we are prioritising across Croda².

Working hard to meet our Science Based Targets (SBTs)

Delivering on our carbon emissions reduction targets will ensure we contribute to limiting the global temperature rise to below 1.5°C above pre-industrial levels. In 2023, our scope 1 and 2 emissions were 101,246 tonnes CO₂e (2022: 121,122 tonnes CO₂e), tracking well below our SBT in part due to lower sales volumes. We are also targeting material upstream supply chain emissions reductions, in 2023 introducing a new internal scope 3 dashboard and prioritising work with like-minded key suppliers.

Understanding and acting on our contribution to improve our impacts on Nature

We are already saving more land through the use of our crop and seed technologies than is used to grow our bio-based raw materials, and have challenged ourselves to go further. At the end of 2023 we are on track to meet our target to save at least 200,000 hectares more land per year in 2030 than in our 2019 baseline. We announced in 2022 our aspiration to build on this to contribute towards a Nature Positive world. Our focus this year has been understanding our impacts and dependencies on nature, where we have identified and started taking action on land use change and freshwater as priorities in our supply chains and operations.

Our efforts to support staff within Croda and wider society are having positive impacts

The Croda Foundation has sustainably improved the lives of more than 22 million people worldwide since it was founded as a charitable

organisation in 2021, while internally we have maintained a gender balanced Board and increased the number of women in leadership roles to 39% (2022: 38%), a leading position in our sector. Reflecting our absolute commitment to the safety of our employees and local communities, we have set a challenging target to reduce our Total Recordable Incident Rate (TRIR) to 0.3 by 2025. The 2023 rate fell slightly, with the second half of the year showing a 20% improvement over the first half. This is a step in the right direction, but there is so much more to do. As we focus on embedding safety as a value across Croda (rather than just an annual priority), in 2023 TRIR became an annual bonus scheme metric, and more than 4,500 hours of safety culture training were delivered to over 500 leaders.

Delivering impact through our customers

This work has real impact when it translates to helping our customers make the right decisions on their formulations and product offerings. Like Croda, they recognise most of their footprints are in their supply chains. In 2023, we launched our product-level carbon footprint (PCF) data to customers, covering the majority of our product portfolio and aligned with the industry guidance we helped create as members of Together for Sustainability (TfS) and the World Business Council for Sustainable Development (WBCSD). We also engaged extensively with customers in sharing broader Life Cycle Assessment (LCA) data on our ingredients; we see most impact- and value-creating business opportunities in the short and medium term arising from sustainability trends in customer markets.

Leadership in sustainability continues to evolve

We have set out to be a leader in the supply of innovative sustainable ingredients, and leadership expectations continue to progress. As this report goes to press, we have been awarded Leadership status (A-) by CDP across our 2023 Climate, Water and Forest programs, confirming we are on track with our ambitions to be a sustainability leader. As I work with our Executive Committee and Board to refresh our sustainability strategy in 2024, I recognise the ongoing work in Croda to ensure accountability for the various aspects of the sustainability agenda is embedded in the right parts of the organisation.

We also continue building the competencies every role requires to deliver on their sustainability responsibilities and support living our Purpose. It will be the fantastic efforts of all our employees that will deliver the positive impacts we strive to achieve, and I again thank everyone at Croda and our partners for their commitment, hard work and positive approach to delivering against our goals.

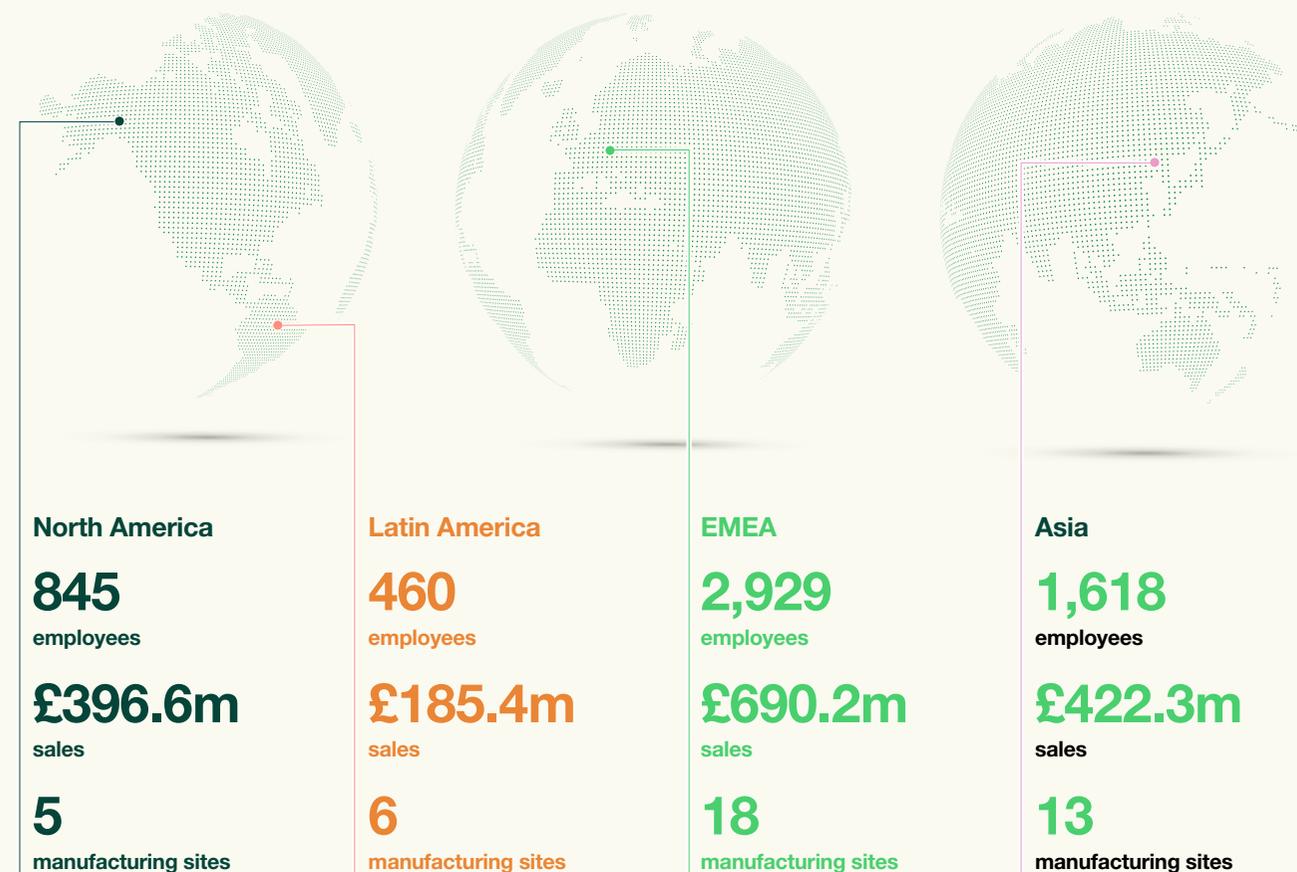
Steve Foots
Group Chief Executive

1. The Global Risks Report 2024, 19th ed., World Economic Forum, www.weforum.org/publications/global-risks-report-2024
2. For more details on this work and reports against specific frameworks, refer to *Where we publish on sustainability* (opposite page) for their location.

At a glance

Croda is the name behind some of the world's most successful brands. We use Smart science to improve lives™: creating, making and selling innovative ingredients that are relied on by industries and consumers around the world.

Our global presence



Who we are and what we do

We use smart science to create high performance ingredients and technologies that improve people's lives. We target long-term, global positive impacts on climate, nature and society. We work with suppliers, customers, their consumers, and other stakeholders across our value chains to ensure sustainability, innovation, quality and resource efficiency are at the forefront of every Croda ingredient, process and relationship.

Consumer care

We develop innovative and sustainable ingredients that provide vital functionality in beauty and household cleaning formulations. We help our customers to differentiate their products, build strong brands, meet their sustainability commitments, and satisfy changing consumer needs.

Life Sciences - Pharma

We develop components and systems to deliver Active Pharmaceutical Ingredients (APIs), supporting our customers across the entire lifecycle of a drug: from early-stage research to commercial manufacture.

Life Sciences - Agriculture

We are an innovation partner to major crop science companies and smaller customers, developing delivery systems to meet the sustainability challenges of current generation products and enabling future regenerative approaches to agriculture.

Our business model: Anticipating global needs to deliver positive impacts through our customers

The customer is at the heart of our business model. Croda innovation focuses on helping our customers to have the greatest impacts in their markets.

What we do and how it creates impact



Global Needs

We strive to anticipate customer needs in light of global developments and trends – and then provide disruptive, innovative solutions that are crucial to protecting and restoring our planet and society. We promote and respond to smart industry regulations and voluntary standards.

Problem Discovery

We aim to increasingly anticipate the downstream impacts and the future effects of our products. Our sustainability-literate innovation teams benefit from new insights from customers and thought leaders on low-footprint ingredients and processes.

Solution Development

We want to meet consumer and end specifier demands for lowest footprint alternative ingredients (e.g. low carbon, water or other natural resources).
We also work to ensure sustainability performance criteria are embedded in our innovation, as we develop sustainable solutions from chemical, biotech or biological processes.

Product Manufacture

We lead our industry in the use of non-fossil raw materials, sourced sustainably. Through increased transparency in our supply chains we will deliver products that help customers achieve their own carbon reduction and climate ambitions.
Our multiple technology platforms provide a huge array of solutions, including yet-to-be commercialised technologies.

Commercial Supply

Our global reach and agnostic approach to technology mean we can select the products with the greatest positive impacts. We also work with industry consortia and trade associations on data sharing; raw material and ingredient traceability enable more informed decisions.

Global Impact

We are increasingly focusing our innovation and smart science where they can improve most lives and have the greatest impacts on climate, nature and society.
We work with many other organisations and consortia.

Our stakeholders: Where we create impact

Our employees

Our highly skilled employees choose to work for Croda because they identify with our Purpose, are excited by our Commitment and see our values of Responsible, Innovative and Together aligning with their own. We maximise our positive impact on our employees by keeping them physically and emotionally safe, paying a Living Wage, building their skills and competence, and giving them fulfilling roles. We connect them to our sustainability strategy through setting relevant individual objectives as well as supporting participation in our Sustainability Professionals Network or Sustainability Champions Network.

Our customers and markets

We deliver more than 6,000 specialty ingredients to more than 15,000 organisations worldwide. Our customers use our ingredients to differentiate their own products and to meet sustainability commitments, regulatory requirements and changing consumer demands. Climate change, biodiversity loss, widening inequalities, changing demographics, overexploitation of resources and innovation in digital technologies are transforming consumer demands. Through our customers and their products, our ingredients can improve consumers' lives by minimising the negative impacts of consumption and help make positive impacts on planet and society.

Our shareholders

Investor needs and expectations relating to environmental, social and governance (ESG) issues continue to grow. Regulations in many jurisdictions increasingly require investors and analysts to assess and publish the non-financial risks and opportunities associated with their investment portfolios. Our focus on impact and transparent approach to sharing data and information enables shareholders to understand and calculate the positives that we bring to their portfolios.

Our suppliers

As a significant contributor to our impacts on planet and society, we partner with suppliers to help improve sustainability practices in supply chains, and commit to sharing the benefits equitably. Working towards more sustainable sourcing is supported by activities that include supply chain mapping, certified transparency and direct investments, often in collaboration with industry partners to maximise impact.

Our local communities

Providing a Living Wage for all of our employees and contractors further benefits the communities where we live and work, along with continued investment in our sites. In addition, Croda employees donated 5,310 hours (2022: 5,336 hours) via our 1% Club through volunteering in their local communities. This focuses on STEM outreach through teaching in schools, summer camps and sponsoring students, prioritising disadvantaged and underrepresented groups. We also donate IT equipment to local schools.

Our innovation partners

Our partnerships with universities, research organisations and startups significantly contribute to the portfolio of technologies we can deploy to make an impact through our ingredients. In return, our shared knowledge, understanding of the sustainability needs of our customers, and collaboration helps them to secure funding and develop breakthrough technologies.

Industry

Sharing our knowledge as part of consortia enables industry-wide challenges to be addressed. Working to make ingredients from sustainable sources more widely available for use has positive benefits industry-wide and for many manufacturers in the markets where we operate. Through trade associations and government engagement we actively contribute to improving regulatory and voluntary sustainability standards.

Society

Our smart science is improving the lives of people around the world. Our ingredients improve health and wellbeing, for example protecting people from skin cancer and contributing to vaccine development projects targeting WHO priority diseases. Alongside this, the Croda Foundation is an independent charitable organisation deploying Croda's funding to improve access to healthcare, reduce poverty and hunger, and improve livelihoods.

Planet

We are working to reduce the negative environmental footprint associated with our operations and value chain. We collaborate with external initiatives and organisations to better assess and measure our impacts and dependencies. This includes creating opportunities to restore ecosystems through investing in projects in our agri-based supply chains, and through the use of crop and seed innovations to support more sustainable agriculture.

The road ahead: Challenges and megatrends

Of the trends affecting our markets and supply chains, we have identified three key global challenges where delivery of our Commitment can maximise positive impacts on climate, nature and society.

Feeding a growing population and restoring nature

Feeding a global population that is expected to reach 10 billion people by 2050 will require a 70% increase in agricultural output¹. Food systems alone already account for a third of GHG emissions², two thirds of freshwater use, and over three quarters of biodiversity loss and most suitable land has already been farmed, so increased output will come from better yields. This will require more sustainable agricultural practices, and growing more resilient crops on less suitable land, supported by restoration of degraded ecosystems.

Living more sustainably within planetary boundaries

Population growth and increasing consumption, fuelled by the expansion of the middle class particularly in developing countries, are putting pressure on planetary systems such as water, climate and biodiversity, and scarce natural resources. Addressing this challenge requires transformational new approaches to consumption and circularity.

Global demand for health and wellbeing

The pandemic has made consumers more conscious of their physical and mental wellbeing, and expanded demands on healthcare systems, already increasing due to a growing and ageing population. This has increased demand for sustainably-sourced effective ingredients that are underpinned by science and support improved physical and mental health.

Our response to these global challenges continues to be shaped by two technology megatrends:

Demand for more sustainable products

Today's consumers want to live more sustainably, which influences their product buying behaviour. Consumer-facing companies want ingredients to help them deliver products with substantiated claims and assured information on their social and environmental footprints, including carbon, water and other resources. Crop science and agriculture businesses want innovative, biodegradable ingredients with a low footprint that have a positive impact on improving yields, soil health and biodiversity.

Avoiding negative impacts through biologics

Biologics are giant molecules manufactured inside animal cells or micro-organisms that are transforming medicine and agriculture. Biologic drugs mean you can treat diseases in more targeted ways with fewer side effects. In crop science, naturally occurring microbes can act as fertilisers, while nucleic acids can enable targeted pesticides, reducing overall dosage with fewer unintended side effects, and fewer resources needed for the same beneficial impacts. But these complex molecules are hard to make, difficult to keep stable, and require sophisticated delivery systems.



1. Food and Agriculture Organization of the United Nations. Global agriculture towards 2050.

2. Francesco N Tubiello et al 2021 Environ. Res. Lett. 16 065007.

The road ahead: A strategy focused on impact

Our Commitment is to be Climate, Land and People Positive by 2030, working towards our goal of becoming the world's most sustainable supplier of innovative ingredients.



Climate Positive: we are delivering absolute reductions in greenhouse gas (GHG) emissions in line with our verified 1.5°C Science Based Target. We have started to provide customers with verified product-level carbon footprints (PCFs) that, together with the avoided emissions in use that our technologies can provide, will help them deliver on their own climate targets.



Land Positive: using natural resources brings a responsibility to take a holistic approach to nature and the role of ecosystems in achieving climate goals, whilst also addressing social inequalities. We are already Land Positive: our crop and seed technologies save more land than is used to grow our bio-based raw materials. We now aspire to contribute to a Nature Positive world by 2030.



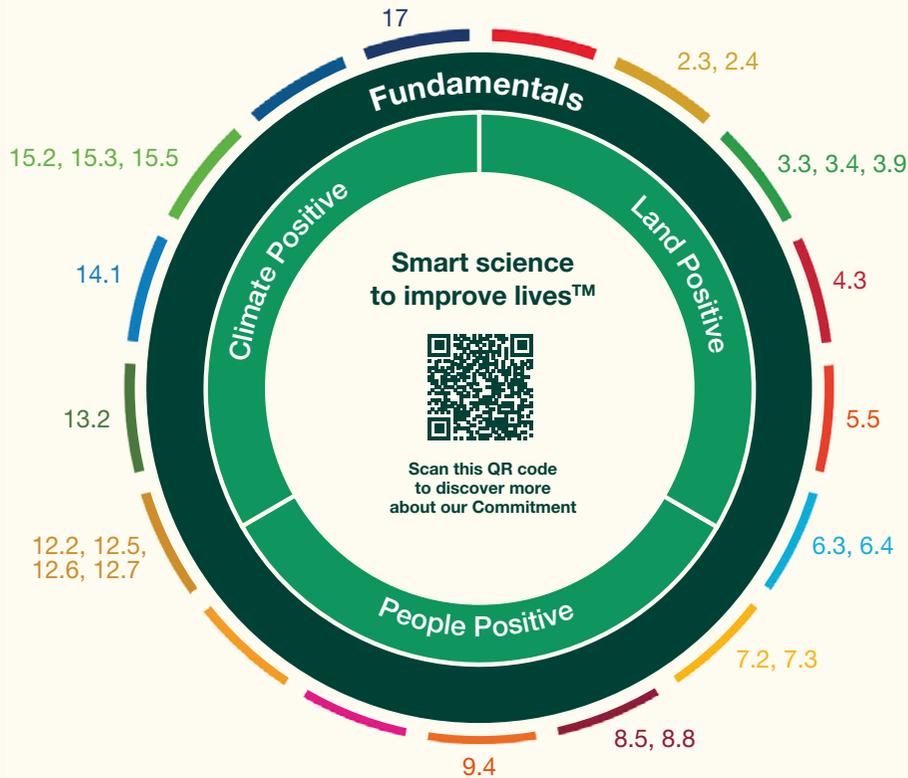
People Positive: we use Smart science to improve lives™, from targeting vaccine solutions for the most challenging diseases to protecting millions of people from damage caused by the sun. Internally, we recognise the value of diversity and are working towards ambitious targets to make a positive difference.

Part of our strategy to reduce our negative impacts and increase our positive impacts on climate, nature and society includes our Fundamental targets. These represent the social licence required for a multinational manufacturing company, such as Croda, to operate in 2030. In setting them we considered all stakeholders in our ecosystem and strive to adopt best practices in environmental protection, labour and human rights, ethics and sustainable procurement.

Several of the targets and KPIs that we have grouped and reported as Fundamentals in the past are more aligned with our climate, nature and society impacts. They have therefore been reported on the relevant progress page at the end of each section.

As we become a partner of choice for our customers and suppliers in delivering on this strategy, we are identifying the priority areas for action:

- Sustainable Supply Chains: targeting material upstream scope 3 reductions and minimising our impacts on nature.
- Transformational Sustainable Innovation: creating a product portfolio that supports our customers' Net Zero and Nature Positive goals.
- Positive Downstream Impacts: working with stakeholders to improve people's lives and identify how we can maximise the positive impacts of our products during their use and at end of life.



→ See page 8 for the UN Sustainable Development Goals and Targets we have connected to our Commitment wheel and business models

How we enable our strategy

To ensure Croda and our value chains are ‘match fit’ to deliver on our Commitment, we have focused on two key enablers: data and employee competency building.

Transparency and traceability of our supply chains...

As a speciality ingredient manufacturer we source bio-derived and mineral materials. We believe sustainability begins at the source, which makes raw material traceability and data transparency important factors in our strategy. Such insights help us to identify potential risks linked to environmental degradation and human rights, and then seek to minimise those impacts. For example, we require suppliers to communicate the country and sub-national region of origin for all our materials so we can better understand risks linked to each and develop a relevant strategy.

...for our customers

Our customers and other stakeholders increasingly expect a high degree of transparency regarding the ingredients they use. We work across extremely complex supply chains for many thousands of raw materials and products to deliver this. We are already starting to provide product-specific Life Cycle Assessment (LCA) data and, in 2023, launched product carbon footprint (PCF) data to our Beauty Care customers (see case study). This will help our customers, and ultimately end consumers, to make more informed choices.

Engaging employees and building sustainability competences

Croda has always prioritised investment in the development of new knowledge and skills to help our people to thrive and, as a result, are continuously adding value to our customers and maintaining our ability to attract and retain the best talent. In 2023, we developed the framework for a Sustainability Academy to help employees acquire the skills they will need to operate in a rapidly changing context, help Croda deliver our Commitment and further their career development. We are piloting the programme in 2024 with senior leadership and commercial teams, with a view to rollout in 2025.

“Our aim is to provide everyone at Croda with an up-to-date understanding of sustainability, building the competence of our employees globally so we can deliver our Commitment, and at the same time help them acquire new skills to further their career prospects.”

Aris Vrettos

Director, Sustainability Strategy and Transformation



Product carbon footprints (PCFs):

Croda has developed a tool to automate the calculation of cradle-to-gate product carbon footprints for the majority of our Beauty Care portfolio. Launched to customers in the summer of 2023, and aligned with the guidance from Together for Sustainability (TfS), it covers scope 1 direct greenhouse gas emissions, scope 2 emissions, scope 3 emissions for raw materials, plus data on transport and other areas. “The aim is to create a validated methodology to measure the carbon footprint of ingredients at a product-specific level,” says Cara Eaton, Sustainability Director, Consumer Care. “The availability of far more granular data is incredibly valuable to Croda and our customers, moving us beyond compliance. We can identify emissions hotspots within our portfolio and put decarbonisation strategies in place, and customers can make more informed decisions as they work towards their own targets.”



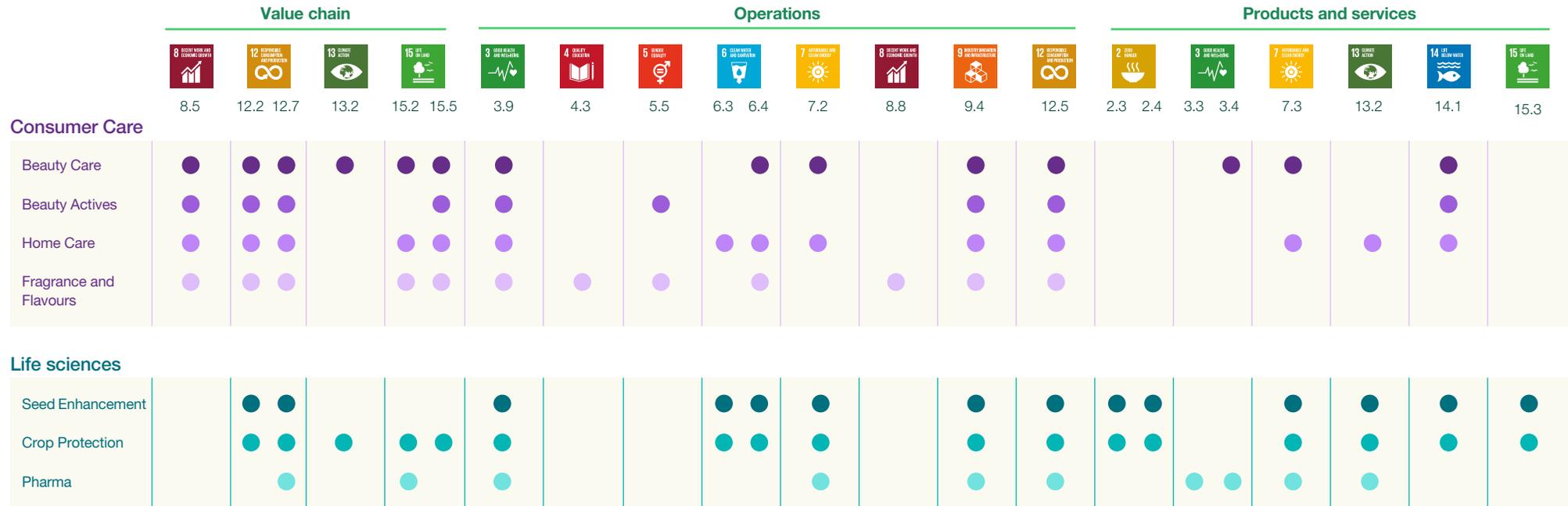
ASD Impact Fund:

We are contributing to the first Impact Fund of Action for Sustainable Derivatives (ASD), developed in partnership with Tides Foundation and Kaleka, launched in March 2022 with five other ASD members. Its purpose is to find ways to sustainably restore the landscape and support socioeconomic growth in a priority region (Central Kalimantan, Indonesia) with strong links to our palm derivative supply chain. In its first pilot year Kaleka has reported meeting its objectives, including recruitment of >600 farmers to become RSPO certified and 500 hectares of forest protected through a social forestry scheme. This project is a great example of the overlap between climate, nature and social impact through one investment programme, and Croda continues to commit to the Fund in 2024.

 To read more visit:

<https://sustainablederivatives.org/our-impact>

Sustainability strategy: Connected with the SDGs



Our ratings and frameworks

While our focus is on delivering impact, we also understand the value of external ratings to our stakeholders. We use the submission and feedback processes from ratings such as MSCI, Sustainalytics, EcoVadis and CDP to learn and improve our approach across the sustainability agenda.



As this report goes to press, we have been awarded Leadership status (A-) by CDP across our 2023 Climate, Water and Forest programs, confirming we are on track with our ambitions to be a sustainability leader.

Climate Impact

We are working hard to reduce emissions across our value chain

Our investments and actions across Croda are driving emissions reductions, in line with our scope 1 and 2 Science Based Targets (SBTs)

Our 2023 scope 1 and 2 emissions are tracking well below our 1.5 °C SBT, continuing the general trend of falling emissions since 2018. However, of note in 2023 is the reduction in output volumes as a result of the challenging business environment. As volumes improve we will need to continue to work hard to deliver decarbonisation projects to ensure this trend accelerates.

As we work towards becoming Climate Positive by 2030, our activities will increasingly focus on key areas such as sustainable sourcing, applying innovation to reduce operational emissions, and understanding and responding to the downstream impacts of our products.

A milestone year for climate change

2023 was the warmest calendar year since 1850, with record levels of emissions from burning fossil fuels and land use change and the first time every day has exceeded 1°C above the 1850-1900 pre-industrial level. More importantly it was marked by high frequency and severity extreme weather events across all geographies which severely affected human health, ecosystems and infrastructure. As these gave us and everyone a glimpse of what climate instability will look like, we have to accelerate our efforts and focus even more on the implementation of our programme to be Climate Positive.

Engagement and close collaboration with suppliers are critical to achieve our ambitious goals on sustainable sourcing and scope 3 decarbonisation. More responsible sourcing is about making the best use of available resources for our products, while minimising or eliminating negative impacts, and the use of renewable raw materials is part of our pathway.

Previously we have identified the challenges involved in quantifying our upstream scope 3 emissions, and in particular how we could move to a more granular level of data. We have continued engaging with suppliers to gather timely and relevant data. In 2023, for the first time, we have started to receive primary emissions data from suppliers, and we are targeting primary data from suppliers covering at least 20% of our purchased raw material volumes by the end of 2024.

Industry engagement: Together for Sustainability (TfS)

We continued to collaborate with the Together for Sustainability initiative, a member-driven global network of leading chemical companies committed to sustainability improvements. In 2023, TfS launched product carbon footprint (PCF) guidance and a new platform to help suppliers to the industry share primary data, which we are utilising to support our emissions reporting and decarbonisation efforts.

Whilst already aligned, we are working to fully assure that the TfS guidance is applied in our approach to generating PCF data for our products. This includes receiving comparable data from suppliers for efficient sustainability reporting and working with suppliers to quantify PCFs in a consistent way.

We rely on external ratings to help us to assess and partner with the most sustainable suppliers. We set high standards for our key suppliers to:

- Achieve an EcoVadis score above 45
- Have an approved Science Based Target (SBT) or equivalent public target
- Complete CDP assessments on Climate, Water and Forest

Protecting forests, high-carbon stock grasslands and biodiversity: ISCC certification

Our Seraya, Singapore site is the first to have been certified ISCC – International Sustainability & Carbon Certification – and we are in the process of certifying further sites. This will further help monitor our agri-based raw material carbon footprints, verifying traceability, and implement improved socioeconomic and ecological practices, keeping our supply chains deforestation-free and avoiding the conversion of biodiverse grassland.

Climate Impact continued

Decarbonising through sustainable innovation

Reducing operational emissions

In 2023 our businesses developed scope 1, 2 and 3 decarbonisation roadmaps for the first time, factoring in business growth and identifying gaps and opportunities to drive innovation and portfolio management beyond the site decarbonisation roadmaps, to ensure we can achieve our Science Based Targets through sustainable business growth.

Our scope 1 and scope 2 emission reductions are on target. 2023 saw Croda manufacturing sites around the world including Brazil, Denmark and France making excellent progress, achieving close to carbon neutrality. This has been achieved by methods including self-generation of renewable energy, the use of biogas, and waste-to-energy sources of fuel. Our new site at Dahej in India is being constructed using the latest low carbon technologies and approaches, and is set to be carbon neutral from the first day of manufacturing.

2023 Internal Carbon Price:

£124/tonne CO₂e

(2021: £55/tonne CO₂e)

Designing new low-carbon ingredients

Our research teams work closely with supply chain experts to maximise the use of bio-based feedstocks in new product development. This helps to ensure our entire product portfolio moves towards our bio-based organic raw material target of 75% by 2030. We also focus on reducing the impact of our ingredients during the full product life cycle by, for example, increasing biodegradability, improving purity and lowering the environmental footprint of products.

As our understanding of the holistic environmental impacts of our ingredients increases through our LCA work, the nature impacts attached to the use of bio-based raw materials can be quantified and considered alongside climate effects. Our innovation will focus on maximising the climate benefits of bio-based whilst minimising potentially negative nature impacts.

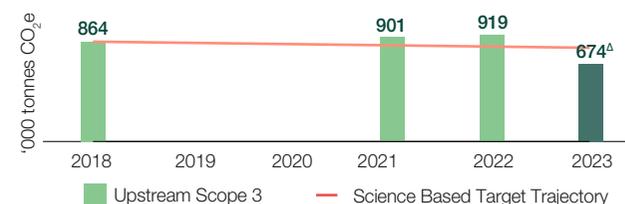
This includes identifying non-virgin feedstocks such as second generation waste or by-product based, working to ensure sustainable certifications are in place for all bio-based raw materials and engaging with suppliers to improve agricultural practices (see page 15).

Our sites are taking action to decarbonise our Operations globally:

- Our Atlas Point site at Delaware, USA has reduced its CO₂ emissions by 18% since 2018 and increased its landfill gas burning capability in 2023 to replace part of its natural gas demand.
- Our site in Chocques, France uses steam generated from a waste incinerator for its heat.
- Incotec's new highly sustainable Aquarela site in Holambra, Brazil has 788 solar panels installed on the roof, aiming to generate 100% of its electricity consumption.
- Our Mevisa site in Spain has installed and commissioned a heat recovery system and solar panels that led to a reduction in annual CO₂ emissions of 15%.
- Our Ditton site in the UK upgraded its electricity supply to allow for more electrification onsite, reducing natural gas consumption.
- In 2023, our Latin American manufacturing site at Campinas, Brazil increased the amount of bioethanol consumed in its biomass boiler, resulting in less natural gas consumption.
- Renewable gas purchases have helped to reduce scope 1 emissions in our Asia operations, as well as increased purchases of renewable electricity to reduce scope 2 emissions.
- Our Singapore site has also switched from steam heat tracing to electrical, using less natural gas.
- In 2023, our Alabama, USA site purchased more Renewable Energy Certificates (RECs) to cover more of its electricity consumption.

Upstream Scope 3 Emissions

In 2023, we increased the transparency of our scope 3 emissions internally, creating a scope 3 dashboard, and moving from annual to quarterly scope 3 reporting. Calculations are now automated, providing more granular data to more people more regularly. This assists in sustainability-focused decision-making for procurement, supply chain and operations teams, as we can monitor and understand progress more closely, observing trends and developments on a quarterly basis, and identifying possible savings. The data we are gathering and sharing is used to create customer-facing PCFs (see page 8).



Scope 1 and 2 GHG emissions



Net Zero Roadmaps to take us further, faster

2024 will see us develop Net Zero Roadmaps for key technology platforms, identifying opportunities to reduce scope 1, 2 and 3 emissions associated with these product families by 90% by 2050. We believe it is essential to start planning for beyond 2030, so we are ready to support our customers. Delivering Net Zero will require us to transform our product portfolio and this will take significant time to plan and execute. We will approach this work in a collaborative fashion with all relevant stakeholders, co-ordinated by cross-functional teams in Croda.

Since 2018, our baseline year, our total scope 1 and 2 greenhouse gas (GHG) emissions have reduced by 33%. Within this, scope 1 emissions have reduced by more than 16% and we have seen a greater than 69% reduction in scope 2 emissions. Our scope 1, 2 and upstream scope 3 emissions have received limited assurance by KPMG (see page 25). www.croda.com/sustainability.

^A indicates where metrics have been assured (limited assurance) under ISAE (UK) 3000 and ISAE 3410 by KPMG, our independent assurance provider and reflects the position for the year ending 31st December 2023. See www.croda.com/sustainability for details.

Climate Impact continued

Understanding our downstream scope 3 impacts

We are committed to helping all our customers to achieve their Net Zero targets, which will include both upstream and downstream scope 3 emissions. We can help by delivering low carbon footprint ingredients and also by reducing a customer’s downstream scope 3 emissions. We can do this by reducing the emissions associated with a customer’s operations (e.g. enabling lower temperature processing) and by providing in-use benefits for a customer’s customer: the end consumer.

Our new industry-leading **Downstream Scope 3 Inventory**, developed in partnership with Accenture will enable us to move in that direction, in partnership with customers and end consumers.

The inventory encompasses categories such as the transportation of products downstream through to end of life. It enables us to quantify and account for the benefits of using bio-based raw materials in our manufacturing, demonstrating the emission-reducing benefits of their use in Croda ingredients.

Gaining these insights is the start of an important process to better understand and so reduce these impacts. It highlights that the vast majority of our emissions downstream (59.9%) are generated through the indirect use of Croda products: that is, the emissions are generated by the use of products that contain a Croda ingredient, for example, the emissions associated with generating hot water for a shower, when a consumer is using a shampoo containing Croda ingredients. Whilst this category will be out of scope for our net zero target, it is important to be able to work with customers on solutions to reduce these indirect use phase emissions as we transition towards a net zero economy.

The most significant downstream category in scope for our net zero target is the end of life treatment of Croda’s ingredients. A large part of this impact is the effect of methane being released at end of life, and further work is required to model the split of methane and CO₂ in more detail. However, our use of bio-based ingredients avoided 16,413 tonnes of fossil CO₂ being emitted to atmosphere at end of life in 2022.



From Carbon Cover to carbon as a claim

As part of our 2030 Commitment we identified the importance of increasing the carbon ‘benefit in use’ of our ingredients through our Carbon Cover target (page 13), which includes downstream scope 3 emission reduction. Now, through our LCA work and collaborations, our innovation teams are prioritising ‘carbon claims’ when developing new ingredients, alongside performance and other claims. Examples of carbon claims include reducing the overall product carbon footprint of a customer’s product by using Croda’s ingredients compared to alternatives and reduced downstream scope 3 emissions during the use or disposal of the customer product.

Avoiding emissions: Crobiotic 100

With malodours in clothes and fabrics often caused by bacterial build up, eliminating the bacteria can mean reduced odours and so less need to wash. Probiotic ingredients from our Home care business neutralise odours, giving consumers the potential to wash items less often and therefore save on water usage, energy consumption, and related emissions.

Downstream scope 3 categories for Croda that are in scope for our net zero target



The greatest emissions are associated with the indirect use of Croda ingredients



Legend:
■ Indirect use of sold products (out of scope for Net Zero target)
■ All in-scope downstream scope 3 categories

Climate Impact continued

Climate Impact in action



Using LCA for innovation in bio-based crop protection ingredients

The polymeric dispersant Atlox™ 4913 is used widely in agrochemical products. An LCA study across multiple manufacturing sites examined the impacts of changing key raw materials from petrochemical to commercially available bio-based alternatives. The first raw material showed a clear climate change benefit, reducing GHG emissions by over 25% with minimal other environmental impacts so the decision was taken to make this transition in consultation with the market. However, for a second raw material the LCA demonstrated a significant burden shift on land and water use if switched, and highlighted the environmental burden from a third raw material. These have led to dialogues with suppliers to reduce them. The LCA also explored the climate change impact of a new processing technology designed to increase efficiency, and to include downstream customer-generated emissions. This demonstrates the potential of LCAs as a valuable tool for innovating and re-designing products aligned with Net Zero agriculture.



Transitioning our portfolio to bio-based ingredients

Moving to bio-based raw material sources as we work toward our target of 75% of our organic raw materials to be bio-based by 2030 can provide climate benefits due to the carbon that is sequestered from the atmosphere while they grow. 2023 was the first year we sourced 100% bio-based monopropylene glycol (MPG), an important raw material, for use at our manufacturing site in Spain. The move from petrochemical sourced MPG resulted in a 33% reduction in the carbon footprint of this raw material as it reaches our gate. In 2023, this led to a reduction in our scope 3 purchased good and services emissions of more than 750 tonnes of CO₂e associated with purchasing this material at this site. In 2024 we will expand our purchasing of this raw material for use at other Croda sites.



Process innovation for decarbonisation: reducing cycle times from 10 hours to two minutes

A multidisciplinary team has created a novel continuous process to produce Consumer Care ingredients reducing cycle times from 10 hours to two minutes. The continuous production plant has delivered annual savings of 360 tonnes of water and 86 tonnes of CO₂e relative to the batch process, equivalent to 4,500 bathtubs of water and 9,000 electric car charges. The plant itself has a 66% smaller footprint relative to a batch reactor, meaning less steel and concrete are used, lowering the construction carbon footprint. Smaller modular units can now produce commercially relevant quantities of products, with new modules only added when needed. In fact, a 'distributed manufacturing' model is now possible: building small yet competitive units across the world to meet local demand, so reducing shipping and environmental impacts. This project, part-funded initially by Innovate UK, saw Croda partner with CPI, NiTech and Cambridge University to develop the technology. We are very excited to be recognised for this achievement with two industry awards: the Innovation Award from the UK Chemical Industry Association; and the EFCE European Process Innovation Award.



Enabling best practice: buyer training and supplier engagement

In 2023, we launched a training programme for Croda buyers on sustainability and engaging with our supply chain, delivered in partnership with EcoVadis and using our Together for Sustainability membership platform. This has enabled our procurement teams worldwide to educate and challenge suppliers in our efforts to achieve our 2024 sustainability milestones. We also held supplier events in 2023 with a strong focus on sustainability. Our Thane site in India hosted an in-person event for more than 50 suppliers, with a major focus on training towards the EcoVadis platform, carbon reduction and ingredient traceability. This programme has enabled Croda to build its inventory of primary upstream scope 3 data from suppliers, and identify the steps to deliver more transparent and traceable agri-based raw material supply chains beyond palm derivatives (see page 15).

Climate Impact continued

Climate Positive

Key	
Target achieved	
Target on track	
Target requires additional focus	
Target challenging to achieve	
Fundamentals	

Objective and targets	Status	Milestones and metrics	Status	2023 progress
<p>Reducing emissions</p> <ul style="list-style-type: none"> By 2030, we will have achieved our SBTs, reducing scope 1 and 2 emissions by 46.2% from a 2018 baseline, in line with limiting global warming to 1.5°C, and reducing upstream scope 3 emissions by 13.5% Thereafter, by 2050 we will be a Net Zero organisation 		<ul style="list-style-type: none"> A reduction of 25% in 2018 absolute scope 1 and 2 emissions by the end of 2024 All Croda locations to have a decarbonisation roadmap by the end of 2022 		<ul style="list-style-type: none"> Absolute scope 1 and 2 emissions have reduced by 33% since 2018, and we are on track to achieve our 1.5 °C scope 1 and 2 SBT Our upstream scope 3 emissions were 674,234 tonnes^Δ in 2023, 22% lower than 2018 Our business teams developed decarbonisation roadmaps to 2030, covering scopes 1,2 and 3.
<p>Carbon Cover</p> <ul style="list-style-type: none"> By 2030, use of our products will avoid four times the carbon emissions (scope 1, 2 and 3) associated with our business – our 4:1 Carbon Cover 		<ul style="list-style-type: none"> Two million tonnes of CO₂e emissions savings delivered through use of our products by the end of 2024, which will be externally verified 100% of our product portfolio evaluated for downstream scope 3 impact by the end of 2024 		<ul style="list-style-type: none"> 812,620 tonnes CO₂e^Δ were avoided through the use of ingredients attached to verified case studies giving a Carbon Cover ratio of 1.05:1^Δ (2022: 0.66:1). We have developed an industry-leading downstream scope 3 inventory to understand our hotspots and impacts, enabling us to support our customers as they work towards becoming Net Zero
<p>Sustainable innovation</p> <ul style="list-style-type: none"> By 2030, over 75% of our organic raw materials by weight will be bio-based, absorbing carbon from the atmosphere as they grow 		<ul style="list-style-type: none"> 71% (rolling three-year average) of our organic raw materials to be bio-based by the end of 2024 		<ul style="list-style-type: none"> Our use of bio-based raw materials remained steady at 59%^Δ (2022: 59%) We are reviewing our 2024 milestone in recognition of our raw material portfolio following the divestment of PTIC in 2022, while maintaining our ambitious 75% target for 2030
<p>Sustainable sourcing and partnerships</p> <ul style="list-style-type: none"> Ensure all key suppliers are responding to EcoVadis and engaging with us to improve practices 		<ul style="list-style-type: none"> By the end of 2024, all key suppliers will be required to achieve a minimum of the average score from EcoVadis (or equivalent) or will have an action plan with timelines to close gaps By the end of 2024, key suppliers representing at least 50% of our raw material volumes will be required to sign up publicly to SBTi or equivalent carbon reduction targets By the end of 2024, suppliers of crop-based raw materials will be required to provide supply chain transparency in a fully traceable and certified sustainable manner 		<ul style="list-style-type: none"> Key suppliers representing 83% of targeted spend have been evaluated using EcoVadis and corrective actions have been assigned and prioritised Key suppliers representing 19% of our raw materials volumes have made public commitments to carbon reduction with more than half of these suppliers, 14.6% of raw materials volume, signed up publicly to the SBTi Supplier requirements are clearly outlined within the 2022 Croda Supplier Code of Conduct and approximately 36% of crop-based raw materials volume is certified sustainable with mapped supply chains

^Δ indicates where metrics have been assured (limited assurance) under ISAE (UK) 3000 and ISAE 3410 by KPMG, our independent assurance provider and reflects the position for the year ending 31st December 2023. See www.croda.com/sustainability for details.

Nature Impact

Contributing to a Nature Positive future

Our Commitment to be Land Positive has enabled Croda to develop sector-leading understanding of our impacts on nature and we have already commenced the work required to reduce them.

Our long history of using bio-based raw materials means we have a great responsibility to address issues around nature, biodiversity and dependencies on ecosystems. We continue to take action to reduce our impacts on land, water, and other natural resources, promoting a positive restorative approach beyond “doing less harm”.

Taking action now on nature: a global sense of urgency

The Global Biodiversity Framework (GBF) was adopted by 196 countries at COP15: ‘the Paris Agreement for Nature’ in 2022. Since then, significant progress has been made to develop guidance and support for businesses to assess and disclose impacts and dependencies on nature.

At New York Climate Week in September 2023, the World Business Council for Sustainable Development (WBCSD) released guidance¹ on how companies can contribute to halt and reverse nature loss by 2030. This approach was further developed by the World Economic Forum (WEF) with the Sector Transitions to Nature Positive project. Croda contributed to one of their first reports, “Nature Positive: Role of the Household and Personal Care Products”.

Building on Land Positive to contribute to a Nature Positive world

Achieving a Net Zero and Nature Positive future is essential for the health, wellbeing and prosperity of everyone. We are already Land Positive and are on track to meet our 2024 land saved milestone, through the use of our crop and seed technologies.

We announced our aspiration to become Net Nature Positive in 2022 and, since then, have recognised this is a global ambition, defined by the Nature Positive Initiative², in which we have an important contribution to make.

We aim to build on the progress we have already made in the sourcing of bio-based raw materials, reducing deforestation and water impacts, preserving ecosystems, and creating technologies for regenerative agriculture alongside suppliers, customers, partners and industry organisations.

Science Based Targets for Nature (SBT for N)

In the last three years, through our participation in the SBT for N Corporate Engagement Programme, reinforced by our membership of WBCSD, we are maturing our approach. Following the SBT for N methodology, we have made significant progress on our assessment and prioritisation of our impacts on nature, upstream of Croda in our supply chains as well as our direct operations.

In 2023 Croda was selected for the WBCSD Science-Based Target for Nature Preparer Group, a project due to complete later in 2024. We are working with like-minded peers across various industries, nature experts and WBCSD to test the SBT for N methodology and agree on best practices in corporate-driven action.

1. “The Roadmaps to Nature Positive: Foundations for all businesses”, WBCSD September 2023.

2. “Definition of Nature Positive”, Nature Positive Initiative, November 2023.



Nature Impact continued

Our biggest impacts – land use and water

Sustainable sourcing

We continue to strengthen our demands on suppliers to provide ingredient transparency and raw material traceability. These insights help us create more sustainable supply chains by identifying and taking action on potential risks linked to carbon, water, land use change, and human rights. Suppliers are required to share origin detail at the sub-national level for raw materials, helping us to better understand risks linked to each commodity.

Extensive transparency for our palm oil derivative raw materials

Our use of palm-derived raw materials is supported by RSPO supply chain mapping, certification and transparency. In 2023 88.4% of our global palm derivatives consumption was RSPO physically certified by Mass Balance, >99.9% in Europe and the Americas. We continue to face challenges completing the conversion, primarily due to slow market progress in Asia.

We are a founder member of Action for Sustainable Derivatives (ASD)¹ an industry consortium focused on transforming palm derivative supply chains by increasing transparency, monitoring risks, and generating on-the-ground impacts (see page 7, ASD Impact Fund). Working with ASD, our 2022 supply chain mapping covered 99.4% of our total 2022 volumes of palm-derived raw materials. Supply chain transparency saw continued increases in our levels of transparency: 97.7% of these volumes could be traced to the refineries, 95.4% to the mills and 33.5% as far as the plantations (see charts).

1. <https://sustainablederivatives.org/>

We will continue our strong focus on this important supply chain reflected by our CDP score for Forests (Palm Oil) reaching A- (2022: B) and will work to improve our approach in response to changing regulations, for example, the EU Deforestation Regulation (2023) and wider stakeholder expectations.

Sustainably sourcing other bio-based raw materials

Beyond palm, we also seek third-party certification to validate the sustainability of suppliers and their bio-based raw materials. We have accreditations with the International Sustainability and Carbon Certification (ISCC), USDA BioPreferred®, Union for Ethical BioTrade (UEBT), and Sustainable Castor Oil Association (SuCCESS) and are working with suppliers to ensure they can provide the required supply chain transparency and certification to meet our targets.

Environmental stewardship: water is fundamental

The use of water in our own operations is crucial in the production of our ingredients, yet has the potential to negatively impact nature in the local watersheds. Croda has been managing water use carefully for decades aligned with chemical industry best practices, and was externally recognized in 2023 by CDP as we improved our Water report score to A- (2022: B). Globally, by the end of 2023, water saving initiatives across our manufacturing sites contributed to reducing water usage volumes by 35% since 2018 within our direct operations. Our focus now is on reducing the water impact of our operations in water-stressed regions around the world.

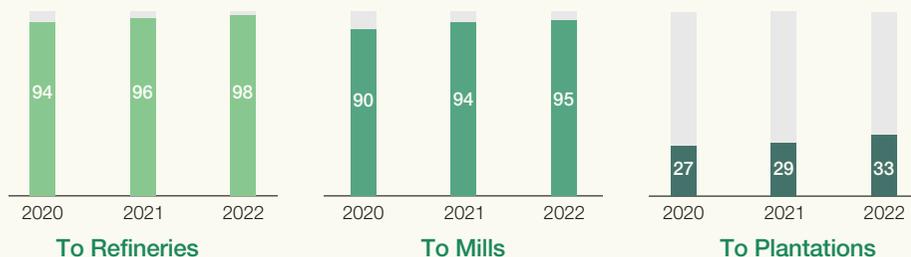
The importance of local roadmaps to reduce water impact

Our Commitment has challenged us to think more holistically about water impact, now aligned with our Nature Positive aspirations, seeking to ensure the more sustainable and responsible use of water resources. We have developed a bespoke Water Use Impact Tool that accounts for local water stress, water displacement effects and water quality in addition to withdrawal volumes, to better assess local environmental impacts associated with our water management practices. To maximise benefit, our water impact target of a 50% reduction in impact by 2030 (from a 2018 baseline) focuses initially on the six Croda locations in recognised water stressed areas of the world. Work continues to enable us to meet our intermediate milestone of a 25% reduction in water impact at these locations by the end of 2024. 4 out of our 6 sites in water-stressed zones are on track to deliver against our water impact target for 2024; the remaining two sites will be further supported in 2024 to maximise our ability to meet the milestone.

Understanding and reducing our ‘water footprint’

Through our work on nature and cradle-to-grave LCA, we have recognised that a significant proportion of our impact on freshwater, like climate, is embedded in our raw materials, bio-based in particular. As we have done for carbon, we are working towards developing a better understanding of our total water footprint and the actions we can take to reduce impacts on nature through freshwater demands that occur throughout our value chains. Over the last four years our LCAs also help to quantify the water impacts through the use and disposal of our products by proactively identifying water-intensive stages, materials and processes. Our total avoided water use in 2023 linked to the sales of ingredients from these case studies is approaching 292 million m³ and enable us to support our customers.

Traceability levels across our palm derivative supply chain



Sustainable Palm Index (SPI): leaders in our field

The SPI is a self-disclosure assessment with independent verification based on desk research for suppliers of palm-based derivatives, aimed at assessing the level of commitments, processes and achievements in terms of sustainable sourcing practices, based on NDPE (No Deforestation, No Peat, No Exploitation) principles. Our 2022 Sustainable Palm Index (SPI) evaluation scored 99/100, a ‘best-in-class’² rating for the third year running and the highest scoring participant in the category.

2. Best-in-class practices are the highest category for suppliers with a score above 80/100, noting the average SPI score for category in 2022 was 49/100.

Nature Impact continued

Delivering crop science and regenerative agriculture solutions

Through our crop and seed businesses, we support the transition to more sustainable agricultural practices – to help build resilience to climate change and nature loss, reduce the negative impact of land cultivation and support food security.

Our technologies enable farmers to use less land

Our crop technologies and seed treatments help our customers' products improve crop yields, in turn reducing the land area required to grow one tonne of crop. We express this as land saved, a key element of our ambition to become Land Positive by 2030. In 2023, combining the yield benefits from our seed coatings, crop adjuvants and bio-stimulants, the total land saved was 151,038 hectares, equivalent to 211,537 football pitches (2022: 161,431 hectares), and 58,815 hectares above our 2019 baseline. 69% of our land saved in 2023 is in Asia and Latin America, maintaining our focus on areas most pressured for food productivity and those facing the greatest threat of deforestation. Our 2024 milestone, while challenging to deliver, remains our focus this year.

Crop science breakthrough innovations directed towards more sustainable agriculture

With a strong record of crop science innovation, the pace of breakthrough launches has accelerated as we close in on our 2024 milestone, with nine breakthrough innovations launched since 2020, including four in 2023 (see opposite). A new whitepaper 'Formulating Biologicals for agriculture' was released, discussing the opportunities that biologicals provide in crop protection, alongside the formulation and delivery challenges.

Beyond Land Positive, our businesses have also engaged with customers to increase transparency in support of their own environmental assessments. Our focus has been on Life Cycle Assessments and biodegradability.

Life Cycle Assessments helping customer transition to more sustainable product portfolios

Our bespoke LCA tool analyses the environmental impacts of ingredients, from raw material source to end of life in our customers' products. In 2023 we have completed two full 'cradle-to-grave' product LCAs and 33 'cradle-to-gate' LCAs in response to customer demand.



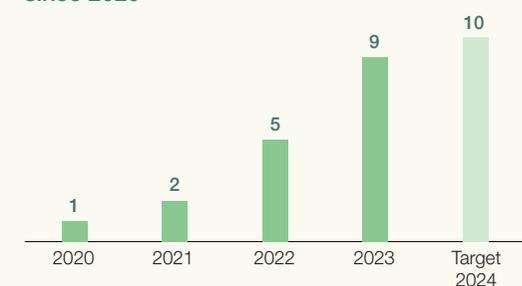
A pathway to circularity: understanding biodegradability

We have assessed the end-of-life impacts of many of our ingredients as we recognise our responsibility for what may be impacting nature through wastewater containing our ingredients. Understanding biodegradability, a substance's decomposition potential, furthers our circular approach for Croda ingredients, with manufacturers, consumers and regulatory authorities increasingly expecting biodegradability information. Our Consumer Care business has prioritised biodegradability transparency information for its customers, generating new data on hundreds of its ingredients and opening the Iberchem Biodegradability Investigation (IB-BI) laboratory, a new internal testing facility to determine the biodegradability of fragrances, in line with OECD test method guidelines.

A new source of natural rubber for more sustainable mobility

Incotec has been collaborating with a major customer to bring a new crop to market to produce natural rubber, so replacing extraction from rubber trees in tropical forests. Incotec completed the development of seed priming and coating for Guayule, which requires far less water than traditional crops and can be grown in desert-like climates in the US, Mexico and other locations.

Breakthrough technologies brought to market since 2020



2020 & 2021:

- 🕒 Microplastic-free seed coatings

2022:

- 🕒 Drought resistant seed coating
- 🔺 Symiro biostimulant to promote crop growth and yields in soybean
- 🔺 Potato seed priming/pelleting¹

2023:

- 🕒 Tree seed production
- ⊕ Seed priming/coating for Guayule alternative rubber crop
- ⊕ Seed treatment for commercial fibre production
- 🚚 Atlox BS-50 delivery system supporting the move to biopesticides

1. 3rd breakthrough technology for 2022 identified during 2023 and added to metric.

Nature Impact continued

Nature Impact in action



Bringing more sustainable sourcing to pharma supply chains

In 2023 we continued our efforts to help the pharmaceutical industry to move towards more sustainable and ecologically-friendly supply chains for vaccine adjuvants. This included partnering with Botanical Solutions Inc (BSI) to produce pharmaceutical grade QS-21, enabling production of next-generation adjuvant systems for new vaccine development. Until now, QS-21 has been produced by harvesting mature soap trees and extracting it from their bark. By contrast, BSI's adjuvant is derived from plant tissue culture, through an innovative process of in-lab growing and extraction. In October 2023, BSI and QS-21 won the Most Sustainable Product or Service award at the Southern Sustainability Partnership's Big Sustainability Expo 2023 in the UK.



Replacing soft wood with regenerative growth

In 2023, Incotec completed its first commercial seed treatment for a project that seeks to develop a new crop for commercial fibre production, replacing the consumption of soft woods. This new crop species was identified as a 'permanent perennial' with benefits including 'regenerative' growth to enable multiple cuttings over a 25-year life span, providing high quality fibre suitable to replace soft woods, and preventing deforestation by providing an alternative source. This project also demonstrates high water use efficiency.



Speed up reforestation vital in an era of ecological decline

In 2023, our Incotec business signed a Memorandum of Understanding with tech-driven reforestation company Land Life to work on a pioneering project to integrate smart coating technologies on tree seeds. In a world of ecological decline, this aims to help scale-up reforestation globally: Incotec 'smart tree seeds' help to simplify logistics, expand the scale of operations and reduce costs. The first coated seeds will be introduced in Colorado, USA, Victoria, Australia and Northern Spain. In September 2023, Incotec won the 2023 Sustainability Award for this project at the 8th edition of the Plantum Sustainability Awards. The jury praised it as a concrete restorative initiative that plays a crucial role in addressing a global issue.



Supporting the shift to more sustainable biopesticides: Atlox™ BS-50

Microbes can have beneficial effects throughout agriculture, with biopesticides probably the most well-known example. These are used to control insects (bioinsecticides) or pathogens (biofungicides) – Croda produces neither. Atlox BS-50 is a new Croda solution that supports a wider-scale transition to bio-based pesticides, so helping to reduce negative environmental impacts. A ready-to-use wettable powder (WP) delivery system with solid microorganisms, bacterial and fungal spores, Atlox BS-50 is designed to improve wettability and dispersibility without affecting viability.

Nature Impact continued



Land Positive

Key

Target achieved	
Target on track	
Target requires additional focus	
Target challenging to achieve	
Fundamentals	

Objective and targets	Status	Milestones and metrics	Status	2023 progress
Land use <ul style="list-style-type: none"> Throughout this decade, the land saved through the application of our crop protection and seed technologies will exceed any increase in land used to grow our raw materials by at least a factor of two, and by 2030, we will save at least 200,000 hectares per year more than in 2019 		<ul style="list-style-type: none"> By the end of 2024, the land area saved through use of our technologies will be at least 80,000 hectares per year more than in 2019 		<ul style="list-style-type: none"> We saved 58,815 hectares per year more than our 2019 baseline year, in total saving 151,038 hectares of land Land used to grow our raw materials in 2023 was 44,397 hectares
Crop science innovation <ul style="list-style-type: none"> Through to 2030 we will bring an average of two crop technological breakthroughs to market each year that are in alignment with our SBTs and which help our customers mitigate the impact of climate change and land degradation By 2030, we will have established three new partnerships to contribute to the recovery of compromised farmland and protect biodiversity. We will work with customers, universities and business councils to achieve this 		<ul style="list-style-type: none"> By the end of 2024, we will have brought 10 qualifying technological breakthroughs to market 		<ul style="list-style-type: none"> We brought four technological breakthroughs to market in 2023, which protect biodiversity and mitigate the impact of changing climate and land degradation, bringing our total breakthrough technologies launched since 2020 to nine
F				
Environmental stewardship <ul style="list-style-type: none"> Reduce our water use impact by 50% from our 2018 baseline 		<ul style="list-style-type: none"> Reduce our water use impact by 25% from 2018 baseline by the end of 2024 Eliminate process waste to landfill across our operations by the end of 2024 		<ul style="list-style-type: none"> Water use decreased by 35% versus 2018 reference. 4 out of our 6¹ sites in water stressed zones are on track to deliver against our water impact target for 2024; the remaining two sites will be further supported in 2024 to maximise our ability to meet the milestone. Process waste to landfill has reduced by more than 58% since our 2018 baseline, with only 3 sites contributing >90% of remaining waste to landfill in 2023
Product Stewardship <ul style="list-style-type: none"> Full life cycle assessments (LCAs) for our top 100 ingredients 		<ul style="list-style-type: none"> Complete 40 LCAs by the end of 2024 		<ul style="list-style-type: none"> 2 further full LCAs were completed in 2023 bringing the total to 7 Focus in 2023 has been on completing 'cradle to gate' LCAs as required by our customers, where we completed 33

1. The number of Croda sites in water stressed areas has reduced from 7 to 6 during 2023, following the announcement that our site in Cikarang, Indonesia will close.

👤 People Impact

Having a positive effect on employees, communities and society

Our Commitment to become People Positive by 2030 drives our efforts to continuously improve our impacts on employees globally, on workers in our supply chains and on people in the communities where we live and work.

We aspire to be in a position where our impacts on people and society can be measured and reported in the same meaningful ways as on climate and nature.

Slowing progress towards the UN Sustainable Development Goals

According to the 2023 Global Sustainable Development Report, with only half a decade to 2030, most of the SDGs are far off track. In recent years the global pandemic, conflict, the cost-of-living crisis and the effects of climate change around the world have contributed to unprecedented levels of inequality and the world “has now suffered significant setbacks including in poverty eradication, gender equality, education and eliminating hunger”¹. For Croda this means that our Commitment to become People Positive is now even more critical for all our stakeholders, and we have to amplify our positive impact through our policies, operations and products.

Safety first: looking after our people

Safety is paramount. 65 of our sites worldwide – over two-thirds of the total – were injury free in 2023. After the rise in injury rates that many manufacturing industries saw following the pandemic, our year-on-year Total Recordable Injuries Rate (TRIR) fell from 0.74 to 0.72. While the overall improvement is small, we saw a reduction in the second half of 2023 as we invested more than £27million, approximately 15% of overall investment in our business, in safety improvements and compliance with internal and external standards throughout the year which puts us in the right improvement trajectory as our investments and actions take full effect.

Our supply chains: acting responsibly and sustainably

Building on our comprehensive set of policies and procedures, in 2023 we further embedded monitoring and management of human rights into our governance, conducted a global risk assessment and continued to train and equip our procurement teams. Through our partnerships with ASD and TFS, we also continued to build the capacity of our suppliers to monitor and address human rights and other social issues.

Providing solutions through our products

Living our Purpose, Smart science to improve lives™, means that we develop products that are environmentally sustainable and help address health risks and conditions. In addition to the launch of new, innovative additions in our skin protection and sunscreen product portfolio, we are proud to be involved in the development of potentially life-saving treatments, such as the Calixcoca vaccine to treat substance addiction which was recognised in 2023.

Developing our people’s knowledge and skills

Our operating context is changing continuously and we need to continuously re-equip our people with the tools and capabilities to thrive. In addition to our regular flagship development programmes, 2023 featured programmes that build practical skills around safety leadership and inclusivity. We also launched new training in Generative AI to help people to use these tools effectively and responsibly.

Another significant development was establishing our Sustainability Academy, to be piloted in 2024: a new learning initiative to develop our people’s knowledge and competencies. We plan to bring sustainability to life for all our people – not only supporting our public commitments and published targets but also energising and applying the capabilities and creativity of all our people to amplify our sustainability efforts for customers and society.

1. Global Sustainable: Development Report 2023: Times of crisis, times of change: Science for accelerating transformations to sustainable development, (United Nations, New York, 2023).

People Impact continued

Working on employee wellbeing, diversity, inclusion and reward

Our continued focus is on ensuring our people's safety, wellbeing and prospects, strengthening our culture and making Croda a more inclusive and rewarding workplace where people can live our values anywhere in the world.

Improving employee wellbeing

We had set an ambitious target to achieve a 30% increase in positive responses to wellbeing in our Global Employee Culture Survey by 2030. After a drop in 2022 with the after-effects of the pandemic, impact of Brexit and supply chain issues affecting uptake of wellbeing activities that took employees away from daily work, in 2023 we saw a significant 5% increase. Having reviewed the results in the previous year, in 2023 leaders focused on reprioritising work and reducing workload burden by stopping or postponing certain activities not seen as value-adding and widening support to employees, including access to private healthcare across the UK and wellbeing apps.

We are making progress towards gender balance

In 2023, we increased the number of women in senior positions from 38% to 39%^Δ. This is a leading value within our peer group. While this is positive progress in achieving gender balance ambitions for leadership roles, we did not meet a milestone target for 80% of shortlists for new roles (interview stage) to be gender balanced by the end of 2023. Acquiring talent for specialist roles can be a lengthy process with pools of candidates so small that we are not able to have a balanced shortlist. We also operate in an industry where, despite progress, biased perceptions of the types of careers, skills and experiences needed to be successful persist. We have been working with recruitment agencies, charities and STEM-focused industry groups to myth-bust and highlight the great careers available to all.

Gender identity in the workplace and trans rights

In 2023 we updated our Gender Identity and Gender Reassignment Policy and held a series of activities to promote awareness about transgender identity in the workplace. This included a session in the US with a trans advocacy guest speaker on trans rights in organisations, attended by 200 colleagues, as well as internal communication campaigns on Trans Day of Visibility and International Non Binary Persons Day.

Dealing with non-inclusive behaviour: Active Bystander programme

Active Bystander is a technique to create ways for an individual to tackle non-inclusive or discriminatory language, or anything else they feel needs a polite mechanism to help someone to understand what they have said or how they have acted may not be inclusive. More than 500 colleagues joined Active Bystander sessions, with an external company running master classes.

Ensuring fair income for our people

In 2023 we continued to work with the Fair Wage Network to gain full accreditation for our work in ensuring a fair income for all our employees, providing our data and methodology for audit and certification. Croda has been a global Living Wage Employer since 2021, with an assessment completed in partnership with the Fair Wage Network. We have established a Living Wage in each of the countries where we operate and ensure all employees receive this as a minimum. This commitment was particularly relevant in 2023 as the cost-of-living crisis continued to impact people globally.

Total reward around the Croda world

We also looked at total reward in different countries, including benchmarking pay, working to ensure we are rewarding and supporting our people in the right ways. This includes the global Free Share Plan scheme, which rewards colleagues in lower grades with shares if the Company bonus scheme pays out. We worked with colleagues around the world to help them better understand what their total reward is, and all the different monetary benefits. This has been tracked within our culture survey, and helped move satisfaction overall from 60% to 65%. This also tracks with people feeling they are fairly rewarded within Croda, with that response increasing from 53% to 57%.



Employee training: using AI responsibly

We have all entered a new world in which Generative AI tools are everywhere. Such tools have the potential to provide valuable insights and create exciting opportunities for offering personalised experiences to customers and employees. As with any technology, its use needs to be risk assessed and governed so it can be used effectively and responsibly. In 2023 we launched new training on Generative AI to create awareness and educate our people about using these tools. The training is a prerequisite for employees using such tools in a business context.

^Δ indicates where metrics have been assured (limited assurance) under ISAE (UK) 3000 and ISAE 3410 by KPMG, our independent assurance provider and reflects the position for the year ending 31st December 2023. See www.croda.com/sustainability for details.

People Impact continued

We are helping to improve lives around the world

CRODA
FOUNDATION

Up and down our value chains we are making an impact on people's lives, through use of our ingredients, supporting suppliers and beyond, through the reach of the Croda Foundation.

Improving lives through the use of our products

We deliver impact by channelling our innovation capabilities in Consumer Care and Life Sciences toward sustainable solutions that help people around the world improve their health and quality of life, in collaboration with our partners and customers. In 2023, we continued to provide innovative critical ingredients and technologies for the healthcare sector, such as CAF®09b, a novel liposomal adjuvant exclusively licensed by Croda for personalised neoantigen cancer vaccines to Evaxion, a start-up company using an AI-Immunology. The company announced positive results of their initial phase 2 study in October 2023. Our Consumer Care business, launched Mel[o]stem™, a 100% natural ingredient which reduces sun and age-induced oxidative damage and is the first cosmetic active ingredient targeting both dark and white pigmentation spots. Mel[o]stem™ enables land use and water consumption savings and won the BSB Innovation Award 2023 (Raw Material – Environment Category).

Social impact in our supply chains

Embedding respect for human rights across our business

We are committed to upholding and respecting human rights in our direct operations and supply chains, with comprehensive policies, procedures and partnerships to ensure they are monitored and managed proactively. In 2023, our Ethics Committee, an Executive sub-Committee, included in its scope the respect of human rights legislation in any country in which the Group does business.

In 2023, a cross-functional working group conducted a human rights risk assessment, including experts from different departments and support from an external provider. This is enabling us to: better understand the landscape and the risks connected to human rights; consider existing risks, mitigating measures and blind spots; discuss the likelihood and impact of key human rights risks; and carry out initial prioritisation of risks and actions. Findings have been shared with the Ethics Committee and are also reported in our Modern Slavery Statement for 2023¹.

1. www.croda.com/en-gb/sustainability/non-financial-performance-and-reports/policies-and-procedures/modern-slavery

Supporting our suppliers in human rights and sustainability

At the end of 2023, 83% of Croda's top suppliers had participated in an EcoVadis assessment, where suppliers are required to provide evidence of how they ensure the prevention of human rights violations within their operations and supply chains. All Croda purchasing teams are trained annually on the Croda Due Diligence policy, which requires that suppliers are assessed for risk and participate in EcoVadis assessments. They are responsible for ensuring due diligence is conducted, working directly with their supplier contacts to facilitate assessments and address performance gaps.

Assessment results are shared with other chemical companies through our membership of Together for Sustainability (TfS); members work collaboratively with suppliers to share best practice and help them to improve sustainability practices.

Croda is also a founder member of the Action for Sustainable Derivatives (ASD), a collaborative initiative to transform supply chains by increasing transparency, monitoring risks, engaging with the consumer sector and generating on-the-ground impacts. Through our work with ASD, we identify and address potential human rights violations using a similar policy and approach.

The Croda Foundation: providing healthcare and clean drinking water

The Croda Foundation is an independent charitable company solely funded by Croda International. The Croda Foundation's goal is to sustainably improve one million lives by 2030. In 2023, the Foundation achieved a major milestone. Working with project partners and super-charged by additional funding accepted from Croda, it has now sustainably improved the lives of more than **22 million people in 21 regions** around the world. For example, almost 15 million people in under-served communities in India now have access to healthcare and/or clean drinking water provision they did not previously have. Here are two other examples:

Project Hope (Colombia) provides health services for Venezuelan women and girls who migrate to Colombia for healthcare over fear of losing their babies or their own lives during childbirth if they stay in their home country. Before the Foundation's grant of £200,000, many women were being turned away. In terms of impact, more than 5,000 women gained access to healthcare provision they did not previously have, 17 healthcare workers have been trained, a new ultrasound machine provided, and 87 complicated births facilitated.

By supporting **Blind SA** (South Africa), the Foundation has helped to economically empower a group of blind and partially sighted people through a £71,083 grant for training. In terms of impact, 12 of the 25 participants achieved the industry standard or higher in the flavours and fragrances training. Nine learners are now earning an income through employment or creating their own business, while eight went onto further training.



People Impact continued

People Impact in action



Helping to treat drug addiction in Brazil

Brazil's Federal University of Minas Gerais launched a project in 2015 to support pregnant women who are addicted to cocaine and crack cocaine, helping to address the challenges of quitting. This led to the development of a molecule and formulation in which Croda's adjuvants and excipients purification technology plays a central role in ensuring safe vaccine production. The innovative new therapeutic vaccine Calixcoca triggers an immune response that blocks cocaine and crack from reaching the brain, so numbing the effect. The vaccine, to be administered at rehabilitation clinics, was approved for human trials in 2023 and, if it receives regulatory approval, this will be the first time cocaine addiction has been treated using a vaccine. Chemically produced in a lab, Calixcoca does not require cold storage and is cost effective. It won Europharma's Euro Health Innovation Award in 2023, which promotes healthcare solutions and innovations in Latin America.



Dahej, India: Accommodation, health and family support services, and training

In 2023, Croda India developed and equipped a community for construction workers from other parts of the country and their families at our greenfield site in Dahej, Gujarat state. The goal was to create an inclusive environment that promotes physical and mental wellbeing, prevents ill-health and equips residents with lasting benefits and skills. The site includes water facilities, a dining centre providing subsidised food and snacks, an ambulance and a well-equipped first aid centre, hosting weekly health check-ups from the Gujarat government and supporting blood donations and health awareness programmes. There is also a fully staffed daycare centre for workers' children providing basic primary education classes for over 20 children. Female workers have separate transport to the construction site. Particular focus has been given to safety, with regular awareness and training, safety awards, motivational activities and recognition. Providing better working facilities and support has contributed to the project achieving 1 million safe staff hours at the construction site.



STEM outreach to young people and disadvantaged communities

We have a long history of providing educational opportunities to young people. In the last year, our UK STEM outreach team developed a five-year strategy that focuses activity where it can have the greatest impact, prioritising deprived schools local to Croda sites. We partner with the University of York's Centre for Industry Education Collaboration and its Children Challenging Industry programme, funding an advisory teacher to deliver science lessons in primary schools. Children learn about Croda science linked to the National Curriculum and later visit Croda laboratories. In summer 2023, our Goole, UK headquarters supported a local summer school for children who qualify for free school meals. STEM activities have also been taken up globally: for the last two years, our Atlas Point site in Delaware, USA has supported six children from a local high school to attend a prestigious engineering summer camp at Bucknell University, Pennsylvania.



Reducing risk: prioritising process safety

Process safety is another focus area for SHE, in particular relating to our high hazard sites. We achieved our 2023 target of completing a programme of process safety risk reviews led by peers, with significant support from both site and Group level. For the first time since the pandemic, we hosted face-to-face conferences and workshops for process safety specialists to discuss their experiences and share best practice. Our Process Safety Leaders Academy was also refreshed and is available for all sites online, with hazard assessment training our sites provided in 2023.

People Impact continued

People Positive

Key	
Target achieved	
Target on track	
Target requires additional focus	
Target challenging to achieve	
Target failed to achieve	
Fundamentals	

Objective and targets	Status	Milestones and metrics	Status	2023 progress
Health and wellbeing through our technologies <ul style="list-style-type: none"> By 2030, we will contribute to the successful development and commercialisation of 25% of WHO-listed pipeline vaccines By 2030, we will protect at least 60 million people annually from potentially developing skin cancer from harmful UV rays, through the use of our sun care ingredients 	 	<ul style="list-style-type: none"> By the end of 2024 our technology will be part of at least 10 clinical phase III trials across at least 25% of the WHO-listed pipeline vaccines By the end of 2024 we will protect one million lives from skin cancer through the use of novel sun protection technologies 	 	<ul style="list-style-type: none"> We met our 2024 milestone in 2022 and we continued to make progress towards WHO listed pipeline vaccines as well as launch new projects in non-WHO listed areas 61 million people protected through the use of our sun care ingredients in 2022, achieving our 2030 target By end 2022, three million people protected from skin cancer through the use of novel technologies launched in the last four years, achieving our 2024 milestone
Gender balance <ul style="list-style-type: none"> By 2030, we will achieve gender balance across the leadership roles in our organisation 		<ul style="list-style-type: none"> We are rolling out gender-balanced shortlisting recruitment across Croda, with a target of having 80% of shortlists gender balanced by the end of 2023 		<ul style="list-style-type: none"> 39%^a of leadership roles now filled by women (2022: 38%) We did not achieve our balanced shortlist milestone (see page 20)
Improving more lives <ul style="list-style-type: none"> We will establish and fund a Croda Foundation to help improve one million lives in relevant communities 				<ul style="list-style-type: none"> 22.8 million lives sustainably improved by end 2023 through projects funded by the Croda Foundation
F				
Health, safety and wellbeing <ul style="list-style-type: none"> OSHA Total Recordable Injury Rate in the top 10% for the chemical industry 30% increase in positive responses to the wellbeing areas in our Global Employee Culture Survey 	 	<ul style="list-style-type: none"> Achieve OSHA Total Recordable Injury Rate of 0.3 by the end of 2024 		<ul style="list-style-type: none"> Full year Total Recordable Injury Rate 0.72 (2022: 0.74) 5ppt increase in wellbeing responses to 59% (2022: 54%)
Process safety <ul style="list-style-type: none"> Zero significant process safety incidents per year We will continue to investigate and apply learnings from minor incidents and near misses 		<ul style="list-style-type: none"> Conduct an independent peer review of our Process Risk Reviews (PRR) for high-hazard processes by the end of 2023 		<ul style="list-style-type: none"> 31 out of 31 PRRs have been peer reviewed, 2023 milestone achieved Process Safety Total Incident Rate (PSTIR) 0.101 in 2023 (0.035 in 2022)
Fair income <ul style="list-style-type: none"> Everyone working at Croda locations, including temporary and permanent employees, and all contractors will receive a living wage that is monitored and reviewed annually 		<ul style="list-style-type: none"> All regularly employed contractors will be paid a Living Wage by end of 2024 		<ul style="list-style-type: none"> We reviewed our Living Wage levels in 2023 and made any adjustments necessary in order to continue paying a Living Wage to all employees as per Living Wage comparators provided by the Fair Wage Network We are working with the Fair Wage Network to gain accreditation for our work and to ensure our progress stands up to external scrutiny by the end of 2024
Knowledge management <ul style="list-style-type: none"> Longer-term target under development 		<ul style="list-style-type: none"> 100% of employees will receive a minimum of one week's training per year by the end of 2025 		<ul style="list-style-type: none"> 44% of our global workforce benefited from a minimum of one week's training in 2023 (2022: 23%)

^a indicates where metrics have been assured (limited assurance) under ISAE (UK) 3000 and ISAE 3410 by KPMG, our independent assurance provider and reflects the position for the year ending 31st December 2023. See www.croda.com/sustainability for details.

Sustainability governance

Our approach to governance

To deliver our Commitment to be Climate, Land and People Positive by 2030 and meet compliance requirements in sustainability, we have created robust governance mechanisms and are developing new ones to hold ourselves to account.

In 2023, amended terms of reference for the Sustainability Committee were approved to focus on Executive Committee membership, delivery of public targets, risk and compliance. The Committee met five times this year.

Sustainability at Board level

Given the growing importance of the sustainability agenda to our stakeholders and its core position in our corporate strategy, the Board approved the creation of a Board-level Sustainability Oversight Committee (BSOC) for 2024, to be led by Chris Good, Non-Executive Director. The new Committee will create additional capacity at Board level to give due attention to this growing area of governance and develop the ESG competency of Board members. BSOC met for the first time in January 2024.

Sustainability linked to incentives

Non-financial metrics account for 30% of the long-term incentive plan for senior management.

For the first time in 2023, a sustainability target was included in the annual bonus scheme for all managers and leaders, accounting for 10% of the plan.

For more details of our approach to governance of the sustainability agenda, use this QR code for more on croda.com.



Board leadership

The Board has ultimate responsibility for monitoring and challenging our sustainability strategy, including overall accountability for the risks and opportunities associated with the climate, nature and social impacts of Croda's business. They take into account the needs of all stakeholders in guiding delivery of the strategy.



Impacts in our supply chains

The majority of our negative impacts on planet and society are upstream in our supply chains. Through proactive management of our product portfolio, increased engagement and transparency of data from suppliers, and direct interventions/investments we aspire to more positive impact sourcing.



Embedded ownership

In our new, simplified matrix organisation, accountability for delivery of the strategy is embedded across the Company, monitored by the Sustainability Committee, and supported by Group Sustainability, our in-house centre of excellence.



Impacts through our products

Our customers and markets demand ingredients from Croda that do more than just provide lower impact raw materials for their products; the use of our products can contribute to positive impacts and minimise other negative impacts at end of life.

Assurance and regulatory compliance

Limited assurance of climate and diversity KPIs

In 2023 we engaged KPMG to provide us with a limited assurance opinion on our climate and gender diversity KPIs, as listed on the right hand side of this page. This decision was taken in part to prepare for future regulatory compliance (see CSRD section on this page) but also to aid internal decision-making now and increase the rigour of our data collection and reporting processes. By starting the assurance process now, and embedding new processes required, we are getting ahead of the regulation, ensuring we follow best practice, increasing our readiness to these new regulatory demands while promoting continued confidence among customers and investors in the numbers we are reporting.

KPMG's work includes looking at our reporting methodologies. In the past, our scope 1, 2 and 3 emissions data have been externally verified, and KPMG has continued to examine these KPIs from a limited assurance point of view. In the last year, however, we have added additional KPIs in areas such as bio-based raw materials, avoided carbon and gender diversity.

The Audit Committee will retain responsibility for overseeing development of the assurance programme for our Commitment KPIs, data and material statements.

Transition plan

The UK's Transition Plan Task Force (TPT) was launched in 2022 to "develop the gold standard for private sector climate transition plans". TPT published its final framework and supporting guidance in October 2023. While clearly demanding, this also reflected many activities and requirements that are already well-established at Croda, and presents new opportunities to enact positive change. We immediately embarked on a detailed review to ensure we can understand the challenges involved and will respond in appropriate ways, leveraging the framework as we develop our own formal transition plan for publication at a future date still to be confirmed.

Task Force on Climate-related Financial Disclosures (TCFD)

We have been reporting against this Task Force since 2020, in advance of regulatory requirements to do so, and have sought to continually improve our response. In our 2023 disclosure, for example, we included further climate-related metrics for our most significant transitional and physical risks. We have also updated our Capex system to allow future tracking of our spend on decarbonisation. In 2024, we plan to review KPIs on climate-related opportunities linked to our products. For more information on Croda's TCFD disclosure, please refer to pages 59 - 67 in the Annual Report.

CSRD compliance and double materiality

In 2023, we engaged Ernst & Young (EY) to assist in a review of the emerging regulatory landscape for ESG reporting to ensure compliance, and build confidence that we understand the challenges and are fully prepared for new ESG compliance requirements in jurisdictions material to Croda in the coming years.

This is leading to significant work during 2024 to continue our preparations for the EU Corporate Sustainability Reporting Directive (CSRD). We want to ensure that we are as effective as possible across all of our internal data capture processes and reporting arrangements. This includes completing our double materiality assessment aligned with CSRD requirements in early 2024, building on our earlier work, and improving internal data collection processes – ensuring we meet the demands of the European Sustainability Reporting Standards (ESRS).

2023 reporting parameters

This report covers the sustainability performance of Croda International Plc for the period 1 January 2023 to 31 December 2023. The scope of this report, and data within it, is all operations wholly owned for the full 12-month period, plus those operations where we have significant management influence due to a majority shareholding.

As of 31 December 2023, Croda employed 5,852 people across 96 locations in 38 countries.

Re-statement of 2018 - 2022

We have re-stated our emissions and energy consumption data for 2018 - 2022. Full details are set out in our Reporting Data Pack www.croda.com/sustainability. These updates reflect our commitment to good quality data and have allowed us the opportunity to improve the completeness of our reporting for arbitration of Renewable Energy Certificates at our site in Atlas Point, along with correcting for small adjustments in raw materials usage at our Singapore facility.

Metrics assured in 2023

- Scope 1 emissions
- Scope 2 emissions (location-based)
- Scope 2 emissions (market-based)
- Scope 3 emissions (upstream)
- Emissions intensity
- Carbon emissions avoided through use of products
- Carbon cover ratio
- % organic raw materials bio-based
- % leadership roles held by women
- % women in the workforce
- % women on the Board

The limited assurance opinion and reporting criteria are available on www.croda.com/sustainability

Fundamentals performance

Our Fundamentals



Starting this year we are shifting towards reporting our impacts, as we progress delivery of our Commitment to become Climate, Land and People Positive by 2030. As a result several of the targets and KPIs that we have grouped and reported as Fundamentals in the past become more aligned with climate, nature and society impacts. They have therefore been reported on the relevant progress page at the end of each section. What remains are a few key Fundamental targets that sit across or alongside these impacts – these are reported here.

Key

- Target achieved 
- Target on track 
- Target requires additional focus 
- Target challenging to achieve 

Objective and targets	Status	Milestones and metrics	Status	2023 progress
Responsible business <ul style="list-style-type: none"> Achieve outstanding CSR performance ratings across all themes within the EcoVadis assessment 		<ul style="list-style-type: none"> Achieve an EcoVadis score of at least 85 by end 2023 		<ul style="list-style-type: none"> Awaiting feedback on EcoVadis submission for 2023: score of 75 in 2022
Quality assurance <ul style="list-style-type: none"> Achieve a 99.5% Right First Time (RFT) rate 		<ul style="list-style-type: none"> Achieve a 99.0% RFT rate by the end of 2024 		<ul style="list-style-type: none"> Ended 2023 with a RFT rate of 98.2%. (2022: 98.3%)

Glossary

Report abbreviations and selected definitions

£m	Million pounds sterling
API	Active Pharmaceutical Ingredient
ARA	Annual Report
ASD	Action for Sustainable Derivatives
Carbon neutral	Elimination of scope 1 and scope 2 GHG emissions at a Croda location (e.g. manufacturing site, office)
CO₂e	Carbon dioxide equivalent
COP15	15 th meeting of the Conference of the Parties to the UN Convention on Biological Diversity
EFCE	European Federation of Chemical Engineering
ESG	Environmental, Social and Governance
GBF	Global Biodiversity Framework
GHG	Greenhouse gas
GRI	Global Reporting Initiative
ISCC	International Sustainability and Carbon Certification
ISSB	International Sustainability Standards Board
KPI	Key Performance Indicator
LCA	Life Cycle Assessment
MPG	Monopropylene Glycol
NDPE	No Deforestation, no Peat, no Exploitation principles
Net zero	Aligned with the SBTi definition: Scope 1, 2 and 3 emissions have been reduced to a residual level (no more than 10% of baseline emissions). Any residual emissions are neutralised by permanent carbon removals to reach net zero emissions.
Organic	Carbon-containing, from renewable and/or fossil sources
OSHA	Occupational Safety and Health Administration
PBT	Profit before tax
PCF	Product Carbon Footprint
Plc	Public limited company

Ppts	Percentage points
PRR	Process Risk Review
PTIC	Performance Technologies & Industrial Chemicals
R&D	Research and Development
RECs	Renewable Energy Certificates
RFT	Right First Time
RSP0	Roundtable on Sustainable Palm Oil
SASB	Sustainability Accounting Standards Board
SBT	Science Based Target
SBTi	Science Based Targets initiative
SBT for N	Science Based Target for Nature
Scope 1	Direct emissions from our own or controlled sources
Scope 2	Indirect emissions from the generation of purchased electricity, steam, heating and cooling. Croda reports using the market based method to quantify scope 2 emissions.
Scope 3	All other indirect emissions that occur in our value chain
SDG	Sustainable Development Goal
SPI	Sustainable Palm Index
SIR	Sustainability Impact Report
STEM	Science, Technology, Engineering and Mathematics
TCO₂e	Tonnes carbon dioxide equivalent
Tfs	Together for Sustainability
TNFD	Taskforce on Nature-related Financial Disclosures
TRIR	Total Recordable Injury Rate
UEBT	Union for Ethical BioTrade
UN	United Nations
UV	Ultraviolet
WBCSD	World Business Council for Sustainable Development
WHO	World Health Organization

Cautionary Statement

The information in this publication is believed to be accurate at the date of its publication and is given in good faith but no representation or warranty as to its completeness or accuracy is made. Suggestions in this publication are merely opinions. Some statements and in particular forward-looking statements, by their nature, involve risks and uncertainties because they relate to events and depend on circumstances that will or may occur in the future and actual results may differ from those expressed in such statements as they depend on a variety of factors outside the control of Croda International Plc. No part of this publication should be treated as an invitation or inducement to invest in the shares of Croda International Plc and should not be relied upon when making investment decisions.

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