



Mondi Group
Sustainable Development
report 2022

Delivering
**SUSTAINABLE
SOLUTIONS**



Contents

How is Mondi
delivering **SUSTAINABLE**
SOLUTIONS?

Mondi is a global leader in sustainable packaging and paper. Our integrated value chain, cross-sector partnerships, extensive technical expertise and broad portfolio of solutions help our customers to make more sustainable choices.

We are investing to expand our capacity, improve efficiency, eliminate waste and tackle emissions. By building on our leading positions, we are amplifying and accelerating the value that our solutions deliver to all of our stakeholders.

Throughout this report, we have highlighted the key questions that our stakeholders ask us and our responses.



Introduction 1-8

Our approach to reporting	2
2022 Highlights	3
External recognition and awards	4
Leadership insights on sustainability	5
Our businesses	7
Where we operate	8

Our Sustainability Approach 9-19

Our global context	10
Industry insights	12
Our Group strategy	13
Our business model	14
Our integrated value chain	15
Mondi Action Plan 2030	17
UN Sustainable Development Goals	19

MAP2030 20-82

Circular Driven Solutions	21-31
- Performance & key learnings	22
- Reusable, recyclable or compostable solutions	23
- Keeping materials in circulation	28
- Eliminate unsustainable packaging together	29
Created by Empowered People	32-44
- Performance & key learnings	33
- Upskilling for long-term employability	34
- Purposeful and inclusive workplaces	36
- Safety, health and mental wellbeing	39
Taking Action on Climate	45-62
- Performance & key learnings	46
- Reduce greenhouse gas emissions	47
- Maintain zero deforestation	54
- Safeguard biodiversity and water resources	58
Built on Responsible Business Practices	63-82
- Environmental performance	64
- Human rights	71
- Communities	74
- Procurement	78

About this report 83-100

Topics discussed by the Sustainable Development Committee	84
Sustainability governance	85
Stakeholder engagement	88
Materiality	90
Reporting standards and scope	92
Independent Assurance Statement	95
Glossary	97
Contact information	100

Our approach to reporting

This report provides a comprehensive overview of our approach to sustainable development and our performance across our Mondri Action Plan 2030 (MAP2030) commitments and targets.

The Group's Russian operations have been classified as held for sale and, since June 2022, reported as discontinued operations. For relevant MAP2030 targets, which have been revised to reflect ongoing operations, we have included an explanation for the changes.

ERM CVS has provided assurance on selected information and key performance indicators and confirmed the report is in accordance with the GRI Universal Standards and the Sustainability Accounting Standards Board (SASB) Sustainability Accounting Standard for the Containers & Packaging Industry.

Alongside this report, our suite of other reporting documents is intended to meet the interests and reporting requirements of a range of different stakeholders. Find the full suite listed on the right.

Navigating our suites of 2022 reports

Consolidated performance data

A comprehensive data file is available in excel or pdf for download, which shows our key performance indicators in line with MAP2030 for the period 2018 to 2022 (unless otherwise indicated).

 [Click to download excel file](#)

 [Read more online](#)



GRI & SASB Index

The report has been produced in accordance with the GRI Universal Standards and the SASB Containers & Packaging Industry Standard. There is also a separate GRI biodiversity disclosure document available.

 [Read more online](#)

 [GRI biodiversity disclosures, read more online](#)



Sustainable Development Goals (SDGs) Index

Our strategic approach to the SDGs is included in the body of this report. In addition, a separate detailed index is available, which maps the SDGs and their respective targets against the contents of this report, including references to where supporting information about our contributions to each target can be found.

 [Read more online](#)



Stakeholder Engagement Index

This index provides detailed information about our stakeholder engagement, including why we engage different groups, how we engage with them, what topics we engage on and the action we have taken.

 [Read more online](#)



Integrated report

Our 2022 Integrated report provides a balanced overview of Mondri's 2022 performance, including financial results and progress against our strategic objectives. It also includes our reporting in line with the Task Force on Climate-Related Financial Disclosures (TCFD).

 [Read more online](#)



2022 Highlights

CIRCULAR DRIVEN SOLUTIONS



82%

of our revenue is from packaging and paper products that are reusable, recyclable or compostable based on our Path to Circularity Scorecard criteria

4%

reduction of absolute waste to landfill from our manufacturing processes since 2020

234

products assessed in our Product Impact Assessment life cycle tool

Circularity Guidelines

developed in collaboration with 4evergreen and CEFLEX

Read more about our performance on [pages 21-31](#)

CREATED BY EMPOWERED PEOPLE



8%

improvement of our Total Recordable Case Rate compared with our 2020 baseline

31%

of employees completed Performance and Development Review process

22%

women employed at Mondi, a 1% improvement since last year

Curious Community

launched to support a growing culture of inclusion

Read more about our performance on [pages 32-44](#)

TAKING ACTION ON CLIMATE



Net-Zero

science-based GHG reduction targets approved for Scope 1, 2 & 3, aligned to a 1.5°C scenario

17%

reduction of our absolute Scope 1 and 2 GHG emissions compared with our 2019 baseline

80%

renewable fuels used in our mills

100%

responsibly sourced fibre (75% FSC™ or PEFC certified, with the balance controlled wood)

Read more about our performance on [pages 45-62](#)

BUILT ON RESPONSIBLE BUSINESS PRACTICES

6%

reduction in specific NOx emissions compared with our 2020 baseline

8%

reduction of specific COD emissions compared with our 2020 baseline

€8.9m

social investments in our communities

78%

of total supplier spend screened through Responsible Procurement process since we started

Read more about our performance on [pages 63-82](#)

External recognition and awards

We have been recognised as a leader in sustainability by a number of external corporate ratings and indices, including:

CDP A-list

CDP Double 'A' score for forests and water security and an 'A-' score for climate change



'AAA' Rating

MSCI ESG Rating top 'AAA' score for strong resilience to environmental, social and governance risks



Prime status

ISS ESG Corporate Rating highest sector-specific score for ESG performance



Ranked #1 in Paper & Forestry Industry

Sustainalytics top score out of 78 companies ranked in Paper & Forestry industry (Sep 2022)



Top 10 Companies

Ranked No. 6 overall and No. 1 among container and packaging peers in 2022 Nature Benchmark by the World Benchmarking Alliance



Member of FTSE4Good Index Series

Member of Index Series, demonstrating strong ESG practices



Top 1% globally

Platinum status in EcoVadis Corporate Social Responsibility (CSR) ratings



Highest level score in Paper Sector

Top level climate change score by Transition Pathway Initiative

- Management Quality: Level 4 rating
- Carbon performance aligned with Paris Pledges

Member of Top 30 Index

Constituent of the FTSE/JSE Responsible Investment Top 30 Index for stocks with highest ESG ratings in South Africa

Industry-leading sustainability reporting

For four consecutive years, ranked as a Top 10 sustainability reporter in the global annual member ranking of Reporting Matters by WBCSD and Radley Yeldar



A selection of our award-winning innovation

2023 WorldStar Packaging Awards

We are very proud to have won 8 WorldStar Packaging Awards. Our products were ranked No. 1 in 5 different categories, including eCommerce, transit, food and fresh fruits and vegetables.



2022 Sustainable Packaging News Awards

Mondi product solutions were awarded in two categories at the '2022 Sustainable Packaging News Awards'. The EcoVantage paper developed for Tesco shopping bags was awarded with gold in the category 'Circular Economy'.



Crescent & Stars Packaging Awards 2022



Mondi received 'Competency Awards' in four categories at the 'Crescent and Stars of Packaging 2022 Competition'. Among the winners was our 'TrapezeBox', which replaces plastic packaging for soft cheese with fibre-based materials.



2022 Swiss Packaging Award



Our RetortPouch Recyclable solution, which was developed with Hilcona for Coop, won gold in the 'Sustainability' category at the Swiss Packaging Award.



Leadership insights on sustainability

What KEY ACHIEVEMENTS stand out during 2022?

Andrew: MAP2030 is now truly embedded across the organisation in the way we make decisions and how we approach our different activities. This is a key achievement since its launch. The integration into the business was evident in the entries for our Mondi Diamond Awards – recognising excellence across our operations – with many reflecting our MAP2030 commitments.

Another key achievement has been the validation of our new Net-Zero targets, which we revised to be in line with a 1.5°C scenario. This marks a significant milestone within the Group's climate action journey. We are also making great progress in product development towards full recyclability, for example the recyclable EcoVantage carrier and MailerBAG, which are designed to replace plastic bags.

Dominique: Our MAP2030 commitments and progress have become a natural, everyday conversation point among colleagues across the business.

This momentum helps to reinforce our purpose by ensuring we look at everything through the lens of 'Sustainable by Design'.

The Product Impact Assessment tool we launched last year has been well received by customers as it provides practical

help to make more sustainable choices. Many customers are assessing the material choices for carbon impact and recyclability at end-of-life.

In the past year we have continued to make progress on our human rights due diligence approach in line with our 2030 targets. We undertook due diligence pilots at our operations in Mexico and Türkiye to test our approach within local operations. The findings confirmed that there were no significant human rights impacts at these operations. The lessons from these pilots will inform the further development of our due diligence approach for human rights across the Group and our value chain.



Over 80% of Mondi's revenue is from fibre-based products. What does Mondi do to safeguard forests and build resilience to climate change?

Dominique: Sustainable working forests are central to providing the fibre needed to produce our packaging and paper solutions. We remain committed to zero deforestation and implement due diligence procedures to ensure responsible sourcing of wood. We also work collaboratively with certification schemes to support sustainable forest management.

Our partnership with the International Union of Forest Research Organizations (IUFRO) aims to leverage scientific insights to identify climate change impacts and develop science-based response measures for forests and the forest-based industry. The overarching goal is to support continued wood and fibre supply from resilient forest landscapes.

Dominique Reiniche,
Chair of Mondi's Sustainable Development Committee

Andrew King, Mondi Group CEO

How has Mondi's decision to divest from its Russian operations impacted MAP2030?

Andrew: We remain a robust and strong business and the decision to divest has not changed our commitment to sustainability or our MAP2030 framework. What has changed is that we have restated the relevant MAP2030 targets to reflect our continuing operation.

Read more on on [page 18](#)

Following the war in Ukraine and the indirect effect on energy markets, like others we are facing high energy costs. We are in a strong position thanks to previous energy efficiency investments made in our business totalling €650 million since 2015 and produce much of our own energy. Our energy efficiency measures continue to be of critical importance and uptake of renewable biomass-based energy capabilities offers us diversified energy options in the near term and continued GHG reductions in the long term.



Leadership insights on sustainability continued



How has Mondi supported the people of Ukraine throughout the war?

Dominique: Our first priority was to take care of our people at our Lviv operation in Ukraine. The operations were suspended at the paper bag plant to protect the employees. Mondi Group also donated €2 million to our partner the World Food Programme.

Our operations in Poland donated to the Polish Red Cross, while our Vienna-based colleagues delivered necessities to the Ukrainian border. In Slovakia, the site offered accommodation to people who had fled their homes.



The response and solidarity shown among our employees to take care of the people is a good demonstration of the Mondi culture.



What are your priorities for continuing to ensure a **SAFE** and **FUTURE-FIT** workplace?

Andrew: Safety remains a top priority for our business. In 2022, our safety teams rolled out a Social Psychology of Risk approach across Mondi, to highlight the role of the unconscious mind in safety practices.

Our priority remains to eliminate all fatal incidents and continue to maintain our strong safety record.



We apply high standards across our organisation, which we expect all of our employees and contractors to adhere to, whether they work in operations or an office.



We are saddened to report one contractor fatality in 2022 and our condolences go out to his family and friends. We can never be complacent and need to continue our efforts to implement a 24-hour safety mindset, to make sure everyone returns home safely every day. We were, however, pleased to have improved our TRCR by 11.8% against 2021.

Dominique: A diverse and inclusive workplace is also fundamental to creating a future-fit workplace. In 2022, efforts continued across Mondi to create a more diverse workforce. We have set a target to have at least 30% women employees by 2030 – an ambitious target within our sector as manufacturing tends to attract fewer women.

We have developed mechanisms to facilitate best practice sharing across the Group and support our teams to drive local diversity and inclusion initiatives. This is an area that includes multiple aspects and requires continuous effort, with local and global initiatives building momentum.



The world economy is experiencing turbulent times with energy concerns, inflation and geopolitical instabilities. What is the outlook for Mondi?

Andrew: I remain very confident about the medium- and long-term outlook for our Group. We are in a fantastic position to deliver the sustainable products that our customers need.

Sustainability in packaging requires a balance of solutions; there is not just one answer. Our expertise in paper and flexible plastics means that we can find the most sustainable solution for our customers, be it paper-based, a mono-material plastic or a hybrid.

We are investing in sustainable packaging and have the capacity, both operationally and financially, to deliver strong growth – and are determined to do so. Our commitment to being sustainable by design is here to stay.

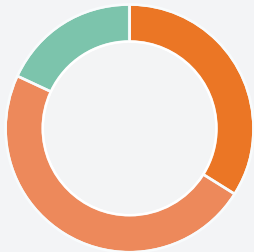


Our businesses

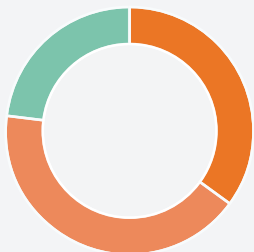
We offer our customers a wide range of packaging solutions based on our principle of paper where possible, plastic when useful. We are also a leading manufacturer of printing papers used at home, in the office and for professional applications.

Our business units

Segment revenue



Underlying EBITDA



- Corrugated Packaging
- Flexible Packaging
- Uncoated Fine Paper

Packaging

Corrugated Packaging



We produce containerboard and a broad range of converted corrugated solutions designed to protect, transport and display our customers' products along the value chain until they reach the end consumer. Corrugated packaging's strength, printability, recyclability and customisation potential makes it an ideal solution for fast-moving consumer goods, eCommerce, heavy industrial and other specialised applications.

Leading market positions

- #1** virgin containerboard producer in Europe
- #1** containerboard producer in emerging Europe
- #1** corrugated solutions producer in emerging Europe

Flexible Packaging



We are a global flexible packaging producer with a unique portfolio of paper, flexible-plastic and hybrid-based solutions. Our kraft papers are converted into strong, lightweight paper-based packaging such as paper bags while our functional paper and films protect adhesive surfaces or provide protective barriers to papers for packaging and other applications. We also make a range of plastic-based flexible packaging solutions which provide functionality and product protection. Our broad range of products are used in a range of consumer, retail, construction and industrial applications.

Leading market positions

- #1** kraft paper producer globally
- #1** paper bags producer in Europe and a global leader
- #3** consumer flexible packaging producer in Europe
- ◆ Leader in coating applications in Europe

Uncoated Fine Paper



Our Uncoated Fine Paper business produces a wide range of home, office, converting and professional printing papers, tailored to the latest digital and offset print technologies. We also produce more pulp than we use which is sold to customers around the world.

Leading market positions

- #2** uncoated fine paper producer in Europe
- #1** uncoated fine paper producer in South Africa

Where we operate

Mondi employs 22,000 people across 100 production sites in more than 30 countries, with key operations located in Europe, North America and Africa.

In addition to those countries represented graphically on these pages, Flexible Packaging operates four production sites in South East Asia.



Europe

Production sites

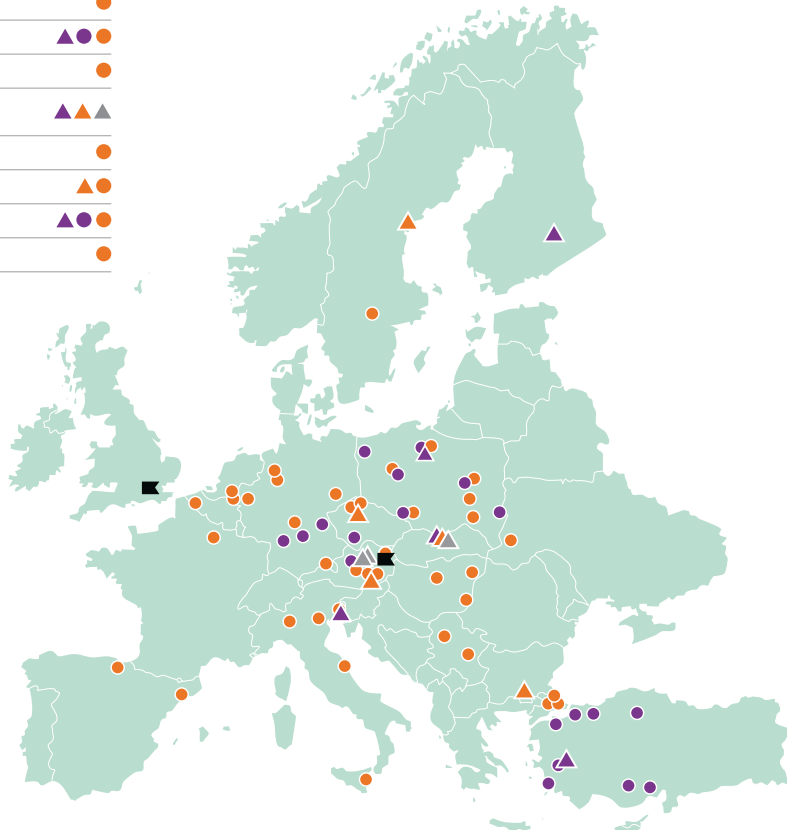
Austria	●▲●▲	Netherlands	●
Belgium	●	Poland	▲●●
Bulgaria	▲	Serbia	●
Czech Republic	●▲●	Slovakia	▲▲▲
Finland	▲	Spain	●
France	●	Sweden	▲●
Germany	●●	Türkiye	▲●●
Hungary	●	Ukraine	●
Italy	▲●		

Production sites per business unit

Corrugated Packaging	▲ Mill (6)
	● Converting plant (19)
Flexible Packaging	▲ Mill (5)
	● Converting plant (66)
Uncoated Fine Paper	▲ Mill (5)

Group offices

London, Vienna ■



North and South America

Production sites

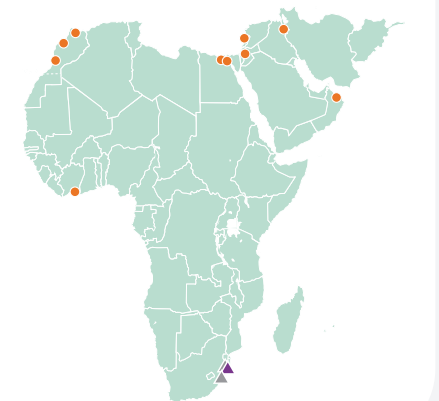
Colombia	●
Mexico	●
USA	●



Africa and Middle East

Production sites

Côte d'Ivoire	●
Egypt	●
Iraq	●
Jordan	●
Lebanon	●
Morocco	●
Oman	●
South Africa	▲▲



Our Sustainability Approach

How is Mondi DRIVING PERFORMANCE in sustainability?

2022 has been a year of rapid change, with an evolving legislative environment combined with geopolitical and economic upheaval. Despite these challenges, we remain focused on achieving our sustainability commitments. In 2022, we further embedded sustainability into our organisation and continued to deliver against our commitments.



Our global context

2022 was a challenging year around the world on many levels, including the economic slowdown, geopolitical instabilities, rising costs of living and an energy crisis. At the same time, momentum is building to take action to reduce global emissions, protect biodiversity and address social inequalities.

These factors are a wake-up call to accelerate change, uphold human rights and speed up a just transition to a low-carbon future. Smart technologies and product and business model innovations will be the drivers of a more sustainable future.

Here, we set out the megatrends and themes shaping our industry and our business impacts in 2022. We have mapped our strategically material topics, such as climate change, nature and biodiversity and circularity, against the identified trends. A full overview of our materiality assessment and list of material topics mapped against our MAP2030 framework and integrated value chain can be found on [page 91](#).

Strategically material topics



A humanitarian crisis rippling across the globe

The war in Ukraine has caused a humanitarian crisis with serious knock-on effects in the global food and energy market, logistics networks and supply chains. Millions of people have been displaced from their homes, seeking shelter within Ukraine or across borders.

The war mobilised an extraordinary level of solidarity for those affected, but also caused soaring energy costs fuelling inflationary pressures. Disruption to supplies of key commodities contributed to higher prices, along with food shortages in low and low-middle income countries.¹ Tight market conditions for wood availability and pricing due to wood import restrictions from Russia, Belarus and parts of Ukraine have led to pressure on wood value chains.²

Many Western companies decided to halt investments, pause operations or exit the Russian market. At the same time, the crisis has stepped up public debates on the dependencies on fossil fuels, helping the transition to renewables climb up the agenda of governments and the private sector.

Responsible procurement

A climate emergency that needs action now

In 2022, the world has again witnessed extreme weather events with many changes in the climate attributed to anthropogenic global warming. Estimates are that the costs of extreme weather events could rise to several hundred million dollars a year as early as 2030.³ Across sectors and regions, the most vulnerable populations are being disproportionately affected by climate disasters.⁴

Rapid and deep greenhouse gas (GHG) emission cuts are required across all sectors to limit global warming.

Even though some governments and companies are having to use fossil fuel alternatives to bridge energy gaps, the International Energy Agency expects that the current energy crisis can be a 'historic turning point towards a cleaner and more secure energy system'.⁵ Innovation, climate-centred policies and the allocation of green capital are key levers for a successful transition.

With more companies committing to Net-Zero emissions, the importance of transparent, tangible plans and actual GHG reductions in line with science-based targets is increasing. Addressing climate change-related risks and opportunities across operations, infrastructure and supply chains, to drive swift and effective progress, is a key part of the response required.

Climate change

“
Across sectors and regions, the most vulnerable populations are being observed to be disproportionately affected by climate disasters.
”

Intergovernmental Panel on
Climate Change (IPCC), 2022

1 [Ruta, Michele \(ed.\), 2022, The Impact of the War in Ukraine on Global Trade and Investment, Washington, DC, © World Bank](#)
2 [Wood Resources International - World Resource Quarterly](#)
3 [PwC 2022 - Time to get serious about the realities of climate risk](#)
4 [IPCC Sixth Assessment](#)
5 [International Energy Agency - World Energy Outlook 2022](#)

Our global context continued

Supply chain resilience top of mind

The past years have demonstrated the complexity and vulnerability of global supply chains. The race to Net-Zero has led to an increased focus on GHG emissions generated upstream and downstream of a company's value chain. Reducing value chain (Scope 3) emissions adds an extra layer of uncertainty and complexity to companies' climate transition plans, but also opens new opportunities to build up future-fit supply chains and to engage with customers, supplier networks and industry groups on low-carbon business practices.⁶

The creation of sustainable supply chains is critical for companies to tackle climate change and address challenges related to deforestation, human rights and social justice. Increased end-to-end supply chain visibility can bolster resilience and must be supported by reliable data to achieve more transparency on environmental and social impacts.

Sustainable forestry

Responsible procurement



Reinforcing nature as an asset

Nature's ecosystem services provide us with the foundation for human life and business activities across all economic sectors. Human actions have resulted in a number of planetary boundaries already being exceeded, with diversity of species being lost faster now than at any other point in human history.⁷ As a result, biodiversity and natural capital are climbing up the agenda of policymakers, who push for stricter regulatory frameworks to protect and restore ecosystems.

Business plays an important role in securing the resilience of species and ecosystems by managing nature-related risks in operations. A common approach to account for biodiversity and natural capital, with practical metrics and frameworks that support business in implementing nature-positive roadmaps, is needed.⁸

At the 2022 UN Biodiversity Conference (COP15), ambitious targets were agreed, including conserving at least 30% of the world's land, coastal areas and oceans by 2030.

Nature and biodiversity



Accelerating the transition to a circular economy

Consumers expect companies to lead the transition to a circular economy, with credible communication of their progress and unambiguous claims of product benefits. This, in turn, is driving retailers and brands to make bold commitments towards lower product carbon footprints, fully recyclable or compostable solutions and increased use of recycled content. In response to public concerns around single-use packaging and greenwashing, more legislation is being developed such as the EU Packaging and Packaging Waste Regulation and the Green Claims regulation.

Plastic pollution remains a global challenge, estimated to exceed US \$100 billion of social costs each year.⁹ While the Ellen MacArthur Foundation points out an increased use of virgin plastic in 2022,¹⁰ a mandate to develop a UN Global Plastic Treaty to end plastic pollution was agreed. Beyond avoiding plastic waste, turning it into a resource is one of the key objectives of the EU's Roadmap to a Resource Efficient Europe.

While the demand for fibre-based packaging as a sustainable alternative is growing, there is a disconnect between public policy initiatives, such as the EU Forest Strategy, which favours conservation and calls for more land to be protected rather than promoting responsible forest management.

Circularity

Customer collaboration

Responsible consumption and changing consumer preferences

Packaging waste

Food waste

Enabling a fair and inclusive transition

People form a core part in designing and executing the systemic changes needed to master the transition to a Net-Zero circular economy. There are 1.2 billion global jobs estimated to depend on natural systems and environmental services,¹¹ so the transition to a circular economy will have a significant impact on workers and communities. Future policies need to ensure that no one is left behind and that the substantial benefits of the transition to a green economy are shared justly throughout society.

Businesses play their part in delivering upskilling programmes on climate change, renewable energy and circular solutions. In addition, it is important to take into account the impacts of changes on disadvantaged communities in rural areas, and other stakeholders, to ensure a just transition. Local communities can benefit from access to clean energy and jobs created through new green economy opportunities.¹²

Circularity

Customer collaboration

Responsible consumption and changing consumer preferences

Packaging waste

⁶ McKinsey 2021 – Making supply-chain decarbonization happen

⁷ IPBES – IPBES Values Assessment – Decisions Based on Narrow Set of Market Values of Nature Underpin the Global Biodiversity Crisis

⁸ WBCSD – "Nature-positive" and the forest sector

⁹ Minderero Foundation. The Price of Plastic Pollution: Social Costs and Corporate Liabilities

¹⁰ Ellen MacArthur Foundation – The Global Commitment 2022 Progress Report

¹¹ World Economic Forum 2022 – Why a just transition is crucial for transformative climate action

¹² World Economic Forum 2022 – Why a just transition is crucial for transformative climate action

Industry insights



What poses the biggest challenge for sustainability in the paper and plastic packaging industry?

Graham: There is a negative public image of plastics with consumers and society in general. The plastic packaging industry needs to proactively and collaboratively show external stakeholders, how in practice, flexible plastic can be both circular and sustainable. The industry needs to demonstrate that they are proactively taking action to make it happen rather than being forced by legislation.

Angela: The paper industry needs to raise awareness and understanding among customers, policymakers and investors on the sustainability credentials of forest products by addressing some of the misperceptions related to the sector.

For example, many consumers believe that the use of forest-based products, like paper or packaging, harms the forest and drives deforestation. However, this is not the case when forests are managed responsibly and can effectively regenerate. Forest products also have higher recycling rates than almost any other material and the use of renewable materials is key to a circular economy approach.

How should the industry drive climate change action?

Graham: The industry can make significant leaps if it works towards making all plastics and other materials carbon neutral by 2030. Industry also needs to effectively drive and fund the UN Global Treaty to prevent plastic pollution. This means actively engaging in the Treaty development process to offer expertise and drive innovation of more sustainable mono-material solutions.

Work is also needed to communicate the outcomes of scientific research on plastics to the public and policymakers. The science demonstrates that using plastics sustainably is the best option for the planet to feed and house the growing population, and also to eliminate food loss and waste.

Angela: The forest sector can drive climate change action to support the Net-Zero transition by applying three key levers: reduce greenhouse gas emissions in operations and across the value chain; increase carbon removals through sequestration in sustainable working forests and storage in forest products; and grow the circular bioeconomy through the substitution of non-renewable and fossil-based materials with forest products.

The climate change mitigation potential of all three levers is simultaneous and cumulative. The forest sector's first lever of impact, aligning with the carbon mitigation hierarchy, is to avoid and reduce emissions before focusing on other compensation mechanisms.

What needs to happen to ensure a sustainable supply of recycled materials?

Graham: Making flexible packaging circular requires innovation in two main areas. First, infrastructure and capacity: to collect, sort and recycle it, and second, sustainable markets. It must become more interesting economically and environmentally to use recycled material in appropriate products. This is where product design and our Designing for a Circular Economy design guideline comes in. In practice, this means moving to mono-material flexible packaging as this is the easiest to sort and recycle.

Today, there is still a cost advantage to use virgin plastic over recycled materials, though Extended Producer Responsibility systems will benefit the use of recycled materials more in future.

How can the forest-based industry be best placed to positively impact biodiversity?

Angela: Nature is under a greater threat today than at any other time in human history. The prevailing linear take-make-waste economy depends on the continuous and increasing extraction of natural resources. The forest sector is well positioned to grow the circular bioeconomy as an alternative, based on wood from sustainable working forests as a renewable and recyclable material. Scaling up this model requires collaborative action along the value chain and within the broader operating environment.

Amidst growing concerns of greenwashing, what do you recommend to your member companies to remain a credible business partner and trusted brand?

Graham: The only credible way of doing this is to 'walk the talk' and not make claims. Success stories need to be shared to demonstrate how flexible plastic packaging can be designed and recycled to be part of a circular economy. This needs to come from businesses, waste collectors and other credible voices in the sector.

Angela: It is increasingly important for companies to hold themselves accountable to acting on their commitments and transparently disclosing their progress through science-informed metrics.

Angela Graham-Brown, Director at WBCSD's Forest Solutions Group & Member of the WBCSD Extended Leadership Group

Graham Houlder, Project Coordinator and Managing Director at CEFLEX



Our strategy



Our strategy is to deliver value accretive growth, sustainably, by prioritising growth in our packaging businesses and leveraging our four strategic value drivers. With sustainability at the centre of our strategy, our approach builds on the competitive advantages we have today and guides our investment and operational decisions so that we can continue creating value in a sustainable way.

Mondi Action Plan 2030

MAP2030, our sustainability roadmap to 2030, builds on our strong progress made to date and sets out the actions we need to take over the next decade to achieve our ambitious goals. MAP2030 has three action areas, each with three high-level commitments supported by more detailed targets, built on a foundation of responsible business practices.



We drive value accretive growth, sustainably

Our structurally growing packaging markets offer significant opportunities for value accretive growth, leveraging our unique product portfolio, leading market positions, innovation capabilities and high-quality asset base.

Sustainability lies at the centre of our purpose, culture and strategy. We have a solid history of setting and achieving credible sustainability targets and reporting on our performance, as we contribute to finding solutions to sustainability challenges and play our part to deliver on the UN Sustainable Development Goals (SDGs).

We work together with our stakeholders to address risks, seize opportunities and empower decision-making. It is only through this collaborative spirit that we will achieve the impact, innovation and scale necessary to bring about positive change beyond our own boundaries.



Drive performance along the value chain

Continuous improvement initiatives, lean processes, rigorous quality management and operational excellence programmes enhance our productivity and efficiency, and prevent waste. Rigorous benchmarking enables us to share best practice, leverage insights across the business and identify emerging issues to optimise productivity and performance. Centralised functions, such as procurement, technical, sustainable development, treasury and tax, improve coordination, control and reduce costs. By combining technology, data science and the talents of our people, we continue to build on our digital capabilities, creating opportunities to accelerate performance and productivity, reduce costs, and improve customer experience.



Inspire our people

The safety, health and mental wellbeing of our people is a priority for us. We embed clear methodologies and procedures, and robust controls to ensure they, and other people who have reason to be on Mondi sites, stay safe. We promote a 24-hour safety mindset with initiatives to address conscious and unconscious behaviours, elevating safety to the front of minds and actions. Creating an inclusive environment that fosters and respects diversity is vital to our success. Our aim is to create equal opportunities where all employees can grow. Enhancing the skills of our people through training and personal development initiatives is a key part of developing an agile and motivated workforce that is capable of driving success in a sustainable way.



Invest in assets with cost advantage

We invest in our asset base to drive organic growth, strengthen cost competitiveness, improve environmental performance, and enhance our product offering, quality and service to customers. Across our pulp and paper operations, we are focused on leveraging our cost advantages. In our converting plants, we focus on enhancing our capabilities to better serve our customers with innovative solutions that are sustainable by design. Where appropriate, we look to acquire businesses that produce high-quality products with sustainable competitive advantage and the potential to achieve world-class operating standards. This enables us to generate synergies through integration and enhance our customer offering.

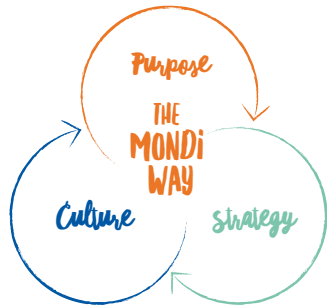


Partner with customers for innovation

We collaborate with our customers and other partners along the value chain to develop and innovate sustainable packaging and paper solutions. This customer-centric approach helps us to lead the transition to a circular economy, and grow our customer base of forward-thinking brands. We prioritise the use of paper-based solutions as a renewable and widely recycled resource. However, when functional barriers are required, lightweight plastic-based flexible packaging can be the most sustainable choice if designed for recycling and disposed of appropriately. Our innovation capabilities, supported by our R&D centres, are critical in meeting increasingly sophisticated and bespoke customer needs by maximising resource efficiency, minimising waste, and designing for recycling.

Our business model

The Mondri Way connects purpose, strategy and culture to our business model



Our purpose is to contribute to a better world by making innovative, sustainable packaging and paper solutions that are sustainable by design. We do this through the execution of our strategy by delivering value-accretive growth in a sustainable way for all our key stakeholders. Our strategy builds on the competitive advantages we enjoy today and sets a clear roadmap embedding sustainability into operational and investment decisions into the future.

We foster a culture that connects, guides and inspires our people to achieve Mondri's purpose. Our values of Performance – Care – Integrity underpin our culture, empowering our people to be passionate and entrepreneurial in a respectful and inclusive way. The dedication and commitment of our employees is essential to delivering on our strategic priorities as we contribute to a better world.

→ **Empowered People**
[page 32](#)

What we rely on

We build and maintain trusted relationships and manage our key resources responsibly to create value for our stakeholders.

Long-standing relationships

The integrated nature of our business means that we rely on the strong relationships we have built over time to drive our business forward for our joint success:

- Caring for our employees and delivering against operational priorities
- Partnering with our customers to innovate and reliably meet their needs
- Optimising our value chain with suppliers and contractors
- Collaborating with our communities to address challenges and create opportunity
- Engaging with investors to share our performance and strategic priorities
- Shaping our context with partners and industry associations

Responsible use of resources

We are determined to protect and safeguard biodiversity and ecosystems. In order to do this, we procure raw materials and use natural resources responsibly.

We have a disciplined capital allocation framework, ensuring we can invest in our portfolio through the cycle and take advantage of value accretive opportunities when they arise.

What we do

As a global leader, we make a broad range of innovative and sustainable packaging and paper solutions to meet our customers' growing needs.

→ **Integrated value chain**
[page 15](#)

The value we create

By combining our integrated value chain, strong relationships, responsible resource management, and leveraging our competitive advantages, we create value for our stakeholders in line with the Mondri Way.

Examples of our value creation in 2022

Employees

443,000
employee and contractor
training hours

We invest in the development of our people, providing a safe working environment and supporting a diverse, skilled and committed workforce

Customers

82%
of revenue is from products
that are reusable, recyclable
or compostable

We deliver innovative sustainable packaging and paper solutions to our customers with a continuous drive to improve overall customer satisfaction

Communities

€196 million
direct taxes paid

In addition to taxes paid, we invest in local community initiatives supporting health, environment protection, education, local enterprise and infrastructure

Suppliers and contractors

78%
of suppliers, sites screened since
2019 (based on total spend)

We engage with our suppliers, encouraging supply chain transparency and fair working conditions, and take action to mitigate our risks

Investors

70.0 euro cents
total recommended
dividend per share

Our dividend policy reflects our disciplined strategy of value creation and aims to offer shareholders long-term dividend growth in line with our cover policy

Partners and industry associations

Strategic
partnerships and initiatives

Our global collaborations support us to find sustainable solutions to the collective challenges we all face and bring about meaningful change

Our integrated value chain

RESPONSIBLY SOURCED *raw materials*

As part of our manufacturing processes, we require raw materials such as wood, paper for recycling, chemicals, resins and access to natural resources, most notably water and energy.

Based on revenue, over 80% of our packaging and paper solutions are fibre-based, for which wood is the primary raw material. We procure wood from responsible sources and our South African sustainably managed plantations with around 90% of our wood sourced domestically in the countries where our mills are located. In addition, we source paper for recycling from waste collection companies or directly from retailers.

Key relationships and partnerships:

- Engagement across our global supply chain, which spans 12,000 suppliers in 67 countries
- Fibre certification schemes, such as FSC and PEFC
- Wood supply organisations
- Partnerships with scientific organisations, such as the IUFRO-Mondi partnership to promote climate-fit and resilient forests
- NGOs, including the Endangered Wildlife Trust
- Waste collection companies
- Retail business partners

END-OF-LIFE & RECYCLING



We are committed to supporting the transition to a circular economy and preventing waste. Our focus is on creating high-quality, innovative packaging and paper solutions that are designed for a sustainable end-of-life through recycling or composting.

Our paper-based solutions already contribute to the circular economy. We aim to include an increasing proportion of recycled content in our plastic-based packaging solutions and monitor our progress in the use of renewable and recycled content across our portfolio.

Our collaboration with stakeholders along the value chain helps to eliminate unsustainable packaging, improve cross-industry initiatives to improve recycling practices, and identify new opportunities to use waste as a secondary raw material.

Key relationships and partnerships:

- Cross-industry organisations, such as 4evergreen, CEFLEX and the Ellen MacArthur Foundation
- Industry partners for secondary raw materials
- Professional recycling organisations

EFFICIENT PRODUCTION

The Group's integrated pulp and paper mills, located in Europe and South Africa, are cost advantaged, producing pulp, packaging papers and uncoated fine paper. In addition, most of our mills are able to generate the majority of their energy needs internally, with 80% from renewable fuels.

Our broad range of containerboard and kraft paper packaging grades are used by our converting operations and sold to other customers. Our converting operations use packaging paper (sourced internally and externally) and other raw materials to produce corrugated solutions and flexible packaging products (paper, plastic or hybrid-based) across our global network.

Key relationships and partnerships:

- Employees across production sites and corporate offices
- Contractors, mainly during annual maintenance and project-related shuts
- Industry associations and other organisations developing design for recycling guidelines, such as Capi and CEFLEX
- Service providers for machinery and other technologies to drive operational excellence, including energy efficiency and reduced emissions
- Communities surrounding our operations, focusing on our impact on local and nearby areas

SUSTAINABLE *packaging and paper solutions*

We produce a broad range of packaging and paper solutions to meet our customers' needs for consumer and industrial end-uses. Partnering with customers provides an opportunity to innovate and create fit-for-purpose solutions that contribute to a circular economy.

Our converted corrugated solutions and flexible packaging products are predominately delivered to customers regionally while our pulp and packaging papers are sold globally. Engagement with logistic partners ensures our products arrive at the right location, on time and according to expected quality standards.

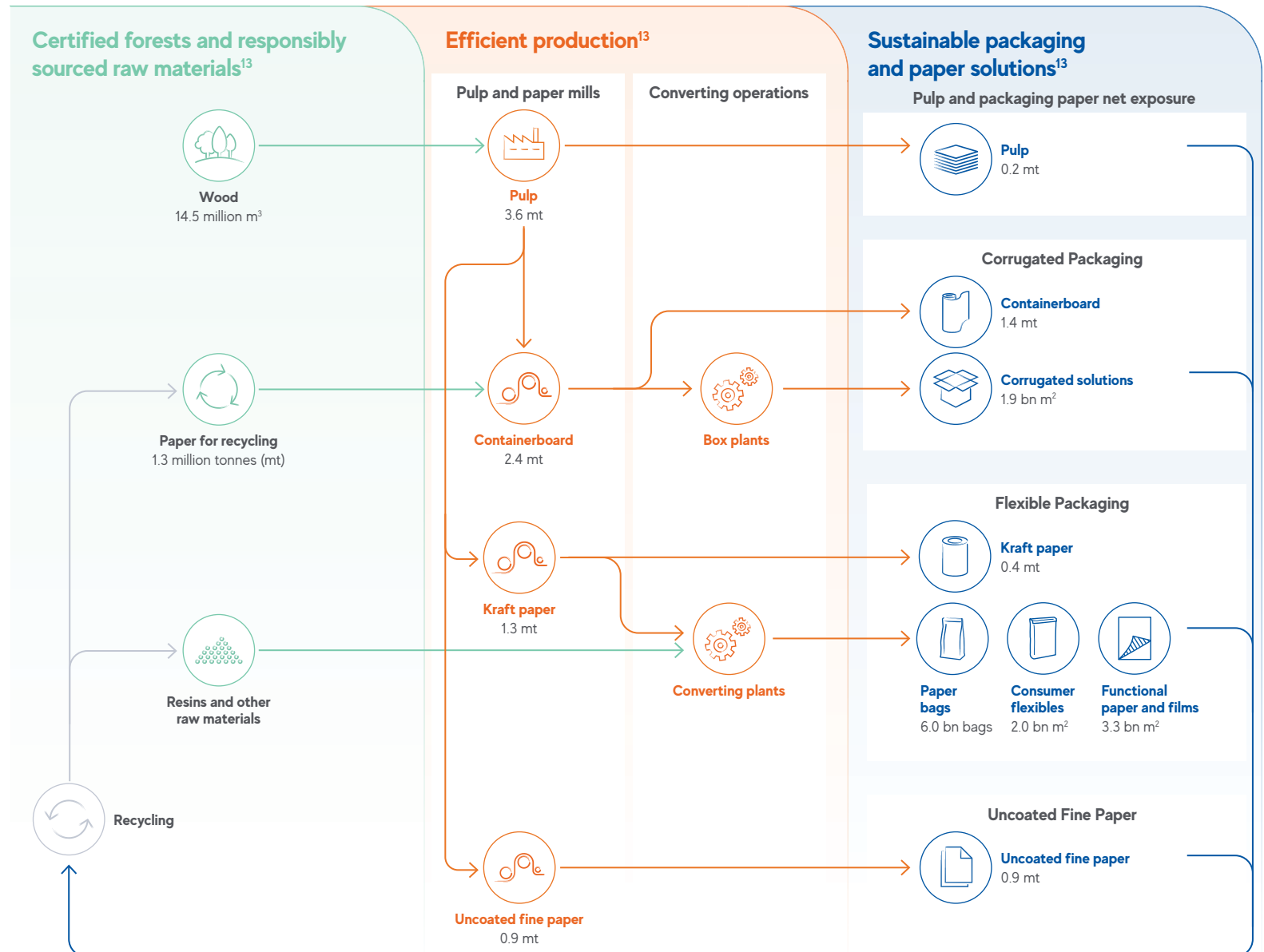
Key relationships and partnerships:

- Employees (sales and supply chain teams)
- Partnering with and delivering on our customers' needs across a range of end-uses, including food and beverage, pet food, eCommerce, home and personal care, industrial, chemicals, transport, agriculture and office and professional printing
- Logistics providers
- Multi-stakeholder initiatives, such as Capi, the Ellen MacArthur Foundation and 4evergreen



Our integrated value chain continued

As a global packaging and paper solutions provider, we operate across a number of regions, servicing our customers with a broad range of sustainable solutions. The integrated nature of our business means that we engage with key stakeholders through long-standing relationships and partnerships to ensure that our sourcing practices are responsible, our production processes are efficient, that we improve our environmental performance, and the products we produce are fit-for-purpose and contribute to a circular economy.



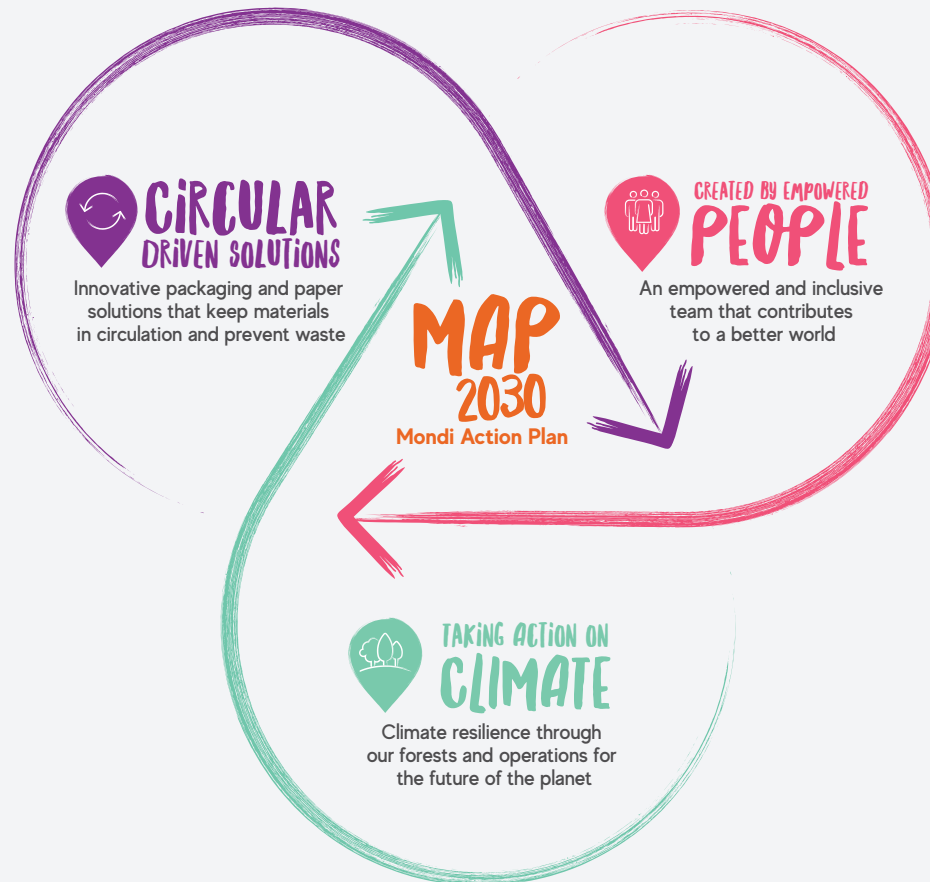
¹³ Based on 2022 statistics

Mondi Action Plan 2030

Our Commitments

Our sustainability framework – Mondi Action Plan 2030, or MAP2030 – sets out the actions, targets and milestones we need to achieve to meet our ambitious 2030 sustainability commitments. Our focus on circular driven solutions, created by empowered people, taking action on climate enables us to have the most positive impact through our business.

The MAP2030 section of the report covers Mondi's performance against the targets and commitments underpinning the framework.



Commitments

- Make our packaging and paper solutions reusable, recyclable or compostable
- Avoid waste by keeping materials in circulation
- Work with others to eliminate unsustainable packaging

→ Read more on [pages 21-31](#)

Commitments

- Build skills that support long-term employability
- Provide purposeful employment for all our employees in a diverse and inclusive workplace
- Create an environment that enables a positive work-life experience, valuing our safety, health and mental wellbeing

→ Read more on [pages 32-44](#)

Commitments

- Reduce our greenhouse gas emissions in line with science-based Net-Zero targets
- Maintain zero deforestation in our wood supply, sourcing from resilient forests
- Safeguard biodiversity and water resources in our operations and beyond

→ Read more on [pages 45-62](#)

Built on Responsible Business Practices

Human Rights | Communities | Procurement | Environmental Performance

→ Read more on [pages 63-82](#)

Mondi Action Plan 2030 continued

2022 was the second year of MAP2030 and we have seen great ownership of the commitments across the business. What's your personal view on this?

Gladys: I'm happy to see that sustainability is well embedded in Mondi's actions and decisions. I believe this is because we have just one strategy with sustainability at its core.

Results from an internal survey conducted among our global leadership team in 2022 confirmed that sustainability is well integrated into their daily decision-making, and they are confident and motivated to contribute to our MAP2030 progress. This is very encouraging feedback. The introduction of sustainability KPIs in the annual bonus has further encouraged delivery against our MAP2030 targets (read more on [page 85](#)).



Gladys Naylor,
Mondi Group
Head of
Sustainable
Development

With the validation of the science-based Net-Zero targets by the Science Based Targets initiative, 2022 has been a remarkable year for Mondi's climate action journey. What are the next steps?

Gladys: Mondi started its greenhouse gas (GHG) reduction journey almost two decades ago and we've made good progress. Our Net-Zero targets are now approved and we are developing the tools to continue to scale our engagement with suppliers and reduce emissions along the supply chain. At the same time, we have a comprehensive investment plan to further drive down emissions across our own operations (read more on [page 50](#)).

We also see a real opportunity to link our progress in reducing the Group's carbon footprint to our customers' own value chain reduction ambitions. As we reduce our GHG emissions, we will be supporting our customers to reduce their own Scope 3 emissions.

Are there commitments that are more challenging to meet, and how will you go about achieving these?

Gladys: Each one of the three MAP2030 action areas has targets that are aspirational. Within Circular Driven Solutions, our goal to achieve 100% reusable, recyclable or compostable solutions by 2025 across our portfolio means that we need to accelerate innovation and convince customers to join us on this journey.

Have you made any notable changes to MAP2030 since its launch?

Gladys: In May 2022, the Board announced the decision to divest its Russian operations. As a result, we reviewed and revised our MAP2030 targets – including environmental performance, communities and procurement – to reflect our continuing operations (see 'Overview of MAP2030 framework updates' below). Our GHG reduction targets also have been updated in line with our newly approved Net-Zero targets.

Despite these changes, there is positive momentum and progress towards our commitments across all action areas. This year, we removed the Business ethics & governance section in Responsible Business Practices as the areas, including sustainability training, audit schemes and sustainability in investment decision-making, are integral parts of our approach and continuous business practices, rather than term-specific actions.

To achieve our Empowered People goals, we acknowledge that increasing the representation of women employed at Mondi, as well as working together to establish a diverse and inclusive culture, requires great effort.

The execution of our climate transition plan requires the acceleration of GHG emissions reductions across our entire value chain, which will mean working with suppliers and customers to achieve a common goal of reducing emissions.

How does the Executive Committee and Board stay up to date on MAP2030 progress and provide feedback and insights?

Gladys: The Board and the Sustainable Development (SD) Committee form core parts of our sustainability governance and provide valuable leadership and guidance along the way. Their review of the progress of MAP2030 commitments is an integral part of the rolling SD Committee meeting agenda throughout the year. In 2022, we held seven SD committee meetings, where we covered topics including safety and health of employees and contractors, product stewardship, environmental performance, D&I and human rights (read more on [page 84](#)).

Overview of MAP2030 framework updates

Taking Action on Climate

Our new Net-Zero GHG reduction targets, including Scope 3, have replaced our previous Scope 1 and 2 targets

Responsible Business Practices

To reflect our continuing operations, the following targets were updated:

- Our environmental performance targets
- Our social investment target
- Our wood procurement target in high-risk countries

Business ethics & governance was removed as a specific topic. This is an integral part of our approach rather than a term-specific target to be achieved.

UN Sustainable Development Goals

There are just seven years left to meet the 2030 UN Sustainable Development Goals (SDGs). It is critical that as a responsible business we accelerate action and play our part to contribute to deliver on the SDGs. We have identified seven SDGs that are strategically most relevant for Mondi and demonstrate the strong link between our activities and the UN SDGs.

These SDGs cover areas with the greatest impact on our business and where we can contribute to positive change at scale. In our selection, we considered both the positive and potentially negative impacts of our operations to determine the strategic relevance of each SDG.

This included evaluating the alignment of goals and sub-targets with our business activities across our entire value chain; our ability to use our skills and resources to help drive change; and the importance of issues to our stakeholders.

We will continue to measure our contribution to the SDGs using our MAP2030 framework.



Read more about our contribution to the SDGs in our SDG Index [online](#)



SDG 12

Responsible consumption and production

Innovation in sustainable packaging and reducing plastic waste provides an opportunity to grow our business, while reducing our environmental impacts. The efficient use of raw materials and energy is fundamental to being a sustainable business. We engage and collaborate with customers to design fit-for-purpose paper- and plastic-based solutions for a circular economy.



SDG 6

Clean water and sanitation

Our manufacturing is water-intensive, as our mills and converting operations impact on water resources with their withdrawal and use of water. Water is also used in the fibre supply chain. We manage our impacts on freshwater resources to meet rising demand for sustainable products while safeguarding freshwater ecosystems at a landscape level. We aim to use water efficiently and increase water recycling in our operations.



SDG 7

Affordable and clean energy

Energy self-sufficiency improves our profitability and energy security, while reducing carbon emissions. We invest in optimising energy and process efficiencies and replacing fossil fuel-based energy with renewable sources. Some of our mills provide electricity generated by the plant to the local municipality and the surrounding community.



SDG 9

Industry, innovation and infrastructure

We contribute to economic and social development by investing in local infrastructure, creating business opportunities and driving collaboration. Our purpose to make packaging and paper that is sustainable by design, means that we take a leading role in product innovation and redesign to shape the future of sustainable packaging. We have clear investment plans to upgrade our operational infrastructure, drive resource efficiency and shift to renewable energy sources.



SDG 8

Decent work and economic growth

We work towards a fair, safe, diverse and inclusive workplace for around 22,000 Mondi employees who are offered good working conditions, upskilling programmes and career development. We promote physical and mental wellbeing and purposeful employment. Our support for local enterprises creates employment opportunities, strengthens the local supply chain and promotes resilient communities.



SDG 13

Climate action

Our climate action includes reducing greenhouse gas emissions and protecting and improving the resilience of forests and freshwater ecosystems, which play a crucial role in tackling the climate crisis.

We support the global just transition to a low-carbon economy as we deliver against our science-based Net-Zero targets. We will continue to decarbonise our operations, increase our uptake of renewable energy sources and target our investments to support our climate transition plan.



SDG 15

Life on land

We manage over 250,000 hectares of plantation forestry landholdings in South Africa and source wood fibre responsibly.

In our plantations we take a leading role in developing and implementing best practices to secure the long-term productivity and resilience of production sites, while managing conservation areas and key ecosystems to maintain biodiversity, water and other natural capital. This involves engaging with scientific organisations and partners to identify ways to improve resilience of forests to climate change.

MAP2030

How is Mondi making progress towards its MAP2030 TARGETS?

Our sustainability framework identifies the three action areas on products, people and planet where we have defined commitments and set ambitious targets to drive performance. Our responsible business practices encompass other important topics like community engagement, responsible procurement and human rights where we focus on continuous improvement in our operations.

How is Mondi putting CIRCULARITY INTO PRACTICE with its products?



CIRCULAR DRIVEN SOLUTIONS

Reusable, recyclable or compostable solutions	23
Keeping materials in circulation	28
Eliminate unsustainable packaging together	29

INNOVATE

Investing to expand our own research and development facilities to support the growth of our circular product solutions.

➔ Read more p25

MONITOR

Applying our Path to Circularity Scorecard to assess the circularity of our portfolio.

➔ Read more p24

COLLABORATE

Working with the World Food Programme to improve humanitarian food assistance packaging.

➔ Read more p29



Performance at a glance & key learnings

Commitment	Target	Performance		
		2021	2022	This year at a glance
Make our packaging and paper solutions reusable, recyclable or compostable	100% of our packaging and paper products are reusable, recyclable or compostable by 2025	●	●	82% of products are reusable, recyclable or compostable based on revenue (up from 77% in 2021) Launched numerous circular innovations in collaboration with customers (see page 30) Continued investment in R&D, with new testing and piloting facilities in Austria and Germany
Avoid waste by keeping materials in circulation	Eliminate waste to landfill from our manufacturing processes	●	●	Reduced our total waste to landfill by around 8,500 tonnes in 2022, which is a reduction of more than 4% since 2020, through numerous initiatives, including reusing our residual waste as secondary raw materials, using ash from our boilers for cement and bricks, or wastewater sludge for landscaping
Work with others to eliminate unsustainable packaging	Progress made through our partnerships and stakeholder engagement activities each year	●	●	Continued engagement in cross-value chain initiatives such as CEFLEX and 4evergreen, contributing to the development of industry-wide guidelines for recycling and design for circularity

Key

✔ Completed
 ● On track
 ● Slightly behind target
 ● Not on track
 ○ In development

LESSONS LEARNED

Defining what makes a product sustainable and providing evidence to back up such claims is not a simple task, as a single number for GHG emissions is not enough. We need to support an overarching view that considers GHG emissions and several other factors – from recycling rates to use of renewable materials – that can inform our customers' decision-making.

Our Scorecard and our life cycle-based tools, like our Product Impact Assessments, are key to monitor and communicate our progress across our entire portfolio. Both have been very well received by stakeholders. The challenge remains to help non-specialists to correctly interpret the data and to understand implications of primary versus secondary data sources, and related levels of uncertainty, particularly when comparing products.

Cross-value chain collaboration is fundamental to drive progress at scale. Initiatives such as the 4evergreen alliance and CEFLEX are vital to develop harmonised approaches to design for circularity and test for recyclability. However, infrastructure related to collection, sorting and recycling also needs to evolve and keep pace with innovative product developments designed to replace plastic with paper or increase the use of recycled plastic content.





Designing products for circularity

Consumer demand for sustainable products continues to reinforce our commitment to creating more sustainable packaging.

We consider the environmental impacts of our products at each stage of the value chain. This involves reviewing the sourcing of raw materials, material efficiency, product design, sustainable end-of-life and product safety. We aim to increase the use of renewable materials and recycled content across all of our solutions.

Commitment

Make our packaging and paper solutions reusable, recyclable or compostable

Target

100% of our packaging and paper products are reusable, recyclable or compostable by 2025

🟢 On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Designing for sustainability to drive growth

We focus our innovation and R&D on developing paper-based, flexible plastic mono-material or hybrid solutions with a sustainable end-of-life for our customers, retailers and brand owners. This supports our growth and addresses the key challenges we face as a society today, such as preventing food waste, using resources wisely and efficiently, and eliminating plastic pollution.

Our approach is to use paper where possible and plastic when useful, keeping the needs of the customer in focus at all stages of the design process. This can include types of barrier properties needed (such as resisting moisture or light), shelf-life requirements, logistical challenges, the use of renewable resources and/or recycled content, as well as optimal disposal to keep materials in circulation and minimise waste.

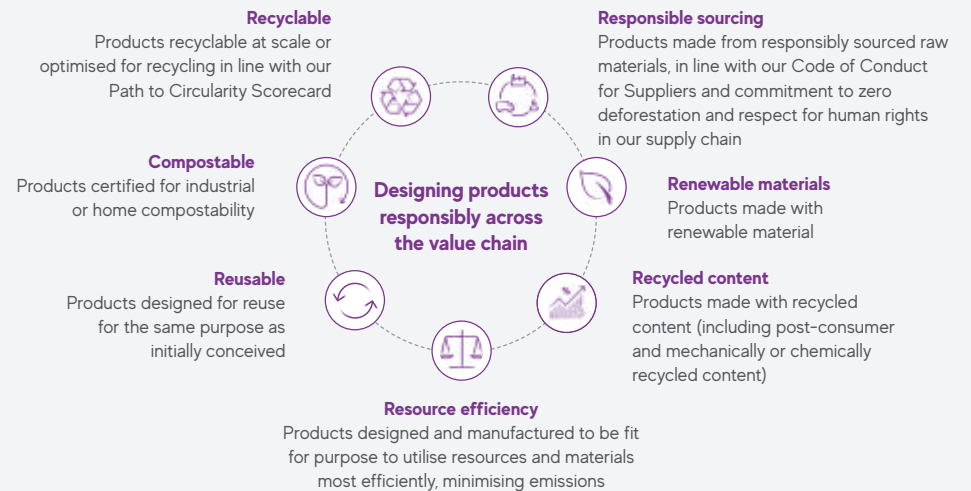
During the design process, the use of any materials, coatings or finishings that impede recyclability are also considered. In addition, we consider the available market infrastructure for collection, sorting and recycling of packaging and paper solutions at their end-of-life.

Our Path to Circularity Scorecard, launched in 2021, captures our harmonised criteria and thresholds that we apply to classify Mondi products as reusable, recyclable or compostable (read more on [page 24](#)).

Our Sustainable Products Principles

We know that there are many different parameters that help to define a sustainable solution, with up to 80% of a product's environmental impact influenced at the design phase.¹ In 2017, we introduced our Sustainable Products Criteria (SPC) to capture these different dimensions and guide our product design, with each business segment applying relevant criteria and thresholds.

Mondi's Sustainable Products Principles (SPP)



In 2022, we reviewed and updated the SPC, renaming it our Sustainable Products Principles (SPP). The SPP now features seven principles, with our 'Next life' criteria divided across principles on recyclability, reuse and compostability. The 'Responsible sourcing' criteria has been revised to focus on the sourcing of wood fibre that is aligned with our zero deforestation commitment.

Assessing product impact

We see an increasing demand from our customers to use life cycle-based assessments to evaluate options and identify more sustainable solutions.

Our Product Impact Assessment (PIA) tool calculates the life cycle impacts of plastic and paper-based products. The PIA tool complements our Product Carbon Footprint (PCF) tool for paper-based products which was introduced in 2012 and is based on Confederation of European

Paper Industries (Cepi)'s ten toes framework.² PIA also supports the comparison between our paper and plastic solutions. In 2022, 234 products were assessed in our PIA tool and 336 PCFs were calculated.

We also offer Paper Profiles for our relevant products. Paper Profile is a uniform environmental product declaration offered by around 19 European pulp and paper companies.

Implementing roadmaps for circularity

Our Path to Circularity Scorecard, developed in 2021, provided us with a framework to assess the circularity of our portfolio (in terms of reusable, recyclable or compostable solutions) and apply harmonised criteria and thresholds across our packaging and paper product groups.

¹ WRAP - Embedding environmental sustainability in product design

² Cepi 'Ten Toes' framework



Assessing our portfolio

In 2022, our business units made progress in the implementation of their circular driven solutions' roadmaps. These roadmaps are used to track performance and apply the Path to Circularity Scorecard criteria.

We require 80% paper content, or similarly 80% PE or PP mono-materials for our respective paper or plastic solutions to be deemed designed for recycling. We have also defined a number of unacceptable parameters, considering design for recycling or design for circularity guidelines from our industry associations and other partners, like CEFLEX and 4evergreen. Solutions that do not meet these thresholds or contain unacceptable materials must be tested in an internally or

externally qualified laboratory to be classified as recyclable.

We apply a risk-based approach to test and verify solutions considered to be potentially difficult to recycle. Our research and development (R&D) and innovation teams are currently working with partners across the value chain to develop alternative solutions. Our commercial teams encourage our customers to switch to existing alternatives and to promote growth of recyclable solutions to help us deliver real impact in our markets.

We review our scorecard criteria annually to reflect technological advancements in collection, sorting and recycling systems or product innovations.

For example, after the 2022 review, we updated the criteria for paper solutions to specify that two-sided siliconised papers are not recyclable today. One-sided siliconised papers have proven to be recyclable in standard mills.

A rapidly evolving EU legislative landscape

The EU continued with its Green Deal agenda, publishing key legislative initiatives for Mondi, such as the revision of the Packaging and Packaging Waste Regulation and the Eco-Design for Sustainable Products Regulation.

The clear focus is on sustainable consumption and products, resource conservation and

circularity. The draft Packaging and Packaging Waste Regulation sets ambitious targets for the recyclability, reusability and recycled content in various forms of packaging, and aims to harmonise labelling, collection, sorting and recycling systems across the EU. Modulated Extended Producer Responsibility (EPR) fees will incentivise and reward packaging that is more easily recyclable.

We are encouraged by the drive to standardise systems across the EU, not only in sorting and labelling, but also via the Green Claims Guidance that makes the sustainability credentials of our products comparable, easy-to-understand and verifiable across the region.

It will be crucial to evaluate the impact of these regulations as unintended consequences may occur, disrupting well-functioning recycling streams or a decline in material efficiency in the move towards reusable solutions. We are engaging with lawmakers through relevant industry associations as part of the consultation processes linked to the development of these regulations.

Building sustainability skills across our organisation

We continue to build the capabilities and understanding of sustainability topics across our business. In 2022, we continued to offer our online sustainability training programme, which has been running for three years. Training topics range from product-related aspects, such as the recyclability of paper and plastic to green claims and labelling, to human rights and climate change. All sessions are recorded and made available to all employees via our planetmondi intranet.

[Read more on our sustainability training on page 35](#)

Mondi's Path to Circularity Scorecard

For a Mondi product to be deemed circular, it has to be designed with a sustainable end-of-life. The below table sets out our defined parameters applied across our portfolio of packaging and paper solutions.

Sustainable end-of-life (Recyclable and/or compostable and/or reusable)

	Reusable	Recyclable	Compostable
Paper	Solutions designed for reuse for the same purpose as initially conceived	Recyclable: >80% paper content ^a Unacceptable^e: VDC, Wax coating, Aluminium foil, Fluorochemicals, Adhesives which plasticise, Permanent wet strength, two-sided silicon or PO polymer coating	In accordance with accepted standards for home or industrial compostability (e.g. EN13432)
Plastic	Solutions designed for reuse for the same purpose as initially conceived	Recyclable: >80% PE or PP (mono-materials), PO (mixed PE and PP) Unacceptable^e: PVC, PVDC, PET ^b , PA, Aluminium foil, Biodegradables Unacceptable above 5%^e: Other polymers ^d (EVOH, PVOH, acrylic, etc.)	In accordance with accepted standards for home and industrial compostability (e.g. EN13432)

When designed for separation, all packaging components must comply with these scorecard criteria.

a. Paper content includes fibre, fillers and binders b. Unacceptable as co-material with polyolefins c. Includes industrial, post-consumer and chemically recycled content d. Should not interfere with recycling processes.
e. Unacceptable unless proven recyclable through testing, (except fluorochemicals)

Recycled and/or renewable

We are also focused on increasing the usage of renewable materials and recycled content across our portfolio. To monitor progress, the thresholds defined below guide our classification when a product is considered to be made of recycled content or from renewable content.

Paper	Recycled content	≥51% ^c
	Renewable content	≥60%
Plastic	Recycled content	≥30% ^c
	Renewable content	≥30%



Sparking innovation through collaboration

Product Stewardship Network

Mondi's Product Stewardship Network (PSN) is our forum for exchanging insights on product sustainability, certification, legislation or other product-relevant topics. The PSN, which meets every three weeks, is made up of representatives from all business segments. It is a cross-functional network of sustainability experts and commercial, innovation and technical customer services colleagues from across the business. Topics addressed this year included insights from our 4evergreen engagement, as well as updates on FSC and PEFC requirements and our revised Sustainable Products Principles.

In 2022, we introduced a new internal forum, called the LCA Lounge, to exchange insights from our life cycle-based assessments and for a greater understanding of systems thinking and potential trade-offs. The forum considers subjects such as varying impacts across our products and differences between different paper grades and mills, or the difference between biogenic and fossil carbon and why it is relevant.

Food hygiene and product safety

We must comply with product safety laws and our products are subject to stringent regulation and testing to maintain safety, hygiene and quality standards. Our expertise in sourcing safe and sustainable materials for innovative products offers significant value to customers. We focus on how packaging interacts with packaged goods, depending on the application (dry, wet, fatty or frozen foodstuffs).

Third-party hygiene audits are conducted for all operations that hold a hygiene management certificate. All product categories including products for the food industry are assessed for safety and health. Of 71 sites in scope in 2022, 86% were recognised to a food hygiene standard (2021: 86%).

Innovation of processes for material and energy efficiency

In 2022, we invested €22 million in R&D to drive deeper collaboration across the value chain and improve our process technologies, energy and material efficiency to reduce our emissions and eliminate waste.

Successes from 2022 include a new conversion technology developed by Group R&D to turn biogenic residues into process energy, replacing fossil fuels and reducing GHG emissions. We are also evaluating the use of alternative raw material sources from residues for our packaging papers (read more on [page 28](#)). We continue to work with Graz University of Technology on process improvements such as material and energy efficiency in our pulp processes.



The ability to provide our customers with information on the recyclability of our products will be a key enabler in our efforts to develop more sustainable solutions and enhance our value proposition for customers.

Elisabeth Schwaiger,
Head of R&D and IP Flexible Packaging



Mondi laboratories support operations and R&D

The Mondi Group Food Safety Laboratory (FSL) is fully integrated at the campus of the Graz University of Technology. The FSL uses the cutting-edge research infrastructure at the university and the research competence of the university's professors and scientists.

Our FSL is well connected with our operations and business, having a second location at Mondi Frantschach (Austria). For food, cosmetics or hygiene products, the FSL offers customers a source of safe and sustainable materials, as well as testing, simulations and documentation that adheres to Good Manufacturing Practice

INNOVATE

Expanding our own research and development facilities

In 2022, Mondi announced the opening of a recycling laboratory with a focus on fibre-based products and pulp at Mondi Frantschach (Austria). The laboratory uses the Capi 4evergreen test methodology to verify recyclability of fibre-based packaging solutions.

Research is also underway to increase the recyclability of plastics, and paper-based materials. We invested €5 million in a new R&D centre in Mondi Steinfeld (Germany). When completed, it will include pilot lines for both plastic- and paper-based solutions as well as an analytical laboratory and a customer experience centre. This will enable us to accelerate the delivery of scalable solutions for our customers.

principles. The laboratory assesses more than 40,000 analytical parameters³ every year and manages data related to raw materials, suppliers and regulatory requirements, to ensure compliance of Mondi products.

The Mondi Group Analytic Laboratory has unique analytic competences in the field of process and additive chemistry. With these capabilities, the team supports our operations with troubleshooting and the product development teams with recipe and method development. In 2022, more than 250 different formulations for new packaging materials were developed and tested, providing the basis for many new product developments.

³ The Mondi Group FSL is accredited (Accreditation Austria ID 0404) for the detection of mineral oil-based hydrocarbons in recovered paper and paper-based packaging and the detection of overall gas phase migration of paper and paper-based materials.

Sustainable solutions to meet customer needs

Consumers are increasingly mindful about products they purchase and call on companies and brands to lead the way in resource efficiency, waste reduction and recyclability. We collaborate with customers to create packaging solutions that are fit-for-purpose and sustainable by design. Our customer-centric approach using paper where possible, plastic when useful, comes down to understanding our customer needs and innovating together to address consumer expectations.



Paper sleeve and corrugated clip replace shrink film for PET bottle bundles

Hug&Hold is a fully recyclable and plastic-free packaging solution that replaces shrink film for PET bottle bundle packs. The kraft paper sleeve using Mondi's unique Advantage SpringPack Plus combined with a lightweight Mondi corrugated carrier provide for high pack stability and convenience. The innovation was devised by Mondi's specialist teams across its kraft paper and corrugated businesses and has been validated for automated packing processes.

Preventing food spoilage with mono-material recyclable packaging

We teamed up with Austrian food company Handl Tyrol to develop a high-barrier, mono-material polypropylene (PP) packaging solution for bacon. The fresh food packaging solution effectively protects the product to prevent food spoilage and can be recycled in existing streams for mixed polyolefins.



Sustainable packaging for pet food

Mondi collaborated with leading Norwegian pet food manufacturer, Felleskjøpet, to switch to recyclable high-barrier packaging for its premium brand of dry dog and cat food. The new FlexiBag Recyclable will be used to pack and protect the food. The mono-material bags are recyclable in Norwegian plastic recycling streams and contribute to a circular economy.



Paper-based Protector Bags for bike handlebars

Mondi worked with German bike manufacturer Diamant to replace the plastic bubble wrap around bike handlebars with a paper-based solution of premade Protector Bags. The innovation protects bikes during transportation and will reduce Diamant's plastic packaging by around 85% per year. The Protector Bags are sourced locally from Mondi Trebsen (Germany) and delivered flat and stacked in pallets, reducing storage and transportation costs.



Premium pasta has a sustainable makeover

Mondi and converter Fiorini International have collaborated to create a new paper packaging solution for Antico Pastificio Umbro, an Italian manufacturer of premium pasta products. The new recyclable paper bag packaging will eliminate up to 20 tonnes of plastic every year, once it is rolled out across the full range. The packaging offers similar protective properties as the previous plastic packaging in terms of shelf life and features a transparent paper window. The innovative solution was included in The Waste Age Exhibition hosted by the London Design Museum and the Ellen MacArthur Foundation in 2022.



Packaging that reduces food waste

Grow&Go is a suite of sustainable packaging products optimised for farm-to-shelf delivery in a range of sizes, from trays to carry-packs to pallet-ready bulk shipping boxes. The packaging is designed to protect and transport fresh produce from farm-to-shelf-to-home safely, reducing food waste due to damage. The mono-material solutions are made entirely of paper that can be recycled.





Reusable, recyclable or compostable solutions

Closing the loop in eCommerce and construction

In 2022, we worked with a large European fashion e-retailer, MODIVO, to create a range of packaging solutions tailored to eCommerce needs.

We supported MODIVO to switch from the standard rigid packaging, used in the distribution of the e-retailer's collection of shoes, bags and clothing, to Mondi's MailerBAGs. These bags are reusable and recyclable; designed to reduce waste and protect products and to reduce the space requirements and overall packaging costs.

We are also taking an active role in promoting the recyclability and collection systems for hybrid paper-based materials from the construction sector. Our aim is to recover the high-quality fibre of the packaging waste materials after use and to keep this material in circulation to produce new fibre-based solutions. We have initiated several pilots to promote a circular economy for paper bags and we are examining collection systems with waste management companies for used paper bags from the construction industry in different countries. Our aim is to better understand feasibility, different methods of material segmentation, and cost levers of the collection systems. One example is the pilot we did in 2022 with the construction company OHLA in Madrid, which over three weeks collected and recycled roughly 10,000 used paper sacks, equal to roughly one tonne of paper from construction materials.



Mondi was able to improve our packaging considerably and support us in reaching our sustainability goals. The Mondi portfolio offers solutions that are fit for purpose, using less space and material, while still protecting the goods on their way to our customers. Not only is this shift more environmentally friendly and cost-effective for our business, but it also reflects our commitment to meeting our customers' expectations and consistently improving their experience.

Łukasz Boguszewski,
Logistics Director, MODIVO



Cradle to Cradle Certified® uncoated fine paper products

Mondi's uncoated fine paper business has developed a product roadmap to drive the 'sustainable by design' principle. The Cradle to Cradle Certified® Products Program⁴ is a cornerstone of the roadmap, along with the Green Spirit customer approach.



Read more about Green Spirit [here](#)

Mondi's Uncoated Fine Paper portfolio, from mills in Austria and Slovakia, was Cradle to Cradle Certified® (Bronze level) in 2021. Mondi South Africa is in the certification process for its uncoated fine paper offering. Initiatives are in place to improve the five assessment criteria of the Cradle to Cradle Products Innovation Institute. These will be implemented throughout 2023, ahead of the recertification process at the end of the year.

As part of our Green Spirit approach, in 2022 we trained more than 1,000 direct customers on paper sustainability topics and shared success stories related to our Cradle to Cradle certification. We hosted inspirational events in Austria, Switzerland, France and Germany for our indirect customers, such as creative agencies, on the importance of using sustainable paper. These events were complemented by a webinar series on circularity.

Performance against our target

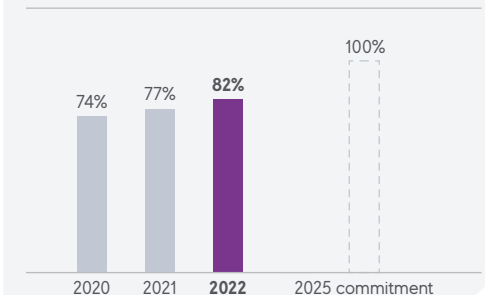
Target: 100% of our packaging and paper products are reusable, recyclable or compostable by 2025

We see sustainability as the driver of growth for all our business segments and engage across our business as well as externally with customers and retailers to achieve this.

Our Path to Circularity Scorecard has enabled us to track our progress, develop our pipeline of innovative solutions and help our customers replace unsustainable packaging with better alternatives. The scorecard also considers the portion of our portfolio that is based on renewable materials (switching from plastic to paper or from fossil-based resins to bioplastics) and our use of recycled content.

82% of our portfolio of packaging and paper solutions is reusable, recyclable or compostable today (based on revenue; 77% in 2021). Key challenges we face in reaching our commitment are related to the availability of post-consumer recycled plastic in sufficient quantity and quality, especially for food applications where chemically recycled materials are needed.

Reusable, recyclable or compostable products (% of Group revenue)



⁴ Cradle to Cradle Certified is a registered trademark of the Cradle to Cradle Products Innovation Institute.



Keeping materials in circulation

We work to avoid waste, starting with product design and the selection of raw materials through to our manufacturing processes and increasing the use of by-products as secondary raw materials for other industries.

We view waste disposed to landfills as a lost resource. We work with industry partners to find economically feasible solutions to reuse and recycle these highly valuable resources. This not only reduces our waste to landfill, it also avoids greenhouse gas (GHG) emissions.

Commitment

Avoid waste by keeping materials in circulation

Target

Eliminate waste to landfill from our manufacturing processes

🟢 On track

Linked to SDGs



🔗 Read more about our contribution to the SDGs in our [SDG Index](#)

Our waste management approach

Mondi has developed a sophisticated waste management system to support our aspirational ambition to eliminate waste to landfill. Our management approach starts by reviewing the way we design our products and the selection of raw materials. During production, we investigate how to increase the reuse of secondary by-products as potential raw materials, rather than sending them to landfill and thus losing their value in a circular economy. We also explore and use alternatives for the disposal of waste to landfill, such as the utilisation of ash from our bark boilers as a secondary raw material in the production of cement and bricks.

The reuse of waste generated in our production processes includes using secondary raw materials within our own organisation and through collaboration with our customers.

Innovating to reuse waste

Our Group R&D team has developed a new conversion technology to turn biogenic residues into process energy, replacing fossil fuels and reducing GHG emissions. In 2022, we conducted several successful trials with biogenic residues, for example bark, from different operations. These trials have proven the substitution potential for fossil fuel and promising results.

Our R&D project on 'Fly ash as feedstock for specialty materials' also contributes to our target by using ash as a secondary raw material. We have successfully proved the feasibility of two applications for these residues on a laboratory scale. If scalable, this has the potential to contribute significantly to our aspirational target of zero waste to landfill.



We are also evaluating the use of alternative raw material sources from residues, for example from coffee brewing, for our packaging papers. First studies show a substitution potential for inorganic fillers in paper providing a similar or better mechanical performance.

Turning residues into resources

Biomass-based chemicals, such as tall oil, a by-product from the wood pulp manufacturing process, can be used either as bio-based fuel for our own energy generation or sold to other industries. Tall oil is used as a renewable-base chemical for biodiesel for energy generation to substitute fossil fuels. It can also be extracted, purified and sold as higher-value secondary raw materials to the chemical industry.

In Finland, wastewater sludge from our pulp and paper mill at Kuopio was used for landscaping, in collaboration with Soilfood, a manufacturer of soil improvement products for agriculture. In 2022, around 42,000 tonnes of our wastewater sludge were used as a soil improvement product.

Performance against our target

Target: Eliminate waste to landfill from our manufacturing processes

Mondi is on track to meet its target. We reduced our total waste to landfill by around 8,500 tonnes in 2022. Since 2020 we have achieved a reduction of 4.4% in absolute waste to landfill. This was achieved by process improvements in Štětí (Czech Republic) and turning sludge into a soil improvement product in Kuopio (Finland).

In 2022, we started reusing fibre sludge from the wastewater treatment plant of our mill in Richards Bay (South Africa) as landfill cover. We also found an alternative use for waste lime mud from our mill in Ružomberok (Slovakia) in the cement production process.

➔ Read more in our case study on [page 70](#)

Eliminate unsustainable packaging together

We work with customers and others across the value chain to support the transition to sustainable packaging solutions. The elimination of food waste is key to this commitment. We can play a vital role by developing suitable packaging which boosts food shelf-life without compromising packaging recyclability. This can reduce the environmental impact of the food industry by preventing food from spoiling before it reaches the table.

Commitment

Work with others to eliminate unsustainable packaging

Target

Progress made through our partnerships and stakeholder engagement activities every year

On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

External benchmarking

We support and participate in a wide range of external benchmarking initiatives to promote transparency and improve our performance. CDP is a global disclosure system which drives transparency of companies' climate change, deforestation and water security impacts.

In 2022, Mondi was once again recognised on CDP's A List for leading practices in forestry and water security. We also achieved an A- score in climate change.

EcoVadis is a platform that enables companies to assess the environmental and social performance of their suppliers. We have a platinum rating and have scored in the top 1% globally for seven consecutive years.

Sustainalytics is the world's largest independent ESG research provider of comprehensive research and analysis on companies' ESG performance, researching more than 13,000 companies annually. Its analysis is used by over 400 institutional investors seeking to incorporate ESG factors into their investment decisions. Mondi is ranked first in the Paper and Forestry industry group.

MSCI is another platform that rates over 8,500 companies and more than 680,000 equity and fixed income securities globally on their exposure to industry-specific ESG risks and their ability to manage those risks relative to their peers. We have been rated AAA, the best possible score, for five consecutive years in the Paper & Forest Products industry.



Preventing food waste with the World Food Programme

According to a recent report from the FAO, the food that is lost and wasted could feed 1.26 billion hungry people every year.⁵ Food loss and waste also accounts for 8–10% of global greenhouse gas emissions. Sustainable packaging can play a vital role in minimising food waste. It reduces the environmental impact of the food industry by preventing food from spoiling before it reaches the table.

Sustainable and effective packaging also plays a critical role in a humanitarian context, maintaining food safety and nutrition when it reaches those in need. We support the World Food Programme (WFP) with expertise and insights to help eliminate food waste and loss due to defective packaging.

Globally, WFP delivered 4.4 million metric tons of food – along with its packaging – in 2021. We are helping WFP to assess different technologies and develop quality specifications for WFP's suppliers to prevent food waste and loss. We also review the environmental impacts of materials and how to design this packaging for recycling.

2022 marks the second year of our three-year partnership. We have projects that consider high-barrier laminates to boxes and other materials. We test and analyse sample packaging in our R&D laboratories and consult on improving technical specifications for WFP suppliers.

In 2022, we donated €2 million to the World Food Programme to support its Ukraine relief effort immediately following the start of the war.

Knowledge sharing among humanitarian organisations

We participated with WFP at a USAID Joint Initiative webinar to promote shared learning



In a humanitarian context, packaging plays a big role in the prevention of food waste, especially in humanitarian sectors, where we often face challenging supply chains because of long transport and storage times and uncertain climate and road conditions.

Carole Manceau,
Packaging Expert, UN World Food Programme



among humanitarian organisations about packaging waste management and sustainable packaging. Mondi and WFP have also shared insights at other events, including a panel at the European Forum Alpbach in Austria.

Working towards a global plastics treaty

In 2022, we joined the Business Coalition for a Global Plastics Treaty. This new coalition led by the Ellen MacArthur Foundation and WWF endorses a common vision for an international legally binding instrument to end plastic pollution, by providing a clear voice in the treaty negotiations to amplify the call for an ambitious and effective global treaty. We will remain active until the multilateral negotiations on the treaty conclude in mid-2025.

⁵ FAO – Tackling food loss and waste: A triple win opportunity



Cross-value chain partnerships to drive progress

We believe in the power of collaboration to drive progress at scale and work with a number of industry associations and cross-value chain alliances to support development of a circular economy for our sector.



We have continued to participate actively in 4evergreen, a cross-value chain alliance to boost the role of fibre-based packaging in a circular economy and raise the overall recycling rate of fibre-based packaging to 90% by 2030 (currently 82.3%).

Mondi is represented in all four technical workstreams, which focus on how to evaluate recyclability tests, how to design for circularity, best practices for improved collection and sorting, and innovation. We are also active in the communication workstream to translate the technical outcomes into understandable messages for industry and policymakers.

Key deliverables in 2022 included the publication of part 1 of the 'Circularity by Design' guideline for fibre-based packaging in March; guidance on improved waste collection and sorting in September; and the release of the 'Recyclability Evaluation Protocol' for standard mills in December. We are also part of the Strategic Taskforce 3.0 to develop proposals for the strategic direction of the alliance post-2023.

Learning from our engagement on the design guidelines has informed our annual review of the Mondi Path to Circularity Scorecard. Insights from work on the recyclability evaluation protocol are also being applied in our new recyclability testing laboratory at Mondi Frantschach (Austria).



FINAT is the European association for the self-adhesive label industry that provides a networking platform for converters, suppliers and indirect suppliers. Its aim is to represent members' interests, provide a central source for industry information and education, voice the industry's views at the EU level, and establish and maintain industry-related best practices, standards and test methods. In 2022, Mondi's Functional Paper and Films business segment started exchanging insights and best practice on the sustainability of our release liner business.



We joined Circular Economy for Labels (CELAB) in 2020 to facilitate collaboration to enable the recycling of self-adhesive label materials. CELAB is an industry-led cross-value chain initiative founded by companies in the self-adhesive label industry to create greater circularity for its products. It currently has two branches: EU and North America.

We are engaged in different workstreams in Europe and North America addressing data mining, recycling solutions and logistics. In 2022, we joined the CELAB-Europe Regulatory workstream.



FPE deals with a wide range of issues including food contact, sustainability and environmental issues. Its vision for flexible packaging establishes four main goals:

- design flexible packaging for full effectiveness and minimum environmental footprint;
- circularity for flexible packaging;
- zero tolerance of leakage and littering into the environment; and
- speeding up progress with cooperation.

FPE plays an advocacy role for the European flexible packaging industry, both within Europe and internationally. We have been a member of FPE's Sustainability Committee since 2004. In 2022, we took on the role to be the chair of the FPE Sustainability Committee. In collaboration with FPE and other industry partners, we are contributing to the development of the Product Environment Footprint (PEF) Category Rules for flexible packaging, including providing a supporting study.



We continue our active engagement with CEFLEX, a pan-European multi-stakeholder consortium aiming to make all flexible packaging in Europe circular by 2025. In 2022, the Mondi team was involved in the near infrared (NIR) sortability tests, a position paper on recycled content, and testing of the web-based Design for Circular Economy (D4ACE) tool. We also joined the advocacy working group supporting a consistent approach to advocacy across our industry.

We also referenced the CEFLEX Design for Circularity guidelines as we developed our Mondi Path to Circularity Scorecard. We have expressed our interest to engage in the ValueFlex project, which aims to implement a state-of-the-art recycling facility for post-consumer flexible packaging.



Working to make flexible plastic circular



In 2022, we renewed our membership with the Ellen MacArthur Foundation. We participated at the annual Ellen MacArthur Foundation summit and a workshop in Sweden. Mondi is a signatory to the Global Commitment, working to eliminate plastic pollution and creating 100% reusable, recyclable or compostable plastic packaging by 2025.

See our latest report on progress [here](#).

The threshold used by the Ellen MacArthur Foundation to prove recycling or composting works 'in practice and at scale' is a 30% recycling/composting rate achieved across multiple regions, collectively representing at least 400 million inhabitants. By this definition, Mondi's flexible plastic-based products are not yet deemed recycled at scale. However, we reported 31% (based on weight, 2021: 28%) of our plastic packaging as designed for recycling based on the CEFLEX guideline.

In order to improve on this, our product development has focused on structures with 30–50% material made from post-consumer resin (PCR). We have three defined areas of action to improve our performance in the use of PCR: 1) Redesign our packaging to mono-material solutions and remove hard-to-recycle components to help improve the feedstocks recyclers receive; 2) Work closely with recyclers to help improve the quality of their recycled resins; 3) Engage in the ValueFlex project with CEFLEX (see [page 30](#)).

We are collaborating with petrochemical companies to explore chemical recycling and mass balance certifications like the International Sustainability & Carbon Certification (ISCC) Plus certification. Seven Mondi sites are now ISCC certified, with Mondi Inncoat (Germany) attaining certification in 2022. ISCC certification uses a mass balance approach to account for the use of renewable (feedstock) or recycled raw materials from plastic waste streams.



We are one of the first in our sector to offer the ISCC Plus certification. This gives us a great competitive advantage and shows our innovative and sustainable approach.

Günter Leitner,
Managing Director, Mondi Styria
and Mondi Coating Zeltweg

Performance against our target

Target: Progress made through our partnerships and stakeholder engagement activities every year

Our Sustainable Development Committee and Executive Committee review our key engagements and partnerships annually and evaluate our progress. We evaluate our performance based on the quality of our engagements and the impact they achieve, rather than the number of engagements.

This makes the evaluation more subjective, as impact is often achieved over time and only with support from across the value chain. We have developed a roadmap for delivering this target based on a qualitative review of key engagements including continued engagement with existing partners and potential new partnerships.

We continue to see an increasing number of organisations joining leading value chain initiatives, like 4evergreen, which we represented at the 2022 Austrian Packaging Day conference held in Vienna in September. We also see progress in the development of design guidelines, from 4evergreen and CEFLEX, that have the potential for adoption by the sector and could inform upcoming legislation on the Packaging and Packaging Waste Regulation, among other initiatives.

[→ Read more on legislation here](#)

We share our expertise with our partners and actively promote sustainable packaging as a key enabler to tackle climate change, reduce hunger by better protecting food and maintaining its quality, and eliminate waste and pollution.

WHAT IS NEXT IN CIRCULAR DRIVEN SOLUTIONS?

- Support our customers in a transition to more sustainable solutions, where identified and available in our portfolio.
- Prioritise developing innovative alternatives to products that are not recyclable or compostable today.
- Continue to work with our cross-value chain collaborators, our industry associations and other key partners to support the development of harmonised and improved collection, sorting and recycling infrastructure to promote sustainable packaging and eliminate plastic leakage to the environment.

How does Mondi create a safe workplace where people feel INCLUDED AND VALUED?

RETHINK

Enhancing our approach by focusing on Social Psychology of Risk.

➔ Read more p40



CREATED BY EMPOWERED PEOPLE

Upskilling for long-term employability	34
Purposeful and inclusive workplaces	36
Safety, health and mental wellbeing	39

RECOGNISE

Celebrating excellence across operations with a record number of entries to the Mondi Diamond Awards.

➔ Read more p34



PROMOTE

Striving towards inclusive recruitment processes to attract women and diverse talents.

➔ Read more p38



Performance at a glance & key learnings

Commitment	Target	Performance		This year at a glance
		2021	2022	
Build skills that support long-term employability	Enable our employees to participate in upskilling programmes	●	●	Continued with multiple people development initiatives like Mondi Academy, Talent and Graduate Programmes, Performance and Development Review and Individual Development Plan
	Achieve 90% Purpose Satisfaction score in our employee survey	●	●	Around 2,600 employees had the opportunity to share their views on topics relevant to their local context in pulse surveys in 2022
	Achieve 90% Inclusiveness score in our employee survey	●	●	Group-wide survey will be conducted in 2023
Provide purposeful employment for all our employees in a diverse and inclusive workplace	Employ 30% women across Mondi	●	●	22% women employed across Mondi, a 1% improvement since last year (2021: 21%) We focus on inclusive recruiting initiatives to attract a diverse range of talents
	Zero fatalities	●	●	Tragically, a contractor was fatally injured at our Frantschach mill (Austria) in August while engaged in manual handling work
	Zero life-altering injuries	●	●	In January, a contractor suffered life-altering injuries at our Mondi Warszawa (Poland) Corrugated Solutions plant through contact with rotating equipment In April, an employee suffered a life-altering injury while setting up a winder in Mondi Štětí (Czech Republic)
	15% reduction of Total Recordable Case Rate	●	●	7.8% reduction of our Total Recordable Case Rate compared with our 2020 baseline, and a 11.8% reduction since last year
	Support our employees in pursuit of a work-life experience that enhances their wellbeing	●	●	Professional counselling accessible for 94% of our employees Ongoing work regarding flexible working in various locations
	Our operations drive awareness of and take measures to improve health and mental wellbeing	●	●	A new Mental Wellbeing Index for our 2023 global employee survey was developed. The index was tested in pulse surveys in various locations

LESSONS LEARNED

Our commitments and targets are ambitious, and change will take time, with results becoming evident in a few years. We need to keep sight of the big picture towards establishing a truly inclusive work culture where all employees can realise their potential.

Creating an empowering and inclusive work culture requires a willingness to adapt, committed leadership at all levels and clear communication to reinforce behaviours and values.

The Safety Engagement Board Process is used proactively for discussions and engagement on new initiatives, safety talks and incident investigations to share learnings across our sites.

While there are many initiatives ongoing across all our plants and mills, we need to focus on creating platforms for people to connect and leverage learnings across the organisation.

Key

✓ Completed ● On track ● Slightly behind target ● Not on track ○ In development

Upskilling for long-term employability

Mondi employs 22,000 people working in more than 30 countries. Our goal is to be an employer of choice by engaging and developing our people to realise their potential. This leads to long-term employability and supports the stability and longevity of our business.

We anticipate and respond to shifts in our industry and society by creating upskilling programmes to support the growth and career journey of every Mondi employee.

Commitment

Build skills that support long-term employability

Target

Enable our employees to participate in upskilling programmes

● On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Continuous learning enablers

Mondi Academy is our global learning hub, which comprises a Group-wide training network, including local academies in Czech Republic, Poland, Slovakia, South Africa and the United States. It serves as a platform that drives collaboration across our business through expert communities, functional academies and the active pool of internal trainers. Many operations also offer local training and development options dedicated to the specific needs of their employees and business.

We offer our employees access to continuous learning at any time, with digital learning tools and e-learning tailored to the needs of employees and the business. In 2022, new methods of learning such as e-learning modules, e-books, audio learnings and language apps accounted for over 3,000 total training hours. Sustainability training sessions were offered on topics that include climate change, human rights and the circular economy to support our employees in acquiring needed skills and know-how for the future.

We also offer employees the opportunity to upskill with external education, on-site and on-the-job training to support job fulfilment and long-term employability. Our different learning and development opportunities cover product portfolios, business insights, people skills, innovation and trends, and sustainability.



Recognition by Mondi Diamond Awards

The Mondi Diamond Awards recognise excellence across our operations. The awards showcase projects that stand out in the areas of Operational Excellence, Successful Customers, Cutting-Edge Solutions, Inspired People, Sustainable Development and Safety & Health.

A record number of 118 teams submitted entries, and 20 were selected to present to the Mondi Group Executive Committee. Twelve finalists were invited to join the Mondi Leadership Forum, where the winners were chosen by audience vote. The winning projects ranged from digitalisation of the production environment, safety risk management to young talent development and sustainable packaging solutions. One of the awards was granted to EcoVantage from Mondi Štětí (Czech Republic) that was also recognised externally (see more on [page 4](#)). The projects are actively communicated across the Group to share project learnings and shine a spotlight on the incredible work being done by colleagues around the Group.



The Merebank team did an amazing job at getting the mill started with no injuries in adverse conditions. They showed great resilience and dedication to get the Merebank mill up and running within a record time after the flood.

Donovan Naidoo,
Operations Director, Mondi Merebank

The spirit of resilience

In April 2022, the mill at Mondi Merebank (South Africa) was severely impacted by a devastating flood. The mill's employees worked tirelessly to restart the mill, despite many suffering loss and damage at home.

The mill was able to restart operations within eight weeks following a massive staff clean-up and recovery operation. Mondi Merebank mill also supported colleagues and neighbouring communities: Employees without water at home were able to collect drinking water and a reusable 25L container for water collection daily from the mill. Mondi Merebank partnered with an NGO to provide immediate relief for those most affected within the mill's vicinity, including shelter, water, food, blankets, clothes and healthcare products.



Promoting individual career paths

Employee feedback

Transparency, assessments and feedback are key to supporting personal development. Our focus is to encourage a feedback culture and proactive exchange on an individual's strength and areas for improvement. Performance and Development Reviews (PDRs) and 360° feedback enable employees and their managers to reflect on individual performance, offer structured feedback and set goals. In 2022, we added training for 'Engaging through Feedback' to the Mondi Academy for individuals and teams. Over 80 people participated in the training, which was confirmed to be a safe space for sharing feedback and stepping out of comfort zones by attendees.

We use formal and informal processes to communicate and engage with employees. This includes an intranet, local sessions on safety and a Group-wide employee survey conducted roughly every two years. The majority of our employees participate in various performance-related pay schemes recognising the pursuit and achievement of business objectives.



Supporting individual employee development

Individual Development Plans (IDPs) are a tool for employees to reach their short- and long-term goals by defining a development path according to individual needs. Mondi offers a variety of targeted development programmes to support each individual in acquiring needed skills for their personal or professional growth and career ambitions.

Experts' career path

Specialists across Mondi have career paths that require the development of specific expertise. We assess competency levels and future development requirements for individuals, considering expertise, complexity, autonomy, business impact and functional competencies.

Recognition is based on employees' competency and achievements, irrespective of whether the employee is a manager or subject matter expert.

Early career development

We have a strong talent pipeline due to building development programmes for employees at the early stages of their career. Platforms such as NEXGEN, job shadowing, mentoring and coaching, help people gain experience in preparation for future positions.



Read more on [NEXGEN online](#)

In 2022, we started the [International Graduate Programme](#) to enhance our talent pipeline and support the early development of future leaders by giving them the opportunity to gain experience in different locations and departments. The programme also supports our diversity targets.

The graduates, and interns identified as high potential, took part in the 'Grow at Mondi' event. The event introduced our business with external guest speakers and workshops on sustainability and Diversity and Inclusion (D&I).

Management careers

First-line managers play an essential role in Mondi as they cascade information to their teams and communicate what is important on the production floor to management. Training for first-line managers is offered in their respective local language and focuses on the challenges of leadership. In 2022, 17 training groups from Austria, Germany, the Netherlands, Mexico, Serbia and the US implemented the first-line manager training with 255 total attendees.

L.E.A.D. is a talent development programme to equip mid-level managers with the tools needed for the new way of working and the challenges of leadership. It is tailored to the needs of the participants, offering both modular customised content and individual coaching opportunities, peer feedback and exchange platforms.

Customer engagement training

In 2022, our Customer Experience Academy was launched to support holistic learning and understanding of the customer life cycle – from creating business to growing business and solving problems.

It is open to all those who are directly or indirectly engaging with customers. In 2022, the first group took part in a trial with in-person modules, remote learning, coaching and reflection on real-life challenges.

Performance against our target

Target: Enable our employees to participate in upskilling programmes

All our employees are encouraged to participate in upskilling programmes offered by the Mondi Academy and local operations. In 2022, employees and contractors across Mondi completed 443,000 hours of training (2021: 425,000), including 49% of hours dedicated to safety training, and 3,200 hours on new ways of learning such as e-learning and online sessions. Average training hours¹ equates to 20 hours per employee.

In 2022, 1,152 participants (2021: 2,780) continued to engage in our sustainability training programme and completed 2,122 hours of training on topics such as recyclability of paper and plastic, human rights, climate change and our Net-Zero journey. In addition to the online live sessions, recordings of all past training webinars are available upon demand for all employees.

In 2022, around 31% of all employees (6,818) took part in the online PDR process (2021: 6,843). The review process is available throughout the year, enabling an agile adaption of goals and regular feedback. A systematic review process is automatically triggered twice a year.

IDPs were completed by 24% of all employees (2021: 22%) and by 72% with access to the online system (2021: 67%). Managers are encouraged to discuss and reflect on each individual's performance and development objectives using IDPs, either online or offline. 734 employees received 360° feedback in 2022 (2021: 519).

¹ Total including safety training for contractors.



Purposeful and inclusive workplaces

We support our employees to realise their individual purpose and see their contribution to Mondi's purpose by promoting a diverse and inclusive work culture.

A diverse workforce is responsive to local contexts, changing environments and different customer needs and an inclusive culture fosters belonging among employees.

Commitment

Provide purposeful employment for all our employees in a diverse and inclusive workplace

Targets

Achieve 90% Purpose Satisfaction score in our employee survey

● On track

Achieve 90% Inclusiveness score in our employee survey

● On track

Employ 30% women across Mondi

● Slightly behind target

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

At Mondi, a diverse and inclusive workplace means understanding, accepting and valuing differences between people. This can mean different races, ethnicities, genders, ages, religions, disabilities or sexual orientations, as well as differences in education, personalities, skill sets or levels of experience. The shift across Mondi to create a diverse workforce and inclusive culture involves everyone, at every level.

Three members of Mondi's Executive Committee are on the Diversity & Inclusion (D&I) Steering Committee along with the Group Communication Director, with one business unit CEO as the Steering Committee Chair. The Committee serves as a sounding board and advisory panel, providing management attention, buy-in and support for global D&I initiatives.

Below, we detail some of the processes that support this transition and ways that employees can contribute.

Employee listening – pulse surveys

It is important to understand how employees feel about Mondi as an employer. In 2022, our Group-wide employee survey was redesigned to better listen to employee views, reflecting the latest scientific findings on how to best engage employees. Several questions were revised to make them more relatable and understandable for employees. We also included new questions for a Mental Wellbeing Index, requesting views on the work environment, team organisation, work-life balance and personal wellbeing. In 2022, the redesigned employee listening journey was kicked off with pulse surveys in some locations. Around 2,600 employees had the opportunity to share their views on topics relevant to their local context and addressing purpose satisfaction, inclusiveness and wellbeing.



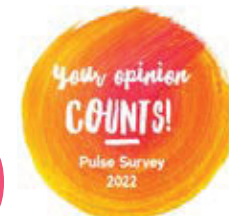
“We know that our employees do their best work and can be the happiest when they feel they belong and don't need to hide any part of their identity. The Curious Community fosters connections and provides a safe and brave space for learning.”

Frauke Bastians,
Mondi Group Diversity & Inclusion Senior Manager

The results offer first insights on how we are performing against our MAP2030 commitments. In 2023, the employee survey will include all employees across Mondi Group and be a measure of progress towards our MAP2030 Empowered People commitments.

2,600

employees were invited to share their views in pulse surveys in 2022



A culture of inclusion: the 'Curious Community'

In 2022 we established the 'Curious Community' to support our culture of development where ideas are exchanged, and everyone feels included. This is an online community that connects members from 17 countries across all business units and career levels.

The Curious Community serves as a sounding board for new initiatives and ideas around D&I and helps us to tailor our approach to individual business, country or regional needs. Mondi colleagues come together to learn, grow and connect around their shared interest in D&I in a safe space.

Global events hosted by the community engage a broad range of colleagues and encourage new thinking and more inclusive behaviour. This gives access to regional insights and encourages cross-pollination of ideas, support and collaboration among people from different backgrounds and functions that may not usually meet. For example, there have been panel discussions about experiences of exclusion and inclusion, expert input sessions, and ideation workshops on our target of employing 30% women by 2030.

There has been a positive response among employees to the Curious Community with participants highlighting that the emotional connection to colleagues through their openness, honesty and courage is a spirit that reflects the 'Grow. Create. Inspire. Together' claim and is helping to shape Mondi's culture.



Providing equal opportunities

Toolbox for sharing best practice

The MAP2030 Empowered People Digital Toolbox is a platform for sharing good practice and initiatives from across Mondi to support our MAP2030 Empowered People commitments.

The Toolbox includes many creative initiatives from across the business that aim to enhance long-term employability, inclusive and purposeful workplaces and mental wellbeing. Individual projects are highlighted in virtual MAP2030 exchange sessions to facilitate adoption in other locations. The aim is that all operations can use this collection of initiatives as both an inspiration and blueprint for local implementation.



Diversity among management

We believe in the value of including employees from local communities in our senior management teams. This helps our decision-makers better reflect local needs, and we benefit from diversity of thought among our leadership. We operate in over 30 countries with ethnic background definitions and descriptions varying across our operations.

For example, at the end of 2022, 64% of Mondi South Africa's management team (7 out of 11 Operational Committee members) were individuals from previously disadvantaged backgrounds (2021: 67%, 8 out of 12).

The female representation on our Executive Committee is 25% (2021: 33%), with female direct reports to the Executive Committee of 25% (2021: 30%) and three (33%) female directors on the Mondi Board (2021: 44%).

Embedding inclusive behaviour and awareness

Providing equal opportunities is a priority at Mondi and we have zero tolerance of discrimination and harassment. Yet, people's behaviour does not necessarily change with standardised and mandatory training on D&I.

Our focus is on integrating guidance and awareness-raising into all aspects of work, and to encourage continuous learning for all employees.

We draw on new ideas, inspiration, research and information to make evidence-based decisions to design initiatives supporting achievement of our MAP2030 roadmap and beyond. Some of these include the following:

- The Mondi Academy training sessions include elements designed to increase D&I awareness and skills, such as intercultural competences. Our Conscious Inclusion training helps employees and leaders to be more mindful of their unconscious biases, equipping them with practical actions they can take to support an inclusive workplace.
- We promote '8 steps towards inclusive behaviour' with self-reflecting questions to encourage employees to think and act in a way that makes everybody feel safe to speak up. These steps were highlighted in a session at Making a Difference Day this year, encouraging conversations and creating awareness. Our success is linked to allies advocating for real change in all levels of management across Mondi.
- [Catalyst](#) is a global non-profit to help build diverse and inclusive workplaces. Mondi is a global supporter and member of the Expert Community. Mondi employees can access the online resources, including virtual events, workshops, courses and case studies on topics such as unconscious bias, gender pay gap, engaging men, ethnicity and culture, the future of work or LGBTQ+.
- We are a signatory of the UN Women's Empowerment Principles and our MAP2030 Empowered People initiatives promote its seven principles.

Recruitment and development

We aim to attract, develop and retain the right people for each job and make them feel respected, fairly treated and empowered to excel in their chosen careers. Employees with potential for future development are identified through roundtable processes that include time for reflection on biases and hidden talents to guarantee fair consideration is given to everyone.

Recruitment activities are aligned with our D&I Policy to promote diversity and maintain fair and non-discriminatory work practices for recruitment and succession planning. We have implemented a new global recruiting guideline that explicitly addresses issues around fairness and inclusion. It aims to support hiring managers and human resources colleagues to critically reflect on hiring practices and potential improvements.

[Read more on recruiting with a focus on women on page 38](#)

Activities to successfully retain talented employees and increase diversity include mentoring programmes as well as networks for establishing valuable relationships to support individual and professional growth, like our 'buddy' programme linking new hires with a seasoned employee.





Fair and inclusive recruiting



Performance against our targets

Target: Achieve 90% Purpose Satisfaction score in our employee survey

We introduced the Purpose Satisfaction score in our 2020 employee survey with an overall score of 78%. The index comprises questions that cover development opportunities, recognition and personal accomplishment.

Our ambition is to achieve a 90% Purpose Satisfaction score by 2030. In 2022, we conducted pulse surveys at several Mondi locations to gauge our performance. The results vary between the locations, but indicate that there is a need to focus on employee recognition. We will work on this by promoting our You Make Mondi recognition scheme and we will focus on communicating our purpose and how colleagues can see meaning in their work.

Target: Achieve 90% Inclusiveness score in our employee survey

Our Inclusiveness index covers the topics of respect, fairness and trust. We aim to achieve 90% by 2030 from a 2020 baseline of 79%. In 2022, we used pulse survey insights at several Mondi locations to measure our performance.

The Inclusiveness score in the pulse surveys shows good results, with Mondi Stamboljiski (Bulgaria) performing exceptionally well and almost meeting the Group target of 90% favourable scores. Overall, an area for development across the pulse survey locations is to improve the working atmosphere so colleagues feel safe to speak their minds and raise concerns.

Inclusivity for all abilities

We have partnered with the social enterprise myAbility since 2018. myAbility brings together companies and people with disabilities to foster inclusive workplaces. The myAbility talent programme has qualified students shadowing Mondi employees to make people aware of being more inclusive when working with colleagues with disabilities. It enables students to gain experience and contacts to help their future careers.

Mondi Simet (Poland) sets a good example for inclusivity across all abilities. About 30% of the employees are people with disabilities who work in various jobs from office-based roles to production operators. As a result, Mondi Simet was recognised with the 'Employer with Heart' award in 2021, which was part of a Polish social campaign aiming to break stereotypes related to discrimination and artificial divisions in society.

Target: Employ 30% women across Mondi

In 2022, we had 22% female employees (2021: 21%). This reflects the beginning of an ambitious journey and the initiatives we have put in place will take time to show results. To achieve our goals, four out of every ten new hires will need to be women, as of the 2020 baseline. The rate of female hires in 2022, totalling 31%, signals that we need to keep working on becoming an attractive employer for women.

Mondi was recognised as a top Diversity Leader 2023 in Europe by an independent survey of the Financial Times and Statista, which considered topics such as age, gender, ethnicity, disability, and sexual orientation.

It is important for us to move forward in reaching all of our Empowered People targets as we otherwise risk increased employee turnover, decrease in mental wellbeing and lack of diverse talent in our workforce.

Find our consolidated performance data [here](#)

PROMOTE

Inclusive recruiting for gender equality

Mondi Dynäs (Sweden) filled 36% of open positions with women in 2022, and attracted female applicants to 85% of the jobs advertised through an inclusive recruiting project seeking to address the under-representation of women working in our plants and mills and challenge the misconception that 'there are no female candidates'.

The almost triple increase in female applicants compared to 2021 was achieved by modernising every step of the recruitment process and job requirements to have a broader appeal to women, by revising language and images used in media campaigns to reflect broader society, in addition to training hiring managers on gender bias.

The project was shared in our MAP2030 exchange sessions, part of the MAP2030 toolbox (read more on [page 37](#)). However, women are still under-represented in our plants and mills worldwide. We are working hard to reach our target of 30% women at Mondi by 2030.





Safety, health and mental wellbeing

Fundamental to our culture and mindset is to look after ourselves and each other. We maintain a working environment that values safety, health and mental wellbeing. We seek to create a positive work-life experience for all of our employees and contractors to enhance performance and support wellbeing.

Commitment

Create an environment that enables a positive work-life experience, valuing the safety, health and mental wellbeing of all our people.

Targets

Zero fatalities

Not on track

Zero life-altering injuries

Not on track

15% reduction of Total Recordable Case Rate

On track

Support our employees in pursuit of a work-life experience that enhances their wellbeing

On track

Our operations drive awareness of and take measures to improve health and mental wellbeing

On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Improving employee safety, health and mental wellbeing

Keeping people safe and healthy is a moral and a business imperative that applies to all who work for and on behalf of Mondi. Our operations involve high-risk activities and providing a safe and healthy working environment is a minimum expectation of our stakeholders.

Our employees and contractors have the right to refuse to work should their safety and/or health be compromised. They are protected against reprisals through SpeakOut, our platform for reporting grievances confidentially (read more on [page 87](#)).

Our safety approach centres on people, promoting a 24-hour safety mindset and managing key risks. We are shifting our focus from traditional safety, which focuses mainly on controls, to addressing Social Psychology of Risk, including psychological and cultural elements to drive continuous improvement in our culture and safety performance.

To monitor and improve our safety performance, we use 'current' and 'lead' indicators in addition to traditional 'lag' indicators. This monitors proactive efforts to address risks, focusing on preventing incidents. Performance against these indicators forms part of our senior managers' bonus scheme. These are revised annually based on the previous year's performance. We assess trends and completion of lag and lead milestones as well as systems audits against ISO 45001.

[Read more about other initiatives and case studies online](#)

Our aim is to build the best possible working environment, processes and structures to enable employees to have a positive work-life experience and enhance their wellbeing. We are developing flexible working models and increasing efforts to give all employees access to assistance programmes and support, with a strong focus on mental wellbeing.

Global safety network

Our Group Safety and Health Network collaborates closely with site safety, health and environment (SHE) teams to meet commitments on safety and occupational health.

The network is made up of Group, business unit and business segment SHE managers who meet quarterly to address issues and align efforts on the Safety and Occupational Health Strategic Plan. The plan is approved by the Executive Committee. The network meets with SHE professionals from operations to facilitate cascading of information, alignment across sites, employee participation and consultation. It is chaired by the Group Head of Safety and Health.

Site-level committees oversee local performance, assess incidents and support departments to enable continuous improvement and raise issues of concern or grievances related to safety and occupational health. Each operation has a dedicated person or people responsible for safety and health who attend specific internal trainings to maintain alignment.

A 24-hour safety mindset

A large proportion of the injuries we see in our operations are connected to the unconscious mindset of our employees and contractors. We promote a 24-hour safety mindset and strive to bring the unconscious to the conscious – thinking about the work we do before starting, so that it is done safely. Our safety initiatives include both work- and family-related topics, for example: poster programmes and the Uncoated Fine Paper 'Your Reason To Be Safe' initiative.





Focus on Social Psychology of Risk

To promote teamwork and engagement, we have rolled out an Engagement Board process. This is a tool that is designed to help our leaders engage with employees and contractors with a focus on Social Psychology of Risk elements. The board assists in open discussion among teams.

The process has been well received at sites and adopted by other disciplines including engineering, production and projects. Additional tools have been developed and are being rolled out to support the Social Psychology of Risk activities and the Engagement Board process. Continuous coaching training is provided to ensure learning and effective use of the tools. Additional tools include conversation role play and dialogue cards.

Making a Difference Day 2022

We hosted our annual Group-wide Making a Difference Day which encourages people to take personal action and to improve our safety, health, and sustainability performance. In 2022, activities included opportunities for employees to engage in our MAP2030 sustainability journey, which covered working safely, mental health and wellbeing initiatives, D&I, and Mondi's eight steps towards inclusive behaviour. Local initiatives took place as webinars, psychological on-site support and management talks.



The Group Safety and Health Network team has been leading change across the Group, to move from a "safety culture" to one culture in the company, with safety being one of the elements of this – with the goal of sending everybody home safely. There have been open discussions with employees and contractors, encouraging their buy-in and ownership. We continue to see an improved performance and further development of our company culture.

Certification and management systems

The safety and health of all our employees and contractors is covered by our management system, which includes our Safety and Health Policy, Practice Notes, methodologies and initiatives. These systems are implemented based on recognised risk management standards and guidelines. 92% of our mills and 77% of our converting operations are ISO 45001 certified. All employees and contractors working on our sites are required to adhere to policies and procedures as set out by our management systems.

Our operations and equipment are subject to ongoing internal and external audits, designed to identify strengths and weaknesses and to guide necessary changes. Regular audits of plant and equipment standards help drive improvements in process controls and systems.

We have identified top risks, such as operations of recovery boilers and paper machines, and developed plans to engineer the risks out. Where not possible, we introduced robust controls to reduce the risks. Working groups manage these top risks, meeting at least once a year to define focus areas, actions, and to conduct audits.

Risk-based approach

Risk assessments are central to our approach. Operations are required to consider the top three risk controls – elimination, substitution and engineering – before looking to administrative controls or issuing personal protective equipment (PPE) (hierarchy of controls). We have engineered out many significant risks, helping to prevent serious incidents.

Employees are trained and engaged during risk assessment processes, and assessments are revised at predefined frequencies, when changes are implemented or because of an incident.

In Mondi, we have added five additional elements to the traditional hierarchy of controls, which are:

- behavioural and cognitive influences;
- social psychological influences;
- social political influences;
- cultural influences; and
- sub-cultural influences.

Our 'Nine Safety Rules to Live By' address tasks that pose a risk of high-severity injury: working at heights; mobile plant; handling chemicals; confined spaces; working in forests; permit to work activities; lifting activities; energy and machinery isolation; and moving and rotating equipment. Employees and contractors are trained in these rules during induction training, specific training courses and regular safety talks.

The rules are supported by Practice Notes and methodologies for easy understanding. Practice Notes include our incident investigation methodology, risk assessment, safe operation of paper machines, handling of hazardous substances, moving and rotating equipment, mobile plant and equipment.



RETHINK

Moving from traditional safety to Social Psychology of Risk

Safety initiatives have focused mainly on workspace issues, including engineering controls and risk assessments. We decided to change the focus of our safety approach to balance safety controls and people by introducing the Social Psychology of Risk.

This new approach covers 'workspace' (physical controls), 'headspace' (psychology) and 'groupspace' (cultural and group dynamics). Incident investigations place a focus on the issues related to psychological and cultural elements and finding the balance across the three areas.



Keeping our employees and contractors safe

Incident investigations

Our incident investigation methodology, Major Incident Cause Evaluation (MICE) guides the reporting and investigation of all incidents including major close calls and injuries. We assess and monitor key trends in incident categories including types of injuries and experience of employees or contractors. To prevent reoccurrences, we share details of investigations through management reports and incident notices. The MICE methodology has been revised to include the elements of Social Psychology of Risk, and training is to be provided in 2023.

New assets and Capital Expenditure projects

When we acquire new assets and operations, SHE professionals form part of the acquisition team to ensure the integration into Mondi systems, methodologies, risk assessment process, culture and approach to safety and health. Safety is represented in the steering committee in all Capital Expenditure-related projects, guaranteeing safety and health requirements are incorporated. Regular site visits are conducted by Group, business unit and business segment SHE managers of all integration and Capital Expenditure projects.

Engaging with our contractors

All contractors are given SHE specifications prior to any work and are required to provide SHE plans of how they plan to meet the requirements. We support them to manage safety and health risks and align with Mondi requirements. We also appoint Mondi contract managers for each contractor. Mondi SHE professionals provide information and guidance, monitor contractor safety performance and support contractors to improve practices.

Most activities at Mondi are performed by our own employees with little significant variation in the numbers reported during the year. The exceptions are harvesting activities at our forestry operations and maintenance shuts at our pulp and paper mills, involving variations to contractor numbers. In 2022, we had an average of 11,629 contractors across the Group (2021: 12,773).

We continue to deepen our engagement with contractors, especially during large projects and the annual shuts to eliminate fatalities and life-altering injuries. Group as well as business unit and business segment SHE managers, conduct pre-shut and project assessments with the operations and selected contractors to align focus and support.

Six-step process of contractor safety management

Our six-step process is set out in a Practice Note to guide integration of safety and health requirements into contractor management and ensuring continuous improvement in engagement and alignment with our contractors.

- Step 1: Selection of a Mondi contract manager
- Step 2: Preparing for a contract
- Step 3: Awarding a contract
- Step 4: Providing briefing, training and consultation
- Step 5: Reasonable controlling of contract compliance
- Step 6: Post-contract performance evaluation



Contractor Safety Programme in Uncoated Fine Paper

Our Uncoated Fine Paper (UFP) business unit faced challenges with regard to contractor safety performance prior to 2021, which included fatalities. Contractors perform non-routine, often high-risk activities at Mondi sites, such as demolitions, forestry works, heavy load lifting or working at heights. It is critical to reduce the risk involved, by engaging with contractors, so that everybody returns home safely every day.

To maintain a good safety performance and prevent fatalities, we started eight contractor initiatives across UFP, at our mills and forestry operations. The initiatives ranged from manager and contractor training to contractor

selection and reshaping the induction process. Each initiative was led by a mill safety manager to provide a bottom-up approach, involving other functions and specialists where required. The solutions proposed by each working group were tested locally and, if successful, approved by a steering committee for roll-out across UFP. One of the focus areas included an engagement initiative called Your Reason To Be Safe, which encouraged contractors to provide photographs of their reasons to be safe.

In 2021 and 2022, UFP experienced no fatalities or life-altering injuries. At the same time, a best-in-class TRCR has further improved.



Measuring our safety performance

Safe projects and maintenance shuts

Our mills are subject to scheduled annual maintenance shuts during which machinery and equipment is maintained, replaced, or upgraded. Other complex and large projects also involve non-routine work, with many employees and contractors working on-site at the same time.

Some of our highest-risk activities occur during these times and we focus strongly on pre-shut risk assessments, engaging with our contractors and providing support and guidance during the activities on-site. This has led to a reduction in the severity of the injuries sustained during shuts and projects.

In early 2022, we completed an extensive shut and rebuild project in Richards Bay (South Africa), with high-risk activities conducted by thousands of contractors. We have conducted numerous meetings related to the learnings from the project to capture continuous improvement.

Safety training and skills development

Our training and skills development programmes cover all aspects of safety and health. Training is offered in a range of formats, from formal to on-the-job training to toolbox talks. Relevant persons are identified and invited to attend.

In 2022, we delivered 170,958 (2021: 185,422) hours of general safety training and 33,275 (2021: 34,021) hours of critical safety training against a combined target of 133,789 hours.

All safety and health colleagues are required to complete the dedicated programme for SHE professionals by 2023. It consists of five modules spanning 12 days of training and attendees submit a post-training project as part of a final evaluation. We are currently developing a sixth module focusing on Social Psychology of Risk.

Performance against our targets

Targets: Zero fatalities, zero life-altering injuries and 15% reduction of Total Recordable Case Rate (TRCR)

When an incident occurs, it can be devastating to the injured, their families and colleagues. Regrettably, while being among the safety leaders in our industry, we still experience fatalities and life-altering injuries. We are committed to going beyond industry minimum requirements so that our employees and contractors return home safely every day.

We had 189 recordable cases in our operations (excluding new acquisitions) in 2022; 132 related to employees and 57 to contractors (2021: 225; 165 related to employees and 60 to contractors).

This equates to a TRCR of 0.63; 0.70 related to employees and 0.51 related to contractors (2021: 0.71; 0.86 related to employees; and 0.48 to contractors). This represents a 7.8% decrease compared with our 2020 baseline of 0.68, and 11.8% since last year. We have achieved our TRCR milestone for 2022, which was set at 0.66.

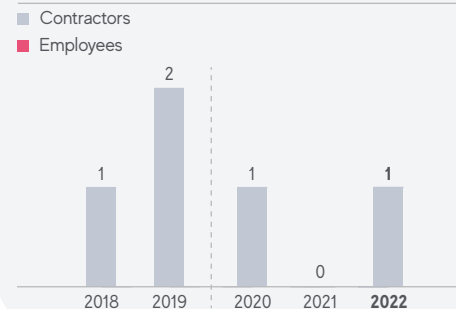
The TRCR baseline for 2020 has been revised to 0.68, to reflect our continuing operations following the divestiture of our Russian operations. Our target of achieving a 15% improvement by 2030 remains, and therefore the objective for 2030 is revised to 0.58, and our TRCR milestone for 2022 was also revised from 0.60 to 0.66.

Unfortunately, we experienced a contractor fatality in 2022 at our Frantschach mill in Austria, when a contractor was operating a mobile pallet jack. Although no systemic failures or management actions were identified that could have prevented the incident, it is a reminder that we can never be complacent.

We also experienced two life-altering injuries: a contractor lost four fingers while working on rotating equipment at our Corrugated Solutions plant in Warsaw (Poland) and an employee lost the tip of a finger at our Štětí Functional Paper and Films operation (Czech Republic). Both incidents were investigated to identify root causes and contributing factors, and necessary actions were taken to prevent reoccurrences.

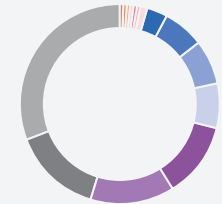
In 2022, we carried out 67,532 safety audits against a target of 52,245. These audits contribute to reducing incidents as they identify areas for safety improvement. They included management risk-focused audits, first-line manager task audits and peer observations. Sites monitor trends from the audits and develop action plans to address the issues identified.

Total fatalities of contractors and employees (cases)

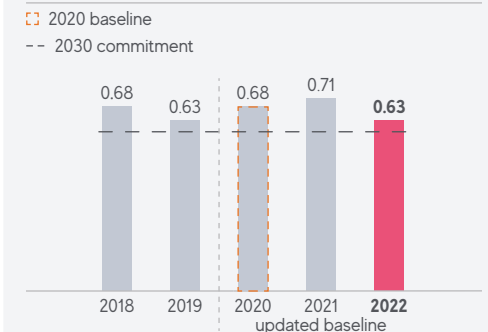


Total recordable cases by injury classification (cases)

Horseplay	1	Housekeeping	6
Moving machinery (other body parts)	1	Falling objects	12
Attack by animal	1	Workplace transport	13
Contact with energy sources	1	Exposure to chemicals, temperature extremes and electricity	13
Slips, trips and falls (forestry)	1	Tool use	24
Natural or environmental hazard	1	Manual material handling	26
Working at heights	2	Moving machinery (hands, arms, fingers)	28
		General personal awareness	59



Total Recordable Case Rate (TRCR) (per 200,000 hours worked)



The total number of hours worked (employees and contractors) in 2022 was 60.3 million hours (2021: 63.3 million hours)



Enhancing employee wellbeing

Annual maintenance shuts in 2022 saw over 9,600 contractors working on our sites. Overall, we achieved a good shut performance with zero life-altering injuries during more than 1.2 million hours worked.

Occupational health programmes

Occupational health programmes across our operations help to eliminate health risks, prevent occupational illnesses and disease, and provide a healthy working environment. Programmes include optimising ergonomics, providing regular health screening, reducing noise impact, and conducting occupational health hygiene surveys.

We have action plans that manage these risks using a hierarchy of controls, such as reducing the noise before issuing hearing protection. We also offer guidance on physical exercise, nutrition, positive mindset, social interaction and home-office ergonomics for employees.

Local occupational health programmes

Other initiatives to promote health and wellbeing are developed at different operations according to identified needs. They include mobile health clinics in South Africa, a health bus for all Austrian locations, a fitness centre at the Frantschach mill (Austria), and promotion of sports, health and recreation such as the Świecie mill (Poland) 'Health Challenge' initiative. Some sites have independent on-site medical clinics and/or doctors or external occupational health service providers.

Employees at our South African operations are offered an HIV Wellness Programme managed off-site by a private healthcare service provider of choice. This entails blood tests and anti-retroviral treatment if needed. HIV & AIDS is regarded as a chronic disease and is managed in a similar manner as other chronic diseases such as diabetes and hypertension.

Wellness and HIV testing and counselling is also offered in the on-site occupational health clinics. A total of 1,257 mill employees and contractors participated in the voluntary HIV counselling programme in our mills in 2022.

The mills also have a structured chronic disease management programme with regular follow-up on employees with a chronic disease to ensure they are fit to work. On the global stage, we maintain our focus and communication related to COVID-19 to prevent its spread.

Social Psychology of Risk and safety and health training

We continue our Social Psychology of Risk and safety and health training programmes, closely collaborating with the Group Safety and Health Network team and the site teams. We guide and support operations to improve the management of safety and health issues.

This has led to better understanding of the Social Psychology of Risk process, and a shift in the language used across all our operations, with a focus on traditional safety, psychological and cultural elements. Trial training programmes using the new tools have taken place. Additional trainings have been provided to ensure learning and roll-out of the new approach.

→ Read more in our case study on [page 40](#)

Our Engagement Board process has created a platform for our employees and contractors to openly discuss safety and health issues. These include high-risk activities conducted by contractors during annual shuts and Capital Expenditure projects.

Performance against our targets

Target: Support our employees in pursuit of a work-life experience that enhances their wellbeing

Target: Our operations drive awareness of and take measures to improve health and mental wellbeing

Quality of work-life experience and wellbeing is very personal to each individual and mental wellbeing is difficult to define and measure. We seek to understand the views of our employees and include a Mental Wellbeing Index in our employee survey.

Mental Wellbeing Index

The newly developed Mental Wellbeing Index for our global employee survey (see [page 36](#)) was tested in several locations via pulse surveys. For the first time, we asked for feedback about work-life experience and mental health and wellbeing. While our colleagues tell us that they have confidence in the future of Mondi and their work environment enables them to do their work effectively, a need to focus more strongly on showing that we genuinely care for the wellbeing of our employees was identified. The first Group-wide results of the Mental Wellbeing Index from the global survey will be available in 2023.

Employee Assistance Programme

We have achieved high levels of engagement in the focused awareness-raising campaigns and webinars about mental health issues such as stress, sleeping problems, anxiety, fears and lost motivation, supported by the specialists from the Employee Assistance Programme (EAP).

The EAP offers a 100% confidential telephone hotline provided by an external company of qualified counsellors and advisers. It can be used by Mondi employees and their families free of charge and around the clock. Qualified counsellors provide support on topics such as stress, mental health and addiction.

Together with programmes in the US and South Africa, 94% of Mondi colleagues worldwide can now rely on an EAP-equivalent system for help and support. This aligns with our commitment to raise awareness of mental illness and improve mental health.

We are passionate about performance and need to make sure people at Mondi have a positive balance between work and personal life. Reviewing overtime, promoting our EAP services and offering mindfulness workshops with practical tips are some of the measures we will reinforce in this area.





Making flexible working a reality



Flexible working hours

Our flexible work framework applies to all Mondri colleagues, regardless of whether they work in an office, plant, mill or in our forestry operations. Flexible working packages, guidance and training also support employees during and after parental leave with their career ambitions. For example, we offer e-learning designed for people returning to the office.

A new approach to flexible working time in production has been tested and proven successful by Mondri Ružomberok (Slovakia). Over 1,000 employees participated in a project, where the start and the end of the working shift was made flexible. Employees are still expected to hand over to colleagues at the end of their shift and fulfil standard working hours. The employee feedback showed that employees appreciated the flexible module to optimise commuting and avoid waiting at the entry gates.

Mondri Frantschach (Austria) began a campaign to examine the perceptions and reality of shift work. Their findings showed that their employees value the security of a fixed shift, while appreciating flexible working time models and the offer of a childcare facility provided on-site. The mill is regarded as a modern and family-friendly employer, which also supports our efforts to attract more women.

The learnings from our flexible working pilots will be integrated into our MAP2030 toolbox and discussed at exchange sessions.



“
We are pioneers in the implementation and focus on Social Psychology of Risk that places people at the centre of everything we do. I have no doubt that this will benefit our efforts in safety and health across Mondri.”

Brian Darlington,
Mondri Group Head of Safety and Health

WHAT IS NEXT IN EMPOWERED PEOPLE?

- In 2023, we will roll out the updated employee survey to our global Group-wide employees, following the 2022 pulse surveys.
- We will encourage a more inclusive leadership approach, with leaders as allies for diversity and inclusion advocating for change. This will support our goals to provide a purposeful workplace, improve mental wellbeing and enhance flexible working.
- We will roll out tools, initiatives and training programmes to embed Social Psychology of Risk into the business. This will include safety training for SHE professionals, and the development and roll out of training covering the revised MICE methodology that now includes Social Psychology of Risk.
- We will revise and develop Practice Notes to address high risk activities and processes that have been identified through risk assessments.
- We will focus on technical safety-related issues, such as shut and Capital Expenditure project assistance programmes, and the development of technical safety handbook and standards.

How does Mondi TACKLE the interconnected challenges of climate change and biodiversity loss?

DEFINE

The Science Based Targets initiative approved our new Net-Zero targets for Scope 1, 2 and 3.

➔ Read more p48



TRACK

Partnering with WBCSD to develop and launch the Forest Sector Nature-Positive Roadmap.

➔ Read more p60



TAKING ACTION ON CLIMATE

Reduce greenhouse gas emissions	47
Maintain zero deforestation	54
Safeguard biodiversity and water resources	58

INVEST

We announced a €125 million investment into our Kuopio mill (Finland) to improve energy and resource efficiencies.

➔ Read more p49



Performance at a glance & key learnings

Commitment	Target	Performance		This year at a glance
		2021	2022	
Reduce our greenhouse gas emissions in line with science-based Net-Zero targets	Reduce Scope 1 and 2 emissions by 46.2% by 2030 from a 2019 baseline*	●	●	Absolute Scope 1 and 2 emissions decreased by 16.9% compared with our 2019 baseline, and 9.4% since last year
	Reduce Scope 3 emissions by 27.5% by 2030 from a 2019 baseline*	●	●	Absolute Scope 3 emissions decreased by 12.6% compared with our 2019 baseline, and 5.1% since last year
	Reduce Scope 1, 2 and 3 emissions by 90% by 2050 from a 2019 baseline*	●	●	Absolute Scope 1, 2 and 3 emissions decreased by 15% compared with our 2019 baseline, and 7.4% since last year
Maintain zero deforestation in our wood supply, sourcing from resilient forests	Maintain 100% FSC™ certification in our own forest landholdings	●	●	In 2022, FSC certification in our South African forestry landholdings maintained and PEFC certification implemented
	100% responsibly sourced fibre with 75% FSC™-/PEFC-certified fibre procured by 2025 and the remainder meeting the FSC Controlled Wood standard	●	●	The share of certified wood for all mills was 75%
	Implement leading forestry measures to ensure productive and resilient forests	●	●	Continued implementation of best management practices in our plantation forestry to support improved growth and minimise disturbances
Safeguard biodiversity and water resources in our operations and beyond	Conduct water stewardship assessments at our mills and forest operations by 2025, and implement required actions to address the findings by 2030	●	●	To date assessments have been completed for 38% of our mills and forestry operations
	Conduct biodiversity assessments at our mills and forest operations, introducing biodiversity action plans where necessary by 2025	●	●	All assessments were finalised in 2021. To date action plans have been developed for 46% of our mills and forestry operations

* Updated in 2022, read more on [page 52](#).

Key

✓ Completed
 ● On track
 ● Slightly behind target
 ● Not on track
 ○ In development

LESSONS LEARNED

Our investment projects are crucial enablers to achieve our science-based greenhouse gas (GHG) reduction targets. These projects increase our production capacity, strengthen our competitiveness and improve our sustainability performance.

Our indirect value chain-related emissions (Scope 3) are a critical part of our Net-Zero target. We will continue to scale up our engagement with our suppliers and service providers, such as logistic companies, to drive progress on these targets.

We recognise that global temperatures and precipitation patterns are shifting, negatively impacting the resilience of ecosystems. The dependency of our business on forests and freshwater ecosystems means that we must intensify our efforts to assess our biodiversity and water impacts and define actions to minimise negative impacts.



Reducing our greenhouse gas emissions

The IPCC scientists have made it clear that the world has reached 'Code Red'¹ when it comes to global heating. Every business has a key role to play in reducing greenhouse gas (GHG) emissions. At Mondi, we aim to reduce our GHG emissions in line with a 1.5°C scenario.

Commitment

Reduce our greenhouse gas (GHG) emissions in line with science-based Net-Zero targets

Targets

Reduce our Scope 1 and 2 emissions by 46.2% by 2030 from a 2019 baseline

On track

Reduce Scope 3 emissions by 27.5% by 2030 from a 2019 baseline

On track

Reduce Scope 1, 2 and 3 emissions by 90% by 2050 from a 2019 baseline

On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Setting ambitious Net-Zero science-based targets

The climate crisis requires bold commitments from governments, businesses and individuals. In January 2022, we announced our commitment to Net-Zero GHG emissions by 2050. Mondi's Net-Zero science-based long- and short-term GHG targets were approved by the Science Based Targets initiative (SBTi) in December 2022. The new Net-Zero science-based targets have replaced our existing targets, which were announced in 2019.

This Net-Zero commitment is our ambitious answer to the increased urgency to cut GHG emissions to avoid the worst consequences of climate change for people and our planet.

Our new long-term science-based Net-Zero targets are in line with a 1.5°C scenario and we are accelerating our existing ambitions to reduce our operational GHG emissions (Scope 1 and 2). The new Scope 1 and Scope 2 GHG emissions reduction target is measured as a reduction in absolute emissions, replacing our previous separate Scope 1 and Scope 2 emission reduction targets, which were emission intensity reduction targets (per tonne of saleable production).

We have also set a Scope 3 target to tackle GHG emissions across our value chain and are working to gain an in-depth understanding of these GHG emissions. To reduce our Scope 3 emissions we are engaging with our suppliers of raw material and fuels, logistic partners and employees, to drive the adoption of low-carbon practices.



Scope 1 and 2

Actions within our operations to drive progress across Scopes 1 and 2 are:

- continue to modernise our operations and invest in energy efficiency projects;
- increase share of renewables used for energy generation; and
- purchase electricity generated from green energy providers.

Scope 3

Actions across our value chain to drive progress for Scope 3 are:

- engage with strategic suppliers on their reduction targets and transition plans and collaborate with them in projects to reduce their GHG emissions;
- replace carbon-intensive raw materials; and
- improve the quality of our GHG emissions' data by obtaining primary data from suppliers.



¹ [United Nation's Secretary-General's statement on the IPCC Working Group I Report on the Physical Science Basis of the Sixth Assessment, 2021](#)



Climate science guides our transition

Our path to Net-Zero

Our Scope 1 primary carbon impact occurs through the combustion of fuels to generate the energy required for our manufacturing. Our Scope 2 emissions are related to energy purchases. Our Scope 3 indirect GHG emissions occur throughout the value chain, predominantly from the purchase of raw materials and fuels, and transportation of supplies and products.



Climate science tells us that we need rapid and deep emissions cuts if we are to achieve global Net-Zero and prevent the most damaging effects of climate change. Mondy's Net-Zero targets match the urgency of the climate crisis and set a clear example that their peers must follow.

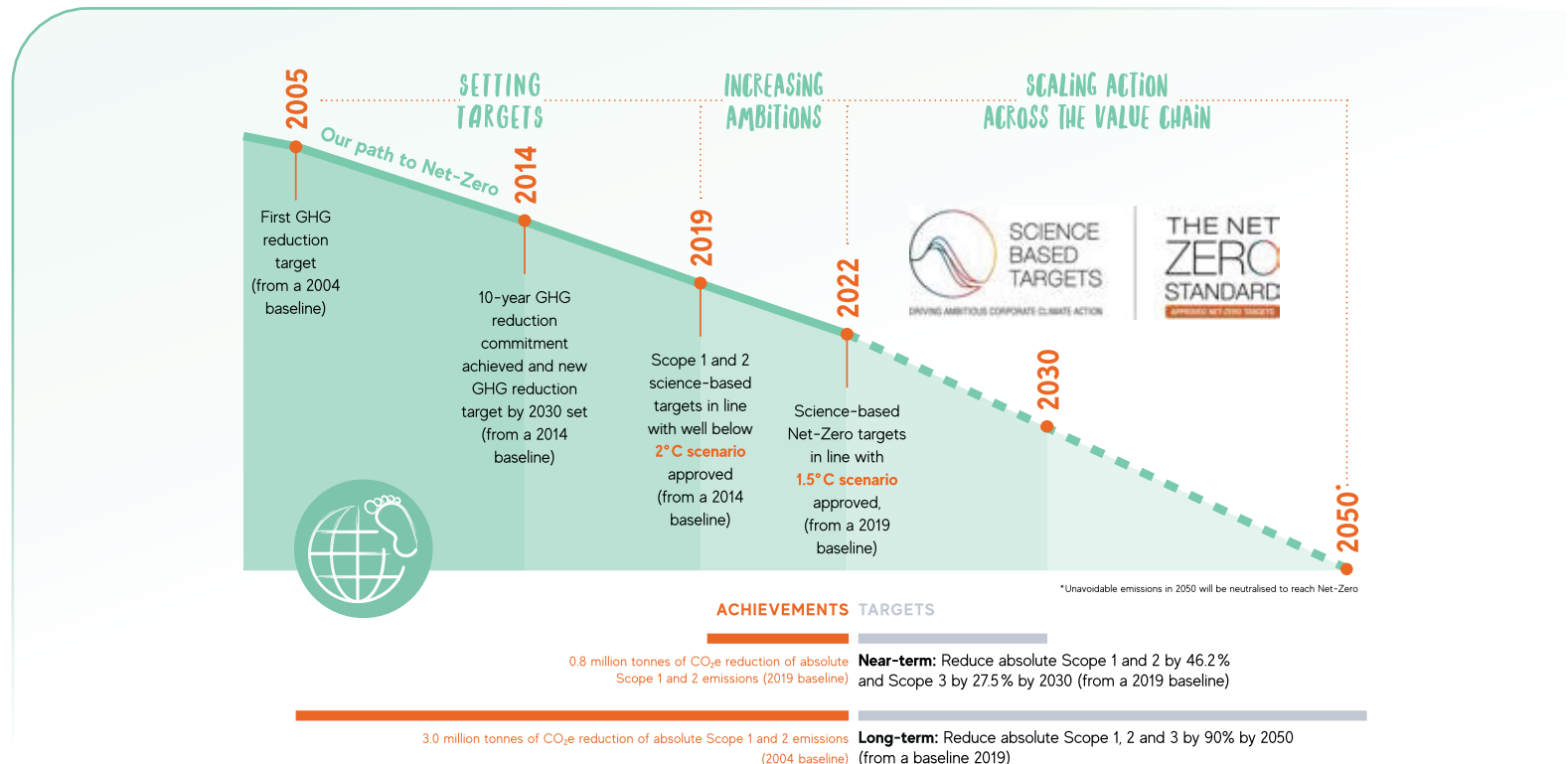
Luiz Amaral,
CEO of the Science Based Targets initiative



Our MAP2030 climate and environment working groups, made up of technical experts from all of Mondy's business units supported by external consultants where required, have developed a roadmap of actions to deliver on our targets. These working groups keep track of the projects that support our transition to a low carbon economy, focusing on reducing the carbon footprint of our energy and manufacturing facilities and reducing our environmental impact. We also consider the potential consequences of climate change on nature by including biodiversity and water stewardship in our action plans.

We recognise the importance of nature in combating climate change. We are committed to zero deforestation in our fibre supply chains and to maintaining carbon sinks in forests. We continue to implement sustainable forest management and silviculture practices in our own landholdings (read more on [page 54](#)).

We are working closely with our partners to achieve reductions in our own operations, for our customers and across our sector. A key focus will be our continued efforts to develop sustainable solutions to provide low-carbon product solutions that support our customers' climate targets.





Key partnerships for a low-carbon future

90%

Mondi commits to reduce Scope 1, 2 and 3 emissions 90% by 2050, from a 2019 baseline

Committing to Net-Zero by 2050 (GHG emissions in tonnes CO₂e)

	Scope 1 (million tonnes CO ₂)	Scope 2 (million tonnes CO ₂)	Scope 3 (million tonnes CO ₂)
2019 baseline	4.05	0.69	3.91
2022	3.47	0.47	3.42
2030 milestone		2.55	2.84
2050 milestone		0.47	0.39

World Business Council for Sustainable Development - Forest Sector Net-Zero Roadmap

In 2022, Mondi and other members of the WBCSD's Forest Solutions Group (FSG) worked together to:

- develop a TCFD scenario analysis tool for food and land use companies;
- develop key elements of a definition of 'Nature Positive' and published the Forest Sector Nature-Positive Roadmap; and
- participate in the development of the new GHG Protocol Land Sector and Removals Guidance² as a technical and advisory member.

Confederation of European Paper Industries

Through our membership in the Confederation of European Paper Industries (Cepi), we actively engaged in discussions related to:

- the revision of the GHG Protocol;
- the EU Packaging and Packaging Waste Regulation;
- the EU Framework for Forest Observation and Monitoring; and
- new rules for food contact materials (FCM), including food packaging.

GHG Protocol Land Sector and Removals Guidance

We participated as part of the Technical Working Group and Advisory Committee in the development of the GHG Protocol Land Sector and Removals Guidance. This is a joint initiative by WBCSD and the World Resources Institute (WRI).

Its goal is to provide consistent and comparable accounting of carbon removals and emissions related to land use change, land management, manufacturing and products among different sectors. This GHG Protocol will be the basis for the calculation of FLAG (Forest, Land use and Agriculture) emissions. The boundary of our targets includes biogenic emissions and removals from bioenergy feedstocks.

UN Business Ambition for 1.5°C

In 2021, we joined the UN Business Ambition for 1.5°C, the world's largest and fastest-growing group of companies committed to taking urgent climate action aligned with the 1.5°C scenario and Net-Zero by 2050.



Reporting against the Taskforce on Climate-related Financial Disclosures

We continue to advance our understanding of climate-related risks and opportunities and to evolve our reporting, in line with internationally accepted recommendations such as the Financial Stability Board's Taskforce on Climate-related Financial Disclosures (TCFD).

A cross-functional team has updated our climate change-related risks and opportunities. Our Integrated Report includes our full TCFD disclosure.



Read more in our [Integrated report and financial statements 2022](#) on page 48



“
We continue to advance our understanding of climate-related risks and opportunities and evolve our reporting in line with TCFD guidelines.
”

Mike Powell,
Mondi Group CFO



INVEST

Upgrading operations in Finland to improve energy and resource efficiencies

Mondi announced a €125 million investment to expand and upgrade semi-chemical fluting mill capacity at our Kuopio mill in Finland. This is a high-performance, top-quality containerboard grade used as a key component of fresh fruit and vegetable trays and boxes. The project includes an upgrade of the wood yard, fibre line, evaporation plant and paper machine.

The project is expected to increase production capacity by 55,000 tonnes each year. The long-term sustainability of the mill will also be improved by boosting energy efficiency, reducing noise, odour emissions and effluent emissions, and by mitigating fibre loss in processing.

The project will also result in a reduction of 5,200 tonnes GHG emissions per annum.



Optimising energy and process efficiencies

Investing to drive progress towards Net-Zero

We combine strategic energy-related investments at our pulp and paper mills with good management practice and best practice sharing. Targeted energy- and efficiency-related investments and improvements are planned in the short and medium term at our mills.³

Investments aim to optimise energy and process efficiency and replace fossil fuel-based energy with renewable sources. Since 2015, we have invested around €650 million in energy and process efficiency projects, including the installation of new stand-by boilers at our mill in Świecie (Poland), a new recovery boiler at our Richards Bay site (South Africa) and modernisation projects at Dynäs (Sweden) and Frantschach (Austria).

We also evaluate capital investment projects to consider the impact on the Group's GHG emissions. We consider energy efficiency projects

on an ongoing basis and assess their potential financial, energy and GHG savings and contribution to energy security. Our investments focus on shifting our fuel mix to renewable biomass which offers the most significant potential for reducing our GHG emissions. Mondi also explores for energy technologies beyond biomass whenever possible to ensure fuel diversification and further optimise the Group's energy portfolio.

Energy and related input costs – such as buying fuel and plant modernisation – significantly contribute to the variable costs of our pulp and paper mills and converting operations. We aim to increase our energy self-sufficiency and improve profitability and energy security in a broader global context of rising energy prices, volatile energy availability and increasing regulation.



“
Mondi recognises the urgent need to mitigate climate change and decided to set ambitious science-based Net-Zero GHG reduction targets in line with 1.5°C. We will continue to reduce our GHG emissions by investing in new technology and energy efficiency.”

Lars Mallasch,
Mondi Group Technical and Sustainability Director



Driving energy efficiency in our operations

Our pulp and paper mills generate most of their energy and electricity needs on-site, with excess energy sold to the grid. Biomass sources, mainly from by-products of the pulp process, account for 65% of the fuels used to generate on-site energy. Including external biomass, our total share of renewable energy increased slightly to 80% (2021: 79%). Natural gas is the biggest share of fossil fuels used in our energy plants, which contributes 10% to our fuel consumption. Long-term power purchase agreements (PPAs) with renewable electricity providers (e.g. windfarms and photovoltaic energy providers) could support us to further increase our future renewable electricity supply.

We have developed a roadmap as part of our Net-Zero transition to reduce the carbon intensity of regional electricity purchases, measured as tonnes CO₂e/MWh purchased energy, an important measure for renewable energy. We have reduced the factor of our purchased energy from 353 kg CO₂e/MWh in 2021 to 287 kg CO₂/MWh in 2022, a specific reduction of 18.8%.

In countries where renewable electricity is currently not available at scale (for example, South Africa), we invest in our mills' electricity self-sufficiency using renewable sources, where feasible, as a means to reduce our Scope 2 emissions.



Read more on our Scope 2 performance on [page 52](#)

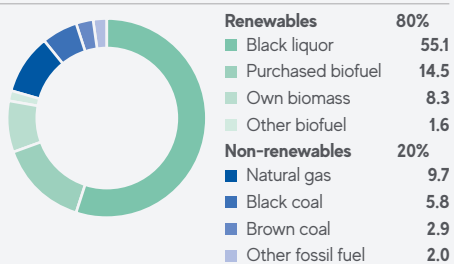


Modernising Czech operations to lead in kraft paper production

In 2022, Mondi announced a €400 million investment in a new paper machine at our Štětí mill in the Czech Republic. The new paper machine will produce around 210,000 tonnes per annum of kraft paper, strengthening Mondi's leading position.

This investment in the modernisation of our manufacturing facilities will reduce the mill's specific GHG emissions by more than 10%.

Fuel sources for our pulp and paper mills (% renewable vs. non-renewable)

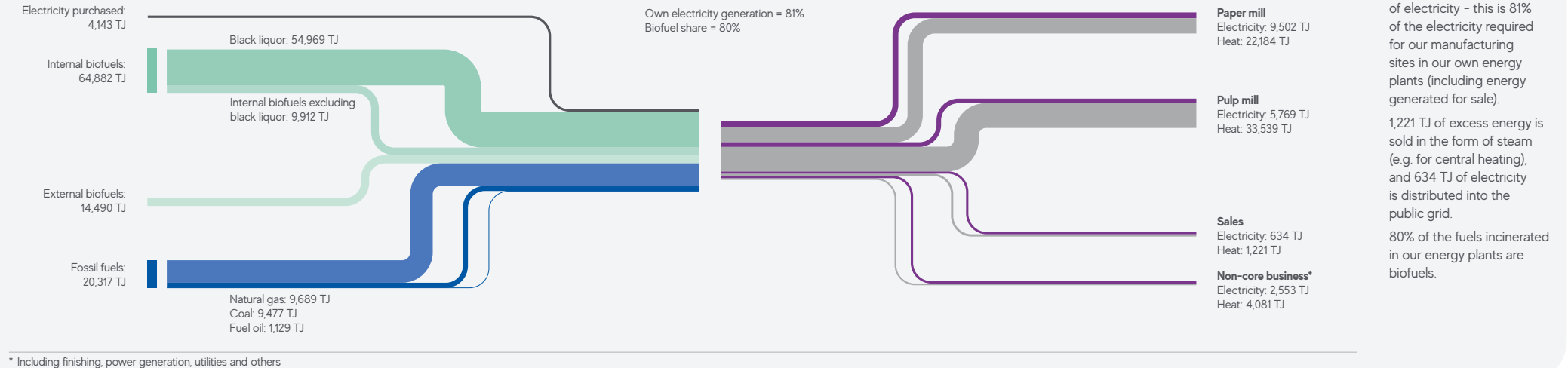


³ We define our investments timeframes as short (up to 3 years), medium (3-7 years) and long term (more than 7 years).



Our energy inputs and outputs

Energy balance from our pulp and paper mills



Avoided emissions

Avoided emissions are emission reductions that occur outside of a product's life cycle or value chain. These emissions are a result of the use of that product.

We sell excess heat to external energy users, such as in the communities where we operate, or to the public grid for district heating and electricity use near our mills.

The energy we sold resulted in 0.8 million tonnes of GHG emissions (2021: 0.8 million tonnes) accounting for 21% of the Group's total CO₂e emissions. In 2022, we sold 8,435 TJ of energy as electricity with a higher share of renewables to the public grid, or as heat for central heating.

We also sell renewable excess energy generated from our pulp and paper processes, resulting in 44,800 tonnes CO₂e of avoided emissions in 2022.

In 2022, we also avoided some 0.13 million tonnes of CO₂e through the sale of approximately 1.7 million GJ of green fuels (including pitch fuel, sulphate soap, tall oil and turpentine), as a substitute for fossil-based fuels. By substituting natural gas with 0.12 million GJ of biogas generated in anaerobic wastewater treatment plants at our mills we also avoided 6,700 tonnes of CO₂e.





Reducing emissions across Scope 1 and 2

Performance against our target

Target: Reduce Scope 1 and 2 emissions by 46.2% by 2030 from a 2019 baseline

We reduced our Scope 1 emissions by 0.25 million tonnes and our Scope 2 emissions by 0.16 million tonnes compared to 2021. This is a 9.4% decrease in absolute Scope 1 and Scope 2 emissions of the Group and 16.9% reduction since the 2019 baseline. Since 2004, we have reduced our absolute GHG emissions by 3.0 million tonnes CO₂e, which is a 43.5% reduction.

The Group's total Scope 1 GHG emissions are predominantly due to the energy generation in our pulp and paper mills and energy sales. Our converting operations have a limited impact on the Group's total Scope 1 emissions (around 4%), but contribute to the Group's Scope 2 emissions by 30%. We are focused on increasing energy efficiency and purchasing electricity from renewable sources.

In 2022, we reduced the specific Scope 1 GHG emissions of our mills by 5.2% to 0.53 tonnes CO₂e/t (2021: 0.56 tonnes CO₂e/t), mainly due to our investment at our Ružomberok (Slovakia) mill.

45% of the Group's Scope 1 emissions are reported in regions with limits on GHG emissions; 25% are covered by the EU Emission Trading System and 20% are covered by South Africa's carbon tax.

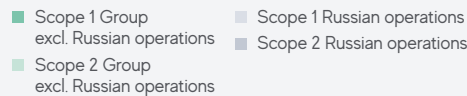


MAP2030 target updates

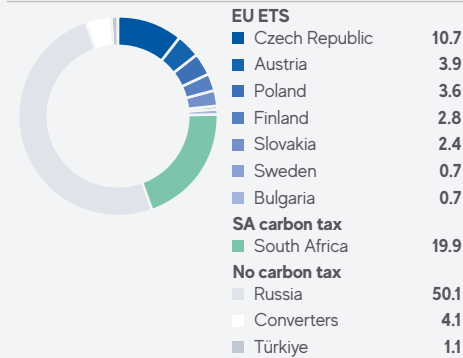
Initial target	New targets*	Reason for change
Reduce our Scope 1 and 2 emissions by 34% per tonne of saleable production by 2025 and 72% by 2050 from a 2014 baseline	Reduce Scope 1 and 2 emissions by 46.2% by 2030 from a 2019 baseline	The 2050 Scope 1 and Scope 2 emissions reduction target has been revised to a more ambitious science-based target, approved in 2022.
Reduce Scope 2 emissions by 39% per MWh by 2025 and by 86% by 2050 from a 2014 baseline		
Set a science-based Scope 3 reduction target by 2025	Reduce Scope 3 emissions by 27.5% by 2030 from a 2019 baseline	Meeting our initial commitment to set a science-based Scope 3 target.

* Our newly approved Net-Zero emission reduction targets include our Russian operations in scope as this process was already under way before our decision to divest from our Russian assets. The Net-Zero targets will be updated in due course upon completion of our divestiture to reflect our continuing operations.

Scope 1 and Scope 2 GHG emissions (million tonnes CO₂e)



Scope 1 emissions by country (%)



European mills are shown in blue

Scope 1 and Scope 2 GHG emissions from our pulp and paper mills Intensity (tonnes CO₂e per tonne of saleable production)

◇ Mondi performance 2014 to 2022





Taking action on indirect emissions

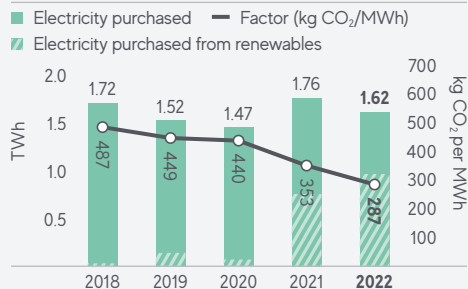
In 2022, Mondi increased the purchase of electricity from renewables and reduced its Scope 2 emissions by 25.7% to 0.47 million tonnes CO₂e (2021: 0.63 million tonnes CO₂e). The Scope 2 factor of purchased electricity reduced by 18.8% to 287 kg CO₂e/MWh in 2022 (2021: 353 kg CO₂e/MWh). This was achieved by purchasing renewable electricity at our mills in Dynäs (Sweden), Ružomberok (Slovakia), Frantschach (Austria), Stamboljiski (Bulgaria) and Kuopio (Finland). 60% of our purchased electricity is from renewable sources (2021: 43%).

In 2022, we purchased 20,317 TJ fossil fuels and used 79,371 TJ biomass to generate most of our energy and electricity on-site in our energy plants. The share of renewable fuels used in our mills increased to 80% (2021: 79%) and our electricity self-sufficiency increased to 81% (2021: 78%).

80%

renewable fuels used in our mills

Group Scope 2 factor and purchased electricity



Reducing Scope 3 emissions

Engaging with suppliers, particularly for raw materials and fuels, is key to reducing our Scope 3 GHG emissions. We have evaluated our Scope 3 emissions related to the raw materials we use and defined potential steps for reducing these emissions.

We conducted three pilot tests in 2022 with key suppliers to collect primary carbon data and engage with them on their GHG reduction targets. This work will enable us to improve the data quality of our Scope 3 emissions and define actions to support their reduction, with a particular focus on raw material and fuel suppliers and service providers, such as logistic companies.

The transport of our finished products to customers contributes to Scope 3 emissions for Mondi and for our customers. Our products are mainly transported by third-party logistics partners. We reported 203,000 tonnes of downstream transport-related emissions in 2022.

We are working closely with our downstream logistics partners to identify and implement improvement projects in transportation. For example, we can select companies that have a lower carbon footprint – by using trains instead of trucks, adopting low-carbon transport and improving specific loading capacity.

In 2021, we conducted a successful pilot project with a logistics partner to reduce maritime transport-related GHG emissions through the use of biofuel (read more [online](#)).

In 2022, we increased the number of Scope 3 categories. We report to provide a complete picture of our indirect emissions in line with the the Science Based Targets initiative (SBTi) Net-Zero Standard.⁴

⁴ SBTi CORPORATE NET-ZERO STANDARD Version 1.0

Performance against our targets

Target: Reduce Scope 3 emissions by 27.5% by 2030 from a 2019 baseline

Our Scope 3 emissions are estimated to represent 46% of our total GHG emissions. In 2022, we reduced the Group's Scope 3 emissions by around 183,000 tonnes CO₂e. This is a reduction of 5.1% against last year and a 12.6% reduction against the 2019 baseline of our short-term Net-Zero target.

The reduction of Scope 3 emissions is mainly due to a slightly reduced production volume (around 2%) and a reduction in fossil fuel consumption for energy generation (around 5%).

Additionally, we replaced secondary data from publicly available and accepted data sources with primary data from some of our suppliers to improve Scope 3 data quality.

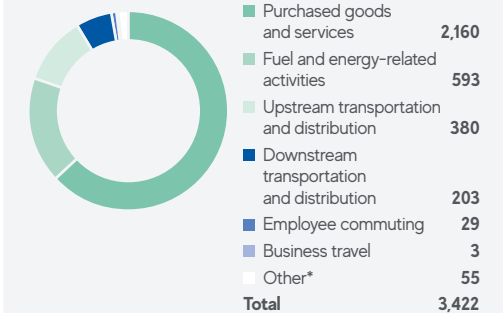
Target: Reduce Scope 1, 2 and 3 emissions by 90% by 2050 from a 2019 baseline

In 2022, our Scope 1, 2 and 3 emissions were reduced by 0.59 million tonnes to 7.4 million tonnes, which is a 7.4% reduction since last year (2021: 7.9 million t). In total we reduced those emissions against the 2019 baseline year by 1.3 million tonnes, achieving a 15% reduction.



Find our consolidated performance data [here](#)

Scope 3 emissions (thousand tonnes CO₂e)



* Not relevant Scope 3 categories (capital goods; waste generated in operations; investments; processing, use and end-of-life of sold products) have been estimated and summarized under "other"





Maintaining zero deforestation

Our planet is facing dual crises of climate change and biodiversity loss which are closely interconnected. Healthy and resilient forests are vital to the circular bioeconomy as a source of renewable, recyclable and compostable material. We also recognise the importance of forests as carbon sinks and their role in climate change mitigation.

Commitment

Maintain zero deforestation in our wood supply, sourcing from resilient forests

Targets

Maintain 100% FSC™ certification in our own forestry landholdings

● On track

100% responsibly sourced fibre with 75% FSC™-/PEFC-certified fibre procured by 2025 and the remainder meeting the FSC™ Controlled Wood standard

● On track

Implement leading forestry measures to ensure productive and resilient forests

● On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

The role of forests in climate change mitigation

There is much debate on a global and EU level between policymakers, the forest sector, NGOs and scientific organisations about the long-term role of forests in climate change mitigation and biodiversity conservation.

There is a potential conflict in evolving EU legislation and the EU Green Deal. EU legislation promotes increased restrictions in forest use, including setting forests aside for conservation, while the EU Green Deal and related regulations imply increased demand for the use of renewable materials and fully recyclable solutions for a circular bioeconomy.



As stewards of sustainable working forests, companies in the forest sector play a fundamental role in helping to secure the abundance, diversity and resilience of species and ecosystems in production landscapes through their actions across the full value chain.

Andrew King,
Mondi Group CEO

There are many different stakeholder views on how forests should be managed and conserved. We believe a science-based approach will be key in addressing these complex challenges and finding appropriate solutions. Responsible management of forests and manufacturing of wood-based products will play an important role to combat the climate crisis and meet society's need for packaging and paper solutions.

Maintaining forest health and resilience

Sustainable working forests have a critical role in addressing the climate crisis and in securing long-term benefits for society and for landowners. They are central to our business as wood fibre is our most important raw material for producing our paper and packaging solutions.

Sometimes, production landscapes face challenges in terms of the health and resilience of forests due to changing climate conditions. Higher temperatures and lower precipitation tend to increase the vulnerability of forests to natural disturbances, such as windstorms, wildfires, pests and diseases.

The long-term health and resilience of forests starts with proper reforestation of harvested sites, followed by effective tending of young forests and their protection throughout the life cycle until the next harvesting.

Supporting sustainable forest management

We have an opportunity to lead the way in our own forestry operations in South Africa by developing best practice silviculture and other forest management practices to promote tree growth and resilience.



In central Europe, where we source the majority of our wood fibre, we do not have a direct influence on land management. We therefore work with relevant stakeholders, aiming to catalyse change at scale. We enable the uptake of sustainable forest management practices and development of resilient forest landscapes, through collaboration with science and other partners, engagement with suppliers and forest owners, and scaling up development of forest certification.

Collaborating with scientific partners

Mondi sources much of its wood in central Europe, where we see lower risk of deforestation. However, climate change impacts may cause heavy degradation of forests, which may ultimately result in deforestation. Over the last 30 years (1990-2020), the forests of Europe (EU-27) have been growing, increasing by 10% in terms of area, and over 42% in terms of growing stock, despite increased rates of forest calamities. Timely harvesting and regeneration of trees is key to sustainable carbon dynamics in forests and enables climate-positive effects downstream in the value chain.



Developing strategies for forest management

We are in favour of continued active use of European forests by implementing integrated forest management approaches to enhance their multiple ecosystem services. The alternative policy of setting more land aside for conservation purposes potentially poses long-term risks to forests and the circular bioeconomy, which must be fully understood. We believe scientific research will be crucial to inform effective policies and management practices, focused on mitigating climate change and reversing nature loss.

In 2022, together with the University of Natural Resources and Life Sciences (BOKU) in Austria, we conducted research into the ability of various forest types to provide stable climate change mitigation. The study considered many existing scientific studies on this topic and found a lack of data on carbon stocks, stand structure of unmanaged forests, and harvested wood products. Using the available data, it concluded that sustainably managed forests are efficient in removing carbon from the atmosphere, acting as a 'carbon pump'. Formerly managed forests left without human intervention can become unstable with inherent uncertainty of carbon storage capacity. Healthy and stable unmanaged forests provide good carbon storage, but additional carbon sequestration is likely to decrease in future as they approach the climax state. The risk of carbon losses will increase, in part due to climate change.

In 2022, Mondi completed and presented the Forest Risk Map⁵ with the focus on Central and Eastern European coniferous forests. The study supports strategic forest management planning, highlighting the regions which might be more susceptible to the adverse impacts of climate change. It also suggests which tree species should be regenerated for better climate change adaptation.



The Forest Risk Map was created to provide scientific insight on climate impacts and potential developments across Europe's forests and tree species distribution and make it accessible for all forest stakeholders.

Peter Mayer,
Managing Director, Austrian Research Centre for Forests



The project was jointly developed by Mondi and scientific partners at the Austrian Research Centre for Forests (BFW) and Central Institute for Meteorology and Geodynamics (ZAMG), and financially supported by the Austrian Research Promotion Agency (FFG).

Small-scale suppliers programme

Our small-scale timber grower programme has benefitted over 3,435 growers with support from Mondi Zimele since it was launched. In 2022, 157,040 tonnes of wood were sourced from rural smallholdings (1-10 hectares each). Mondi Zimele also distributed 1.2 million seedlings in the planting season of 2022 and provided training, mill visits and knowledge-sharing field days to eligible small growers.



Read more about Mondi Zimele's emerging timber growers [online](#)

IUFRO and Mondi teaming up for forests

Demands on forests – including wood, biodiversity, carbon and energy – have never been higher. Discussion on how forest management can be adapted to meet these needs and support forest resilience is essential.

The three-year IUFRO-Mondi Partnership was announced in 2021 to better understand climate change impacts on and challenges for forests and the forest-based industry; identify response measures in line with maximum contribution to the SDGs, particularly to climate change mitigation and adaptation, people's livelihoods and biodiversity conservation; and serve as catalysts for widespread collaboration and partnership between the private sector and research.

In 2022, two partnership events involving the forest value chain brought together scientists, NGOs, forest owners and industry representatives.

Stakeholder Dialogue: Participants shared different perspectives on the future of pan-European forests and discussed how to balance wood supply, carbon stocks, biodiversity and energy demand from forests in a changing climate.

Think Tank Meeting: Together with scientists, government and forest sector representatives we discussed appropriate response measures to address the diverse demands on forests today and in future and how to best respond to climate change. Potential response measures were identified for forest management, policy, industry and science.



Read more on the partnership [online](#)





Sourcing our wood responsibly

Certification for forest management

Compared to non-certified forest management systems, we believe FSC and PEFC certification offers the greatest value in terms of increasing sustainable fibre sourcing in the long term. Forest certification schemes work continuously to make their standards more effective to address challenges such as deforestation and forest degradation.

We support these efforts and have been working to enhance quantitative and qualitative aspects of voluntary forest certification using different levers. For example, by enhancing certification in our own forestry operations and in global wood fibre sourcing, as well as proactively sharing our insights.

In South Africa, significant progress has been made in certification of small growers through FSC Group Scheme certification. Working collaboratively with CMO, Africa's largest forestry consulting and training company, 101 small growers are being onboarded to the FSC Group Scheme, with 36 of them now supplying FSC-certified wood to Mondi's Richards Bay mill, with work in progress to increase this number.

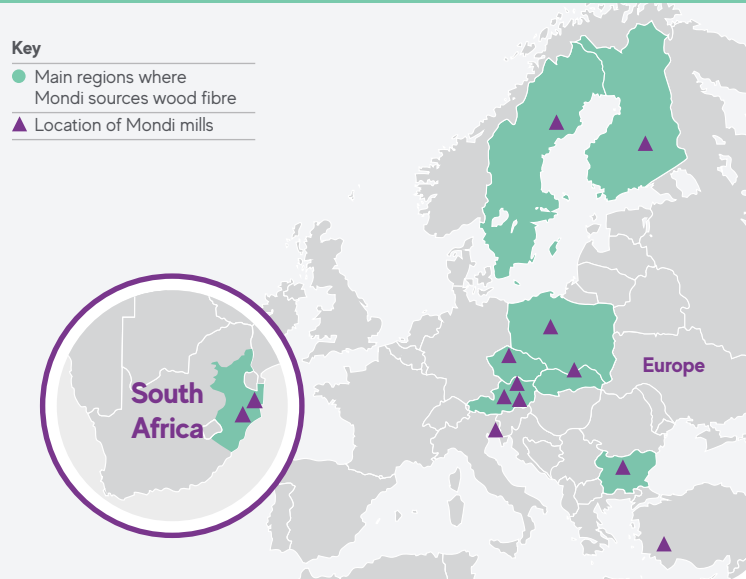
Benefits of domestic sourcing

Currently, only 11% of forests and 38% of industrial wood globally is certified.⁶ Forest certification is most effective when a high proportion of forests in a region are certified. We aim to make the best use of certified wood from domestic markets, where voluntary certification covers most managed forests.

There are a number of other sustainability benefits to sourcing nearly 90% of our wood from the countries where our mills are located (see countries listed on the right):

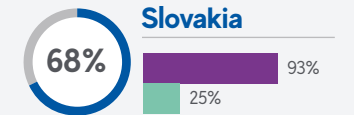
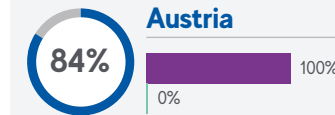
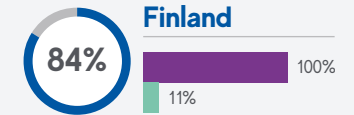
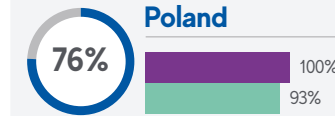
- shorter transportation distances with lower GHG emissions;
- more resilience and transparency in our supply chain with lower risks; and
- contributing to the local economy and livelihoods.

100% of our wood is sourced from responsible sources with a risk-based approach

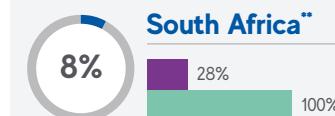


% of certified forests in key countries where we source 90% of our wood

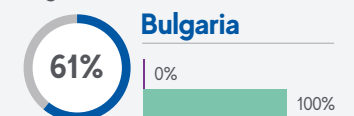
Low-risk countries*



Medium-risk countries*



High-risk countries*



○ Total % of certified forests in each country
 ■ % of PEFC-certified forest ■ % of FSC-certified forest

Note: The FSC% and PEFC% shows how much of the country-level certified forest area is represented by each certification scheme. The sum may exceed 100% as some forests are certified to both FSC and PEFC. Calculated based on FAO, FSC, PEFC (2021).

* The sources used to define the country-risk levels are: Transparency International's Corruption Perceptions Index (CPI), World Bank's Worldwide Governance Indicators (WGI), FSC's Centralized National Risk Assessments (CNRA) and Preferred by Nature's Timber risk assessment methodology.

** In South Africa, wood is sourced only from forest plantations, 80% of which is certified (DAFF, 2020).

14.5 million m³
 Mondi's total wood consumption

6 FAO. 2020. Global Forest Resources Assessment 2020. Main report. Rome



The role of certification

Performance against our targets

Target: Maintain 100% FSC certification in our own forestry landholdings

In South Africa, we prolonged FSC forest management certification for over 250,000 hectares of our landholdings for the next 5-year period. We also implemented PEFC certification.

Our forestry operations also successfully maintained certification of their environmental management system according to the ISO 14001 (2015) standard.

Target: 100% responsibly sourced fibre with 75% FSC-/PEFC-certified fibre procured by 2025 and the remainder meeting the FSC Controlled Wood standard

In 2022, 100% of our fibre was responsibly sourced, with 75% FSC or PEFC certified and the remainder meeting the FSC Controlled Wood standard.

Since 2020 the proportion of certified wood has increased by 2% in the context of overall increase of wood supply volumes by 5%. This increase is due to sourcing decisions and actions on the ground to support expansion of certification to new areas and suppliers.

Target: Implement leading forestry measures to ensure productive and resilient forests

The main threat to forests in our landholdings is forest fires, occurring as frequent, high-intensity small-scale fires in South Africa. We have developed a comprehensive tree improvement programme in South Africa as well as silviculture techniques to maintain healthy, resilient and productive tree plantations. We mitigate the risk of catastrophic fires with a robust fire management system.

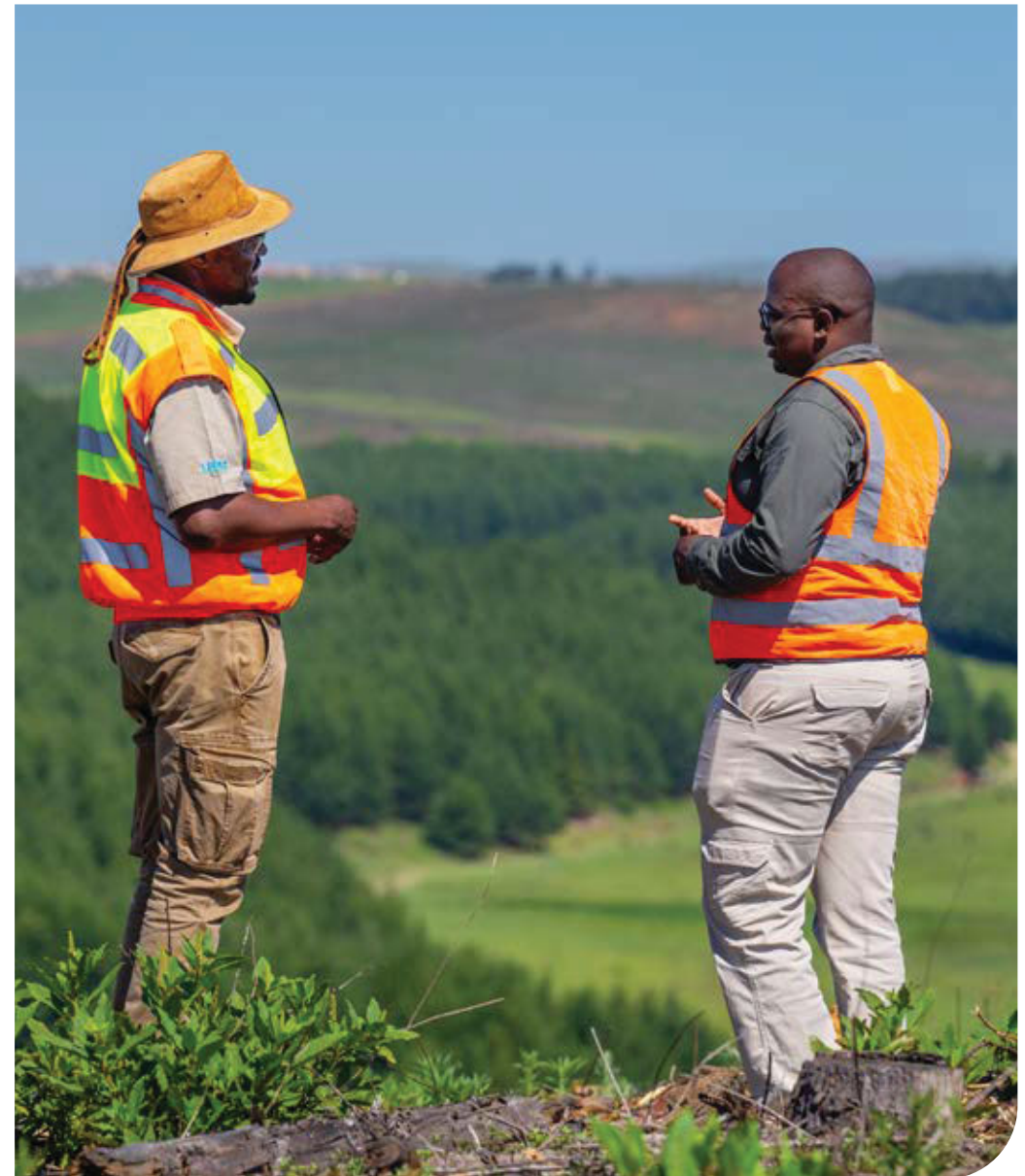
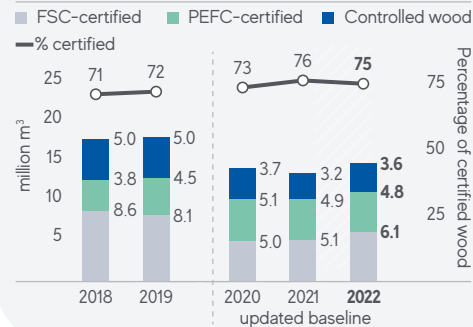
While the planted area of our landholdings in South Africa remained stable, the carbon stock in the above-ground biomass at the end of 2022 was slightly higher than at the end of 2021. This was mainly due to annual growth exceeding wood harvesting in this year.

The 10-year rolling average mean annual increment in our plantations has increased by 6% and 7% for eucalyptus and pine respectively from 2016. At the same time, the losses caused by wildfires and other natural disturbances remained below 1% of total plantation area.



Find our consolidated performance data [here](#)

Share of certified wood supply in our pulp and paper mills





Safeguard biodiversity and water resources

Healthy and well-functioning ecosystems are the foundation of life on our planet. Water and biodiversity are key factors for ecosystem resilience. In the forest sector, the most significant biodiversity and water impacts and dependencies occur upstream, in forestry landscapes and primary processing facilities.

Commitment

Safeguard biodiversity and water resources in our operations and beyond

Targets

Conduct water stewardship assessments at our mills and forestry operations by 2025, and implement required actions to address the findings by 2030

● On track

Conduct biodiversity assessments at our mills and forestry operations, introducing biodiversity action plans where necessary by 2025

● On track

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Our approach to biodiversity and water stewardship

Within our MAP2030 framework, we are committed to conducting biodiversity and water stewardship assessments for our forestry operations and mills, which will enable us to manage our impacts and dependencies on nature and support healthy ecosystems around our manufacturing sites and at a landscape level.

Part of our biodiversity and water stewardship approach under MAP2030 includes collaboration with partners to support the development and implementation of Biodiversity Action Plans and Water Impact Assessments in our forestry and manufacturing operations, as well as beyond our operations at the landscape or forest sector level.

Water management

In addition to the impacts of climate change on freshwater ecosystems and water cycles, industrial water withdrawal from freshwater ecosystems can lower the water table, reducing the volume of water available to other stakeholders and impacting the healthy functioning of ecosystems. This can have negative economic and social consequences for local communities. We expect more stringent water regulations in the future, and we have made water stewardship a priority, especially in water-stressed and water-scarce regions.

Our approach includes assessing and managing our own water-related risks and conducting basin- and production-related water stewardship assessments.

Read more in our case study for the WBCSD's Forest Sector Nature-Positive Roadmap [online](#)

We manage our water impacts by reducing water use and increasing water recycling and reuse. This includes modernising our wastewater treatment facilities at our mills, to treat and return our waste water without negatively impacting water quality and water recycling. In some locations, the cost of the water we use and treat can be significant and water availability may be a pre-existing risk.

Mondi developed a Group Water Stewardship Standard together with WWF and the Alliance for Water Stewardship (AWS). The standard includes requirements related to our water stewardship policy, plan and strategy, as well as requirements related to water, sanitation and hygiene. We are currently assessing all our operations against this standard and developing action plans as needed to address gaps identified.

Biodiversity management

Wood fibre is our primary raw material for more than 80% of our products and solutions and we understand the importance of biodiversity for resilience of our operations.

Our principles and measures include prohibiting negative land conversion (e.g. zero deforestation); avoiding harm to biodiversity hot spots (e.g. protected areas); and maintaining or improving quantity and quality of critical native ecosystems (e.g. within conservation corridors). Our ecosystem stewardship approach entails development of context-specific measures to address the most material aspects in our operations, depending on geographic location and value chain position.

As part of our assessments, we conducted biodiversity status reviews in our pulp and paper mills and forestry operations. With the support of external experts, we identified important biodiversity sites around our operations and evaluated the state of a full variety of environmental aspects, which also may affect biodiversity. We are currently working on the development of context-specific action plans for all operations.

In 2022, Mondi South Africa's forestry operations updated the strategy for managing conservation areas in its owned and leased landholdings. This includes a set of critical measures against which we will monitor biodiversity management performance (many of these are a continuation of our monitoring to date, with an added focus on natural forest ecosystems). We also began the next phase of the partnership with the National Biodiversity and Business Network of the Endangered Wildlife Trust (EWT) to develop the biodiversity accounting principles for our forestry operations in South Africa (read more on [page 60](#)).





Key principles of our landscape approach

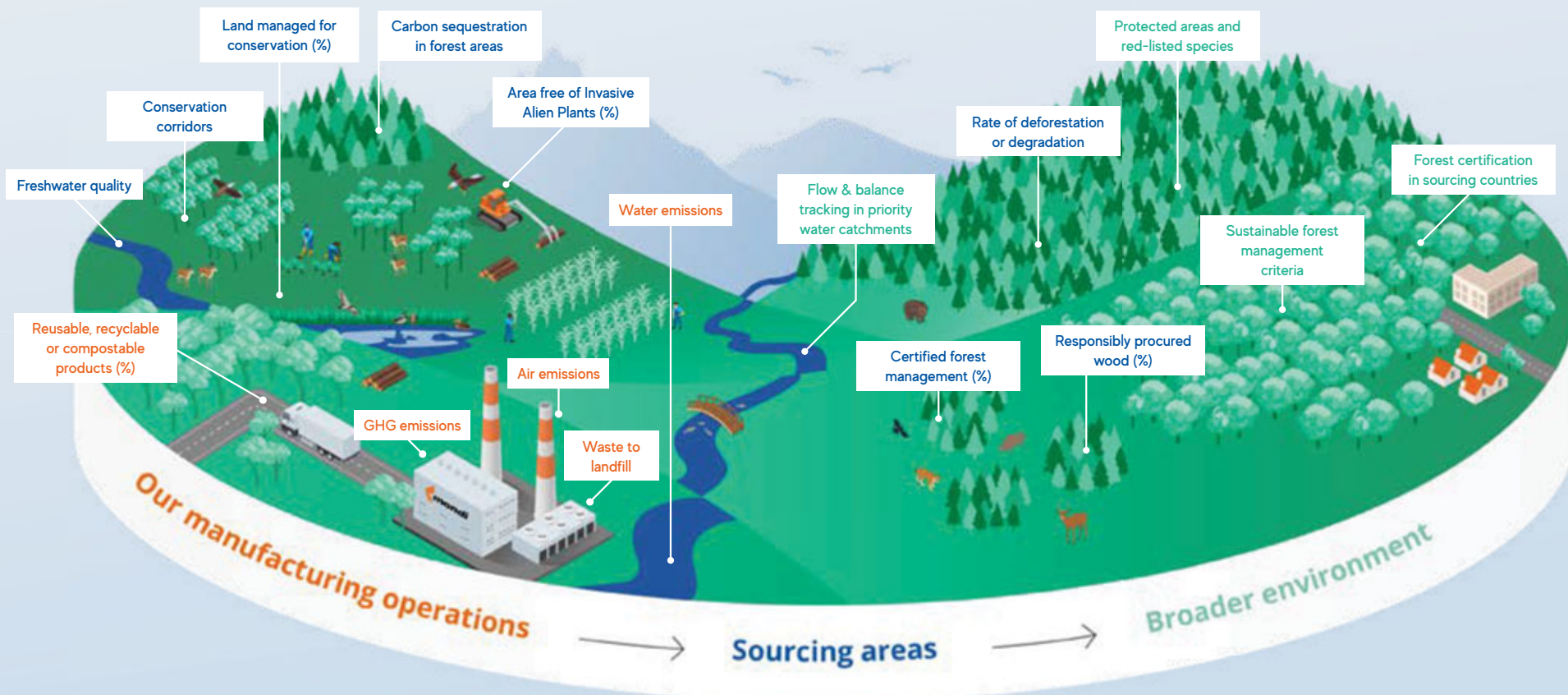
Well-functioning ecosystems are fundamentally linked to the health of our planet, wellbeing of our communities and the resilience of our business.

The diagram below illustrates our operational environment and landscapes, being in constant interaction with other land users and nature. Our pulp and paper mills are surrounded by forest plantations (e.g. in South Africa) and semi-natural forests (e.g. in Europe), embedded into a network of protected areas and conservation corridors. Some of the KPIs we monitor in our operations, sourcing areas and the broader environment are highlighted here. We regularly review performance against them to identify the most material issues and critical measures.

Most nature-related impacts and dependences occur upstream, in the landscapes where we operate. Timber and water are key natural resources for our pulp and paper mills.

In manufacturing operations and sourcing areas we have direct management of environmental impact drivers (left side of the diagram). Here, we conduct biodiversity and water stewardship assessments and develop action plans. We implement and test the best available management practices and monitoring approaches. By sharing our insights with other land users and key stakeholders we contribute to the development of nature-related frameworks and tools.

Taking a landscape-level approach, we also look beyond our direct operations to external sourcing areas and the broader environment (right side of the diagram). When we do not have direct access to land management and are not able to directly influence ecosystem stewardship on the ground, we monitor the overall state of ecosystems via several external proxy KPIs. We focus our efforts on catalysing positive change at scale via collaboration with relevant local and regional partners.





Placing ecosystems in focus



© Scott Ramsay

Our key partnerships

We have enhanced our collaboration with local environmental NGOs and scientific institutions. We have two aims: first, to increase access to science-based knowledge on ecosystem stewardship and, second, to promote communication and implementation of effective science-based approaches to managing biodiversity and natural capital in our operational landscapes.

Our approach is to implement local measures in our direct operations where we have more primary data and stronger leverage. We then aim to use these learnings in our engagements with international frameworks, as reflected by our European collaborations.

WBCSD Forest Solutions Group (FSG)

In 2022, we supported the development of a new WBCSD Forest Solutions Group report 'Forest Sector Nature-Positive Roadmap'. This is the first of several sectoral nature-positive roadmaps from WBCSD, developed with input from 30 external stakeholders.



Read WBCSD's Forest Sector Nature-Positive Roadmap report [online](#)

The aim of the report is to define what nature positive means for the forest sector and to provide guidance for business action. A special focus was placed on transformative actions leading to critical system-level changes. The report includes Mondi's case study on landscape water stewardship approaches in prioritised river catchments in South Africa, which illustrates this approach in practice.

We also engaged with the Taskforce on Nature-related Financial Disclosures (TNFD) and the Science-Based Targets Network (SBTN) through WBCSD FSG. Both frameworks published their draft guidelines in 2022, which will inform further development of our ecosystem stewardship management approach and disclosures.



EU Business and Biodiversity Platform (EU B@B)

We were part of the Community of Practice and the Technical Hub of the ALIGN project, which developed 'Recommendations for a standard on corporate biodiversity measurement and valuation'.⁷ Going forward, we will assess implementation of these guidelines within our operations. Firstly, evaluating the applicability of biodiversity accounting in our direct operations in South African plantation forestry, supported by the EWT. Following this, we will investigate practical approaches to consistent biodiversity measurement in our external wood fibre sourcing areas.



The Endangered Wildlife Trust (EWT)

In 2022, we continued to work in partnership with the EWT's National Biodiversity and Business Network to further improve our biodiversity management system (based on the results of biodiversity status review carried out in 2021), and to pilot the Biological Diversity Protocol (BD Protocol), which uses biodiversity accounting principles to measure and consolidate a company's footprint for both species and ecosystems.



Stellenbosch University, Mondi Ecological Networks Programme (MENP)

We continued our collaboration with the Department of Conservation Ecology and Entomology at Stellenbosch University. To date, we have had 15 years of collaborative research on developing conservation principles for the design and management of ecological networks. Our focus is now on critical measures outlined in our Biodiversity Action Plan. For example, the MENP team will work on improving monitoring tools for grasslands and indigenous forests.



WWF-Mondi Water Stewardship Partnership (WWF-MWSP)

Our long-standing relationship with WWF South Africa continued in 2022. We are now engaging with forestry and agriculture sectors on improved water stewardship in targeted catchments in KwaZulu Natal. Activities include working with irrigation farmers and local authorities to strengthen governance for water use. This includes supporting the uMhlathuze Water Stewardship Partnership (UWASP), which is focused on the improvement of the water resource management practices in the uMhlathuze river catchment, where our Richards Bay mill is located. Our recent work includes development of a near real-time water flow monitoring tool to aid strategic decision-making in the catchment area.

⁷ [Recommendations for a standard on corporate biodiversity measurement and valuation](#)



Managing water resources

Water stewardship in the Richards Bay's water catchment

The Richards Bay mill operates in a water-scarce catchment. The mill has already implemented best practice water management and reduced its consumption by 16%, mainly through process changes in the fibre line. This resulted in improved pulp quality without the need for high water use. In recent years, water risks due to climate change have become more evident in South Africa in the form of extreme droughts.

In response, the Richards Bay mill partnered with WWF-South Africa; German development agency, GIZ; NGOs such as the National Business Initiative (NBI) and neighbouring industry and government departments to form the uMhlathuze Water Stewardship Partnership (UWASP). Its aim is to build a climate- and drought-resilient landscape. A key concern was the communication between water authorities and users and the lack of visibility of metrics related to water availability and resources in the catchment. This contributed to ineffective decision-making and inefficient management of scarce water resources.

To mitigate this risk, UWASP worked with external consultants to fund, develop and commission a near real-time water flow monitoring system for the catchment. In 2022, the partnership assisted stakeholders and authorities to make more informed strategic decisions on water resource management.



FlowTracker and Inwards are highly innovative near real time water monitoring tools, that will significantly strengthen water governance in the uMhlathuze catchment. The partnership between GIZ, NBI, Mondi, South 32, AWARD and WWF to fund and develop these tools is a superb example of organisations collaborating to address water security challenges on the ground.

Ruth Beukman,
Freshwater & Policy Lead, WWF-South Africa



Impact of high temperatures on freshwater biodiversity

Our biodiversity status reviews highlighted that potentially significant impacts on biodiversity in freshwater ecosystems can be related to increased temperatures of water, particularly with extreme weather events in a changing climate. Professor Schmutz helped us to further explore this issue at the Mondi Environmental Managers Network annual meeting.

Some fish species, such as trout, are very sensitive to increased water temperature and only remain healthy and reproduce successfully when temperatures remain within a certain range. We measure the temperature of the water discharged from our mills and estimate the degree of impact on the receiving environment, taking into account the biological and physical characteristics. We consider opportunities for water cooling and heat recovery, where feasible.



Manufacturing companies, like pulp and paper mills, need significant quantities of water for production processes. Going beyond legal requirements and water use efficiency they have a duty to assess their impacts on biodiversity in rivers and define action plans to safeguard future aquatic ecosystem integrity and services.

Stefan Schmutz,
Professor, Institute for Hydrobiology
and Water Management of University of Natural
Resources and Life Sciences, Vienna (BOKU)



Assessing our impacts on nature



Performance against our targets

Target: Conduct water stewardship assessments at our mills and forestry operations by 2025, and implement required actions to address the findings by 2030

In 2022, we conducted assessments against our Group Water Stewardship Standard for the mills in Ružomberok (Slovakia), Štětí (Czech Republic) and Świecie (Poland) and developed action plans for water stewardship. To date, we have assessed 38% of our mills and forestry operations.

In 2022, we conducted a detailed assessment to identify water reduction opportunities at our mill in Richards Bay (South Africa) and established further water reduction projects, such as increasing water reuse in the mill.

We successfully started a project to install an additional anaerobic wastewater treatment plant at our Ružomberok mill. This is for pre-treatment of the waste water of our new paper machine and reduces the chemical oxygen demand (COD) load of this wastewater stream by 97% before entering the mill's wastewater treatment plant.

Target: Conduct biodiversity assessments at our mills and forestry operations, introducing biodiversity action plans where necessary by 2025

In 2022, we assessed and developed action plans for three mills, located in Austria (Frantschach), South Africa (Richards Bay) and Finland (Kuopio). To date, we have assessed 46% of our mills and forestry operations.

In 2022, in Mondi South Africa's forestry operations, we initiated implementation of the first phase of the biodiversity action plan agreed in 2021.



Read more in our [GRI Biodiversity disclosures online](#)



Forest companies should protect and enhance biodiversity as that is the most important investment to ensure the resilience and sustainability of key resources. The polarisation between forest conservation and production reflects 'old economic thinking'. Bio-economy and biodiversity are two faces of the same future: a future powered by nature, in harmony with nature.

Marc Palahí,
Director, European Forest Institute and Chair,
Circular Bioeconomy Alliance



WHAT IS NEXT IN TAKING ACTION ON CLIMATE?

- Continue to develop and implement our biodiversity action plans and water stewardship assessments across our operations.
- Continue to develop metrics to measure our impacts on biodiversity and ecosystems.
- Invest in projects that help to achieve our science-based Net-Zero GHG reduction targets and improve our sustainability performance.
- Scale up our engagement with our suppliers and service providers, such as logistic companies, to drive progress on Scope 3 emissions.

How do Mondi's RESPONSIBLE BUSINESS PRACTICES underpin our performance?

REDUCE

Investing in anaerobic wastewater treatment at Ružomberok (Slovakia) improves the removal efficiency of organic compounds, and produces biogas for energy generation.

➔ [Read more p66](#)



EVOLVE

Integrating MAP2030 targets into the procurement strategy to support our Net-Zero commitment.

➔ [Read more p78](#)



ENGAGE

Assessing our relationships with local stakeholders in Štětí (Czech Republic) and Tire (Türkiye) to identify and respond to concerns.

➔ [Read more p74](#)

BUILT ON RESPONSIBLE BUSINESS PRACTICES

Environmental performance	64
Human rights	71
Communities	74
Procurement	78

Environmental performance

Resource efficiency is fundamental to many of our material issues. We work with partners across our value chain to use resources wisely, prevent environmental degradation and develop circular solutions.

Commitment	Target	Performance		This year at a glance
		2021	2022	
We will continually work on improving the environmental performance of our operations to minimise environmental impacts	Reduce specific contact water consumption by 10% by 2030 from a 2020 baseline*			Specific contact water consumption decreased by 3.2% compared with our 2020 baseline. We reported a slight 0.4% increase against 2021.
	Reduce specific effluent load (measure COD) by 15% by 2030 from a 2020 baseline*			Specific COD emissions decreased by 7.7% compared with our 2020 baseline, and increased by 4.1% since last year, mainly due to process instabilities at the Świecie (Poland) wastewater treatment plant after the annual shut.
	Reduce specific NOx emissions from our pulp and paper mills by 10% by 2030 from a 2020 baseline*			Our specific NOx emissions were 6.1% lower compared with our 2020 baseline, and 2.6% lower than last year. This improvement is due to investments in our mills in Ružomberok (Slovakia) and Štětí (Czech Republic).
	Reduce specific waste to landfill by 30% by 2030 from a 2020 baseline*			Specific waste to landfill decreased by 7.8% compared with our 2020 baseline, and 6.5% compared to last year, primarily due to process improvements in Štětí and turning sludge into a soil improvement product in Kuopio (Finland).
	100% of our operations will be certified according to globally accepted environmental standards equivalent to ISO 14001 by 2025			100% of our pulp and paper mills and 70% of our converting operations are ISO 14001 certified. It is an increase from 71% in 2021 to 74% across the Group.

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Key

Completed On track Slightly behind target Not on track In development

* Updated targets in 2022.

How we minimise environmental impacts

Our manufacturing processes are resource-intensive, with our environmental impacts primarily coming from our pulp and paper mills. Most of the energy we use for our processes is generated on-site from biomass-based by-products from the pulp manufacturing process, as well as from fossil fuels, resulting in greenhouse gases and other air emissions.

Our manufacturing processes also use significant amounts of water and generate waste. We see every emission to water and air as a lost resource and landfilling as a wasted raw material, which could be reused as a secondary raw material. Hazardous waste disposed to landfills poses a potential serious threat to soil and groundwater and can create future liabilities.

We actively engage with external stakeholders to reduce our environmental impact. This includes finding alternative solutions for waste by recycling or reuse and innovating to support a circular economy.

[Read more on page 28](#)

The implementation of best available techniques (BAT) standards and the modernisation of our energy and manufacturing facilities help us to reduce emissions to water and air, run resource-efficient operations, avoid disturbances and protect the rights of our neighbours and other stakeholders.

In 2022, we continued implementing our ambitious Group-wide Water Stewardship Standard methodology to reduce our freshwater impact, with particular focus on regions with higher water risks.

[Read more on page 61](#)

Management systems and certification

Our Environment Policy outlines the requirement for cleaner production and explains the drivers for our public commitments, including the principle of resource efficiency. It also covers the requirements for water stewardship and biodiversity assessments. Around the world, we apply a precautionary approach and strive to comply with all applicable environmental regulations and permits. When an impact is identified, we take mitigating measures to avoid harm to the environment. We record and thoroughly investigate all environmental incidents and complaints.

Environmental management systems are embedded in our Sustainable Development Management System (SDMS) and support our operations to meet environmental protection standards, comply with legislation and improve reporting and transparency. Our SDMS supports our operations to minimise their environmental impacts, improve their performance in accordance with good manufacturing practices and to adhere to the principles of resource efficiency, as defined by the United Nations Environment Programme (UNEP). We have installed internal expert networks to support the achievement of energy and environmental targets with benchmarking and knowledge sharing. Our approach is based on internationally accepted environmental management systems, including ISO 14001. Individual operations may also develop local, sector-specific environmental management systems, some of which are required by their key customers.

Environmental and energy audits are an integral part of certification and support compliance of our operations. The audits highlight opportunities to reduce our environmental impacts and deliver cost savings with respect to resource, waste and energy management.

Managing our water impacts

Using water wisely

We are committed to reducing water use and increasing water recycling in our operations. Water scarcity and decreasing groundwater levels are among the most serious risks facing society. Water is also vital to our supply chain and production processes. Managing water use in a sustainable way and investing in appropriate water infrastructure is a priority to avoid negative impacts of our operations on water availability within the catchments where we operate – particularly in regions where there are high water-related risks.

Our pulp and paper mills are our most significant water users. In 2022, we conducted three detailed water stewardship assessments at our mills in Ružomberok (Slovakia), Świecie (Poland) and Štětí (Czech Republic).

In 2022, the total water input, contact and non-contact water, was reduced by 2.6% against 2021, mainly due to water-saving projects in our mills. For example, at our mill in Świecie we reused several internal water streams, which reduced water input and also helped us improve energy efficiency by using the heat from the warm water streams. We have intensified our efforts to further reduce water consumption by developing a detailed guidance for water-saving opportunities in our pulp and paper operations. We continue to investigate opportunities to reduce and reuse water, for example reuse of condensates at our Richards Bay (South Africa) mill.

Monitoring of water returned to water bodies

We carefully monitor the amount of water we withdraw by source and release back to the aquatic environment, and we report on water use as contact or non-contact water in manufacturing and energy generation.

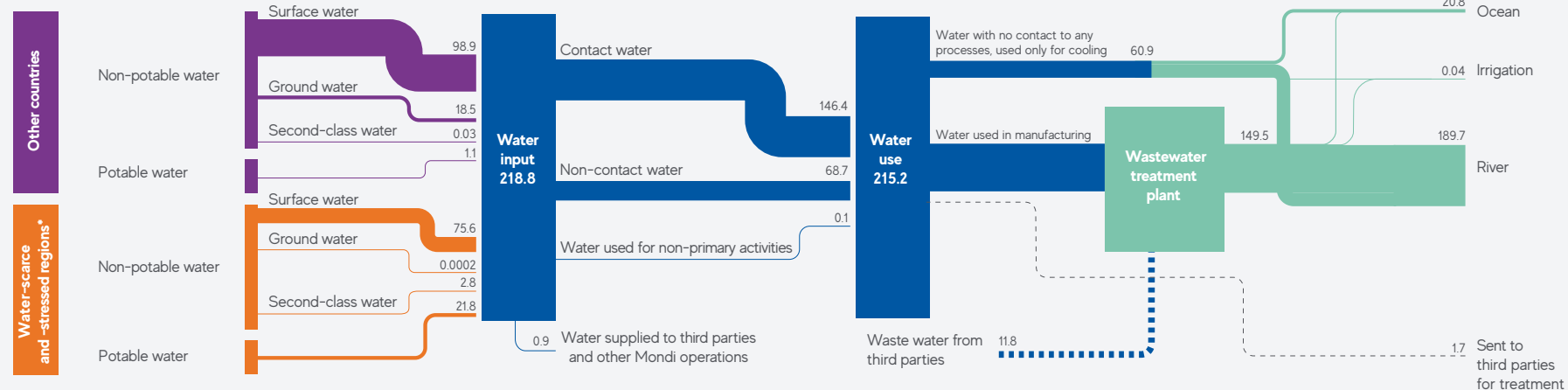
Our approach to managing water impacts includes:

- assessing and managing our water-related risks;
- reducing water consumption;
- investing in water recycling in our mills and forestry operations;
- investing in best available technology to treat our waste water; and
- developing partnerships with other water users to manage the risks across entire catchments.

In 2022, we used 215 million m³ of contact and non-contact water in our operations and discharged 92% back to the ocean or rivers. All waste water generated from production processes is treated in on- and/or off-site wastewater treatment plants before being discharged to ensure the waste water quality meets regulatory requirements. We monitor a number of parameters related to water emissions, including chemical oxygen demand (COD) and adsorbable organic halogen (AOX) compounds, as well as phosphorous and nitrogen compounds, which can contribute to eutrophication of water and negatively impact biodiversity.

Water use (million m³)

Sources



82% of the water we use in our operations for contact water or for cooling is released back to fresh water (e.g. rivers, lakes), 10% is sent to the ocean, 8% is released with our products (e.g. moisture in paper) or evaporated at our energy and manufacturing sites

* Pulp and paper mills in Czech Republic, Poland and South Africa

Monitoring our air emissions



REDUCE

Improved wastewater treatment at our Ružomberok mill

Mondi invested in a new anaerobic wastewater pre-treatment plant at its pulp and paper mill in Ružomberok (Slovakia). Anaerobic wastewater treatment is a solution to treat waste water containing higher amounts of organic residues (COD). It also delivers valuable biogas, which is used for energy generation. Excess anaerobic bio-sludge is transformed into anaerobic pellets, which are sold as secondary raw materials.

In cases where non-contact water from our operations is released back to the aquatic environment, such as rivers or oceans – for example, non-contact water used for cooling – we monitor several parameters, like pH and conductivity to ensure the water quality is suitable for release. At some of our pulp and paper mills, we treat waste water from third parties in our wastewater treatment plants.

We installed a working group that evaluates the longer-term water reduction required to reach our 2030 target. It is focused on identifying opportunities for water reduction and reuse by benchmarking and introducing best practice and BAT standards at our operations, with a focus on water-stressed areas. We consider water availability using local historic, current and future

outlook data (for example, provided by FAOSTAT¹) and data provided by utility companies and governments. We also look at catchment-wide water quality and availability parameters and water discharge risks from our manufacturing sites using the WWF Water Risk Filter.

Air emissions

We invest in modernising our operations to minimise the impacts of our air emissions, including those that may affect local communities.

Our main source of air emissions is the on-site energy generation in our recovery, bark and auxiliary boilers, as well as our lime kilns. Air emissions associated with combustion of fuels for energy production are a challenge for all energy-generating processes.

For example, nitrogen oxides (NOx) emissions generated by fossil fuels and biomass incineration can damage forests, crops and other vegetation by acidification of soils. The by-product from the combustion process in our energy plants, N₂O, is a significant greenhouse gas.

We regularly monitor SO₂, NOx, TRS (see glossary for definitions) and dust and we calculate our CO₂ emissions based on fuel consumption. We strictly adhere to permitted limits. The emissions from sulphur-containing gases (TRS substances) may lead to odour complaints in the event of a failure of our high-efficiency combustion equipment and flue gas cleaning.

TRS emissions increased by 11.2% since last year, mainly from our Richards Bay mill, due to issues in the burning zone for non-condensable gases. SO₂ increased by 15.5%, mainly due to a higher sulphur content in the coal used at Merebank (South Africa).

Particulate emissions decreased by 7.4% due to modernisation programmes conducted in Richards Bay and Ružomberok.

Ozone-depleting substances (ODS) have increased due to work replacing old ODS from cooling devices.

The modernisation of our energy facilities, including the use of modern combustion modification technologies (e.g. low NOx burners) and the implementation of flue gas abatement techniques, have enabled us to significantly lower NOx emissions per unit of energy at our mills in Ružomberok, Štětí and Świecie.

Air emissions

	2022 performance	2021 performance	% change 2021–2022
Specific NOx emissions	1.19 kg/tonne	1.22 kg/tonne	-2.6%
Total reduced sulphur (TRS)	35.0 tonnes	31.5 tonnes	11.2%
Total SO ₂	1,399 tonnes	1,212 tonnes	15.5%
Total particulates	687 tonnes	742 tonnes	-7.4%
Total ozone-depleting substances (ODS)	4.1 tonnes	3.1 tonnes	30.5%

¹ FAOSTAT – Food and agriculture data

Eliminating waste in our operations

Working towards zero waste

Our inputs primarily consist of wood, energy and water; we also rely on various chemicals and resins to produce our products. We implement the waste hierarchy. By-products from our production process are reused and recycled where possible as secondary raw materials for other industries, such as biomass-based chemicals (by-products of the pulp manufacturing process) as bio-based fuel. Disposal of wastewater and chemicals can, if not managed properly, negatively impact aquatic environments and biodiversity, resulting in soil and land pollution. Once our products are in consumer hands, incorrect disposal and non-recyclable products can lead to impacts such as micro-plastic pollution. Such pollution can damage soil health, marine life, and even human health. The landfilling of waste may present a risk to soil and groundwater.

We focus on reducing the quantity of waste that is landfilled and managing the disposal of our waste streams to improve the circularity of our material flows.

We monitor the volume of operational waste (by waste type and waste routes) across all operations and investigate alternative routes to divert unavoidable waste from being landfilled wherever feasible. To support our zero waste to landfill ambition, we are engaging with external waste treatment companies and companies interested in the use of secondary raw materials.

→ Read more on [page 28](#)

In 2022, we reduced our specific waste to landfill compared to the previous year by 6.5% from 23.45 kg/t saleable production in 2021 to 21.93 kg/t.

At our mill in Ružomberok (Slovakia), we made progress on managing waste to landfill by partnering with a cement producer. Waste lime mud, a by-product of our paper production that was previously sent to landfill, is now being used in the cement production process.

Our mill in Richards Bay (South Africa) reduced its waste to landfill by reusing the fibre sludge from its wastewater treatment plant as landfill cover (see case study [page 70](#)). The mill also began trials to use waste material for fertiliser production. Ash from the mill's boilers is also recycled into cement blocks, reducing waste to landfill by around 29,000 tonnes per year, and creating jobs for at least 24 people in the community.

Only a small portion of our total waste streams, around 2.4%, is hazardous waste. Many countries have laws covering the management of hazardous waste, including storage, treatment, transportation and disposal. We either dispose of the waste ourselves in accordance with our waste permits or we use reputable waste disposal contractors. As a last resort, only a small portion of the hazardous waste, where there is no economically feasible alternative available, is landfilled (e.g. ash). In total, around 5,000 tonnes of hazardous waste was sent to landfill in 2022 – approximately 4.4% of our total waste to landfill.

Non-hazardous waste can also have a detrimental environmental impact and can incur treatment and disposal costs. When not possible to avoid, reuse or recycle a waste stream, we dispose of waste responsibly by one of the following options: drying and filtration treatment to change the physical status and/or chemical composition of the waste; treatment of waste to reduce any hazardous characteristics; or incineration in combination with energy recovery.

Energy and materials flow 2022*

INPUTS**

Non-renewable

Energy (fossil fuels)
22 million GJ

Chemicals, starch and fillers
0.9 million tonnes

Aluminium***
14,370 tonnes

Plastic and films
0.2 million tonnes

Recycled plastic and films
935 tonnes

Renewable

Bio-based plastic and films
1,355 tonnes

Energy (biofuels)
79 million GJ

Water
219 million m³

Wood
14.5 million m³

External pulp
0.3 million tonnes

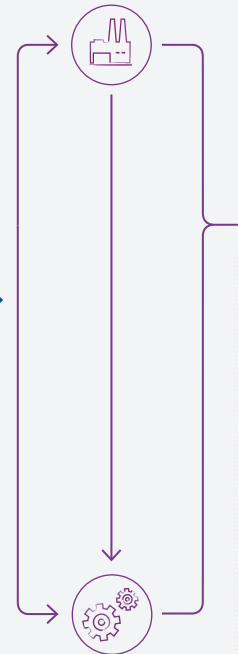
Paper for recycling
1.3 million tonnes

Virgin containerboard and kraft paper
0.3 million tonnes

Recycled containerboard
0.5 million tonnes

OPERATIONS

Pulp and paper mills



Converting operations

Recycling

OUTPUTS

Production statistics

Containerboard
2.4 million tonnes

Kraft paper
1.3 million tonnes

Uncoated fine paper
0.9 million tonnes

Market pulp
0.5 million tonnes

Corrugated solutions
1.9 billion m²

Paper bags
6.0 billion units

Consumer flexibles
2.0 billion m²

Functional paper and films
3.3 billion m²

Personal care components
0.8 billion m²

Waste
Recycled/reused
643,650 tonnes

Sent for treatment
14,879 tonnes

Incinerated
117,908 tonnes

Landfilled
115,765 tonnes

Energy sold
3.0 million GJ

Total water output
212 million m³

Emissions to water
28,479 tonnes COD
62 tonnes AOX

Emissions to air
2.2 million tonnes CO₂e
35 tonnes TRS
6,255 tonnes NO_x
1,399 tonnes SO₂
687 tonnes particulates

* Excludes Russia

** Input materials reflect purchased quantities

*** The percentage of aluminium from certified sources is 0%

Addressing impacts beyond our boundaries

Listening to communities

Our production processes have the potential to cause concerns or grievances, primarily related to odour or noise, in the local communities where we operate. We have mechanisms in place for the public to make us aware of any concerns so that we can take action. The Group's formal grievance platform, SpeakOut, is available to the public.

Some operations also have dedicated telephone lines that connect complainants directly with the relevant person at the operation. Some of our kraft pulp mills have also installed monitoring equipment that is able to detect odorous substances in the ambient air. This equipment, along with the community monitoring stations, enable us to immediately take corrective action if issues arise. Every complaint is investigated, reported and corrective action taken (read more on [page 87](#)).

Environmental incidents

Our operations strive to comply fully with local and regional environmental laws, regulations and other standards, such as site permits. Environmental incidents mainly arise from accidental releases. We have established management systems and procedures to avoid such incidents.

Where we store chemicals, we have installed secondary containment to capture spills or leakages that may occur from equipment. When an environmental incident does occur, we conduct a thorough investigation, take corrective and preventive actions and share lessons learned through our Group environmental managers' network.

We closely monitor occurrences of non-compliance, including those resulting in monetary penalties and violations of the environmental requirements set out in our procedures. Incidents of non-compliance are reported in line with our procedures.

In 2022, Mondi reported 38 non-monetary sanctions and non-compliances with environmental laws and regulations (2021: 86).

We paid fines totalling €56,653 involving seven cases. The major cases were related to exceeding the pollution limits of waste water in our Turkish plant in Izmit (€10,548); an unauthorised release to Elbe River (€16,182) in Štětí (Czech Republic); and automated measurement system not fully compliant with requirements (€16,500) in Ružomberok (Slovakia).

Additionally, we paid a total of €3,995 in fines in Syktyvkar (Russia).

Environmental incidents with impacts outside our boundaries in 2022

Month	Location	Brief summary	Action taken
Jan	Štětí (Czech Republic)	Approximately 3m ³ of caustic soda with a high pH entered the rainwater system and consequently flowed into the Elbe river. This led to the death of several dozen fish.	The contaminated sewer was isolated and treated. Following an investigation, the authorities imposed a fine of €16,182.
Mar	Richards Bay (South Africa)	During preparation for maintenance, there were increased emissions of malodorous gas from a gas scrubber due to incorrect bypassing, draining and isolation. The incident resulted in 17 odour complaints.	The standard operating procedure at the mill was reviewed and updated. The relevant employees were retrained.
Apr	Syktyvkar (Russia)	Alkaline waste water from the evaporation plant leaked through the underground pipe into a storm water well and onwards to the Vycheгда River.	The wells were plugged and the waste water was directed to the industrial sewer for treatment.
May	Dynäs (Sweden)	During startup of the mill, a mixture of liquor and soap overflowed into the secondary containment of the recovery boiler building. Due to a leak between the embankment and the pump room, a small amount of soap leaked into the river.	The foam on the river surface was collected with absorbent barriers.
Jun	Świecie (Poland)	A sudden loss of power meant that waste water could not be pumped from the mechanical to the biological treatment plant. Waste water after mechanical treatment was discharged directly to the river for 35 minutes with no visible contamination to the river.	The authorities were notified about the incident and no financial penalties or actions were imposed.
Jul	Richards Bay (South Africa)	Non-condensable gases (NCGs) were released into the atmosphere as a consequence of overpressure in the hardwood non-condensable gas line. The deviation was immediately rectified once identified. 61 odour complaints were received.	The procedure for undertaking work on the NCG line was revised. The revision outlines roles, responsibilities and approval processes. The relevant employees have been retrained.
Sep	Dynäs (Sweden)	Due to high pressure in a broken hose, hydraulic oil escaped the secondary containment and reached surrounding areas. Around 300 litres of oil leaked through the sewage system into the sedimentation plant and then to the river.	The hydraulic unit was stopped, a new hose was installed, spillage cleaned, and the river was monitored. No negative impact on water quality was observed.
Oct	Jülich (Germany)	A truck damaged the cooling water valve, causing a leakage. Approximately 4,000 litres of a 95% water and 5% ethylenglycol mixture entered the sewage system.	The line was closed, and the machines were turned off. The spill was diluted with additional water.
Dec	Jackson (USA)	Approximately 110kg of volatile organic compounds (VOCs) were released into the atmosphere as a result of a technical malfunction of equipment.	The process was stopped and the equipment repaired. Authorities were notified of the incident.



An overview of environmental incidents, non-compliances and environmental complaints can be found in our consolidated performance data [here](#)

Progress towards our environmental targets

Performance against our targets

Target: Reduce specific contact water consumption of our operations by 10% by 2030 from a 2020 baseline

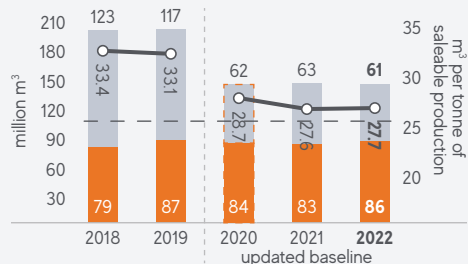
We are on track to achieve the target. Contact water consumption decreased by 3.2% since 2020. We reported a slight increase of 0.4% against 2021, mainly due to increased washing activities at Merebank (South Africa) after a significant flooding event and higher water consumption during a very hot summer in Świecie (Poland).

In 2022, specific contact water consumption of our pulp and paper mills in water-stressed areas slightly increased by 0.2% compared with the 2020 baseline. We expect to reduce our contact water consumption in the coming years after introducing several water-efficiency projects at our mills in Świecie and Štětí (Czech Republic).

Recent years have demonstrated that water stress is not only limited to water-scarce countries.

Contact water consumption

- Absolute contact water in water-stressed regions*
- Absolute contact water in other countries
- specific contact water m³ per tonne of saleable production
- 2020 baseline -- 2030 commitment



* Our pulp and paper mills in Czech Republic, Poland and South Africa

Countries such as Austria also face significant challenges with water availability at certain locations. We have, therefore, decided to make our new 2030 specific contact water reduction target applicable to all our operations, not just our pulp and paper mills in water-stressed countries.

Target: Reduce specific effluent load (measure COD) by 15% by 2030 from a 2020 baseline

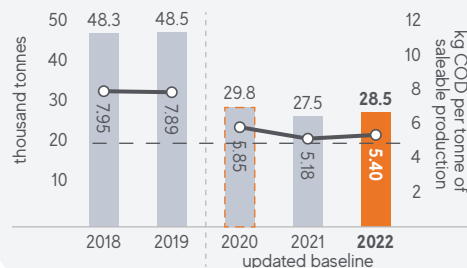
We achieved a specific Chemical Oxygen Demand (COD) reduction of 7.7% compared with the 2020 baseline. The biggest reduction was achieved due to efficiency improvement in our wastewater treatment plant in Richards Bay (South Africa).

This improvement, along with others, achieved due to investments in our wastewater treatment plants, such as the new anaerobic wastewater treatment plant in Ružomberok (Slovakia) and improvements in recovery cycles, has resulted in us achieving our initial 2025 reduction target for COD.

We have set a new target to reduce the specific COD load of our operations by 15% by 2030 against a 2020 baseline. To achieve this target we will continue to focus on improving our wastewater treatment plants and increasing the reuse of internal water streams.

COD emissions

- specific kg COD per tonne of saleable production
- 2020 baseline -- 2030 commitment

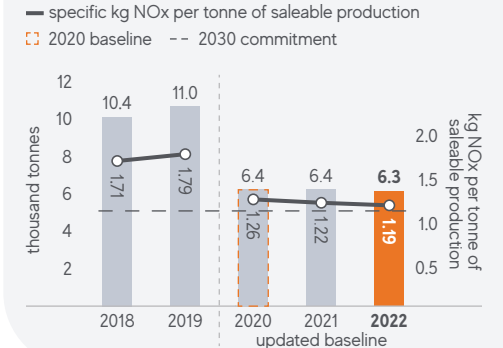


Target: Reduce specific NOx emissions from our pulp and paper mills by 10% by 2030 from a 2020 baseline

In 2022, our specific NOx emissions were 6.1% lower than the 2020 baseline. This improvement is due to investments in energy efficiency and modernisation in our energy plants at our mills in Ružomberok, Świecie and Štětí.

The 2025 specific NOx reduction target was also achieved in 2022. A new 2030 target has been set to reduce the specific NOx of our operations by 10% by 2030 from a 2020 baseline. To achieve this NOx reduction, we will invest in new energy boilers and rebuild existing energy boilers, for example at our Kuopio mill (Finland).

NOx emissions



MAP2030 target updates

Initial target	New target	Reason for change
Reduce specific contact water consumption in our pulp and paper mills in water-stressed areas by 5% by 2025 from a 2020 baseline.	Reduce specific contact water consumption by 10% by 2030 from a 2020 baseline.	We have updated our targets to reflect our continuing operations after the divestiture of our Russian assets.
Reduce specific effluent load to the environment (measure COD) by 5% by 2025 from a 2020 baseline.	Reduce specific effluent load to the environment (measure COD) by 15% by 2030 from a 2020 baseline.	
Reduce specific NOx emissions from our pulp and paper mills by 5% by 2025 from a 2020 baseline.	Reduce specific NOx emissions from our pulp and paper mills by 10% by 2030 from a 2020 baseline.	
Reduce specific waste to landfill by 20% by 2025 from a 2020 baseline.	Reduce specific waste to landfill by 30% by 2030 from a 2020 baseline.	

Reducing waste to landfill

Target: Reduce specific waste to landfill of our operations by 30% by 2030 from a 2020 baseline

In 2022, we generated about 0.9 million tonnes of waste in our manufacturing operations, of which 72% has been brought back into value creation processes by recycling and reuse of secondary raw materials.

We reported a 7.8% decrease in specific waste sent to landfill compared with the baseline year by process improvements in Štětí and turning sludge into a soil improvement product in Kuopio.



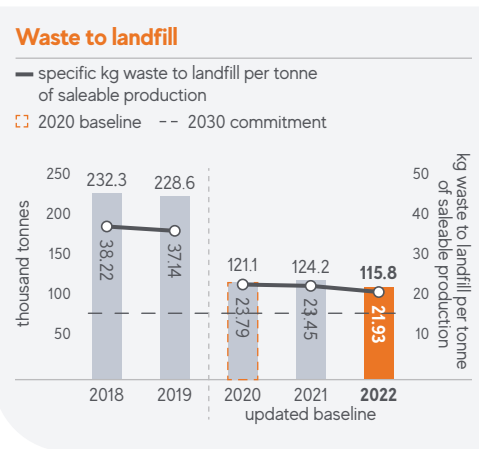
Find our consolidated performance data [here](#)

Over the past 15 years, Mondi has reduced waste to landfill by 65%. However, in 2022, we still disposed of 116,000 tonnes of waste to landfill (2021: 124,000 tonnes). Our working groups are focused on identifying alternatives to landfilling.

As part of our MAP2030 update, we set a new 2030 target to reduce the specific waste to landfill of our operations by 30% by 2030 from the 2020 baseline. This target supports our long-term aspirational goal to eliminate waste to landfill from our manufacturing operations.



Read more on [page 28](#)



Target: 100% of our operations will be certified according to globally accepted environmental standards equivalent to ISO 14001 by 2025

In 2022, 100% of our pulp and paper mills and forestry operations and 70% of our converting operations were certified to the international environmental management system standard ISO 14001. This is a 3% improvement of the Group's ISO 14001 certification level to 74% – an increase from 71% in 2021. We have established a working group to support our operations in the implementation of the ISO 14001 standard. In 2022, we started to develop a detailed gap analysis of the uncertified converting operations and have a roadmap in place to achieve certification of all our operations by 2025.

WHAT IS NEXT IN ENVIRONMENTAL PERFORMANCE?

- Continue to address the topics identified in our ISO 14001 gap analysis in order to implement ISO 14001 across all of our operations by 2025.
- Continue to focus on environmental audits of operations.

Waste reduction at our mill in Richards Bay (South Africa)



In 2022, Mondi partnered with an external landfill facility to use recovered fibre from the Richards Bay mill's wastewater treatment plant as landfill cover and capping material. Previously, the landfill site had been using topsoil as cover material. After a series of laboratory trials, we identified the best method of using the recovered fibre to cover landfill waste while preventing dust generation, resulting in utilisation of 2,300 tonnes of recovered fibre each month.

Human rights

We are committed to respecting human rights in our operations and across our supply chain. We are proactively working to identify and manage potential risks as we introduce our Human Rights Due Diligence approach across the business.

Our human rights approach is embedded in our relevant practices and policies. This includes our Labour and Human Rights Policy, Supply Chain and Responsible Procurement Policy, Communities Policy, Code of Conduct for Suppliers and Business Integrity Policy.

The United Nations Guiding Principles on Business and Human Rights offer business a comprehensive guidance framework to monitor and report on potential human rights risks. Transparency is key and we report our compliance against the 10 principles of the United Nations Global Compact (UNGC) annually and publish a Human Trafficking and Modern Slavery Statement according to the UK Modern Slavery Act.


 [Find Mondi's Human Trafficking and Modern Slavery Statement online](#)

Our Human Rights Due Diligence (HRDD) is a continuous management process that includes the integration of human rights considerations into our procedures to identify and assess risks, defining action plans and ensuring appropriate management controls are in place.

Identifying risk areas

In 2022, we confirmed Mondi's priority human rights risk areas, taking into consideration any inherent geographical risks in our countries of operation, as well as our business processes, industry risks and legislative requirements. While we consider all human rights as important, we focus on the topics that are most significant for our operations. Our risk areas are fair working conditions, freedom of association and collective bargaining, indigenous and land rights, modern slavery, child labour and safeguarding our environment.







We continuously review our operational impacts through regular engagement with our stakeholders. This includes working with external human rights experts and engaging with our partners across the value chain as well as people in the communities where we operate (read more about how we engage with our local stakeholders on [page 74](#)). We conducted e-learning sessions, workshops with external experts and internal training sessions across Mondi to raise awareness of human rights risks and where they might occur, as well as the action needed to address them. In 2022, we devoted over 270 hours to training on human rights policies and procedures.

 [Read more on how we identify and assess human rights-related risks in our supply chain on page 78](#)

Fair working conditions

An area of significant importance for us is to respect, protect and fulfil people's right to 'just and favourable conditions' of work, including a fair wage, a decent living, safe and healthy working conditions, no discrimination, and reasonable limitation of working hours. We focus on the following areas to achieve this:

- Safe and healthy working conditions: We value human life above all else and protect the safety, health, mental wellbeing and security of our employees and those who work on our premises (read more on [page 39](#)).
- No discrimination: We promote equality of opportunity in the workplace and value diversity in our employees. We seek to eliminate all forms of discrimination and harassment, including those on the grounds of gender, marital or parental status, ethnic or national origin, race or colour, social background, sexual orientation, religious belief, political opinion, age, disability, health status or union membership (read more on D&I on [page 36](#)).
- Fair remuneration: We provide fair wages and benefits that meet or exceed legal or industry minimum standards. Most employees participate in the performance-related pay schemes that we offer. The average ratio of basic salary and remuneration to variable pay across all employees in significant operations is 92:08 and varies by operation (2021: 80:20). In 2022, 71% of employees received a bonus of some kind (2021: 68%).
- Working hours: We comply with all applicable labour and human rights laws and industry standards regarding working hours. We strive to provide workplace flexibility and create an environment that enables a positive work-life experience.
- Employment contracts: All work at Mondi is voluntary and employees are free to leave work or terminate their employment upon notice, in line with mandatory and contractual regulations. We ensure that all employees have employment contracts or terms and conditions outlining their rights and obligations if required by law.

Commitment	Target	Performance		
		2021	2022	This year at a glance
Strengthen governance systems to prevent human rights violations and remedy any adverse impacts	Develop the due diligence and risk assessment methodology and guidance with the support of the Danish Institute for Human Rights (DIHR) by end of 2021			Methodology and guidance were developed in 2021 and have been refined after pilot-testing. Training on the methodology and guidance documents was rolled out in 2022
	100% of operations with a completed human rights due diligence & risk assessment, and action plan in place to address findings by 2025			Completed pilots for the HRDD approach in two operations and identified human rights focus topics for the Group as a baseline for continuing with a risk-based approach for the due diligence roadmap
	100% of operations to have addressed their human rights impacts (investigate, prevent future occurrences and remedy adverse impacts) by 2030			Operations where the HRDD pilots were completed have developed action plans as part of their due diligence and work on the implementation of these plans has commenced

Linked to SDGs



Read more about our contribution to the SDGs in our [SDG Index](#)

Key

 Completed  On track  Slightly behind target  Not on track  In development

Respecting human rights

Freedom of association and collective bargaining

We respect the rights of our employees to form and join trade unions and take part in collective bargaining. We abide by legally binding collective agreements and do not collect or report information on employee union membership due to differences in national legislation.

An estimated 59% of our employees were covered by Collective Bargaining Agreements (CBAs) in 2022 (2021: 61%).

Indigenous and land rights

In our forestry operations, the rights and cultural heritage of indigenous communities living on and around our landholdings are paramount. We cooperate with stakeholders to address historical injustices that pre-date our involvement in an area.

In South Africa, portions of our landholdings are subject to land claims under the Restitution of Land Rights Act (40% of our owned land under claims to date). By the end of 2022, we had settled 21 out of 66 claims, covering 37,182 hectares. We continue to work with stakeholders to settle the remaining 45 claims, covering 75,437 hectares.

Of these remaining claims, the State has gazetted 28 claims covering 39,107 hectares. We support communities after a successful land claim process to continue the sustainable management and certification of fibre production for the mutual long-term benefit of stakeholders and the environment.

Modern slavery

We do not tolerate any inhumane treatment of employees, any form of forced labour, modern slavery, human trafficking, physical punishment or other abuse. Our Human Trafficking and Modern Slavery Statement complies with the UK Modern Slavery Act 2015.



Read more in Mondi's [Human Trafficking and Modern Slavery Statements online](#)

Child labour

Mondi does not tolerate child labour. We do not employ people below the age of 15 or below the local minimum employment or mandatory school age – whichever is higher and relevant to the particular country.

We have special protections in place for young people on apprenticeships to ensure that they are not exposed to hazardous work.

Safeguarding our environment

We actively strive for the best environmental performance in our operations, endeavour to comply with all applicable laws and are guided by the relevant internationally recognised principles. We acknowledge that access to fresh water, sanitation and hygiene as well as unharmed land and ecological integrity are recognised by the United Nations as fundamental human rights (read more on our environmental performance [here](#)).



Reporting and monitoring concerns

We provide robust internal processes and tools to facilitate the reporting, investigation and resolution of grievances, including those related to potential human rights violations. Our operations make formal grievance mechanisms, such as SpeakOut, available to the public (read more on [page 87](#)).

SpeakOut is the Group's anonymous channel operated by an independent third party through which anyone can raise concerns or alerts on potential violations to our Code of Business Ethics. Access to SpeakOut incident information is restricted to named responsables, and coordination of the cases is handled by Group Internal Audit.

All SpeakOut messages are addressed and treated with utmost discretion and may involve the respective Mondi management team where relevant, in accordance with standard procedures. In 2022, we had a total of 47 incidents, 45 from SpeakOut and 2 reported cases through other channels (2021: 39 individual incidents aggregated from a total of 61 gross cases reported, 34 incidents from SpeakOut and 5 from other channels). Overall, topics encompassed allegations concerning work-related harassment and unfair treatment, labour rights and health & safety matters. Appropriate responses and corrective actions were taken on all issues (further details of cases are not disclosed due to confidentiality).

Incidents with potential human rights impact related to privacy of employees as well as unfair treatment at the workplace were immediately addressed and adequate measures taken.

We continue our work in assessing the potential risk areas and develop action plans and roadmaps, where relevant.

Our approach to human rights due diligence

Performance against our targets

Target: Develop our due diligence and risk assessment methodology and guidance with the support of the Danish Institute for Human Rights (DIHR) by end of 2021

Our first human rights target for MAP2030 was achieved in 2021 with the development of our Human Rights Due Diligence (HRDD) methodology. Our due diligence and risk assessment methodology helps operations to identify, mitigate and remediate the human rights risks within our business activities and business relationships. Training on the methodology and guidance documents was rolled out in 2022.

Target: 100% of operations with a completed human rights due diligence and risk assessment, and action plan in place to address findings by 2025

Target: 100% of operations to have addressed their human rights impacts (investigate, prevent future occurrences and remedy adverse impacts) by 2030

In 2022, we conducted two pilots based on our Human Rights Due Diligence methodology and guidance developed in 2021. The learnings were integrated into the training material, available to all Mondi operations.

We have identified our human rights focus areas and established a risk-based approach and risk identification process that takes into account the local context, prior incidents as well as established practices.

This baseline of risk areas and processes sets the foundation for assessing priorities and developing our action plan and roadmap for the human rights due diligence within our operations. We are, therefore, on track to meet our targets, as progress on addressing findings and impacts will follow on from this work.



HRDD pilots within local operations

Two Mondi operations in Mexico and Türkiye tested the HRDD methodology and guidance documents. The local assessment teams first sought to understand areas of risk and vulnerable groups within their operations by conducting stakeholder engagement sessions with individual rights holders, groups and representatives. The findings were discussed and assessed with the support of human rights experts, applying the UN Guiding Principles framework.

No violations of human rights were found. However, there were areas of improvement identified, relating to impacts on people, such as working hours, recommendations for safety improvements and equality. Action plans were developed with the management teams, including monitoring of their implementation. For example, the team in Mexico

introduced various initiatives related to diversity and inclusion, such as the local language welcome messages, workshops for women empowerment and a sexual assault awareness campaign. In Türkiye, our management is taking further actions to reduce overtime working hours and increase the number of permanent employees.

The local HRDD process and findings were documented and integrated into the continuous business management processes. The two pilot operations have clearly defined their action plans and are working on the identified measures. These pilots will also support the development of a roadmap for human rights due diligence and risk assessments across Mondi operations.

WHAT IS NEXT IN HUMAN RIGHTS?

- Conduct risk-identification exercises across all operations. The findings will be evaluated and consolidated to help us to better understand our overall risk areas. These will form the baseline for the roadmap for all operations.
- Conduct further training and awareness-raising to improve our understanding of how Mondi's business activities and relationships potentially impact human rights.
- Integration of all human rights-related learnings and findings into our continuous management processes, so that they are considered in all our actions and decisions.



Communities

Our business thrives when it is connected to healthy and prosperous communities. We support sustainable development and engage with communities around our operations to build trust and collaboration.

Stakeholder engagement tools

We use a variety of stakeholder engagement tools to understand the needs of local communities and our impacts on them, including:

- Stakeholder and Community Engagement Plans: Local engagement plans that detail the stakeholders, topics and engagement activities to be conducted by our operations.
- Socio-Economic Assessment Toolbox (SEAT): An open dialogue with a variety of stakeholders, facilitated by an independent third party, that informs our understanding and actions in relation to all stakeholders of an operation. The outcomes and follow-up action plans are made publicly available, both in English and the relevant local language.

- Feedback and grievance mechanisms: Formal grievance mechanisms are available to employees and the public to make us aware of issues so that we can respond promptly and effectively. The mechanisms include local hotlines and our Group-wide confidential, third-party platform, SpeakOut.

[→ Read more on our stakeholder engagement on page 88](#)

SEATs in Štětí and Tire

In 2022, we conducted two Socio-Economic Assessment Toolbox (SEAT) processes in our paper mills at Mondi Štětí (Czech Republic) and Mondi Corrugated Turkey – Tire (Türkiye). These were a series of open dialogues with various stakeholders – including employees, contractors, suppliers, customers, neighbours, community members and local institutions – to gather insights into our relationship with them.

Overall, the feedback was positive, reflecting good relationships with Mondi. Stakeholders appreciated the benefits Mondi brings to the region as an employer, a major economic player and a supporter of local initiatives.

MAP2030 target update

Initial target	New target	Reason for change
Group spend as a % of profit-before-tax annually, in strategic categories named above (target: >1% annually for Group)	Report on our total social investment annually	We support the sustainable development of our communities, and the local context informs our approach. We have updated the target to reflect the level of social investment expected in our continuing operations. Historically, we invested significantly in infrastructure and community development in our Russian operations.

Our continuous investment to improve the mills' environmental footprint was also recognised.

The local management teams reviewed all the findings and prepared a SEAT report that includes follow-up steps on how to improve across areas of concerns raised by participants. Challenges identified during the conversations tend to be specific to the local context. This includes traffic and sporadic odour issues in Štětí, and water use and preserving the company's heritage in Tire. The most recent SEAT reports will be published on Mondi's website in 2023.

[🔗 Access all Mondi SEAT reports online](#)

Development programmes and social investments

The outcomes of our various stakeholder engagements enable us to align our community development programmes and social investments with local needs. Various committees and

functions, such as works councils and safety and health committees, support our response to local impact assessments and engagement. Our social investments are further guided by the principles of sustainable development, such as those reflected in the UN Sustainable Development Goals, national and local development priorities, MAP2030 and our own business objectives.

We aim to maximise our positive impact. Our voluntary investments include monetary contributions and Mondi employees sharing their skills, time and networks. We specifically target initiatives with a focus on Science, Technology, Engineering and Mathematics (STEM) education, environmental protection, enterprise support and job creation. We support community health provision and infrastructure development as long-standing and important parts of our community strategy and in recent years included the investment areas of COVID-19 and Ukraine support.

Commitment	Target	Performance		
		2021	2022	This year at a glance
Maintain social investments in our communities to support sustainable development aligned with local needs	Report on our total social investment annually	🟢	🟢	Mondi Group and our Mondi operations around the world have spent over €8.9 million on social investments, including a €2 million donation to the WFP to support people in need in Ukraine

Linked to SDGs




Read more about our contribution to the SDGs in our [SDG Index](#)

Key

✔ Completed 🟢 On track 🟡 Slightly behind target 🔴 Not on track ⚪ In development

Main areas of social investment

Our social investments focus on areas where we can make the greatest difference and support the key drivers of development in these communities, covering a broad spectrum of areas. Our social investments in 2022 were €8.9 million (2021: €5.4 million).

Investment area	Description	Examples from operations
Education	We engage and collaborate with schools and educational institutions, focusing on Science, Technology, Engineering and Mathematics (STEM) subjects to promote careers in these fields, especially for women and in rural locations.	Mondi Neusiedler (Austria): In 2022, the mill focused on promoting STEM for girls and women by supporting the 'Girls' Day' initiative; participating at local student job fairs; and organising an open day, including the 'Papernight' evening that offers insight into careers at the mill.
Employment & enterprise support	We support local suppliers to build knowledge and capacity, particularly those linked to our forestry operations. Our mills also aim to contract with and purchase from local companies, contributing to their development.	Mondi Zimele (South Africa): Mondi Zimele aims to empower communities in the forestry value chain and supports small businesses around Mondi's operations: our small-scale timber grower programme distributes seedlings and sources pulpwood timber from the growers.  Read more about Mondi Zimele online
Environmental protection	We build awareness of and help tackle critical environmental issues in the communities in which we operate.	Mondi Ružomberok (Slovakia): In 2022, the mill donated more than €200,000 to environmental protection projects. The mill hosted environmental and ecological days with various local stakeholders, with initiatives to improve the regional environment. This has included an educational project, Ruženka, to improve education about the environment.
Health & wellbeing	Many of our operations support medical institutions and local initiatives to improve quality of healthcare and increase wellbeing of local communities.	Mondi Świecie (Poland): In 2022, the focus was to help young people to be more active. This included a sports competition for 12 local kindergartens; a physical education class for school girls with a Polish Olympic swimmer; and sponsoring a summer football camp for local children. Mondi employees also remained active in the 'We are Mondi. Active helpers' project with 2022 proceeds used to set up an outdoor bike skills track in Świecie.
Infrastructure & community development	Our investments in infrastructure and community development provide access to vital services, empower enterprise, facilitate health and education, and support our business operations.	Mondi Štětí (Czech Republic): There was continued support of local initiatives through the Patriots grant programme and the Environmental challenge. In 2022, Mondi Štětí invested over €61,000 in 66 projects, supporting 60 organisations. The employees are personally involved in community engagement and development, with more than 180 employees dedicating over 1,000 hours to support 20 NGOs in the local area.
Ukraine support	Various Mondi operations have provided support, ranging from organised fundraising, temporary homes and donating essential items.	Mondi operations have provided support for Ukrainian refugees and people in need. In particular, our Mondi sites in Poland have organised fundraising, offered temporary homes and donated essential items and paper for transportation of goods. Mondi Group contributed to the humanitarian relief effort with €2 million donated to the UN World Food Programme (WFP) (read more on page 29).
COVID-19	We continue to assist interventions in response to the COVID-19 pandemic, such as vaccination and testing facilities.	

Adding value through taxes

In addition to direct employment, we support local economic development by providing indirect employment, business opportunities, paying local and regional taxes, improving infrastructure and contributing with voluntary social investments.

Taxes are important sources of government revenue and play an essential role in achieving the UN SDGs. Reporting on taxes demonstrates our contributions to the economies in which we operate. We also support global initiatives that promote tax transparency, such as the Global Reporting Initiative's (GRI) Tax Standard.

In 2022, we paid corporate income taxes of €196 million. We pay and collect a wide range of taxes, in addition to corporate income taxes.

Our tax strategy

The main principles of our tax strategy are:

- to manage our tax affairs in accordance with national legislative provisions;
- to structure our operations tax efficiently and benefit from available incentives and exemptions provided by governments;
- to apply responsible tax governance at all our operations managing tax risks;
- to ensure tax decisions are made in response to business transactions and activities;
- to ensure the results of our operations reflect the value created in the country of operation in line with guidelines set out by the OECD; and
- to maintain a constructive dialogue with tax authorities, working in a transparent manner to resolve disputes.

Tax jurisdictions and principal activities

As a global packaging and paper group, we have taxable presence in 39 countries. The location of our companies is driven by commercial rationale. A full list of all Mondi entities, grouped by country, is included in our [Integrated report and financial statements 2022](#) page 226. This list includes details of the country of residence for tax purposes and the principal activities undertaken by each entity. We have no entities that are stateless or are resident in more than one state. We do not structure transactions in a way that gives a tax result contrary to the intention and purpose of the legislation. We do not enter into artificial arrangements solely to create tax benefits.

Some countries where we have presence are included on the European Commission list of non-cooperative jurisdictions, dated 4 October 2022. These countries include Jordan, Malaysia, Thailand and Türkiye. We have registered companies in each of these countries and undertake production activities from these locations. We do not use so-called tax havens or non-cooperative jurisdictions for tax planning purposes.

In 2022, the Group benefited from tax incentives principally in Czech Republic and Slovakia as a result of significant capital investments in those countries.

Tax governance, control and risk management

The Board is responsible for the conduct of the tax affairs of the Group and operational responsibility is delegated to the Executive Committee (Exco). The Group Chief Financial Officer (CFO) is accountable for the conduct of the Group's tax affairs.

The centralised Group Tax function, reporting to the CFO, is responsible for providing operational guidelines aimed at ensuring a robust control environment, implementing risk management initiatives and supporting local management on tax matters. Group Tax monitors tax risks and reports to the CFO/Exco as issues arise.

Local management are responsible for the everyday conduct of business activities, including their tax affairs. Local management escalate tax risks to Group Tax as they arise.

The Group is subject to tax risks outlined in the [Integrated report and financial statements 2022](#) on page 78. Operational guidelines provide details of tax risks and how we manage them, building on the principles of our Tax Strategy.

Tax governance

Board

Overall responsibility for conduct of tax affairs of the Group
Approves the tax strategy on an annual basis
Review of tax management and operational guidelines on an annual basis



Audit Committee

Review of tax risks as part of interim and year-end reporting cycles



Executive Committee (Exco)

Operational responsibility for the Group's tax affairs



Group Tax function

Responsible for providing operational guidelines on tax and for implementing tax risk management initiatives
Providing support and coordination to local entities on tax matters
Monitoring tax risks and reporting to CFO/Exco as issues arise
Training of local entities on tax matters (such as new regulations) to improve awareness and compliance



Local entities

Day-to-day responsibility for tax affairs and adhering to operational guidelines including escalation of tax risks to Group Tax function

Supporting tax transparency

We maintain constructive dialogue with tax authorities and aim to work transparently and collaboratively to resolve disputes. We seek to deal with queries from tax authorities as they arise to resolve any issues in a timely manner. Where uncertainty exists on the tax treatment of a transaction, we obtain external professional advice and seek to obtain tax authority clearance to agree the treatment in advance where possible.

Our Business Integrity Policy sets out Mondi's approach to unacceptable business practices. The policy includes 'facilitation of tax evasion' as a key corruption risk and states that the Group does not tolerate any form of tax evasion. It encourages Mondi employees and stakeholders to report suspected violations or genuine concerns through dedicated channels, including through our SpeakOut platform. Mondi is not involved in tax-related lobbying activities but supports tax-related initiatives that play a part in creating a stable, secure and sustainable society.

We prepare and submit Country-by-Country Reporting (CbCR) to the UK tax authorities annually, in line with the OECD requirements. The inclusion of comprehensive CbCR data beyond our current external reporting would represent disclosing commercially sensitive information. As an alternative, we include selected country information that discloses the effective corporate income tax rate per country and the main factors explaining any deviations to that country's statutory rate.

Country-by-country tax

Tax jurisdiction	External revenues € million	Full-time equivalents	Segment net assets € million	Taxes paid € million	STR %	ECITR %	Reason for significant difference between STR and ECITR
Austria	1,640	2,608	797	41	25%	31%	The ECITR is higher because of non-creditable withholding tax suffered on a dividend from a subsidiary.
Czech Republic	820	1,446	843	10	19%	9%	The ECITR is lower than the STR due to tax credits from paper machine investments and higher tax depreciation for capital expenditure.
Germany	808	2,220	488	13	30%	23%	The lower ECITR arises because tax losses from previous periods are being offset against 2022 profits combined with higher tax depreciation on fixed assets.
North America*	634	1,573	368	4	25%	19%	Tax losses arising in previous years have been offset against the 2022 profits thereby reducing the ECITR.
Poland	1,587	3,822	933	82	19%	19%	There are no significant differences between the tax rates.
South Africa	667	1,441	1,018	4	28%	2%	The low ECITR arises because tax losses arising in previous years have been offset against 2022 profits and because a fair value gain relating to revaluation of forestry assets is not taxable in the period.
Türkiye	589	2,368	320	12	23%	439%	The high ECITR arises because hyperinflation accounting adjustments reduce profits but do not impact current tax payable.
United Kingdom	3	51	40	5	19%	-9%	The UK is loss-making during the period but paid withholding taxes on interest income. This explains the negative tax rate.
Other	2,154	5,855	1,956	25			
Total	8,902	21,384	6,763	196			

* The North America STR and ECITR are the weighted average US and Mexico tax rates

Definitions for CbCR data provided

External revenues: these are external revenues per location of production as reported in the Operating Segment analysis (see page 185 of our [Integrated report and financial statements 2022](#)).

Full-time equivalents: average number of full-time equivalents calculated based on hours employed/standard working hours per week by principal location of employment.

Segment net assets: these are a measure of operating assets employed per location as reported in the Operating Segment analysis (see page 185 of our [Integrated report and financial statements 2022](#)).

Statutory tax rate (STR): the applicable corporate income tax rate in the country.

Effective corporate income tax rate (ECITR): the ratio of accrued income tax (excluding any income tax relating to earlier years) compared with underlying profit-before-tax in the Mondi Group financial statements.

Taxes paid: corporate income taxes paid during the year.

WHAT IS NEXT IN COMMUNITIES?

- Engage with local stakeholders via our SEAT process at two Mondi mills in 2023.
- Continue to implement stakeholder and community engagement plans that detail how we support communities, aligned to needs of the local communities.
- We will review our social investment strategies, including areas of focus, to evaluate potential partnerships to enable meaningful collaboration at a local and global level.

Procurement

Commitment	Target	Performance		This year at a glance
		2021	2022	
We mitigate risks and create greater transparency in our supply chains through our responsible procurement process	We will minimise the supplier risk ratio ¹ year-on-year			Risk assessment focused mainly on newly onboarded and reactivated suppliers. One supplier production site (0.3% of 369 screened) remained residual high-risk
Ensure that all our wood fibre (round wood, wood chips and market pulp) is sourced solely from credible wood sources	Maintain 100% of wood fibre compliant with credible standards (FSC, PEFC or controlled wood)			Achieved in 2022
	For high-risk countries maintain 100% FSC-certified fibre sourcing or implement additional risk mitigation measures			We sourced a small volume of wood from high-risk countries which was FSC Controlled Wood (with additional third-party verification) rather than FSC-certified. This was due to wood supply disruptions in Europe in 2022
	100% PEFC- or FSC-certified market pulp			Achieved in 2022
	100% PEFC or FSC Chain-of-Custody certification for our pulp and paper mills			Achieved in 2022
	We will continue to work with certification bodies to ensure credibility of the certification and controlled wood systems			Mondi participated in the PEFC and FSC General Assemblies in 2022 and contributed to issue-specific working groups

Linked to SDGs



[Read more about our contribution to the SDGs in our **SDG Index**](#)

Key

Completed On track Slightly behind target Not on track In development

Stakeholders are seeking clear information on how businesses manage their supply chain risks. A sustainable supply chain requires responsible procurement processes, tools, governance, reporting and supplier engagement.

In 2022, our global supply chain included around 12,000 suppliers² in 67 countries. We procured €7 billion worth of goods and services from these suppliers (2021: €5.5 billion), with 58% sourced locally (2021: 57%). We use two methods within Mondi to manage procurement: the Due Diligence Management System (DDMS), which is relevant to procurement of wood and pulp, and the Responsible Procurement process, which is used for all other materials and services.

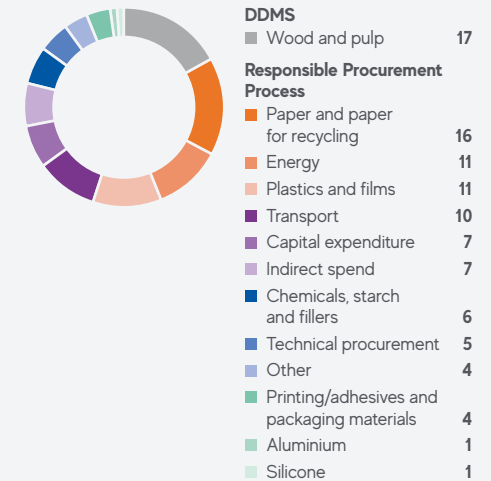
Responsible Procurement process

Our Responsible Procurement process is facilitated by the Group procurement function. It aims to achieve a consistent process for evaluating and monitoring suppliers globally, based on their sustainability risk and performance.

The Responsible Procurement process applies a risk-based approach to assess suppliers against our Code of Conduct for Suppliers. An initial screening highlights potential high-risk suppliers in one or more of three areas: labour and human rights, environment and climate change, biodiversity and water security.

Any potential high-risk supplier will receive a questionnaire where answers are evaluated against the risk categories. We then engage with the supplier to obtain relevant information about areas of concern and track and monitor their progress to de-escalate the risk rating.

Breakdown of supply spend (%)



For suppliers that are non-responsive or remain in the high-risk category, we have defined escalation steps. These include supplier meetings, audits, third-party environmental, social and governance assessments and, as a last resort, termination of the supplier relationship.

Since the launch of the Responsible Procurement process in 2019, we have assessed over 7,000 supplier sites, as of year-end 2022, representing approximately 78% of our total spend. We have also evaluated external sustainability risk assessment and rating tools to support us to scale the process across our supplier base. Our focus is on identifying inherent risks in our supply chain, assessing the supplier performance and working on corrective actions. We will pilot this refined approach using a new tool in 2023.

¹ Supplier risk ratio (Total number of residual high-risk suppliers/Total number of suppliers screened).

² Direct active suppliers to continuing operations grouped into single entities, excluding Personal Care Components suppliers.

Managing our supply chain risks

Supplier engagement

Our relationship with suppliers is critical to meet our sustainability targets. Our Supplier Engagement and Responsible Procurement team undertakes supplier risk management, quality management, evaluations, audits and collaborates with suppliers as part of our efforts to meet our quality and sustainability requirements. We have a number of processes and policies in place to support this work.

Our supplier audit programme provides a consistent supplier audit approach as well as standardised audit reports, self-assessment tools and other documentation. We have a Corrective and Preventive Action process to ensure a closed loop with our suppliers and support work with them on development measures. We offer auditor training by internal lead auditors and external experts to help build our capacity with new internal auditors from across the organisation.

Our approach to responsible procurement and managing supply chain risk is governed by our Group-wide Supply Chain and Responsible Procurement Policy, Business Integrity Policy, General Supplier Quality Requirements, and Code of Conduct for Suppliers. These policies also form part of our response to the UK Modern Slavery Act and related legal requirements that apply in other jurisdictions.



Find our latest UK Modern Slavery statement [online](#)

We started initial supplier engagement workshops on climate action with our experts from sustainability, business development and procurement, working towards defining a path to reduce Mondi's Scope 3 emissions.



Supplier Code of Conduct

Our Code of Conduct for Suppliers defines the minimum standards for our suppliers for environmental, social and governance topics, and other legal and ethical issues.

Our companies and business units worldwide, including joint ventures in which we have a controlling interest, are required to apply the Code of Conduct as a minimum standard, irrespective of the jurisdiction in which they operate.



Access the Code of Conduct in multiple languages [online](#)

We also encourage suppliers to apply similar requirements to their own suppliers. Where we have a non-controlling interest, we encourage our business partners to adhere to the Code of Conduct.

Due Diligence Management System (DDMS)

There are specific requirements related to the responsible procurement of wood and pulp. Our dedicated Due Diligence Management System (DDMS) stipulates that all our wood fibre (round wood, wood chips and market pulp) is purchased from responsible sources and in line with our commitment to zero deforestation. We depend on a continuous supply of responsibly sourced wood fibre as our key raw material for a large portion of our business. The forest sector's most material risks typically occur upstream at the beginning of the value chain.

We are committed to zero deforestation and to excluding illegal and controversial wood fibre sources from our supply chain. We do not source tropical tree species, species listed as protected by Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) or International Union for the Conservation of Nature (IUCN) or wood from genetically modified trees. We also do not accept wood fibre from sources where deforestation and unsustainable land conversion occurs; where biodiversity and other critical ecosystem values are under threat; or where the rights of workers and communities are violated. Legality and labour requirements are also relevant within the value chain when wood fibre is processed, transported and traded.

To manage these risks, we only procure wood fibre through supply chains covered by FSC and PEFC Chain-of-Custody certification to ensure their integrity. All uncertified sources shall be compliant with FSC Controlled Wood requirements.

Local due diligence systems are underpinned by National Risk Assessments (NRAs) which address country-specific legal, environmental and social issues.

The majority of the wood we source originates in Central and Northern European countries, where we define PEFC as the appropriate assurance level according to our DDMS (see [page 80](#)). PEFC is well suited in this region due to its accessibility to smallholders and alignment with national forest practices. We only accept controlled wood as a sufficient assurance level in lower-risk countries, or in countries where we operate and have strong local expertise (such as Bulgaria).

Our due diligence in wood procurement

We have defined specific requirements for certification in areas of higher uncertainty:

Adapting to the local context

Most of our wood fibre is sourced in lower-risk countries. If we source from high-risk countries, we prefer FSC-certified wood as this certification is designed to address uncertainties in high-risk contexts, such as weaker governance mechanisms or higher corruption levels. When FSC is not available in the countries of high risk, we make sure that we conduct a targeted third-party verification audit.

Addressing supply chain complexities

Globally, procured pulp has a very complex supply chain involving transformation and mixing of wood fibre in the production process. This can be challenging to ensure traceability and verification using Controlled Wood mechanisms. Therefore, our externally procured market pulp must be PEFC- or FSC-certified (in high-risk countries only FSC).

The successful functioning of our DDMS depends on the support of local managers and specialists across our global operations. Our Wood Certification Managers Network offers effective collaboration to ensure responsible sourcing across the Mondi Group. The network includes certification managers from nearly 10 countries who regularly exchange information on emerging risks, changes in certification standards and regulations, as well as relevant training and development opportunities.

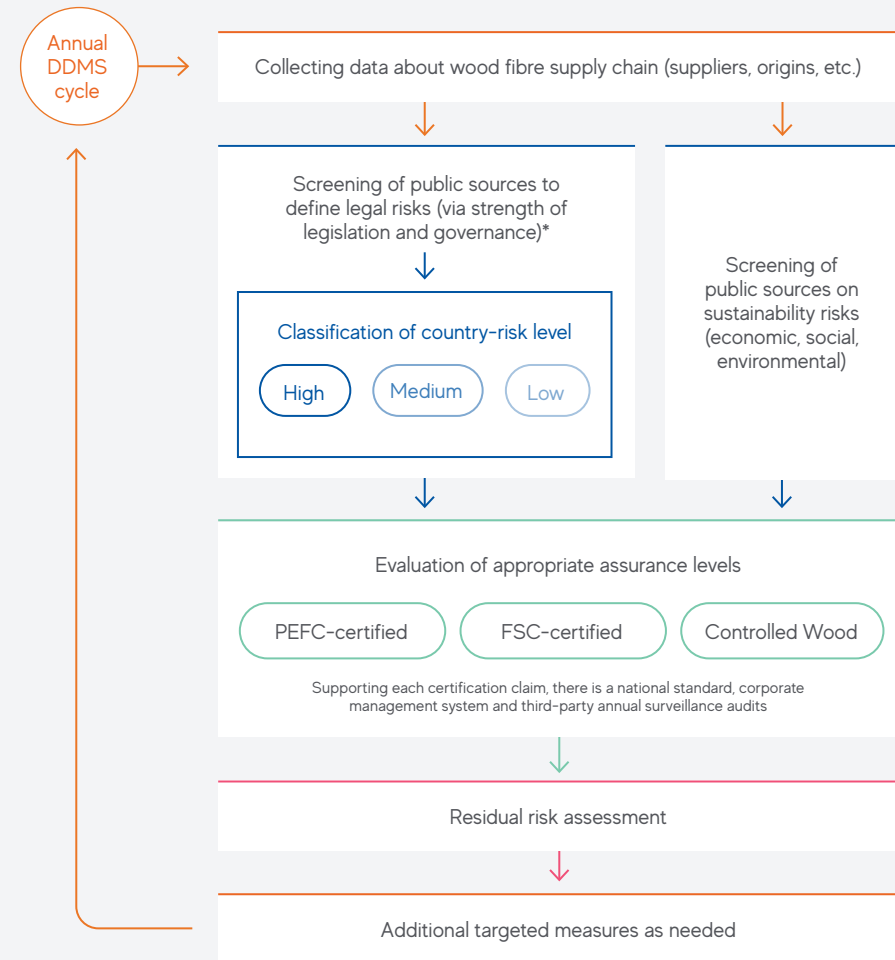
The network reviews the status of our DDMS and the effectiveness of local due diligence systems. For example, in 2022, we developed and implemented actions to address gaps in high-risk countries.

→ [Read more on the performance against our target on page 82](#)

MAP2030 target update

Initial target	New target	Reason for change
Maintain 100% FSC certified fibre from high-risk countries exception: countries where Mondi has local operations and expertise (i.e. Russia, Bulgaria)	For high-risk countries maintain 100% FSC-certified fibre sourcing or implement additional risk mitigation measures	We have updated our target to reflect continuing operations after the divestiture of our Russian assets

Mondi Due Diligence Management System



* The sources we use to define the country-risk levels are: Transparency International's Corruption Perceptions Index (CPI), World Bank's Worldwide Governance Indicators (WGI), FSC's Centralized National Risk Assessments (CNRAs) and Preferred by Nature's Timber risk assessment methodology.

Engaging with suppliers

Performance against our targets

Target: We will minimise the supplier risk ratio year-on-year

In 2022, we completed a 'Sustainability in Procurement' project, with external experts, to integrate the MAP2030 targets into the procurement strategy and support our Net-Zero commitment. The project identified opportunities to collaborate with suppliers to advance their own sustainability performance and supported us to partner with suppliers who share our sustainability, quality and responsible conduct ambitions. We identified potential improvements in our Responsible Procurement process to create a longer-term, scalable approach for risk assessments among our supplier base. Outcomes included improved criteria for supplier screening and risk rating guidelines, and a revised monitoring process for follow-up actions. The learnings will be included in the new risk assessment and rating process.

We have conducted further follow-up steps with the remaining suppliers from previous risk assessments with potential high risk, non-responsive and incomplete responses. The escalation steps included escalation to management, expert evaluation and meetings with local buyers as well as suppliers.

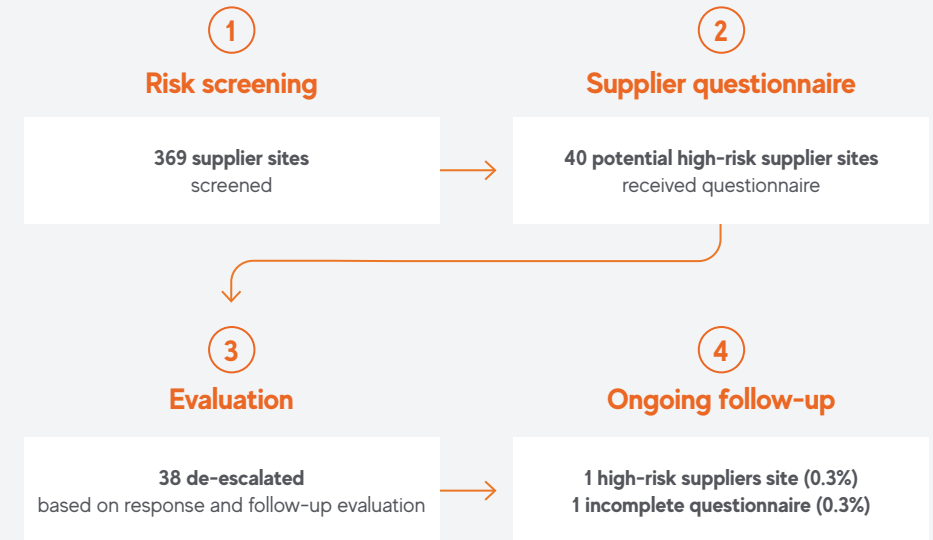
In 2022, our Responsible Procurement process focused on newly on-boarded and reactivated suppliers, based on criteria related to spend and the critical nature of materials or services purchased. The risk screening includes environmental criteria (climate, resources and biodiversity risks) and social criteria (human rights and labour practices).

369 supplier sites were screened with 40 supplier sites considered potential high risk and consequently requested to complete a questionnaire.

We assessed the completed questionnaires from potential high-risk suppliers and our sustainability specialists conducted follow-up evaluations. Following these efforts, one supplier site (0.3%) remained classified as potential high risk (2021: 0.1%) and one supplier site (0.3%) did not complete the questionnaire (2021: 2.3%). Escalation procedures are being carried out with these suppliers.

The slight increase in our supplier-risk ratio can be attributed to the smaller sample of suppliers screened in 2022 as our primary focus was on the long-term strategic 'Sustainability in Procurement' project and the evaluation of external sustainability risk rating tools to further refine our approach in future.

Responsible Procurement process



Certification to minimise risk



Target: Maintain 100% of wood fibre compliant with credible standards (FSC, PEFC or Controlled Wood)

This target was achieved in 2022, with 75% certified wood fibre, and the remainder meeting the FSC Controlled Wood standard.

Target: For high-risk countries maintain 100% FSC-certified fibre sourcing or implement additional risk mitigation measures

In 2022, we sourced a small volume of wood from high-risk countries as FSC Controlled Wood rather than FSC-certified. This was due to disruptions in European wood supply during the year. We remain firmly committed to zero deforestation and sourcing wood responsibly.

In line with our DDMS, we applied additional control measures for suppliers of FSC Controlled Wood from high-risk countries. We engaged with third-party verification bodies from the European Commission's registry of Monitoring Organisations, working with our Wood Certification Network experts, to conduct trial verification audits with three verification bodies.



Read our case study [online](#) for more information

Target: 100% FSC- or PEFC-certified market pulp

The target was achieved in 2022.

Target: 100% FSC or PEFC Chain-of-Custody certification for our pulp and paper mills

The target was achieved in 2022.

Target: We will continue to work with certification bodies to ensure credibility of the certification and Controlled Wood systems

Experts from Mondi's Wood Certification Network are members of FSC International's working group focusing on the update and revision of risk assessment procedures for Controlled Wood. We also contribute to discussions related to FSC regulations on safeguards against false claims.

Mondi participates in activities of the working groups of PEFC International focused on EU policy affairs and on Studying Impacts of Certification. PEFC submitted its application to the EC to be recognised under the EU Renewable Energy Directive.

In 2022, Mondi took part in the PEFC and FSC general assemblies which define the strategic development of these organisations.

WHAT IS NEXT IN PROCUREMENT?

- Implement a sustainability risk assessment and rating tool to improve transparency in our supply chain and mitigate risks
- Continue to actively engage suppliers to improve their sustainability performance and take action, together, to drive down GHG emissions across the supply chain
- Build supply chain resilience by developing robust solutions for addressing risks particularly in existing and new wood sourcing countries

About this report

How does Mondi embed sustainability into daily DECISION-MAKING?

We believe that delivering against our MAP2030 commitments requires robust governance systems and continuous dialogue with key stakeholders. Our Board and Sustainable Development Committee provide leadership and navigate complex decision-making along the way to make our business more sustainable. We engage with a range of different stakeholders to identify risks and opportunities to maximise our positive impact.



Topics discussed by the SD Committee

As part of Mondi's sustainability governance, the Board maintains a clear overview of policies, systems, practices and progress across all aspects of sustainability. We provide a summary of the key sustainability topics considered by the Board's Sustainable Development (SD) Committee in 2022.

Throughout 2022, the committee maintained a strong focus on reviewing the progress against MAP2030 commitments and received updates on key performance indicators as part of these reviews.

Sustainable products

The committee reviewed progress against the MAP2030 target of making 100% of our packaging and paper solutions reusable, recyclable or compostable by 2025. Members were informed about the Group's 'Path to Circularity Scorecard', which is Mondi's harmonised approach to circularity across its product portfolio. The committee was also updated on the product environmental impact assessments conducted for customers and activities within key industry collaborations to support the transition to a circular economy.

Safety and health

The safety and health of employees and contractors remained a key topic at every committee meeting. Members received reports on safety performance at Group and business unit levels, including individual mill performance and classification of incidents. The committee was updated on the total recordable case rate (TRCR), injury types and severity as well as COVID-19 statistics. Members reviewed and approved the updated safety indicators (lag and lead) and re-confirmed the key safety and health focus areas. In-depth discussions took place regarding this year's fatality and two life-altering injuries and the committee took note of the initiatives and controls to maintain the good safety performance during annual maintenance shuts and investment projects. Members were informed about activities to promote the concept of Social Psychology of Risk throughout the Group.

Human rights and business ethics

The committee reconfirmed Mondi's approach to human rights, stakeholders and sustainability principles, as outlined in the Code of Business Ethics. Members agreed that the guidelines and management approach remain appropriate to support compliance with the code and socially responsible conduct. The committee confirmed updates to the SD Policies and reviewed Mondi's Modern Slavery Act statement before making a recommendation to the Board to approve the statement. Members also reviewed Mondi's human rights due diligence process, including two pilot due diligence assessments conducted in operations in Mexico and Türkiye. Members agreed that the committee's terms of reference remain appropriate.

Employee initiatives

The committee reviewed performance against the MAP2030 Empowered People commitments. Employee statistics and communication initiatives were presented and a discussion took place on activities across the Group to further drive awareness of diversity and inclusion topics among employees. Members were informed about recent employer branding activities and upcoming employee listening initiatives, such as the employee survey planned for 2023. The committee received an overview of the Mondi Diamond Awards, highlighting outstanding contributions and engagement of employees across multiple categories, from sustainable solutions to operational excellence.

Climate change and environmental impacts

The committee received updates on the Group's environmental performance, highlighting the progress against our MAP2030 climate commitments and the implications of the divestiture of Russian operations on the Group's performance, including greenhouse gas emissions. The committee also considered the climate change-related risks and opportunities facing the Group in the context of the recommendations of the TCFD. Members were informed about the approval of the Group's science-based Net-Zero targets by the Science Based Targets initiative. The committee was informed about environmental incidents and the implementation of corrective and preventive actions. Special attention was paid to the consequences of the flooding in South Africa in April 2022 and the impacts for Mondi Merebank's operational infrastructure and employees.

Forestry and biodiversity

The committee received information on the progress of forestry-related sustainability topics and progress on our MAP2030 responsible sourcing targets. Discussions included the increased pressure on the wood market and the implications for the Group's supply chain as well as its MAP2030 procurement targets. Members received a presentation on our South African forestry operations, which successfully obtained PEFC certification, and confirmed the key focus areas, including the monitoring and mitigation of climate change effects. The committee was updated on the Group's engagement in the development of nature- and climate-related frameworks.

Stakeholder engagement

The committee reviewed the Group's relationships and engagement with key stakeholders to deliver against the MAP2030 framework. A particular focus was on our partnerships that address global forestry-related challenges, such as the WBCSD's Forest Solutions Group. Members received an overview of the local community and stakeholder engagement, with a special focus on engagement in South Africa. An in-depth review was provided on Mondi South Africa's approach, highlighting the integration of stakeholder engagement activities with the overall business strategy and aiming to support opportunities for the maximum participation of local stakeholders.

Responsible procurement

The committee discussed the Group's Responsible Procurement process, including the criteria applied for assessing high-risk suppliers and steps of (de-)escalation. The responsibilities for dealing with suppliers who remain in the high-risk category were reviewed, along with plans to continue to develop and scale up actions to identify and mitigate sustainability risks within Mondi's supply chain.

Sustainability governance

Strong governance is fundamental to building a resilient and successful organisation in which sustainability is embedded at all levels. We engage openly and transparently with stakeholders across the value chain for a fair and inclusive business. Robust policies, standards and management systems guide our operations to address risks and opportunities and enable us to measure our performance and meet our commitments.

The Board and its committees provide the leadership necessary to implement the principles of good corporate governance across the Group, ensuring all decisions and actions are based on integrity, responsibility, accountability, fairness and transparency. The Board reviews the performance approach and outcomes.

Our Board members bring a wealth of experience and expertise to the Group. They are diverse in origin, gender, race, education and experience, and reflect the broad nature of our activities and our operational territories. At the end of 2022, we had one director of colour and three female directors (representing 33% of the composition of the Board).

Sustainability was covered at seven meetings of the Sustainable Development Committee during the year, with a rolling agenda that covers all the aspects of sustainability that are material to our business.

Board committees

The Board is ultimately responsible for sustainability governance and delegates different areas of responsibility to specific committees. Accountability for sustainable development policies, systems, practices, commitments and the effectiveness of our approach to managing all aspects of sustainability is monitored at four levels:

- the Sustainable Development (SD) Committee chaired by an independent non-executive director;
- the Executive Committee chaired by the Group CEO;
- other committees of the Board, such as the Audit Committee and Remuneration Committee, chaired by independent non-executive directors; and
- the operational management team consisting of senior executives across Group operations.

Eight global specialist network groups provide expert insight and support to the business on specific sustainable development matters. This can lead to adjustments in our management approach – subject to the approval of relevant executives and the Board.

Stakeholder engagement and the Board

The Board is updated on sustainability matters and external stakeholder views by the Group's Head of Sustainable Development.

External experts are also invited to present to the Board on relevant sustainability topics. For example, in 2022, Peter Bakker, President and CEO of the WBCSD, discussed sustainability and the triple challenge of climate, nature and inequality with the Board.

The Board also receives information on external environmental, social and governance (ESG) rating assessments (such as CDP or MSCI), along with updates on activities with external organisations and partners. For further details of the role of the Board in overseeing sustainability at Mondi, see [page 86](#).

Remuneration linked to sustainability

20% of the annual bonus awarded to members of the Executive Committee, which includes the Group CEO and the Group CFO, and approximately 3,400 employees across the Group, is linked to sustainability objectives.



Read more in our [Integrated report and financial statements 2022](#) on page 124

In 2022, we introduced sustainability KPIs into the annual bonus to embed sustainability goals more deeply throughout the business. The sustainability bonus scorecard covers KPIs (listed below) from all three MAP2030 action areas, representing 20% of the Group's annual bonus metrics:

- reduction of specific GHG emissions (5%);
- reduction of specific waste to landfill (5%); and
- safety (10%).

Mondi's Group Sustainable Development (SD) function

The SD function provides guidance and defines actions required to achieve our sustainability goals. This includes monitoring and assessing risks and opportunities, emerging changes to the regulatory environment, developments in our social and environmental operating context, and evolving stakeholder needs and expectations. The function informs, challenges and supports our businesses to respond to stakeholder needs and expectations, shaping our long-term response to global challenges.

The SD function oversees the Sustainable Development Management System (SDMS) that facilitates sustainability reporting, external assurance, and internal and external engagement. Ratings and recognition of our sustainability performance are based on our public disclosures. Our customers and investors are increasingly interested in better understanding our performance as well as our risks and opportunities as a business.

Our Sustainable Development Management System

Policies, procedures and management systems support us to apply a consistent and standard approach to sustainability throughout our operations. We consider the ESG implications of our business decisions. Our SDMS guides effective governance of our activities and implementation of our policies. It covers all facilities and activities that we manage and operate, including those in which we hold a controlling interest, new developments, and mergers and acquisitions. The SDMS builds on policies, operating standards and practices notes, which support us to apply a consistent and standard approach to sustainability throughout our operations.

Activities undertaken by contractors, either on Mondi sites or while under our management, are covered and they are required to comply with our policies, standards and requirements.

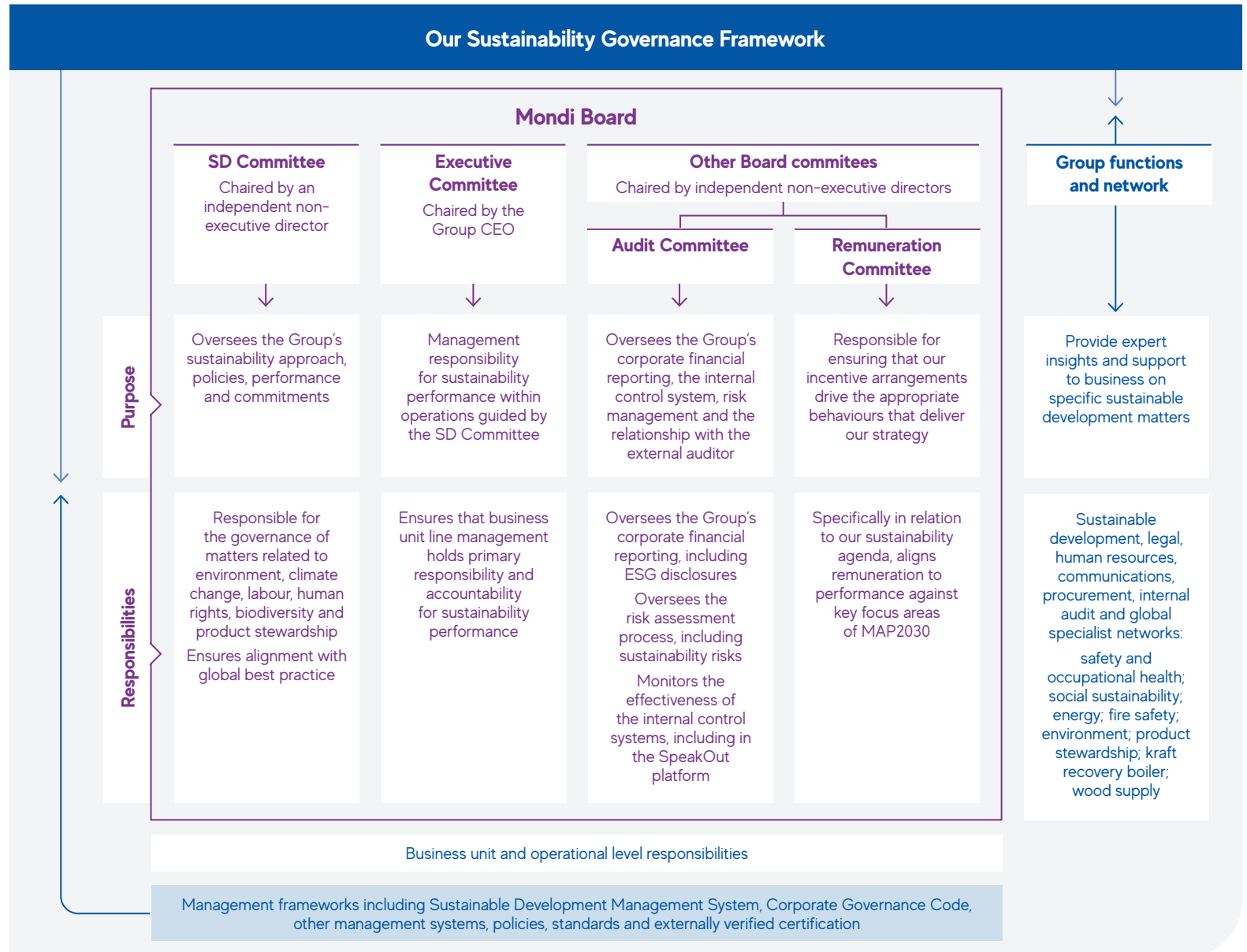


Sustainability governance continued

The Board delegates to the SD Committee the review and sign-off of the Group's annual Sustainable Development report. Furthermore, the Board reviews the Group's SD policies annually. In 2022, we updated our Governance Policy to include reference to the Sustainability Accounting Standards Board (SASB). This forms part of the international conventions, agreements and standards that guide our global SD agenda. In the Safety and Occupational Health Policy, we added a reference to our concept of Social Psychology of Risk as a key safety and health focus area. The Board approved all updates in 2022.

Our central reporting system allows us to capture and consolidate monthly and annual data on health and safety, energy, environmental, wood procurement, forestry and other sustainability parameters from our global operations. This allows us to benchmark individual operations and identify opportunities for improvement and to share best practice across the Group. We independently assure selected KPIs annually.

[→ Read more on our reporting methodology on page 92](#)



Sustainability governance continued

How we manage sustainability risks and opportunities

Sustainable development risks are addressed in our Group-wide risk management framework, which is designed to address strategic, financial, operational, compliance and pandemic-related risks that could undermine our ability to achieve our business objectives. We exercise due diligence prior to introducing new operations, practices, processes and products.

Our risk management approach – particularly relating to environmental issues and climate-related risks – incorporates the precautionary principle. This implies our responsibility to protect the natural environment from harm where there is a plausible risk.

We update our sustainable development risk register annually to ensure mitigation plans are in place for those risks with a high likelihood of occurrence and/or impact potential. These risks include inherent operational and strategic risks. In addition to key impacts on our business and stakeholders, we identify sustainability trends and opportunities and seek to mitigate risks that affect our longer-term prospects and financial performance.



Read more about our Principal risk disclosure in our [Integrated report and financial statement 2022](#) on page 72

As part of our annual risk register update, we also update our climate-related risks and opportunities following the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.



Read more about our TCFD disclosure in our [Integrated report and financial statement 2022](#) on page 48

Our risk management process informs the identification of material sustainability issues and the commitments we set to monitor and improve our performance in addressing them (read more on our material issues on [page 90](#)).

Policy developments are informed by current best practice and aligned with MAP2030. Our Sustainable Development Governance Policy underpins our overall approach and is supported by specific policies, which can be found [online](#).

Mondi's internal audit function

Our internal audit function is an integral part of the Group's governance framework and provides an independent assurance function.

Group Internal Audit reports to the Audit Committee and is mandated to perform Group-wide reviews of key processes, projects and systems, based on Mondi's strategy and most significant risks. These are what underpin Mondi's system of internal controls, which comprise the policies, procedures, practices and organisational culture that collectively support the effectiveness of our operations in the pursuit of objectives.

Group Internal Audit assists in accomplishing its objectives by bringing a systematic and disciplined approach to evaluate and improve the organisation's governance, risk management and internal control processes. The main objective is to assist the Board in the effective discharge of its responsibilities, including its duties and obligations under the UK Corporate Governance Code. Group Internal Audit also assists in the annual reporting to shareholders on the effectiveness of Mondi's systems of internal control.

SpeakOut platform

SpeakOut is our anonymous grievance system for employees, customers, partners and other stakeholders to raise any concern relating to potential bribery, discrimination, fraud, corruption, environmental pollution, major safety and health violations, harassment or other significant topics.

The Internal Audit function is responsible for monitoring the SpeakOut process, overseen by the Audit Committee and the Board. Each Audit Committee and Board meeting includes a summary of reported issues, the status of unresolved items and actions taken in response to the valid allegations.

In 2022, all SpeakOut messages were forwarded to the respective Mondi management team, in accordance with our standard procedures. We responded and took appropriate corrective action for all issues. The confidentiality of the platform means we are unable to disclose further details of cases raised.



Read more about SpeakOut on [page 72](#)

Our Business Code of Ethics

Mondi's Code of Business Ethics supports high ethical standards across our organisation. It comprises the following five principles: legal compliance; honesty and integrity; human rights; stakeholders; and sustainability. The code's application is detailed in Mondi's policies and procedures – particularly the Business Integrity Policy, which outlines Mondi's zero tolerance of bribery and corruption. Our process for reporting violations includes notifying the Group CEO, Group CFO and Group Head of Internal Audit in all instances.

We have zero tolerance of corruption. This forms part of the annual Group risk assessment process and

outcomes are reviewed by the Audit Committee and the Board. The Business Integrity Policy details our values and key principles of ethical business practices and is available to employees and business partners.

Board members are regularly informed about anti-corruption policies, procedures and requirements. All relevant employees must complete mandatory business integrity training each year, which also covers anti-corruption topics. The number of relevant employees in 2022 was 3,593, with 3,406 (94%) completing the online training and the remaining employees scheduled to complete the training in 2023. Suspected cases of non-compliance can be reported through our SpeakOut platform, which is available to internal and external stakeholders.

We follow strict guidelines and procedures to ensure compliance with applicable laws and regulations as well as voluntary codes across all our operations. This includes compliance with regulations on product and service information as well as labelling; marketing communications; customer privacy measures; and laws and regulations in the social and economic area.

Sustainability informing investment plans

Sustainability considerations also form part of our investment decision-making. Since 2022, the reporting of positive and negative impacts on environmental parameters and sustainability targets has been formalised as part of the capital investments decision-making process for all investments over €500,000.

Future environmental costs, such as internal region-specific carbon prices, are also factored into our investment decision-making process. We have included environmental metrics related to GHG emissions, waste to landfill, and air- and water-related emissions in the decision-making framework.



Read more on our sustainability governance [online](#)

Stakeholder engagement

Listening to and engaging with our diverse stakeholders drives progress, trust and transparency. It enables us to understand external developments and market expectations and supports our identification of opportunities and risks.

We undertake meaningful partnerships and multi-stakeholder collaborations that have the potential to bring about positive change, locally and globally. Sharing knowledge, resources and best practice opens new opportunities to develop sustainable solutions along the value chain.

We determine our key stakeholder groups through consultation with internal business functions and experts from our businesses. In 2022, we continued to analyse insights and information from a range of external and internal sources on the issues most relevant to our business. Sources included: a review of sector and industry developments and responsible business practices; benchmarking of peers and ESG ratings; review of customer and investor requirements; analysing NGO expectations; reviewing the UN SDGs, and considering the outcomes of our latest Socio-Economic Assessment Toolbox (SEAT) engagements in our operations.

OUR EMPLOYEES



Key issues raised in 2022 and our response

Themes highlighted in 2022 centred around feedback and recognition, personal development opportunities, collaboration, diversity and inclusion, and mental health. To support building our talent pipeline, the International Graduate Programme was initiated with graduates and interns taking part in the 'Grow with Mondi' event.

In 2022, around 31% of all employees took part in the online Performance and Development Review process. Around 2,600 employees shared their views in the pulse surveys. To support our culture of development and inclusion, we established the 'Curious Community', a new online community to exchange ideas on diversity and inclusion.

We also extended the reach of the Employee Assistance Programme to include Thailand, with 94% of our employees worldwide now able to rely on its support. The newly developed Mental Wellbeing Index for our employee survey (see [page 43](#)) was tested in various locations. Making a Difference Day (MADD) took place across most of Mondi's locations with a focus on inclusive behaviour, mental health, safety and climate action. Local MADD initiatives included webinars and management talks (see [page 40](#)).

OUR CUSTOMERS



Key issues raised in 2022 and our response

Our customers continued to focus on topics including security of supply, product quality, the circular economy and related legislative initiatives, sustainable packaging solutions, competitive advantage and carbon emissions. In 2022, to meet customer requests for transparency on the climate and water impacts of our products, we conducted 234 Product Impact Assessments and 336 Product Carbon Footprint assessments.

We continued our engagement with Graz University to work on process improvements on the material and energy efficiency of our pulping process.

In 2022, we continued our customer collaboration to develop solutions to meet customers' sustainability goals (see [page 26](#) for examples) and maintained our ongoing collaborations with multi-stakeholder initiatives, such as CEFLEX and 4evergreen, as well as the Ellen MacArthur Foundation.

OUR SUPPLIERS AND CONTRACTORS



Key issues raised in 2022 and our response

Local sourcing, secure contracts and capacity building are key topics for suppliers. There is also increasing attention from our stakeholders on the environmental and social performance of our suppliers and contractors. In 2022, we risk-screened 369 supplier sites using our Responsible Procurement process. We conducted workshops with some of our key global suppliers to collect primary carbon data and engage with them on their GHG reduction targets to support our Scope 3 engagement (see [page 53](#)).

Safety was a key priority for contractors, particularly during annual maintenance and project-based shuts. During the Richards Bay (South Africa) rebuild project we continuously discussed learnings and identified improvement opportunities.

Annual maintenance shuts in 2022 saw over 9,600 contractors working on our sites. Overall, we achieved a good shut performance with zero life-altering injuries during more than 1.2 million hours worked.

We support smallholders in South Africa via our corporate social projects and provide them with sustainability training opportunities. In 2022, Mondi sourced 157,040 tonnes of wood from rural smallholdings (1-10 hectares each). Mondi Zimele also distributed 1.2 million seedlings and provided training, mill visits and knowledge-sharing field days to eligible small growers.

Stakeholder engagement continued

OUR COMMUNITIES



Key issues raised in 2022 and our response

We invested €8.9 million in social initiatives supporting health, environmental protection, education, local enterprise and infrastructure. Our mills continued to serve local communities with power supply, wastewater treatment and waste disposal services. Mondi Group and many of our local operations supported people in need in Ukraine through aid campaigns, including a donation of €2 million to the World Food Programme for humanitarian assistance (read more on [page 29](#)). In South Africa, Mondi Zimele focused on income-generating projects and self-help groups to support livelihoods. Our nine mobile health clinics provided healthcare and support for forestry contractor employees and their families and provided Early Childhood Development services and support sessions.

In 2022, we conducted two Socio-Economic Assessment Toolbox (SEAT) processes in our paper mills at Mondi Štětí (Czech Republic) and Mondi Corrugated Turkey - Tire paper mill (Türkiye). The SEAT reports will be published on Mondi's website, capturing the process and all outcomes.

We received and addressed 167 complaints from communities, including 153 odour-related and 13 noise-related complaints. We continue to invest in the latest technologies to reduce our impacts on communities.

OUR INVESTORS



Key issues raised in 2022 and our response

We continued to engage with investors throughout the year, focusing on our financial performance, market dynamics, governance and remuneration, strategy, capital allocation and sustainability priorities and actions.

During the year, the Group's interests in Russia were regularly discussed during investor engagement activities following the war in Ukraine in February, the Board's assessment of the Group's interests in Russia and the decision in May to divest the operations. Discussions focused on the implications for the Group's strategy, business model and value creation. During the second half of the year, the Group entered into agreements to sell its Russian businesses in line with the decision taken in May.

The Board recommended a final 2022 dividend of 48.33 euro cents per share. This final dividend, together with the interim dividend, amount to a total dividend for the year of 70.00 euro cents per share, an increase of 8% on the 2021 total dividend.

PARTNERS AND INDUSTRY ASSOCIATIONS



Key issues raised in 2022 and our response

Our partnerships aim to find solutions to societal challenges such as climate change, biodiversity and water stewardship, responsible sourcing, circular economy and food waste.

We maintained our membership of the WBCSD's Forest Solutions Group and actively supported the development of the Nature-Positive Roadmap for our sector (read more on [page 60](#)).

We continued to engage with IUFRO to identify ways to improve forests' resilience to climate change.

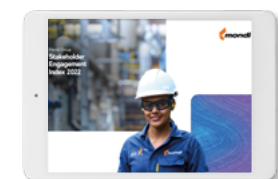
In South Africa, we worked with the Endangered Wildlife Trust to support our biodiversity status review of our plantation forestry operations and launched a partnership to explore biodiversity accounting approaches in plantation forestry. We continued supporting the Mondi Ecological Networks Programme of the University of Stellenbosch. WWF-Mondi Water Stewardship Partnership in South Africa also progressed well.

We collaborated with CEFLEX and 4evergreen to drive progress across the value chain with development of tools such as design guidelines. With Capi, we engaged in discussions related to the GHG Protocol Mirror Group and the Packaging Waste Regulation for example. We also engaged with the SBTi to validate our new Net-Zero GHG emissions reduction targets.

Stakeholder Engagement Index

In this index we offer further insights into how we have engaged with different stakeholder groups, topics raised and our response.

Read more [online](#)



Materiality

Mondi's success depends upon understanding and responding to the shifting sustainability landscape and associated issues that may influence our future strategic direction. Our material issues help us to identify, manage and report on our sustainability risks and opportunities across the business.

We take both impact and financial materiality into account in our materiality assessment process. The process considers our impacts on people and planet as well as the business case perspective, in line with the concept of double materiality. We evaluated issues from the perspective of their impact on Mondi's ability to create value and deliver value-accretive growth, sustainably, as well as considering the financial materiality.



Sharing knowledge is critical to our ongoing success and also provides an opportunity to recognise the great work being done by teams across the business.

Kerry Cooper,
Mondi Group Communication Director



Our materiality assessment

We conducted our latest materiality assessment in 2021, which involved the following four key steps:

1. Desk-based research

Our research used trusted sources to identify and prioritise the sustainability topics that are most material. This included current and emerging trends; a market and stakeholder trend analysis; and the identification of key changes in our external environment.

We have identified 15 key changes in our environment since our previous materiality assessment in 2018, and a further 13 emerging trends. The market and stakeholder research included benchmarking 24 key companies relevant to Mondi, including suppliers, customers, industry peers and key opinion formers. Publicly available information from each company was reviewed. The benchmarking formed part of our evidence to prioritise issues.

2. Internal stakeholder engagement

An internal survey was sent to over 200 senior colleagues (response rate: 80%), spanning 17 functions and 25 locations globally. This represented a broad range of Mondi's business areas and spheres of impact. Employees ranked the issues (30 topics) identified in the desk-based research based on perceived importance to Mondi, ranging from zero, equating to 'not important', to five being 'critically important'.

Interviews were also conducted with key senior leaders across diverse functions – human resources, procurement, finance, communication and marketing and business unit CEOs – to gain insight into their material issues.

3. External stakeholder engagement

An independent consultant conducted interviews with external stakeholders such as customers, investors, and NGOs. We were able to better understand how we are viewed by these groups and what we can do to build on our performance and address gaps.

Together, the internal and external interviews helped us to refine the materiality matrix.

4. Review and approval of outcome

The Sustainable Development Committee approved the final definition and prioritisation of the Group's material issues on behalf of the Board.



3M is initially focusing on Scope 1 and 2 GHG emissions, which are in our immediate control. If Mondi can reduce its Scope 1 and 2 emissions, this will have a positive impact on 3M's Scope 3 emissions. 3M will likely have a Scope 3 target in the future, so this type of collaboration across our supply chains will be required.

Ann Meitz,
Vice President, Sustainability & Packaging Innovation,
3M Consumer Business



Key outcomes

Topics of importance to internal stakeholders

Our material sustainability topics have remained relatively constant over the past years although some have increased in significance to stakeholders, including nature and biodiversity and D&I.

Among the top ten issues considered to be critically important, eight were environmental and the other two were employee safety, health and wellbeing and product safety and quality.

There were some key differences identified among different business units and geographies. For example, water was in the top five most prioritised issues in seven of the ten markets with most respondents. Overall environmental issues were of high priority in almost all markets. In South Africa, colleagues regarded social issues of greater importance.

Senior management fundamentally believes that sustainability and financial performance are intertwined, and that D&I will play an important role in Mondi's continued success.

Topics of importance to external stakeholders

Climate change was highlighted as the number one priority across all stakeholder groups. Forest-related issues, along with nature positive and biodiversity, were a priority for customers and NGOs. We acknowledge the clear call among stakeholders to take bold action on climate as well as an understanding of the interconnectedness of nature, biodiversity and climate change.

Packaging, circular economy and community investment and relations were priorities for all our external stakeholder groups. Importantly, circular economy and sustainable innovation were identified as key opportunities for Mondi.



Read more details on the 2021 materiality assessment in our 2021 Sustainable Development [report](#).

Materiality continued



Responsible sourced raw materials



Efficient production



Sustainable packaging and paper solutions



End-of-life and recycling

Material topics



Circularity	●	●	●	●
Customer collaboration	●		●	●
Food waste and loss			●	
Packaging waste		●	●	●
Product safety and quality	●	●	●	●
Responsible consumption and changing consumer preferences			●	●



Employee safety, health and wellbeing	●	●		
Employee retention, engagement and development		●		
Diversity and inclusion		●		



Climate change	●	●	●	●
Sustainable forestry	●			
Nature and biodiversity	●	●	●	●
Responsible procurement	●			

Insights and conclusions

Our Group's strategy has sustainability at its core. In our materiality assessment, we identified 13 material issues as 'strategically significant' and 'very important' to our strategy, and mapped them against their impacts along our value chain (listed on the left).

We continually monitor business developments, risks and opportunities, sustainability trends, changes in legislation and the needs and perspectives of our stakeholders so that our sustainability agenda remains focused and responsive.

Our materiality assessment is refreshed approximately every three years to include new input from our stakeholders. We intend to conduct a review of our material issues following completion of the divestiture of our Russian assets.



Reporting standards and scope

This 2022 Sustainable Development report covers the financial year 1 January 2022 to 31 December 2022 and should be read in conjunction with our Integrated report and financial statements 2022. Our previous report was published in March 2022 for the financial year 1 January 2021 to 31 December 2021.

Reporting standards and format

The Mondi Sustainable Development (SD) report is published on an annual basis and provides a comprehensive view of Mondi's approach to sustainable development and our performance throughout the reporting year, with a focus on environmental, social and governance issues. It has been prepared in accordance with the Global Reporting Initiative (GRI) Universal Standards (2021) as well as the Sustainability Accounting Standards Board (SASB) Sustainability Accounting Standard for the Containers & Packaging Industry. Our separate GRI & SASB Index can be accessed [here](#).

We have applied the GRI Guidelines to our annual sustainability reports since 2009, and transitioned to the new GRI Universal Standards in 2022.

We have applied the SASB Standards Application Guidance since 2020. We believe that these frameworks offer us the best way to present our most salient sustainability information in a fully transparent, accurate and reliable way. Guided by the GRI Universal Standards for structure and principles of reporting, the content is defined through various internal and external processes including risk management (see [pages 85-89](#)), materiality assessment (see [pages 90-91](#)) and stakeholder engagement at various levels (see [pages 88-89](#)).

We also report our performance against the sustainability metrics defined in our non-financial reporting system for internal and external reporting of key performance indicators (covering safety and health, wood procurement, forestry, environment, energy and products). Throughout the report, by 'our operations' we mean our pulp and paper mills, converting operations and forestry operations, unless otherwise specified. For better readability, we have reduced reporting of figures generally to two decimals or rounded performance. However, trend comparisons with previous years have been calculated by considering the actual performance figures.

In addition, we report on progress of the commitments we made in 2022 against a 2020 baseline, unless otherwise stated.

The Group's Russian operations have been classified as held for sale and, since June 2022 results, reported as discontinued operations. For relevant MAP2030 targets, which have been revised to reflect continuing operations, we included a box-out feature to identify what has been updated and the reason for change. We show performance against our updated targets (Taking Action on Climate; Communities; Environmental Performance; Procurement) with our traffic lights in the consolidated performance overview.

For our GHG reduction targets (Taking Action on Climate), we report against our new science-based Net-Zero targets aligned with a 1.5°C scenario (2019 baseline), which exceptionally still include our Russian operations.

As a signatory to the United Nations Global Compact (UNGC) we have aligned this report with the UNGC's 10 universally accepted principles in the areas of human rights, labour, environment and anti-corruption. The report highlights progress made in 2022 towards these principles. Our annual Communication on Progress to the UNGC can be found [here](#).



Reporting standards and scope continued

Disclosures of management approach based on GRI Standards methodology

The MAP2030 action areas and Responsible Business Practices usually include more than one GRI topic. For example, the 'Environmental Performance' section includes information relating to waste, water consumption, emissions to water and air; while the 'Human Rights' and 'Created by Empowered People' sections include the topics of employment, labour/management relations, human rights assessment and diversity and equal opportunity. The impacts associated with our material topics are disclosed within the relevant report sections.

In line with the GRI Disclosure 3-3 'Management of material topics', the report includes a description of how we manage our material impacts, including our approach to policies, commitments, goals and targets, responsibilities and resources.

Statements provided in the 'Sustainability governance' section (see [page 85](#)) on the governance and accountability of sustainability at Mondi is valid for all reported MAP2030 action areas, and all GRI topics included in this report. Our Sustainable Development Management System (SDMS) – including policies, standards and performance requirements – governs our approach, and we have systems in place to support the monitoring and measurement of our performance. Our Group-wide reporting systems include key performance indicators across our focus areas and reported material topics.

Our performance is guided by our public MAP2030 commitments – a set of medium- and long-term goals that shape our approach and track our progress. As a result of our commitment to divest from our Russian operations announced in 2022, we reviewed and revised our climate, environmental and social investment MAP2030 target(s) to reflect continuing operations (see [page 18](#)).

Roles and responsibilities for managing our MAP2030 commitments and material topics are described in our SDMS (see [page 86](#)) under 'Our Sustainability Governance Framework'.

The resources that we use to manage our action areas and material aspects include:

- our well-invested, low-cost, high-quality mills and converting operations;
- a strong financial position to fund our business and pursue relevant growth opportunities;
- our talented and committed people;
- access to natural resources, such as fibre and water, as well as fuels and electricity;
- strong partnerships with our suppliers and our customers; and
- our constructive working relationships with communities, governments, NGOs and other stakeholders.

Please refer to our business model on [page 14](#) and see our MAP2030 commitments on [page 17](#) for a more detailed overview of how we manage each material aspect.

See our GRI & SASB Index [online](#).

Reporting scope

In terms of performance data, the following should be noted:

- The Group's Russian operations have been classified as held for sale and, since June 2022, reported as discontinued operations. As a result, we excluded Russian operations from 2022 performance data and restated our 2020–2021 sustainability figures to reflect continuing operations and enable a year-on-year performance comparison with our 2020 baselines. Pre-2020 data and GHG emissions figures include Russian operations, as these operations were still part of our Net-Zero targets submission. In the consolidated performance data, we disclose 2022 data without Russian operations and 2020–2021 data was restated to show continuing operations and support comparability. Pre-2020 data includes Russian operations. We added a section to show the 2022 performance of Russian operations to support transparency.
- The report takes into account the results from the materiality assessment that was carried out in 2021.
- Our environmental performance covers all our manufacturing operations (including converting operations), unless stated that they are limited to 'our pulp and paper mills' or otherwise. Examples include some energy and climate-related data.
- GHG emissions are reported according to the GHG Protocol, published by the WBCSD and the World Resources Institute. We adhere to the Science Based Targets initiative (SBTi) definition and framework for our GHG emissions targets.
- Safety data includes all employees and contractors, but usually excludes service suppliers, such as catering, office cleaning or telecommunications and management consultants (a number of our operations include service providers in their performance where relevant).
- In our 'Created by Empowered People' section, the safety training hours reported excludes recent acquisitions, in line with all other safety data. However, the scope reported on total training hours includes recent acquisitions to show the full scope of training provided to all employees.
- Financial information is reported in euro (€), for ease of reading and to allow comparisons.
- Where we have reported wood volumes in m³, this figure reflects solid cubic metres.

Reporting standards and scope continued

GHG emissions scope and boundaries

The calculation of our Scope 1 emissions is based on the fuel consumption in our operations, as well as in Mondi-owned vehicles and the consumption of CO₂-emitting process chemicals (e.g. dolomite). Mondi reports its GHG emissions generally as CO₂e and takes into account the emissions of methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbon (HFC) and hydrochlorofluorocarbons (HCFC) emissions from refrigerant leakage, as well as emissions from sulphur hexafluoride (SF₆ leakage) from old electrical switch gears. Our operations report all direct emissions, as well as those indirect emissions attributable to imported electricity, steam and heated or cooled water, on a monthly basis. Scope 1 and Scope 2 emissions are calculated according to the GHG Protocol, published by the WBCSD and WRI, EU Emissions Trading Scheme (EU ETS) monitoring and reporting regulations, and ISO 14064, based on primary data (such as energy bills and meters with defined accuracy) and are externally verified with reasonable assurance.

Scope 3 emissions are calculated and reported at Group level based on the GHG Protocol's 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' (2011). Due to lack of primary data, in many cases secondary data sources (from databases like Ecoinvent) are used for the calculation of Scope 3 emissions. Scope 3 data is externally verified with limited assurance on an annual basis. Biogenic emissions are calculated on the basis of biomass input in our energy plants. This includes purchased biomass incinerated in our biomass boilers, bark and by-products from the pulp process, such as black liquor, pitch fuel, tall oil, turpentine, methanol, biogas from anaerobic wastewater treatment plants, and others. Specific GHG factors used are taken from the GHG Protocol for the paper and pulp industry as well as from regulatory directives (such as the EU ETS) and supplier information (e.g. Scope 2 emissions for electricity purchased). Our Scope 2 CO₂e emissions are reported as one consolidated number and not reflected separately as greenhouse gas type.

External assurance

External assurance plays an important part in our reporting and it provides stakeholders with assurance in respect of our performance. Our policy and practice is to seek external assurance of our Sustainable Development report on an annual basis. The Board (through the Sustainable Development Committee) and the Executive Committee approve the approach to and scope of external assurance every year, oversee the overall reporting progress, and are informed of the assurance observations and recommendations.

Environmental Resources Management Certification and Verification Services (ERM CVS) provided limited assurance on selected KPIs that we report on, the Consolidated performance data tables and the status of compliance of this report in accordance with the GRI Standards and SASB Sustainability Accounting Standard for the Containers and Packaging Industry. ERM CVS also verified total Scope 1 and Scope 2 GHG emissions and total energy usage in accordance with ISO 14064 to a reasonable level of assurance for the Group. ERM CVS verified total Scope 3 emissions from categories 1, 3, 4, 6, 7 and 9 in accordance with ISO 14064 to a limited level of assurance.

PricewaterhouseCoopers, our appointed statutory auditors, provided an unqualified audit opinion on our 2022 financial statements.

Stakeholder approval for reporting content

We consider external and internal stakeholder feedback in our annual reporting cycle and ask for input and approval for references and quotes before publication. Relevant report sections and the '2022 Stakeholder Engagement Index' were distributed to around 100 internal and external stakeholders for input and approval in 2022. Relevant changes were incorporated into the report.

Additional information

In addition to our online Sustainable Development report 2022, other information – including policies and standards, report archives, governance of sustainability, case studies, associations we engage with, useful links and sustainability contacts – can be found [here](#).



See our [SDG Index](#) and our [Stakeholder Engagement Index](#) on our [website](#)



Find our [Consolidated performance data](#) [here](#)

Independent Assurance Statement

ERM Certification and Verification Services Limited ("ERM CVS") was engaged by Mondi plc ("Mondi") to provide limited and reasonable assurance in relation to Mondi's 2022 Sustainable Development Report (the "Report") and the selected information set out below and presented in the Report and the Consolidated Performance data tables.

Engagement summary

Scope of our assurance engagement

- Whether the Report is fairly presented in accordance with the Global Reporting Initiative (GRI) Standards and the Sustainable Accounting Standards Board (SASB) Sustainability Accounting Standard for the Containers & Packaging industry.
- Whether the 2022 data for the following key performance indicators ("KPIs") are fairly presented in the Report, in all material respects, with the reporting criteria:
 - Total energy usage (GJ)
 - Total Scope 1 greenhouse gas (GHG) emissions (tonnes CO₂e)
 - Total Scope 2 (location-based) GHG emissions (tonnes CO₂e)
 - Total Scope 2 (market-based) GHG emissions (tonnes CO₂e)
 - Total Scope 3 GHG emissions from the following categories (tonnes CO₂e)
 - » Category 1: Purchased goods and services
 - » Category 3: Fuel and energy-related activities not included in Scope 1 or Scope 2
 - » Category 4: Upstream transportation and distribution

- » Category 6: Business travel
- » Category 7: Employee commuting
- » Category 9: Downstream transportation and distribution
- Total water input (pulp and paper mills) (m³)
- Total water output (pulp and paper mills) (m³)
- Total contact and non-contact water use (m³)
- Total hazardous and non-hazardous waste (tonnes)
- NOx emissions (tonnes)
- COD emissions (tonnes)
- Total Recordable Case Rate (number/200,000 hours)
- Fatalities and Life Altering Injuries (number)
- Management Risk Focused audits conducted (number)
- First Line Manager Task audits conducted (number)
- Critical safety training completed (hours)
- General training completed (hours)
- Certified wood procured (percentage, m³)
- Certified pulp procured (percentage, tonnes)
- FSC certification of forests owned and leased by Mondi (percentage)
- Managed land set aside for conservation purposes (percentage)
- Ratio of male and female employees (%)
- Community and social investments, by category (€).

- Whether the disclosures relating to the above KPIs in the Report and the Consolidated Performance data tables are consistently presented in Mondi's 2022 Integrated report and financial statements ("Integrated Report").
- Whether the disclosures relating to GHG emissions and energy consumption presented in the section 'Taking action on climate' on page 45 of the [Integrated Report](#) comply with the requirements of the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018.

Reporting period

2022 (1 January 2022 to 31 December 2022)

Reporting criteria

- Global Reporting Initiative (GRI) Standards
- SASB Sustainability Accounting Standard for the Containers & Packaging industry (Version 2018-10)
- Internal indicator criteria developed by Mondi and described in the "Reporting standards and scope" section and the relevant performance sections of the Report.

Assurance standard and level of assurance

We performed a limited and reasonable assurance engagement, in accordance with the International Standard on Assurance Engagements ISAE 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Standards Board and ISO 14064:3 for Greenhouse Gas emissions data.

Reasonable assurance

- Total energy usage
- Total Scope 1 GHG emissions
- Total Scope 2 (location-based) GHG emissions
- Total Scope 2 (market-based) GHG emissions

Limited assurance

- All other scopes set out under 'Scope of our assurance engagement', above.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than, for a reasonable assurance engagement and consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Respective responsibilities

Mondi is responsible for preparing the Report and for the collection and presentation of the information within it, and for the designing, implementing and maintaining of internal controls relevant to the preparation and presentation of the Report.

ERM CVS' responsibility is to provide conclusions to Mondi on the agreed scope based on our engagement terms with Mondi, the assurance activities performed and exercising our professional judgement. We accept no responsibility, and deny any liability, to any party other than Mondi for the conclusions we have reached.

Independent Assurance Statement continued

Our opinion

In our opinion, the 2022 Total energy usage, Total Scope 1 and Total Scope 2 (location-based and market-based) GHG emissions are fairly presented in the Report, in all material respects, in accordance with the reporting criteria.

Our conclusion

Based on our activities, as described below, nothing has come to our attention to indicate that:

- the Report is not fairly presented in accordance with the Global Reporting Initiative (GRI) Standards and the Sustainable Accounting Standards Board (SASB) Sustainability Accounting Standard for the Containers & Packaging industry;
- the 2022 data for the KPIs, as listed under 'Scope of our assurance engagement' above except for Total energy usage, Total Scope 1 and Total Scope 2 (location-based and market-based) GHG emissions are not fairly presented in the Report, in all material respects, with the reporting criteria;
- the disclosures relating to the above KPIs in the Report are not consistently presented in the Integrated Report; and
- the disclosures relating to GHG emissions and energy consumption presented in the section 'Taking action on climate' on page 45 of the [Integrated Report](#) comply with the requirements of the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018.

Our assurance activities

Considering the level of assurance and our assessment of the risk of material misstatement of the Report and the selected information a multi-disciplinary team of sustainability and assurance

specialists performed a range of procedures that included, but was not restricted to, the following:

- Assessing the appropriateness of the reporting criteria for the Report and the selected information.
- Reviewing external media reporting relating to Mondi to identify sustainability issues in the reporting period that may be relevant to the assurance scope.
- Interviewing relevant Mondi staff to understand and evaluate the relevant management systems and processes (including internal review and control processes) used for collecting and reporting the selected disclosures.
- Reviewing a sample of qualitative and quantitative evidence supporting the information disclosed in the Report.
- Performing an analytical review of the 2022 data for the KPIs, which included testing the completeness and mathematical accuracy of conversions and calculations, and consolidation in line with the stated reporting boundary.
- Conducting site visits to Mondi production sites in Poland, Türkiye, Czech Republic, South Africa and the United States of America to review source data for the KPIs and local reporting systems and controls.
- Confirming conversion and emission factors and assumptions used.
- Reviewing the presentation of information relevant to the scope of our work in the Report to ensure consistency with our findings.

The limitations of our engagement

The reliability of the assured information is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusions in this context.

Our independent Assurance Statement provides no assurance on the maintenance and integrity of the SD reporting section of Mondi's corporate website, including controls used to achieve this, and in particular whether any changes may have occurred to the information since it was first published.

Our independence, integrity and quality control

ERM CVS is an independent certification and verification body accredited by UKAS to ISO 17021:2015. Accordingly we maintain a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. Our quality management system is at least as demanding as the relevant sections of ISQM-1 and ISQM-2 (2022).

ERM CVS applies a Code of Conduct and related policies to ensure that its employees maintain integrity, objectivity, professional competence and high ethical standards in their work. Our processes are designed and implemented to ensure that the work we undertake is objective, impartial and free from bias and conflict of interest. Our certified management system covers independence and ethical requirements that are at least as demanding as the relevant sections of Parts A & B of the IESBA Code relating to assurance engagements.

The team that has undertaken this assurance engagement has extensive experience in conducting assurance on environmental, social, ethical and health and safety information, systems and processes, and provides no consultancy related services to Mondi in any respect.

Other Matters – observations

We have provided Mondi with a separate management report with our detailed (non-material) findings and recommendations. Without affecting

the opinion and conclusion presented above, we have the following key observations:

- Mondi's safety performance in terms of Total Recordable Case Rate (TRCR) improved in 2022 compared to 2021 and the 2020 baseline; nevertheless, Mondi has reported a contractor fatality and two life-altering injuries during the year. We strongly encourage Mondi to continue its ongoing work on safety risk identification and mitigation, contractor safety management, training, and the social psychology of risk to reduce the risk of harm for all its employees and contractors.
- We note that Mondi's Net-Zero science-based short- and long-term targets include those relating to its Scope 3 greenhouse gas emissions. We encourage Mondi to continue its efforts to improve the quality of its Scope 3 GHG emissions data by obtaining primary data from suppliers and other parties in its value chain, as well as carrying out actions aimed at reducing its Scope 3 emissions.
- Mondi has made progress on its MAP2030 target to eliminate waste to landfill from its manufacturing operations, with a reduction in the absolute amount of waste to landfill since 2020. As the level of contribution to this performance varies across its manufacturing operations, we encourage Mondi to extend its efforts in this area to all its manufacturing operations, to identify opportunities to remove at source waste which is currently landfilled, and to divert waste away from landfill.

Gareth Manning
Partner, Corporate Assurance
London, UK

20 March 2023

ERM Certification and Verification Services Limited

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Glossary

AOX

Adsorbable organic halogen compounds is a metric for emissions to water and is measured in tonnes.

BAT

Best Available Technique. Technically and economically feasible environmental technology that is efficient and advanced, generally to reduce emissions and the impact on the environment as a whole. The BAT values are defined by IPPC (the European Integrated Pollution Prevention and Control Bureau) in the 'Reference Document on Best Available Technique for the Pulp and Paper Industry'.

Biodegradable

Designates a property that is needed – among others – to make a package compostable. It means that the product can be broken down by the action of living organisms, such as bacteria, into carbon dioxide, water and biomass. 90% of the organic material is converted into CO₂ within six months.

Bioenergy feedstocks

In the context of biofuels, a feedstock is any biomass destined for conversion to energy or biofuel.

Biogenic emissions

Biogenic emission sources are emissions that come from natural sources.

Blue water

Potable, surface, second-class and groundwater.

CAPEX

Capital expenditures are funds used to acquire, upgrade and maintain physical assets, such as property, plants, buildings, technology or equipment.

Carbon sink

A carbon sink is anything, natural or otherwise, that absorbs more carbon from the atmosphere than it releases – for example, plants, the ocean and soil.

CFCs

Chlorofluorocarbons – a greenhouse gas that lowers the average concentration of ozone in the stratosphere; commonly found in spray cans, refrigerators, air conditioners and styrofoam cups, among other products.

Chain-of-Custody (CoC)

Chain-of-Custody is a tracking system that allows manufacturers and traders to demonstrate that wood comes from a forest that is responsibly managed in accordance with credible standards.

Circular economy

A circular economy is an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals that impair reuse and aims for the elimination of waste through the superior design of materials, products, systems and, within this, business models.

CITES

The Convention on International Trade in Endangered Species is an international agreement between governments with the aim of ensuring that international trade in specimens of wild animals and plants does not threaten their survival.

CO₂e

Other greenhouse gases (such as CH₄, CFCs or N₂O) can be converted into an equivalent amount of CO₂ according to their global warming potential. Total GHG emissions are the sum of the equivalent amount of CO₂ for each GHG, abbreviated as CO₂e.

COD

Chemical oxygen demand is a measure of the oxygen-consuming capacity of inorganic and organic matter present in waste water; it quantifies the amount of oxidisable pollutants in water and is measured in tonnes.

Compostable

For a product to be considered compostable it must meet the following criteria: 1) It must biodegrade; 2) disintegrate (after three months' composting and sifting, no more than 10% residue remaining); and 3) support plant growth with no ecotoxicity. As defined by EN 13432.

Contact water

The sum of all water volumes used on the production site for use in processes, for washing and as product input; for sanitary purposes and for non-industrial operations (e.g. in kitchens, toilets and bathrooms); and for use in boilers for steam production.

Controlled Wood

Controlled Wood is wood of known origin with a minimum risk that it is harvested in an unacceptable way. The Controlled Wood system defines the minimum standards for wood that can be mixed with FSC wood. Products made from such material can use the FSC Mix label.

Controversial sources

Mondi defines controversial sources as wood that is illegally harvested, sourced in violation of traditional and civil rights, or harvested in forest management units in which HCVs are threatened by management activities. It also relates to wood that is harvested in areas in which primary forests are being converted to plantations or non-forest use or harvested from forests in which genetically modified trees are planted.

Country-level risks

Country-level risks are identified by Mondi as a combination of indices characterising the strength of national governance (Transparency International Corruption Perception Index and the World Bank's Worldwide Governance Indicators) and prevalence of forestry-related legality issues in the country (Centralised National Risk Assessments and NEPCo Timber Risk Assessment Methodology).

Cradle to Cradle

Cradle to Cradle Certification® is the global standard for products that are safe, circular and responsibly made.

Current indicators

Current indicators include management risk-focused audits, first-line manager task audits, safety, health and environment (SHE) professional focus audits, and peer observations.

DDMS

Due Diligence Management System is used to govern our approach to the responsible sourcing of wood and fibre.

Deforestation

The conversion of forest to other land use regardless of whether human induced or not. This definition implies permanent tree-cover loss.

Ecosystem services

Ecosystem services are the multitude of benefits that nature provides to society. These include provisioning services, such as food and water; regulating services such as regulation of floods, drought, land degradation and disease; supporting services, such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other non-material benefits.

EAP

Mondi's Employee Assistance Programme is a confidential hotline for supporting employees and their families on professional and private topics ranging from work and occupation, personal and family topics, to addiction and dependency, financial issues and debt counselling.

EPR

Extended Producer Responsibility is a policy instrument to add all of the environmental costs associated with a product throughout the product life cycle to the market price of that product. EPR aims to internalise the negative environmental costs and shift the responsibility for managing the products' end-of-life and waste(s) arising from it, from taxpayers to producers. Producers pay fees to cover the costs for collection, transport and treatment of the end-of-life products, including costs for awareness-raising and administrative issues.

EU ETS

European Union's Emissions Trading System.

EUTR

The EU Timber Regulation came into effect on 3 March 2013. It prohibits the placing on the EU market, for the first time, of illegally harvested timber and products derived from such timber.

EVOH

Ethylene-vinyl alcohol copolymer is a flexible, clear thermoplastic copolymer; EVOH offers excellent gas barrier properties, thus making it especially suited for packaging of food, drugs, cosmetics and other perishable or delicate products to extend shelf life.

FLAG emissions

Defined by the SBTi, FLAG emissions relate to Forest, Land and Agriculture companies that are considered land-intensive. For example, forest and paper products, food production and tobacco. The FLAG project was initiated to provide tools and guidance for land-intensive sectors to set science-based targets in line with the goals of the Paris Agreement.

Fluorochemicals

A chemical compound containing fluorine.

Forest degradation

Forest degradation is the reduction of the capacity of a forest to provide goods and socio-cultural and environmental services, which is caused by disturbances.

FSC or PEFC certified

FSC certification ensures that products come from responsibly managed forests that provide environmental, social and economic benefits. The FSC Principles and Criteria provide a foundation for all forest management standards globally.

PEFC, the Programme for the Endorsement of Forest Certification, is a leading global alliance of national forest certification systems. As an international non-profit, non-governmental organisation, it is dedicated to promoting sustainable forest management through independent third-party certification.

While FSC sets specific standards, PEFC is an umbrella brand incorporating different national certification schemes and covers a much larger area than FSC.

GHG

Greenhouse gases are gases that have the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and re-radiating it back to Earth's surface, thus contributing to the greenhouse effect. The greenhouse gases that contribute to the greenhouse effect are listed in the Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC).



Glossary continued

GIS

Geographic information system is a system designed to capture, store, analyse, manage and present all types of spatial or geographical data.

Green water

Rainwater stored in vegetation or soil as moisture. Water consumption during fibre growth in forests is counted and reported as green water.

Grey water

Waste water that is generated from all streams of water, which have been in contact with process chemicals.

HCFCs

Hydrochlorofluorocarbons – a greenhouse gas intentionally developed as replacements for ozone-depleting substances in the refrigeration, air conditioning, aerosols, fire suppression and foam-blowing sectors.

HCVs

High conservation values are biological, ecological, social or cultural values which are outstandingly significant or critically important at the national, regional or global level.

Human Rights Due Diligence (HRDD)

The process through which companies identify, prevent, mitigate and account for how they address their actual and potential adverse impacts on human rights, as an integral part of decision-making and risk management systems.

Hybrid solutions

A hybrid packaging solution uses multiple materials to produce solutions which meet several customer demands. For example, creating lighter versions of heavy packages and recyclable versions of already-lightweight packages.

IDP

Individual Development Plan is a tool supporting employees to define their short- and long-term career goals through creating and aligning development objectives.

ILO

The International Labour Organization is a UN agency dealing with labour issues, particularly international labour standards, social protection and work opportunities for all.

Invasive alien plants (IAPs)

Species whose introduction and/or spread, outside their natural distribution, threaten biological diversity. They are non-native to an ecosystem and may cause economic or environmental harm.

ISO 14001

Sets out the criteria for an environmental management system certification. It maps out a framework that a company or organisation can follow to set up an effective environmental management system.

IUCN

The International Union for Conservation of Nature is an international organisation working in the field of nature conservation and sustainable use of natural resources. IUCN is the global authority on the status of the natural world and the measures needed to safeguard it.

IUCN Red List

International Union for Conservation of Nature (IUCN) is now the world's largest and most diverse environmental network. The IUCN Red List of Threatened Species™ is the world's most comprehensive information source on the global extinction risk status of animal, fungus and plant species.

Lag indicators

Conventional safety performance metrics focus on incidents and total recordable case rate (TRCR), known as lag indicators.

Landscape approach

Balancing competing land use demands in a way that is best for human wellbeing and the environment by creating solutions that consider food and livelihoods, finance, rights, restoration and progress towards climate and development goals.

Lead indicators

Lead indicators monitor issues that underpin safety performance, such as action tracking, critical safety training and the roll-out of the engagement board process.

Life-altering injuries

A life-altering injury resulting in permanent or significant loss of a major body part or organ function that permanently changes or disables the person's normal life activity.

Life cycle assessment (LCA)

A methodology for assessing environmental impacts associated with all the stages of the life cycle of a product, process or service. Environmental impacts are considered from raw material extraction and processing (cradle), through the product's manufacture, process waste disposal, logistic of raw materials and waste (grave). A cradle to grave LCA also considers the distribution of products, product use, and recycling/disposal at end-of-life.

Major close call

An unplanned, undesired event, which, under slightly different circumstances, could have resulted in a life-altering or fatal injury.

Mondi Leadership Forum

A regular gathering of Mondi senior leaders to review strategic objectives and exchange best practices.

Mono-material packaging

A mono-material refers to a product composed of a single material or fibre, as opposed to packaging made from different materials. This makes the recycling process much easier, as it reduces the amount of energy required to split or separate various materials.

Natural capital

The stock of renewable and non-renewable natural resources (for example, plants, animals, air, water, soils and minerals) that combine to yield benefits to people.

Nature positive

A high-level goal and concept describing a future state of nature (e.g. biodiversity, nature's contributions to people) which is greater than the current state.

Net-Zero greenhouse gas emissions

Net-Zero target setting supports the rapid decline of a company's value-chain greenhouse gas emissions to limit global temperature rise to 1.5°C. The SBTi acts as an independent verification body for 'science-based' carbon emission reduction targets. Net-Zero covers the entire value-chain emissions, including those produced by one's own processes (Scope 1), purchased electricity and heat (Scope 2) and generated by suppliers, service providers and customers (Scope 3).

Non-contact water

Water used for cooling purposes. It does not come into direct contact with any raw material, intermediate product, waste product or finished product.

NOx

NOx is the sum of nitrogen oxide compounds, which are generated mainly in the incineration process of fuels in our energy plants. Those inorganic air emissions are major contributors to acid rain and precursors for ozone creation in the atmosphere and the generation of smog and related detrimental environmental effects. The total amount of NOx emitted from all sources on-site is measured and reported as NO₂.

Operational control principle

We report emissions from operations where we have day-to-day management control over GHG emission sources, including any key sub-contracted operations, which are a core part of the business. All activities of our global production operations in which we hold a minimum 50% shareholding or over which we have management control are covered.

Ozone-depleting substances (ODS)

Substances that contribute to the depletion of the natural ozone layer in the stratosphere.

PA

Is a common abbreviation of polyamide, also known as nylon; it is a clear and printable thermoplastic that has a relatively high melting point, exceptional strength and toughness, and good oxygen barrier properties. It is also scratch - puncture - and flexcrack-resistant and does not dissolve or absorb grease, oil, and acidic food when in direct contact.

Paper for recycling

Also known as 'recovered paper', this is a term used by Cepi to highlight the intended use of this secondary raw material for paper recycling only. It is defined as natural fibre-based paper suitable for recycling, consisting of paper in any shape or product made predominantly from paper, which may include other constituents that cannot be removed by dry sorting, such as coatings, laminates, spiral bindings, etc.

PCR

Post-consumer resin (or post-consumer recycled resin) refers to material made from recycled plastic.

PDR

Performance and Development Review is a tool used to define and agree on an employee's individual objectives and review the achievement and overall job performance in a regular feedback evaluation process.

PE

Is a common abbreviation for polyethylene; it is a versatile family of ethylene-based polymers and is resistant to chemicals and moisture and offers good sealing properties for various flexible packaging applications.

PET

Is a common abbreviation of polyethylene terephthalate; it is a plastic resin that is often used for bottles or flexible packaging for food storage and other consumer products.

PFC

Perfluorinated compounds – a greenhouse gas; used ubiquitously in the production of Teflon and related fluorinated polymers and make products water repellent or stain resistant, for example.

Planetary boundaries

The planetary boundaries concept presents a set of nine quantitative planetary boundaries within which humanity can continue to develop and thrive for generations to come. Developed by Johan Rockström, along with 28 international scientists, it defines the nine processes that regulate the stability and resilience of the Earth system.



Glossary continued

Plantation forest

Planted forest that is intensively managed and meets all the following criteria at planting and stand maturity: one or two species, even age class, and regular spacing. Specifically includes short rotation plantation for wood, fibre and energy.

PO

Is a common abbreviation of polyolefin, also called polyalkenes (mixed PE and PP); olefins are thermoplastics that can be used as building blocks for a variety of materials. PO is durable, adequately heat resistant, thermo-sealable and able to withstand most forms of chemical corrosion.

PP

Is a common abbreviation for polypropylene; it is used in all kinds of applications, including packaging and labelling, textiles, containers and retort/sterilise-able food packaging.

Pre-competitive collaboration

Two or more companies within the same industry, coming together to address a shared problem or pain point that doesn't impact direct business competition and is often focused on joint social or environmental impacts.

Primary forest

Naturally regenerated forest of native tree species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.

Pulse survey

Pulse surveys are smaller samples of our global employee survey that can be conducted in individual locations and functions or contain specific locally relevant questions.

PVC/PVDC

Polyvinyl chloride and polyvinylidene chloride are standard polymers for many industrial and pharmaceutical applications, while PVDC in addition provides a strong barrier for oxygen, water vapour, and aromas.

PVOH

Polyvinyl alcohol is a clear, water-soluble thermoplastic derived from polyvinyl acetate; it offers high chemical resistance to hydrocarbons, mineral oils and many organic solvents. Films made from PVOH have good heat-sealing properties and excellent gas barrier properties, and PVOH is widely used as a cold and hot water soluble film for diverse packaging applications, including food, detergents and other products.

Recovered paper

See 'paper for recycling'.

Recyclable

A product or package is deemed recyclable when it can be collected, separated, or otherwise recovered from the waste stream through an established recycling programme and returned to use in the form of raw materials or products. Collection and sorting mechanisms are conveniently available to a reasonable proportion of consumers of the product and recycling takes place in practice on an industrial scale.

Resilient production landscapes

Production landscapes integrating commercial forests and conservation networks that have the capacity to recover from disturbances, such as climate change, intensive management, poverty-induced overuse, drought, fire, floods, pests and disease.

Reusable

A characteristic of a product or packaging that has been conceived and designed to accomplish within its life cycle a certain number of trips, rotations or uses for the same purpose for which it was conceived.

Safety-focused training

Covers specific topics related to top risks.

Secondary raw material

Recycled materials that can be used in manufacturing processes instead of or alongside virgin raw materials.

Science-based target

A carbon emission target is defined as 'science-based' if it is in line with the scale of reductions required to keep global temperature rise to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.

Scope 1 emissions

Total direct GHG emissions from sources owned or controlled by Mondi and its subsidiaries. This includes CO₂e from fossil fuels and processes, company leased/owned vehicles, waste and wastewater treatment, make-up chemicals and other GHGs.

Scope 2 emissions

Total indirect GHG emissions from sources that are related to generation of purchased energy outside the company boundaries.

Scope 3 emissions

Total indirect GHG emissions from the production of fuel and raw materials, business travel; transport of products and raw materials; and employee commuting and not relevant categories (capital goods; waste generated in operations; investments; processing, use and end-of-life of sold products).

SDGs

The United Nations Sustainable Development Goals, a set of universal goals that meet the urgent environmental, political and economic challenges facing our world.

SDMS

Sustainable Development Management System is used to govern our approach to sustainability and implement our sector policies.

SEAT

Socio-Economic Assessment Toolbox process is a series of open and transparent dialogues with Mondi stakeholders, facilitated by an independent third party to obtain a thorough understanding of how our stakeholders perceive a mill or operation, and what the positive and negative impacts are of that operation on the surrounding communities and stakeholders.

Secondary containment

A secondary containment is any containment serving as a barrier to limit the consequences due to the loss of primary containment by containing or controlling a release from primary containment. Secondary containment systems include, but are not limited to, tank dikes, curbing around process equipment, drainage collection systems or the outer wall of double-walled tanks.

SH E

Safety, health and environment.

Silviculture

The growing and cultivation of trees.

Social Psychology of Risk

How decisions are influenced by the presence or perceived presence of people as well as the environment.

SO₂ emissions

Sulphur dioxide is an air emission arising from the combustion of fossil fuels and biomass at our on-site energy generation plants.

Specific

Measurement of emissions or consumption normalised to volume, measured in saleable production tonnes.

TRCR

Total recordable case rate is calculated as the number of total recordable cases (the sum of fatalities, lost-time injuries, restricted work cases and medical treatment cases), multiplied by 200,000 and divided by the total hours worked for the selected period.

TRS

Total reduced sulphur compounds are generated in the pulping process and are the sum of the following reduced malodorous sulphur compounds: hydrogen sulphide, methyl mercaptan, dimethylsulphide and dimethyldisulphide, expressed as sulphur. It is a metric for emissions to air and is measured in tonnes.

UK Modern Slavery Act (MSA)

An Act of the Parliament of the United Kingdom, which became a law in 2015 to specifically address slavery and trafficking in the 21st century.

UNGP

United Nations Guiding Principles on Business and Human Rights provide a set of guidelines for States and companies to prevent, address and remedy human rights abuses committed in business operations.

UN Women's Empowerment Principles

A Joint initiative of UN Global Compact and UN Women developed in 2010 to provide a holistic framework to empower women and girls in the workplace, marketplace, and community.

Water catchment

An area of land that drains rain water or snow into one location, such as a stream, lake or wetland. These water bodies supply our drinking water, water for agriculture and manufacturing, offer opportunities for recreation and provide habitat to numerous plants and animals. Water scarcity occurs where there are insufficient water resources to satisfy long-term average requirements.

360 degree feedback

Development tool that provides employees with systematic and structured feedback on their behaviour from their superior, direct reports and peers.

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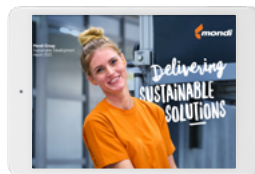
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