

ESG at Ingredients



Our Ingredients businesses are implementing strategies to manage their material ESG topics.



Wastewater treatment at AB Mauri Maya's yeast plant in Bandrima, Turkey

Each Ingredients business manages its ESG impacts, risks and opportunities independently, tailoring strategies to its specific operational needs.

ESG Governance

AB Mauri

AB Mauri has defined and ranked its priority areas across environmental, social and governance topics.

Its regional businesses are responsible and accountable for overseeing ESG issues in their local business context, while manufacturing sites receive guidance on engaging with local stakeholders, including community groups, employees, media, regulators and local government bodies.

ABFI's ESG strategy is based on three pillars: People, Planet and Customers. These pillars reflect its efforts to protect its people, respect its partners and preserve the planet's environment and natural resources.

In 2023/24, ABFI enhanced its ESG governance structure to strengthen responsibility and expand communication of its ESG agenda. The Chief Executive is responsible for the ESG agenda including impacts, risks and opportunities. The ABFI Divisional Safety, Risk, and Sustainability Director serves as the liaison between the ABF Group and its businesses, facilitating communication, collaboration and strategic direction on ESG matters.

The business-level managing directors have overall responsibility for the implementation of their ESG strategy and for the performance of their business unit. Many ABFI businesses leverage internationally recognised frameworks and benchmarks, such as EcoVadis, to guide the direction of their ESG agendas. AB Enzymes was awarded the EcoVadis gold medal for their responsibility performance in 2024.

Our people - Ingredients



Our people are central to the success of our Ingredients businesses. Each business prioritises having a positive impact across health, safety and wellbeing, diversity, equity, inclusion and work-life balance.



A colleague at AB Mauri's plant in Hull, UK

Health, safety and wellbeing

Keeping people safe remains the top priority for our Ingredients businesses. Their ultimate aim is to create a safe working environment that results in zero injuries and no work-related ill-health.

We are deeply saddened to report that a contractor was fatally injured during an off-site weather-related traffic accident in Brazil. The site has investigated the root causes and shared learnings across the businesses to minimise the likelihood of such events reoccurring.

For our Ingredients businesses the Lost Time Injury (LTI) rate for employees on-site is 0.26%, which equates to 15 employees experiencing an LTI on-site in 2024. For contractors there has been a decrease from eight in 2023 to four this year. The contractor LTI rate has reduced from 0.40% to 0.20%. In 2024, 76% of Ingredient production sites recorded zero employee or contractor LTIs.

AB Mauri

Health and safety topics are prioritised at all meetings of AB Mauri's Global Management Team, where performance is closely monitored through benchmarks and reviews of any work-related accidents to identify areas for improvement and implementation of corrective actions. Leaders play a key role in fostering a culture of safety and promoting wellbeing across all sites. Health and safety performance is also monitored at several other global functional leadership meetings, including those focused on manufacturing and logistics. AB Mauri also established a health and safety steering group responsible for developing and overseeing new strategies, supported by a health and safety leadership team made up of regional health and safety managers who coordinate and implement activities across regions.

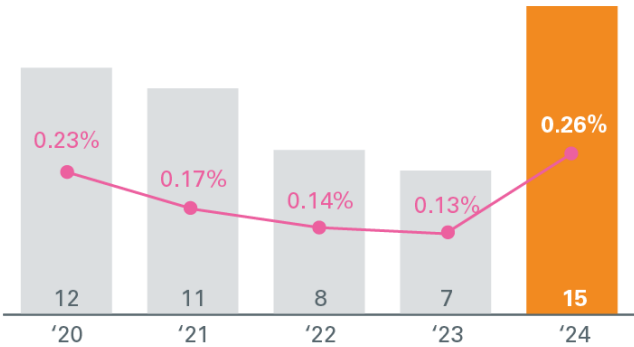
Central to AB Mauri's safety culture is the programme SAFE, Safety For Everyone, which is a set of systems designed to increase awareness of health and safety issues, highlight best practices and reduce or eliminate risk wherever possible. The programme is embedded in the culture of the business and continues to evolve as the division learns from its experiences.

AB Mauri's LTI rate for employees on-site is 0.30% in 2024 compared with a rate of 0.10% in 2023. This equates to 14 employees experiencing an LTI on-site in 2024 compared with five in 2023. Despite recording more LTIs in 2024, the number of days lost per LTI decreased by 46% compared to 2023, and the number of employee days lost was the lowest recorded ever, indicating a reduction in severity. For contractors working at AB Mauri's sites, there has been a decrease in LTIs from five in 2023 to four in 2024. The contractor LTI rate has reduced from 0.27% to 0.22% in 2024. In 2024, 73% of factories did not report an employee or contractor LTI.

When accidents do occur, the business uses a safety alert system to share learnings across all sites. Each site assesses whether they face similar risks and determines the necessary corrective actions. Addressing critical risks is another key focus, with these risks identified through audits and data analysis. Appointed safety champions develop toolkits, provide training and mobilise teams on site, drawing on global expertise when needed.

Training is a key part of AB Mauri's approach. Its safety training addresses technical requirements around critical risks and behavioural safety to develop the capability of our front-line managers and safety champions to help deliver safety targets. Additionally, AB Mauri's health and safety awards programme, now in its twelfth year, further contributes to a culture of strong performance through continually highlighting and sharing outstanding achievements in Health and Safety. As an example this year's Health and Safety innovation award was won by AB Mauri's business in Türkiye for developing an automated alarm system that signals approaching forklifts through visual and audible alarms.

Employee on-site Lost Time Injuries and Lost Time Injury Rate (%) - Ingredients



Team leader performing a routine inspection at AB Mauri's plant in Hull, UK

ABFI

ABFI's health and safety activities are guided by its 'Six Points of Success', which emphasises individual responsibility for workplace safety. This is also reflected in the results of a November 2023 Global Engagement Survey, where 92% of the workforce reported feeling that they work in a safe environment, based on a 93% response rate.

Safety performance is continually monitored. In 2024, there was one employee on-site LTI across ABFI's operations. This equates to an employee on-site LTI rate of 0.29% in 2024. For contractors working at ABFI's sites, the number of LTIs has decreased from three in 2023 to zero in 2024. 90% of ABFI's production sites recorded zero employee or contractor LTIs in 2024.

Since 2017, the annual ABFI Health, Safety & Environment Recognition Awards have been held to honour individuals or teams who have significantly contributed to workplace safety through various initiatives. These awards play a crucial role in fostering a culture of health and safety awareness among all employees across its businesses.

PGPI has cultivated a culture where safety is a shared responsibility, achieving zero LTIs for both employees and contractors since 2017. This success is attributed to robust communication, ongoing training and the establishment of clear safety guidelines and expectations.

SPI Pharma has made investments in health and safety, including the introduction of online safety training and a new series of safety videos for employee onboarding. Additionally, SPI has implemented safety Gemba walks, equipping employees with the knowledge and tools needed to make informed, rational decisions that facilitate the journey to safety excellence.

Finally, Ohly has partnered with a third-party business specialising in robotic technology to conduct safety inspections of spray dryers. The inspections are crucial to identify potential structural risks before an emergency failure occurs. However, the inspection process itself poses significant safety risks, such as confined space entry and working at height. The implementation of this new robotic technology reduces inspection time by 50% and eliminates the need for human entry into confined spaces, while still delivering the critical data required to maintain the structural safety of the dryers.

Mental health and wellbeing

Our Ingredients businesses believe that promoting employee wellbeing creates a more positive working environment where individuals and businesses can thrive. They deliver a range of programmes to improve employees' mental and physical health, providing support, protection and education to employees and their families.

While there are nuances between the wellbeing programmes for employees across the businesses in order to respond to the local context, wellbeing programmes focus on a comprehensive range of topics including:

- physical wellbeing - health promotion, good rehabilitation, diet and exercise;
- mental wellbeing - mental health awareness, dignity at work, stress management and emotional support; and
- social wellbeing - employee voice and social events.

AB Mauri and ABFI also have channels in place for their employees to raise wellbeing concerns via [Speak Up](#). Increasingly, businesses are also using their engagement surveys to get better insights, including around employee wellbeing.

AB Mauri

Across AB Mauri, there are various examples of wellbeing initiatives. 'Thrive' is the health and wellbeing framework for its UK and Ireland business, which recognises the interconnected nature of home and work life, and of physical and mental health. The programme aims to support and enable employees to bring their whole self to work and to flourish, grow and contribute to business performance. Initiatives are focused around healthy minds, healthy bodies, healthy homes and healthy work. Another example is Virgin Pulse, the wellness programme in North America which provides mental health education modules for monitoring daily health and tools for recognising co-workers.

This year, Mauri Maya, AB Mauri's business in Türkiye, organised a cancer prevention campaign for female employees and for female partners of employees. More than 50 women accessed a free breast screening.

AB Mauri also focuses on financial wellbeing through pension advice, financial education and the provision of financial benefits. A variety of financial wellbeing sessions were held across AB Mauri sites in south and

south east Asia, with webinars helping people to understand tax liability, saving plans and investments.

ABFI

Many ABFI businesses engage with employee assistance programmes to provide support, resources and promote mental health and wellbeing among employees.

ABFI businesses also have specific employee networks to support health and wellbeing. SPI Pharma has a wellness committee that meets and plans activities, as well as a healthy living programme.

Diversity, equity and inclusion (DEI)

Our businesses respect all individuals, striving to foster a sense of belonging among employees, and create workspaces that value cultural diversity. Through action and initiatives, they are working to build a diverse pipeline of talent, strengthen their high performing teams through equal opportunities and inclusive cultures.

AB Mauri

AB Mauri celebrates diversity across the 32 countries it operates in, with an approach designed to respond to the local cultures and traditions of the societies it serves.

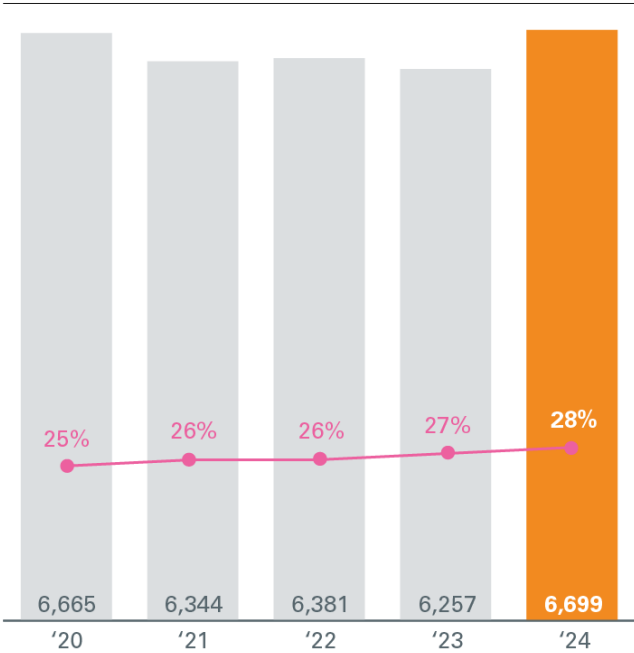
To ensure that diversity, equity and inclusion (DEI) are effectively integrated throughout the organisation, local businesses are empowered to determine which DEI aspects are most relevant to their specific contexts. Globally, AB Mauri has appointed two global DEI champions to leverage expertise, implement improvements and promote best practices across the businesses.

AB Mauri recognises that there is always more work to be done in advancing DEI, especially in the manufacturing and science, technology, engineering and mathematics (STEM) fields where gender imbalances persist in key roles. AB Mauri aspires to achieve greater female representation, particularly at the senior leadership level. It has committed to diversity in its recruitment, with an expectation to always have at least one female candidate for consideration. The business monitors its gender balance throughout the organisation, and the balance of candidates and hires in its top 100 recruitment. These KPIs are also reviewed by the senior leadership team monthly. As a result of this work, the business has seen a continuous and material improvement in the number of women in its top three layers of management.

AB Mauri is embedding DEI practices across its businesses, including family-friendly policies, awareness and education, unconscious bias training, external partnerships and support of charities.

AB Mauri Brasil has established an ethnicity group that has launched a mentoring programme for Black employees, with 24 participants across all sites. This programme also includes sessions on racial issues specific to Brazil. In Spain, board members have taken proactive steps to enhance leadership capabilities in DEI through an Inclusion and Diversity Awareness Workshop. AB Mauri North America has updated its family-friendly policies to provide enhanced paid parental leave for new parents and is planning to implement unconscious bias training.

Number of employees and percentage of women in workforce



ABFI

ABFI prioritises respect and inclusion across its diverse international workforce. Its November 2023 Engagement Survey highlighted inclusion as a key strength, with 82% of employees reporting a strong sense of diversity, equity and inclusion. ABFI has previously introduced a division-wide development programme called Leading Inclusively, designed to complement local initiatives already in place like SPI Pharma's Month of Respect and Ohly's World Day for Cultural Diversity.

Recognising the importance of gender representation in STEM fields, ABFI actively promotes inclusion and celebrates the diversity of its female workforce. This is reflected in its businesses, AB Enzymes and Ohly, where women comprise respectively 64% and 70% of the R&D departments with diverse backgrounds across regions from China, India, Germany, France, Italy, USA and Lebanon. Additionally, Fytexia has set specific objectives to promote gender diversity within its workforce. These goals include fostering equality in recruitment practices and integrating gender perspectives into research and innovation.

Engagement and development

Building the skills and experience of their people is vital for our Ingredients businesses. Alongside the need to provide ongoing development opportunities, they strive to ensure all employees are engaged and informed about the business they work in.

Learning and development

AB Mauri

AB Mauri prioritises on-the-job experience, complemented by coaching, mentoring and formal training. A global performance management toolkit for line managers sets the standards expected across the business. Individual high performance is boosted through various inputs, including a network of 'Talking Talent' leaders with specific functional expertise or competencies that are then leveraged across the businesses.



Lab colleagues at AB Enzymes, Rajamäki, Finland

Local businesses are responsible for tailoring learning approaches to their specific needs. Technical experts from AB Mauri's Global Technology Centre in Etten-Leur, Netherlands, developed a Technology Bakery Ingredients training programme. This modular programme, designed to build knowledge on specific bakery product applications, is available to all regions. Training is provided at foundation, specialist and master levels through a combination of online and in-person sessions.

ABFI

ABFI has enhanced its learning initiatives through its Development Academy, which successfully delivers structured virtual and classroom training and an on-demand learning platform. The platform was designed for individuals requiring quick recaps of essential skills or seeking to improve their soft skills and leadership abilities.

Its Study Sponsorship Programme, first launched in 2021, admits new participants annually and offers employees access to fully funded, higher level education where they have previously not had this opportunity in life, in order to further develop their careers. The candidates for the 2023/24 intake were from ABbiotek Health, Ohly, PGPI and SPI Pharma business units.

As part of its plan to increase awareness and understanding of ESG matters, both in employees' personal lives and within the business, ABFI's Head Office holds 'Sustainability Snack and Share' learning sessions.

These sessions aim to educate and engage employees on various ESG topics including plastic pollution, modern slavery and food waste. Similarly, PGPI has focused on developing its employees' understanding of its ESG priorities and activities to ensure alignment on key topics and to promote collaboration within the industry.

Employee engagement

AB Mauri

AB Mauri businesses engage with employees through periodic employee engagement surveys, town hall meetings, toolbox talks, newsletters and business and employee updates. They have conducted surveys in all regions and most countries over the last two years, with an average participation rate of 95%. Their average engagement scores of 83% perform well against an industry norm of 77%. The important part in all of these surveys is the follow up with the participants to create tangible action plans.

As part of this continuing programme of understanding the levels of engagement in their businesses, and how they can do even better, they are committed to conducting more surveys in the years ahead.

ABFI

ABFI's engagement survey provides insights to build a positive working environment through identification of strengths and areas for improvement. Sustainable employee engagement leads to actionable insights to target better productivity, performance and absenteeism, as well as improved individual fulfilment for all employees.

Its second employee engagement survey, carried out in 2023/24, showed an increase in overall engagement and improved scores in 14 of the 15 categories. The survey achieved a 93% response rate.

Case study - AB Mauri

Addressing the gender pay gap and diversity, equity and inclusion in Brazil



Participants in AB Mauri Brazil's mentorship programme

Since 2022, AB Mauri's business in Brazil has been working to address the gender pay gap by implementing gender-neutral hiring and promotion policies, as well as centralising salary decisions within its Reward department, to ensure equitable compensation. In 2023, results of gender pay gap reporting were communicated to all employees at all levels and the business is committed to providing annual updates and reports, supported by explanatory materials on its analytical approach.

They also focused on the development of Black talent through a mentorship programme that pairs 24 mentors and mentees across all company sites. Mentoring participants received four educational sessions on racial issues in Brazil.

The business in Brazil has also focused on accessibility for people with disabilities. At the Pederneiras plant, inspections were conducted to identify improvements for individuals with various disabilities, including auditory, visual, intellectual, physical or multiple disabilities. Enhancements such as designated parking spaces, access ramps, and adjusted heights of everyday tools like soap dispensers have been implemented.

People in our supply chains and surrounding communities - Ingredients



Our Ingredients businesses understand the importance of working conditions and labour standards within their supply chains and are committed to operating as responsible neighbours to their surrounding communities.



AB Mauri programme for unemployed people with bakery skills, Chile

Human and labour rights in our supply chains

Our Ingredients businesses adhere to the Group Supplier Code of Conduct, which also serves as the standard for managing human rights issues within their supply chains. Each business determines the most effective application of this Code for their specific raw material supply chains.

AB Mauri

Some AB Mauri businesses use desk-based screening to identify product categories and origins deemed to be at high risk of human rights issues, and supplier self-assessment questionnaires to assess working practices of higher risk suppliers. In 2025, a number of businesses will be rolling out the Sedex (Supplier Ethical Data Exchange) online database platform to support this work.

ABFI

ABFI uses desk-based screening processes to identify potential risks associated with human rights in its supply chains based on product origins. Where potential risks are identified, ABFI engages with relevant suppliers as appropriate to investigate further. Where necessary, ABFI proactively works with supply chain partners to provide training and education to create awareness of social accountability practices and standards. Some ABFI businesses use the Sedex online database for supply chain mapping and risk management.

In September 2023, ABFI launched an online training module for senior leadership members, as well as other relevant employees in different teams across the businesses, to help them understand the risks of modern slavery within the industry. The objective of this training was to equip its employees with knowledge and tools they can use to identify and address any relevant issues that may arise.

Supporting communities

AB Mauri and ABFI pursue opportunities to add value to communities beyond their business operations. Areas of focus across the global network include donating food and promoting education and inclusion.

AB Mauri

AB Mauri is actively engaged with local communities through various initiatives. In Colombia, the business partnered with a local foundation to launch several projects aimed at supporting young people, including those living with disabilities, in a deprived area near its site. This year, the business donated a recreational area for children and introduced a bakery skills training programme to equip young people with valuable skills and opportunities.

The AB Mauri business in Brazil collaborated with its distribution partners and a local NGO to distribute products made from cashew nuts grown by the NGO's members in an underdeveloped region of the country. Additionally, AB Mauri employees helped gather 1,000 food baskets for donation to families in the region. This project not only strengthened collaboration with distribution partners but also boosted employee engagement.

ABFI

Since 2022 ABFI business PGP International has collaborated with Yolo Food Bank, a US charity, to help prepare and pack food, providing meals to those in need.

This year, AB Enzymes invited students and children from the local community into its Darmstadt laboratory in Germany to explore enzyme production and promote careers in science, technology, engineering, and mathematics (STEM) disciplines, particularly aiming to improve gender diversity. The initiative encourages students to make career choices based on their interests, inclinations and strengths, rather than being influenced by gender stereotypes.

Case study - ABFI

Celebrating impact at the ABFI Recognition Awards



PGP International employee supporting a local food bank in Woodland, CA, United States

ABFI actively encourages its businesses to support their communities through initiatives like the ABFI Recognition Awards, which celebrate outstanding contributions to safety and environmental activities. Award recipients are rewarded with funds to donate to a charity of their choice within their respective communities.

Some recent examples of recipients across ABFI businesses include:

- PGPI continued its partnership with local NGOs by donating to EmpowerYolo, Young & Established, Cast for Kids and Evansville Rescue Mission.
- ABITEC chose VFW (Post 1621) and the local rotary club reflecting employee involvement and the connection many employees have to military service through relatives who are war veterans.
- Ohly selected West CAP, a community action agency that helps support low-income families in rural Wisconsin, a region in which many employees are community members of.

AB Mauri annual award celebrates Mauri Maya's earthquake response



AB Mauri Maya employees participating in the humanitarian effort to aid survivors and support affected communities in response earthquake in Türkiye in February 2023

Since 2022, AB Mauri has celebrated the community support efforts of its businesses through an annual award, chosen by a vote across its global site network each December. In December 2023, the award was won by its Turkish business Mauri Maya for its contribution in supporting communities affected by Turkey's devastating earthquake in February that year.

Mauri Maya and its employees mobilised to collect essential supplies like food, clothing and hygiene items and launched a fundraising campaign to gather more support. Mauri Maya also worked to ensure local bakeries and partners had the resources they needed to continue serving their communities, providing essentials like water and yeast that facilitated the production and distribution of free bread to communities. Extended payment terms were also granted to impacted businesses, easing financial burdens and supporting business continuity.

Through these comprehensive efforts, Mauri Maya as a business and as a team not only supported those directly affected by the earthquake but also demonstrated a strong sense of social responsibility and solidarity with the impacted communities.

Carbon and climate - Ingredients



AB Mauri and ABFI recognise that climate change poses risks to their operations and supply chains, while the transition to a low-carbon economy also brings potential opportunities.



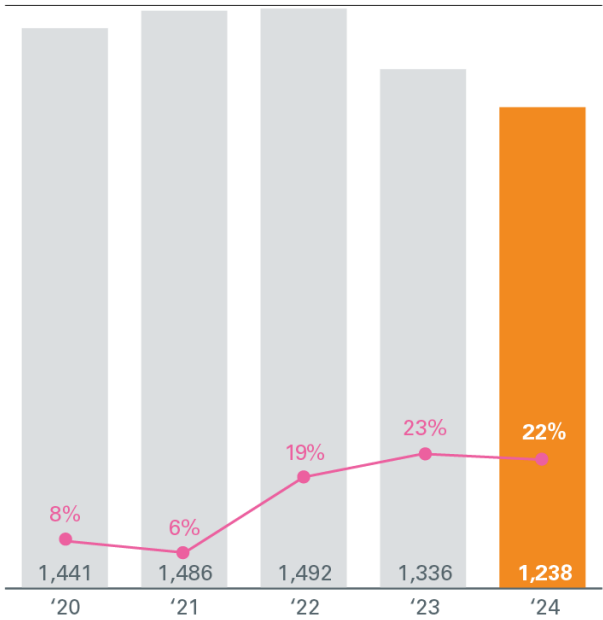
The anaerobic digestion facility at AB Mauri's yeast plant in Hull, UK

GHG emissions, energy and renewables

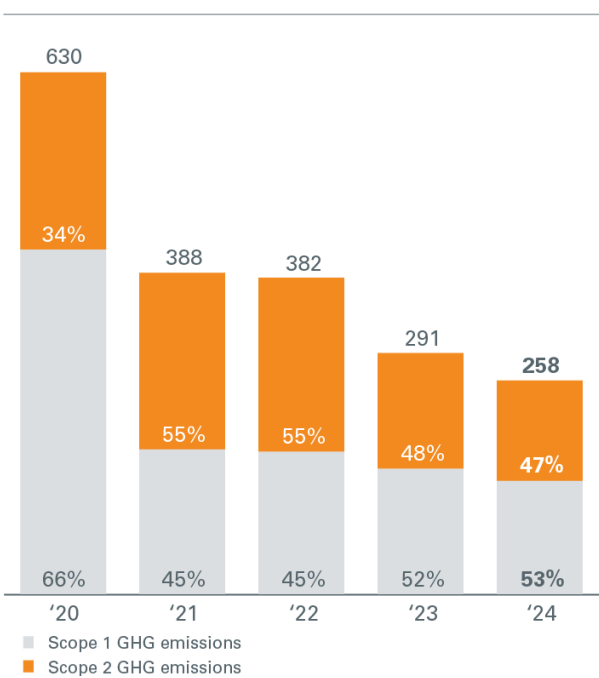
AB Mauri and ABFI are looking to improve the efficiency and resilience of their operations by producing more while using less energy and switching to renewables. They also seek to help customers reduce their GHG emissions. Many of their customers, particularly in the EU and UK, have ambitious GHG emission reduction targets, including Scope 3 emissions.

In 2024, the Ingredients segment saw a 7% decrease of total energy consumption compared with 2023, reducing from 1,336 GWh to 1,238 GWh in 2024. Of the total energy consumed in 2024, 22% was from a renewable energy source including biogas, wood and on-site solar. The number of sites with on-site solar energy has increased by 25% in 2024, and the segment contributes 18% of the Group's consumed self-generated renewable energy. The segment's Scope 1 and 2 (location-based) GHG emissions decreased by 11% compared with 2023.

Total energy consumed and proportion from a renewable source
(GWh)



Scope 1 and 2 (location-based) GHG emissions
(000 tonnes of CO₂e)



AB Mauri

AB Mauri’s approach to GHG emissions is governed by its Environment Policy, which requires its businesses to identify opportunities to mitigate emissions and to collaborate and share best practice across the division. AB Mauri does not have division-wide GHG emission targets, however its businesses are required to assess the carbon impact of any major capital investments, particularly those affecting Scope 1 or 2 emissions, and this is considered as part of the capital investments approval process.

To support these efforts, AB Mauri provides its businesses with an internally developed tool to forecast GHG emissions up to 2030. This tool factors in five-year capital plans, projecting the impact of various initiatives on emission levels, changes in production volumes and shifts in electricity grid carbon intensity where data is available. The global and regional results are reviewed twice a year by the global leadership team, led by the Head of Environment and regional managing directors.

AB Mauri focuses on reducing energy use and emissions by investing in energy efficiency and increasing the use of renewable energy. Its sites have access to a wealth of energy efficiency tools, specific guidance and a shared database of successful carbon reduction initiatives already implemented by other sites. Additionally, AB Mauri leverages a network of regional engineering and operational experts to evaluate and implement the most impactful new energy technologies. AB Mauri is subject to volatility in the cost of energy, particularly for electricity and natural gas. It has identified several opportunities to reduce both energy costs and emissions. Some of these include implementing energy efficiency measures, generating renewable energy on-site, and exploring fixed-term power purchasing agreements with renewable energy suppliers.

In 2024, AB Mauri used 1,030 GWh of energy, an 8% reduction compared with 1,116 GWh consumed in 2023. This is driven by a reduction of natural gas at its site in Italy as part of its energy saving strategy. This has been achieved by the installation of a new blower which has enabled the site to retire a natural gas turbine previously used for peak energy requirements and exporting electricity to the grid when not needed for own

operations. Renewable energy sources, including biogas, wood and on-site solar, accounted for 24% of the total energy consumed.

An increasing number of AB Mauri sites are purchasing renewable energy from external suppliers, with manufacturing sites in Brazil, Colombia and Spain all using 100% renewable electricity. AB Mauri businesses in Mexico and India achieved approximately 67% and 79% renewable electricity respectively during 2023/24. AB Mauri sites in Argentina now purchase 20% of their electricity directly from a renewable supplier. Some sites in Italy, Spain, the US and Mexico also have on-site solar installations. In some AB Mauri's yeast plants, biogas created from biological wastewater treatment is turned into a source of heat and/or power for operations where feasible.

AB Mauri's Scope 1 and 2 (location-based) GHG emissions decreased by 13% compared with 2023 from 243 ktCO₂e to 212 ktCO₂e. The emissions from biogenic carbon, which are mainly from its yeast fermentation process, have also reduced this year by 4%.

AB Mauri has undertaken a number of projects to decarbonise operations across its businesses and geographies. Its yeast plants are focused on energy efficiency, in particular advanced fermentation aeration technology, new highly efficient natural gas boilers, steam distribution optimisation and new heat recovery technologies. This year, its plant in Casteggio, Italy introduced a new biogas-powered boiler, using renewable energy from its anaerobic digestion process to generate low-carbon heat. Its plant in Tucuman, Argentina installed equipment that uses hot air from the yeast fermentation process to pre-heat water for cleaning, replacing steam produced with natural gas. This initiative has cut GHG emissions by close to 100 tCO₂e in 2024 compared with 2023, a saving that is expected to more than double once the technology has been fully rolled out.

In addition, at a plant in Palmira, Colombia, heat generated during the effluent treatment process is recycled to pre-heat incoming effluent to the required temperature, avoiding the use of steam produced using natural gas and resulting in a reduction of associated GHG emissions by over 800 tCO₂e per year compared with the same system without this technology.

AB Mauri has also acted to reduce fugitive GHG emissions that are not directly related to energy. In January 2024, its plant in Atzala, Mexico, installed a new system to eliminate emissions related to its anaerobic wastewater treatment process. The system collects and combusts gases emitted as organic matter decomposes, greatly reducing emissions of biomethane and other gases by converting them into biogenic carbon dioxide. The system is expected to reduce non-biogenic emissions by approximately 100 tCO₂e per year.

ABFI

During the year, ABFI consumed 208 GWh of total energy, which is a decrease of 6% compared with 2023, with 11% of the total energy used coming from renewable sources. Additionally, Scope 1 and 2 (location-based) GHG emissions dropped by 5%, decreasing from 49 ktCO₂e in 2023 to 46 ktCO₂e in 2024. This reduction was supported through equipment replacement at sites which has led to an increase in energy efficiency.

ABFI's approach to energy management, GHG emission reduction and renewable energy transition is guided by its Environmental Policy, which promotes energy efficiency and continual efforts to minimise environmental impacts. ABFI's businesses focus on heat recovery and invest in renewable energy sources. Currently five out of 10 production sites use renewable electricity, with two sites using 100% renewable

electricity. While there is no division-wide target for emissions reduction, each business develops its own strategies and processes, allowing each business to tailor its efforts to the specific needs and opportunities of its local environment.

Ohly is working to reduce its Scope 1 and 2 emissions through decarbonising its Hamburg site. This includes ongoing efforts to switch energy sources from natural gas to electricity where feasible. Additionally, Ohly has installed electric vehicle charging stations to help employees reduce their carbon footprint.

Scope 3 GHG emissions

AB Mauri

AB Mauri is working to calculate a full Scope 3 carbon footprint, which is expected to be primarily driven by emissions from purchased goods and services. AB Mauri purchases large quantities of raw materials, including molasses and ammonia for yeast production, as well as a wide range of agricultural ingredients, specialised additives and other inputs for its bakery ingredients business. Other material categories are likely to include GHG emissions related to upstream energy and capital expenditure.

ABFI

At ABFI, AB Enzymes and Ohly work with a consultant to calculate their Scope 3 emissions. These Scope 3 assessments help to identify opportunities for GHG emission reduction activities and inform their GHG emissions reduction strategies across their value chains.

Other ABFI businesses are calculating their Scope 3 emissions, recognising that understanding where emissions occur within the value chain and identifying the most material categories is crucial for implementing effective reduction activities with value chain partners. Fytexia, PGPI, and SPI Pharma are building in-house capabilities to accurately calculate and account for these emissions, developing strategies aimed at reducing their overall Scope 3 footprint.

Carbon enablement

Some Ingredients businesses provide products and services that have the potential to assist others in reducing their carbon emissions, often referred to as carbon enablement. Carbon enablement is integral to these businesses' customer proposition and a key focus for investment and innovation.

AB Enzymes, an industrial biotech company that specialises in the development of enzymes used in multiple industries for various applications, has enablement at the core of its purpose. Enzymes are biological catalysts that essentially accelerate biochemical reactions, making them a very effective alternative to petrochemical-based products.

AB Enzymes has developed a number of innovative products that enable emissions reductions in comparison to using traditional products, with no impact on product performance, such as ECOPLULP®.

Case study - AB Mauri

Heat recovery projects



AB Mauri Maya's yeast plant in Bandırma, Türkiye

A core part of AB Mauri's GHG emissions reduction strategy is investing in energy efficiency, particularly at its yeast production plants. Yeast production requires both electricity and heat, primarily to create steam, which is used throughout the process to keep equipment sterile. Recovering heat from this production process to use in another is a key way energy use can be reduced.

At its site in Bandırma, Turkey, a state-of-the-art two-stage economiser was added to an existing steam boiler in 2024. The economiser now takes flue gas waste heat from the boiler, which was previously lost, recycling it to heat cold water coming into the boiler. The project reduced the site's emissions by approximately 200 tCO₂e in 2024. Another significant investment in improved evaporator technology has enhanced overall site efficiency by improving co-products processing. This contributes to an annual reduction in emissions of over 1,300 tCO₂e.

Case study - AB Mauri

Casteggio emissions reduction



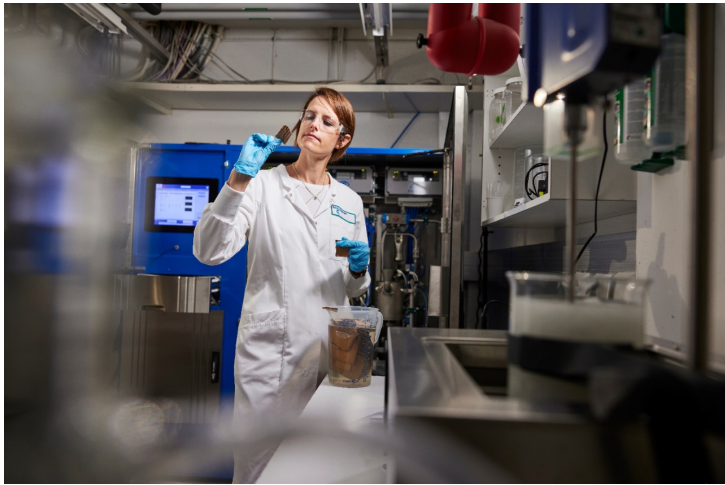
Energy efficiency equipment at AB Mauri's factory in Casteggio, Italy

AB Mauri's yeast plant in Casteggio, Italy, is decarbonising its operations through the implementation of various technologies and initiatives. The focus has primarily been on improving energy efficiency through advanced fermentation aeration technology, high-efficiency natural gas boilers, steam distribution optimisation and new heat recovery systems.

In 2024, the plant introduced a new boiler that uses renewable biogas, generated as a by-product of its anaerobic digestion water treatment process, to supply low-carbon heat. These efforts have reduced carbon intensity (tCO₂e/tonne of product) by 9% since 2018, excluding changes in grid electricity carbon intensity. Further reductions are expected in 2025 as additional energy efficiency measures, including rooftop solar panels, are implemented, allowing for the decommissioning of a natural gas turbine.

Case study - AB Enzymes

Enzyme carbon enablement ECOPULP®



Lab colleague testing enzymes for pulp and paper at AB Enzymes, Finland

The pulp and paper industry faces numerous challenges in resource usage and efficiency, as well as reducing emissions. Cellulase enzymes, including AB Enzymes' ECOPULP®, are seen as part of the solution to these and many other challenges.

Cellulase enzymes are responsible for the degradation of cellulose structures, which are a major component of plant cell walls and thus wood pulp, the primary material in paper making. Cellulase enzymes impact paper and pulp milling in three key ways:

- **fibre modification:** cellulase enzymes can help modify the cellulose fibres in wood pulp, allowing for efficiency in the mechanical refining processes;
- **reduced refining time:** by breaking down cellulose fibres, cellulase enzymes may reduce the time needed for refining; and
- **improved drainage:** cellulase enzymes may improve the drainage of water from the pulp during the refining process, meaning less energy is needed for water removal and drying processes.

Findings show that the addition of AB Enzymes' ECOPULP® cellulase enzymes to non-integrated paper mill production over a 72-hour period demonstrated immediate production benefits on the paper fibre. This included a 20% reduction in the refining energy required, which equates to a potential emissions reduction of 15.6 kg CO₂e/kWh for one tonne of enzyme treated pulp compared to untreated pulp in a paper refining process.

Case study - AB Enzymes

Enzyme carbon enablement - BIOTOUCH® and ECOSTONE®



Lab colleague testing enzymes for pulp and paper at AB Enzymes, Finland

AB Enzymes, an industrial biotech company that specialises in the development of enzymes used in multiple industries for various applications, has enablement at the core of its purpose. Enzymes are biological catalysts that essentially accelerate biochemical reactions, making them a very effective alternative to petrochemical-based products. AB Enzymes has developed a number of innovative products that enable emissions reductions with no impact on product performance.

For instance, BIOTOUCH® is a washing powder incorporating a specialist enzyme developed by the business, that allows the average washing temperature to be decreased by 13°C. This can potentially lower electricity consumption by about 260 kWh or 120 kg of CO₂e per 1,000 washes¹.

Another product, ECOSTONE®, reduces the water temperature needed for biopolishing cotton textiles, a process that cleans the surface and removes fluff, from 50°C to 30°C. This can result in energy savings of approximately 350 kWh or 360 kg of CO₂e for every tonne of cotton processed, a significant reduction given the carbon-intensive nature of textile processing².

1. Calculations are based on the emissions saving from the reduced energy consumption when using an average detergent and washing machine type with 164 cycles per household in Central Europe. The use of the enzyme results in an average reduction of 13°C in washing temperature compared to when using an average detergent, which equates to a reduction of 258 kWh electricity and 119kg avoided emissions per 1,000 washing cycles.

2. Calculations are based on the emissions savings from the reduced energy consumption in the South East Asia region, which is the largest cotton producing region. The use of the enzymes results in an average reduction of 20°C in water temperature, which equates to a reduction of 350 kWh and 360 kg avoided emissions for every tonne of fabric processed compared to untreated biopolishing processes.

Case study - AB Mauri

Helping customers with climate change resilience



An AB Mauri colleague at the Global Strain Development Center in St. Louis, United States

AB Mauri is developing solutions to help its customers adapt to the challenges posed by climate change. A key example of this effort is the development of yeast strains for bioethanol production that can perform efficiently at higher temperatures.

Fermentation typically takes place in temperatures between 30-34°C. Temperatures higher than this can cause heat stress to yeast cells, which reduces fermentation efficiency and impacts overall yield (i.e. the amount of bioethanol produced for a given quantity of input).

As ambient summer temperatures rise with climate change, bioethanol producers require increasing amounts of energy to cool the fermentation process to ensure decent yields. To address this issue, AB Mauri has launched a new product called Summit Olympus in Europe, India and other markets which operates at higher temperatures bands, reducing costs for cooling compared to traditional methods and maintaining optimal yields.

Water - Ingredients



Water is vital to our Ingredients businesses, in particular AB Mauri which relies on water as the medium in which yeast cells grow and reproduce.



A wastewater treatment plant at SPI Pharma's manufacturing site in Lewes, Delaware, United States

Our Ingredients businesses aim to minimise their impact on local water resources, communities and biodiversity, by using water efficiently and returning it safely to the environment after use.

Water abstracted across the Ingredients segment decreased by 8% in 2024, reducing from 17 million m³ in 2023, to 16 million m³. Of the amount abstracted in the year, 80% is attributed to AB Mauri which continues to reduce its need for water through targeted water management initiatives.

The amount of wastewater generated across the Ingredients segment also decreased in 2024 by 4% compared with 2023, reducing from 14.3 million m³ to 13.7 million m³. While contributing only 19% to the segment's total wastewater in 2024, ABFI has decreased the amount of wastewater generated by 24% compared with the previous year, which has led to the segment's overall reduction.

AB Mauri

AB Mauri's total water abstraction in 2024 was 13 million m³. AB Mauri's water strategy focuses on reducing water use and reusing where possible, and recycling after treatment where feasible. The business assesses water risks affecting each site and ensures that any water returned to the environment is managed as safely as possible.

To support this strategy, the division has built significant in-house capabilities in water usage and wastewater management formalised into guidance documents, reporting tools, procedures and standards that facilitate the management of all water-related matters. A Global Water Champion works with a group of regional water leads to implement this strategy.

Since 2010, AB Mauri has invested \$120m in wastewater treatment. Many of its production facilities have complex on-site effluent treatment plants that include biological processes, evaporators and reverse osmosis membrane systems that can produce reusable water and useful co-products. The selection of technologies addresses the local aquatic sensitivities and water quality objectives. At a minimum, sites design their treatment systems so as not to disrupt any downstream municipal processes.

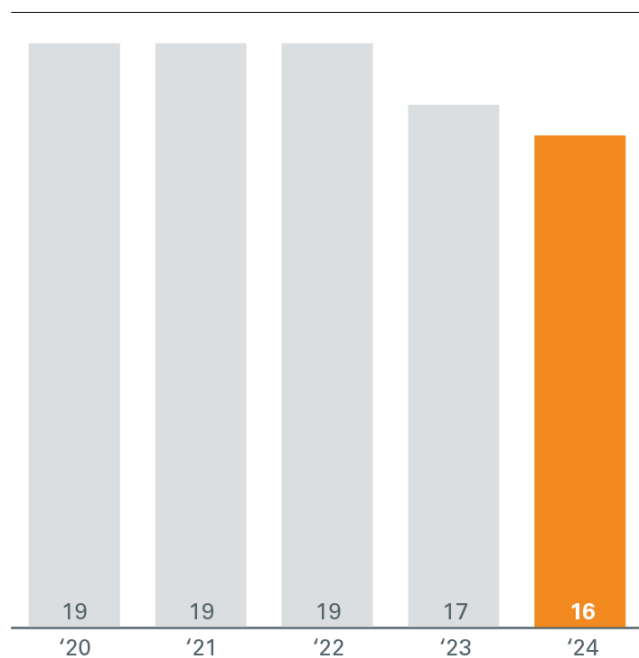
The division is also focused on reducing its water intensity ratio (the quantity of water consumed per tonne of product, excluding by-products) over time. Initiatives include large, capital-intensive projects such as the installation of new cooling towers in the Tucuman yeast factory (see the case study below).

It has also completed many smaller, incremental improvement projects, such as at its yeast site in Chiplun, India, which saved 5% of the site's total annual water consumption through recycling water after treatment with membranes. This combination of approaches has enabled AB Mauri to reduce its water intensity ratio by more than 25% since 2017/18.

Finally, AB Mauri has developed its own tool to help its sites identify current water supply risks and those calculated in 2030 and 2050. The tool makes use of data from the WWF Water Risk Filter and Aqueduct, as well as the sites' own experience and knowledge of local mitigation and adaptation measures to assess overall risk levels. The tool considers water supply risk in terms of water stress risk, regulatory risk, reputational risk and water quality risk.

Total water abstracted

(million m³)



The risk assessment is combined with a forecast for water use, incorporating any projects the site has that will reduce or increase water use. The tool is completed annually at all sites with material water use. The results are reviewed and presented to AB Mauri's global Manufacturing Leadership Team, Environment Leadership Team and Global ESG Steering Group.

AB Mauri has also developed a tool to help sites identify their flooding risk up to 2050. The tool makes use of data from the [WWF Water Risk Filter](#) and [Aqueduct](#), as well as the sites' own experience and knowledge of local mitigation and adaptation measures to assess overall risk levels and identify candidates for further assessment.

ABFI

ABFI uses benchmarks to identify opportunities for improvement and to encourage its teams to find ways to increase efficiency, such as by recirculating water.

Additionally, effluent wastewater is treated before discharge and ABFI monitors the oxygen demand of wastewater effluent across its operations. This information and regular monitoring are fundamental to ensure its operations remain compliant with regulation.

ABFI's ABITEC Corp Janesville site has invested in a distributed control system to reduce the water needed to cool its chemical reactors. It works by controlling the contact time to allow more heat to be absorbed by the water.

Case study - AB Mauri

Cooling towers reducing water abstraction at Tucuman



AB Mauri's yeast site in Tucuman, Argentina

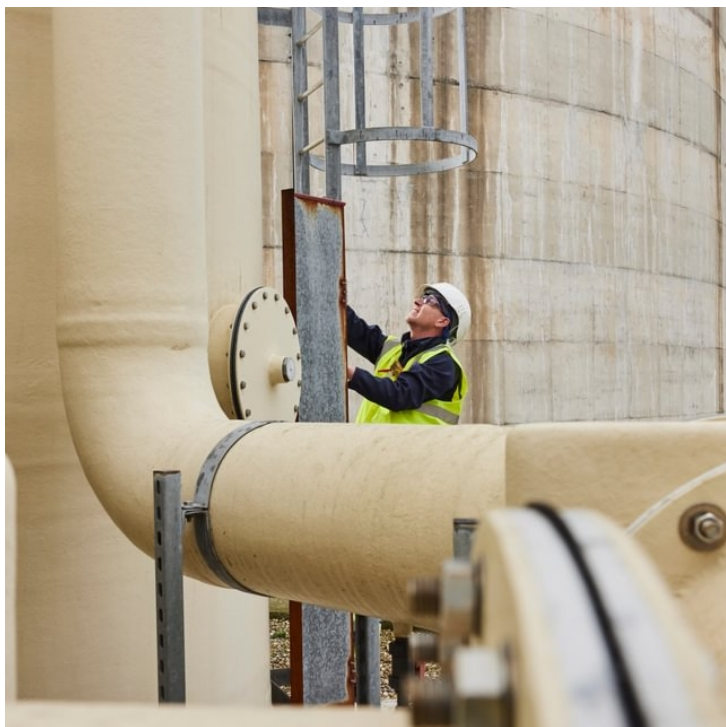
Cooling requires significant water use in yeast manufacturing. At AB Mauri's yeast site in Tucuman, Argentina, river water was previously used to cool equipment before being returned to the river, a practice known as 'once-through cooling'. This practice meant the site was reliant on river flows that had become increasingly unreliable and required treatment before use, which incurred additional costs.

In 2018, the site decided to invest in eight cooling towers to replace the use of once-through cooling, dramatically reducing water abstraction, increasing the resilience of the site and reducing the impact on the environment. The site also reduced its net energy requirement as the energy required for cooling towers was offset by reduced energy for river water pumping. Over this time, the site has also installed six cooling towers which have reduced the site's surface water abstraction by more than 60% compared with the baseline in 2017/18. A further two cooling towers will come online in 2025, eliminating the use of surface water.

Waste and packaging - Ingredients



Our Ingredients businesses are committed to protecting finite resources and reducing the waste generated by their operations.



Anaerobic digestion plant at AB Mauri's site in Hull, UK

Waste and circularity

Across our Ingredients businesses, waste streams are increasingly repurposed for new uses and markets, and if waste cannot be eliminated or repurposed, it is recycled wherever possible.

In 2024, there was a 55% decrease in the generation of all waste materials across the segment from 70 kt the previous year to 31 kt. This significant reduction is primarily due to the AB Mauri site in Vietnam ceasing yeast production early in 2023, which greatly reduced the amount of waste generated by the business.

Of this waste, 67% of ABFI's and 77% of AB Mauri's total was recycled, recovered, reused or sent for another beneficial use. In addition to reducing overall waste, the businesses regularly explore positive ways to use the waste created, with examples in 2024 including fertilisers, animal feed and recycling of paper and plastics.

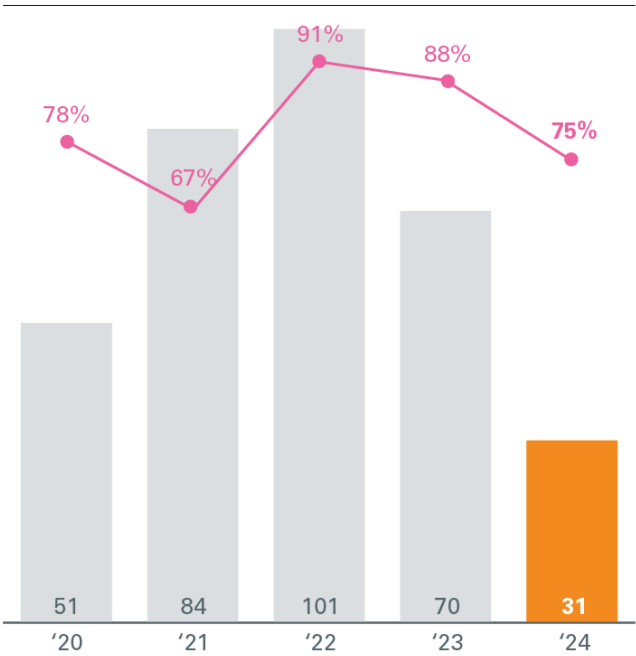
AB Mauri

AB Mauri aims to reduce waste by continuously improving the efficiency of its operations, such as through the smart design of its production lines. For example, some of its operations collect the waste created during the bakery ingredient manufacturing processes to sell as by-products in several locations.

AB Mauri has also formed a co-products technology team with a mandate to evaluate and develop a portfolio of technologies to better exploit these opportunities, overseen by a monthly steering group chaired by its global CEO.

An example of an effective use of one of these co-products would be vinasse, a part of AB Mauri's yeast process which is used to create fertiliser for agriculture and highly prized ruminant animal feed. Husks from its soya milling operation in Royston, UK, are sold for processing into animal feed, helping the site to maintain zero waste to landfill.

Total waste generated and proportion of waste sent for recycling or other beneficial use
(000 tonnes)



By repurposing waste streams into valuable co-products, the businesses are also displacing industrial processes. For example, a number of its businesses repurpose waste as an ingredient in organic fertiliser and others send waste for conversion into compost, replacing nitrogen-based fertilisers that rely on carbon intensive manufacturing processes.

Biogas from yeast wastewater treatment processes on-site is also captured and recycled back into operations, replacing natural gas as a source of heat and electricity generation.

ABFI

ABFI businesses are focused on eliminating waste and promoting recycling wherever possible. Training and education play a key role in raising awareness and understanding of waste management opportunities across operating activities. Each business is responsible for developing waste management initiatives tailored to their specific operational needs. These initiatives focus on elimination, reduction, reuse, and recycling, and often involve collaboration with value chain partners to convert waste into usable raw materials. For example, PGP International monitors its efforts to eliminate waste and employs a risk assessment process to track continuous improvement projects. Another example is SPI Pharma's innovative container tilting system at its facility in Septèmes, France. Using gravity to tilt and empty containers allows the site to reduce waste, cut costs and improve safety.

Case study - AB Mauri

AB Mauri site in Brazil achieves significant reductions in waste



AB Mauri's yeast site in Sorocaba, Brazil

AB Mauri's business in Brazil has reduced its waste to landfill through several initiatives that aim to repurpose waste streams into value-added new products.

At its site in Sorocaba, which focuses on egg-based products for its Sohovos brand, AB Mauri has developed processes to repurpose both of its main types of waste, empty eggshells and wastewater treatment sludge. The empty eggshells are cleaned, dried and crushed at the site into a fine powder, which is used as fertiliser by different partners.

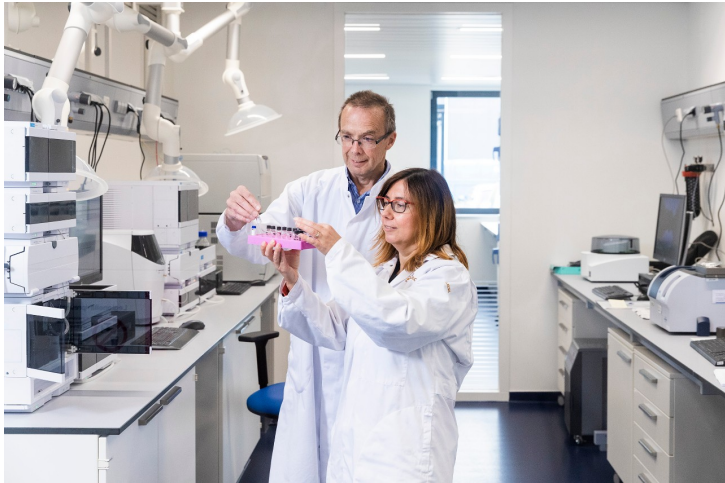
To dispose of the viscous mix of water and waste solids, the Sorocaba site has been working with a partner in January 2024 who incorporates it as an ingredient in organic fertiliser products, replacing the previous practice of paying a contractor to transport and dispose of it through landfill. The two initiatives have helped the site drive down its landfill waste to zero.

Elsewhere in Brazil, waste previously sent to landfill has been repurposed for use in biomass boilers to create low-carbon energy for manufacturing operations, with residual waste sent to asphalt manufacturers. These initiatives form part of a programme that has enabled an overall reduction in waste to landfill in Brazil from over 40% in 2019/20 to just below 7% in 2023/24.

Food safety and nutrition - Ingredients



The quality and safety of products are critical to our Ingredients businesses, alongside developing healthier and more nutritious products.



AB Mauri Chromatography Analysis, Global Technology Centre laboratory, Etten-Leur, Netherlands

Food safety

Our Ingredients businesses have robust processes and policies for their operations and supply chains. They rely on a well-established process for identifying emerging food safety and regulatory risks. These risks are proactively evaluated and managed through their risk registers, which are reviewed and updated at least twice each year with all regions.

Regional, territory, country and site senior management are responsible for ensuring that formal reviews are conducted at least annually and are tracked to demonstrate a commitment to continuous improvement.

AB Mauri

AB Mauri aims for zero food safety incidents or recalls and full customer satisfaction through a 'Right First Time Product Quality' approach. It uses risk-based food safety and quality (FSQ) systems focused on assessing, mitigating and controlling potential hazards at production facilities and in the supply chain. Its FSQ systems, scorecards and toolkits including procedures, guidance and ways of working, reinforce food safety activities at all levels.

All activity is governed by the AB Mauri Global Food Safety Policy. The FSQ steering group sets the overall approach and direction, with strategy delivered through the FSQ leadership team (regional FSQ heads). The Global Head of Food Safety works with the FSQ leadership team to build capability through toolkits, scorecards and performance monitoring.

AB Mauri relies on a strong internal food safety culture and robust risk management systems, with annual formal management reviews of FSQ management systems. Risk-based food safety and quality systems focus on the assessment, mitigation and control of potential hazards at its production facilities and throughout its supply chain. FSQ systems, scorecards and toolkits strengthen its capabilities and spread best practices implemented by its FSQ professionals. All AB Mauri FSQ toolkits aim to meet the requirements of one of the Global Food Safety Initiative (GFSI) recognised standards, such as FSSC 22000, Safe Quality Food (SQF), British Retail Consortium Global Standard (BRCGS) and IFS (International Featured Standard).

Since 2019, AB Mauri sites have been participating in World Food Safety Day activities, with the number of sites participating increasing each year. Many AB Mauri sites join in activities to raise awareness and educate employees, sometimes extending activities to employees' families and local community organisations and schools.

ABFI

Food and product safety are paramount to ABFI, and maintaining high standards is a central focus of its business operations. To uphold this commitment, ABFI has established robust governance structures that enhance product safety performance across the division. At divisional level, ABFI holds product safety working group sessions that facilitate best practice sharing on safety initiatives across businesses. Additionally, each business has dedicated internal teams that manage safety performance tailored to their specific product portfolios.

ABFI undergoes regular assessments from third-party auditors to ensure compliance with recognised product safety standards including the GFSI and certifications such as FSSC 22000, SQF, BRCGS and IFS. In the rare event of a food safety incident, ABFI collaborates with RQA, its product safety consultant, to review and test its business continuity and crisis management plans, reinforcing its commitment to maintaining product quality and safety excellence.

ABFI's product safety and quality approach extends to its supply chain, incorporating external auditing and food safety assurance programmes that assess supplier compliance with food safety standards. Strong working relationships with suppliers, along with robust testing protocols and rigorous risk assessments, are fundamental components of ABFI's operations.

Nutrition and health

Our Ingredients businesses develop and produce a range of ingredients that aim to offer health and wellbeing solutions for customers in the food and beverage, functional food, nutraceutical and pharmaceutical industries.

ABFI's business activities are focusing on fostering healthy lives and promoting wellbeing across all ages. Its diverse product portfolio aims to support good health and nutrition. These products include PGP International's natural ingredients designed to replace artificial food products and its lipids manufacturing business ABITEC's nutritional ingredients for food, drinks and supplements.

ABFI also produces scientifically supported active ingredients for healthcare products, such as its yeast and integrated fermentation technology provider ABbiotek Health's ABB C1™ product, which is designed to enhance the immune system's ability to respond quickly and effectively to viruses, allergies and infections.

Case study - ABbiotek Health

Tetra Pak allows for microbial preservation



Lab colleague at ABbiotek Health, Barcelona

ABbiotek Health specialises in developing postbiotics for supporting human bodily functions such as immune system support and metabolic activities. These non-living cell components produced by probiotic bacteria can be added to food and beverage products for human consumption. In collaboration with Tetra Pak, ABbiotek Health has introduced innovative postbiotic food solutions that can be easily integrated into the production of ultra-high temperature (UHT) products by adding a powder during the mixing process. This collaboration opens up new opportunities for food producers to offer a wider range of fortified products with postbiotics, including beverages, dairy products, ice cream and cheese.

Case study - AB Mauri

Balancing delight and nutrition in sweet baked goods



Preparation for sensory evaluation of sweet bakery products

AB Mauri has successfully developed solutions for its sweet bakery portfolio that enables up to 100% sugar reduction. Across its cake, muffin and doughnut product categories, AB Mauri is also improving the nutritional profile of its sweet bakery goods by increasing the amount of fibre, aiming to help consumers reach their recommended daily intake. This facilitates production of healthier alternatives that prioritise taste and nutritional content, contributing to a shift towards healthier consumption patterns.

AB Mauri has also prioritised fat reduction in sweet bakery goods, notably in doughnuts. This not only enables the production of a doughnut with reduced fat content but also increases the fibre content, further enhancing its nutritional value.

Agriculture and farming practices - Ingredients



Our Ingredients businesses create products from a range of agricultural commodities and support the adoption of responsible farming practices.



A harvested rice field, California, United States

Biodiversity and land use

Our Ingredients businesses source agricultural commodities that are linked with potential risks related to deforestation and biodiversity loss, such as palm oil. AB Mauri and ABFI's purchasing practices are informed by awareness of these risks, and both will be directly and indirectly impacted by the EU Deforestation Regulation (EUDR).

AB Mauri

AB Mauri has identified palm oil as a high-risk commodity due to its association with deforestation. As part of the Group membership of the Roundtable on Sustainable Palm Oil (RSPO), the business is committed to sourcing palm oil that is physically certified to RSPO standards. Where possible, AB Mauri will purchase RSPO-certified palm oil from local markets. However, in instances where certified palm oil is unavailable, the company will acquire RSPO credits. These credits are purchased through AB Mauri's sourcing partner AchieveNow which maintains direct relationships with RSPO-certified producers globally and conducts due

diligence. More than 95% of the palm oil purchased by AB Mauri UK and Ireland business is physically certified to RSPO standards.

AB Mauri's UK and Ireland business operates to the standards set out in its responsible soya sourcing policy and is a signatory to the UK Soy Manifesto, an industry commitment to ensuring all soy entering the UK is deforestation and conversion-free by 2025. The policy includes commitments to sourcing deforestation and conversion-free, non-GMO, fully traceable soy, requiring direct suppliers to adopt and cascade the same commitment, and integrating these requirements into supplier contracts. More than 99% of the business's soy products were sourced from a soy crop grown in Canada for the calendar year 2023, which can be traced and verified as deforestation and conversion-free. The business submits a progress report to the [UK Soy Manifesto](#) detailing progress against the Manifesto commitments on an annual basis.

AB Mauri is aligning its operations with the objectives of the upcoming EUDR to minimise the risk of contributing to deforestation or forest degradation. The business is currently mapping its products and inputs against the regulation's requirements and is engaging with suppliers to address them.

ABFI

Some of ABFI's businesses utilise Sphera Risk, an online risk management procurement tool to evaluate the environmental risk associated with the materials they purchase and the locations they source from in their supply chains.

ABFI is aware of the risk of deforestation associated with global palm oil supply chains. To mitigate this risk, AB Enzymes considers alternative materials to eliminate its dependency on palm, while ABITEC, which sources a limited quantity of palm-related raw materials, has been using RSPO-certified palm oil ingredients under a mass balance supply chain model since 2016.

Another ABFI business, PGP International, procures rice and rice flour from California and the southern states of the US. The business participates in the USA Rice Millers' Association, an organisation advocating for environmental responsibility, biodiversity preservation, and conservation efforts as a part of the USA Rice Group.