

focus paper

Materiality analysis
Issue April 2024

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Materiality analysis

International guidelines for sustainability reporting such as The Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC) or the EU Corporate Sustainability Reporting Directive (CSRD) require a materiality analysis as a basis for non-financial reporting (sustainability reporting) with the aim of implementing a standardized analysis to make these reports more comparable. The materiality analysis helps to link the topics identified as material for the company and its stakeholders with the report content and thus also the possibility of setting sustainability priorities and targets for the company in order to improve its performance in the area of sustainability.

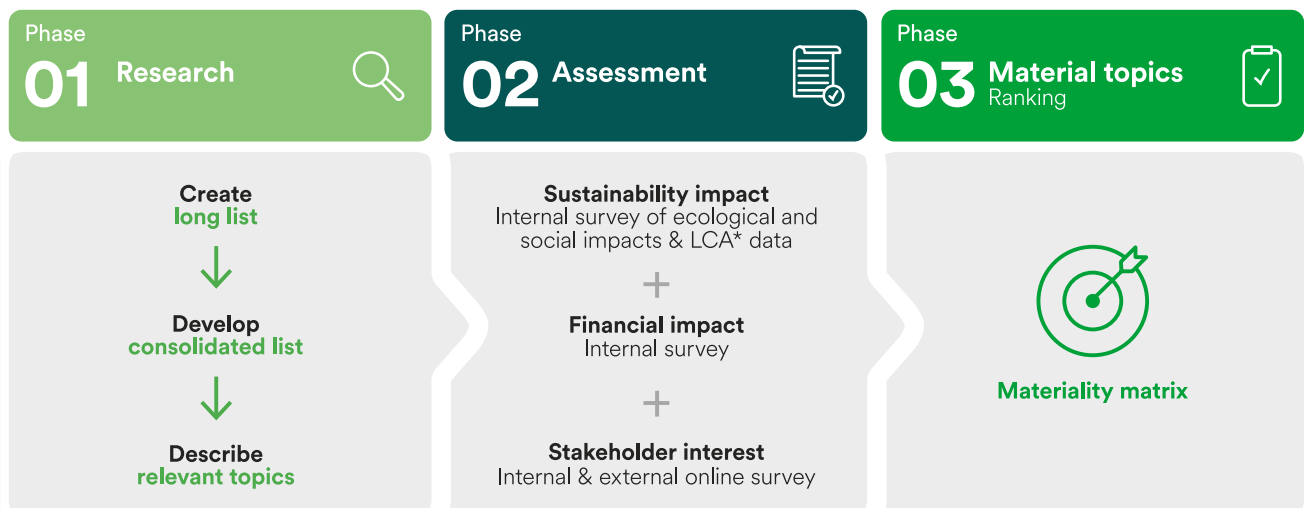
In 2019, the EU Commission introduced the concept of “double materiality” requiring the assessment of risks and opportunities from two perspectives: firstly, from a financial perspective and, secondly, in terms of how they affect their business and the impact they have on people and the environment.

Lenzing’s materiality analysis 2021

The regular update of the materiality analysis is an integral part of Lenzing’s sustainability strategy. In 2017, Lenzing presented its new sustainability strategy “Naturally Positive”. In the run-up to this, a comprehensive materiality analysis was carried out for the first time in 2015. In 2021, this materiality analysis was updated and expanded. For the first time, a so-called double materiality analysis was carried out. This means that both the influence of the environment on the company and the influence of the company on the environment were examined and supplemented by the financial consideration of these influences.

Development of materiality analysis

The new materiality matrix of the Lenzing Group was developed in three phases.



* LCA = Life cycle assessment

Figure 1: Development of materiality analysis

The **first phase** was dedicated to defining the potential material topics. Around 300 internal and external topics and trends in the environmental, social and governance (ESG) domain were identified for the present and future. This list of topics was divided according to ESG criteria and then summarized, which yielded the 16 potential material topics (i.e. the shortlist).

The **second phase** was to prioritize the potential material topics with the help of external and internal stakeholders. For this purpose, a stakeholder survey and an impact analysis were carried out in order to be able to compile a topic ranking in the third phase of the process. For each of these topics, a brief description of the impacts, risks, opportunities, expectations and current situation was prepared and a questionnaire was created. This questionnaire was sent worldwide to employees at different levels, the Supervisory Board, investors, suppliers, customers, partners from the value chain, brands, insurance companies and the media. The feedback received from stakeholders regarding the relevance of the different topics, have been considered in the final materiality matrix.

In addition, an impact analysis of these topics was carried out with 40 employees from various areas who are also involved in sustainability reporting on ecological and social impacts. These experts were selected from the areas of business management, risk management, sustainability, finance, etc.

In the **last phase**, the impact analyses and the stakeholder survey results have been compiled to the final materiality matrix, which allowed ranking the issues and thus defining the material issues for the company. All of the assessments explained below were individually rated on a scale of 1 (very low) to 6 (very high).

Environmental and social & governance impact analysis

Environmental impact analysis

The ecological impacts have been assessed by Lenzing internally by using data from existing Life Cycle Assessments (LCAs). Specific, relevant LCA indicators were assigned to each topic on the shortlist. Thus, the respective share of the total environmental impact of Lenzing's production activities can be calculated for each topic together with the degree of severity. Each aspect of severity (scale, scope, irreversibility) was also assessed qualitatively by a small survey of representative experts. The results are shown in figure 2.

Social & governance impact analysis

The social and governance related impacts have been evaluated by means of an internal survey involving the participation of 16 internal experts (figure 2). The final assessment was derived from the participants' average assessment for each topic (figure 3) and compiled as the maximum out of the three assessment categories (scale, scope, irreversibility).

Topic 1		Assessment		
Topic description		Impact on life quality	Number of people affected	Irreversibility
Advocacy & engagement	What Engaging in dialogue means respecting stakeholders, making Lenzing's expertise and knowledge available, and taking the opportunity to learn from partners' perspectives. The complex global challenges we are facing call for a collaborative approach to designing systemic solutions, and to foster trust and long-term relationships.	1 - very low impact; 6 - very serious impact	1 - only individuals affected; 6 - all stakeholders affected	1 - no irreversible effects; 6 - serious irreversible effects
	Relevance As a global sustainability pioneer, Lenzing also feels obliged to advocate sustainable development by contributing to, for example, legislative processes or industry standard enhancements. This has to be done through cooperation not only in industry associations and non-governmental organizations (NGOs)/non-profit organizations (NPOs) but also on supranational level (EU).	1	1	1
		Very low or no impact	Impacts only affect individuals	No long-term or irreversible effects

Figure 2: Screenshot of internal survey for social and governance topics

For both, the environmental and social & governance assessments, some effects will certainly occur due to impacts linked to the relevant topics, which is why the likelihood was defined as 100 percent.

Results of environmental, social & governance impact analysis



Figure 3: Results environmental, social & governance impact assessment

Financial impact analysis

All topics have been assessed according to their potential financial impact within an internal expert survey involving 12 participants and using the following assessment categories (figure 4). The participants were presented with scenarios of financial impacts and risks. Only impacts and risks with a potential financial impact of more than EUR 500,000 were included. The potential financial impact multiplied by probability equals the expected financial impact per topic.

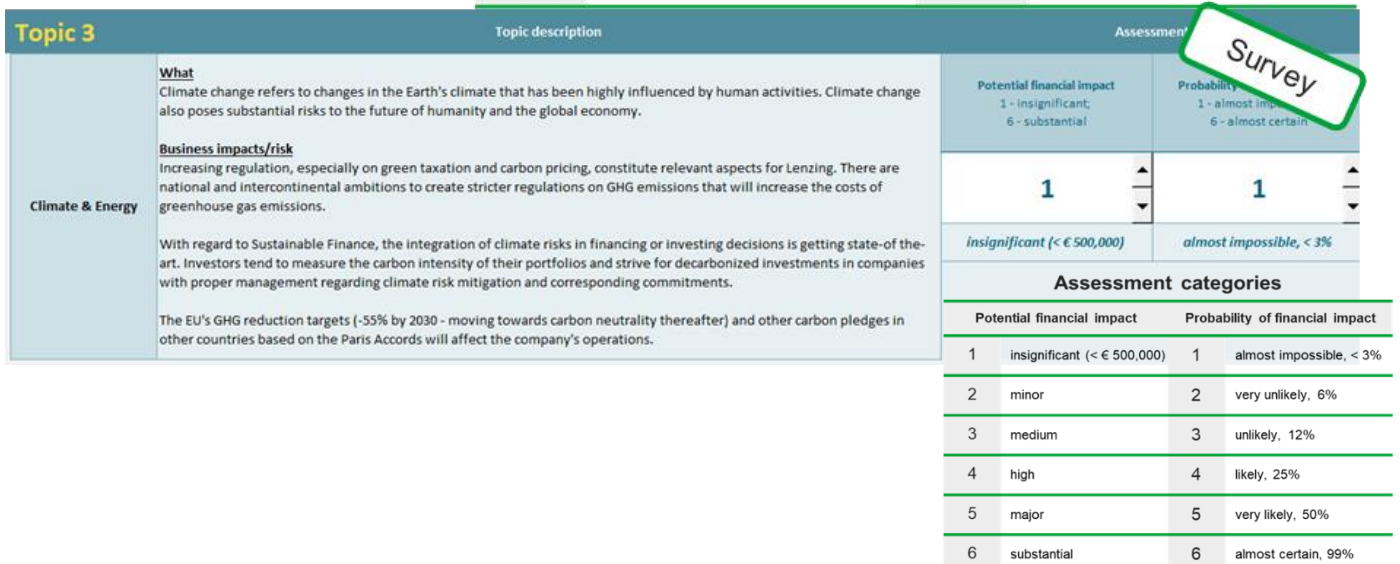


Figure 4: Screenshot financial impact assessment

Results of financial impact assessment

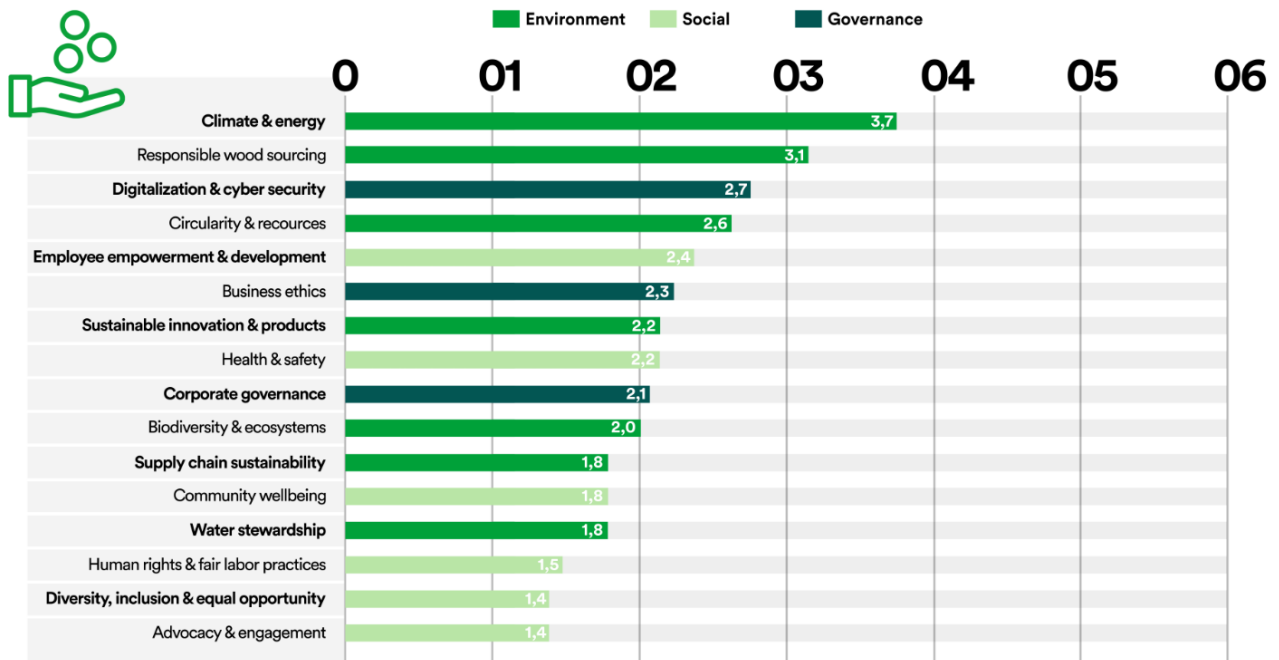


Figure 5: Results of financial impact assessment

Stakeholder assessment

Stakeholder interests were assessed by 150 internal and external stakeholders (figure 7) by means of an online survey (figure 6). The participants were presented with topic descriptions and two assessment categories:

- assessment per single topic
- top 3 rating

To obtain differentiated results, single topic ratings and top 3 ratings are weighted equally (50 percent each).

(E) Circularity & resources
What:
 The concept of circularity aims to keep materials in closed loops. In this way, resources are maximally used, the need for primary raw materials is reduced, waste is avoided and the life cycle of products is actually circular.
Relevance:
 The improvement of resource efficiency is essential for Lenzing to stay competitive in terms of costs and upcoming legal requirements. Circularity also provides new business opportunities for partnerships and collaborations and enhances transparency. It is also supports finding solutions for other challenges (climate change, textile recycling, etc.).
 * 3. How important is this topic and Lenzing's engagement for my decisions as a stakeholder?
 1 less important 2 3 4 5 6 very important

Rating of topics
 18. How would you rate the importance of the following topics from your perspective as a Lenzing stakeholder?
 (1 = most important topic)

- (E) Biodiversity & ecosystems
- (E) Circularity & resources
- (E) Climate & energy

Figure 6: Screenshot of stakeholder assessment survey

Only stakeholder groups with at least six participants were considered for the evaluation. As shown in figure 7, stakeholder groups with less than six participants were put together in two clusters of direct (contractors, direct customers and value chain partners) and indirect stakeholders (brands & retailers, competitors, media & influencer). Each group was weighted equally. The overall response rate was around 50 percent.

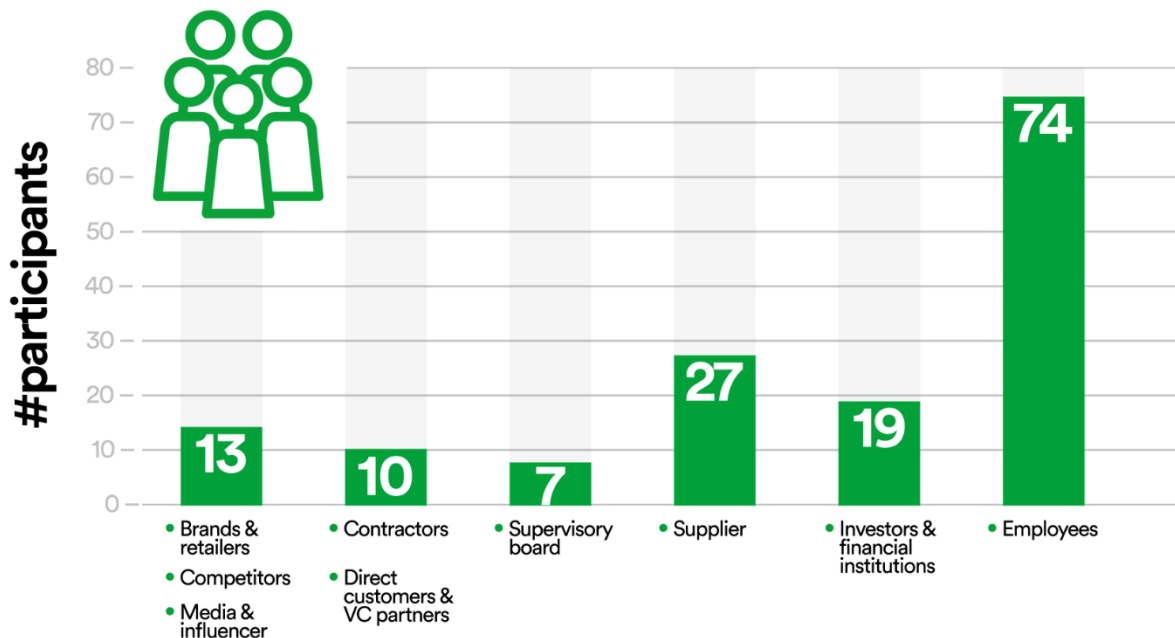


Figure 7: Participants in stakeholder assessment

Results stakeholder assessment

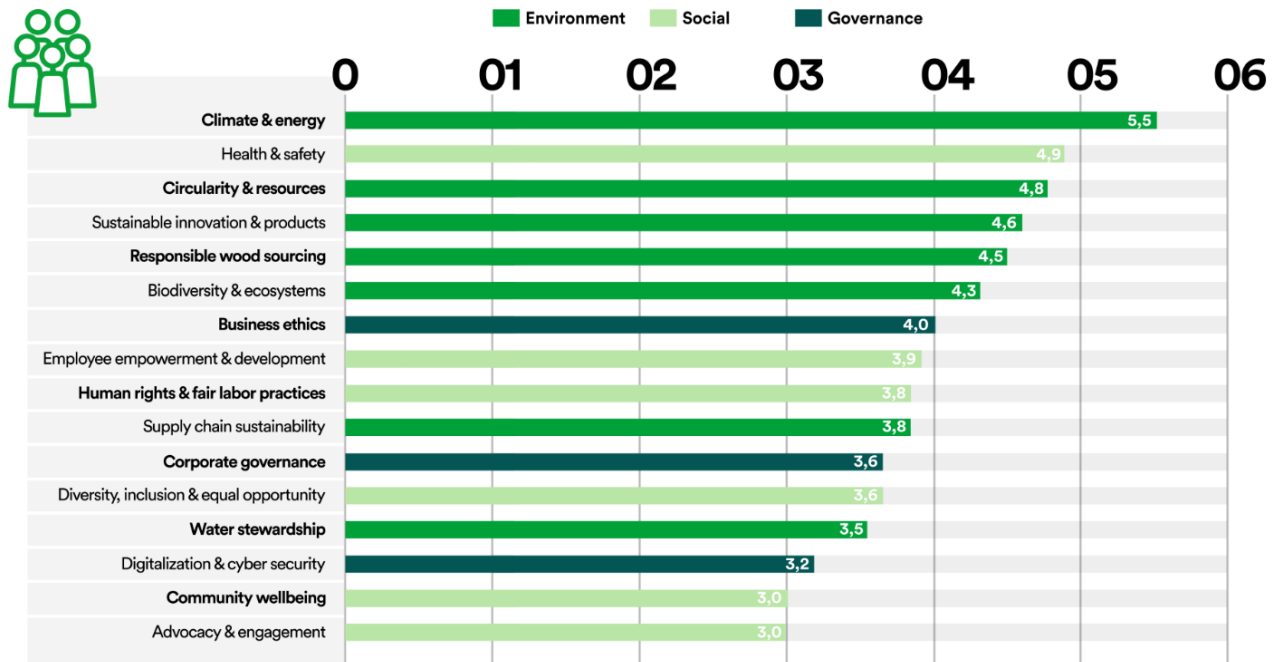


Figure 8: Results of stakeholder assessment

Final results: materiality matrix (on a scale of medium to high)

In the **third phase**, the internal and external results were summarized in a materiality matrix. This made it possible to identify the most material issues, which were reviewed by the Austrian consultancy denkstatt GmbH.

On this basis, the final materiality matrix was created (figure 9) and the future material topics were defined together with the corresponding GRI indicators. This forms the basis for sustainability reporting. In addition, the material topics were integrated into the existing sustainability strategy.

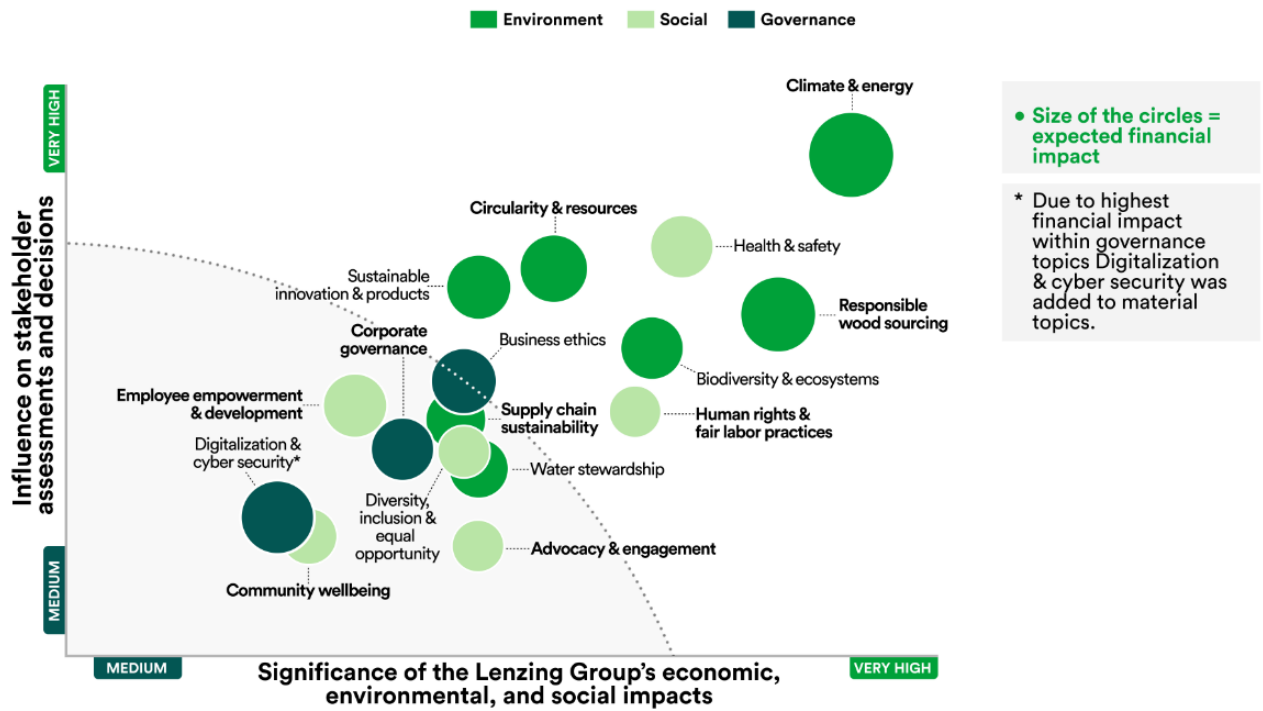


Figure 9: Final results: materiality matrix (on a scale of medium to high)

The cut-off line was set as shown in the chart, based on internal alignments and the views of external experts. The topic of digitalization & cyber security was added to the set of material topics due to its importance as derived from the financial impact analysis.

The updated material topics

At the end of the materiality analysis, the topics above the dotted line were defined as material. The newly added topics are marked with a star, while all others have been updated in terms of content. Those below the line will still be included in future sustainability reporting in some form, even if not in separate chapters.

Environment	Social	Governance
<ul style="list-style-type: none"> ● Circularity & resources ● Climate & energy ● Responsible wood sourcing ★ Biodiversity & ecosystems ● Sustainable innovation & products 	<ul style="list-style-type: none"> ★ Health & safety ★ Human rights & fair labor practices 	<ul style="list-style-type: none"> ★ Business ethics ★ Digitalization & cyber security
<ul style="list-style-type: none"> ● Supply chain sustainability ● Water stewardship 	<ul style="list-style-type: none"> ● Advocacy & engagement ● Community wellbeing ● Diversity, inclusion & equal opportunity ● Employee empowerment & development 	<ul style="list-style-type: none"> ● Corporate governance 

★ = new topic

Figure 10: New material topics

Description of material topics

Lenzing AG already started implementing core elements of the new European Sustainability Reporting Standards (ESRS) subject to the CSRD into the Sustainability Reports of 2022 and of 2023 in a progressive manner. Lenzing has to be CSRD/ESRS compliant for the reporting year of 2024. Due to further adaptation of the ESRS structure in the sustainability report 2023, Lenzing's chapters were, where applicable, renamed according to ESRS, e.g. "Climate & energy" was renamed to "Climate change". Table 1 lists these allocations of Lenzing's material topics.

Table 1: Materiality matrix

Materiality analysis – allocation of topics		
Material aspects and chapter	Strategic focus area	ESRS
Circularity & resources	Partnering for systemic change, Sustainable innovations	E5 Resource use and circular economy
Climate & energy	Decarbonization	E1 Climate change
Responsible wood sourcing	Raw material security	E5 Resource use and circular economy, G1 Business conduct
Biodiversity & ecosystems	Raw material security	E4 Biodiversity and ecosystems
Sustainable innovation & products	Sustainable innovations	E2 Pollution, E3 Water and marine resources, S4 Consumers and end-users
Health & safety	Empowering people	S1 Own workforce
Human rights & fair labor practices	Empowering people	S1 Own workforce, S2 Workers in the value chain, S3 Affected communities
Business ethics	Empowering people	G1 Business conduct
Digitalization & cyber security	Sustainable innovations	–
Further sustainability aspects		
Supply chain sustainability	Raw material security, Partnering for systemic change	–
Water stewardship	Sustainable innovations	E3 Water and marine resources
Community wellbeing	Enhancing community wellbeing	S3 Affected communities
Diversity, inclusion & equal opportunity	Empowering people	S1 Own workforce
Employee empowerment & development	Empowering people	S1 Own workforce

Circularity & resources

Lenzing is developing a circular economy model by creating more sustainable systems and processes at every opportunity. The company has worked hard to achieve greater efficiency in the use and reuse of resources, such as closing loops in production processes and producing fibers that are biodegradable at the end of their life¹. Such measures also ensure that Lenzing remains financially competitive and compliant with environmental legislation.



As Lenzing continues to drive circular solutions across both the business and the industry, the complex transition from a linear to a circular system requires a collaborative approach. The company has partnered with e.g. Swedish pulp producer Södra to generate more opportunities for recycling waste, creating circular practices and promoting systematic change. The company aims to create as much value as possible through improved sustainability performance, the impact of which is felt throughout the entire value chain.

Climate & energy

Dissolving wood pulp and fiber production are energy-intensive processes that present a climate challenge for Lenzing. Where possible, the company has eliminated fossil-based energy or replaced it with renewable sources. Investments in state-of-the-art carbon neutral technologies and low-carbon production processes at all Lenzing sites have helped to increase energy efficiency and positively influence the company's carbon emissions.

Climate risks present opportunities for innovation and investment that make Lenzing more resilient to the changing regulatory landscape. It demonstrates industry leadership as recognized in 2023 by the environmental non-profit organization CDP, which awarded Lenzing a triple "A" rating for Climate Change, Water security and Forests for the third time. This sustained environmental effort has kept the company on track to be in line with the Paris Agreement (1.5°C target) and the UN SDG 13. The Lenzing Group set ambitious science-based targets (SBTs) for reducing absolute GHG emissions in scope 1 and 2 by 42 percent and in scope 3 by 25 percent until 2030 (baseline 2021) and aims to achieve net-zero GHG emissions by 2050.

Raw material security

Lenzing minimizes the environmental risk of procuring raw materials through responsible sourcing from sustainably managed forests. More than 99 percent of the company's wood and pulp sourcing is certified by globally recognized standards, such as the Forest Stewardship Council (FSC®) and the Programme for the Endorsement of Forest Certification (PEFC). Lenzing's dissolving wood pulp mill in Brazil enables the production of up to 500,000 tons of pulp from FSC®-certified plantations.

In the reporting year, the Canadian environmental organization Canopy awarded Lenzing again a "dark green shirt", which signifies low risk for sourcing from ancient and endangered forests. Canopy is a globally regarded non-profit organization that ranks viscose suppliers according to their sourcing practices.

★ Biodiversity & ecosystems

The World Economic Forum identifies the loss of biodiversity as one of the top three systematic risks to people and the planet. Investment in the protection of biodiversity is also critical to the success of Lenzing's business. The company therefore continues to innovate in the fields of responsible systems, processes and products that mitigate risks to the natural environment. Lenzing's innovation in fiber production also provides end-of-life solutions for textile and nonwoven products. In the reporting year, the company received reconfirmation from Scripps Institution of Oceanography at the University of California, San Diego that LENZING™ generic fibers (LENZING™ Viscose Standard, LENZING™ Lyocell Standard and LENZING™ Modal Standard) are biodegradable in marine environments². Lenzing is part of the Textile Exchange's Advisory Group for the Biodiversity Benchmark, which supports companies in understanding and mitigating their impact on nature.

Sustainable innovation & products



Sustainability acts as a guiding principle for Lenzing's innovation and product development, which is driving systematic change across the textile and nonwoven industries. The continual improvement of existing product and production technologies builds business resilience and reputation, as well as facilitating the supply of products to value chain partners that contribute to the eco-credentials of their own portfolios.

Moving from linear to circular ways of working presents many opportunities for Lenzing to provide customers with a variety of environmental solutions, such as biodegradable fibers for the manufacturing of agricultural and hygiene products.

★ **Health & safety**

A safe working environment with supportive health systems for Lenzing's employees are as critical to business success as eco-responsible products and production processes. The Lenzing Group strives to ensure that no direct or indirect employees, contractors or visitors come to harm at Lenzing's sites or while working at external locations. This ethos extends to the impact on the communities in which Lenzing operates. In keeping with the principle that all injuries and occupational illnesses can be avoided, workplace programs have been implemented that promote health-conscious behavior.

Lenzing seeks to exceed its compliance with health and safety requirements across all sites. Since 2021, all employees have been surveyed twice a year about their psychosocial working conditions through the Health Climate Index (HCI), which evolved to the new Lenzing Climate survey in the reporting year. It provides a comprehensive overview of the general working climate at Lenzing.

★ **Human rights & fair labor practices**

Diversity, inclusion and respect are core pillars of a strategy designed to attract and develop talent from all backgrounds. A committed and empowered workforce is critical to business success, and Lenzing acts to provide equal opportunities for employment, learning and development. The company seeks to create an open-minded and inclusive environment by proactively fostering ethical ways of working in compliance with high internal standards, as well as principles outlined by international regulatory bodies.

★ **Business ethics**

Lenzing and its people are expected to act with honesty and transparency in line with the Group's Global Code of Business Conduct and corporate governance policies. These expectations of compliance reach beyond legal requirements and regulatory standards, as the company strives for exemplary quality in all products, processes and dealings with customers, partners and shareholders. It is the responsibility of all employees and contractors to uphold these standards and to help create a culture of tolerance and integrity.

Lenzing continues to develop its Compliance Management System to ensure the company acts to prevent misconduct, mitigate compliance risks and effectively safeguard its people. Training in business ethics ensures that all employees understand the behavior expected of them and contributes to an environment where the people feel comfortable raising concerns or reporting misconduct. Suppliers are also expected to adhere to the highest professional and ethical standards in the industry.

★ **Digitization & cyber security**

Today, digital technologies are evolving at a faster pace than ever, becoming increasingly complex and affecting more and more people. As new digital technologies dramatically reshape industries, Lenzing pursues efforts to leverage the benefits of these technologies to optimize its operations, enable transparency and traceability along the value chain, and provide additional value to its customers.

Lenzing is also extending its technical solutions to prevent fraud across the supply chain. The company delivers transparency across product supply chains with the extension of fiber identification technology to all TENCEL™ branded lyocell and modal fibers, and VEOCEL™ branded fibers. Digital traceability was also rolled out across the textile supply chain enabled by a cloud-based platform. Identification technology allows Lenzing fibers to be verified at any point in the supply chain, which protects the company's reputation and builds customer trust and loyalty.

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¹ LENZING™ fibers which are TÜV certified biodegradable (soil, fresh water & marine) and compostable (home & industrial) include the following products: LENZING™ Viscose Standard textile/ nonwovens, LENZING™ Lyocell Standard textile/nonwovens, LENZING™ Modal Standard textile, LENZING™ Lyocell Filament, LENZING™ Lyocell Dry and LENZING™ Web Technology. There is an exception for the TÜV certified biodegradable & compostable fibers LENZING™ Lyocell Filament and LENZING™ Lyocell Dry, they fulfil the above mentioned conditions except biodegradability in marine environments.

² Royer S-J, Greco F, Kogler M, Deheyn DD (2023) Not so biodegradable: Polylactic acid and cellulose/plastic blend textiles lack fast biodegradation in marine waters. PLoS ONE 18(5): e0284681. <https://doi.org/10.1371/journal.pone.0284681>

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