

Lenzing

Innovative by nature

www.lenzing.com

Partner
for change

Naturally
positive 

**Lenzing Group
Sustainability Report 2018**

Executive Summary

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Sustainability Report 2018

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Highlights 2018



Progress

On track with all committed sustainability targets

29 percent* lower sulfur emissions from viscose production

The Lenzing Group signed the Fashion Industry Charter for Climate Action committing it to a reduction in aggregate greenhouse gas emissions of 30 percent by 2030**

Investment of more than EUR 100 mn in sustainable production technology by 2022



Sustainable Innovations

Investment of up to EUR 30 mn in a pilot plant producing TENCEL™ Luxe branded filaments

Nonwovens: market launch of pioneering LENZING™ Web technology

Raw material security: Together with a joint-venture partner Lenzing plans to build a dissolving wood pulp plant in Brazil with an annual capacity of 450,000 tons

highlights 2018



Achievements

Lenzing ranks 1st in Canopy's Hot Button Report

Lenzing improved its ESG ratings:
MSCI (BBB to A)

VÖNIX: Lenzing best rated company in Austria

New branding concept supports long-term business success

Textile Exchange Report: LENZING™ fibers listed as "Preferred Fibers"***



Awards

2018 Austrian State Prize for Smart Packaging awarded to Packnatur® reusable wood-based bag****

ASRA award for Sustainability Report 2017*****

* CS₂ and H₂S, baseline 2014

** Baseline 2017, in scope 1, 2 and 3; see <https://bit.ly/2LfaaKA>

*** <https://textileexchange.org/downloads/2018-preferred-fiber-and-materials-market-report/>

**** Awarded by Federal Ministry for Digitization and Business Location of Austria; Packnatur® reusable cellulose bags were developed together with VPZ Verpackungszentrum GmbH.

***** Awarded by the Chamber of Public Accountants and Tax Consultants

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Lenzing Group Sustainability Report 2018

Executive Summary

The Lenzing Group



Message from the CEO

Dear Ladies and Gentlemen,

Sustainability is the dominant issue of our times. The textile industry has a particularly large impact on the economy and the environment. It makes a major contribution to global value creation, but it also leaves a very sizable ecological footprint.

In order to find solutions to these challenges, pioneers and role models are required. And Lenzing is one of them. Our business is based on the circular economy model. We use the renewable, entirely certified or controlled raw material wood to produce dissolving wood pulp in our biorefineries.

Our leadership responsibility also includes our commitment to global taxes on CO₂ emissions and the introduction of science-based targets. These are both initiatives that Lenzing will address in the coming months.

Achievement of these ambitious goals calls for the commitment of all Lenzing Group employees and our partners, as well as customers along the value chain.

Yours

Stefan Doboczky
Chief Executive Officer of the Lenzing Group

“Our pioneering role in the textile and nonwoven industries expresses itself in an ambitious sustainability agenda based on the ‘Naturally Positive’ sustainability strategy.”

Managing sustainability

The sustainability strategy of the Lenzing Group

“Naturally positive”, the Lenzing Group’s sustainability strategy, was developed based on the results of the materiality analysis and is firmly rooted in the Lenzing Group sCore TEN strategy.

The strategy is based on the three pillars Partnering for systemic change, Circularity and Greening the value chain. It defines seven main challenges (focus areas) where the Lenzing Group substantially contributes to creating positive impacts and benefits:

- Raw material security
- Water stewardship
- Decarbonization
- Sustainable innovations
- Empowering people
- Partnering for systemic change
- Enhancing community wellbeing

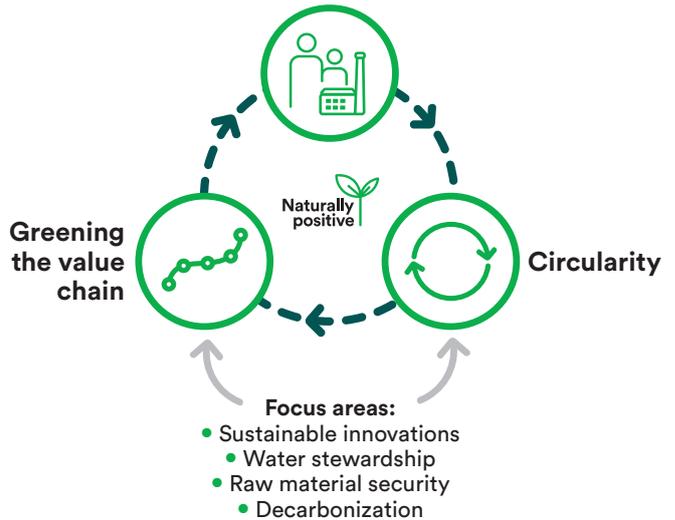


Lenzing Group sustainability strategy “Naturally positive”

Partnering for change

Focus areas:

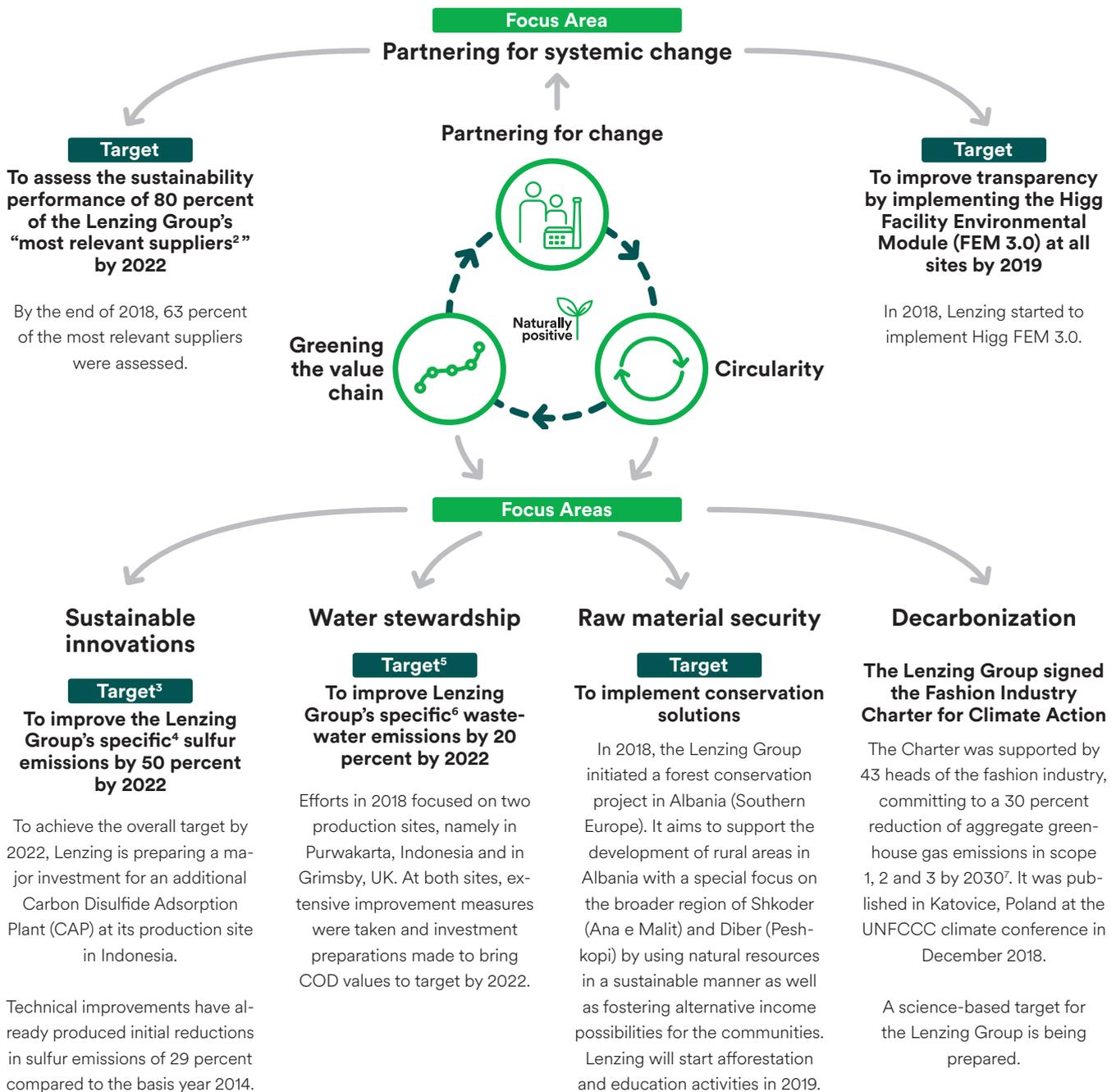
- Partnering for systemic change
 - Empowering people
 - Community wellbeing



Managing sustainability

Lenzing Group Sustainability targets¹

In 2017, Lenzing set Group sustainability targets for the most important challenges arising in its strategic focus areas – read about our progress in 2018:



1) These existed in 2014, in particular with regard to the capacity of the owned operations. In case of any structural changes in ownership, such as the acquisition of a new plant, these targets will be reviewed and reformulated considering the new context of the Lenzing Group. Targets and commitments are applicable

2) Most relevant suppliers comprise 80 percent of the Lenzing Group's purchasing spend.
3) This target will allow Lenzing's stringent internal Group standard to be met at all Lenzing production sites. Baseline for the target is 2014.

4) Specific emissions are defined as emissions per unit of Lenzing Group production (i.e. pulp and fiber production volumes).
5) This target will allow Lenzing's stringent internal Group standard to be met at all Lenzing production sites. Baseline for the target is 2014.

6) Specific emissions are defined as emissions per unit of production by the Lenzing Group (i.e. pulp and fiber production volumes).
7) Basis 2017

Managing sustainability

Circularity and waste

Circularity is a pillar of Lenzing's sustainability. The company unites the cellulosic fiber cycle of its wood-based products (biological cycle) with its innovative technologies that focus on closing loops and recovery (technical cycles).

The biological cycle starts from the renewable resource, wood, which is converted into dissolving wood pulp and subsequently into fibers. Lenzing's biorefinery concept stands for 100 percent utilization of the renewable raw material wood. Wood material that is not used for the production of dissolving wood pulp and fibers provides the basis for valuable biobased products and energy. Subsequently, Lenzing's customers use the fibers in different applications. This biological cycle is closed when the fibers biodegrade or are composted at their end of life⁸.

In the technical cycle, Lenzing aims to minimize the environmental footprint and to improve resource efficiency by closing the loops of fiber production technologies with state-of-the-art recovery rates. Following the net-benefit principle, Lenzing also considers the downstream value chain steps. Lenzing's REFIBRA™ technology recycles cellulosic waste from garment-making into dissolving wood pulp and feeds it back into the fiber production, without any loss of quality. With its focus on partnering for systemic change, Lenzing strives to identify and develop cross-industry business cases to make progress on the circularity of Lenzing as well as of the industry.

Waste

Waste management is an integral part of Lenzing's environmental management, and the activities relating to waste management, e.g., collection, separation, storage, transportation, and treatment of waste, are planned and performed based on an understanding of their environmental impact and risks.

In 2018, Lenzing published its internal Waste Management Guideline, which has further consolidated the Group approach to waste data reporting.

8) The compostability and biodegradability of final consumer textile and nonwoven products depend on the material composition (fiber blend) and processing in the value chain steps.

Managing sustainability

Stakeholder dialog

Engaging in a dialog means respecting the stakeholders, contributing with Lenzing's expertise and knowledge, and the opportunity to learn from the partners' perspectives. Each dialog starts with providing transparent information. This helps stakeholders to form an educated opinion, to assess risks, and to avoid misunderstandings by building trust. Furthermore, continuous trustful stakeholder relationships contribute to solving existing tensions and avoiding potential conflicts.

Key stakeholder groups



Lenzing's most important stakeholder dialogs in 2018 were those with the following organizations:

- Canopy and CanopyStyle Initiative
- Changing Markets Foundation
- Zero Discharge of Hazardous Chemicals (ZDHC)
- Textile Exchange
- Sustainable Apparel Coalition
- Make Fashion Circular
- World Resources Institute
- World Economic Forum

Main topics discussed in 2018 were:

- Responsible sourcing, in particular sustainable sourcing of wood and pulp
- Responsible fiber production
- Circular economy topics
- CO₂ climate target (science-based target)
- Environmental issues, such as microplastics in the oceans, climate change, waste, emissions, water management
- Transparency and supply chain mapping
- Raw material assessments (definition of sustainable raw materials)
- Life cycle assessment
- Health and safety
- Innovation
- Human rights
- Labor rights
- People and community

To find out more about our stakeholder dialogue, please find all relevant information in the Sustainability Report 2018 on pages 24 and 25.

Responsible Sourcing

Wood and dissolving wood pulp certification in the Lenzing Group

Wood and dissolving wood pulp are the most important raw materials for Lenzing. The Lenzing Group assumes responsibility by focusing on sustainable sourcing covered by certifications, responsible consumption, and highly efficient use of these valuable resources.

Wood and dissolving wood pulp supply in the Lenzing Group

dissolving wood pulp supply, from own production and market dissolving wood pulp (2016-2018)

Wood sourcing region	Central Europe	Europe	South Africa	North America
Wood sourcing countries	see Sustainability Report 2018, page 30	Mainly Scandinavia and Baltic states, Russia	South Africa	USA
Forest type according to FAO*	Semi-natural forest	Semi-natural forest	Plantation	Semi-natural forest
Wood species (most important)	Beech, spruce, birch	Birch, aspen, beech	Eucalyptus sp., Acacia sp.	Southern pine, maple, aspen
Forest certificates	PEFC™, FSC®	PEFC™, FSC®	FSC®	FSC®, PEFC™, SFI
Verification audit	Rainforest Alliance**			
Wood procurement by	Lenzing Group Wood Procurement	Dissolving wood pulp suppliers**		
Dissolving wood pulp produced by	Lenzing Group dissolving wood pulp mills (Paskov and Lenzing)	Dissolving wood pulp suppliers		
Pulping process	Sulfite	Sulfite/Kraft		
Bleaching process	Totally chlorine free (TCF)	Elemental chlorine free (ECF)		

* Carle and Holmgren 2003

** Rainforest Alliance audit report 2017 (https://www.rainforest-alliance.org/business/wp-content/uploads/2018/10/Lenzing-Canopy-Verification-Audit-Public-Report_sans-Russia_23May2017.pdf)

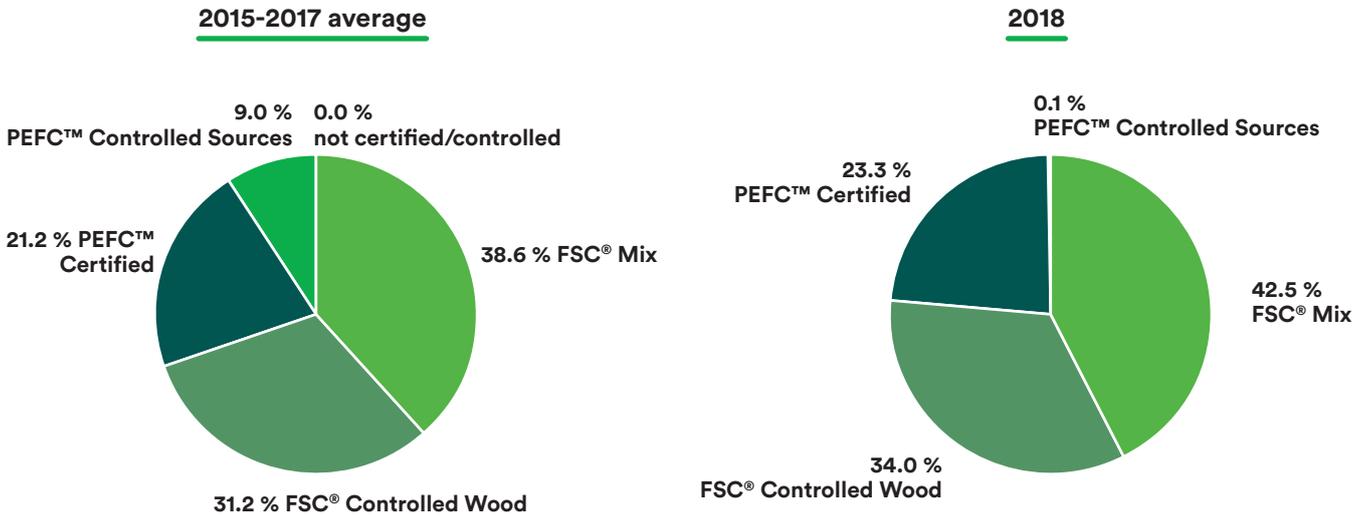
Lenzing's wood procurement management system ensures that all wood is sourced from legal and sustainably managed sources. In order to demonstrate that wood sourcing complies with Lenzing's high standards, the company relies on FSC® and PEFC™ certification systems for verification purposes.

More than 99 percent of wood and dissolving wood pulp used by the Lenzing Group is either certified by FSC® and PEFC™ or inspected in line with these standards. Furthermore, the additional CanopyStyle verification audit will be renewed in 2019.

Responsible Sourcing

Certification status in the Lenzing Group

Certification status of total wood input at Lenzing fiber production sites via own and purchased dissolving wood pulp; Left: average 2015-2017, changes less than 3 percent in shares. Right: 2018. Basis: dissolving wood pulp by weight. All PEFC™ certified or controlled sources are also FSC® controlled.



Responsible Sourcing

Regional wood supply

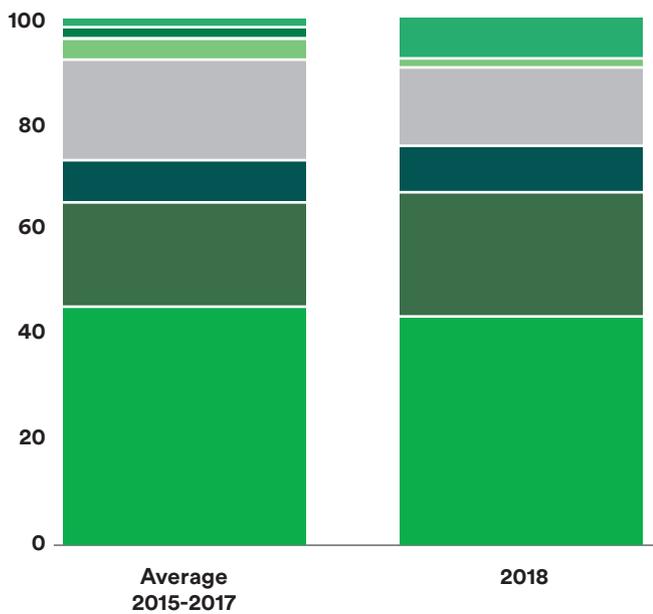
In order to ensure short transport distances and short delivery times, almost all the wood required originates either from the country where the pulp is produced or neighboring countries wherever possible.

Wood sourcing for Lenzing Group's own pulp mills in Lenzing, Austria, and Paskov, Czech Republic

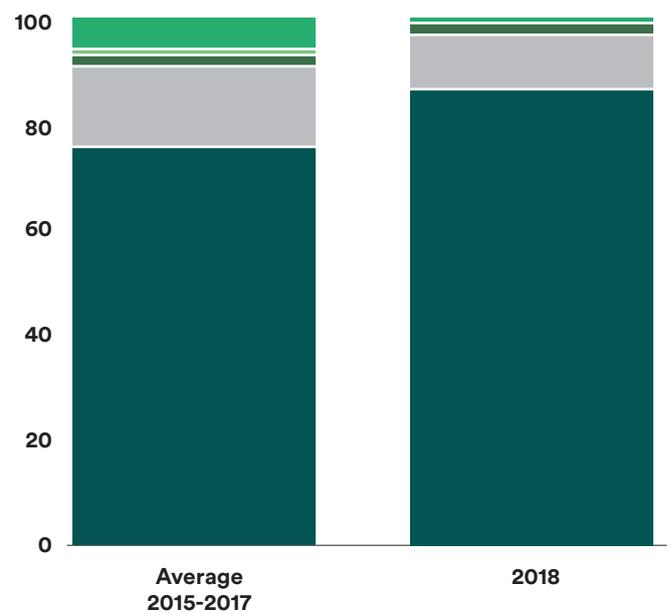
Beech and spruce, by country, average 2015-2017 and 2018. "Other countries" for Lenzing site are Estonia, France, Switzerland, Poland, Romania, Russia, and Ukraine (until mid-2018). "Other countries" for Paskov site are Ukraine and Belarus.



Lenzing Pulp Mill



Paskov Pulp Mill



Efficient production

Biorefinery

The Lenzing Group operates two pulp production plants: one at the Lenzing site (Austria) and one in Paskov (Czech Republic). The biorefinery concept ensures that 100 percent of wood constituents are used to produce fibers, biobased chemicals, and bioenergy, thereby maximizing value creation from an economic and environmental perspective.

Highly efficient use of the raw material wood at the Lenzing Group's biorefineries

Wood and biorefinery products are calculated as "absolute dry", and pulp as "air-dry"

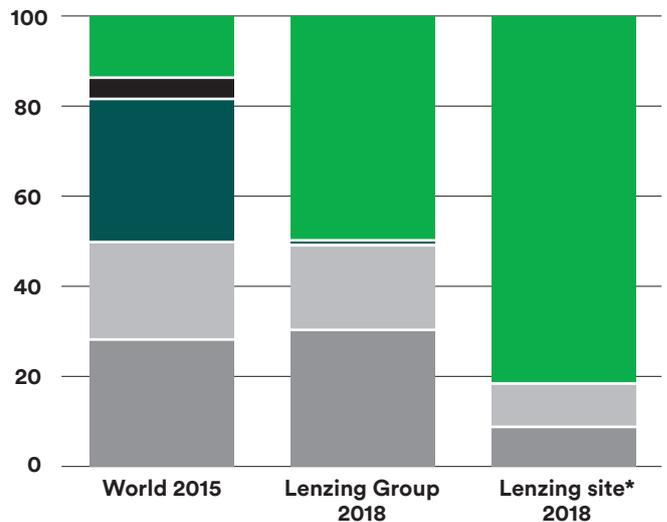


Energy use and climate change

Furthermore, the Lenzing Group is committed to reducing emissions all along the value chain. Consequently, the company engages with its dissolving wood pulp and chemical suppliers to reduce their CO₂ emissions. Lenzing's innovative products reduce the footprint of downstream business partners. Table 4/4 on page 42 in the Sustainability report shows in detail how Lenzing is contributing along the value chain.

Energy sources of the world, Lenzing Group and Lenzing site*

- Renewables (biomass, wind, solar, hydro, waste, etc.)
- Nuclear
- Crude oil
- Natural gas
- Coal



Sources: World Energy Outlook 2017, Lenzing AG

Includes own energy consumption and energy from providers, excluding grid power which is a minor fraction of total scope 1 and 2 energy consumption in the Lenzing Group. The production sites in Paskov, Grimsby, Mobile, and Heiligenkreuz do not use coal as a fuel source in their own operations, whereas the Asian sites, i.e. Nanjing and Purwakarta, predominantly use coal.

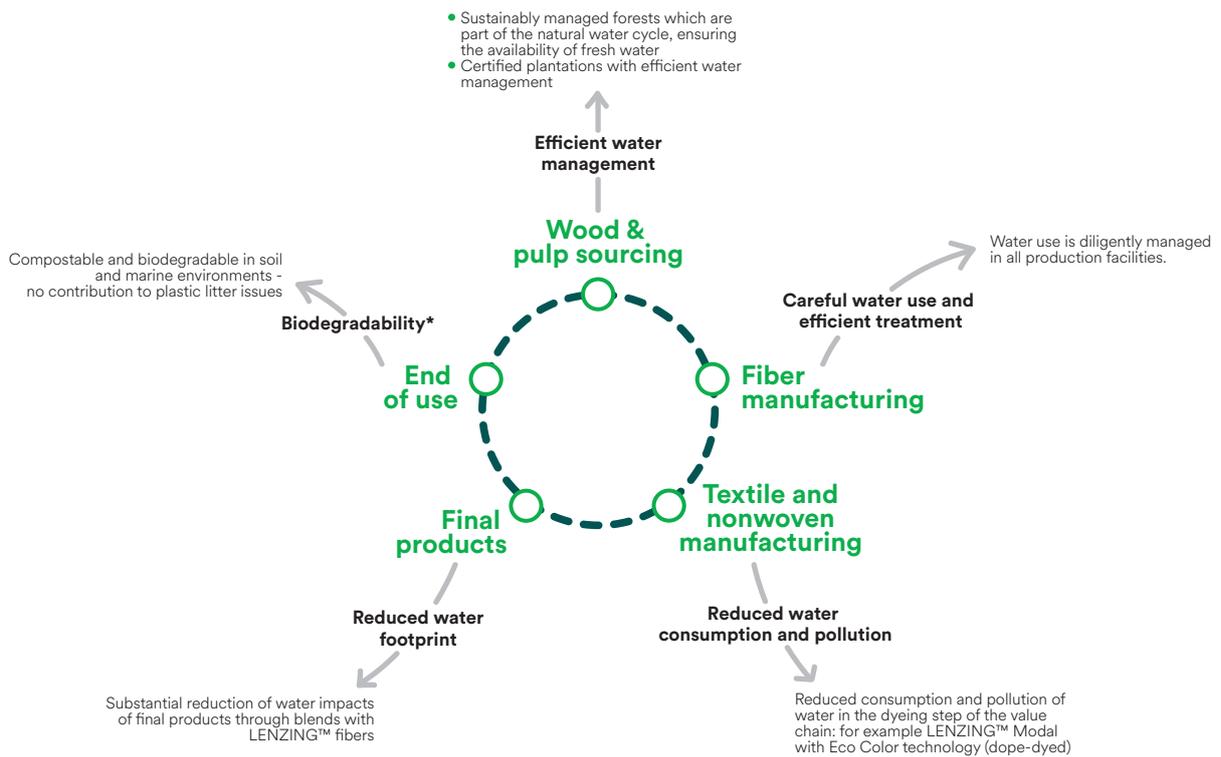
* incl. RVL

Efficient production

Water use and pollution

Lenzing uses water for processes and cooling purposes and is committed to improving the water-related impacts at its production plants and all along the value chain.

Lenzing's water stewardship



* The compostability and biodegradability of final consumer textile and nonwoven products depend on the material composition (fiber blend) and processing in the value chain steps.

Innovation for sustainable products

Innovation and sustainability are at the heart of Lenzing's sCore TEN strategy. Every new development, whether it be process-, product-, or application-related, is evaluated from the very beginning in terms of sustainability. Thinking sustainably and paying due regard to both the life-cycle perspective and the net-benefit principle are decisive for innovations at Lenzing. Certain projects and development work focus primarily on sustainability aspects.

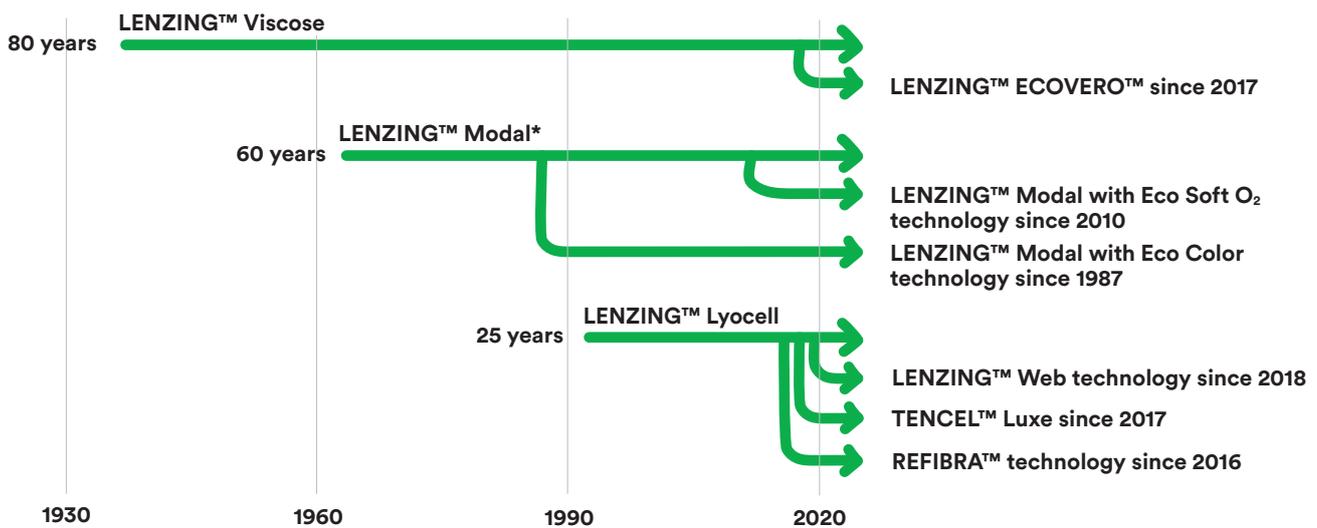
The research work focuses on

- developing processes and products hand in hand
- alternative sources of raw material for fiber production
- process innovations to improve efficiency and sustainability
- applications using fibers from Lenzing as a sustainable alternative

Net benefit thinking

Lenzing's net-benefit products offer positive impacts and benefits to environment, society, and value chain partners, which are better than most competing alternatives in the market. Net-benefit products take a life-cycle perspective and thus include both upstream and downstream value chain processes. Net-benefit thinking describes the performance of Lenzing's specialities and forward solutions that form part of the sCore TEN strategy. The Naturally positive sustainability strategy is rooted in net-benefit thinking and is the basis for Lenzing's contribution to the Sustainable Development Goals (SDGs) of the United Nations.

Lenzing Group: Selected fiber types, technologies and branded offers



* complete name: LENZING™ Modal with Eco Soft technology

Responsibility for People

Employees

The corporate culture of the Lenzing Group is characterized by long-term partnerships, trustful collaboration, and mutual respect founded on open dialog and transparency. The principles of sustainability as a company value have been integrated into the global human resources (HR) strategy, Lenzing's HR policy and HR-related processes.

Diversity: information by country, 2018

(headcount, proportion of women, proportion of over-50s, employee turnover rate)

	Headcounts*	Female in %	Age > 50 in %	Turnover in %
Group	6,657	13.9	22.9	5.4
Austria	3,216	16.8	27.2	5.1
Indonesia	1,763	3.6	12.8	3.3
China	823	19.4	5.2	9.5
Czech Republic	406	17.7	49.0	7.2
USA	205	17.6	42.4	9.9
United Kingdom	179	12.3	49.7	1.5
Other**	65	44.6	10.8	12.5

* Employees excluding apprentices and contractors

** India, Thailand, Turkey, Korea, Singapore, and Brazil

Find more on the growing workforce, diversity, works council and lifelong learning and training in our Sustainability Report, starting on page 56.

Safety

Lenzing's Group philosophy for safety, health, and the environment (SHE) aspires to no accidents, no harm to people, and no damage to the environment, underpinned by its vision LEAVE HOME HEALTHY, COME HOME HEALTHY. Lenzing identifies potential hazards and risks at every stage of its production processes. Lenzing designs facilities and implements plant and process changes according to appropriate industry standards. Further details regarding Lenzing's SHE policies are available on the Lenzing website <https://www.lenzing.com/en/sustainability/people/health-and-safety/>.

Improving Safety, Health, and Environment in Lenzing operations is a high priority and the teams are continuously investigating safety incidents and near misses to identify any potential underlying issues. Leading indicators are used to monitor the strength of controls to prevent incidents.

The United Nations SDGs



The Lenzing Group “Naturally positive” sustainability strategy supports the following SDGs:

- **SDG 7:** Affordable and clean energy
- **SDG 9:** Industry, innovation and infrastructure
- **SDG 12:** Responsible consumption and production
- **SDG 13:** Climate change
- **SDG 15:** Life on land
- **SDG 17:** Partnerships for the goals

Further goals for the Lenzing Group are:

- **SDG 1:** No poverty
- **SDG 3:** Good health and wellbeing for people
- **SDG 6:** Clean water and sanitation
- **SDG 8:** Decent work and economic growth
- **SDG 14:** Life below water

You can find more information on this topic on page 53 in the Sustainability Report.

Links

Sustainability Report 2018

https://www.lenzing.com/fileadmin/content/PDF/04_Nachhaltigkeit/Nachhaltigkeitsberichte/EN/NHB_2018_EN.pdf

Sustainability Report 2017

https://www.lenzing.com/fileadmin/content/PDF/04_Nachhaltigkeit/Nachhaltigkeitsberichte/EN/NHB_2017_EN.pdf

Lenzing Group's Materiality analysis

https://www.lenzing.com/fileadmin/content/PDF/04_Nachhaltigkeit/Nachhaltigkeitsberichte/EN/NHB_2018_materiality_analysis_EN.pdf

Annual Report 2018

https://www.lenzing.com/fileadmin/content/PDF/07_Finzen/Geschaeftsberichte/EN/GB_2018_EN.pdf

* United Nations, 2018 (<https://www.un.org/sustainabledevelopment/development-agenda>)



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