

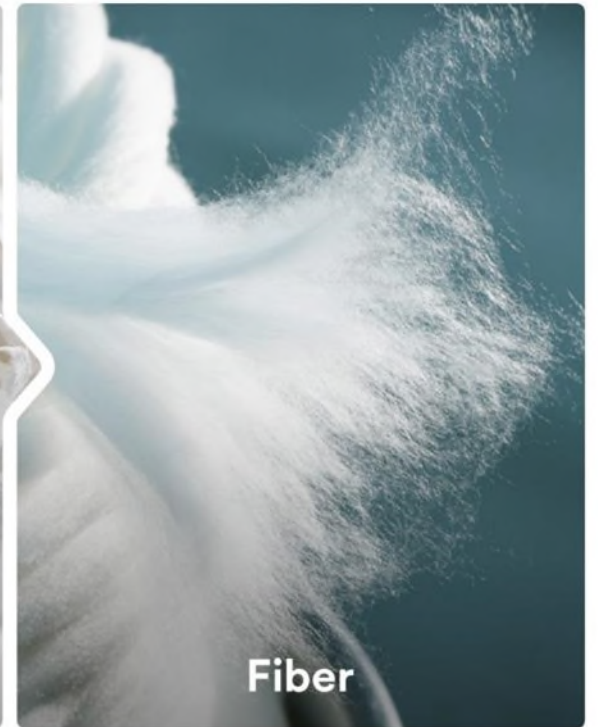
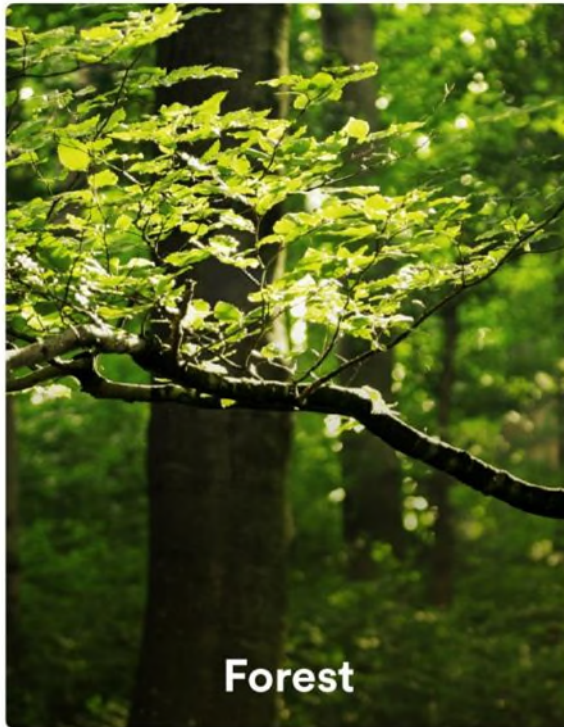
Welcome

# Integrative Forest Management from the viewpoint of the wood processing industry

K. Christian Schuster, Lenzing AG

Plenary session – Forests and Forestry in the context of  
Biodiversity Conservation. 10th Annual meeting -  
INTEGRATE Network, 23. October 2024, Vienna

# Our core market: regenerated cellulosic fibers



Products: Cellulosic fibers viscose, modal, lyocell, and dissolving wood pulp



LENZING EcoVero™

For textile applications



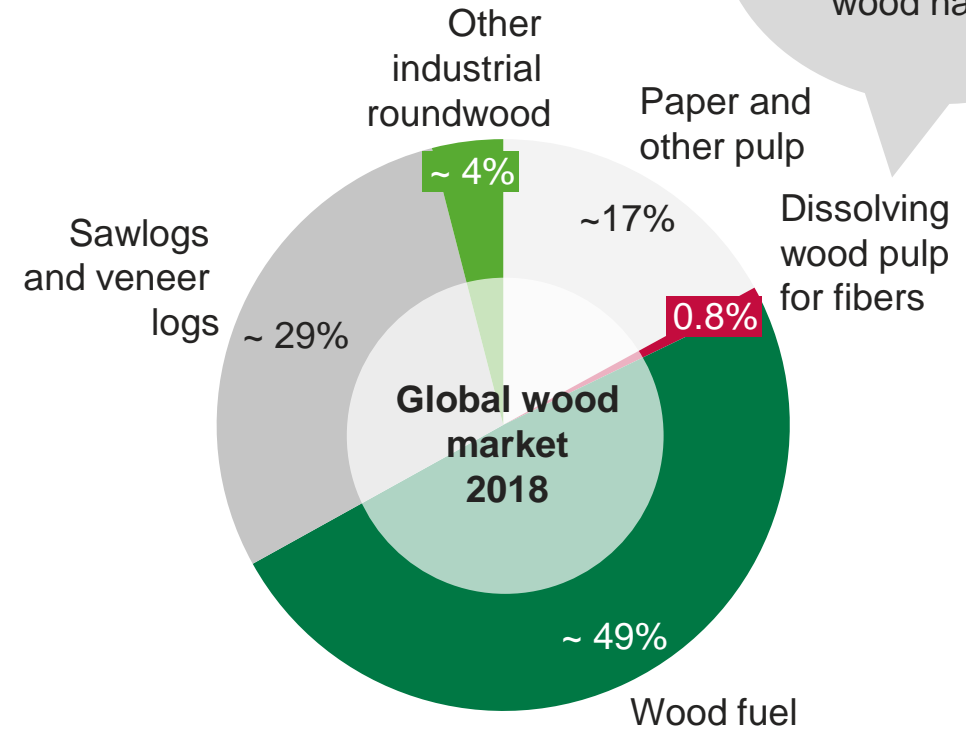
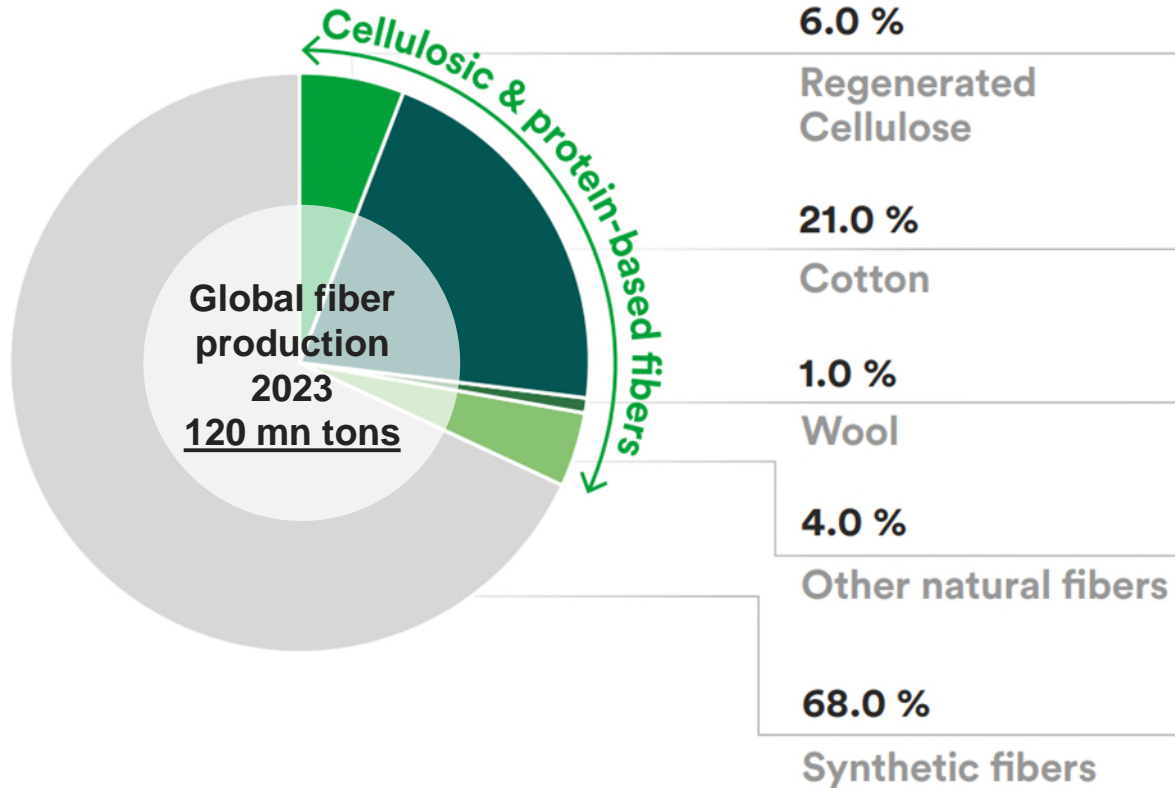
For nonwovens

LENZING™

Industrial,



# Global fiber and wood production



Production of dissolving wood pulp for fibers uses **less than 1%** of the global wood harvest.

Global wood market 2018. Source: FAO database, CIRFS, The Fiber Year, and Lenzing estimates. Percentages of cubic meters.

# The wood processing industry and biodiversity

Until recently – little focus on biodiversity



Until recently, the industry had little focus on the topic of biodiversity.

**Forest certificates** were considered sufficient to prove sustainable wood sourcing

Perception has changed



Customers and value chain



Investors and finance sector



NGOs



Legislation

Increasingly detailed inquiries

... ask for the **supply chains**, for **transparency** back to the tree in the forest

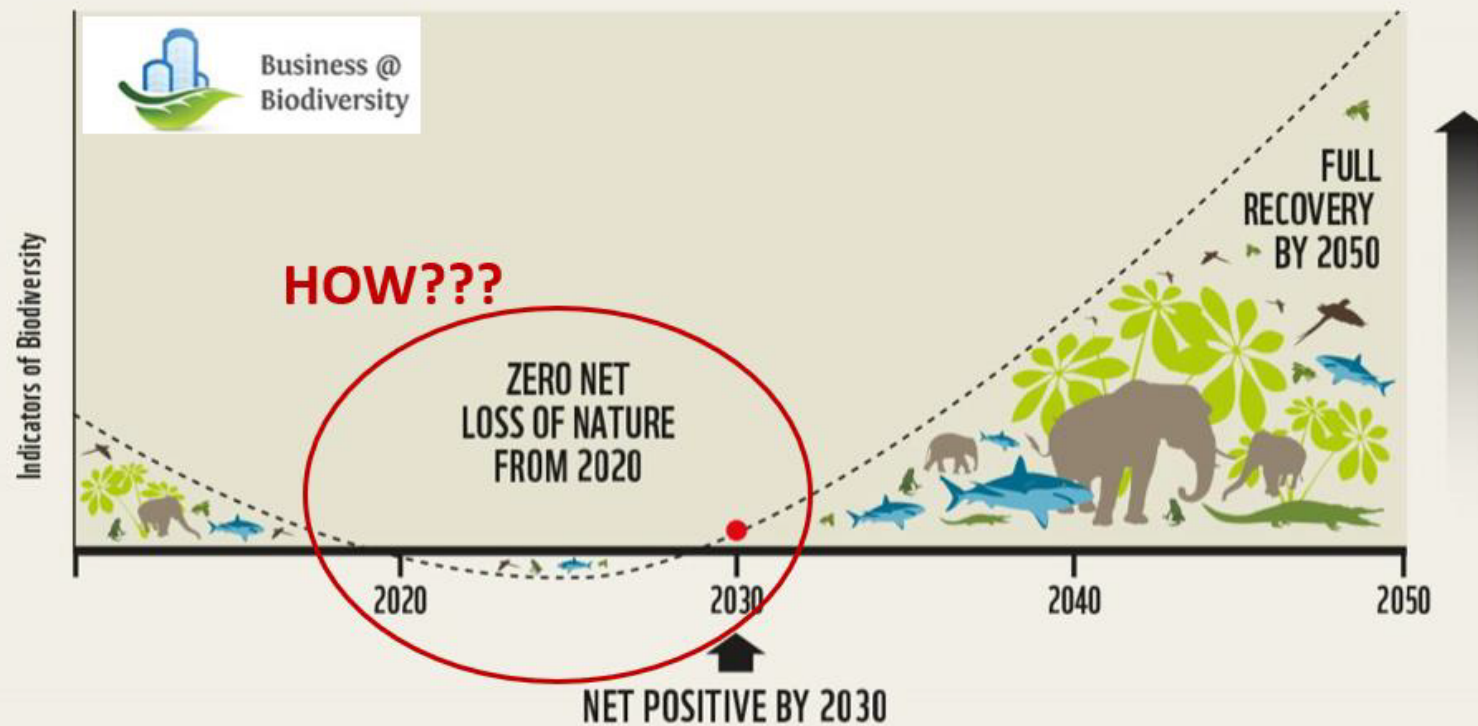
... ask for the **responsibility** of wood processing industry

... question whether it is good or **right to harvest**

**wood at all**, or to use wood products

# The global goal for nature: Reversing the trend

## Global Goal for Nature: Nature Positive by 2030





## Governance – EU Green Deal

- **Reporting and monitoring obligations:** Corporate Sustainability Reporting Directive (The ESRS contains >25 comprehensive questions), along with numerous subquestions, explicitly related to biodiversity), Corporate Sustainability Due Diligence Directive
- **Forest, nature and wildlife protection:** EU Deforestation Regulation, Nature Restoration Law, Renewable Energy Directive, EU Forest Strategy for 2030, Biodiversity Strategy for 2030, Habitats directive, Invasive Alien Species regulation,
- **Circular economy:** Bioeconomy strategy, Ecodesign for Sustainable Products Regulation, Waste Framework Directive
- **Biodiversity financing:** - Sustainable Finance and Taxonomy, EU Recovery and Resilience Facility, LIFE Natural Capital Financing Facility
- **Water protection:** Water Framework Directive, Single-Use Plastics Directive, Marine Strategy, etc.

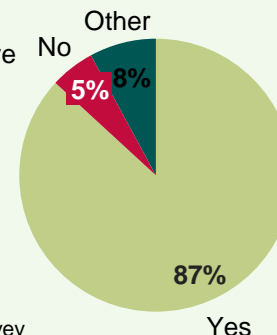


## Stakeholders expect biodiversity action!



### Employees – commercial teams

**Survey<sup>1</sup> from October 2022:** Do we have to be ahead of our competitors when it comes to protection/restoration of ecosystems and biodiversity to retain our premium for fibers or our reputation?



<sup>1</sup> 76 participants from commercial teams in the survey



## Investors and finance sector



- **CDP rating:** > 60 questions explicitly related to **biodiversity action**, for example, requesting participation in landscape wide conservation projects and assessment of deforestation risk in bioenergy supply chain.



- **Taskforce on Nature-Related Financial Disclosures (TNFD):** Developing and delivering a risk management and disclosure framework for organizations to report and act on evolving nature-related risks.



- **Insurance business:** e.g. Swiss Re Institute Biodiversity and Ecosystem Services Index assesses which economic sectors are most reliant on nature and evaluates the exposure each country has to Biodiversity and Ecosystem Services decline



## NGOs



## Customers and value chain



*"In financial year 21, we included biodiversity requirements in IWAY..." – IKEA code of conduct.*

**83%**  
with target on responsible (wood) sourcing

**50%**  
with target on bio-diversity

# Public perception studies

Meta-studies on perceptions on forestry and forest-based bioeconomy in society clearly show the priorities:

1. Climate mitigation and biodiversity
2. Recreation and nature experience
3. Wood production

| Waldökosystemdienstleistung       | WÖDL-Kategorie |   |   |
|-----------------------------------|----------------|---|---|
|                                   | R              | K | V |
| Lebensraum für Pflanzen und Tiere | X              |   |   |
| Landschaftliche Schönheit         |                | X |   |
| Luftgüte                          | X              |   |   |
| Gesundheitsförderung              | X              |   |   |
| Kohlenstoffspeicherung            | X              |   |   |
| Lärmschutz                        | X              |   |   |
| Erholung                          |                | X |   |
| Schutz vor Naturgefahren          | X              |   |   |
| Temperaturregulierung             | X              |   |   |
| Wasserqualität und Erosionsschutz | X              |   |   |
| Spirituelle und kulturelle Werte  |                | X |   |
| Bildung                           |                | X |   |
| Nahrungsmittel aus Wildsammlung   |                |   | X |
| Beschäftigung                     |                | X |   |
| Brennholz                         |                |   | X |
| Nutzholz                          |                |   | X |
| Jagd                              |                |   | X |



Quoted after : WALDPOLITIK BLICKWINKEL NO.3/2022 POLITISCHE OPTIONEN ZUR SICHERUNG DER WALDÖKOSYSTEMDIENSTLEISTUNGEN. G. Weiss, H. Püzl, A. Ludvig, I. Zivojinovic, S. Linser, G. Winkel

Ranacher, L., Sedmik, A. and Schwarzbauer, P. 2020. Public perceptions of forestry and the forest-based bioeconomy in the European Union. Knowledge to Action 03, European Forest Institute. <https://doi.org/10.36333/k2a03>

Roitsch, D., Derks, J., Rosinger, C., De Vreese, R., Jin, J., Lovrić, M., Püzl, H., Zhang, C., Kronenberg, J., Basnou, C., Tyrväinen, L., da Schio, N., Haase, D., Konczal, A., Winkel, G., 2022. Deliverable 1.3 Societal perceptions and demands towards UF-NBS in China and Europe. H2020 project CLEARING HOUSE. [un-published].

# What is necessary now?

## Develop a strategy addressing:

- Fulfil regulation (reacting to increasing number of laws)
- Comprehensive assessment of all **dependencies and impacts** on biodiversity
  - in the context and in the nexus with climate mitigation and ecosystem services
- Provide positive answers to critical public perception

## But also:

- Realize the opportunities
  - Understanding how an enterprise using nature's resources can grow „nature-positive“
- Move from a reactive mode to active transformation

**Legal compliance**  
with the EU laws



**Value creation**  
Protection against loss of customers and revenue. Customers need to meet ambitious targets.



**Nature positive**  
Contribute to the transition to a regenerative economy



**Positive image**  
Provide positive answers to critical public perception





**L** Locate  
Interface with Nature

**E** Evaluate  
Dependencies & Impacts

1 Assess

- Materiality screening
- Value chain assessment

## Value chain mapping for

## Natural dependencies

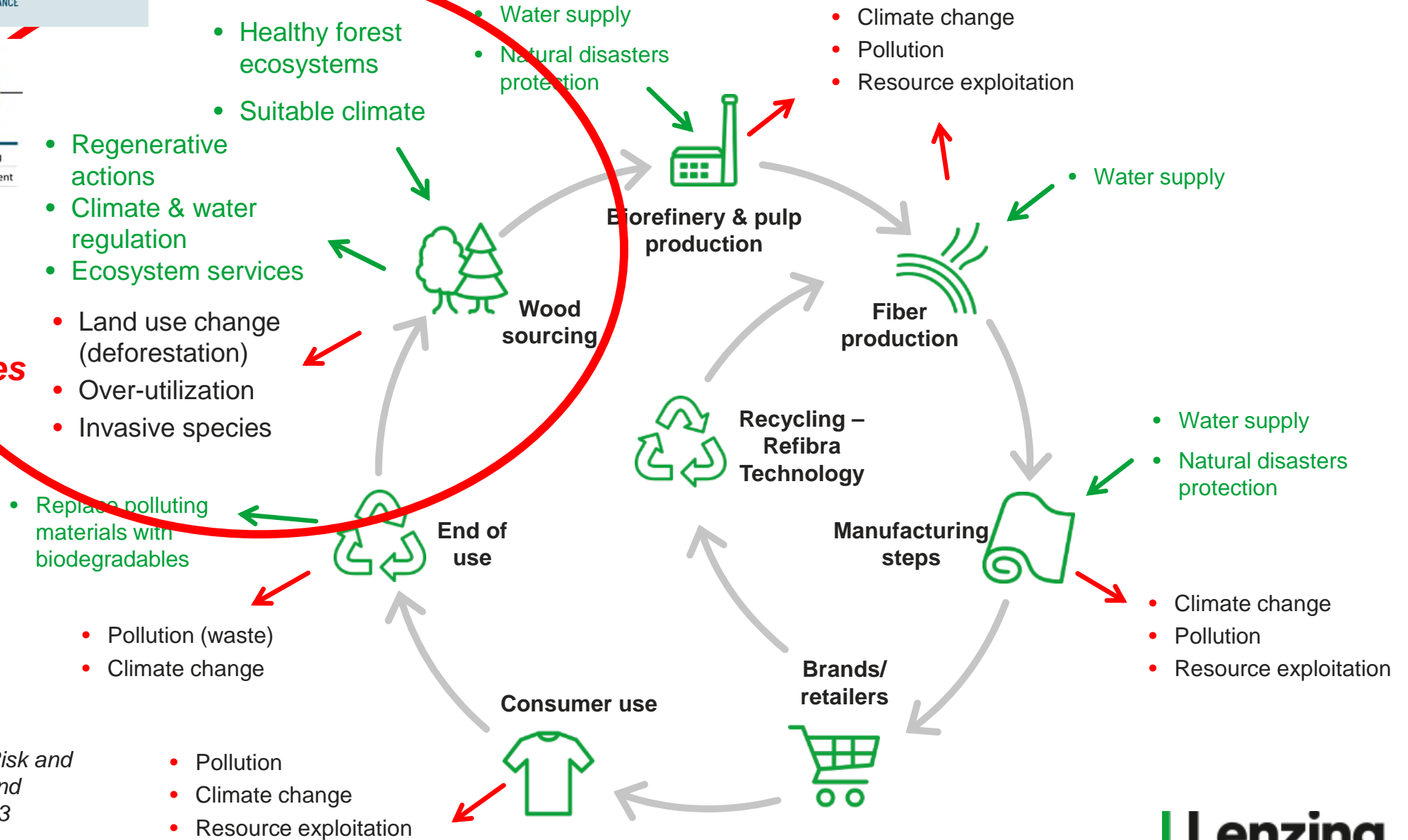
## Potential impacts

## Potential positive effects

TNFD 2023 (1)  
SBTN 2020 (2)

(1) The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework. 2023

(2) Science Based Targets for Nature: Initial Guidance for Business. 2020  
[www.lenzing.com](http://www.lenzing.com)



# Action for biodiversity and ecosystems

- Feasibility study by Umweltdachverband 2022 concluded that
  - in Lenzing's European sourcing regions, nature conservation needs a *combined approach* with *integrated measures on large areas*, and some strict protection for special purposes
- Support actions for species and ecosystems
  - local, regional
  - Lenzing supports projects within our supply chain and beyond, e.g. for
    - Wild bees, wetlands regeneration
  - regional projects:
    - in Austria - BIMUWA
    - in 5 West Balkan states (ADA project)
- Assessment of indicators, research on tools and data gathering in context with public authorities → Set targets
- We believe: Forest management , wood harvest, and protection/regeneration of the state of nature can work together

→ utilize and protect the forests



# Models of nature conservation



SEGREGATION ← ————— COMBINATION ————— → INTEGRATION

## „Natural forest“

- Core areas of national parks, biosphere parks
- Wilderness areas
- Natural forest reserves
- Protected landscape elements

## Sustainable multifunctional forestry

### Close-to-nature forestry

- Guided by the natural species composition
- Natural propagation
- Single tree harvest
- site specific harvest and management
- **Integrated promotion of biodiversity**

## Intensively managed forestry

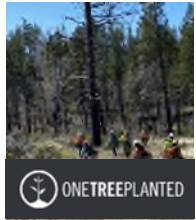
- Plantations
- Short rotation forestry
- Tree species from other areas

Source: Georg Frank / BFW, BIMUWA Fachveranstaltung Juni 2023

Modified from a presentation by Bo LARSEN, International Conference on FORESTS FOR BIODIVERSITY AND CLIMATE, Brussels, 4-5 Feb. 2020

# Implementation – we are strong in “avoiding”, improvement needed on the top of the pyramid

## Restore: Forest conservation and restoration



One-Tree-Planted



Biodiversity monitoring and measures to improve in Lenzing's own plantations in Brazil



Afforestation and social impact project in Albania

**Target 8**

Progress made in 2021

Partnering for systemi

Assessment for new engagement in biodiversity/conservation

## Regenerate: Enhance ecosystem quality in managed forests in close cooperation with a wood supplier



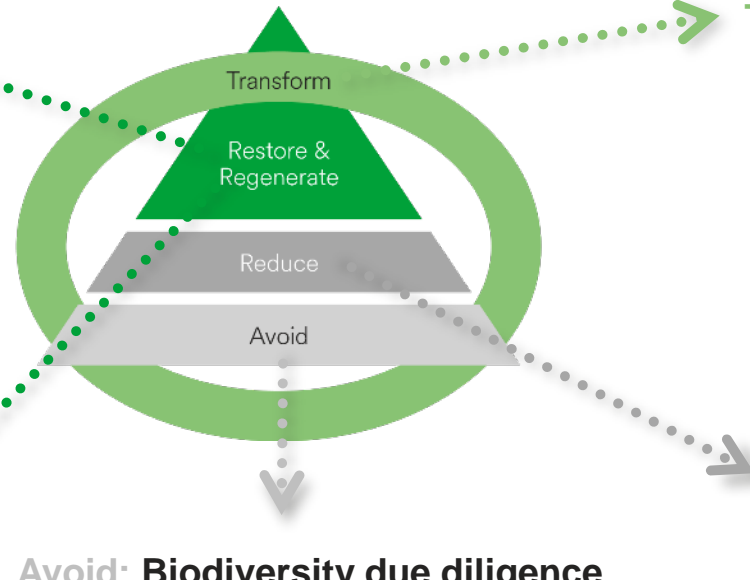
Biodiversity protection during forest management



Special actions to promote vulnerable species (feasibility study)



Climate change adaptation support – Future forest



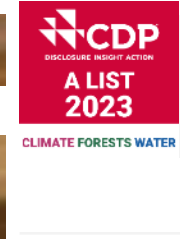
## Transform



Textile Exchange Biodiversity Benchmark



Wood Kplus



CDP Forests



Industry associations work (CEPI, ...)

## Reduce: Via circular economy and climate targets

Resource use efficiency: Biorefinery

Recycling



Climate targets



Pollution prevention

## Avoid: Biodiversity due diligence via sustainable sourcing

Wood & pulp policy

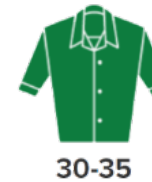


Forest certificates



Due diligence system in wood & pulp procurement

Canopy Style initiative

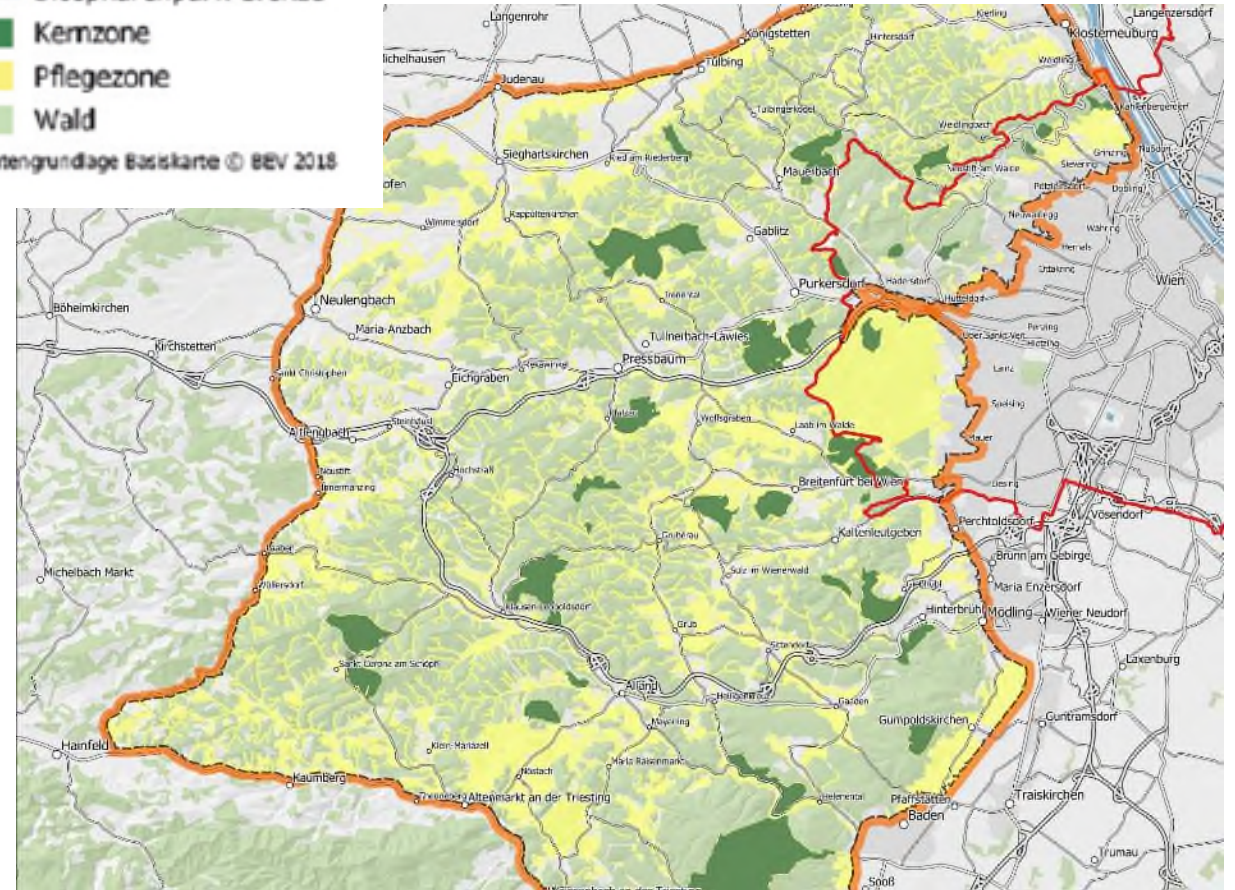
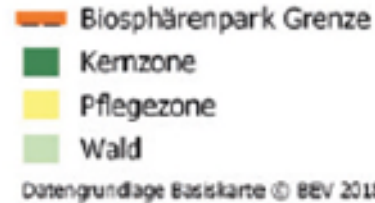


30-35

# Lighthouse action in Austria

## Vienna Woods Biosphere Reserve

- Network of differently used and protected areas - *integrated and combined* nature conservation concept
- Important supply region for Lenzing (beech wood)
- One hectare of forest in the Vienna Woods produces more fibers than one hectare of cotton field
- ... and also fulfills many other ecosystem services



# Lighthouse action in Austria

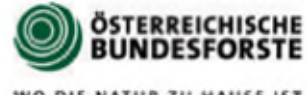
## Biodiversity and multifunctional forest management

### - Project “BIMUWA”

- Funded pilot project in PEFC region 6 (Styria / Carinthia)
- Measures developed to protect endangered species and increase biodiversity, under local conditions, and integrated into daily forest management.
- Voluntary measures, very concrete and relatively easy to implement
- Broad stakeholder involvement
- Positive effects on large forest areas
- Lenzing supported the dissemination of the results to interested private forest owners in the region in 2023

<https://www.umweltdachverband.at/inhalt/biodiversitaet-und-multifunktionale-bewirtschaftung-im-wald-vielfalt-macht-stark>

<https://www.bundesforste.at/leistungen/naturraum-management/foerderprojekte/biodiversitaet-und-multifunktionale-bewirtschaftung-im-wald.html>



Mit Unterstützung von Bund, Ländern und Europäischer Union

 Bundesministerium  
Land- und Forstwirtschaft,  
Regionen und Wasserwirtschaft

  
LE 14-20  
Förderung für den Ländereinsatz

  
Europäischer  
Landwirtschaftsfonds für  
die Entwicklung des  
ländlichen Raumes  
Hier werden Europa in  
die ländlichen Gebiete.

  
Innovative by nature

# Future forests

## Adapting to climate change

Climate change alters the conditions for forest growth quicker than the forest ecosystem can adapt by itself. Thus, to ensure the benefits of forests for society, such as raw material, recreational space, protection from natural hazards, air quality or cooling effects, forest management tries to support the adaptation of forest stands to climate change. In the Wienerwald, we will be confronted with long hot spells and droughts in summer, while winters will probably be warmer than in the past and wet. So, our wood supplier Österreichische Bundesforste enhances the number of tree species that are more heat-tolerant and drought-resistant than others, such as oak, fir and pine species.

[Willkommen im Wald der Zukunft! | Wald der Zukunft \(wald-der-zukunft.at\)](https://www.wald-der-zukunft.at)



The spruce monoculture on this spot was damaged by the bark beetle: already stressed by drought and the warm climate the spruce trees were easy prey for this pest. So, our wood supplier removed the dead and moribund trees and planted oak trees. With additional tree species from natural regeneration, this forest stand will hopefully become a stable, mixed, and well adapted forest of the future.

# Conclusions



- There is a need for improvement in the state of biodiversity and climate resilience in European forests.
  - New legislation and various stakeholders e.g. NGOs demand changes towards broader responsibility also from wood processing industry.
  - The wood processing industry is often in a reactive or even defensive mode towards these demands.
  - Forestry can work with nature (integratively !) to solve the big issues .
  - Science and governmental institutions can contribute with a framework, science-based recommendations, and data
- **let us join in action to transform the forests in a nature-positive and productive way**
- **let us live and tell the vision of a nature-positive forest-based bioeconomy together**