

TAALERI
Bioindustry

TCFD & TNFD Risk Report

Taaleri Bioindustry

Reporting period 2023



Foreword

This is Taaleri Bioindustry's first report on climate- and nature-related risks and opportunities, implementing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the Task Force on Nature-related Financial Disclosures (TNFD). As a private equity fund manager specialising in investments within the bioindustry sector, we recognize the critical importance of disclosing our approach to these environmental challenges.

In an era marked by increasing environmental awareness and the imperative to transition to a sustainable global economy, it is essential for us to be transparent and proactive in addressing the climate and nature-related risks that our investments may encounter. This report demonstrates our dedication to safeguarding the long-term interests of our investors and the well-being of the planet.

At its core, this report aims to inform our investors about the climate- and nature-related risks associated with our investment targets and assets. By providing these insights into the environmental aspects of our investments, we empower our stakeholders to make better-informed decisions, manage risks, and capitalise on opportunities that align with a more

sustainable future. We believe that transparency is the cornerstone of trust, and accountability is the essence of responsible investing. By adopting the TCFD and TNFD recommendations, we are committed to enhancing our transparency in disclosing these material climate and nature-related risks related to our investment portfolio. This report offers a view of our strategy, governance, risk assessment, and management approaches regarding climate- and nature-related risks.

The report will cover various aspects, including our leadership and governance structures, engagement with stakeholders, our ambition and targets for addressing climate and nature-related risks, how these risks impact our strategy and how they are monitored and reviewed, as well as our metrics and targets.

We understand that the financial industry plays a pivotal role in fostering sustainability, and we are dedicated to driving positive change. We are excited to share our first report on these vital topics and are committed to continuously enhancing our practices in response to the evolving environmental landscape.

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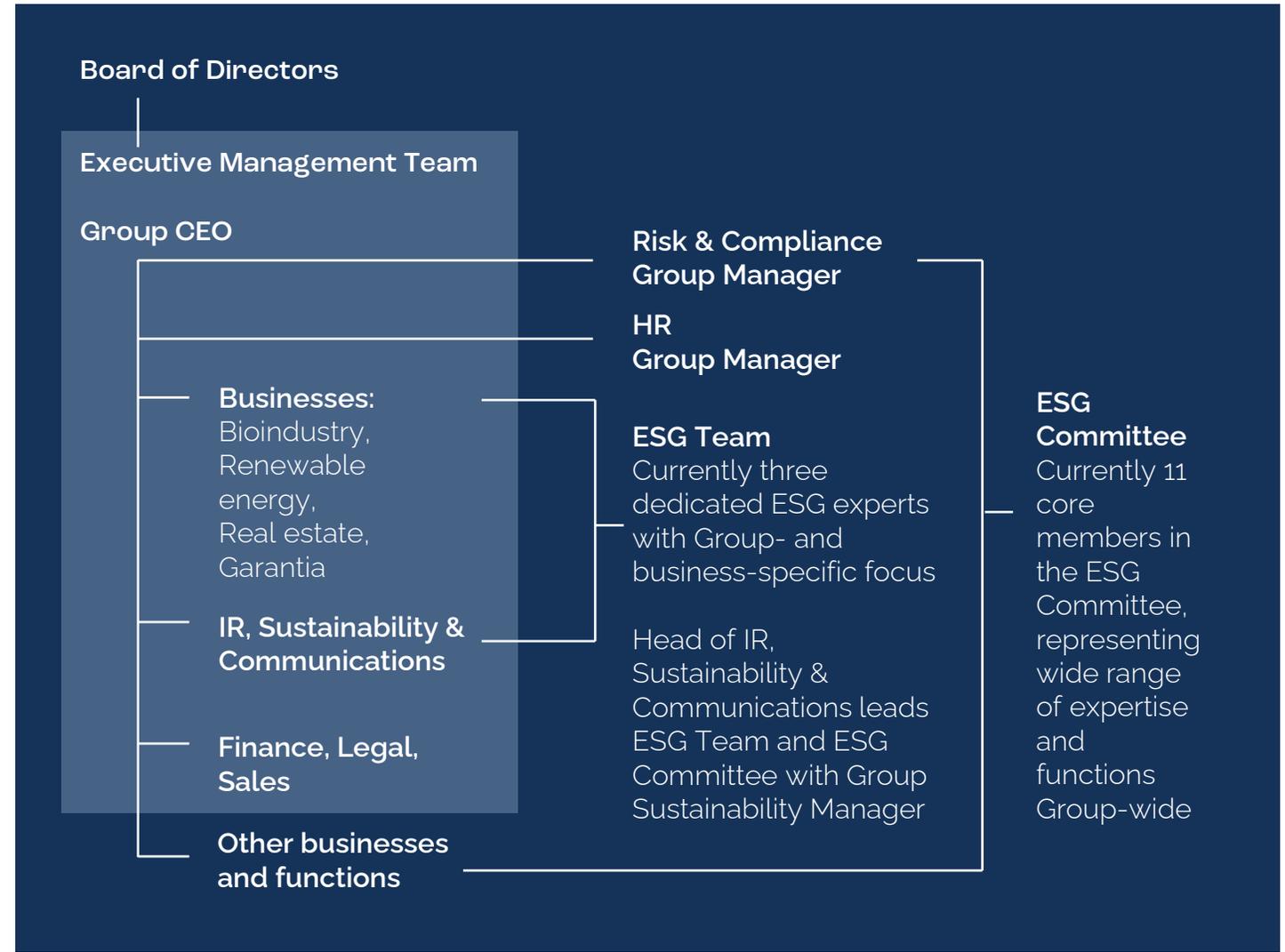
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Governance



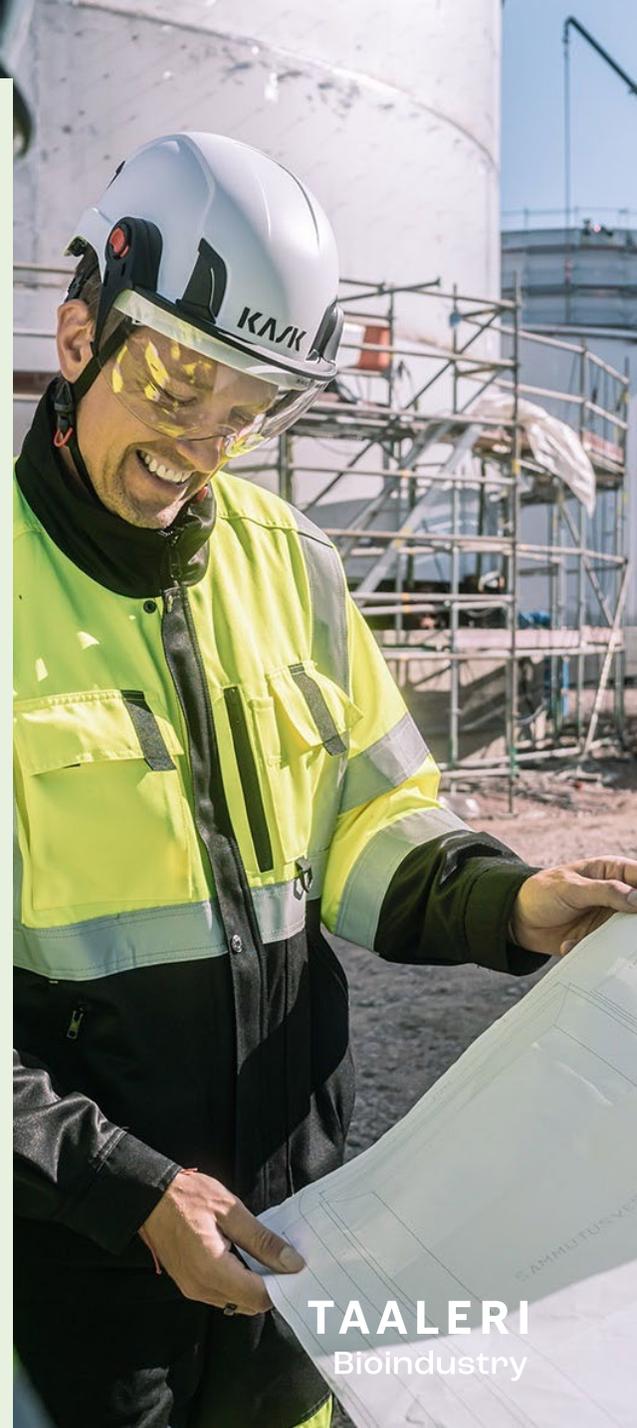
Board oversight and management's role

- **Board of Directors** guides and ensures sustainability work.
- **Executive Management Team** leads, develops, resources and monitors the progress of sustainability work.
- **Business directors** ensure that internal and external obligations are met in respect of their own business and manage the sustainability work of their business.
- **ESG Committee** plans, implements and assigns responsibilities for sustainability work.
- **All Group personnel** are responsible for their conduct and compliance with relevant policy documents related to sustainability.



Board oversight and management's role

- The Group's Sustainability Team is responsible for identifying and documenting the Group's significant sustainability risks, drafting, and updating policies and guidelines, and providing support functions for the monitoring of sustainability risks of the business segments.
- The Group's Sustainability Team is responsible for the communication and training in regard to sustainability risks and related processes, monitoring the EU sustainable finance reporting obligations (SFDR 2019/2088), and measuring the Group's performance.
- The Group Risk Officer and the Sustainability Team as well as the persons responsible for the risk management of the businesses are responsible for monitoring and controlling sustainability risks and preparing adaptation plans for said risks. In addition, the Group's Sustainability Team reports on the Group's sustainability risks. Compliance with the reporting requirements is the responsibility of the Group's General Counsel.
- The Group's Executive Management Team is responsible for integrating sustainability risks into the development of the Group's strategy and objectives.
- The Executive Management Team and the legal and risk departments ensure the implementation of risk functions, processes, and sufficient resources. In addition, the Group's Executive Management Team is responsible for compliance with Taaleri's Code of Conduct.



Description of policies and engagement activities

- Our strategy and measures for sustainable investing are described in the Group's [Sustainability Policy](#).
- Taaleri's Code of Conduct and sustainability principles guide Taaleri Plc and all its businesses.
- Taaleri and Taaleri Bioindustry's approach to Sustainability risks and their management is described in the Group's [Sustainability Risk Policy](#)
- The policies and documents mentioned in this section are available at [Document Archive](#).
- Taaleri's businesses work responsibly and comply with good governance practices and the principles of sustainable investing in all their operations. The implementation of responsibility and sustainability is supported by business-specific policies and guidelines.
- Taaleri is committed to respecting all internationally recognised human- and labour rights, such as the International Bill of Human Rights and the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work (ILO's eight Core Conventions). We are also committed to following the UN Guiding Principles on Business and Human Rights in all our activities. Taaleri also expects its employees, partners, and other relevant collaborators to respect these human- and labour rights.
- Taaleri Bioindustry's business-specific policies that describe our approach to stakeholder engagement, human rights and other sustainability topics are available at:
 - [Taaleri Bioindustry Sustainability Principles](#)
 - [Taaleri Bioindustry Code of Conduct](#)

Description of policies and engagement activities

The principles of ownership and stewardship summarised here guide our engagement activities as a shareholder, developer and manager of private equity or alternative investments. The principles of ownership and stewardship include binding principles that guide our actions as well as measures that we take at our discretion.

- 1) We integrate ESG issues into our investment analysis and decision-making process
 - We develop fund-specific engagement plans.
- 2) As an active owner we help to implement ESG factors into practical operations, principles, and policies of our investees
 - We integrate sustainability commitments and obligations into contracts and agreements.

- 3) We identify and implement essential sustainability indicators and report on the sustainability work of the fund and the Group in accordance with disclosure obligations
 - We analyse and report on sustainability risks and impacts;
 - We develop roadmaps for target companies to support them in developing their sustainability work;
 - We monitor and report on the measured developments; and
 - We take part in decision-making and operational activities in the target companies through board work.
- 4) We promote the implementation of active ownership and sustainability principles in the industry by being an active member in industry organisations and registered associations.
- 5) We are working on the continuous development of our active ownership measures and stewardship methods.
- 6) We monitor the actions taken and report on their progress as part of fund reporting.



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Risk Management



Sustainability Risk Management

Sustainability risk means an event or circumstance (e.g. impacts of climate change or nature loss) relating to the environment, society, or governance, the occurrence of which might have an actual or potential negative material impact on the value of the Group or the investment products it offers.

Sustainability risks are managed by assuring compliance with international environmental and social standards, norms, and regulations. We are committed to following the laws, statutes, and official regulations of all countries where we carry out our business.

In addition to local laws and regulations, we are committed to following internationally recognised human rights declarations, as defined in UN Universal Declaration of Human Rights and the core conventions of the International Labour Organisation (ILO). We also comply with other minimum safeguards under the EU's Sustainable Finance Disclosure Regulation.

In addition to international and national standards and norms, investments' sustainability risks are managed by following the process described below and on the following page:

1. Integrating sustainability as a key part of the company's strategy, risk management, agreements and management of portfolios, projects, and partnerships;
2. Continuous monitoring of regulation and stakeholder expectations;
3. Maintaining and updating appropriate procedures, policies, and processes at the fund-, AIFM-, and Group level;
4. Carrying out comprehensive ESG due diligence assessments taking into account environmental, social, and governance aspects of new investment products and investee companies and monitoring and auditing performance;
5. Various quantitative and qualitative analyses;
6. Maintaining appropriate tools, information, and processes on the sustainability impacts of the investees and collecting data to report on them; and
7. Assessing sustainability risks as part of the Group and business segments' annual risk assessments.

Sustainability risk management process and measures



1. Planning

- Identification and documentation of material sustainability risks
- Data collection, measuring sustainability risks and committing to sustainability targets and goals
- Risk as part of the strategy, long-term plan, and budgeting
- Updating of policies, guidelines, and management methods

2. Management

- Creating an understanding of the sustainability risk- and market environment and processes throughout the value chain
- Collection and monitoring of data and information (PAI-indicators)
- Measuring performance against set targets
- Monitoring the implementation of operations and processes, available resources and spent costs
- Monitoring reporting requirements

3. Corporate governance

- Integration of sustainability risks into other policies, processes and risk assessments
- Sustainability due diligence reviews, audits, risk monitoring, control and adaptation/mitigation plans
- Processing and documentation of any complaints, errors or development proposals
- Reassessment, monitoring and development of relevant sustainability risks and opportunities in the value chain and engagement of partners, for example through agreements

4. Reporting

- Sustainability risk reporting and monitoring as part of quarterly- and investor reporting
- Reporting of complaints, errors and development proposals
- Measuring, monitoring and reporting sustainability risks and impacts
- Monitoring the implementation of activities and processes, available resources and spent costs
- Compliance with reporting requirements

Sustainability Risks

Sustainability risk management is integrated into all of the Group's operations and risks are assessed throughout the operations' life cycle.

Sustainability risk management starts with identifying and measuring sustainability risks as part of existing functions and services and new fund products.

The main means of assessing sustainability risks are different analyses and surveys of investees before the investment decision, monitoring, and tracking of investees operations, training, drafting of guidelines, active ownership and engagement of our investees, clients, stakeholders, and partners.

Risks are assessed and measured on the basis of the likelihood of their realisation, and the magnitude of their impact and remendability. The likelihood of climate- and nature risks are assessed on a six-step scale: 0) poor chance, 1) rare, 2) unlikely, 3) possible, 4) likely and 5) almost certain.

Similarly, the severity of the risks is assessed on a six-step scale: 0) none 1) minimal, 2) low, 3) medium, 4) high and 5) significant. The likelihood and severity of the sustainability risks is also assessed on the basis of the interaction between the scores obtained by squaring the severity of the impact. The combined impact produces a classification that determines the sustainability risks in five categories: Critical, Significant, Important, Informative, and Minimal.

In the management and administration phase, risks are monitored, data is collected, and functions are audited. Where necessary, we develop adaptation plans to mitigate, eliminate or remedy risks. Reporting on sustainability risks is an essential part of transparent stakeholder communication. Reporting takes into account the requirements of regulation and our clients, as well as reports made through various whistleblowing and grievance channels. Reporting is an essential part of transparency, and we are constantly working to improve reporting on the sustainability factors and sustainability risks of investments.

Strategy

Climate -related risks & opportunities



Risks, Opportunities, and Strategy

Central to our strategy is the pursuit of investments that promote sustainability and resilience. We actively seek opportunities to replace the use of fossil and virgin raw materials with renewables, enable circular economy, and support the development of less pollutive bio-based solutions. These strategies align our investments with a low-carbon future and help our adaptation to climate -related risks and opportunities.

Board Engagement and Governance:

Taaleri Bioindustry's active ownership is instrumental in shaping climate risk management. Through board seats in target companies, we actively engage and collaborate with investees to establish robust governance structures. These structures ensure that climate considerations are firmly embedded within the investee's strategic decision-making processes.

Risk Identification and Assessment:

Our strategy work involves a comprehensive assessment of climate-related risks within the portfolio. We identify and analyse both physical and transitional risks that our investments may face due to climate change. This risk assessment is dynamic and evolving, considering various climate scenarios.

Scenario analysis:

To anticipate potential climate impacts, we conduct scenario analysis, which helps us evaluate different climate scenarios' implications on our portfolio. By stress-testing investments under various climate pathways, we gain a deeper understanding of their resilience and vulnerabilities.

Setting Net Zero Targets:

As part of our commitment to climate action, Taaleri Bioindustry sets Net Zero targets for our own operations. This commitment extends to our investees, where we engage and support them in setting science-based targets to achieve Paris-aligned net-zero emissions by 2050. These targets serve as a clear roadmap for mitigating climate-related risks and capitalising on opportunities.

Integration into Investment Decisions:

We integrate climate-related financial risks into our investment decisions, considering climate risk assessments and scenario analysis as fundamental criteria. This ensures that climate considerations are a core part of our due diligence process when identifying new investment opportunities.

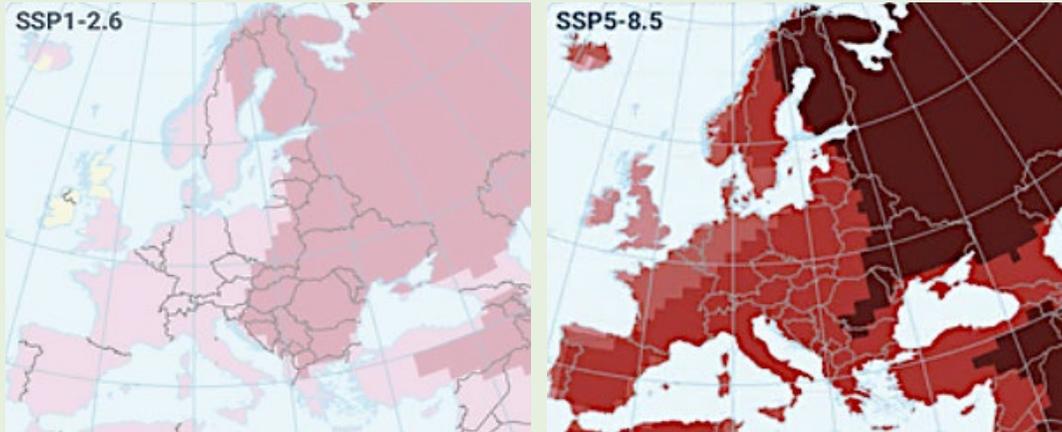
Transparency and Disclosure:

Taaleri Bioindustry values transparency. We prioritise disclosing our approach to climate -related financial risks and opportunities to our stakeholders. By providing clear and comprehensive reporting, we foster trust and enable informed decision-making among our investors, partners, and clients.

Monitoring and Adaptation:

Continuous monitoring of climate -related performance metrics and targets is vital. This enables us to track progress toward our Net Zero objectives and make necessary adjustments to our strategies. Adaptive measures ensure our portfolio remains resilient in the face of evolving climate and environmental challenges.

Climate Scenarios



Projected changes in annual temperature for the forcing scenarios SSP1-2.6 and SSP5-8.5

In assessing climate related risks, Taaleri Bioindustry uses the IPCC's climate scenarios. The IPCC's climate scenarios are crucial for estimating the risks associated with climate change to an investment portfolio because they provide a structured framework for assessing the potential impacts of different climate futures. This allows us to make more informed decisions, anticipate changes in regulations, and identify both risks and opportunities related to climate change in our investments.

Climate scenarios used are the Representative Concentration Pathways (RCPs) that primarily focus on greenhouse gas emission trajectories and the physical drivers of climate change, and the Shared Socioeconomic Pathways (SSPs), that describe a range of possible futures based on factors such as population growth, economic development, technological advancement, and governance. SSPs provide information about how society might evolve, including changes in energy systems, land use, and lifestyle.

SSP1-RCP2.6 (Sustainability): This scenario assumes significant emissions reductions and aims to limit global warming to well below 2°C above pre-industrial levels. Core changes include rapid adoption of clean energy sources, strong mitigation policies, and increased energy efficiency. It represents a future where emissions peak soon and decline steadily. This scenario represents a future with strong climate mitigation efforts and sustainable socioeconomic development, where the society prioritises environmental and social well-being.

SSP2-RCP4.5 (Middle of the Road): The scenario assumes moderate emissions reductions, but not as aggressive as RCP2.6. The society follows a pathway of moderate socioeconomic development. It represents a world where climate policies are implemented. The scenario represents a world where emissions continue to rise for a while before stabilising, with some use of carbon capture and storage (CCS) technologies. Global warming is limited but still exceeds 2°C.

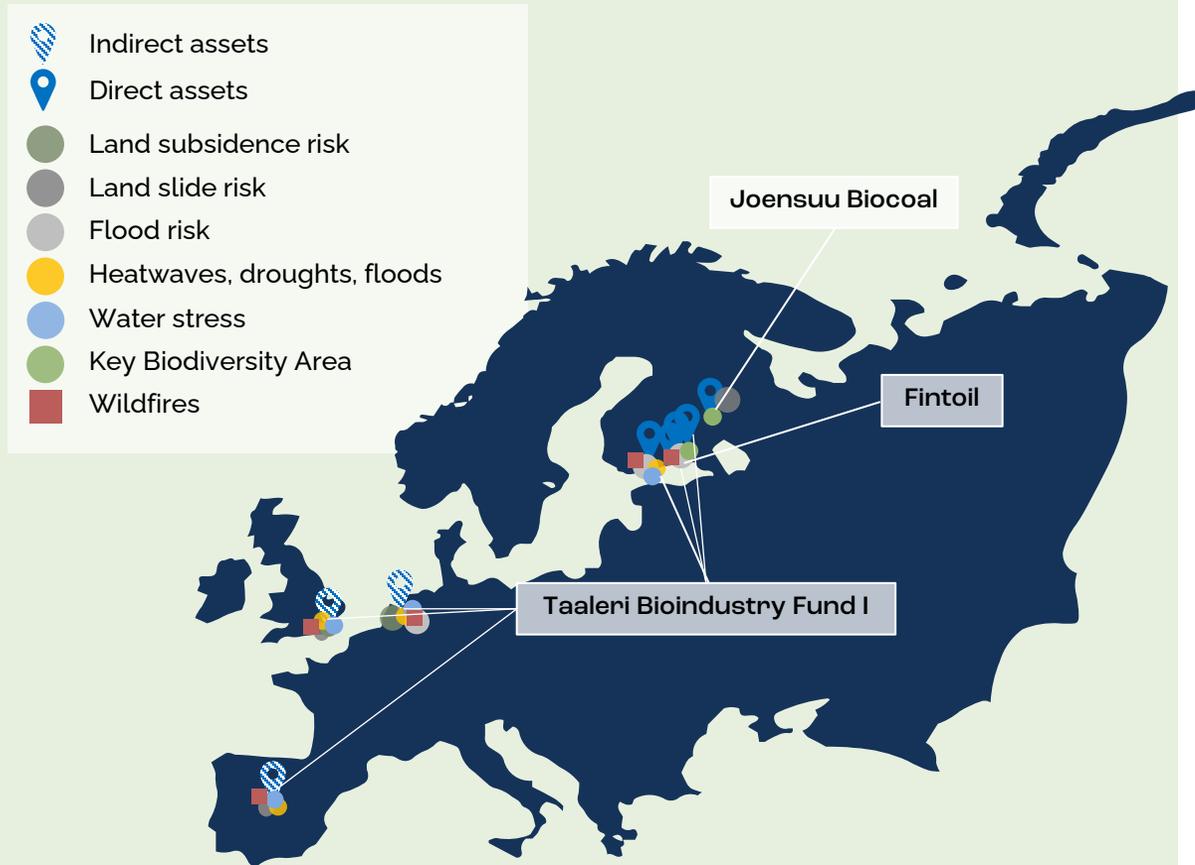
RCP6.0 (Stabilisation without Peak): RCP6.0 envisions emissions continuing to increase throughout the 21st century but eventually stabilising. It assumes a future with moderate climate policies and less rapid adoption of clean technologies. Global warming in this scenario is significantly higher than 2°C.

SSP3-RCP7.0 (Regional Rivalry): SSP3-RCP7.0 portrays a future characterised by fragmented international relations and regional conflicts. Emissions remain high, leading to significant global warming and less coordinated efforts to address climate change.

SSP4-RCP3.4 (Inequality): This scenario depicts a world with high levels of socioeconomic inequality, limited international cooperation, and uneven access to resources and technology. Emissions are moderate, but disparities in adaptation and mitigation efforts exist.

SSP5-RCP8.5 (Fossil-Fuelled Development): RCP8.5 is a high emissions scenario where emissions continue to increase rapidly throughout the century. It assumes limited climate mitigation efforts and heavy reliance on fossil fuels. This results in the most severe global warming, well above 2°C and potentially exceeding 4°C or more. Socioeconomic development is driven by economic growth, resulting in the highest level of global warming and significant environmental challenges.

Physical climate- and nature related risks



Taaleri Bioindustry's assets face several risks in the context of integrated climate and socioeconomic scenarios. These risks include physical climate risks such as extreme weather events, which can disrupt supply chains and damage infrastructure, as well as changes in temperature and precipitation patterns that may impact forest and biomass resources. Transition risks arise from potential regulatory changes and shifts in market demand towards sustainable bio-based products, affecting asset profitability. Economic and social risks include market disruptions due to climate impacts on global supply chains and potential public health and social welfare challenges. The likelihood of these risks depends on the specific trajectory of climate change and the extent of global mitigation and adaptation efforts, but they underscore the importance of sustainable and adaptive practices in the bioindustry sector.

However, these scenarios also present opportunities for the bioindustry sector to capitalise on the growing demand for sustainable and renewable bio-based products, clean technologies, and green financing, aligning their assets with the transition to a more climate-resilient and sustainable future.

The physical nature- and climate related risks regarding Taaleri Bioindustry's assets were assessed based on scientific, geographical open-data. Only potential risk areas or areas of concern are depicted on the map. The depicted areas only mark the approximated geographical areas where flooding, land slide or subsidence risks are possible, but do not showcase the level, or magnitude of risk. However, according to sources used, all direct physical risks to assets are considered low, whereas risks to indirect assets in the Netherlands are ranked higher.

No direct assets are located on Biodiversity sensitive areas, but some are near biodiversity sensitive areas and Natura 2000 sites. It is to be noted that Finland has a high number of endangered vascular plants and tree species in forests, which should be taken into account in raw material sourcing.

Land subsidence: [UNESCO \(2021\)](#). Land slides: [ESDAC \(2018\)](#); [Wilde et al. \(2018\)](#); [ESPON \(2005\)](#). Flooding: [ESSD \(2022\)](#); [EEA \(2022\)](#). Heatwaves, droughts, floods: [EEA \(2020\)](#). Water stress: [EEA 2050 projection \(2016\)](#). Wildfires: [EFFIS Wildfire Risk Viewer](#). Biodiversity sensitive areas assessed: [Key Biodiversity Areas](#), [UNESCO World Heritage Site](#), [Natura 2000](#), [Protected areas](#), [European Protected Sites](#).

Taaleri Bioindustry Ltd - Climate risks & opportunities

Taaleri Bioindustry Portfolio's Climate-related risks are described in tables throughout pages 20-25. These tables include only risks that are estimated to be material in the most stringent climate scenario SSP1-RCP2.6, based on the performed risk assessment, that is, the table does not include risks or opportunities that have a minimal classification category. However, all six scenarios have been analysed and taken into account in the assessments. As described on page 11, the materiality of the risks are assessed on a scale from 0-5 considering both the likelihood of the risk, and its potential financial impact. The overall materiality score is derived by summing the likelihood and the financial impact, while raising the financial impact to the power of two.

The table further includes information on the category of risk / opportunity recognised and whether it is related to chronic physical risks, such as temperature increase, acute physical risks, such as wildfires or floods, or transition risks that include risks related to regulatory, technical, and market changes.

The risk classification categories are described below:

Classification categories



In addition, the tables provide a short description of the risk / opportunity recognised and an estimate of its possible financial implication, the assets the risk concerns, as well as the estimated time horizon, when the risk / opportunity might actualise.

The assets that are included in the risk assessment covers all assets under management under Taaleri Bioindustry Ltd: Taaleri Bioindustry Fund I, Joensuu Biocoal Oy, Fintoil Hamina Oy, as well as some of Taaleri Plc's balance sheet investments that are managed by the Taaleri Bioindustry team. Risks and opportunities regarding portfolio pipeline have not been included in the report.

For investor reporting purposes, some more detailed information regarding Taaleri Bioindustry Fund I –portfolio and Joensuu Biocoal risks and opportunities are provided.

Altogether, over 70 climate –related risks and opportunities were identified and assessed, from which 27% were chronic physical risks & 88% opportunities, 43% were acute physical risks & 0% opportunities, and 31% were transitional risks & 13% opportunities.

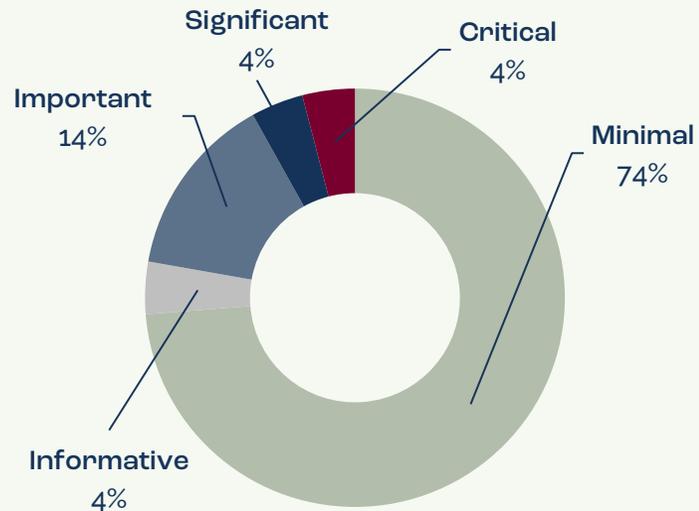
The pie-charts presented on pages 17-19 represent the distribution of the types of risks and opportunities of all Bioindustry portfolio assets, the distribution of Bioindustry Fund I specific risks and opportunities, as well as Joensuu Biocoal specific risks and opportunities.

As we move up the scenarios from SSP1-RCP2.6 to SSP5-RCP8.5, the number of risks categorised as "significant" increases slightly, as does the number of "important" and "informative" risks, whereas the number of minimal risks reduces from 48 to 37. The number of critical risks remains at 9. In the scenarios more dependent on fossil resources the physical risks become more material.

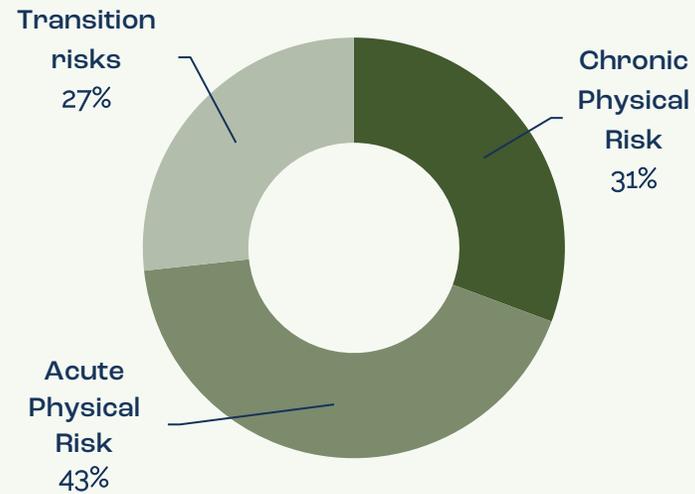
Climate Risk Exposure

Taaleri Bioindustry Ltd Portfolio

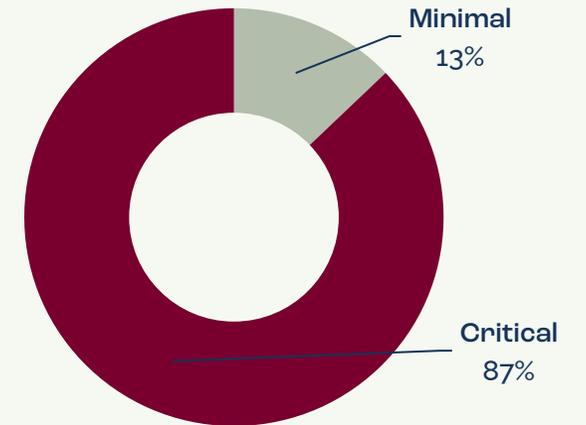
Climate-risk materiality



Climate-risk type



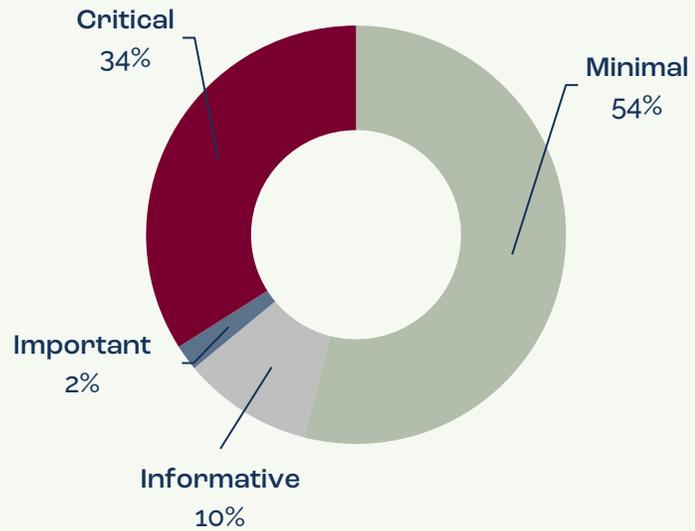
Climate-opportunity materiality



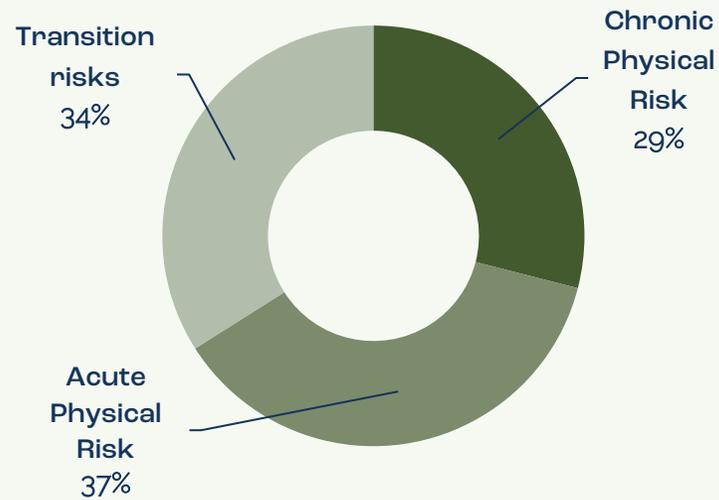
Climate Risk Exposure

Taaleri Bioindustry Fund I

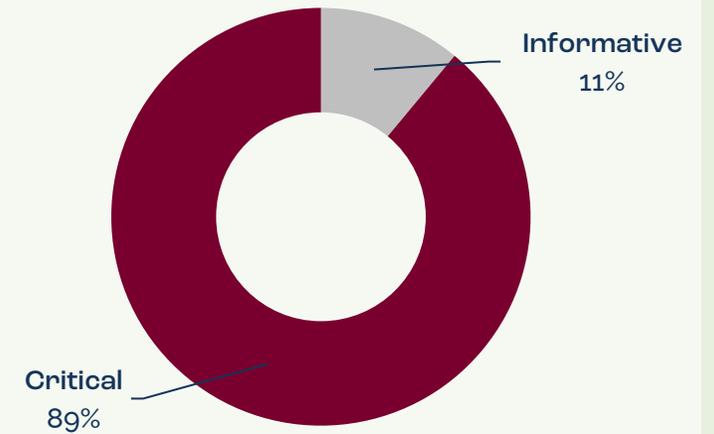
Climate-risk materiality



Climate-risk type



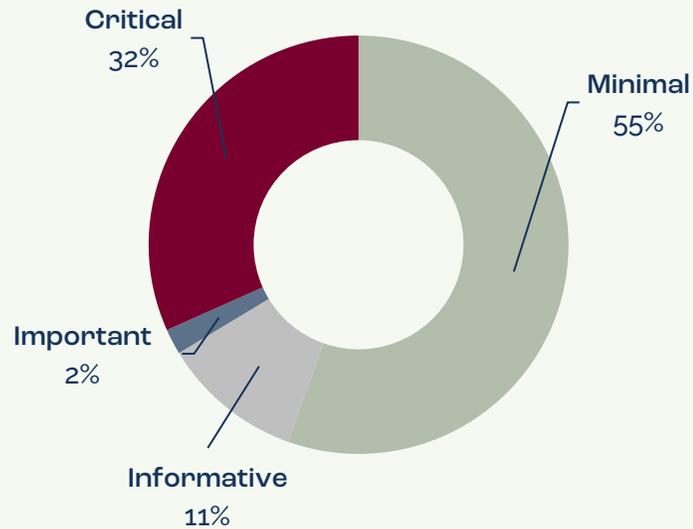
Climate-opportunity materiality



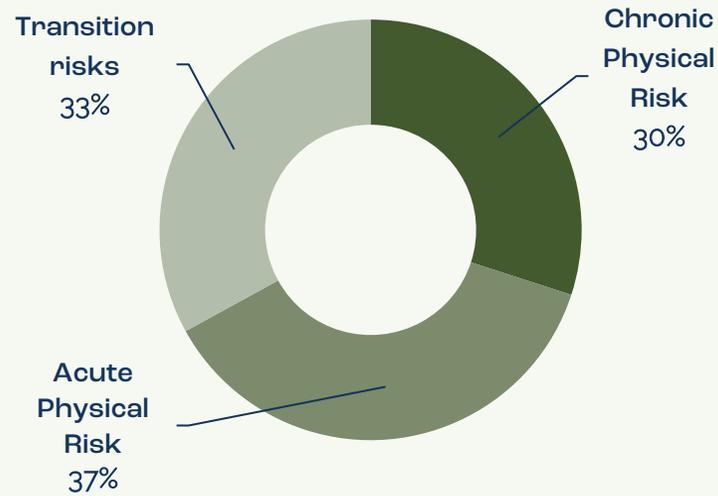
Climate Risk Exposure

Joensuu Biocoal

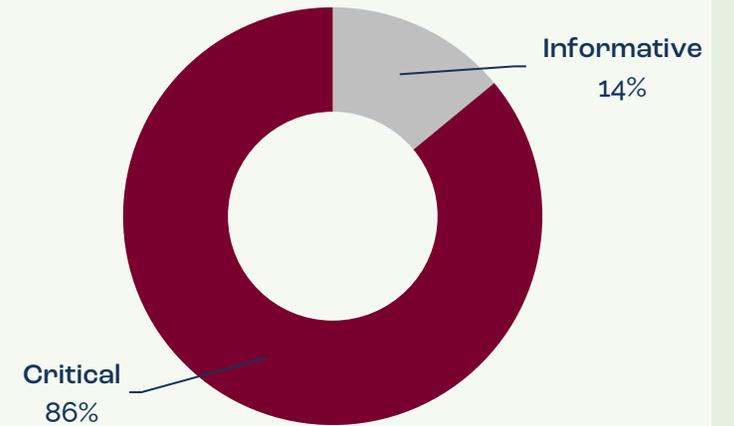
Climate-risk materiality



Climate-risk type



Climate-opportunity materiality



Climate risks & opportunities

Taaleri Bioindustry Ltd Portfolio

Category	Risk / Opportunity	Description	Potential financial impact	Assets, Time horizon and scenario			Materiality
Acute physical risks	R	Heat waves increase the risks for wildfires, which in turn can cause severe damage to infrastructure, facilities and housing, as well as the raw material supply chain, increasing both OpEx and CapEx.	Reduces the supply of raw material, which causes the prices to increase. These increases can be detrimental for some assets' profitability and cause Potential financial impact: 0 - 1,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Informative
Acute physical risks	O	Consumer behaviour can be influenced by extreme heat events, impacting market demand for certain products. Bioindustries may face financial risks if they are not adaptable to changing consumer preferences during heat waves, but e.g. eco-friendly packaging might gain market opportunities from increased consumption of packaged foods and drinks during heat waves.	Increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 - 5,000,000 €	Bioindustry Fund I	1-5 years	SSP1-RCP2.6	Important
Transition risks	O	The increased pricing of GHG emissions can increase the competitiveness and demand of Bioindustry products and technologies reducing the dependency on fossil or virgin inputs, leading to better margins and profits for related businesses.	Competitive price compared to less sustainable substitutes / 1,000,000 - 5,000,000 €	All assets	1-5 years	SSP1-RCP2.6	Critical
	O	As an impact investor Taaleri Bioindustry's assets are already in someways equipped to report on their emissions and are in this way in a better position to respond to regulatory demands regarding sustainability reporting compared to the majority of SMEs. Developing internal reporting would benefit the target companies through optimising own operations and managing with data, and this would also support better risk management.	Developing internal reporting would benefit the target companies through optimising own operations and managing with data, and this would also support better risk management. This leads to increased company value due to better performance in sustainability compared to competitors / market / 500,000 - 5,000,000 €	Bioindustry Fund I	1-5 years	SSP1-RCP2.6	Important
	R	Tightened emissions reporting introduces standardised reporting requirements to companies of all sizes. This requires more know-how and potentially internal resources in target companies on ESG and governance, as well as third party assistance, increasing operational costs.	Increased OpEx costs due to increased labour / advisory costs, and audit costs / 10,000 - 100,000 € / year	All assets	1-5 years	SSP1-RCP2.6	Important

Category	Risk / Opportunity	Description	Potential financial impact	Assets, Time horizon and scenario			Materiality
Transition risks	R	Tightened emissions reporting introduces unfavourable reputation for target companies compared to their competitors realising in the financial products forced exit due to unalignment with fund strategy and / or regulation	Forced unfavourable exit due to unalignment with fund strategy / regulation / 500,000 - 5,000,000 €	Bioindustry Fund I	1-5 years	SSP1-RCP2.6	Important
	O	The degradation of the environment and global warming imposes increased regulation to consumption (and production) of commodities e.g. packaging, recycling, fuels, energy production and efficiency, chemicals, water use and handling, permits, etc. These developments can provide opportunities through bans / supply of certain raw materials or inputs competitors use and increase their prices and hamper the end-markets and demand of competing commodities.	Forced unfavourable exit due to unalignment with fund strategy/regulation / 1,000,000 – 10,000,000 €	All assets	1-5 years	SSP1-RCP2.6	Critical
	R	The degradation of the environment and global warming imposes increased regulation to consumption (and production) of commodities e.g. packaging, recycling, fuels, energy production and efficiency, chemicals, water use and handling, permits, etc. These developments can cause negative financial implications through bans / supply of certain raw materials or inputs or increases in their prices or hamper the end-markets and demand of certain commodities.	Decreased demand and competitiveness impacting the price of the end product and the company 0 - 1,000,000 €	All assets	1-5 years	SSP1-RCP2.6	Important
	R	Increased regulation and its rapid development increases risks related to exposures to litigation. Litigation involves direct legal costs, but also indirect financial risks related to reputational damage and adverse media coverage.	Litigation and sanction costs, PR costs 0 - 100,000 €	All assets	1-5 years	SSP1-RCP2.6	Informative
	R	Invested solutions are not the best available solutions on the market in regard to environmental impact, decreasing market demand, lowering performance and valuations leading to lower returns on investments.	Decreased demand and competitiveness impacting the price of the end product and the company / 0 - 1,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Important
	O	Invested solutions are among the best available solutions on the market in regard to environmental impact, increasing market demand propping higher valuations and returns on investments.	Increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 - 10,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Critical

Category	Risk / Opportunity	Description	Potential financial impact	Assets, Time horizon and scenario			Materiality
Transition risks	O/R	Due to fast changes in the market as well as in the regulatory environment it can be hard to estimate the winning technologies. Successful investments impact the overall performance of the funds, strengthening the track record of the team, impacting future fundraising aspirations as well as the current performance and payback of investments made. / Unsuccessful investments impact the overall performance of the funds, weakening the track record of the team, impacting future fundraising aspirations as well as the current performance and payback of investments made.	Successful investment leading to gained capital and LP trust / Unsuccessful investment leading to lost capital and LP trust / 1,000,000 – 10,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Critical
	R	Investors might become hesitant in investing in new projects, technologies, or capital expenditures when market signals are unclear, leading to potential financial stagnation, missed growth opportunities, and difficulties in attracting new investors or capital. In addition, uncertainty can contribute to market volatility, leading to fluctuations in asset prices, valuations and stock prices, impacting businesses' financial performance.	Difficulties in fund-raising for financial products, poor re-financing opportunities, investment decisions based on wrong signals, early exits. 1,000,000 – 10,000,000 €	All assets	1-5 years	SSP1-RCP2.6	Significant
	O/R	Consumer behaviour is evolving towards more mindful consuming habits. Bioindustries that succeed to seize opportunities and adapt to changing needs and market demands, may face increased demand for their products, leading to revenue inclines and potential market share gains. / Bioindustries that fail to seize opportunities and adapt to changing needs and market demands, may face reduced demand for their products, leading to revenue declines and potential market share losses.	Successful investments leading to lost capital and LP trust / Unsuccessful investments leading to lost capital and LP trust 500,000 – 10,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Critical
	R	The bioindustry sector may be subject to increasingly stringent environmental regulations aimed at reducing GHG emissions and promoting sustainability. Compliance with evolving regulations may require significant investments in technology upgrades, emissions reduction measures, and adherence to new reporting standards, and R&D efforts.	Litigation and sanction costs, PR costs, impacts on raw-material intake and prices 500,000 – 10,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Important

Category	Risk / Opportunity	Description	Potential financial impact	Assets, Time horizon and scenario			Materiality
Transition risks	R	Rising raw material costs can lead to higher production expenses, reduced profit margins, and potential challenges in managing budgets and cash flows. This can lead to limiting investment and growth initiatives as well as losing competitive advantage. Increased raw material costs can disrupt the supply chain and lead to delays in production, increased logistics expenses and disruption in product availability. Businesses with long-term contracts or pricing agreements with fixed raw material costs may be locked into unfavourable terms when prices rise.	OpEx increase due to reduced raw material availability leading to unfavourable position in the markets and reducing competitiveness / 500,000 – 5,000,000 €	All assets	1-5 years	SSP1-RCP2.6	Significant
	R	Stigmatisation of a sector may result in reduced market access and demand, diminished brand value and reputation, and potential challenges in attracting investors and even a permanent contraction of a sector.	Decreased demand and competitiveness impacting the price of the end product and the company 0 – 1,000,000	All assets	1-5 years	SSP1-RCP2.6	Important
	O/R	Consumer preferences are evolving towards sustainable and environmentally friendly products, as is the meaning of what is considered environmentally friendly. Bioindustries that succeed / fail to adapt to changing market demands may face increased / decreased demand for their products, leading to revenue increases / decreases and potential market share gains / losses.	Increased demand and competitiveness impacting the price of the end product and the company 1,000,000 – 10,000,000 € / Decreased demand and competitiveness impacting the price of the end product and the company 0 – 1,000,000 €	All assets	5-20 years	SSP1-RCP2.6	Significant
	O/R	Positive/negative public perception and stakeholder feedback may result in improved / reduced market access, increased/decreased brand value, and improved / hinder opportunities in attracting investors.	Decreased demand and competitiveness impacting the price of the end product and the company 1,000,000 – 10,000,000 €	All assets	1-5 years	SSP1-RCP2.6	Significant

Adaptation measures - Climate

Conducting comprehensive risk assessments and scenario analyses specific to climate impacts is essential. We identify potential physical and transitional climate risks within our portfolio and consider the dynamic character of climate change by looking into different climate scenarios. These comprehensive evaluations help in assessing the exposure of assets to various climate scenarios and guides our strategic decision-making. By implementing scenario analysis, our adaptation strategies are flexible and enable us to effectively respond to emerging risks and opportunities while maintaining portfolio resilience.

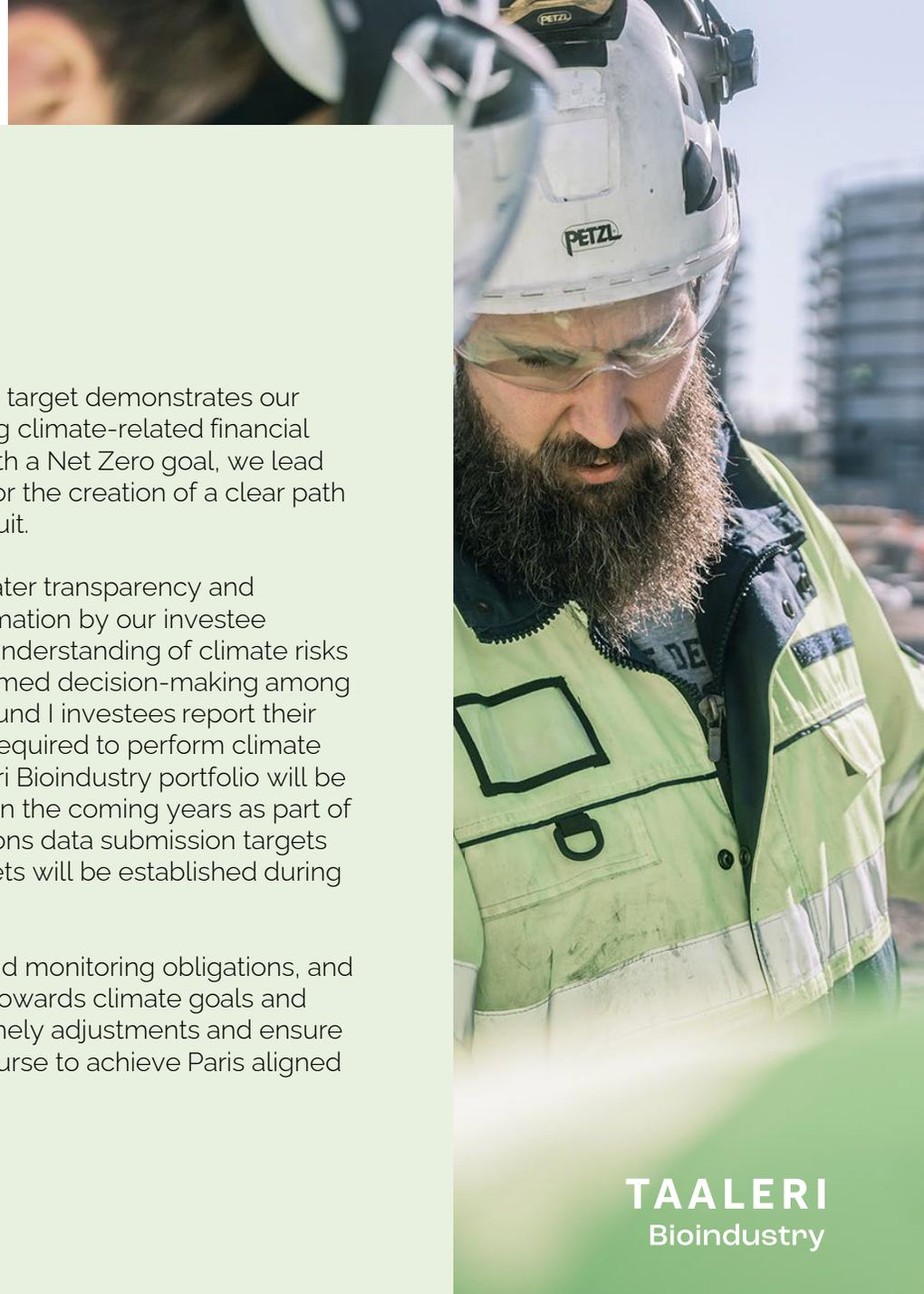
We also integrate climate risk considerations into our investment decisions to ensure that climate factors are a fundamental part of the due diligence process. We also integrate climate and other sustainability risk assessments into our investment criteria, enhancing the resilience of our portfolio.

We at Taaleri Bioindustry recognise the power of engagement and collaboration with our investee companies. By acting as an active owner, we work closely with our investees, and strive to influence and guide the companies' strategies and climate risk mitigation work. Mitigating our negative impacts is one concrete action to mitigate transitional risks and help limit global warming. This includes encouraging the adoption of science-based targets for achieving Paris-aligned net-zero emissions by 2050.

The commitment to set a Net Zero target demonstrates our proactive stance towards mitigating climate-related financial risks. By aligning our operations with a Net Zero goal, we lead by example and provide support for the creation of a clear path for investee companies to follow suit.

Furthermore, we advocate for greater transparency and disclosure of climate-related information by our investee companies. This promotes better understanding of climate risks and opportunities and fosters informed decision-making among stakeholders. Taaleri Bioindustry Fund I investees report their emissions to us quarterly and are required to perform climate risk analyses. The rest of the Taaleri Bioindustry portfolio will be engaged to report their emissions in the coming years as part of our Net Zero work. Related emissions data submission targets as well as emission reduction targets will be established during 2024-2025.

Finally, we implement reporting and monitoring obligations, and frameworks to track the progress towards climate goals and targets, which allow us to make timely adjustments and ensure that investee companies are on course to achieve Paris aligned emission targets.



Strategy

Nature -related risks & opportunities



Risks, Opportunities, and Strategy

At Taaleri Bioindustry, our commitment to integrating nature-related financial risks into our investment strategy is integral. During 2024 we strive to fully-align with the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD) and join TNFD adopters. Our approach to integrating nature risks and opportunities into our strategy work is comprehensive, focusing on investment decision-making, active ownership, and fostering a transition towards a more environmentally conscious and sustainable economy and a low-carbon future.

Active Ownership, Board Influence, and Governance:

Holding board seats in our investee companies, we exert influence to steer these companies towards more sustainable practices, including the careful management of nature-related risks and more sustainable raw material acquisition. Our active engagement is instrumental in ensuring that our investees understand and mitigate their impact on natural ecosystems. This includes encouraging the adoption of practices that support biodiversity conservation, sustainable resource use, and environmental stewardship.

Risk Identification and Assessment:

In 2023 we began our work towards implementing TNFD recommendations, to our risk assessments and our overall risk management framework. Nature related risks are currently considered at a sectoral level, as well as in raw material intake. In the future, our nature risk work will involve conducting scenario analyses to understand how various environmental and biodiversity-related scenarios could impact our investments. By considering a range of potential future states, we can better position our portfolio to be resilient against risks associated with the degradation of natural ecosystems and resources.

Integration into Investment Decisions:

Our investment philosophy is primarily based on replacing fossil and virgin raw materials with renewable resources, enabling the circular economy, and finding bio-based solutions that are less pollutive.

This inherently aligns with mitigating nature-related risks by investing in companies that contribute to biodiversity conservation and sustainable use of natural resources. We assess potential investments for their impact on ecosystems and biodiversity, ensuring our portfolio supports a transition to sustainable practices that respect and preserve natural resources.

Climate Targets:

Climate- and nature risks and opportunities have feedback loop linkages - climate change exacerbates nature loss, while the degradation of natural ecosystems further intensifies climate change. Addressing one without the other is insufficient; therefore, our strategy focuses on mitigating both, in tandem. As part of our commitment to climate action, Taaleri Bioindustry sets Net Zero targets for our own operations. This commitment extends to our investees, where we engage and support them in setting science-based targets to achieve Paris-aligned net-zero emissions by 2050. These targets serve as a clear roadmap for mitigating climate-related risks and capitalising on opportunities.

Transparency and Disclosure:

We value transparency, which is one of the reasons we want be adopters of TNFD. We prioritise disclosing our approach to nature -related financial risks and opportunities to our stakeholders. By providing clear and comprehensive reporting, we strive foster trust and enable informed decision-making among our investors and partners.

Monitoring and Adaptation:

Continuous monitoring of climate and nature -related performance metrics and targets is vital. This enables us to track progress toward mitigating our environmental footprint and make adjustments to our operations and strategy. We are currently developing the measurement practices of our nature related impacts. Adaptive measures ensure our portfolio remains resilient in the face of evolving climate and environmental challenges.

Taaleri Bioindustry Ltd - Nature risks & opportunities

Taaleri Bioindustry Portfolio's Climate-related risks are described throughout pages 31-41. These pages include only risks that are estimated to be material based on the performed risk assessment, that is, the pages do not include risks or opportunities that have a minimal classification category, nor do they include nature-related risks or opportunities regarding the portfolio pipeline.

As described on page 11, the materiality of the risks are assessed on a scale from 0-5 considering both the likelihood of the risk, and its potential financial impact. The overall materiality score is derived by summing the likelihood and the financial impact, while raising the financial impact to the power of two.

The risk assessment further includes information on the category of risk / opportunity recognised and whether it is related to direct or indirect physical risks, dependency or feedback loop risks, or transition risks that include risks related to changes in the markets, regulation, technical advancements and reputation. Examples of these risks are described on the following page, but they are in many cases interlinked.

The risk classification categories are aligned with the climate risk classification, and are as described below:

Classification categories



Pages 31-33 present a heatmap of sectoral nature-related dependency and impact risks across their value chain. This heatmap assessment is based on [ENCORE](#) online tool. In addition, the tables on pages 37-41 provide a description of the nature-related risks / opportunities recognised and an estimate of its possible financial implication, the assets the risk / opportunity concerns, as well as the estimated time horizon of when the risk / opportunity might actualise.

The assets that are included in the risk assessment covers all assets under management under Taaleri Bioindustry Ltd: Taaleri Bioindustry Fund I, Joensuu Biocoal Oy, Fintoil Hamina Oy, as well as some of Taaleri Plc's balance sheet investments that are managed by the Taaleri Bioindustry team. For investor reporting purposes, some more detailed information regarding Taaleri Bioindustry Fund I –portfolio and Joensuu Biocoal risks and opportunities are provided.

Altogether, over a 100 nature –related risks and opportunities were identified and assessed, from these 89% were risks and 24% were opportunities. From the recognised risks 28% were direct or indirect physical risks, roughly 20% were dependency and feedback loop risks, and a bit more than 50% were transition risks. Finally, the opportunities divided so that roughly 38% were direct or indirect physical opportunities, 54% were transition -linked opportunities, and about 8% were dependency and feedback loop linked opportunities. The pie-charts presented on pages 34-36 represent the distribution of the types of risks and opportunities of all Bioindustry portfolio assets, the distribution of Bioindustry Fund I specific risks and opportunities, as well as Joensuu Biocoal specific risks and opportunities.

Types of nature-related risks

Direct physical risks

Direct physical nature risks are primarily related to the reliance on natural resources and ecosystems. Direct physical nature risks refer to the immediate and tangible risks to a business resulting from environmental changes or natural events. These risks are directly linked to physical changes in the environment. Finland's bioindustry, which includes sectors like forestry, paper packaging, and bio-based products, is heavily dependent on the health and availability of these natural resources.

Indirect physical risks

Indirect physical nature risks refer to the secondary or cascading effects resulting from changes in natural systems or environmental conditions. These risks can have significant implications for the sector, even if they are not immediately connected to the direct operations of bioindustry companies.

Dependency risk

Dependency risks, are related to a business's reliance on natural resources and ecosystem services. These risks arise when the degradation or depletion of natural resources impacts a business's operations or supply chains. These dependencies are critical because any disruption or degradation in these natural systems can have direct operational, financial, and strategic impacts on the sector.

Feedback Loop risks

Nature-related feedback loop risks involve complex interactions where industrial activities and environmental changes mutually reinforce each other, often leading to accelerated or amplified negative effects. Understanding these feedback loops is essential for sustainable operations and long-term planning.

Regulatory risks

Regulatory risks are primarily centred around changes in laws, policies, and regulations that aim to protect the environment and natural resources. These changes can have significant implications for operational practices, costs, and investment strategies.

Market risks

Nature-related market risks encompass various factors that can affect market dynamics, consumer preferences, and competitiveness. These risks are often linked to how environmental issues and sustainability are perceived and valued in the marketplace.

Reputation risks

Nature-related reputational risks arise from how the sector's environmental practices and impacts are perceived by the public, customers, investors, and other stakeholders. These risks can significantly affect a company's brand value, customer loyalty, investor confidence, and overall market position.

TNFD Leap Approach

The TNFD (Task Force on Nature-related Financial Disclosures) has introduced the LEAP (Leading Practices for Impact-Driven Natural Capital Management) approach to help businesses and financial institutions assess and disclose their nature-related risks and opportunities.

The LEAP approach is designed to help organisations systematically identify, assess, and manage nature-related risks and opportunities, ultimately leading to improved sustainability, resilience, and responsible business practices. It aligns with the broader goal of integrating nature and biodiversity considerations into financial decision-making processes.

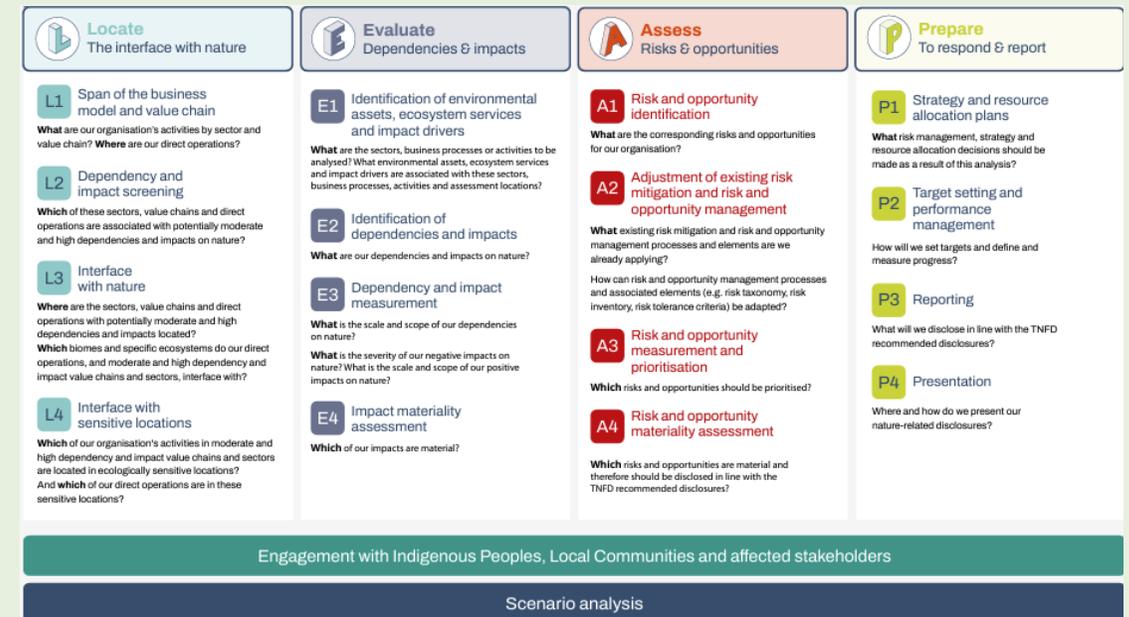
Taaleri Bioindustry is currently at the “Planning and implementation” –phase of our nature –related risk governance and management work. The TNFD recommendation launched in September of 2023, and so far, 320 early adapter organisations have committed to start making nature-related disclosures based on the TNFD recommendations. Taaleri Bioindustry strives to be among the next group of early adopters and commit to following TNFD recommendations during 2024.

For the reporting period of 2023, Taaleri Bioindustry has conducted a location- and sector-based nature risk analysis that is based on SBTN (Science Based Targets for Nature) approach and Encore’s Heatmap tool for estimating nature-related impact and dependency risks. The heatmap assessment is based on the sectoral classification of SASB and SBTN, and uses Biodiversity scores from the Encore tool. Biodiversity dependency and impact risks are assessed on a scale very low, low, medium, high, and very high. These heatmap projections are presented on pages 28–30. Risks and opportunities regarding portfolio pipeline have not been included in the report.

Biodiversity dependency considers global, sectoral, as well as value chain up-stream, direct and down stream estimates and considers terrestrial ecosystem use, freshwater ecosystem use, marine ecosystem use, and water use.

Biodiversity impact considers global, sectoral, as well as value chain up-stream, direct and down stream estimates and considers GHG emissions, non GHG air pollutants, water pollutants, soil pollutants, solid waste, as well as invasive species and other disturbance.

In addition, we have identified and assessed over 90 nature-related risks and their potential financial impacts, which are assessed on a scale from 0–5 considering both the likelihood of the risk, and its potential financial impact, as described on page 11.



Exposure – Heatmap

Taaleri Bioindustry Ltd | All assets | Heat map (SBTN / Encore)

SASB / SBTN sectors		Portfolio coverage, %	Invested value, MEUR	Aggregated biodiversity dependency (0-20)	Aggregated biodiversity impact (0-20)
Materials	Paper packaging	7.1%	6.3	High (12.5)	High (13.8)
	Forest products	23.9%	21.2	Medium (11.9)	Medium (12.1)
	Specialty chemicals	66.6%	59.0	High (12.5)	Medium (11.3)
	Fertilisers and Agricultural chemicals	2.4%	2.1	High (16.3)	Medium (11.7)

Taaleri Bioindustry Fund I Portfolio | Heat map (SBTN / Encore)

SASB / SBTN sectors		Portfolio coverage, %	Invested value, MEUR	Aggregated biodiversity dependency (0-20)	Aggregated biodiversity impact (0-20)
Materials	Paper packaging	30.7%	6.3	High (12.5)	High (13.8)
	Forest products	49.3%	10.1	Medium (11.9)	Medium (12.1)
	Specialty chemicals	20.0%	4.1	High (12.5)	Medium (11.3)

Joensuu Biocoal | All assets | Heat map (SBTN / Encore)

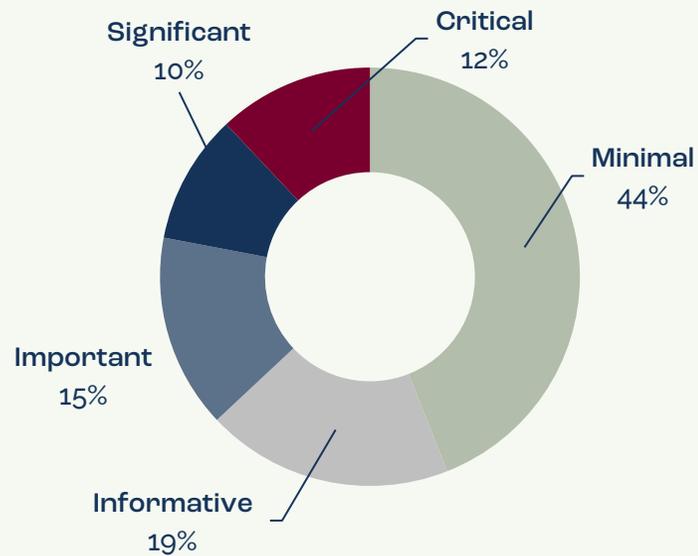
SASB / SBTN sectors		Portfolio coverage, %	Invested value, MEUR	Aggregated biodiversity dependency (0-20)	Aggregated biodiversity impact (0-20)
Materials	Forest products	13.8%	11.1	Medium (11.9)	Medium (12.1)

Note: The values presented do not include cash or commitments

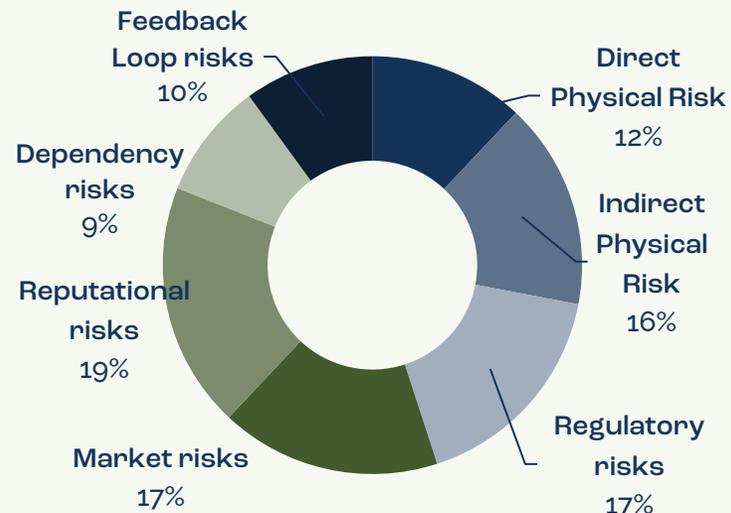
Nature Risk Exposure

Taaleri Bioindustry Ltd Portfolio

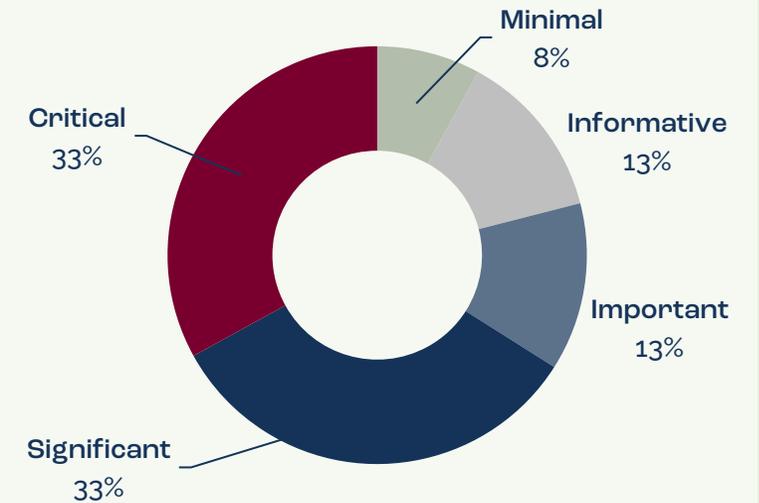
Nature-risk materiality



Nature-risk type



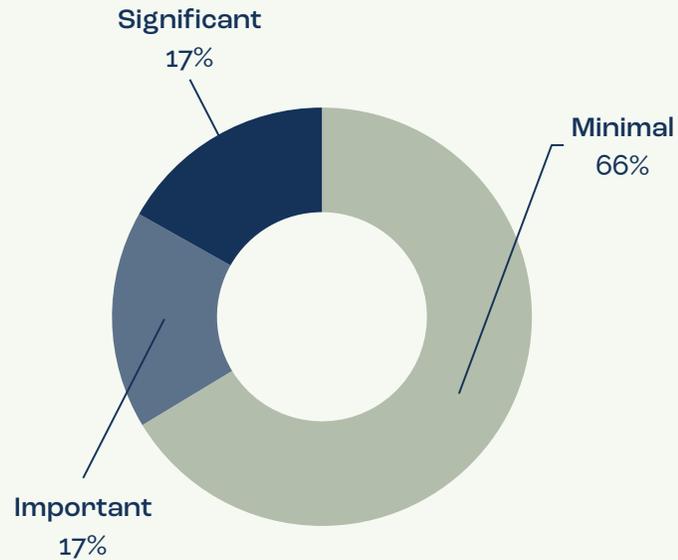
Nature-opportunity materiality



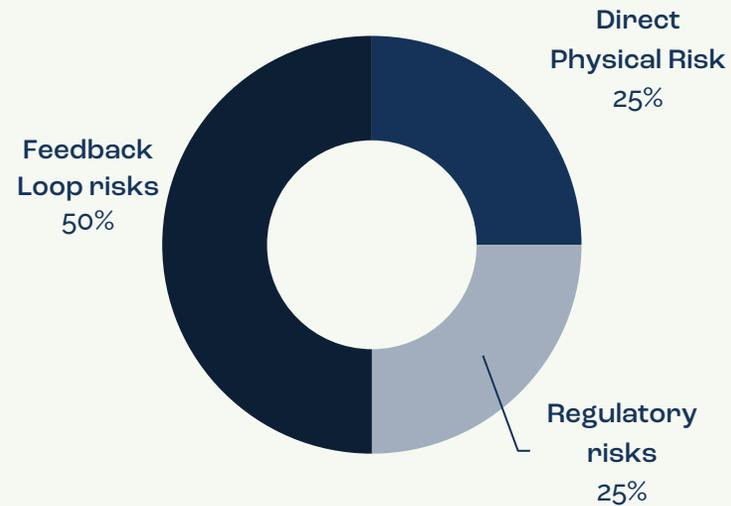
Nature Risk Exposure

Taaleri Bioindustry Fund I

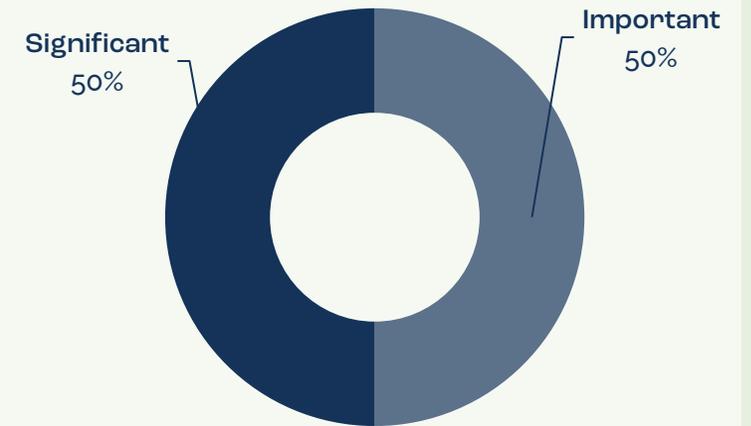
Nature-risk materiality



Nature-risk type



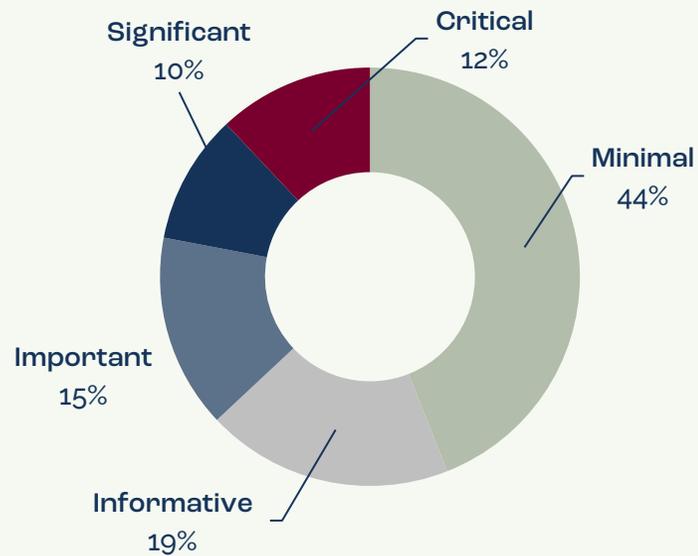
Nature-opportunity materiality



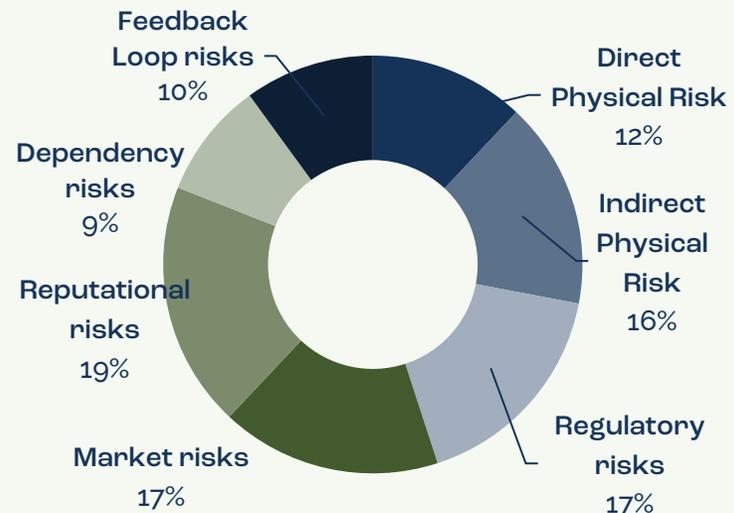
Nature Risk Exposure

Joensuu Biocoal

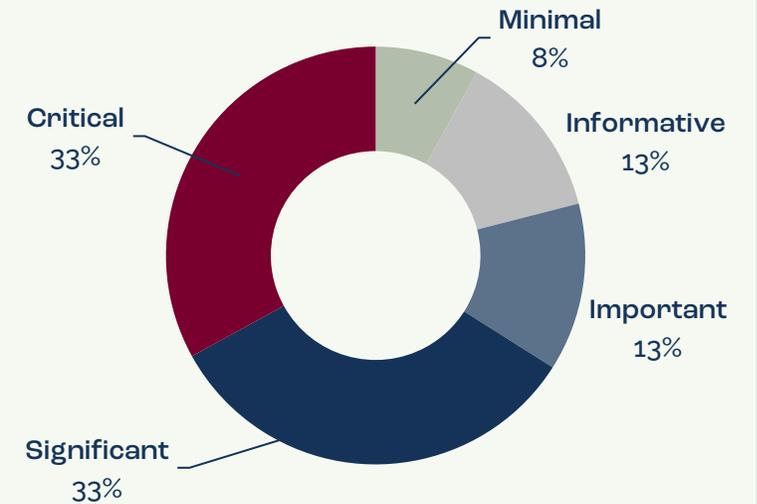
Nature-risk materiality



Nature-risk type



Nature-opportunity materiality



Nature risks & opportunities

Taaleri Bioindustry Ltd Portfolio

Category	Risk / Opportunity	Description	Potential financial impact	Assets & Time horizon		Materiality
Direct physical risk	R	Forest Fires: Increased risk of forest fires, potentially exacerbated by climate change, can lead to significant losses of forest resources and damage to production facilities.	Reduces the supply of raw material, which causes the prices to increase. These increases can be detrimental for some assets' profitability / 0 – 1,000,000 €	All assets	5-20 years	Informative
	R	Loss of Habitat: Industrial activities in the bioindustry can lead to habitat destruction, impacting biodiversity and ecosystem services essential for the industry.	Average decrease in raw material supply & its impacts on raw material prices impacting OpEx by roughly -10-20%	All assets	5-20 years	Informative
Indirect physical risk / Market risks	R/O	Changes in Consumer Preferences: Growing global awareness of environmental issues may lead to shifts in consumer preferences towards more sustainable products, affecting demand patterns for Finnish bioindustry products.	Decreased / increased demand for products invested in leading to unsuccessful/successful and unsustainable / sustainable investments translating to lost / gained capital and LP trust / 1,000,000 – 10,000,000 €	All assets	1-5 years	Critical
	R/O	Emergence of Substitute Products: Environmental changes elsewhere could lead to the development and preference for alternative materials, potentially impacting the demand for traditional bioindustry products.	Decreased / increased demand for products invested in leading to unsuccessful / successful and unsustainable / sustainable investments translating to lost / gained capital and LP trust / 1,000,000 – 10,000,000 €	All assets	1-5 years	Critical
	R	International Environmental Policies: New global or EU-wide environmental regulations in response to changing environmental conditions could impact the Finnish bioindustry, requiring adaptations in practices or technologies.	Increased OpEx costs due to adaptations in operations (increased labour / advisory costs, and audit costs, implementing new technology) / 10,000 – 100,000 €	All assets	5-20 years	Important
	R/O	Trade Policies: Environmental issues can influence trade policies, potentially affecting the export and import conditions for bioindustry products.	Increased OpEx costs due to adaptations in operations as well as increased import / export prices impacting competitiveness (e.g. CBAM) / Improved competitiveness compared to less sustainable products and raw materials used in production through decreases in related costs / 0 – 100,000 €	All assets	1-5 years	Informative

Category	Risk / Opportunity	Description	Potential financial impact	Assets & Time horizon		Materiality
Indirect physical risk / Market risks	R/O	Investor Sentiment: As LPs become increasingly aware of environmental risks, there could be shifts in investment patterns, with more focus on biodiversity. This might affect the availability and cost of capital for companies in the bioindustry sector.	Difficulties / success in fund-raising for financial products, poor / better re-financing opportunities, investment decisions based on wrong/right signals, early / successful exits / 1,000,000 – 10,000,000 €	All assets	1-5 years	Critical
	R/O	Environmental changes can create feedback loops (e.g., climate change leading to more intense forest fires, which in turn release more carbon dioxide), exacerbating risks.	Reduces the supply of raw material, which causes the prices to increase. These increases can be detrimental for some assets' profitability / Increases the supply of raw material, which causes the prices to decrease. These decreases can be a huge advantage for some assets' profitability / 1,000,000 €	All assets	5-20 years	Important
	R/O	Advancements in Alternative Technologies: Developments in alternative, more environmentally friendly technologies in other sectors could indirectly impact the bioindustry, either through competition or by providing new opportunities for innovation and adaptation.	Unsuccessful / successful investment leading to lost capital and LP trust / 1,000,000 – 10,000,000 €	All assets	5-20 years	Critical
	O	Building more resilient supply chains that can adapt to global environmental changes, creating a competitive advantage.	OpEx decrease due to increased raw material availability and less disruption in the value chain leading to favourable position in the markets and increasing competitiveness / 500,000 – 5,000,000 €	All assets	1-5 years	Informative
	O	Diversifying product lines and services to adapt to changing environmental conditions and market needs.	Increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 – 10,000,000 €	All assets	1-5 years	Critical
Dependency risk	R	Pollination and Soil Fertility: Biodiversity underpins ecosystem services like pollination and soil fertility, which can be critical for certain segments of the bioindustry, especially those linked to agriculture or specialised forestry.	Reduces the supply of raw material, which causes the prices to increase. These increases can be detrimental for some assets' profitability / 1,000,000 €	All assets	5-20 years	Informative
	R	Downstream Dependencies: The bioindustry's end products are often integral to other industries' supply chains, making it critical to maintain a stable and sustainable supply of these products.	Potential sanctions on late product deliveries due to lag in production & delivery due to raw material shortages / 0-10,000 € per year	All assets	5-20 years	Informative

Category	Risk / Opportunity	Description	Potential financial impact	Assets & Time horizon		Materiality
Feedback Loop risks	O	Implementing circular economy principles in operations, reducing waste and turning by-products into new revenue streams.	Increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 – 5,000,000 €	All assets	1-5 years	Important
	O	Adopting regenerative agricultural or forestry practices that restore and enhance natural systems, providing long-term sustainability benefits.	Engaging suppliers to adopt more sustainable forestry practices can increase brand value through more sustainable supply chain management, which can serve as a competitive advantage from the perspective of the end product customer / 0 – 1,000,000 € per year	All assets	5-20 years	Informative
Regulatory risks	R	Stricter Emission and Pollution Controls: New or tightened regulations on emissions and pollution could increase operational costs for bioindustry companies, requiring investments in cleaner technologies or more efficient processes.	Potential increases to CapEx and/or OpEx through compliance related costs and setting monitoring and abatement systems in place, potentially investing in new technology / 0 – 100,000 € per year	All assets	5-20 years	Informative
	R	Waste Management and Disposal: Regulations regarding waste treatment, recycling, and disposal could become more stringent, impacting companies that generate significant industrial waste.	Potential increases to CapEx and/or OpEx through compliance related costs and setting monitoring and abatement systems in place, potentially investing in new technology / 0 – 100,000 € per year	All assets	5-20 years	Informative
	R	ESG Reporting Requirements: Laws mandating detailed reporting on climate risks and mitigation strategies could increase administrative burdens and require more transparent business practices.	Increased OpEx costs due to emission allowances (increased labor / advisory costs, and audit costs) / 10,000 – 100,000 € per year	All assets	5-20 years	Informative
	O	ESG Reporting Requirements: Enhanced requirements for Environmental, Social, and Governance (ESG) reporting can impact investment attractiveness and the administrative burden for companies.	Increased company value due to better performance in sustainability compared to competitors / market / 500,000 – 5,000,000 €	Bioindustry Fund I	1-5 years	Significant
Market risks	R/O	Environmental Standards in Trade: Stricter environmental standards and certifications required in key markets can pose barriers to market access for companies that do not comply.	If deemed unsustainable / sustainable, decreased / increased demand and competitiveness impacting the price of the end product and the company / 0 – 1,000,000 €	All assets	5-20 years	Important
	R/O	Tariffs Linked to Environmental Performance: There could be potential tariffs or trade restrictions based on environmental performance, affecting export-oriented sectors of the bioindustry.	Increased / decreased OpEx costs due to emission allowances (increased / avoided labour / advisory costs, and audit costs) / 10,000 – 100,000 €	All assets	5-20 years	Informative

Category	Risk / Opportunity	Description	Potential financial impact	Assets & Time horizon		Materiality
Market risks	R/O	Impact on Valuation: Companies with poor / great environmental practices might face lower / higher valuations due to perceived higher / lower risks and reduced / increased investor interest.	Decreased / Increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 – 10,000,000 €	All assets	5-20 years	Critical
	R/O	Access to Capital: Financial institutions are increasingly factoring in environmental risks in their lending and investment decisions. Companies with higher / lower nature-related risks may face challenges / opportunities in accessing capital or incur higher / lower costs of capital.	Difficulties / success in fund-raising for financial products, poor / better re-financing opportunities, investment decisions based on wrong / right signals, early/successful exits / 1,000,000 – 10,000,000 €	All assets	5-20 years	Significant
Reputational risks	R/O	Negative / Positive Publicity: Activities perceived as harmful / more sustainable to the environment, can attract negative / positive media and stakeholder attention and public criticism, damaging / improving the reputation of companies involved.	If deemed unsustainable / sustainable, decreased / increased demand and competitiveness impacting the price of the end product and the company / 0 – 1,000,000 €	All assets	5-20 years	Significant
	R/O	Attracting Talent: A poor / good environmental reputation can make it difficult / easier for companies to attract and retain top talent, especially among younger generations who prioritise sustainability.	Reduced competitiveness and brand value / attractiveness which decreases performance and demand, resulting in lower valuation and increased OpEx due to human resources costs / 0 – 1,000,000 €	Bioindustry Fund I	1-5 years	Informative
	R/O	Customer Trust: Loss / gain of customer trust due to perceived environmental negligence / consciousness can have long-lasting impacts on sales and market position.	If deemed unsustainable / sustainable, decreased / increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 – 10,000,000 €	All assets	1-5 years	Important
	R/O	Brand Value: A company's brand value can be significantly affected by its environmental reputation, impacting customer loyalty and long-term profitability.	If deemed unsustainable / sustainable, decreased / increased demand and competitiveness impacting the price of the end product and the company / 1,000,000 – 10,000,000 €	All assets	5-20 years	Significant

Adaptation measures - Nature

Conducting comprehensive risk assessments specific to nature impacts is essential. We identify potential physical and transitional nature risks within our portfolio and consider the dynamic character of climate change and nature risks. Our evaluations help in assessing the exposure of assets to various nature-related risks and opportunities and guides our strategic decision-making. By implementing risk analysis, we can effectively respond to emerging risks and opportunities while maintaining portfolio resilience.

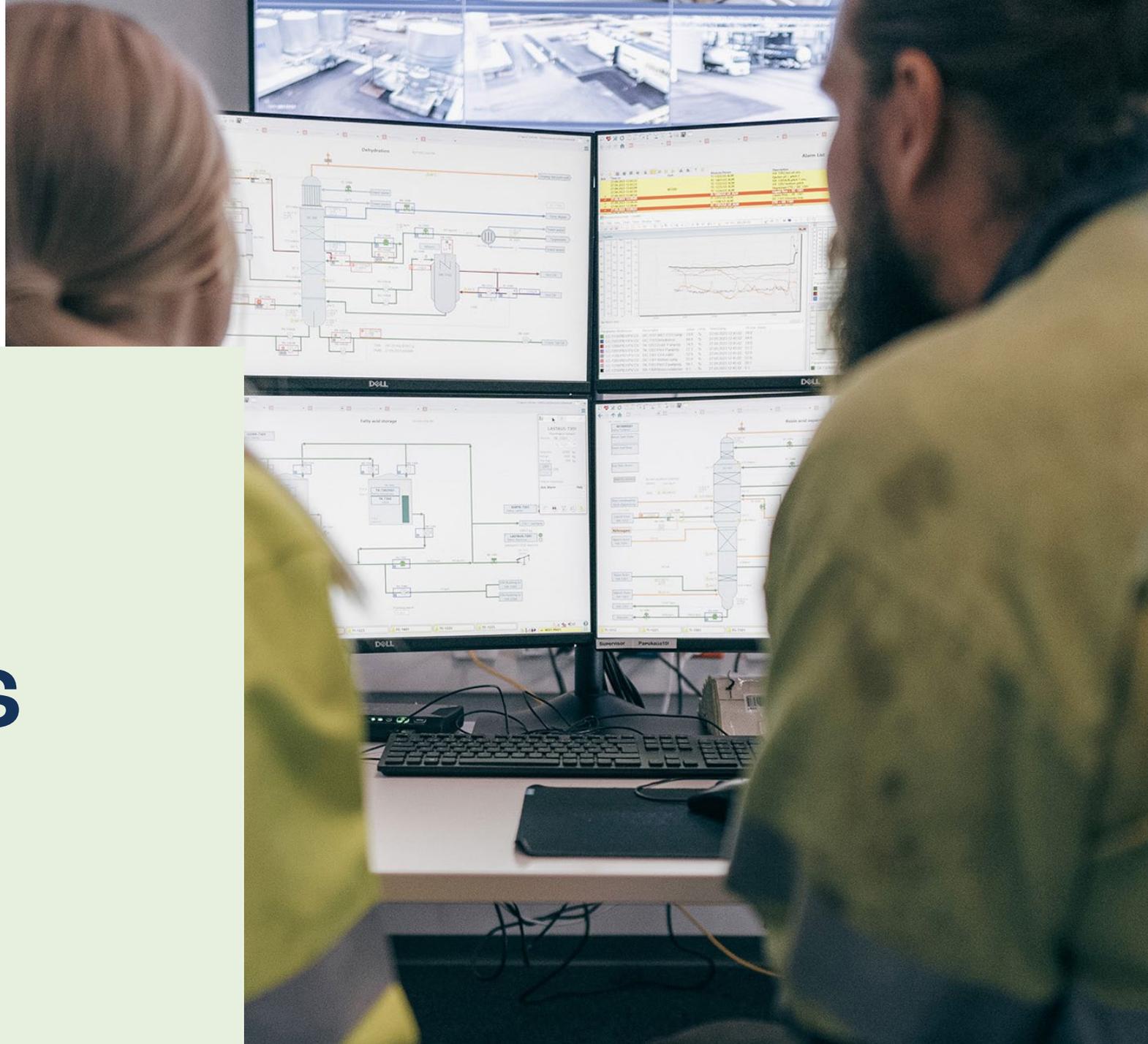
We continue to rigorously apply sustainability criteria in investment decisions, focusing on companies that demonstrate strong commitment to environmental stewardship. We also strive to diversify investments across various sectors and locations to mitigate nature-related risks and tap into different sustainability market opportunities. We ensure that all investments avoid biodiversity-sensitive areas and when suitable, contribute positively to conservation efforts

We at Taaleri Bioindustry recognise the power of engagement and collaboration with our investee companies. By acting as an active owner, we work closely with our investees, and strive to influence and guide the companies' strategies and nature risk mitigation work, especially when looking at raw material sourcing and finding ways to reuse and reduce waste and / or side streams and promoting resource efficiency. To further ensure portfolio resilience to nature risks, we intend to implement clear, measurable targets to mitigate the impacts of climate change, which can enforce nature related risks.

We support our portfolio companies in setting and achieving Net Zero targets that are in line with the goals of the Paris Agreement.

Furthermore, we advocate for greater transparency and disclosure of nature and resource use-related information by our investee companies. This promotes better understanding of the potential risks and opportunities and fosters informed decision-making among stakeholders. Taaleri Bioindustry Fund I investees report their water use, waste generation, emissions, and resource use to us quarterly. The rest of the Taaleri Bioindustry portfolio will be engaged to report their emissions and other relevant indicators in the coming years as part of our sustainability work. Related emissions data submission targets as well as emission reduction targets will be established during 2024 - 2025.

Our approach to managing nature-related risks is rooted in active ownership and a commitment to environmental sustainability and positions our portfolio to effectively mitigate nature-related financial risks. By adhering to TNFD recommendations and continuously evolving our approach, Taaleri Bioindustry can assist in safeguarding its investments but also contributes positively to the broader goal of sustainable development. A proactive stance is crucial in navigating the complexities of today's environmental challenges while achieving long-term financial stability and growth.



Indicators and targets

Indicators and targets

As recommended by the TCFD and TNFD, in the following page, we present a table consisting of a comprehensive set of metrics and targets used to assess and manage relevant risks, opportunities, and impacts regarding nature- and climate-related risks. These metrics include e.g., carbon emissions, energy and water usage, land use, and biodiversity impacts. Each indicator is chosen for its relevance to our portfolio and its significance in assessing our environmental impact. The asset-specific columns show whether we already have data on the specific metric, or the target year for when we intend to report that indicator for the said assets.

The purpose of this table is to offer a clear, accountable, and actionable framework for our portfolio's efforts in mitigating climate and nature-related risks. It serves not only as a tool for internal tracking and management but also as a means of transparent communication with our stakeholders, demonstrating our commitment to responsible environmental stewardship and sustainable investment practices. In future, the report will include baseline and historic data regarding the metrics used and data received.

Indicators

Indicators	Climate	Nature	Bioindustry Fund I*	Joensuu Biocoal*	Fintoil*	Balance Sheet Investments*
Scope 1 GHG emissions (tCO ₂ e) (Table I, PAI 1)	x	x	6.3	N/A 2025	N/A 2025	N/A 2026
Scope 2 GHG emissions (tCO ₂ e) (Table I, PAI 1)	x	x	45.1	N/A 2025	N/A 2025	N/A 2026
Scope 3 GHG emissions (tCO ₂ e) (Table I, PAI 1)	x	x	260.5	N/A 2025	N/A 2025	N/A 2026
Carbon footprint (tCO ₂ e) (Table I, PAI 2)	x	x	12.7	N/A 2025	N/A 2025	N/A 2026
GHG avoidance / Carbon handprint (tCO ₂ e)	x	x	289.7	N/A 2025	N/A 2025	N/A 2026
¹⁾ Total spatial footprint (km ²)		x	0.2	N/A 2025	N/A 2025	N/A 2026
Energy usage (kWh)	x		2,269,510.0	N/A 2025	N/A 2025	N/A 2026
Land use change (km ²)		x	N/A 2024	N/A 2025	N/A 2025	N/A 2026
Water use (m ³)		x	2,855.7	N/A 2025	N/A 2025	N/A 2026
Tonnes of emissions to water (Table 1, PAI 8)		x	0.0	N/A 2025	N/A 2025	N/A 2026
Wastewater discharged (m ³)		x	N/A 2024	N/A 2025	N/A 2025	N/A 2026
Tonnes of hazardous waste & radioactive waste (Table I, PAI g)		x	0.01	N/A 2025	N/A 2025	N/A 2026
Non-recycled waste ratio (tonnes of waste generated expressed as weighted average (Table 3, PAI 13))		x	0.65	N/A 2025	N/A 2025	N/A 2026
Activities negatively affecting biodiversity-sensitive areas (Table 1, PAI 7)		x	0%	N/A 2025	N/A 2025	N/A 2026
Exposure to sensitive locations (through direct operations) (TNFD Recommendations p. 136)		x	3.2%	0	0	N/A 2026
Number of IUCN Red Listed species in the areas where investee companies have operations		x	Low	Low	Low	N/A 2026

Targets

Taaleri Bioindustry Fund I

- 2023: Baseline year for GHG emissions and other climate- and resource use related indicators.
- 2024: Portfolio company roadmaps for achieving Net Zero emissions by 2050.
- Other nature related indicators: target baseline 2024, roadmap work based on data gathered to be started in 2025.

Joensuu Biocoal

- 2025: Baseline year for GHG emissions and other climate- and resource use related indicators.
- 2026-2027: Company roadmap for achieving Net Zero emissions by 2050.
- Other nature related indicators: target baseline 2025, roadmap work based on data gathered to be started in 2026-2027.

Fintoil

- 2025: Baseline year for GHG emissions and other climate- and resource use related indicators.
- 2026-2027: Company roadmap for achieving Net Zero emissions by 2050.
- Other nature related indicators: target baseline 2025, roadmap work based on data gathered to be started in 2026-2027.

Balance sheet investments

- 2026: Baseline year for GHG emissions and other climate- and resource use related indicators.
- 2027: Portfolio company roadmaps for achieving Net Zero emissions by 2050.
- Other nature related indicators: target baseline 2026, roadmap work based on data gathered to be started in 2027.

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