



Materials Benchmark Report

Brands & Retailers

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Disclaimer

The Materials Benchmark program is based on participant self-assessment. While Textile Exchange reviews all data entries and carries out consistency checks, it does not verify the accuracy of the data or disclosures within a company's survey submission, or the process of preparing the disclosures. That responsibility remains with the participating company. The opinions expressed in this publication are those of Textile Exchange and do not necessarily reflect the views of any participants, funders, member organizations, or advisors.

Cover photo: Joya Berrow

Key terms

Priority: A material is deemed a priority if it meets one or more of the following criteria:

- **Scale:** The company is using 10% or more of the material in its overall material portfolio, or 10% of product share in the case of down.
- **Risk:** The material represents a substantial risk to the company. Risks associated with low-volume materials include sourcing from environmentally and/or socio-economically high-risk sourcing regions, animal welfare risk, etc.
- **Opportunity:** The company has seized the opportunity to advance the sustainability of the material despite its low volume usage (below the 10% threshold) and/or it not being considered a substantial risk.

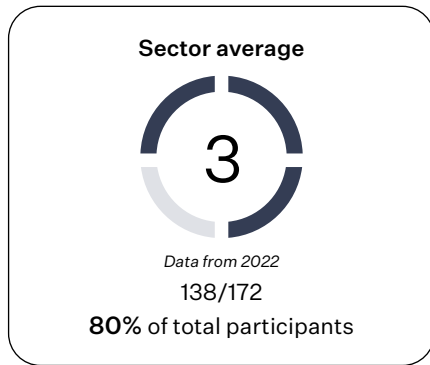
Raw materials: Primary or secondary materials that are used to create a product. In the context of the bioeconomy, “raw material” is used as a synonym for feedstock (Nova Institut, 2014).

Uptake: Refers to the consumption/use of raw materials, referred to as a percentage of volumes in metric tons (MT).



Key findings

Participants are scaling their sustainability strategies for raw materials.



Participants collectively achieved a Level 3 (Scaling) band in this area. The majority have incorporated a raw materials sustainability strategy into the core of their business operations that demonstrates the importance of collaborating on climate and nature initiatives.

Boards and leadership teams were reported as being accountable, and participants place a strong emphasis on building internal capacity. There is increasing collaboration with key stakeholders, which is integrated into the companies' risk assessment, implementation efforts, and communication strategies.

However, the data shows more work is needed to decouple the extraction of raw materials from economic growth.

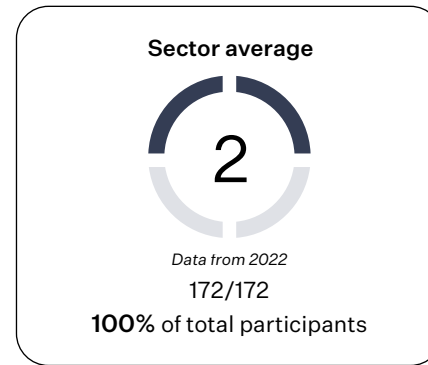
There are signs of progress in the transition to a more circular economy.



Participants collectively achieved a significant level of maturity in this area, reaching a Level 3 (Scaling) band. The data shows that participants are making progress in establishing the concepts of more formal strategies for the circular economy.

However, participants need to focus more on making business models profitable and supporting the design phase, developing new solutions for pre- and post-consumer waste, and establishing more traceability in their supply systems, especially regarding unsold goods.

There is more to do across preferred raw materials, and further traceability is a must.

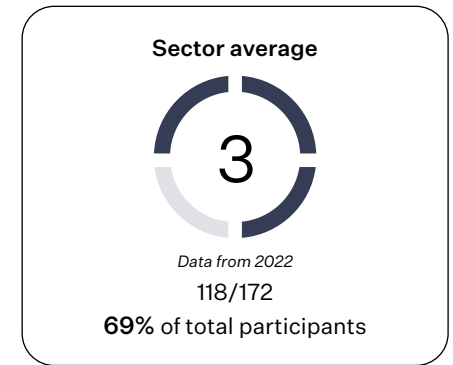


Participants scored a Level 2 (Establishing) band on average across priority materials, indicating that there is room for progress and improvement.

Cotton is the most reported raw material used, followed by polyester, leather and viscose. The data shows that conventional practices prevail for most raw materials except cotton and mohair.

Furthermore, traceability to the raw materials level is relatively low. 80% of participants do not yet have access to this information.

Climate-related impacts are being addressed through goal setting and risk assessment.



Although measuring climate and nature impacts is still a relatively new area for some companies, participants are aware of its importance and are actively engaging with the issue, already reaching a Level 3 (Scaling) band.

Participants show progress in addressing climate-related issues, particularly in defining their SMART goals and assessing the associated risks.

The data shows that further action is needed to restore and regenerate ecosystems.

Introduction

Introduction

Purpose & scope

The purpose of this report is to provide an overview of how brands and retailers are moving towards adopting more preferred materials, based on data from the [Materials Benchmark program](#). Textile Exchange analyzed the data submitted by 394 companies – including brands, retailers and their subsidiaries – for the year 2022.

The scope of the study comprises both new and returning brands and a mix of company sizes ranging from micro to SMEs to large enterprises. The sub-sectors are Apparel/Footwear, Outdoor/Sports, Home/Hospitality, and Multi-Sector.

The Materials Benchmark program keeps growing year by year, allowing us to better understand the state of the sector and the solutions needed. Collaboration is essential to achieve this and drive positive change in the textile industry.

As part of the Materials Benchmark program, we are proud to actively collaborate with several leading initiatives and sustainability organizations to jointly accelerate progress towards a more sustainable future, including the [Sustainable Apparel Coalition](#), [The Fashion Pact](#), [Ellen MacArthur Foundation](#), [World Benchmarking Alliance](#), and the [Taskforce on Nature-Related Financial Disclosures](#).

What makes this report different?

Our focus on Tier 4

We encourage companies to transition away from conventional raw materials towards ones from preferred sources. The Materials Benchmark enables a comprehensive assessment of the actions being taken right at the start of the supply chain, where raw materials are grown, cultivated, or produced.

Our holistic approach

We promote a comprehensive path to sustainability by weaving together key principles and impact areas, looking at the integration of raw material strategies into a business, the steps being taken in the transition to a more circular economy, and the substitution of conventional materials. In addition, we explore how participants are addressing climate and nature in their overall strategies.

Our commitment to transparency

Our data-driven approach offers insights into the reality of our participants' sustainability journeys. We are committed to transparency and believe in continuous improvement, which is why we have updated our [methodology](#) this year.

Our results are part of the largest peer-to-peer comparison initiative in the textile industry.

The more the Materials Benchmark program grows, the better we can showcase the current state of the sector.



Background and the big picture

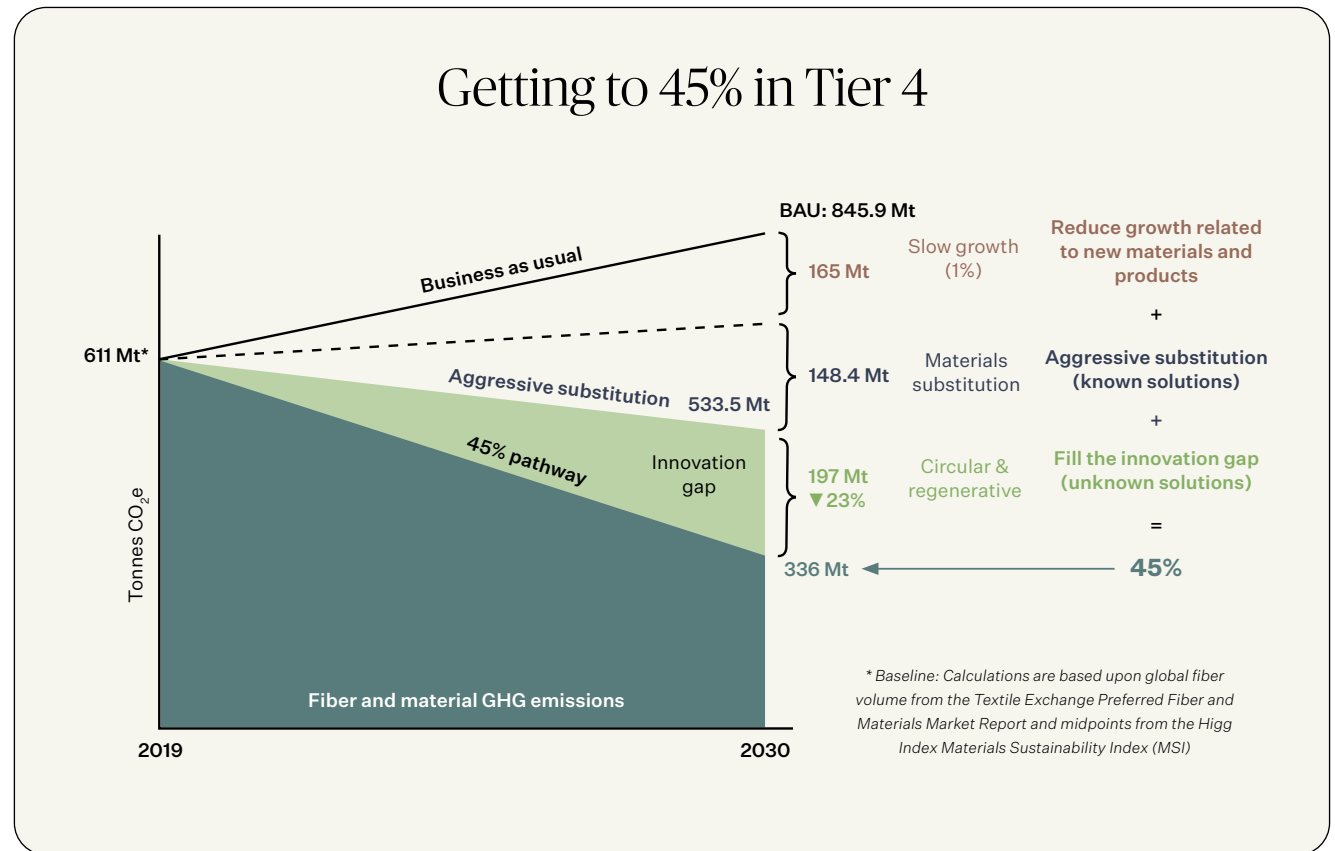
The global fashion, textile and apparel industry needs a paradigm shift. It can no longer continue business as usual under the guise of vague sustainability promises. Instead, companies must embrace the transition, transforming their business models on a large scale to address climate and nature impacts right from the start of their supply systems.

Textile Exchange, its members, and a wide range of governmental and non-governmental stakeholders stand united behind the goal of limiting global warming to 1.5°C above pre-industrial levels.

In the context of the fashion, textile and apparel industry, Textile Exchange is setting out to drive a 45% emissions reduction from raw materials production by 2030. This target, alongside three interconnected impact areas — **soil health, water, and biodiversity** — forms the basis of our [“Climate+” strategy](#).

To achieve holistic improvement across these areas and reach our emissions reduction target, we have identified three critical points to focus on: **material substitution, closing the innovation gap, and slowing growth**.

The Materials Benchmark program contributes to this progress by collecting data from almost 450 companies and providing participants with a best-practice framework to guide the transition towards a preferred fibers and raw materials portfolio.



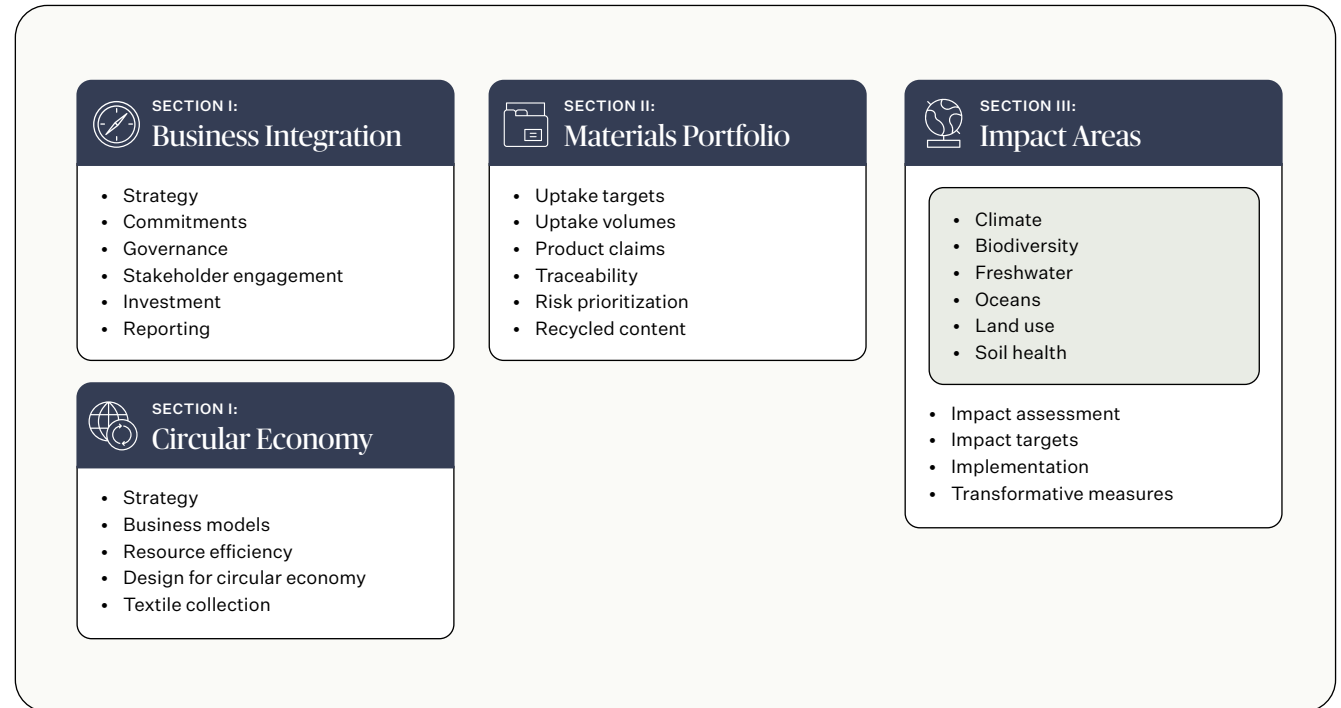
Modelling of interventions needed in the apparel and footwear raw materials extraction phase in order to achieve 45% GHG impact reduction by 2030, as measured against a 2019 baseline. Source: Textile Exchange

Materials Benchmark framework and methodology

The Materials Benchmark program’s mission is to continuously nurture and challenge our participants and help them determine the direction of their climate journeys.

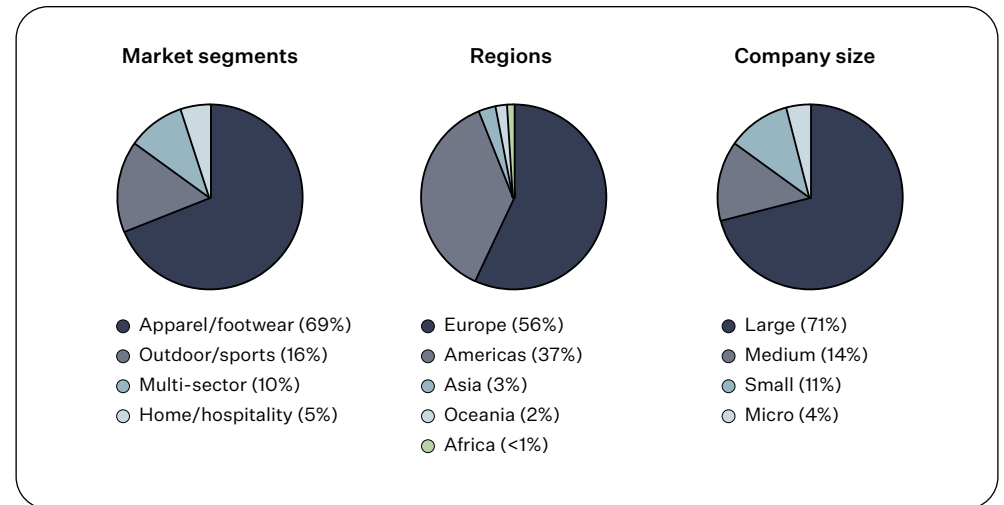
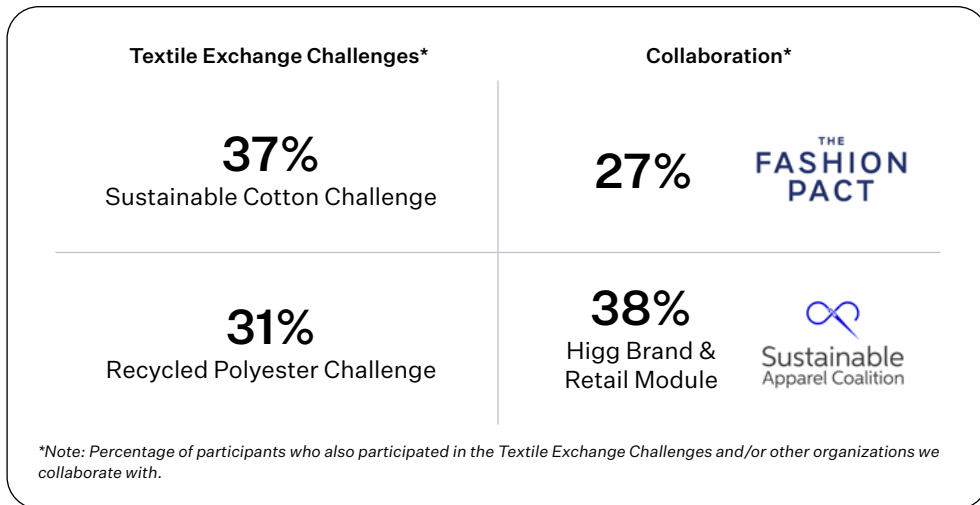
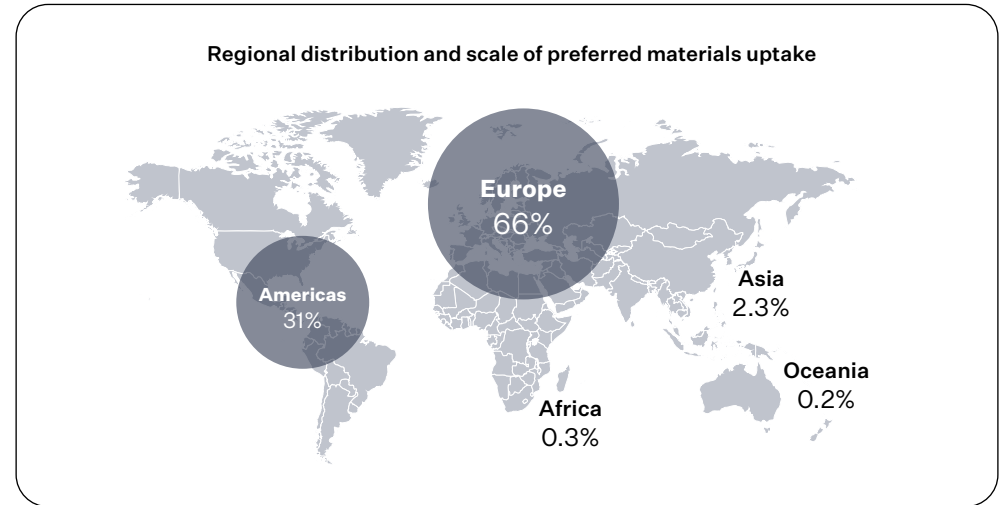
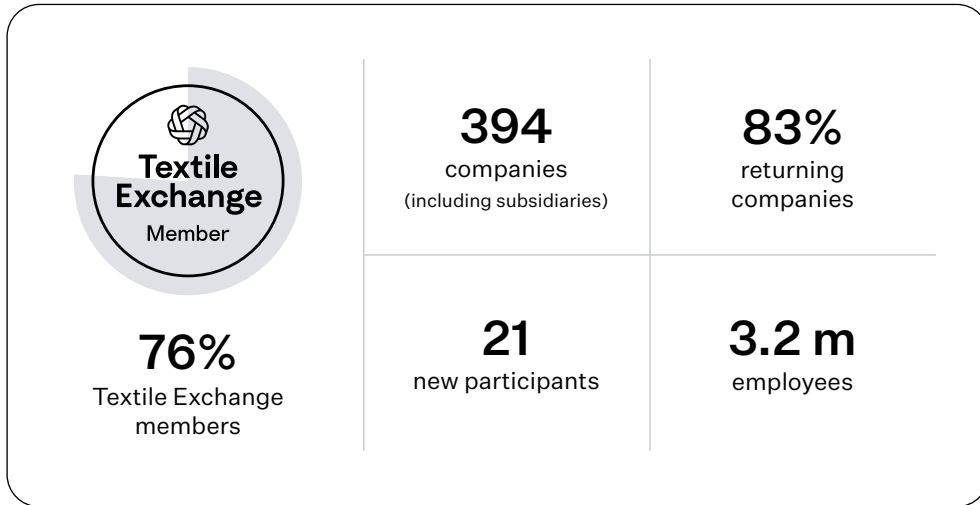
In 2023, as part of our ongoing commitment to greater sustainability in the fashion, textile and apparel industry, Textile Exchange made the strategic decision to review and update our scoring methodology. The rationale was that we need to be more aggressive if we want to achieve our 2030 goals as an industry and stay within our planetary boundaries. As a result, we rescaled the performance bandings to show where the industry needs to improve in line with our Climate+ goals, and further aligned them with our organizational tools such as the [Preferred Fiber and Materials Matrix](#) (PFMM).

The biggest change in the scoring is in Section II: Materials Portfolio. Given the need to rethink growth, our goal is to reward companies for transitioning to more preferred raw materials as a percentage of total volumes. This shift in ranking should be viewed as a rescaling and readjustment rather than a “drop” in score. For more information, see the [scoring methodology guide](#).



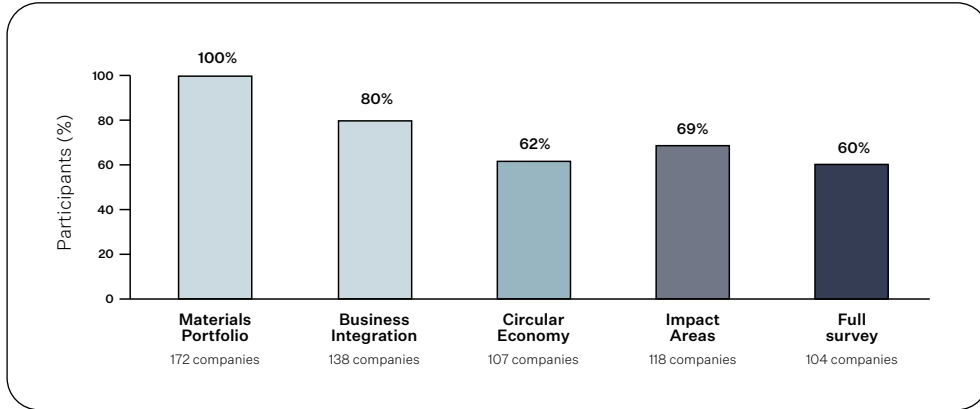
The 2023 Materials Benchmark Community

The 2023 Materials Benchmark Community

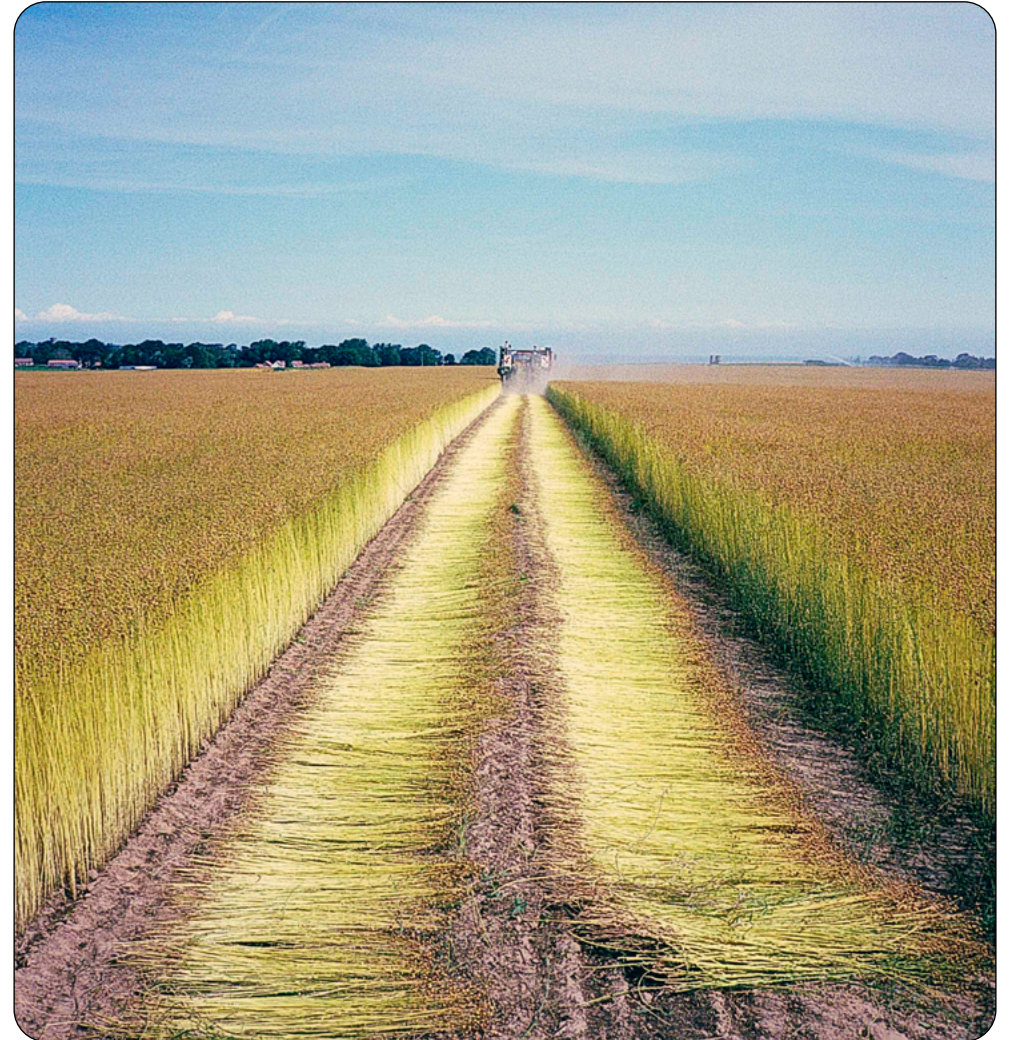
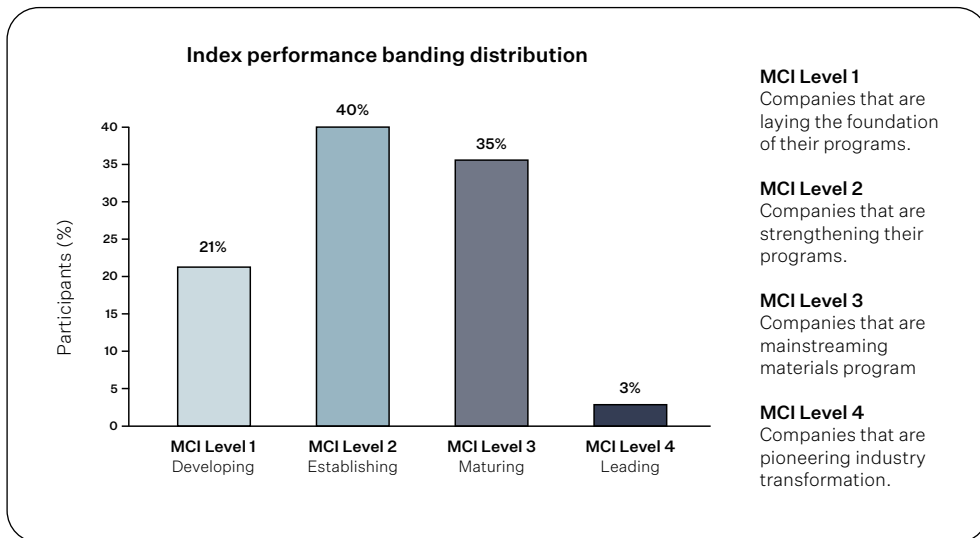


The 2023 Materials Benchmark Community

Survey completion



Banding distribution



Business Integration

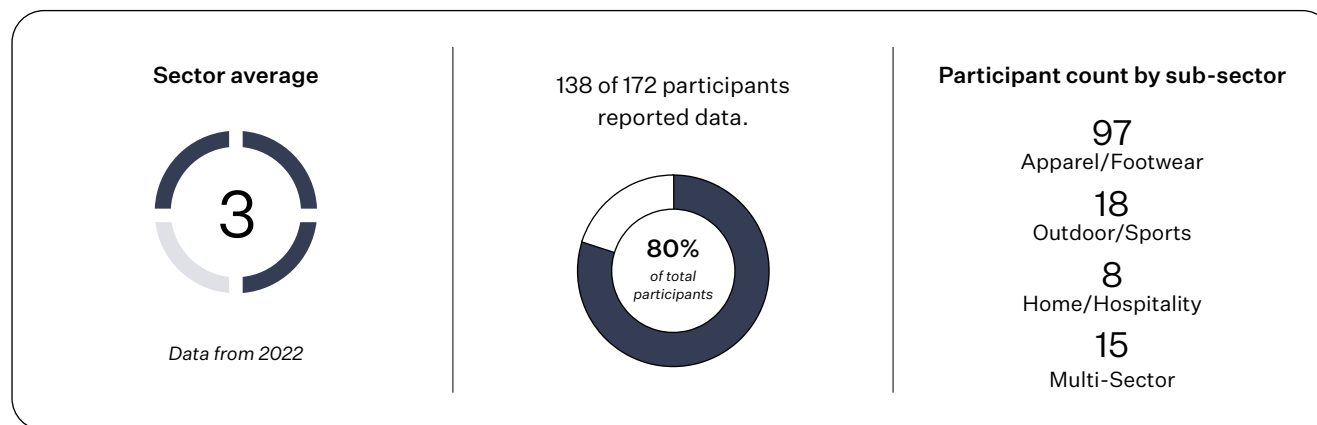


Raw materials strategy

What is included in this section:

- Business strategy
- Global goals and commitments
- Governance
- Corporate risk assessment
- Stakeholder engagement
- Investment
- Reporting

Participant profile



Why are we collecting this data?

We collect this data to understand whether companies have started to strategically work on an approach or formal strategy for their raw materials and, if so, how it is being integrated into their business.

Findings

Participants have collectively achieved a Level 3 (Scaling) band. The majority have incorporated a raw materials sustainability strategy into the core of their business operations that demonstrates the importance of collaborating on climate and nature initiatives.

Boards and leadership teams were reported as being accountable, and participants place a strong emphasis on building internal capacity. There is increasing collaboration with key stakeholders, which is integrated into the company's risk assessment, implementation efforts, and communication strategies.

However, the data shows more work is needed to decouple the extraction of raw materials from economic growth.



Strategy and commitments

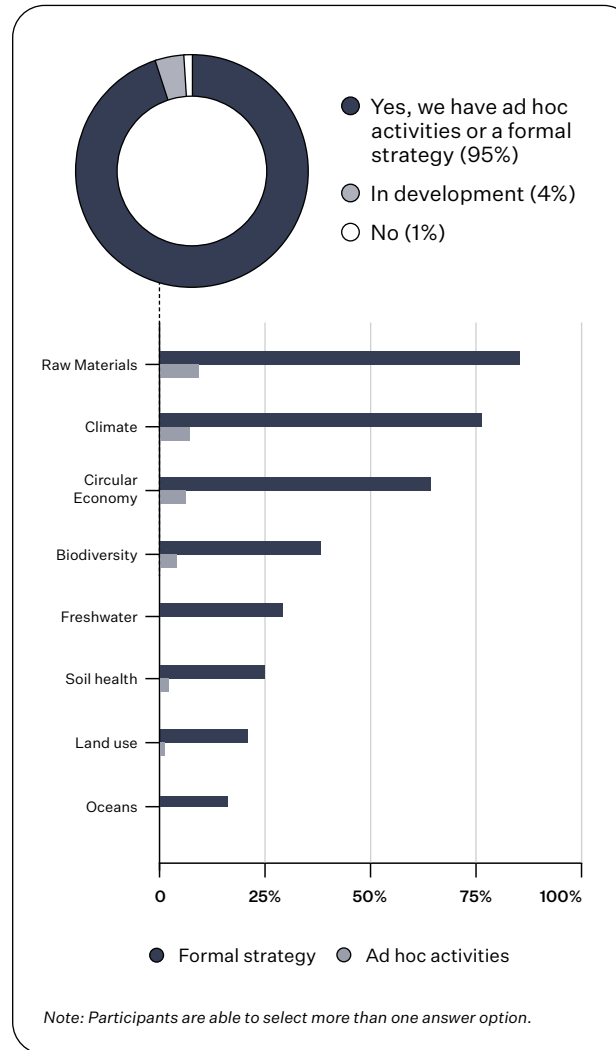


Raw materials approach

Participants are focused on developing formal strategies, especially in relation to raw materials.

Almost all respondents (95%) responded “yes” to having a formal strategy and/or ad-hoc activities. These include a focus on raw materials followed by climate, circular economy, and biodiversity strategies.

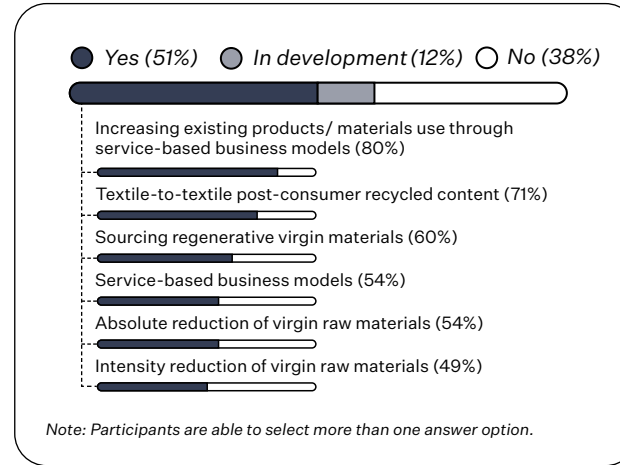
From the data collected, companies have not yet prioritized freshwater, soil health, and land use, indicating a relatively low level of maturity in these areas.



Strategy and commitments



Decoupling economic growth

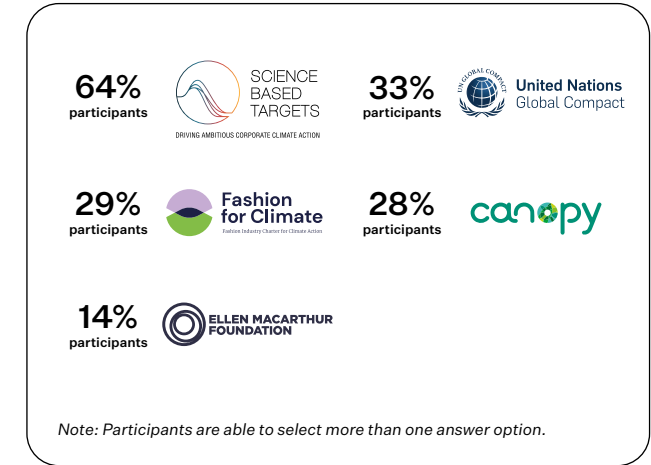


There is still more action needed to “do more with less.”

The industry needs to rethink value creation. This requires a shift from the traditional growth-driven model based on exponential increases in production and consumption volumes that result in the depletion of natural resources.

As indicated by respondents, there is some level of action being taken, primarily involving the increased use of existing products and materials through service-based business models, the use of post-consumer recycled textiles, and the sourcing of regenerative virgin materials.

Global goals and commitments



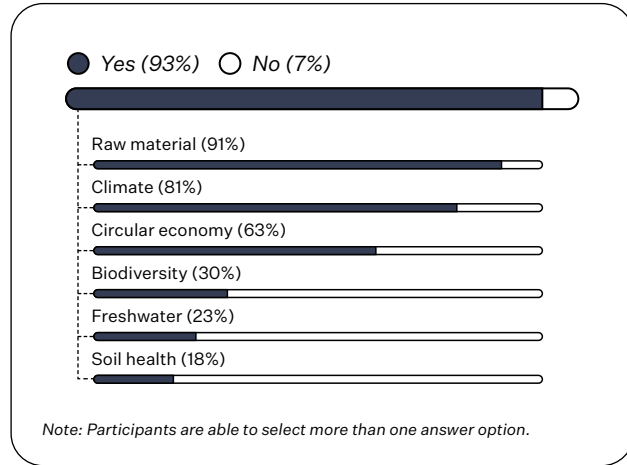
Companies continue to join forces for climate and nature initiatives.

Collective goals and commitments play a critical role in shaping company behavior. In today’s globalized world, they are essential to successfully scaling impact and driving action, as well as aligning the business sector with the ambitious goals set by independent organizations.

Respondents show a strong commitment to the [Science Based Targets Initiative](#), followed quite a way behind by the [UN Global Compact](#), the [UNFCCC Fashion for Climate](#), the [Canopy Style Initiative](#), and the [Ellen MacArthur Foundation](#).



Board accountability

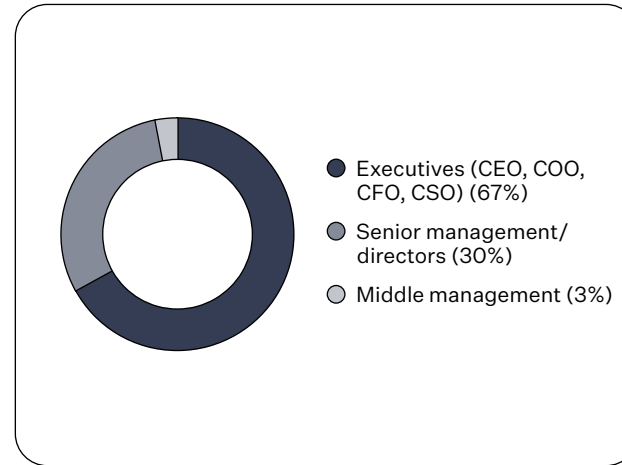


Boards are involved, often with a focus on raw materials and climate areas.

Ensuring the involvement of leadership teams is needed to successfully execute the strategy, as well as extend its influence across all company departments, and set the tone from the top.

Respondents indicate that the board is heavily involved, especially in specific areas such as raw materials, climate, and circular economy. However, biodiversity, freshwater, and soil health remain low on the agenda.

Leadership

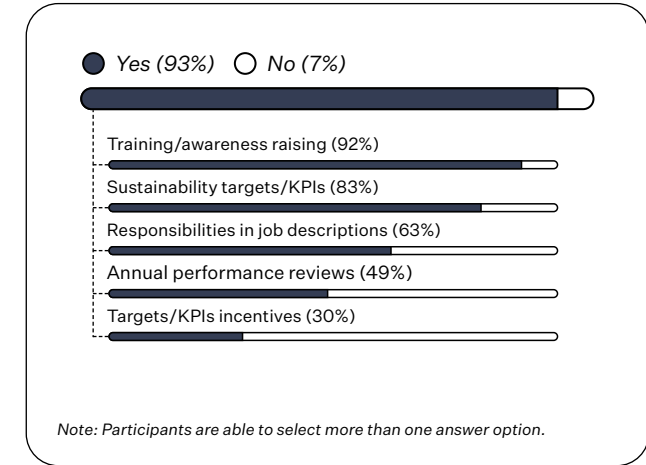


Responsibility lies primarily with leadership teams.

Leadership roles are key to defining a shared path by using their position to integrate raw materials sustainability strategies and activities across the company.

The data reflects awareness of the importance of leadership-level responsibility. 67% of respondents reported that the highest level of operational accountability for integrating the company’s raw materials sustainability was at the C-suite level.

Capacity building



Everyone plays an active role in the path to sustainability.

Capacity building beyond businesses’ sustainability teams is essential to spread awareness, share responsibilities, and commit to the same goals.

Of those that answered “Yes”, respondents’ capacity building is primarily focused on conducting training/awareness raising (92%), setting sustainability KPIs (83%) or including these tasks in job descriptions (63%). However, more progress is needed to ensure that sustainability targets are integrated into annual performance reviews and incentives are provided to employees.

Risk assessments and engagement



Risk assessment and top risks

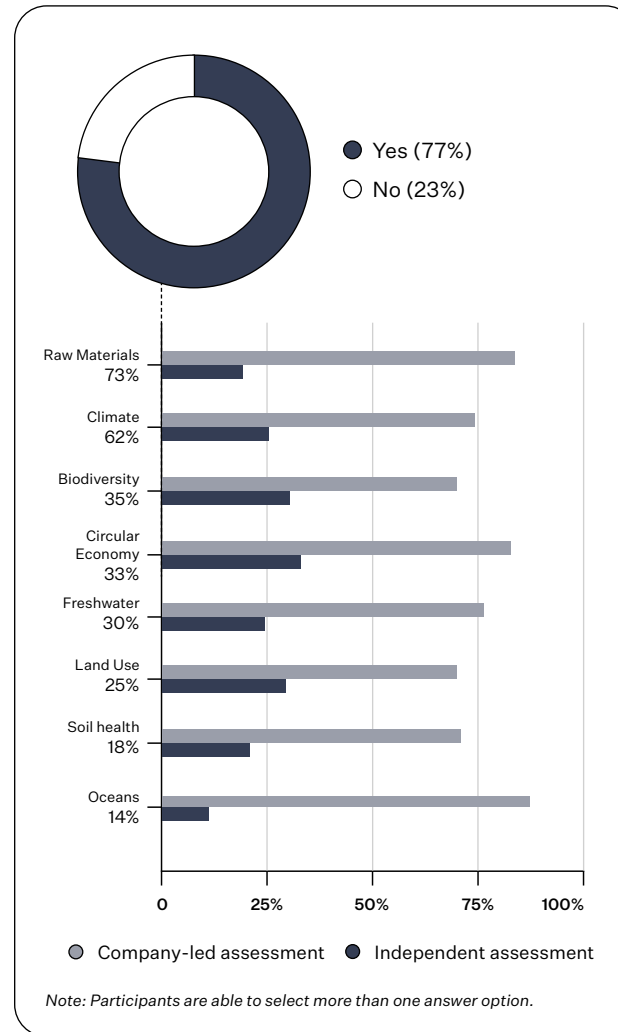
Risk assessments are essential for respondents but require increased accountability.

Risk assessments help companies to determine the nature and extent of risks by analyzing hazards and evaluating existing areas of vulnerability that could potentially harm exposed people, services, livelihoods and the environment.

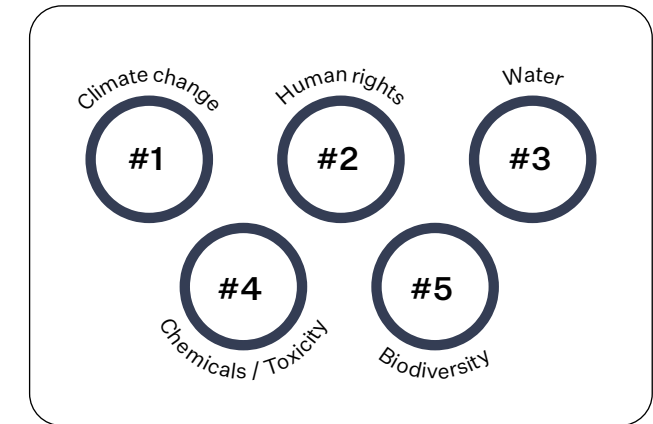
Respondents' data shows that 77% are conducting risk assessments. Materiality assessments are driven primarily by internal, rather than independent, assessments, focusing their analysis on raw materials, climate, and biodiversity.

This process of identifying and ranking the risks related to raw materials help participants to prioritize and take action. The top risks identified in these assessments are climate change, human rights, water, chemicals/toxicity and biodiversity.

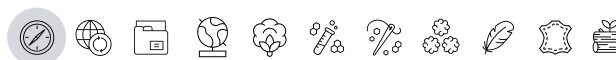
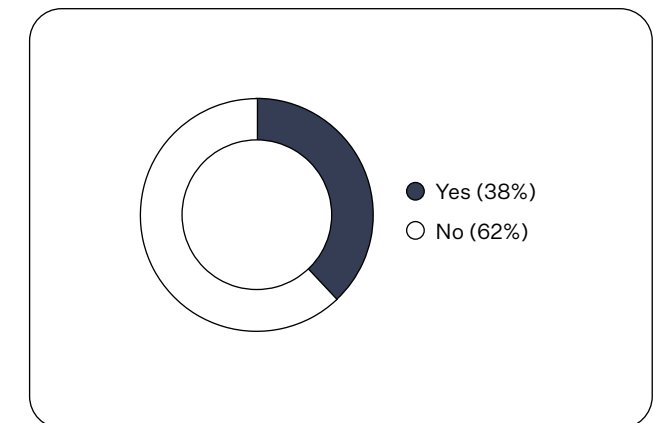
Risk assessment



Top risks



Public risk assessments' results



Risk assessments and engagement



Stakeholder engagement

Awareness as to the importance of engaging with multiple stakeholders, including consumers, is high.

Engaging with both internal and external stakeholders is essential for successful strategic planning and enables businesses to capture a range of expertise and perspectives to avoid unexpected risks and seize opportunities. Most respondents prioritize engaging external stakeholders, especially independent experts, followed by manufacturers and NGOs.

Consumers play a major role through their choices, and dialog with them is critical for effecting change. Respondents maintain close contact with their customers by providing information on standards and initiatives, as well as supporting customer education among other activities.

Stakeholder engagement



Independent experts (79%)

Manufacturers (76%)

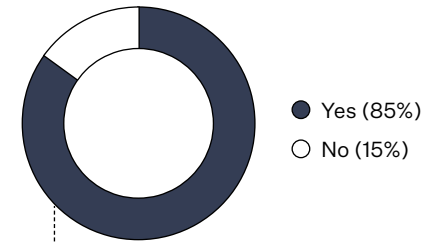
NGOs (72%)

Peer companies (58%)

Producers/farmers (45%)

Note: Participants are able to select more than one answer option.

Customers engagement



Provide information on the standards and initiatives (97%)

Support customer learning (74%)

Open dialogues with customers (65%)

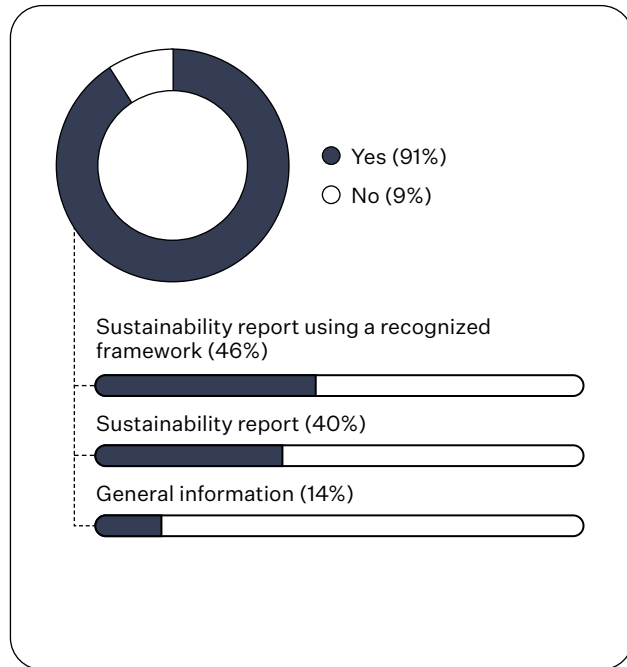
Encourage questions (62%)

Note: Participants are able to select more than one answer option.





Public reporting

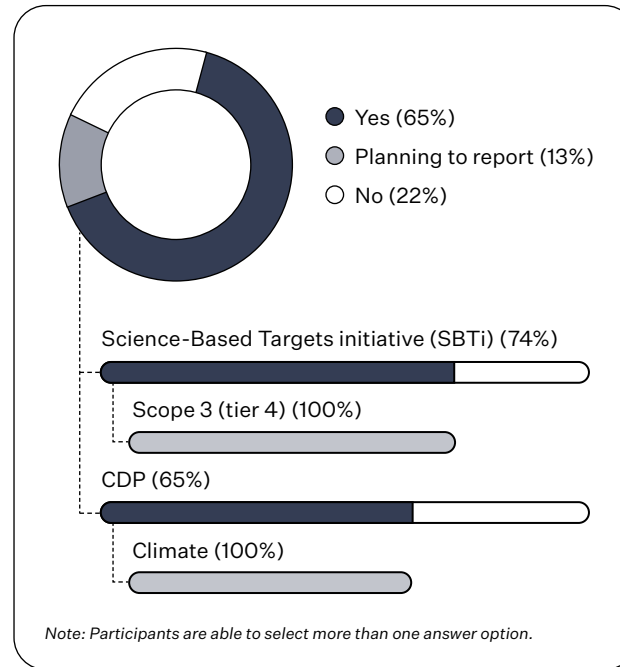


Performance in reporting activities is strong.

Reporting is essential to monitor business performance and provide insights for management. It helps companies to make informed decisions, forecast future results and improve accountability and risk management.

91% of respondents stated that they report on their activities, with nearly half following a recognized framework.

Disclosure framework

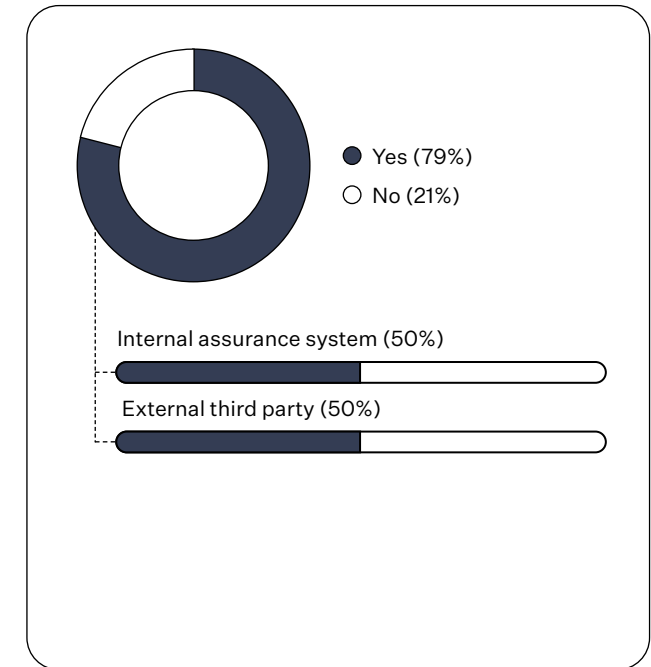


Businesses are adopting recognized reporting frameworks.

Reporting frameworks play a critical role in the global reporting landscape by standardizing ESG reporting across different industries and regions, providing a systematic approach for company disclosures.

So far, the results show that more than half of respondents follow a recognized framework. Most respondents base their reporting on Scope 3 of the Science-Based Targets Initiative (SBTi) and the CDP.

Reporting assurance



Respondents' approach to reporting assurance is split.

External, independent reviews of sustainability management processes and reporting activities are intended to increase the robustness, accuracy and trustworthiness of information disclosure.

Respondents are equally divided in their approach: half rely on internal assurance systems, while the other half opt for external third-party assessments.

Deep dive

Investment



Closing the innovation gap is one of three levers that Textile Exchange has identified to help achieve a 45% emissions reduction by 2030.

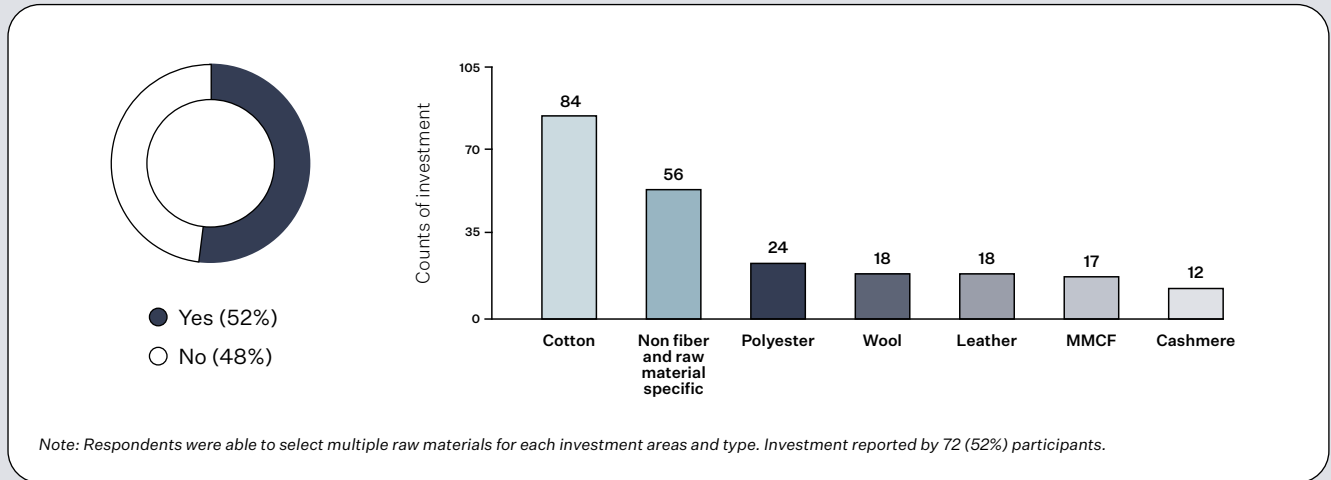
Investing in innovation plays an important role in transforming the textile industry. These innovations span a broad spectrum, ranging from resource efficiency improvements to a fundamental rethinking of production processes and business models.

Such investments, especially in the early stages, are often necessary to support capacity, as well as technical and operational developments beyond the usual membership and purchasing fees.

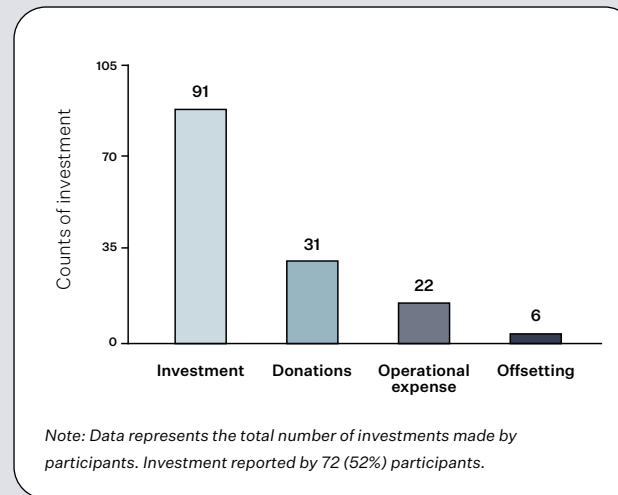
Our data suggests that more investment is needed. 52% of the 138 companies surveyed are making some form of investment, with the primary focus on raw materials, followed by the circular economy.

In terms of raw materials, most investments are made in cotton, followed by polyester and wool. The data also shows that direct investment is the most common form of investment.

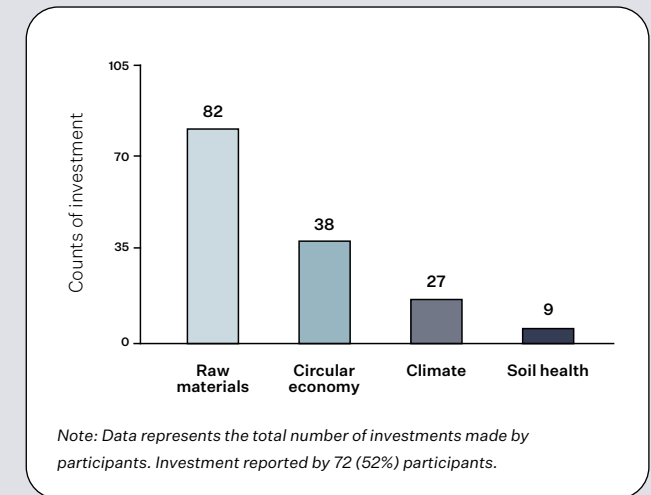
Investment



Type of investment



Investment area



Sustainable Development Goals (SDGs)



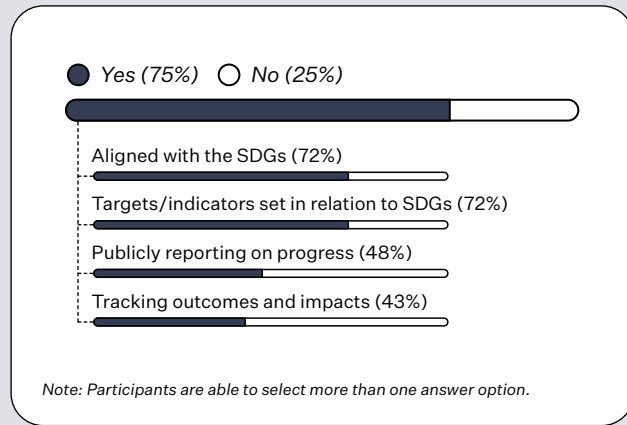
The Materials Benchmark is a partner of the [World Benchmarking Alliance](#) and is aligned with the [United Nations Sustainable Development Goals \(SDGs\)](#), helping us monitor progress on global challenges.

72% of Materials Benchmark respondents who said “yes” aligned their sustainability strategy with the SDGs, and the same proportion set targets/indicators for at least one of these goals.

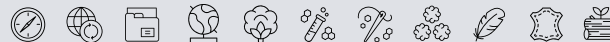
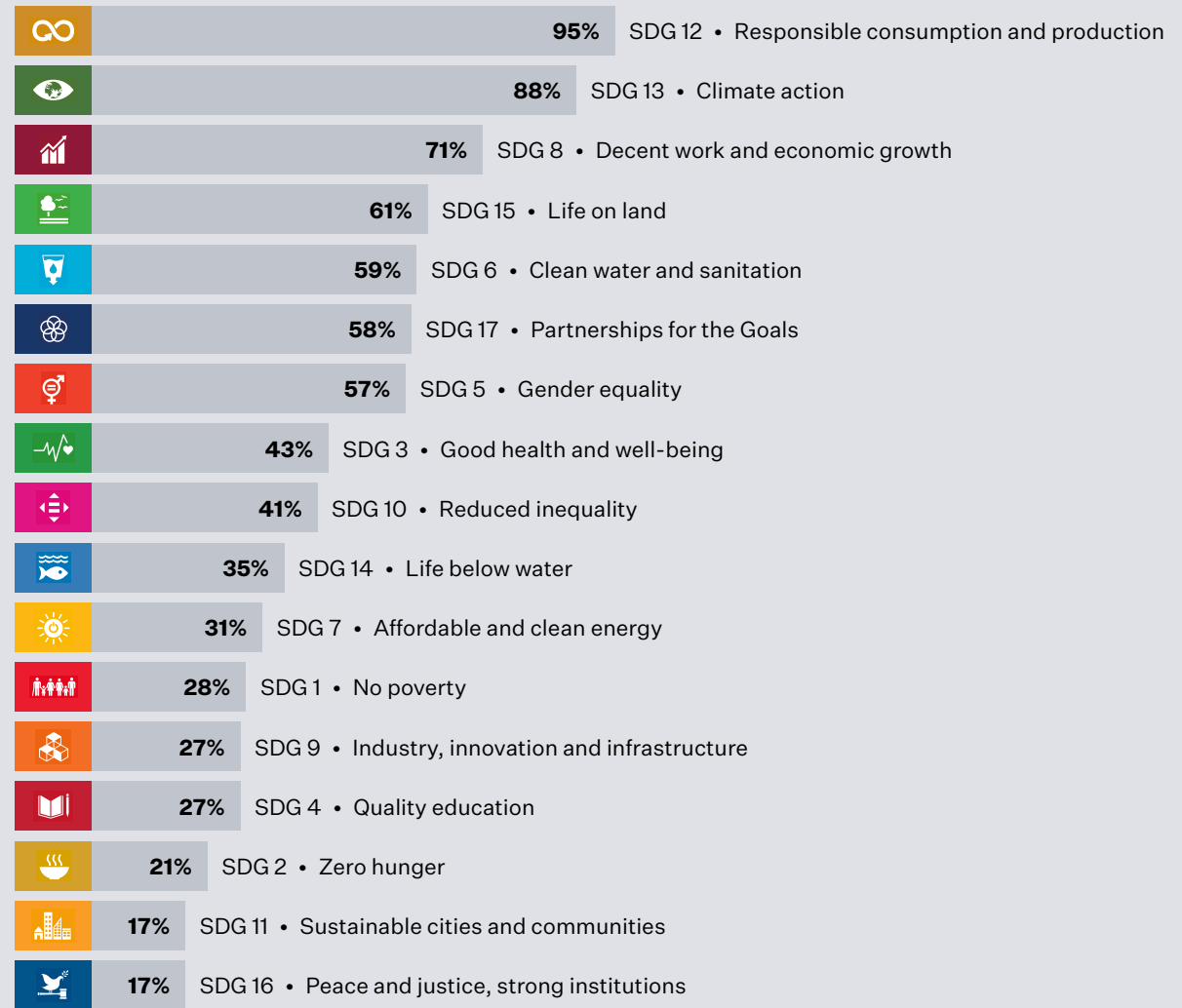
However, less than half of respondents (43%) track outcomes and impacts.

SDG 12 (Responsible consumption and production) remains at the top in terms of strategic alignment, followed by SDG 13 (Climate action), and SDG 8 (Decent work).

In collaboration with



Alignment with the Sustainable Development Goals



Circular Economy



Shifting to a circular economy

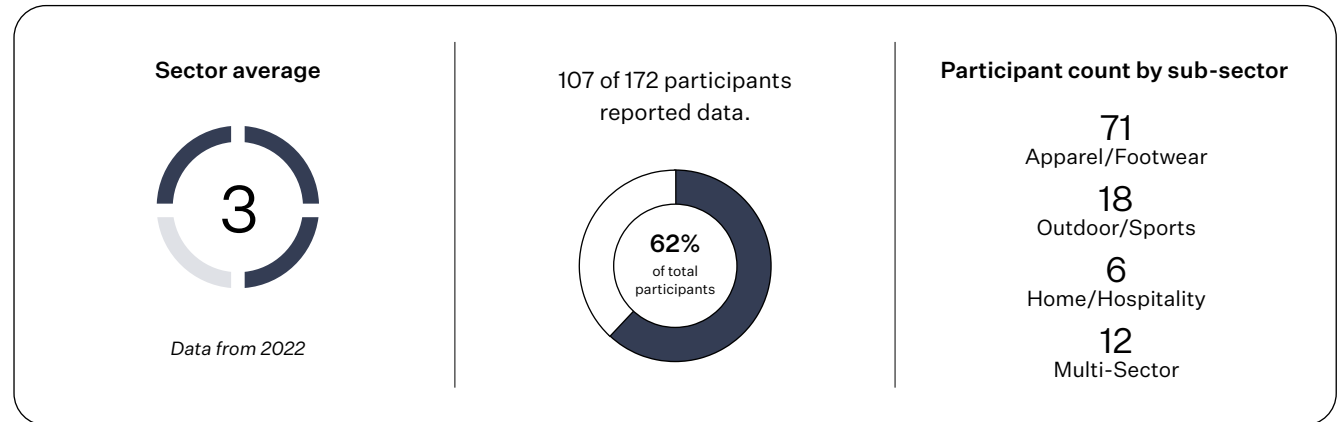
What is included in this section:

- Circular economy strategy
- Circular economy targets
- Circular business models
- Resource efficiency
- Design for circular economy
- Certification schemes

Circular economy questions developed in collaboration:



Participant profile



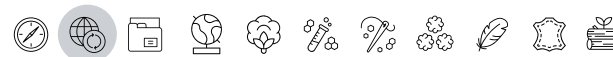
Why are we collecting this data?

We collect this data to determine whether companies have begun to integrate circular economy activities into the core of their business.

Findings

Participants have achieved a significant level of maturity in this area, reaching a Level 3 (Scaling) band. The data shows that participants are making progress in establishing the concepts of more formal strategies for the circular economy.

However, participants need to focus more on making business models profitable and supporting the design phase, developing new solutions for pre- and post-consumer waste, and establishing more traceability in their supply systems, especially regarding unsold goods.



Strategy and targets

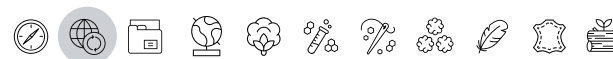
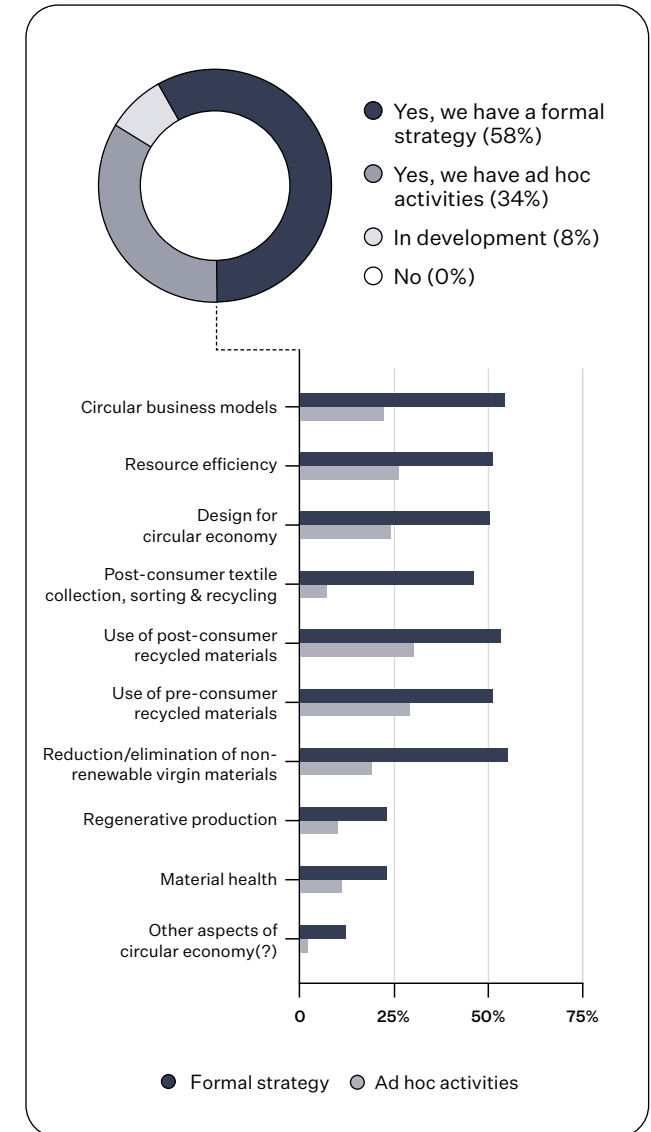


Circular economy approach

Moving away from virgin materials and focusing on circular strategies is now a priority for companies.

Shifting towards a circular economy can be challenging for businesses, especially when factors such as company size are a hindrance.

The data shows that more than half of companies (58%) have already developed a formal circular economy strategy, with a focus on reducing the use of virgin materials and re-evaluating business models.



Strategy and targets



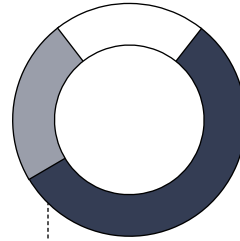
Circular economy targets

SMART goals have been integrated in some areas, but further efforts are needed.

SMART goals (Specific, Measurable, Achievable, Relevant, and Time-Bound) help to clearly define how the goals are to be achieved.

56% of respondents have set SMART targets that focus on reducing or eliminating non-renewable virgin materials and post-consumer recycled materials, among others.

The data shows that respondents are setting SMART targets for specific areas. However, efforts in areas such as regenerative production or material health are less clear.



- Yes, SMART targets (56%)
- Yes, qualitative targets only (23%)
- No (21%)

Non-renewable virgin materials reduction/elimination (78%)



Post-consumer recycled materials (78%)



Circular business models (67%)



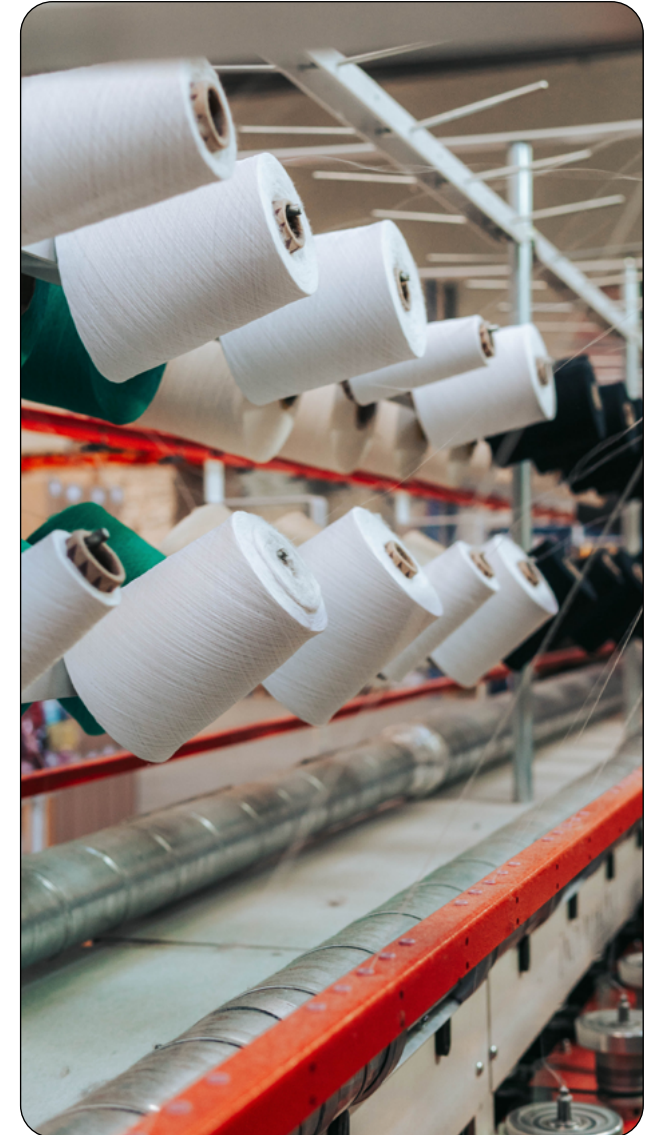
Pre-consumer recycled materials (62%)



Design for circular economy (57%)

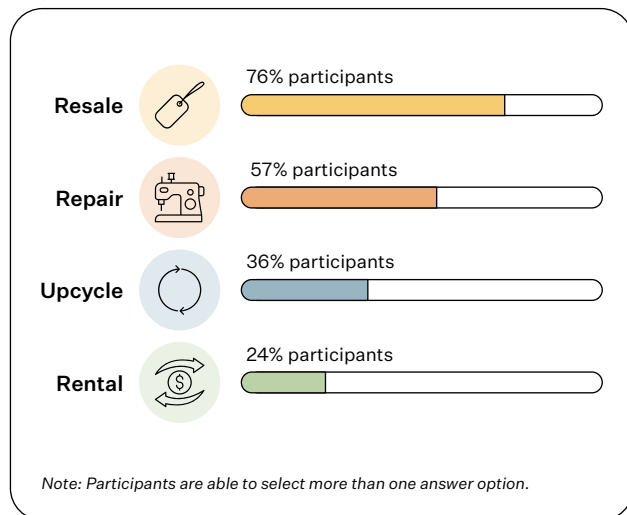


Note: Participants are able to select more than one answer option.





Circular business models



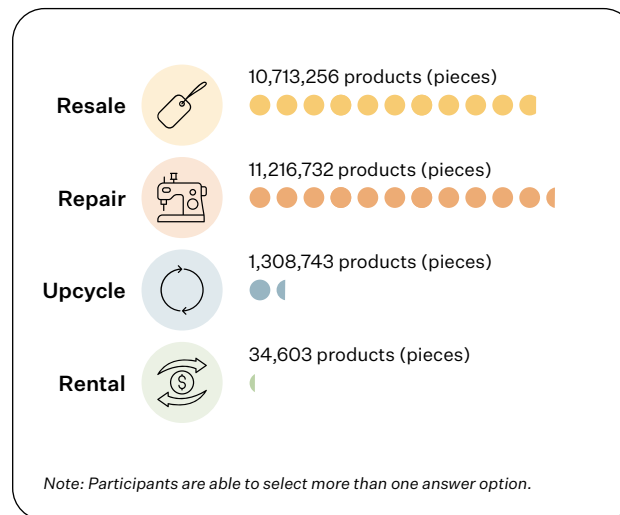
Efforts are being made to extend the lifecycle of products.

A circular business model clarifies the logic of a company's value creation, provides an alternative to growing and producing new raw materials, and can reduce dependence and impact on natural resources.

The data shows that resale appears to be the most popular of the circular business models. 76% of respondents stated that they extend the first life of their products through resale.

Repair was the second most popular model, used by 57% of respondents, followed by upcycling and rental.

Tracking progress towards circular economy

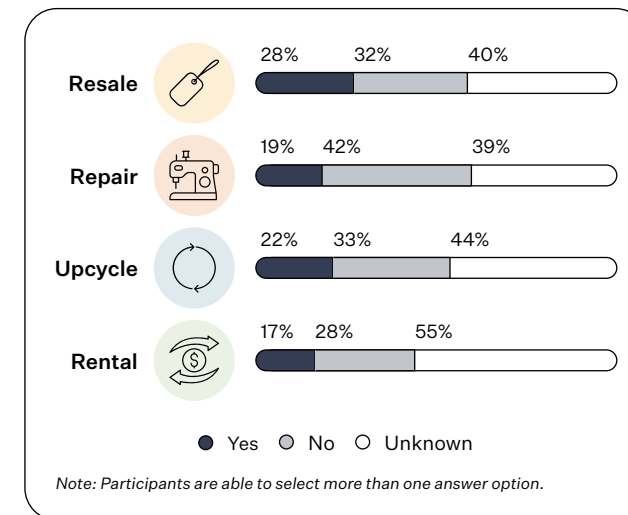


Companies starting to track progress in numbers.

Repair is the circular economy model that impacts the highest number of products reported by respondents, closely followed by resale. According to the data, upcycling and rental are used less to extend the lifecycle of products.

The data indicates that companies have started to track the number of products being resold, repaired, upcycled and rented.

Profitability of circular business models



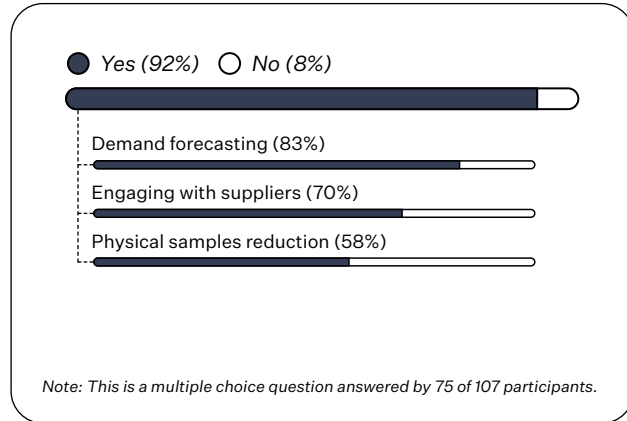
Respondents are yet to see a clear return on investment made in circular business models.

The data shows that most respondents either did not perform profitability analysis of the steps taken to implement circular business models or did not provide data.

Due to the lack of data provided by the respondents, a low percentage of profitability was reported for all circular business models.



Pre-consumer waste



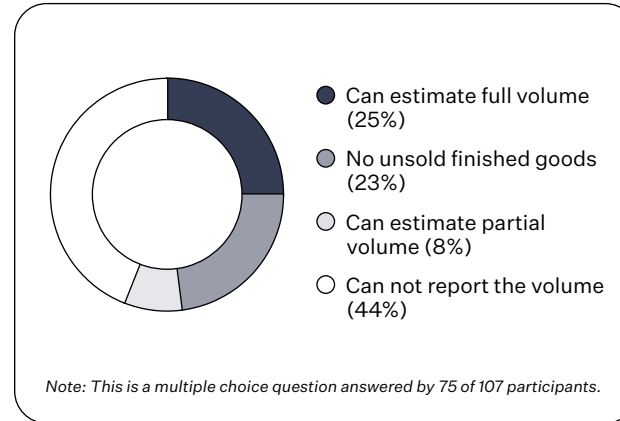
Pre-consumer waste holds huge potential to increase efficiency, and companies are starting to tap into it.

Pre-consumer products – materials that have been discarded or thrown away before the consumer-use phase – are often disposed of as waste. However, they hold enormous potential for innovation and efficiency if they can be transformed into useable materials.

Data shows that companies are actively engaged in this task, particularly through demand forecasting and working with suppliers to minimize waste.

Ideally, the aim is to prevent waste in the first place by focusing on improving management practices and establishing a system where waste becomes feedstock for another process.

Unsold finished goods



Unsold finished goods represent a difficult area where there is a lack of traceability.

Unsold finished goods are products that could not be sold as intended, including defective products or sample pieces. This does not include unfinished textiles such as cutting scraps or trims.

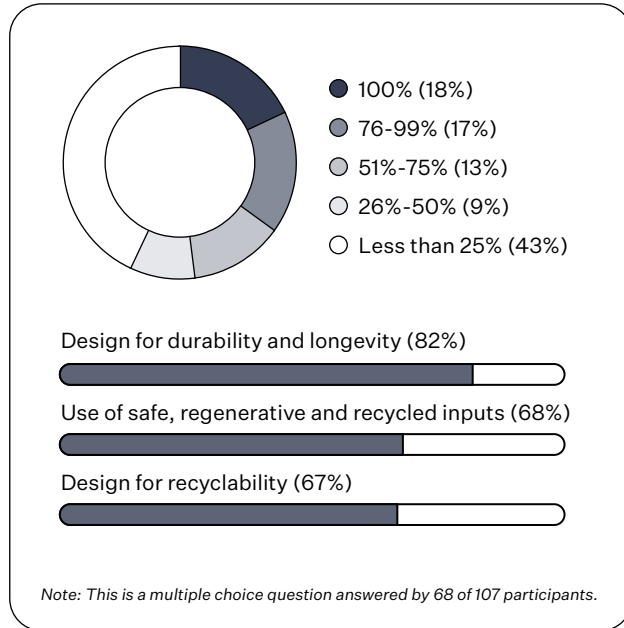
Identifying the volume of unsold finished goods and their destination is critical to finding scalable solutions.

The data indicates that so far very few companies report this metric. Only 25% of the respondents can do so, and nearly half are unable to report their volumes.





Design for circularity

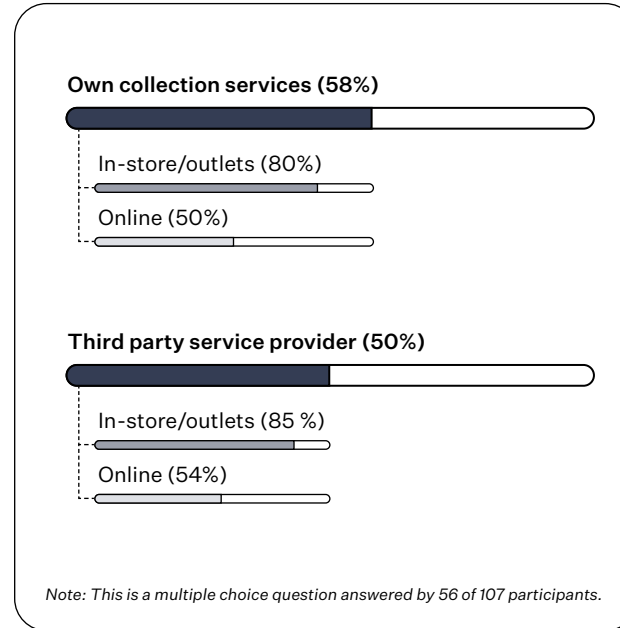


There needs to be further emphasis on design as a key driver of change.

The path to a circular economy begins in the design phase, where products should be developed with repair, reuse, recycling and reintegration into the production system in mind.

However, the data shows that most companies do not incorporate design from the beginning: only 18% of the 68 companies that answered this question do. The top area that these companies focus on is designing for durability and longevity, followed by using safe, renewable and recycled raw materials, and designing for recyclability.

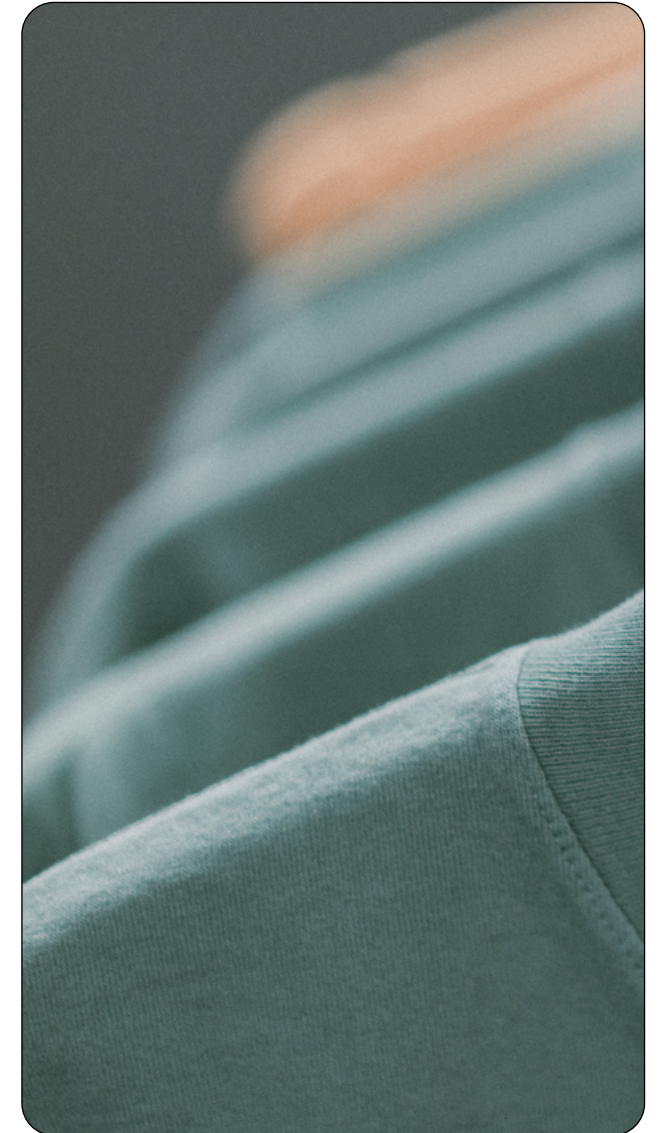
Post-consumer textile collection



Participants need to accelerate their efforts to extend the life of post-consumer textiles.

As most post-consumer waste is sent to landfill, it is crucial to create more effective collection systems.

56 of the 107 respondents to this question have acted in this area. Half of them do the collection themselves, mainly in stores or retail outlets, while the other half use third-party providers, with in-store or point-of-sale collection being the most common approach.



Progress to Preferred

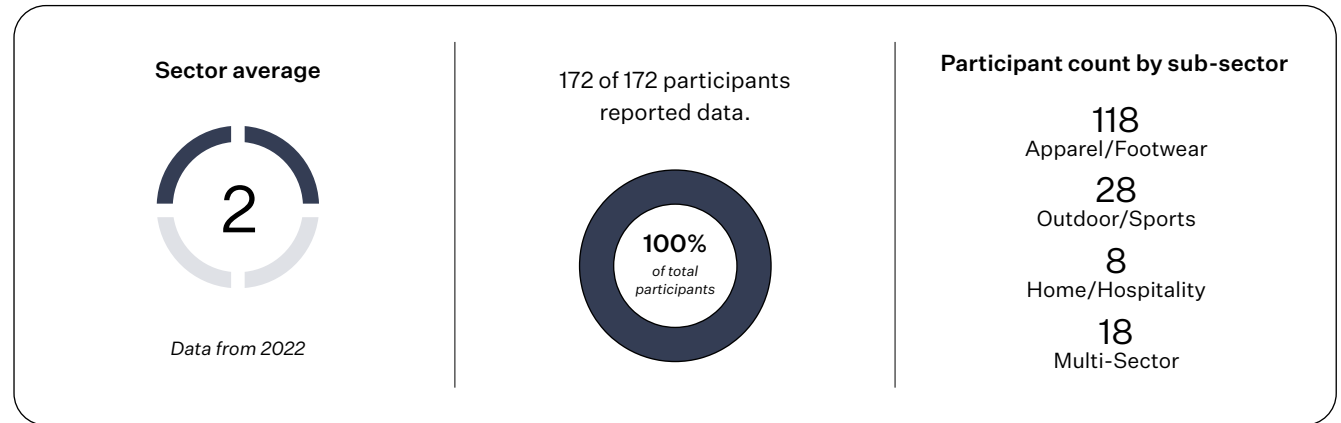


Overview

What is included in this section:

- Uptake targets
- Uptake data
- Prioritization assessments
- Recycled

Participant profile



Why are we collecting this data?

This section is designed to track participants' progress towards the adoption of a preferred materials portfolio that helps to reduce and eliminate the impacts of materials sourcing. This section is mandatory for all participants as it is the core of the Materials Benchmark survey.

Please note that all percentages marked as "recycled" are also considered as preferred materials. In this breakdown, "preferred" includes primary (virgin) fibers and raw materials from preferred sources, and "recycled" covers secondary (renewable) fibers and raw materials. All other recycled materials, which are from a non-recognized sustainability system, are allocated to conventional.

Findings

The sector scored a Level 2 (Establishing) band on average across priority materials, indicating that there is room for progress and improvement.

Cotton is the most reported raw material used, followed by polyester, leather and viscose. The data shows that conventional practices prevail for most raw materials except cotton and mohair.

Furthermore, traceability to the raw materials level is relatively low. 80% of participants do not yet have access to this information.

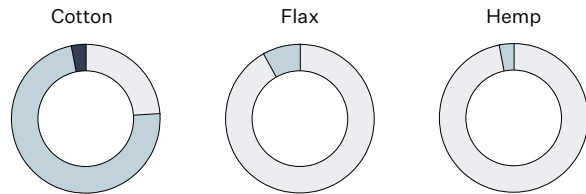
Overview: Progress to preferred

○ Conventional ● Preferred ● Recycled



Plant-based fibers and materials

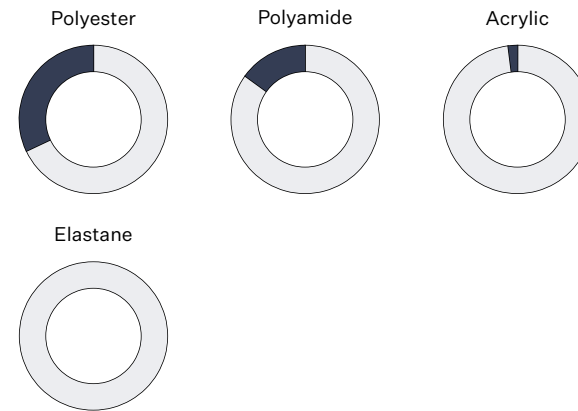
Plant-based fibers and materials include cotton, flax and hemp. They are “preferred” when cultivated or harvested using more sustainable methods, with production practices that have a reduced impact on climate, soil health, water, or biodiversity.



Click the pie charts below to get further insights into the respondents’ progress towards a preferred materials portfolio.

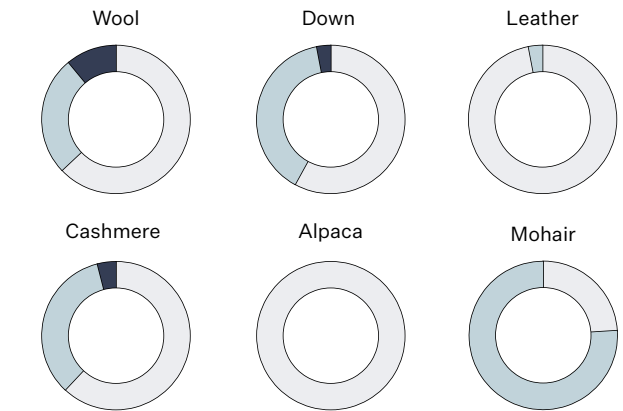
Synthetic fibers and materials

Synthetic fibers and materials can be categorized as conventional, recycled, and biobased. Conventional synthetics are created from non-renewable fossil fuels. Recycled synthetic textiles are often made from post-consumer plastic waste, while biobased synthetics are derived from plants such as corn and sugar.



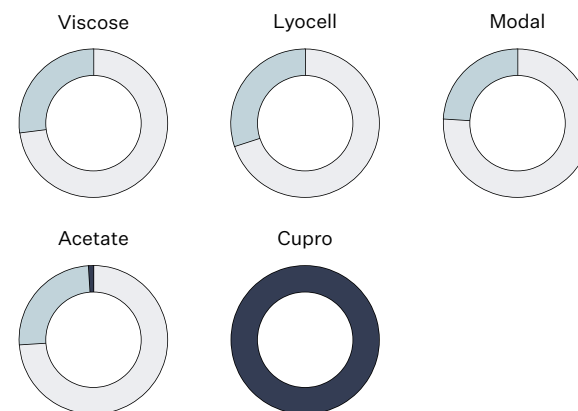
Animal-based fibers and materials

Animal-based fibers and materials include sheep wool, mohair, cashmere, alpaca, leather, and down. They are popular natural choices for textiles, but attention must be paid to the welfare of the animals and the land they graze on.

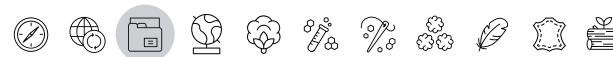
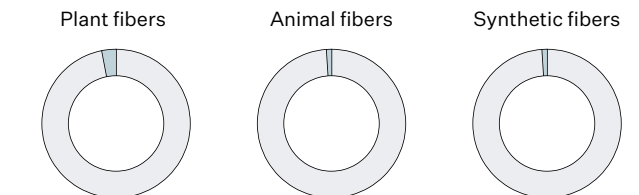


Manmade cellulosic fibers (MMCFs)

Manmade cellulosic fibers (MMCFs) such as viscose, modal, and lyocell have naturally produced feedstocks, mainly derived from the bark of trees like birch and eucalyptus or other plants such as bamboo. MMCFs are made from these feedstocks through industrial processes and consist of pure cellulose.



Other fibers and materials



Materials portfolio



Plant fibers

Cotton is the most reported fiber in terms of uptake volumes at about 3.47 million metric tons, representing 45% of the total reported volume of materials used in 2022.

The market share of the other specified plant fibers (flax and hemp) accounted for less than 1%. [Read more.](#)

Synthetic fibers

Polyester is the second most reported fiber in terms of uptake volumes at about 2.62 million metric tons, representing 34% of the total reported volume of materials used in 2022.

Among other synthetic fibers, polyamide is the second most reported (3%), while acrylic and elastane account for only 1%. [Read more.](#)

Animal fibers and materials

Leather is the third most reported raw material by uptake volume at nearly 0.55 million metric tons, representing 7% of the total reported volume of materials used in 2022.

Wool is the second most sourced animal fiber with a share of less than 1%.

Other animal fibers and materials (down, cashmere and alpaca) accounted for less than 1%. [Read more.](#)

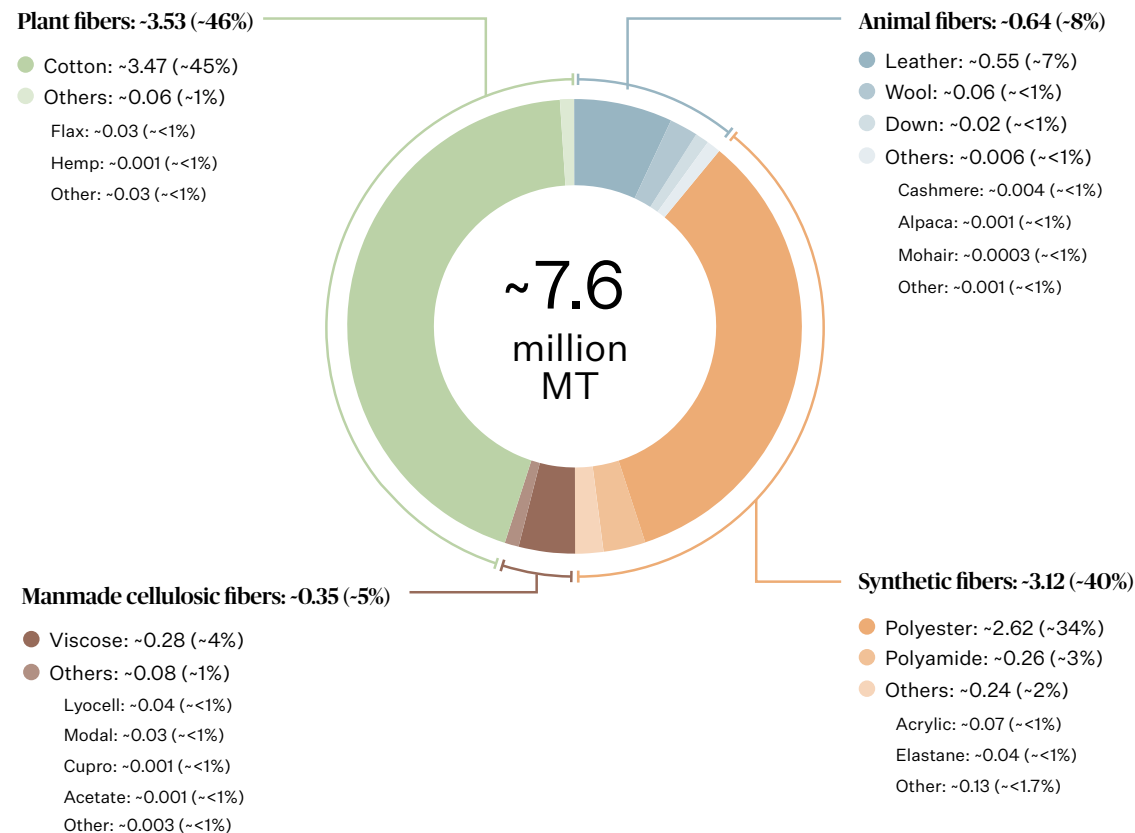
Manmade cellulosic fibers

MMCFs represent 5% of the total reported volume of materials used in 2022.

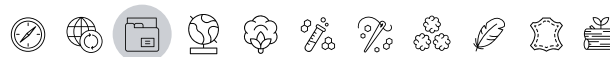
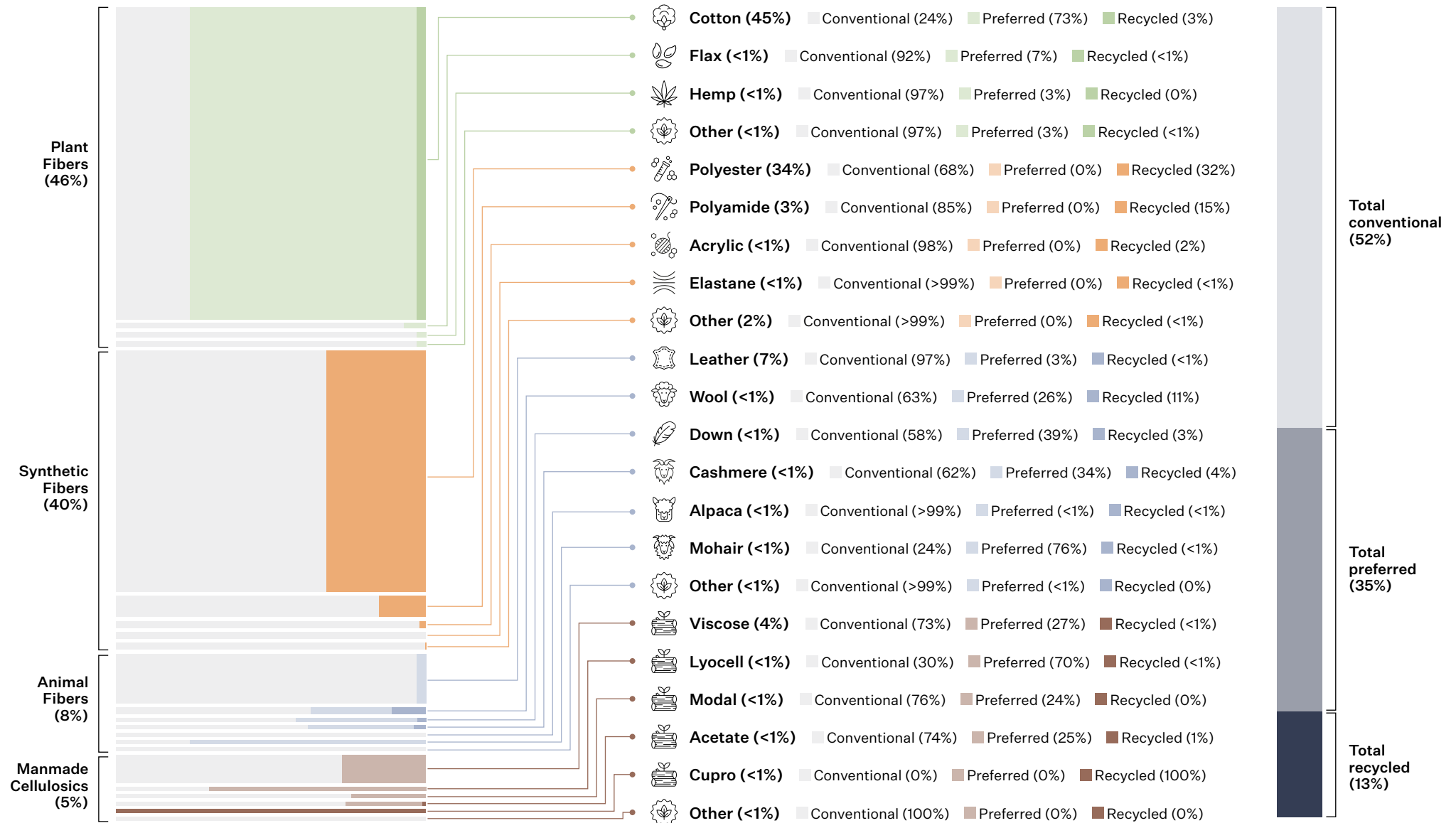
Viscose accounts for the majority of reported MMCF uptakes, followed by lyocell and modal. [Read more.](#)

Fiber and raw materials uptake in 2022

(in million metric tons and %)



Uptake volumes and progress to preferred



Progress to preferred

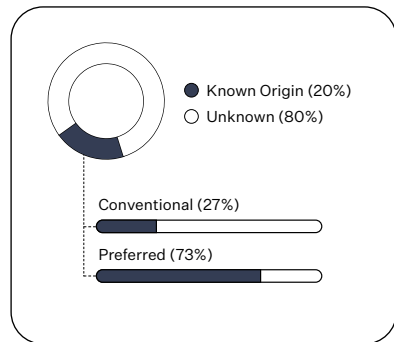
Country of origin

MT = Metric tons ○ Conventional ● Preferred

This chart lists only the top countries by highest uptake volumes reported. For preferred, recycled is included within preferred in this chart.



Many of the on-the-ground impacts of raw materials happen where they are grown, cultivated, or produced. Based on the data, most respondents (80%) still do not have this information. The following map provides an overview of the main countries from which respondents source the raw materials for which the countries of origin are known.



Southern Europe

AUSTRIA
Total: 24,949 MT
MMCF
 ○ Conventional: 385 MT (2%)
 ● Preferred: 24,518 MT (98%)

Southern Asia

BANGLADESH
Total: 72,329 MT
Cotton
 ○ Conventional: 19,058 MT (35%)
 ● Preferred: 35,444 MT (65%)
Polyester
 ○ Conventional: 6,736 MT (50%)
 ● Preferred: 6,805 MT (50%)
Acrylic
 ○ Conventional: 1,362 MT (100%)
 ● Preferred: 0 MT (0%)

INDIA
Total: 360,471 MT
Cotton
 ○ Conventional: 10,067 MT (3%)
 ● Preferred: 310,087 MT (97%)
Polyester
 ○ Conventional: 13,024 MT (60%)
 ● Preferred: 8,580 MT (40%)
MMCF
 ○ Conventional: 2,396 MT (15%)
 ● Preferred: 13,071 MT (85%)

PAKISTAN
Total: 108,585 MT
Cotton
 ○ Conventional: 5,658 MT (5%)
 ● Preferred: 98,596 MT (95%)
Polyester
 ○ Conventional: 3,702 MT (98%)
 ● Preferred: 60 MT (2%)

Northern America

UNITED STATES
Total: 158,246 MT
Cotton
 ○ Conventional: 8,087 MT (7%)
 ● Preferred: 103,009 MT (93%)
Leather
 ○ Conventional: 43,092 MT (97%)
 ● Preferred: 1,456 MT (3%)
Polyester
 ○ Conventional: 70 MT (5%)
 ● Preferred: 1,205 MT (95%)

Latin America and the Caribbean

BRAZIL
Total: 110,646 MT
Cotton
 ○ Conventional: 3,329 MT (3%)
 ● Preferred: 95,510 MT (97%)
Leather
 ○ Conventional: 6,522 MT (57%)
 ● Preferred: 4,872 MT (43%)

Africa

SOUTH AFRICA
Total: 6,115 MT
Wool
 ○ Conventional: 2,072 MT (52%)
 ● Preferred: 1,928 MT (48%)
Leather
 ○ Conventional: 1,436 MT (100%)
 ● Preferred: 0 MT (0%)

Eastern and South-Eastern Asia

CHINA
Total: 424,139 MT
Polyester
 ○ Conventional: 97,032 MT (36%)
 ● Preferred: 175,550 MT (64%)
Cotton
 ○ Conventional: 23,058 MT (37%)
 ● Preferred: 39,453 MT (63%)
MMCF
 ○ Conventional: 7,395 MT (26%)
 ● Preferred: 21,555 MT (74%)

Australia and New Zealand

NEW ZEALAND
Total: 15,110 MT
Leather
 ○ Conventional: 7,212 MT (100%)
 ● Preferred: 0 MT (0%)
Wool
 ○ Conventional: 177 MT (2%)
 ● Preferred: 7,326 MT (98%)



Impact Areas

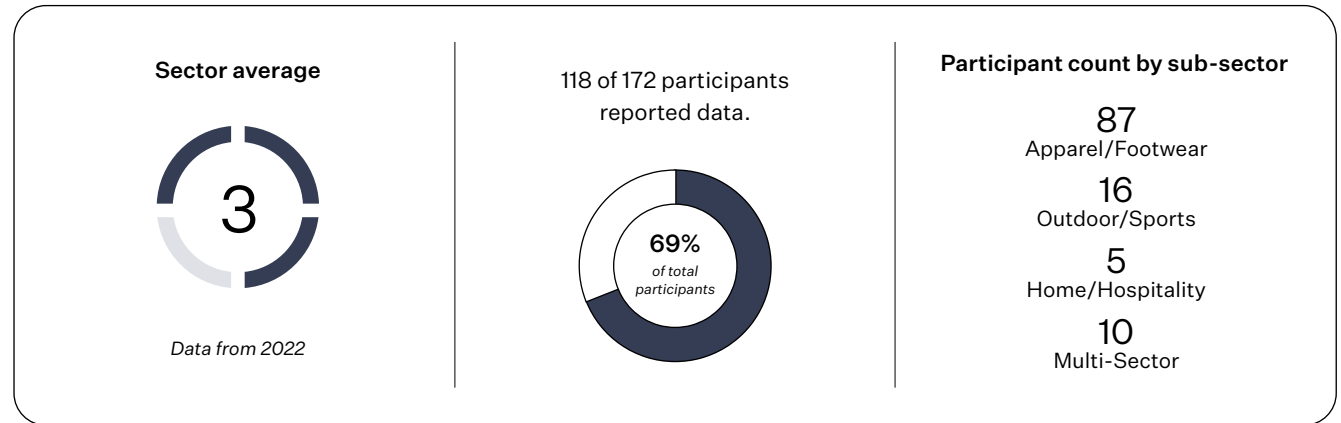


Measuring impacts

What is included in this section:

- Prioritization assessments
- Recycled
- Implementation

Participant profile



Why are we collecting this data?

This section is designed to track industry progress, targets, monitoring, and reporting on climate and nature-related impact areas such as biodiversity, freshwater, ocean, land use, and soil health, in line with [Textile Exchange's Climate+ strategy](#). The framework's inclusion of areas impacting Climate+ is a new addition to the Materials Benchmark.

Findings

Although measuring climate and nature-related impact areas is still a relatively new area for some companies, they are aware of its importance and are actively engaging, already reaching a Level 3 (Scaling) band.

Participants show progress in addressing climate-related issues, particularly in defining their SMART goals and assessing the associated risks.

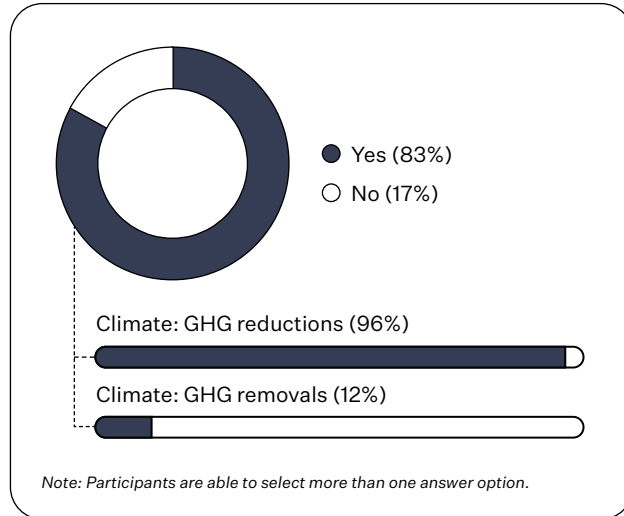
The data shows that further action is needed to restore and regenerate ecosystems.



Impact assessments



Impact assessment (climate-related)

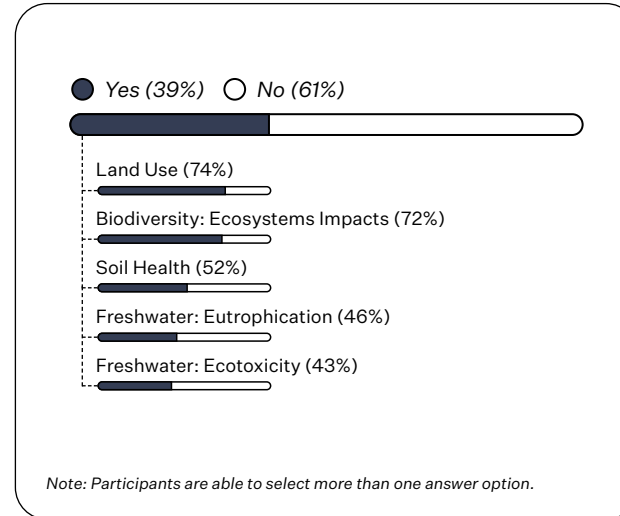


Reducing greenhouse gas emissions is a top priority.

Climate impact assessments at the raw materials level focus primarily on the impacts associated with growing and extracting these materials. These assessments help companies understand and assess their wider environmental impact.

Almost all respondents that said “yes” (96%) reported that they are actively engaged in this area and taking a collective approach to reducing greenhouse gas (GHG) emissions rather than focusing on carbon removal.

Impact assessment (nature-related)



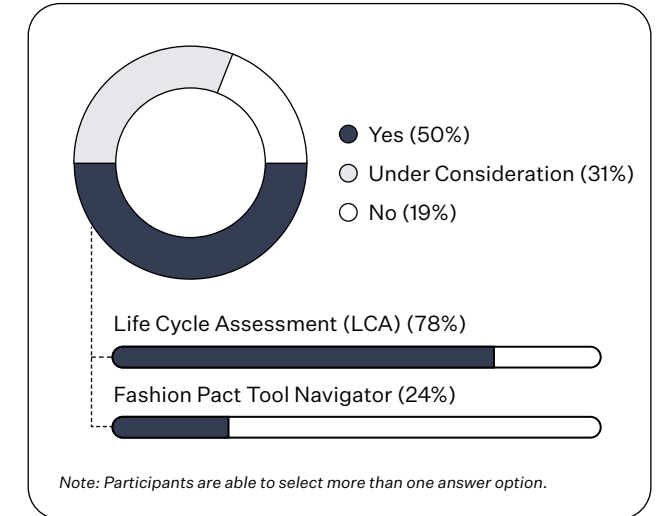
More action is needed to reduce and avoid negative impacts on ecosystems.

As with climate, nature impact assessments at the raw materials level focus on the impacts that cultivating and extracting raw materials has on nature. These assessments are needed to identify ways to restore and regenerate biodiversity and stop nature loss.

Respondents are much more advanced on climate than nature, with only 39% of the 118 respondents having conducted this type of assessment.

Land use, biodiversity, and soil health are the top three areas of focus for those that have carried out these assessments.

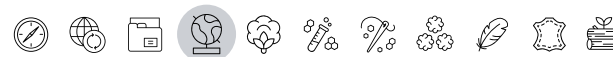
Tools and frameworks



Life cycle assessment (LCA) is the tool most used by respondents to assess impact.

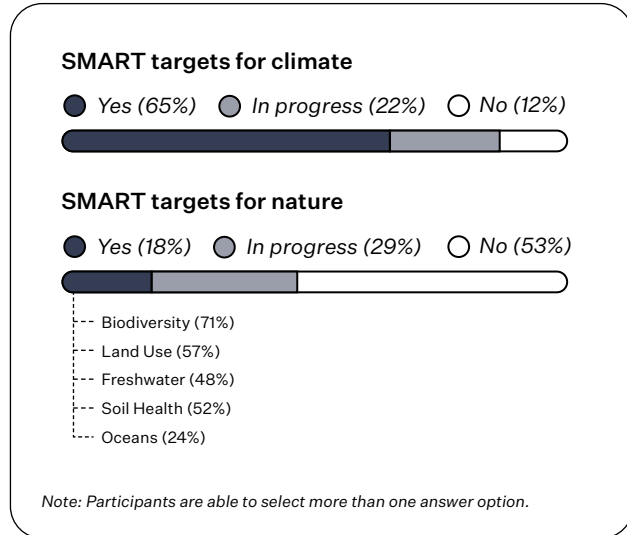
Different tools and frameworks can be used to help carry out climate and/or nature impact assessments.

The data clearly shows that LCA is the most used tool, followed by the Fashion Pact Biodiversity Strategy Tool Navigator.





SMART targets



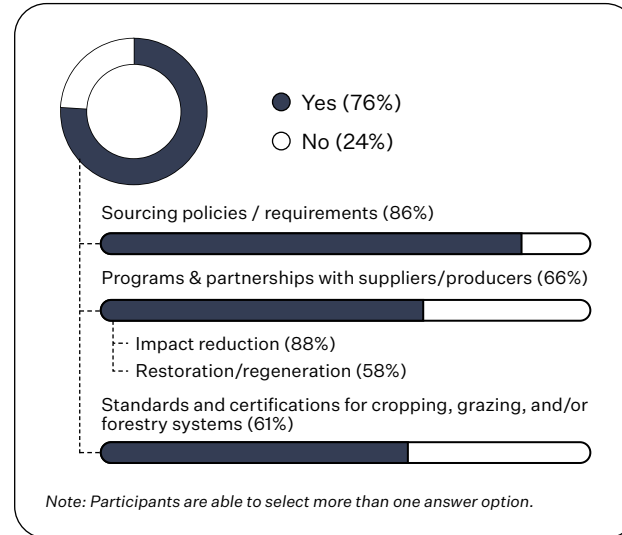
SMART goal setting differs between climate and nature.

SMART (Specific, Measurable, Achievable, Realistic or Relevant, and Time-bound) targets help organizations define and track goals.

Respondents show a much higher level of maturity in dealing with climate issues than with nature when it comes to setting such goals.

Of the 118 respondents, 65% have set SMART goals for climate. That number drops to just 18% for nature.

Measures to reduce impact on climate/nature



There are actions being taken towards mitigating impacts on climate and nature.

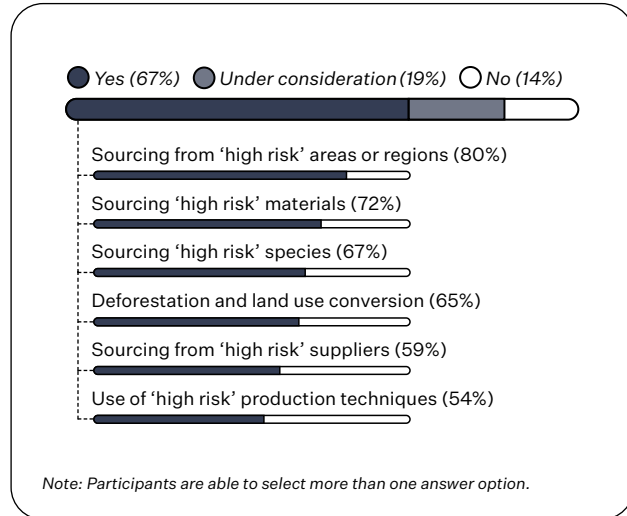
Analyzing and measuring the climate and nature-related impacts during raw material production is key to implementing valuable activities and initiatives. Companies are taking a variety of approaches to reduce impacts on climate and nature, either directly or indirectly.

The data shows that the most common approaches for respondents who said “yes”, include setting sourcing guidelines (86%), establishing strategic partnerships (66%), and ensuring compliance with recognized standards and certifications (61%).





Sourcing restrictions

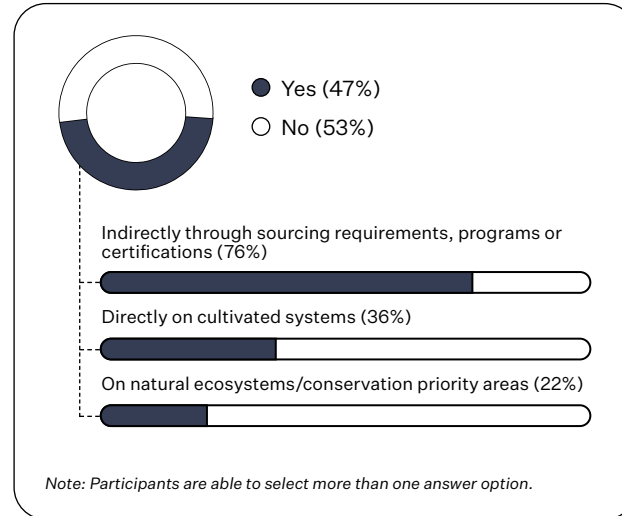


Companies are actively setting sourcing restrictions.

The data shows that 67% of 118 respondents have set some form of sourcing restrictions due to climate and nature-related risks.

Of this set of respondents, 80% have restrictions on sourcing from high-risk regions, 72% on sourcing high-risk materials, and 67% have restrictions on sourcing from areas with high-risk species.

Measures to restore and regenerate nature

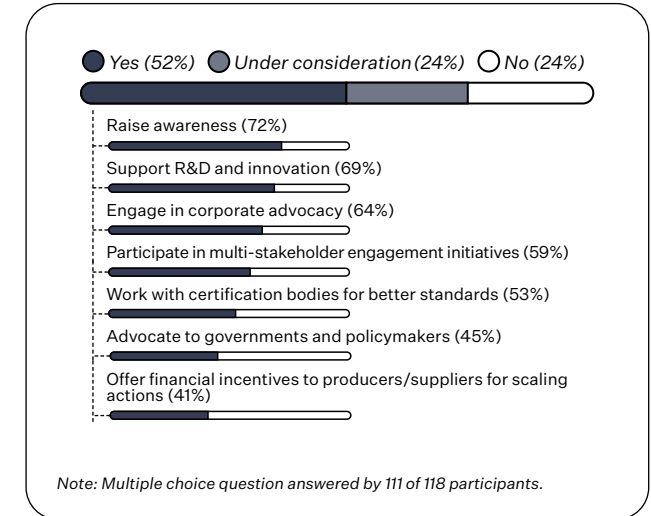


More direct action is needed on restoration and regeneration.

Restoration primarily aims to return degraded ecosystems to a near-original natural state, while regenerative actions aim to increase ecological integrity in areas where humans benefit from natural resources.

Respondents show some degree of commitment in this area, with 47% of 118 taking some form of action. This is typically achieved indirectly through sourcing requirements, programs or certifications, with much lower levels of direct participation from companies.

Transformational activities



Companies are more engaged in activities related to driving change on climate and nature issues.

The potential for companies to actively engage in actions that support systemic change in the fashion, textile and apparel industry underlines the central role they can play in promoting positive change.

The data indicates that most respondents are either already actively involved in such activities or are considering their implementation. Among those that have already begun these efforts, the primary methods have included raising awareness (72%), supporting R&D and innovation (69%), and engaging in corporate advocacy (64%).



Impact areas



[Textile Exchange's Climate+ strategy](#) considers the impacts associated with raw material extraction and initial processing. Alongside its 45% greenhouse gas emissions reduction target, what sets Climate+ apart is its interdisciplinary and interconnected approach. It does away with blanket solutions in favor of tailored, targeted strategies across three independent impact areas: soil health, water, and biodiversity.

Soil Health

Soil provides our food, sustains our farming systems, and is the beginning of all material production. We are striving to keep it healthy.

Freshwater

Water is the foundation of life as we know it and must be treated as the precious resource that it is. Our efforts focus on responsible water use and ensuring the safe return of water to our systems.

Biodiversity

Material production relies on healthy ecosystems which require a wide variety of animals, plants, and microorganisms. To mitigate climate change, we've got to protect and conserve biodiversity too.



Impact areas

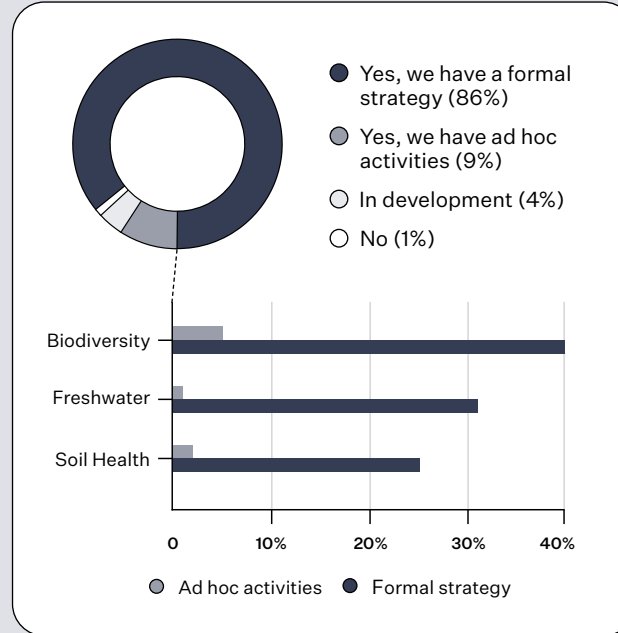


Business Integration

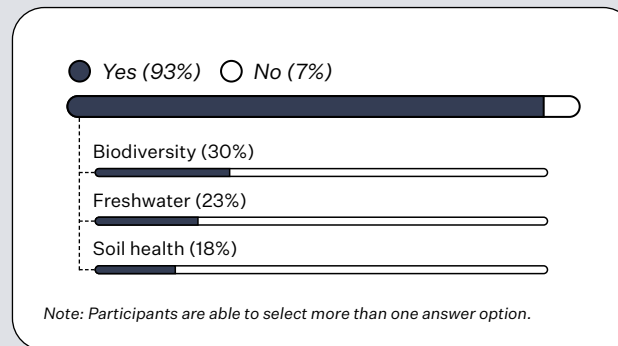
The data shows that companies are beginning to incorporate these impact areas into their formal strategies, but they remain low priority on the agenda. A similar trend can be seen when it comes to board accountability and internal capacity building, as these areas steadily gain traction among leaders.

Respondents conduct a greater number of risk assessments related to biodiversity than soil health and freshwater. Most of these assessments are conducted internally.

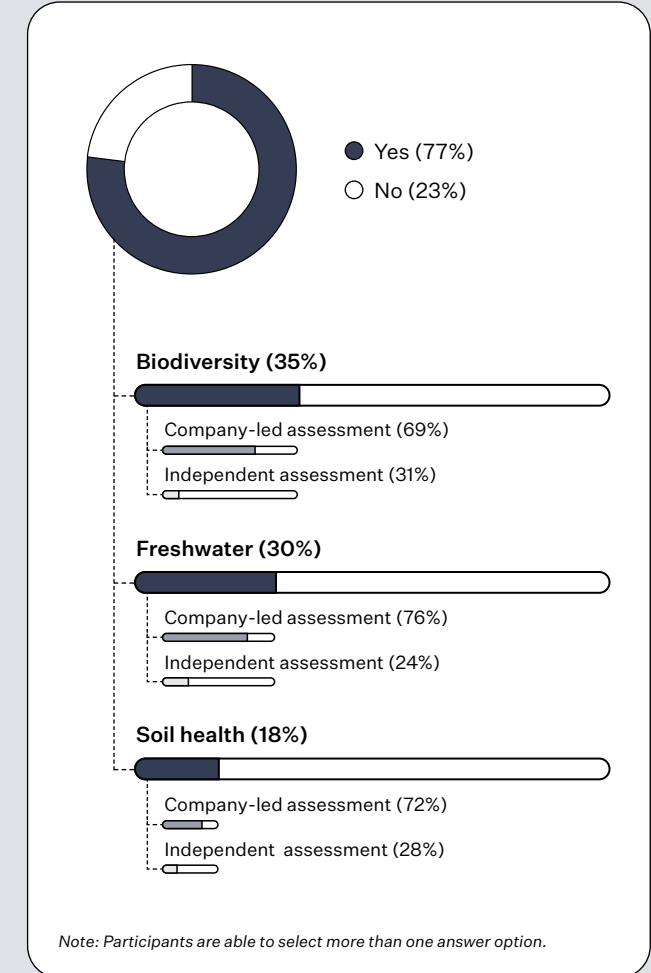
Formal strategy



Board accountability



Risk assessment



Impact areas

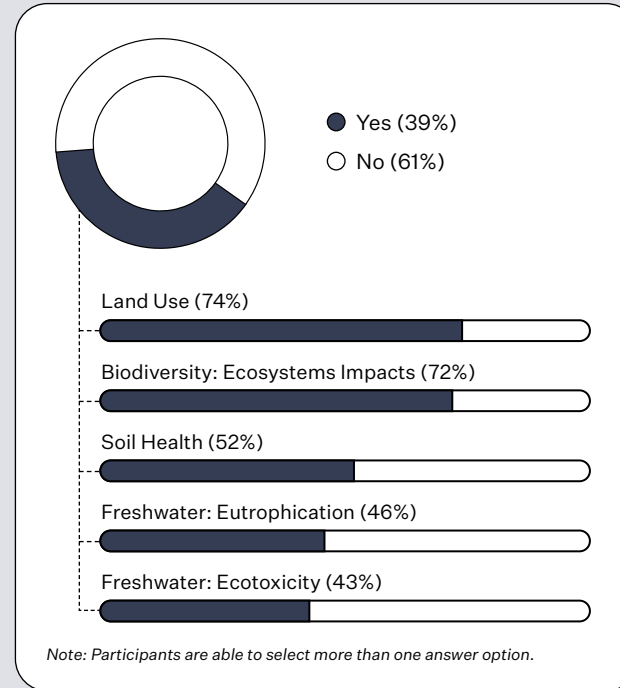


Impact Areas

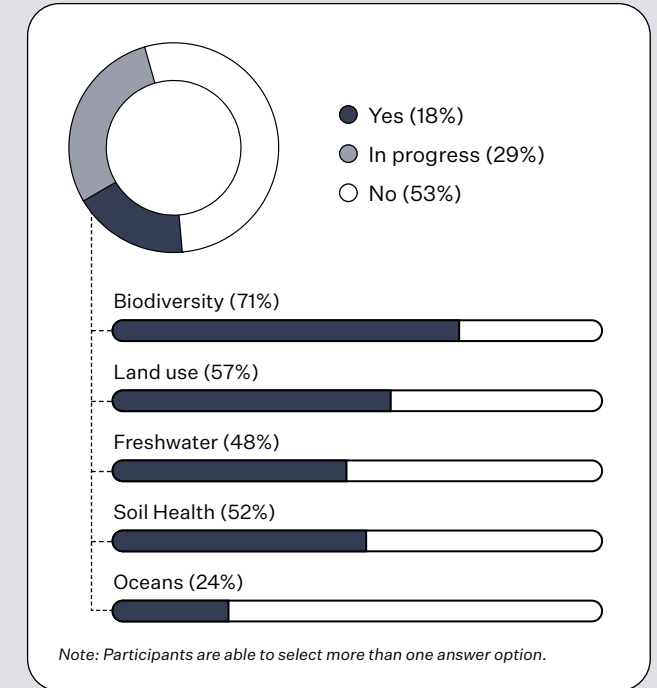
Companies are beginning to assess their impact on nature, with biodiversity at the top of the list, followed by soil health and freshwater.

Setting SMART targets helps to establish clear direction. Respondents show that they are still in their infancy, especially regarding soil health and freshwater, while biodiversity is gaining more traction.

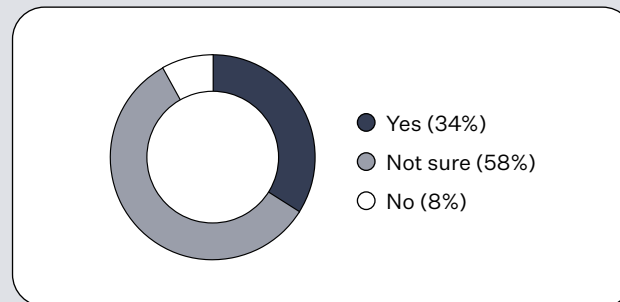
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SMART targets



Science-Based target for nature



Plant Fibers and Materials

Cotton



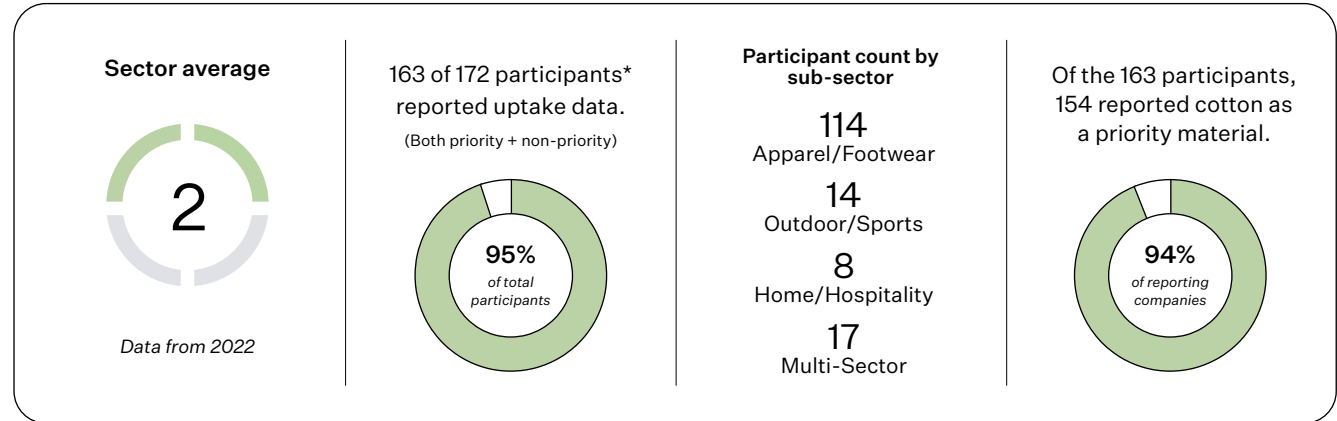
Cotton uptake data was reported by 163 of 172 participants, with cotton volumes accounting for 45% of overall material uptake.

Of the 163 participants that reported on cotton, 154 (94%) identified it as a priority raw material. Based on the data, companies' reporting on cotton sits within the Level 2 (Establishing) band.

Preferred cotton dominates the total portfolio at 73%, with the remaining 24% being conventional and a small amount recycled.

More than half of the participants have set a goal for "100% more sustainable cotton" and most of them have been made public, demonstrating a commitment to accountability in this area.

Participant profile



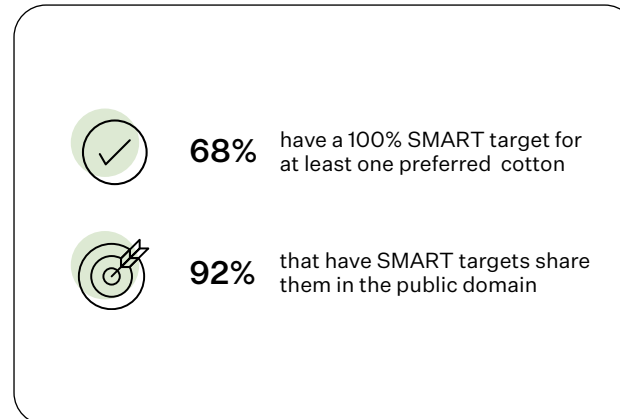
* 3 participants reported they use cotton but did not provide uptake volumes.

[Uncover the Sustainable Cotton Challenge Dashboard](#)

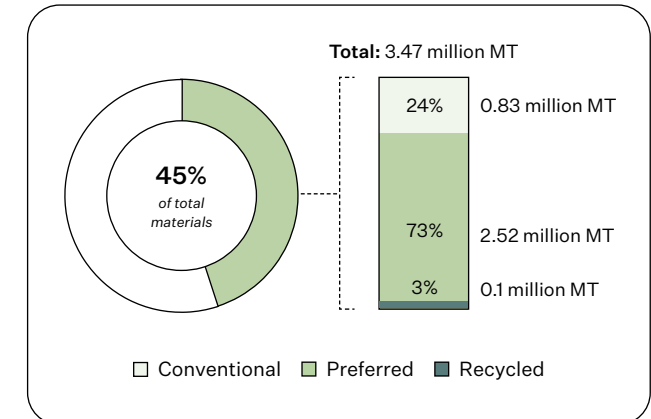
37% of participants representing 135 companies, including subsidiaries of which 36 have achieved their target.*

* The Cotton Challenge calls on companies to commit to sourcing 100% of their cotton from recognized programs and initiatives by 2025.

Uptake targets



Cotton overview



Cotton



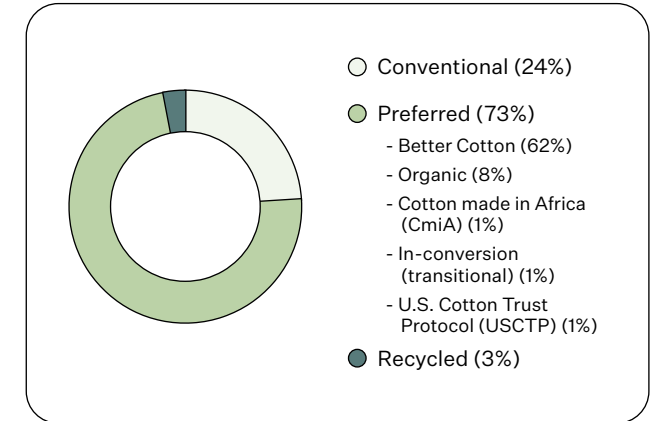
Note: This data is not indicative of clear trends due to the change in participants and Textile Exchange's updated taxonomy.

Cotton portfolio

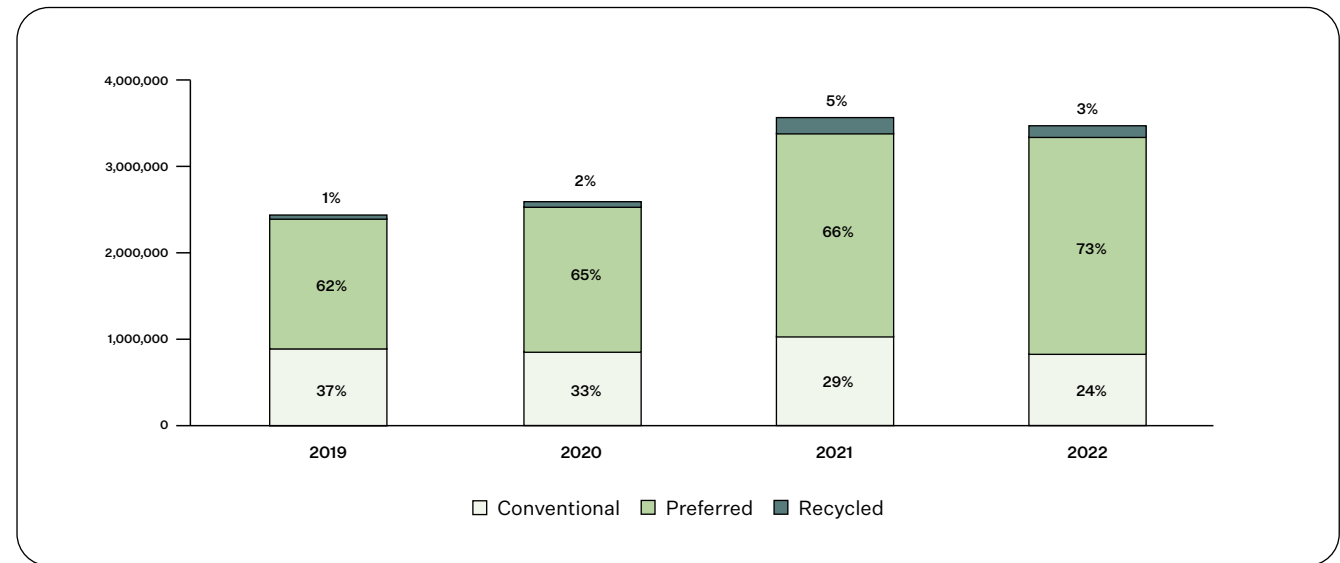
Overall, cotton is the raw material where participants show the most progress towards adopting preferred fibers. The data indicates that a high percentage of cotton is sourced from recognized programs and initiatives.

Better Cotton is the most reported initiative, followed by certified organic. Conventional cotton accounts for 24% of participants' cotton portfolio, while recycled cotton only represents 3%.

Portfolio



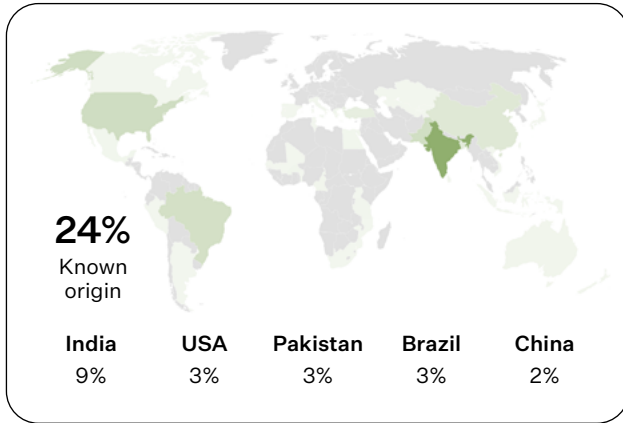
Trend (MT)



Cotton



Traceability

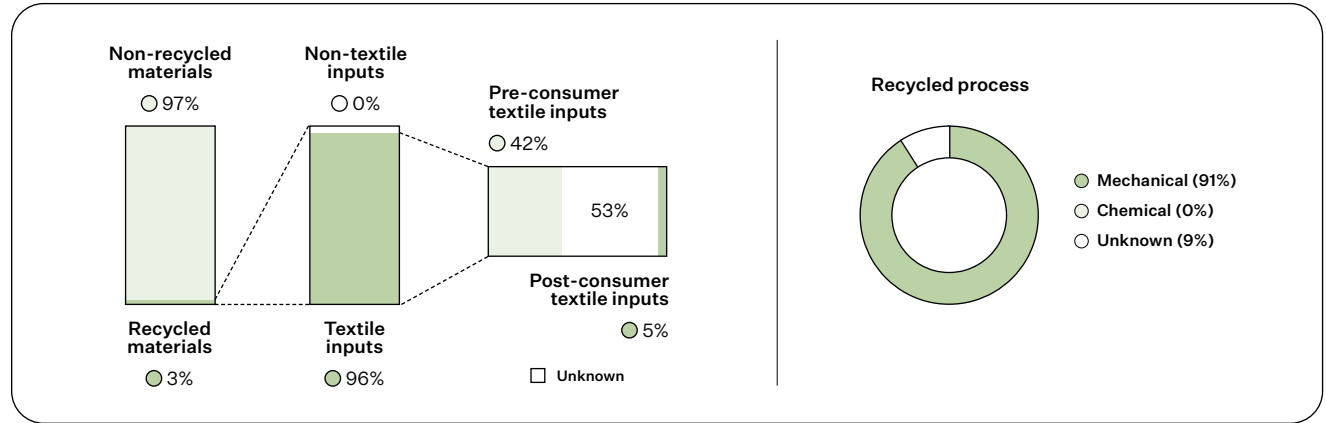


Traceability in cotton sourcing is complex but necessary.

Achieving traceability within supply chains is essential for companies to properly manage the environmental, socioeconomic, and political risks that come with materials sourcing. It all starts with the country of origin, where the raw materials are grown, cultivated, or produced.

The data reveals that 24% of respondents' cotton uptake can be traced back to a country of origin. India remains the biggest sourcing country, followed by the United States, Pakistan, Brazil, and China.

Recycled cotton portfolio



Recycled cotton is still in its early stages.

Textile-to-textile recycling plays an important role in helping companies transition to a circular economy. Cotton recycling can be broadly defined as the conversion of cotton fabric into cotton fibers that can be reused in textile products.

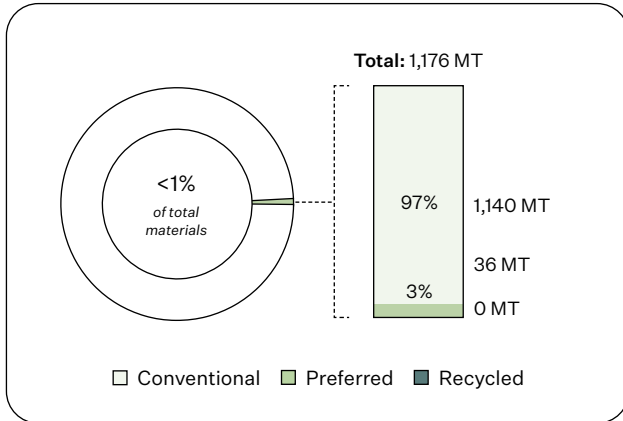
The data indicates that most respondents use a very small amount of recycled cotton (3%), mainly produced through mechanical processes



Other plant-based fibers



Hemp

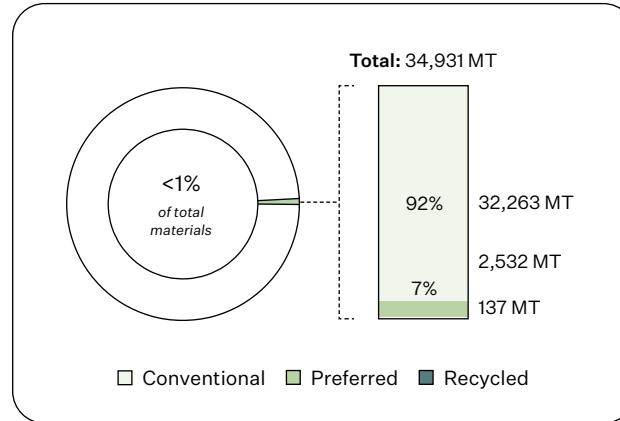


42 out of 172 respondents reported using hemp, making it the third most reported plant fiber.

Of the respondents that reported on hemp, six companies (14%) identified it as a priority raw material. Based on 2022 data, hemp sits within the Level 1 (Developing) band.

Hemp production is expanding, primarily due to recent legalization in countries around the world. It's a crop with a multitude of uses that has the potential to help brands "tick off" several of the sustainability criteria they are looking for in a fiber: low input, with strong environmental attributes, and durable. However, attention must be paid to the production practices used.

Flax



69 out of 172 respondents reported using flax, making it the second most reported plant fiber.

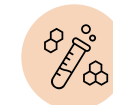
Of the respondents that reported on flax, 16 companies (23%) identified it as a priority raw material. Based on 2022 data, flax sits within Level 2 (Establishing) band.



In 2022, hemp and flax collectively accounted for less than 1% of the raw materials uptake reported by all participants. Although their volumes are significantly lower compared to cotton, we have provided a brief overview of these two raw materials due to their potential.

Synthetic Fibers

Polyester



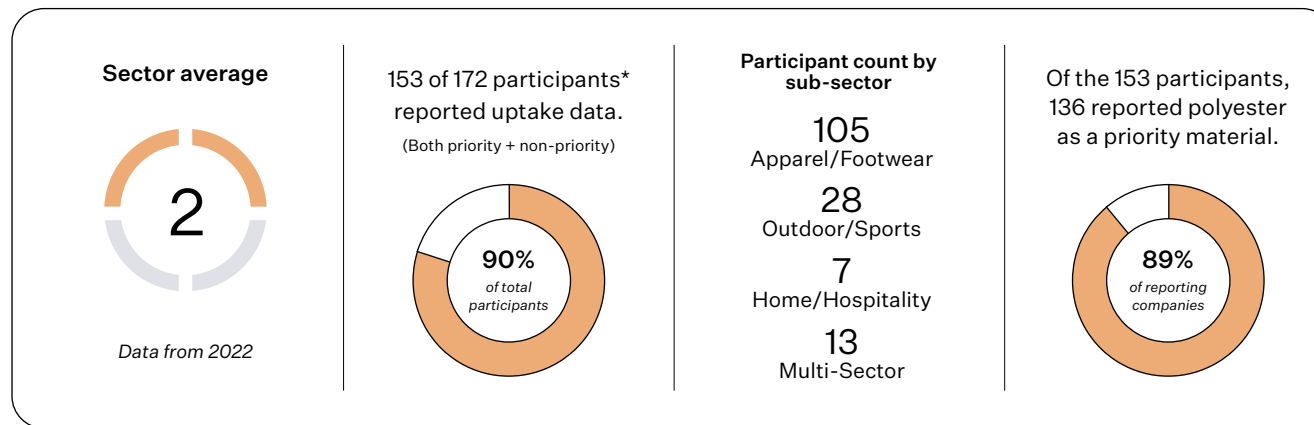
Polyester uptake data was reported by 153 out of 172 participants, with volumes accounting for 34% of overall material uptake.

Of the participants who reported on polyester, 136 (89%) identified it as a priority raw material. Based on the data, polyester sits within the Level 2 (Establishing) band.

Conventional polyester dominates over half (68%) of the total portfolio, with the remaining 32% being recycled polyester.

SMART targets are driving progress, with nearly half of the companies setting a target for “100% more sustainable polyester,” most of which have been made public.

Participant profile



* 5 participants reported they use polyester but did not provide uptake volumes.

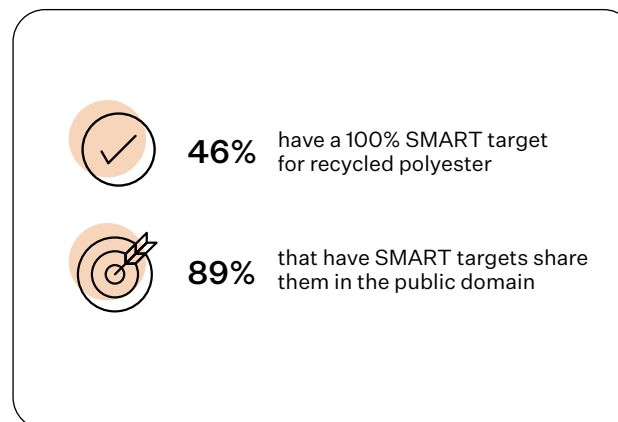
[Uncover the Recycled Polyester Challenge Dashboard](#)



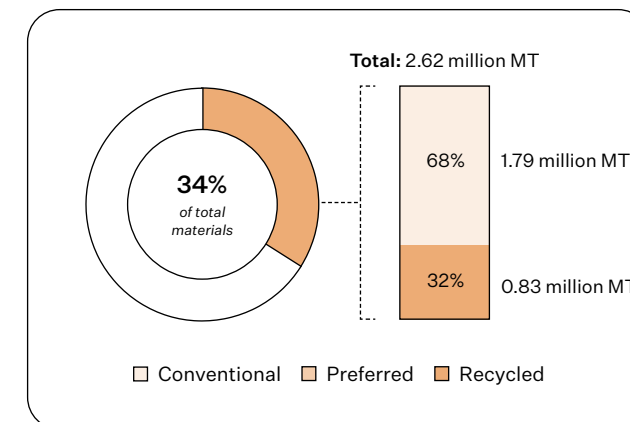
31% of participants representing 96 companies, including subsidiaries of which 10 have achieved their target.*

* The Recycled Polyester Challenge presses the industry to commit to bringing the market share of recycled polyester up from 14% in 2019 to 45% by 2025.

Uptake targets



Polyester overview



Polyester



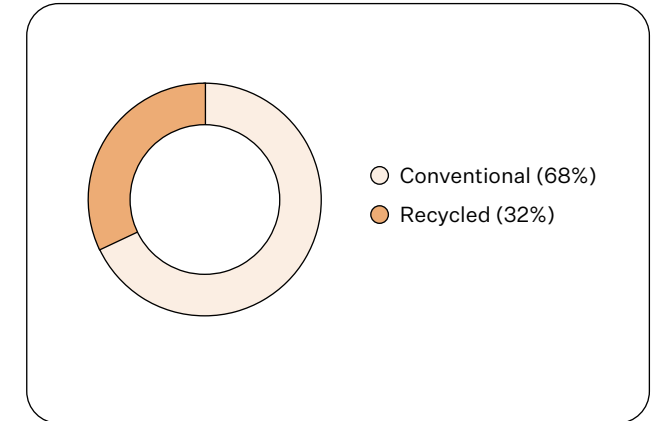
Note: This data is not indicative of clear trends due to the change in participants and Textile Exchange's updated taxonomy.

Polyester portfolio

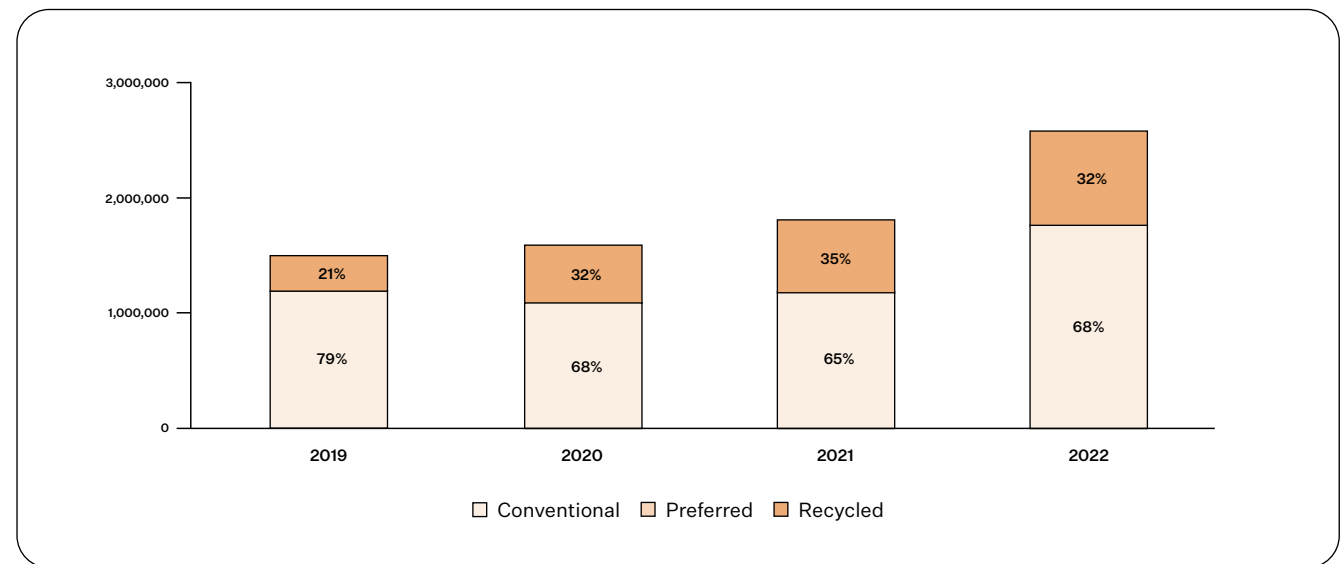
The data shows that recycled polyester accounts for 32% of participants' total polyester portfolio. However, conventional polyester volumes remain high, indicating that companies are still heavily dependent on virgin fossil-based feedstocks.

Brands and retailers reported using less than 1% biobased polyester solutions during the reporting period.

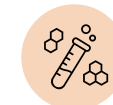
Portfolio



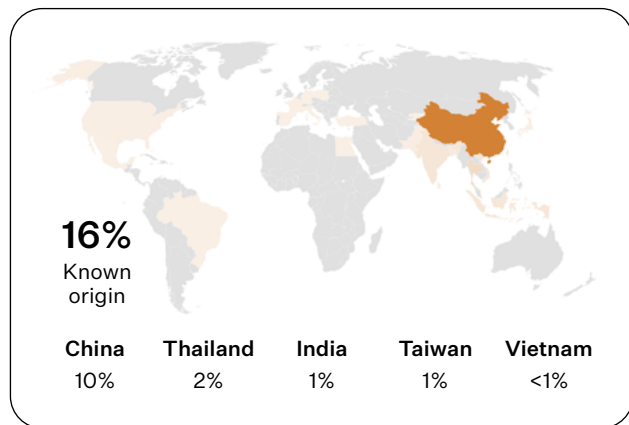
Trend (MT)



Polyester



Traceability

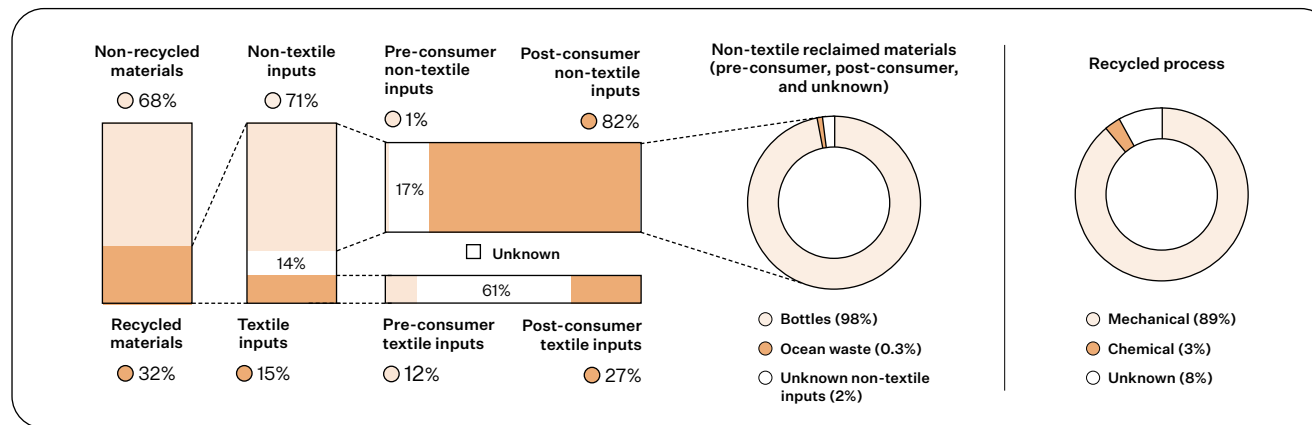


Traceability remains slightly more difficult for synthetic fibers than natural fibers.

Traceability within supply chains is essential to properly manage the various environmental, socioeconomic and political risks that come with materials sourcing. It all starts with the country of origin where the raw materials are grown, cultivated or produced.

The data reveals that 16% of polyester uptake can be traced back to its country of origin. China remains at the top of the list, followed far behind by Thailand, Taiwan, India and Vietnam.

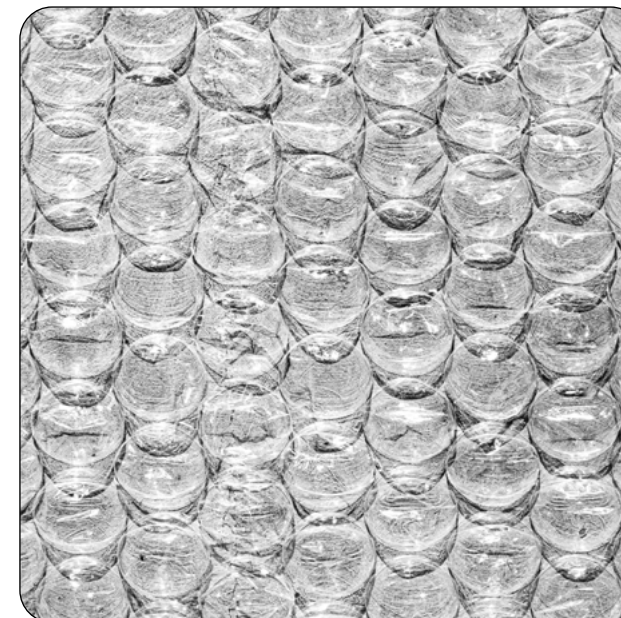
Recycled polyester portfolio



Recycled polyester is primarily derived from plastic bottles.

The data indicates that recycled polyester accounts for 32% of respondents' total polyester volumes. Most of this recycled polyester is sourced from post-consumer non-textile inputs (82%) – mainly plastic bottles. The most common recycling process used is mechanical.

While recycled polyester most commonly comes from post-consumer plastic bottles today, Textile Exchange does not want to incentivize their production. Companies should instead invest in circular solutions such as textile-to-textile recycling by partnering with recyclers and other links in the supply chain.



Polyamide



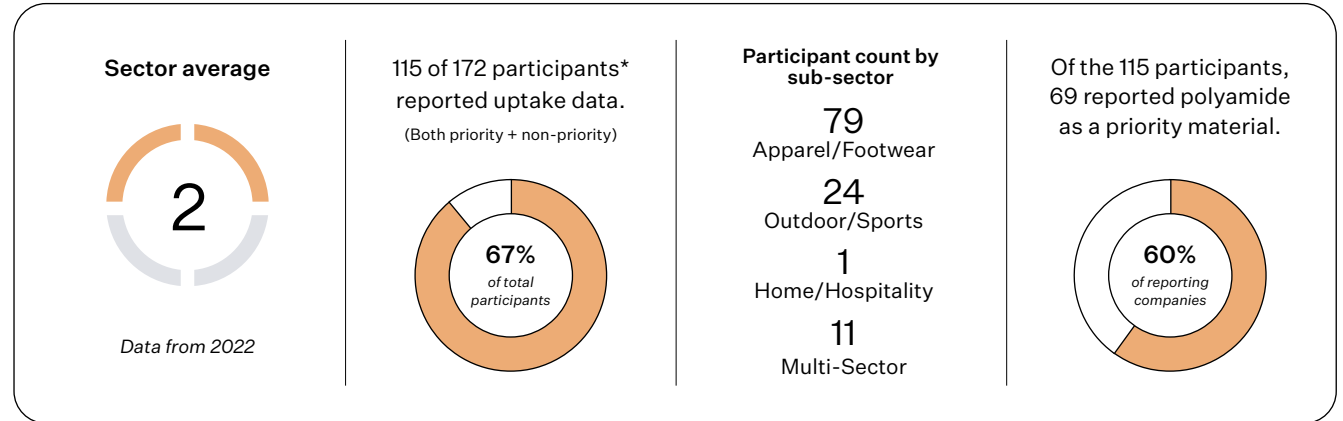
Polyamide uptake data was reported by 115 out of 172 participants, with polyamide volumes accounting for 3% of overall material uptake.

Of the participants that reported on polyamide, 69 companies (60%) identified it as a priority raw material. Based on the 2022 data, polyamide sits within the Level 2 (Establishing) band.

Conventional polyamide still constitutes the predominant share, representing 85% of the total portfolio, with the remaining 15% being recycled.

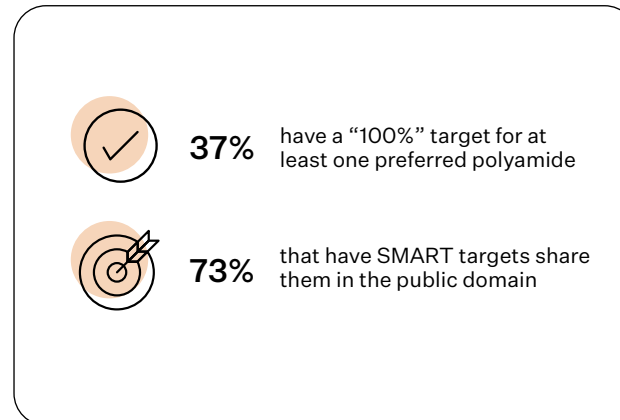
37% of the participants have set a SMART target for achieving “100% more sustainable polyamide,” indicating that polyamide is not yet among the highest priority raw materials.

Participant profile

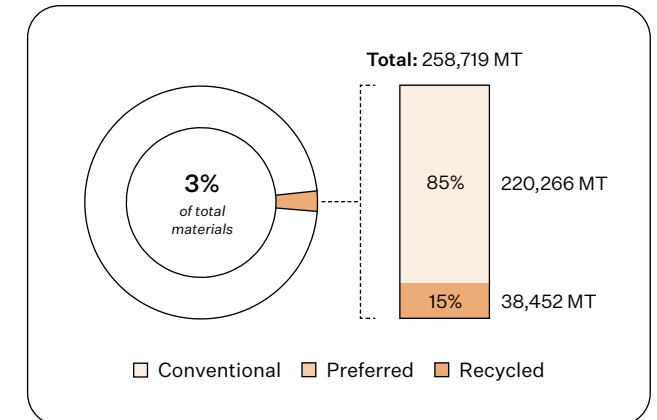


*10 participants reported they use polyester but did not provide uptake volumes.

Uptake targets



Polyamide overview



Polyamide

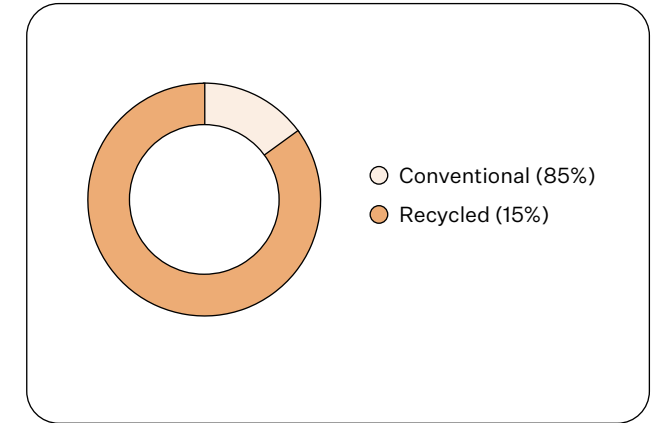


Note: This data is not indicative of clear trends due to the change in participants and Textile Exchange's updated taxonomy.

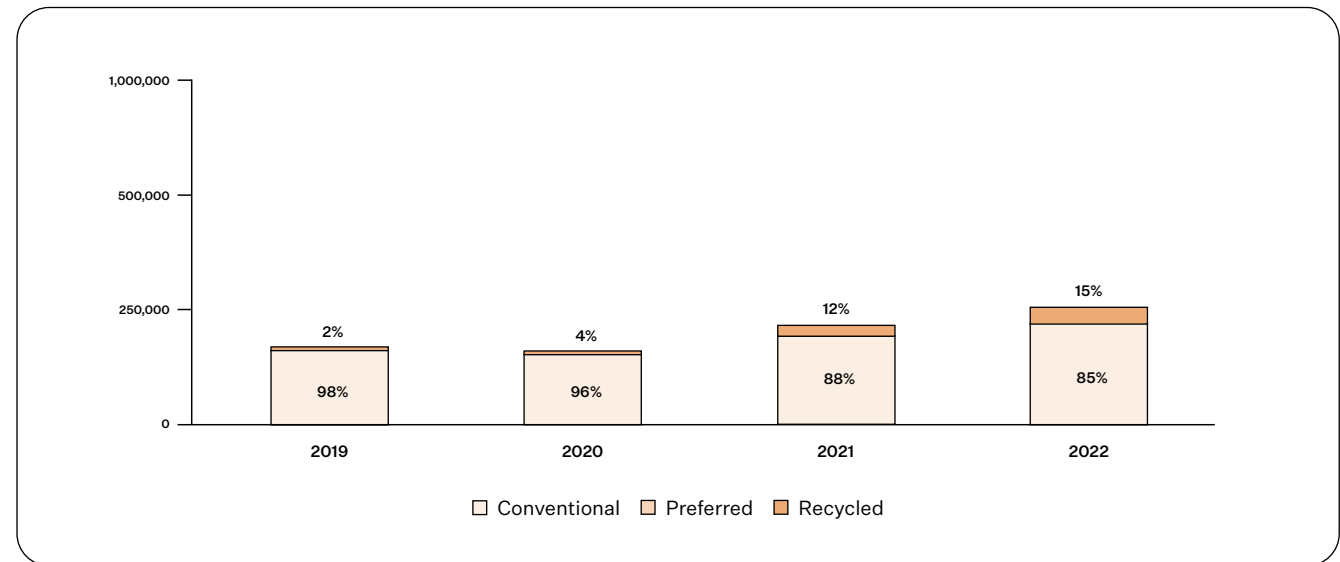
Polyamide portfolio

Overall, the data shows that the proportion of recycled volumes is lower for polyamide (15%) than polyester (32%), but it is increasing over the years. Conventional polyamide volumes are high (220,266 MT), indicating that companies are still strongly dependent on virgin fossil-based feedstocks.

Portfolio



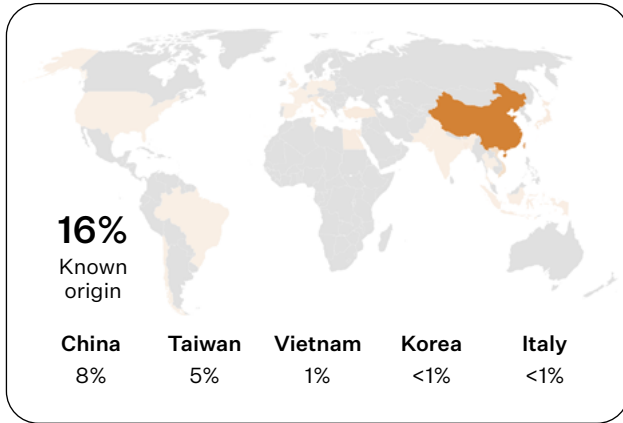
Trend (MT)



Polyamide



Traceability

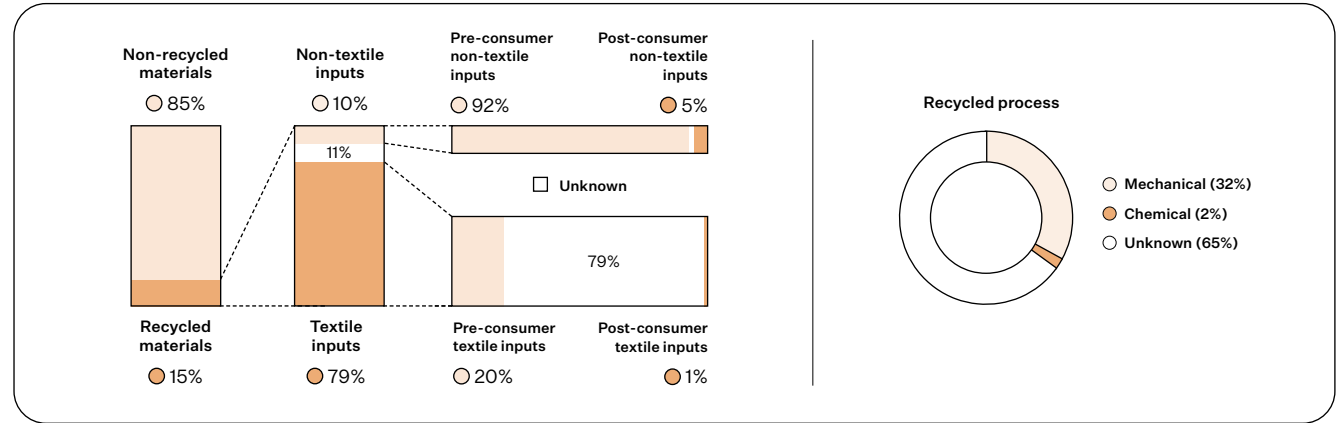


Achieving traceability for synthetic fibers like polyamide is difficult.

Traceability within supply chains is essential to properly managing the environmental, socioeconomic, and political risks that come with materials sourcing. It all starts with the country of origin where the raw materials are grown, cultivated or produced.

The data reveals that only 16% of polyamide uptakes can be traced back to the country of origin. China tops the list followed by Taiwan, Vietnam, Korea (South), and Italy.

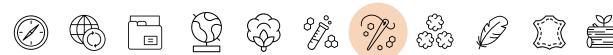
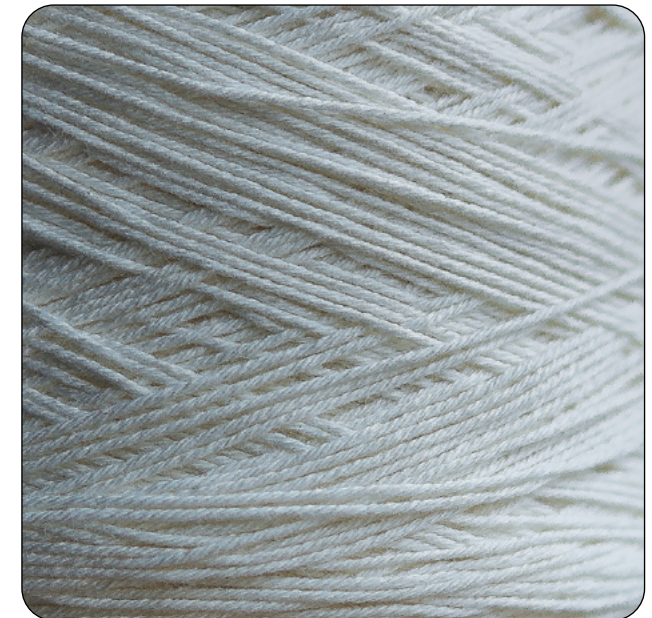
Recycled polyamide portfolio



Recycled polyamide is moving forward.

Recycled polyamide is usually made from pre-consumer fabric waste, though it may also come from post-consumer materials like industrial fishing nets.

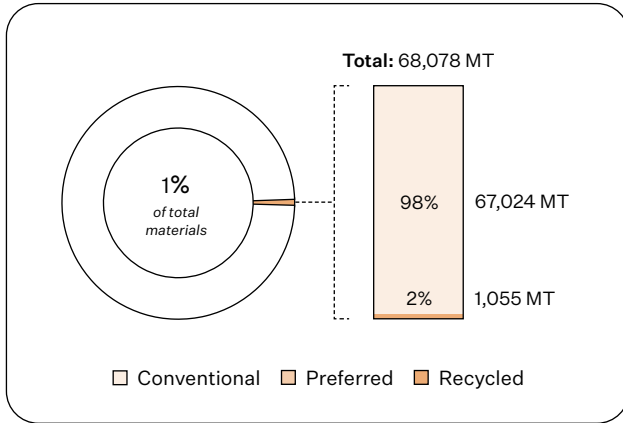
Data indicates that most respondents still use a relatively small proportion of recycled polyamide (15%). The most used recycling process is mechanical, but most respondents do not have this information to hand.



Other synthetic raw materials



Acrylic

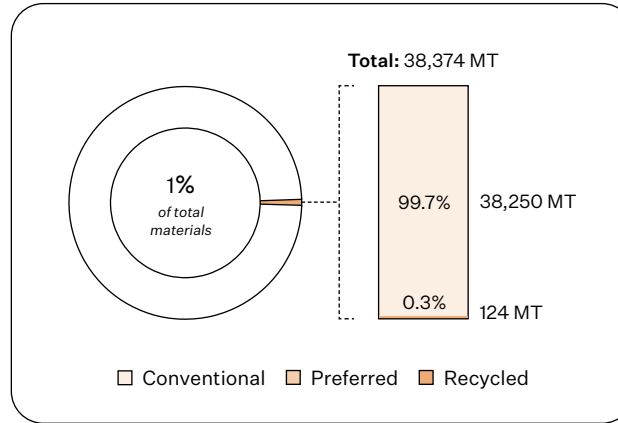


Data on acrylic use was reported by 54 out of 172 respondents, with volumes accounting for 1% of overall material uptake.

Of the respondents that reported on acrylic, 11 (20%), identified it as a priority raw material. Based on the 2022 data, acrylic sits within the Level 1 (Developing) band.

Conventional acrylic accounts for 98% of the total portfolio, with the remaining 2% being recycled.

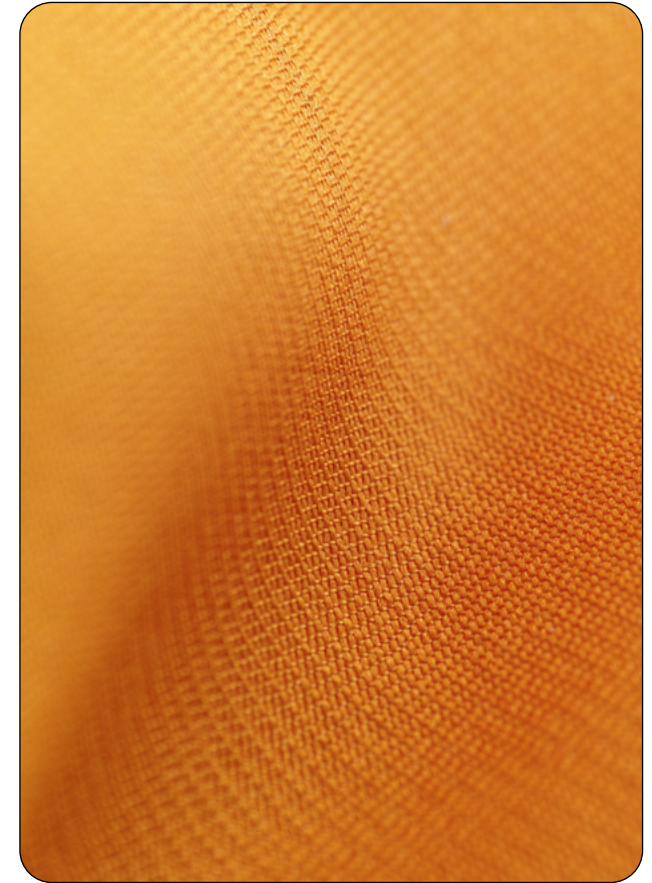
Elastane



Data on elastane use was reported by 90 out of 172 respondents, with volumes accounting for 1% of overall material uptake.

Of the respondents that reported on elastane, 19 (21%) identified it as a priority raw material. Based on the 2022 data, elastane sits within the Level 1 (Developing) band.

Conventional elastane accounts for 99.7% of reported uptakes, indicating that companies are not yet focusing on this raw material as part of the transition towards preferred fibers.



In 2022, acrylic and elastane collectively accounted for 2% of the raw materials reported on by participants. Although their volumes are significantly lower compared to polyester and polyamide, we have provided a brief overview of these two raw materials since they are part of the core raw materials of the benchmark and some of the most used by the industry.

Animal Fibers and Materials

Wool



Sheep wool is the most common animal fiber used in the fashion, textile, and apparel industry. Animal welfare and environmental impacts are at the center of its associated risks.

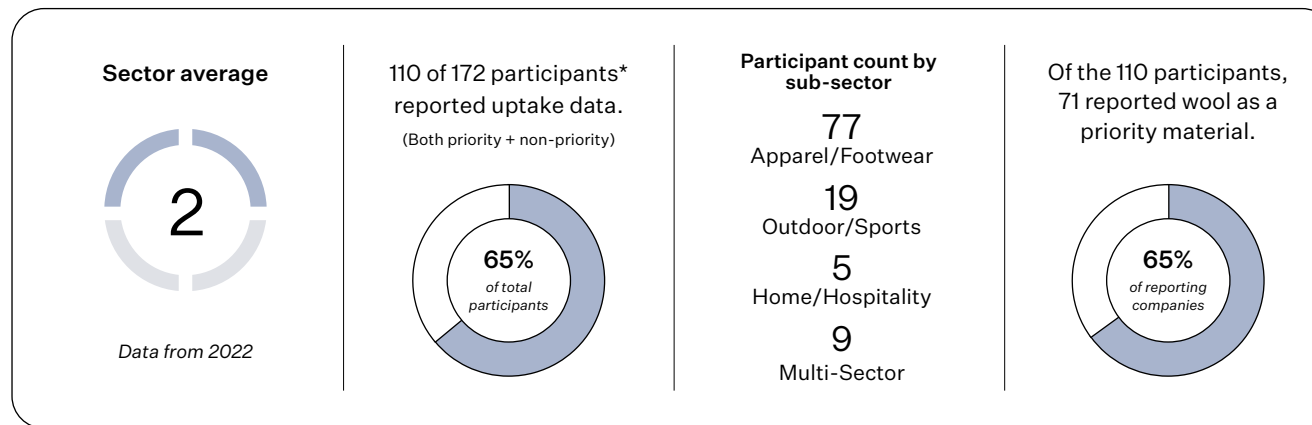
Wool uptake data was reported by 71 out of 172 participants, with volumes accounting for less than 1% of overall material uptake.

Of the participants that reported on wool, 71 (65%) identified it as a priority raw material. Based on the data, wool sits within a Level 2 (Establishing) band.

Conventional wool dominates over half (63%) of the total portfolio, with the remaining 26% being preferred wool and 11% recycled.

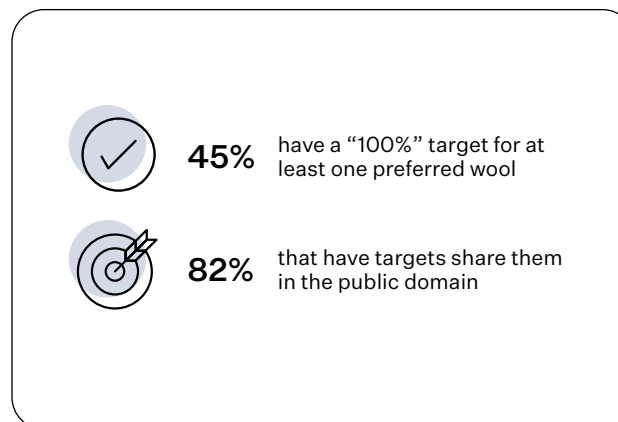
Less than half of participants have set a SMART goal for “100% more sustainable wool,” but of those set, most have been made public.

Participant profile

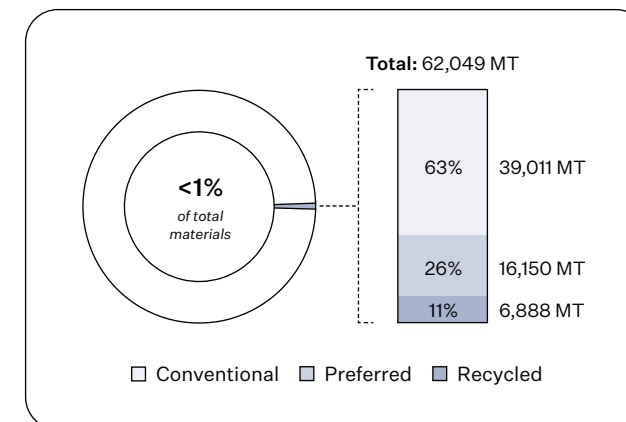


* 11 participants reported they use wool but did not provide uptake volumes.

Uptake targets



Wool overview



Wool



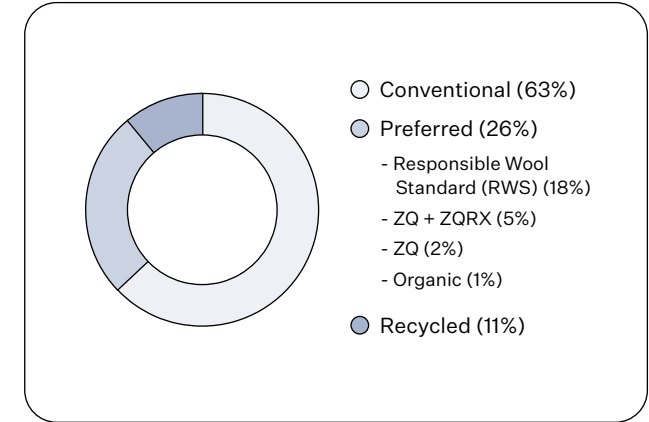
Note: This data is not indicative of clear trends due to the change in participants and Textile Exchange's updated taxonomy.

Wool portfolio

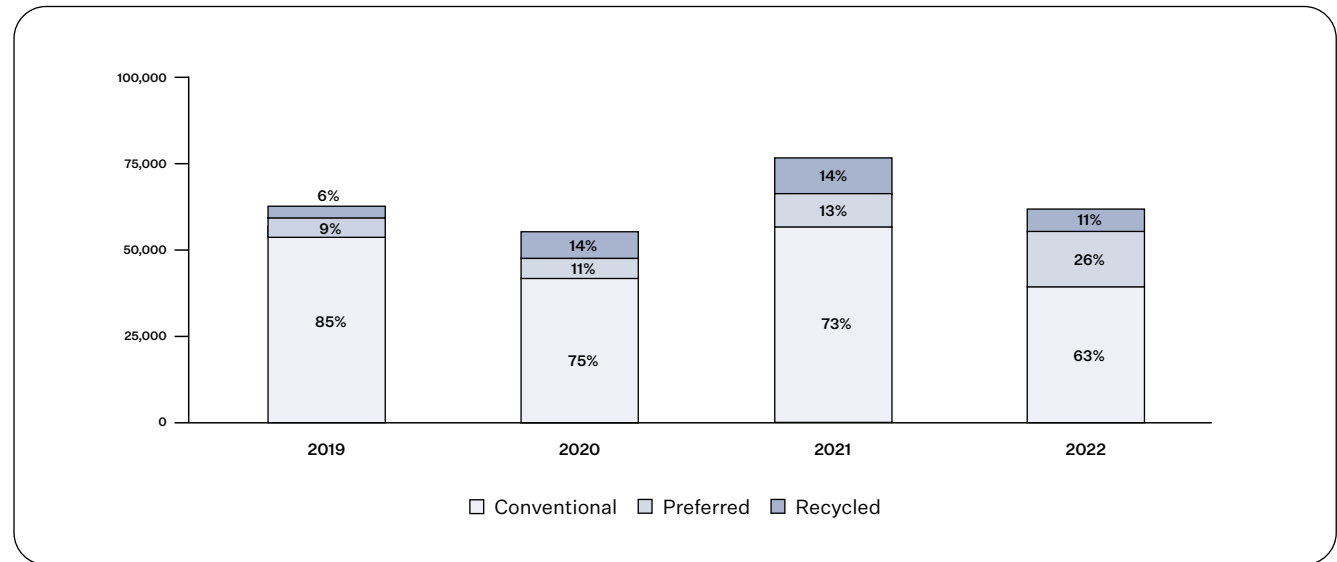
Overall, the data shows an increase in the use of preferred wool, with Responsible Wool Standard (RWS) leading the charge. However, conventional wool still makes up over half of the total wool portfolio.

Recycled wool uptake remains low, and there is no clear evidence of progress in this area.

Portfolio

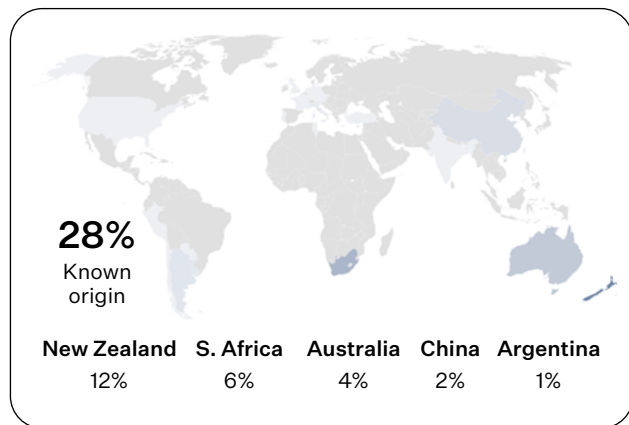


Trend (MT)





Traceability

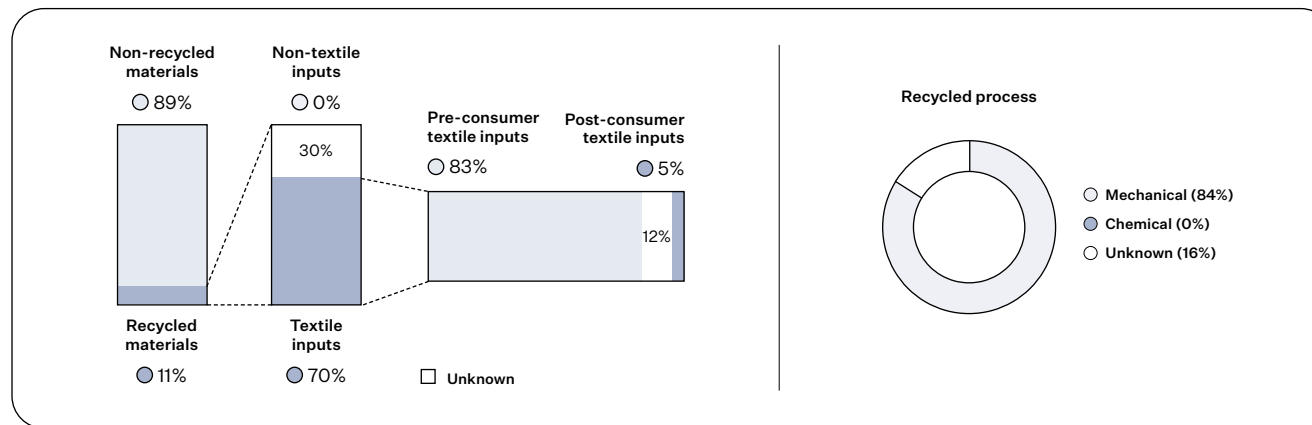


Wool has slightly greater traceability than other raw materials but work still needs to be done.

Traceability within supply chains is essential for companies to properly the environmental, socioeconomic and political risks that come with materials sourcing. It all starts with the country of origin where the raw materials are grown, cultivated, or produced.

The data reveals that only 28% of wool used can be traced back to its country of origin. Almost half of this traceable wool comes from New Zealand, followed by South Africa, Australia, China and Argentina.

Recycled wool portfolio



Recycled wool uptake remains limited.

There are various forms of wool recycling, including mechanical closed-loop systems, open-loop systems, and re-engineering.

Choosing durable, easily recyclable wool can help reduce the amount of textile waste sent to landfill. However, the percentage of recycled wool is still low, making up just 11% of respondents' total wool portfolio, with the majority coming from pre-consumer waste. Mechanical is the most used recycling process for wool.



Down



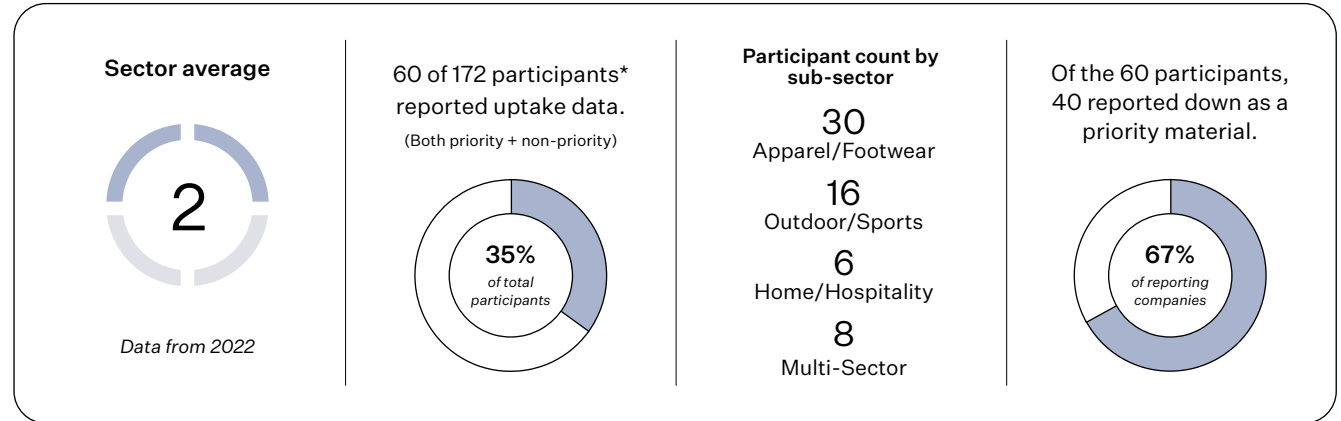
Down uptake data was reported by 60 companies out of 172, with volumes accounting for less than 1% of overall material uptake.

Of the participants that reported on down, 40 (67%) identified it as a priority raw material. Based on the data, down sits within the Level 2 (Establishing) band.

Conventional down makes up just over half (58%) of the total portfolio, with the remaining 39% being preferred and a small amount (3%) recycled.

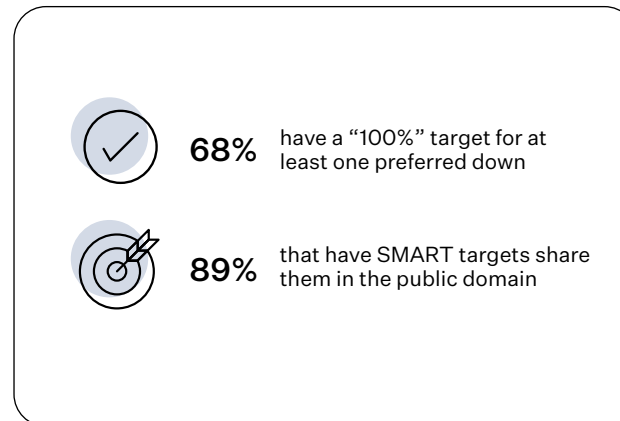
Over half of the participants have set SMART targets for “100% more sustainable down,” most of which are public.

Participant profile

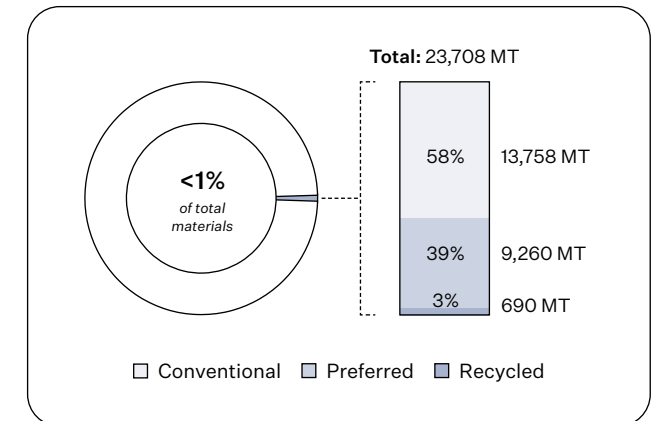


*9 participants reported they use down but did not provide uptake volumes.

Targets



Down portfolio



Down

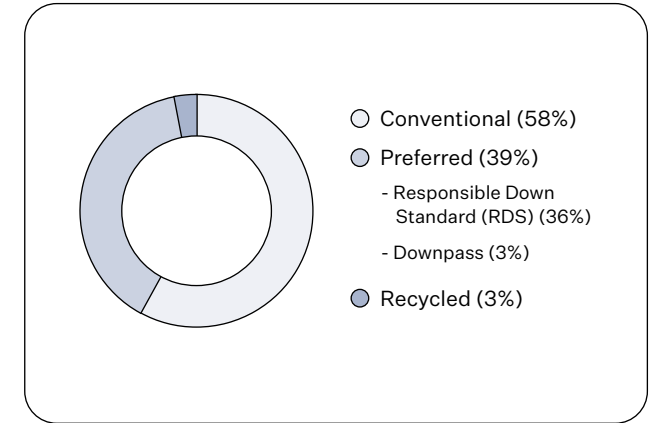


Note: This data is not indicative of clear trends due to the change in participants and Textile Exchange's updated taxonomy.

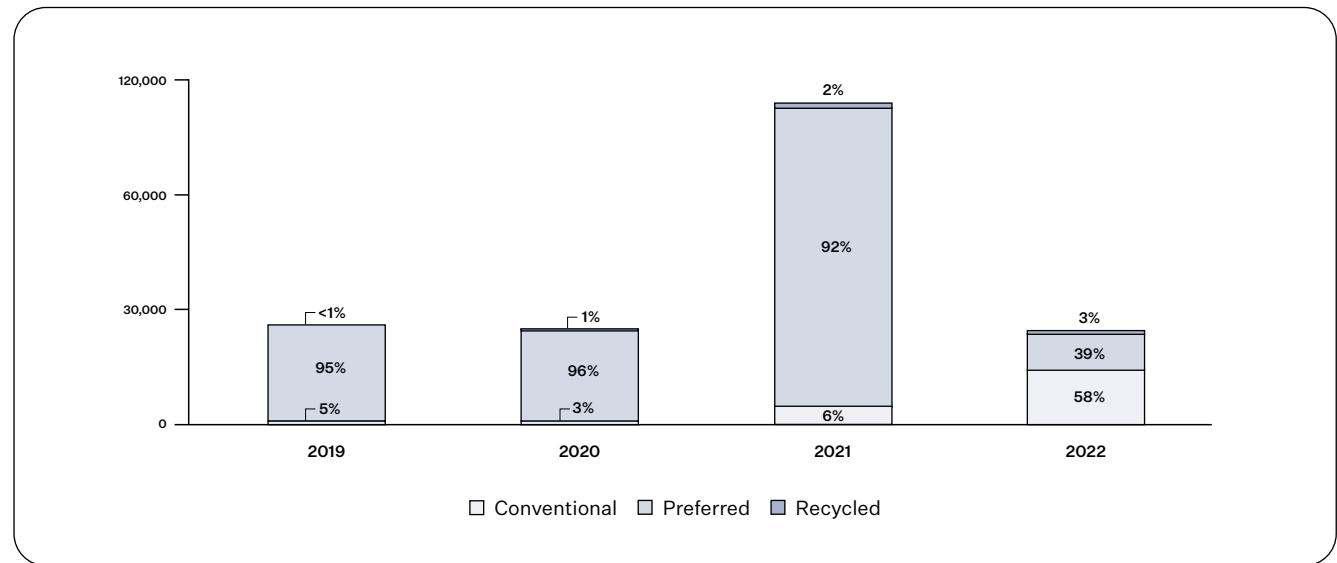
Down portfolio

Overall, the data shows an even split between conventional down (58%) and preferred or recycled down. Among the preferred programs used by participants, Responsible Down Standard (RDS) is the most prevalent, while recycled down accounts for a small percentage.

Portfolio

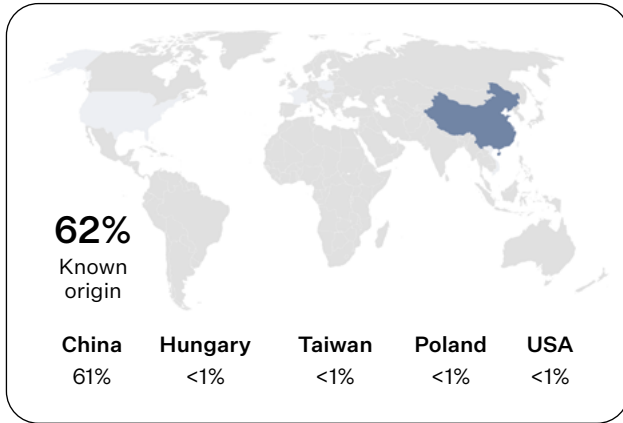


Trend (MT)





Traceability

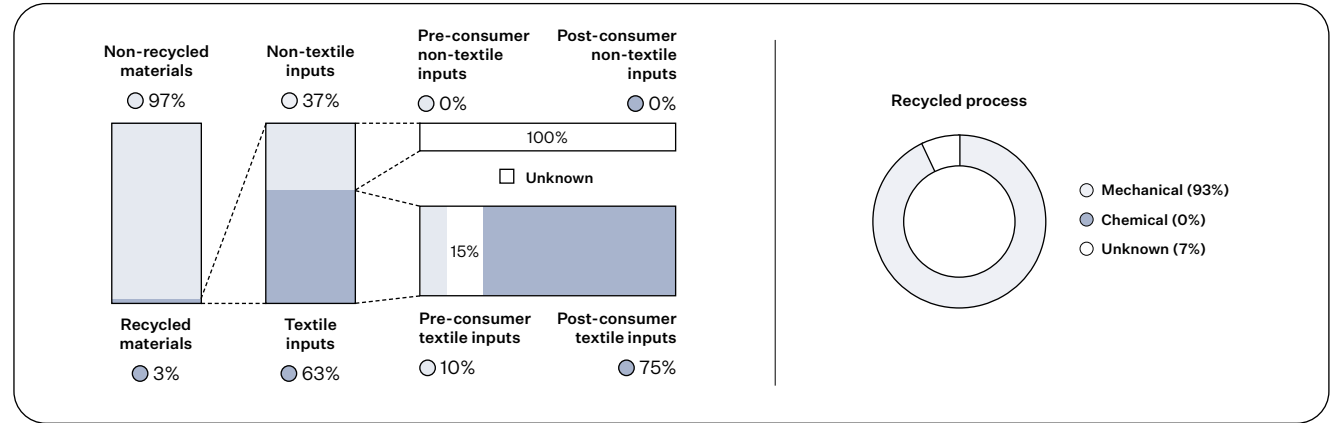


Down is the raw material with the greatest traceability among those reported.

Traceability within supply chains is essential for companies to properly manage the environmental, socioeconomic and political risks that come with materials sourcing. It all starts with the country of origin where the raw materials are grown, cultivated or produced.

The data reveals that 62% of down used can be traced back to its country of origin. China remains at the top of the list, with Hungary, Taiwan, Poland and the United States far behind.

Recycled down portfolio



Recycled down is still very limited.

Typically, old down ends up in landfills. Companies can develop a system to close the loop and reuse this down.

Data indicates that most respondents still use a very limited amount of recycled down, at just 3% of all down used. Most it comes from post-consumer materials, although it should be noted that many respondents did not share this data.

The most common method of obtaining recycled down is mechanical processing.



Leather



Leather uptake data was reported by 75 out of 172 participants, with volumes accounting for 7% of overall material uptake.

Of the participants that reported on leather, 50 (67%) identified it as a priority raw material. Based on the data, leather sits within a Level 1 (Developing) band.

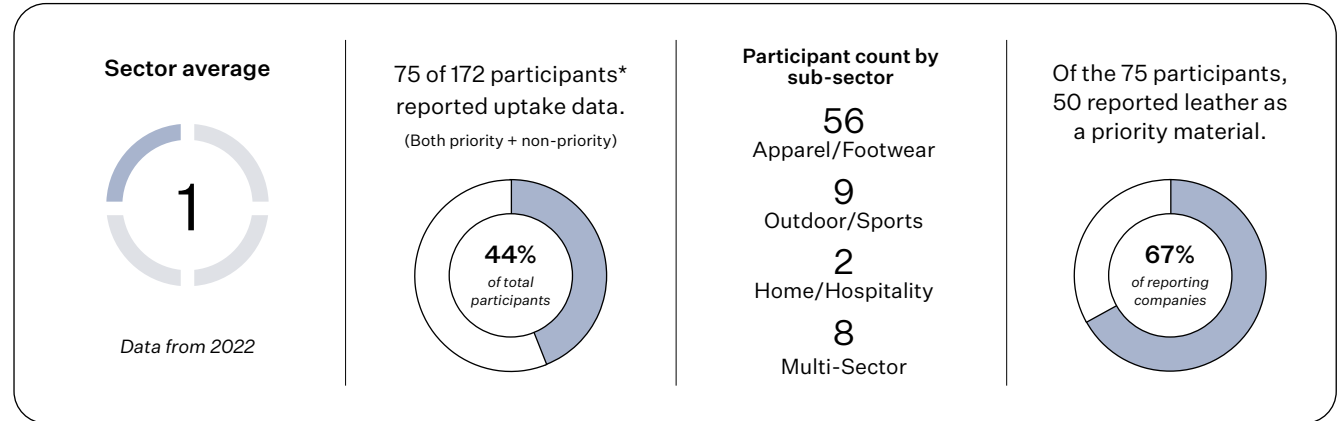
Conventional leather dominates participants' total leather portfolio, with preferred leather accounting for just 3%. This is in part because programs for certifying leather at the production level are practically non-existent. The most popular processing-level preferred program among participants is [the Leather Working Group \(LWG\)](#).

Less than half of participants have set a target for "100% more sustainable leather," although a considerable number of those that have done so have made their targets public.

[The Deforestation-Free Call to Action for Leather](#) asks brands to commit to sourcing their bovine leather from deforestation/conversion-free supply chains by 2030 or earlier.

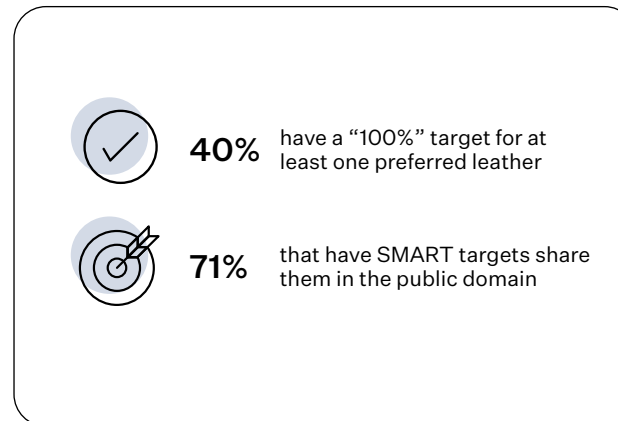
Co-led by Textile Exchange, the Leather Working Group and WWF, it sets meaningful expectations for brands and develops tools and guidance to support them on this journey.

Participant profile

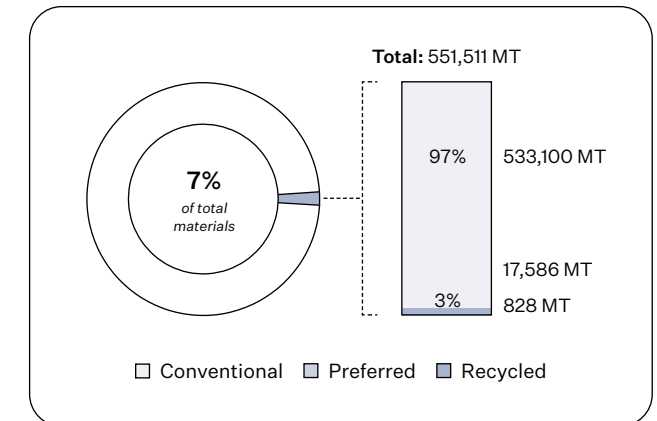


*10 participants reported they use leather but did not provide uptake volumes.

Targets



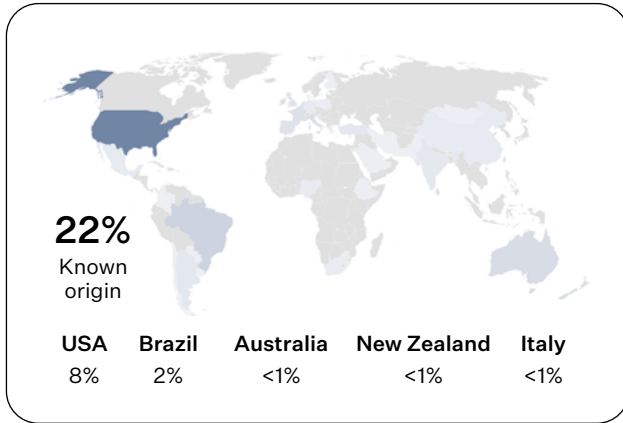
Leather overview



Leather



Traceability

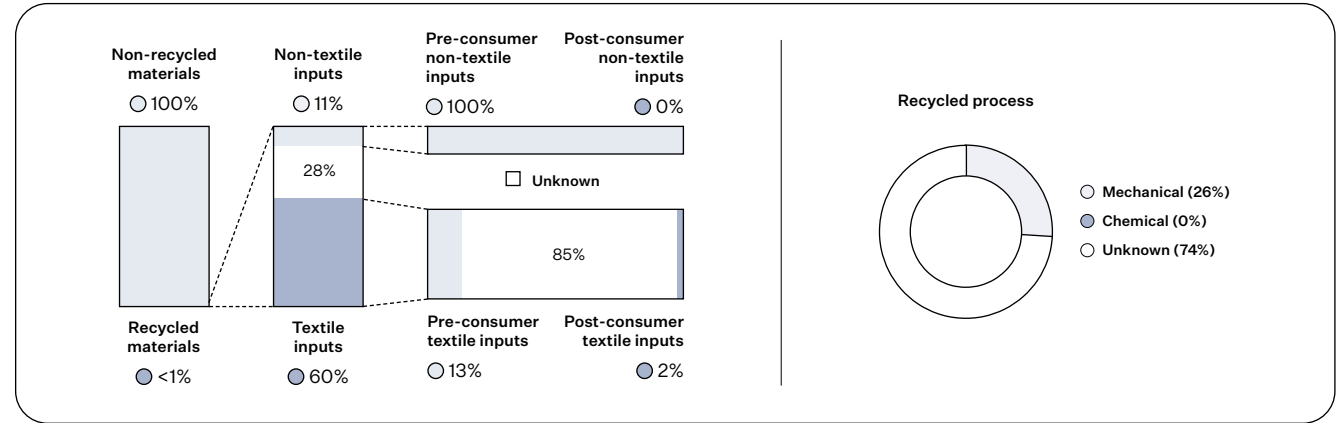


The is a desperate need for traceability in the leather industry.

Traceability within supply chains is essential for companies to properly manage the environmental, socioeconomic, and political risks that come with raw materials sourcing. It all starts with the country of origin where the raw materials are grown, cultivated or produced.

The data reveals that only 22% of leather used can be traced back to its country of origin. United States is top, followed by Brazil, Australia, New Zealand and Italy.

Recycled leather portfolio



Recycled leather is almost non-existent.

Recycled leather –leather that is cut after use and then reused – and bonded recycled leather fibers play a role in preventing waste. Bonded recycled leather fibers are primarily made from pre-consumer manufacturing waste and consist of recycled leather fibers and binders, or recycled leather fibers bonded to the surface of a synthetic material.

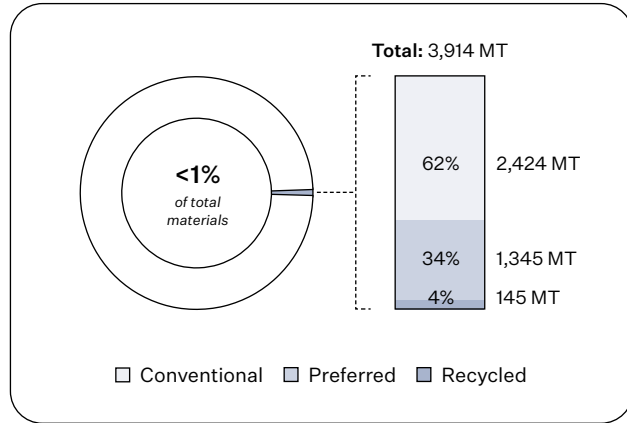
Respondents indicate that only a very small amount of recycled leather is used, making up less than 1% of total leather volumes, and that most of it comes from pre-consumer leather. The mechanical process is the most used, although it should be noted that many respondents did not share this data.



Other animal raw materials



Cashmere

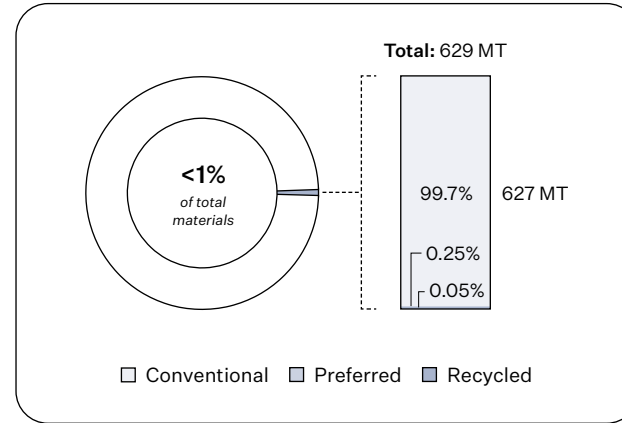


53 out of 172 respondents reported on their use of cashmere, with volumes accounting for less than 1% of overall material uptake.

Of the respondents that reported on cashmere, 22 (42%) identified it as a priority raw material. Based on the 2022 data, cashmere sits within the Level 2 (Establishing) band.

Conventional cashmere makes up the majority (62%) of the total portfolio, followed by more sustainable cashmere under the Good Cashmere Standard (18%) and the Sustainable Fiber Alliance Cashmere Standard (16%). Recycled cashmere accounts for 4%.

Alpaca

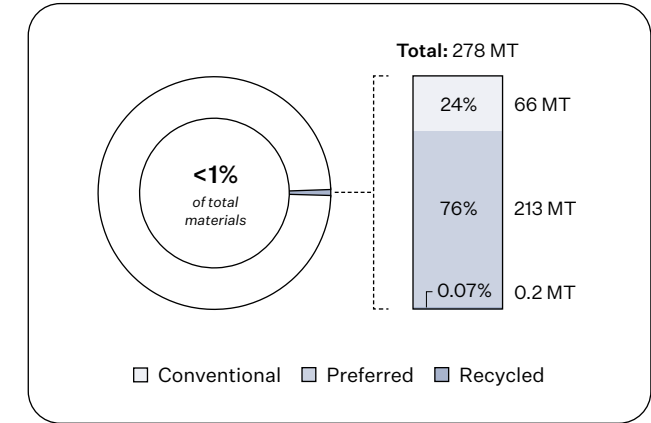


38 out of 172 respondents reported on their use of alpaca, with volumes accounting for less than 1% of overall material uptake.

Of the respondents that reported on alpaca, 7 (18%) identified it as a priority raw material. Based on the 2022 data, alpaca sits within the Level 1 (Developing) band.

Conventional alpaca accounts for 99.7% of the reported uptake, indicating that companies are not yet focusing on alpaca as part of their raw materials sustainability strategy.

Mohair



15 out of 172 respondents reported on their use of mohair, with volumes accounting for less than 1% of overall material uptake.

Of the respondents that reported on mohair, 7 (47%) identified it as a priority raw material. Based on the 2022 data, mohair sits within the Level 2 (Establishing) band.

76% of reported mohair uptake is certified under the Responsible Mohair Standard (RMS), with the remaining 24% being conventional mohair and <1% recycled mohair.

In 2022, alpaca, cashmere and mohair collectively accounted for less than 1% of the total raw materials uptake reported by participants. Although their volumes are significantly lower compared to wool, leather and down, we have provided a brief overview of each of them since they are still important for the industry.

Manmade Cellulosic Fibers

Manmade cellulosic fibers



Manmade cellulosic fibers (MMCFs) are regenerated fibers usually made from the dissolved wood pulp or “cellulose” of trees. Switching to preferred versions means pushing forward with deforestation-free solutions and those that preserve high conservation value forests.

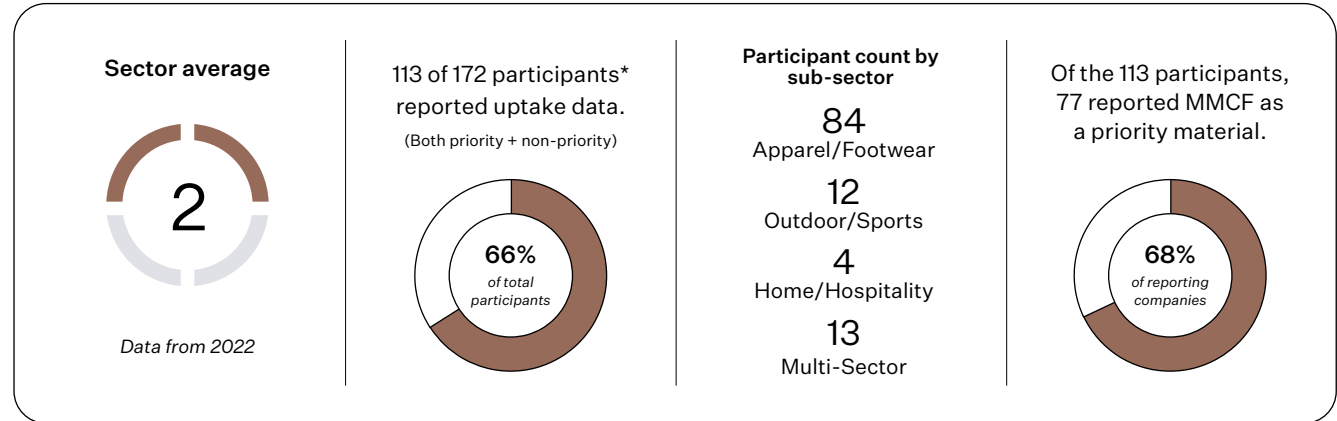
MMCF uptake data was reported by 113 out of 172 participants, with volumes accounting for 5% of overall material uptake.

Of the participants that reported on MMCFs, 77 (68%) identified it as a priority material category. Based on the data, MMCFs sit within the Level 2 (Establishing) band.

Conventional MMCFs dominate over half of the total portfolio, with the remaining 31% being preferred and a small amount (1%) recycled.

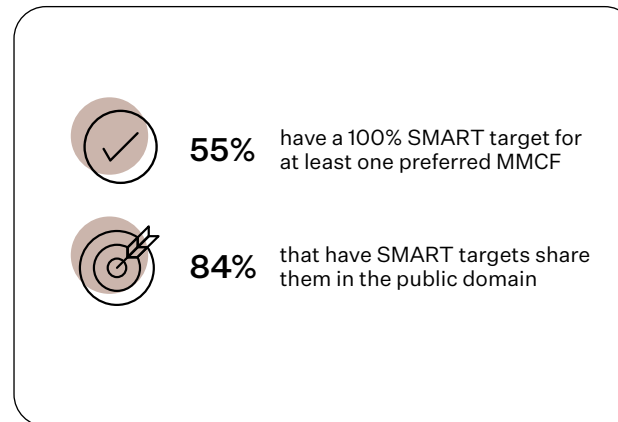
Just over half of participants have set targets for “100% more sustainable MMCFs,” most of which are public.

Participant profile

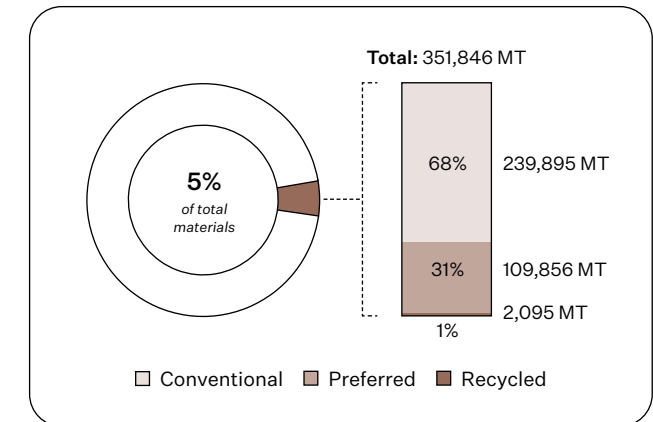


*9 participants reported they use MMCF but did not provide uptake volumes.

Targets



MMCF overview



Manmade cellulosic fibers



MMCF portfolio

Overall, the data shows a high proportion of conventional MMCF fibers, with some evidence of participants making progress in substituting them for recycled options. The use of preferred fibers remains otherwise stable.

MMCFs by material type:

Viscose

Conventional dominates the total portfolio (73%), with the remaining 27% being preferred and 0.2% recycled.

Lyocell

Preferred dominates the total portfolio (70%), with the remaining 30% being conventional and 0.2% recycled.

Modal

Conventional represents 76% of the portfolio, with the remaining proportion being preferred.

Cupro

Cupro is fully recycled as it is a “regenerated cellulose” fiber made from cotton waste.

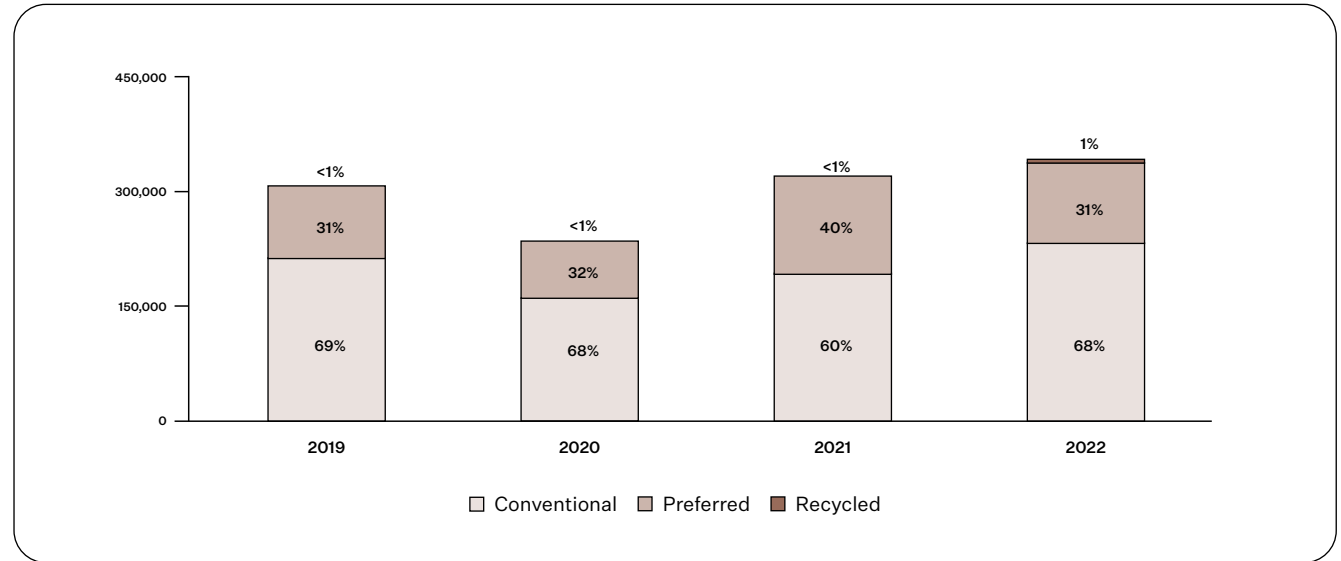
Acetate

Conventional dominates the total portfolio, with the remaining 25% being preferred and 1% recycled.

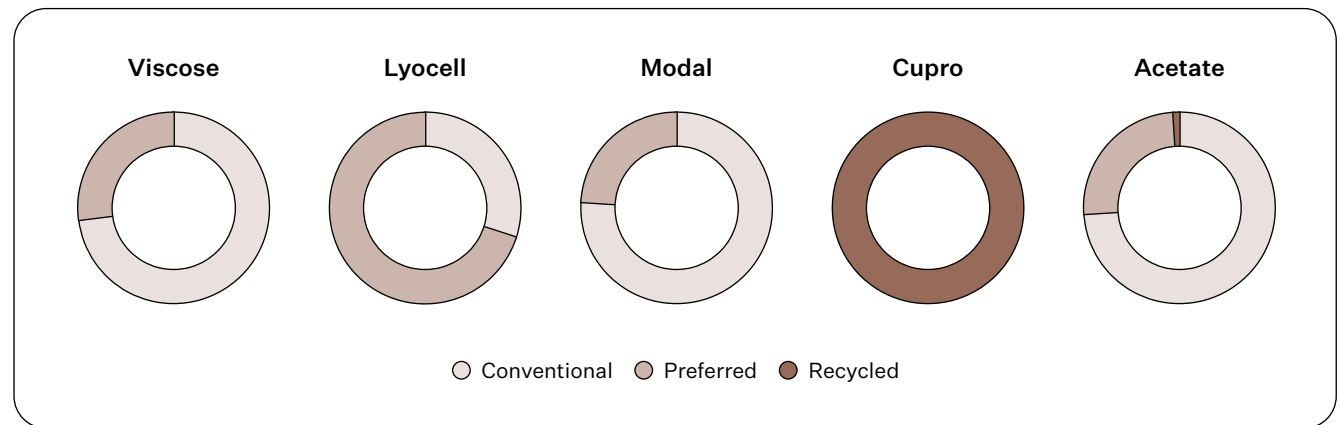
All preferred programs refer to PEFC + FSC.

Note: This data is not indicative of clear trends due to the change in participants and Textile Exchange’s updated taxonomy.

Trend (MT)



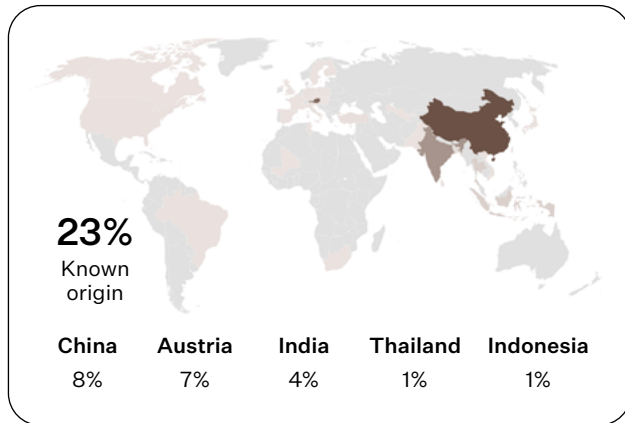
Portfolio



Manmade cellulosic fibers



Traceability

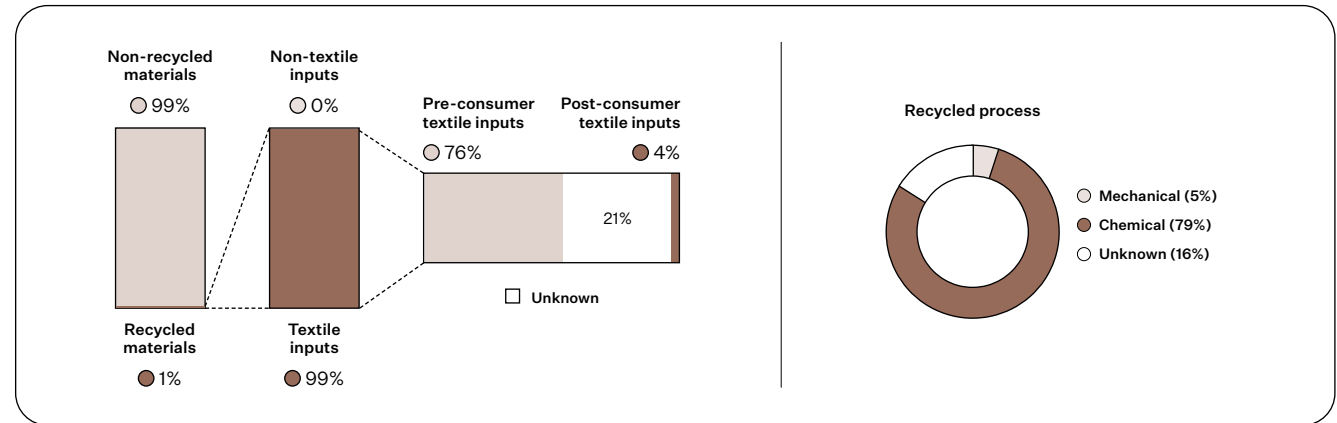


Traceability is also a challenge for MMCFs.

Traceability within supply chains is for companies to properly manage the environmental, socioeconomic and political risks that come with raw materials sourcing. It all starts with the country of origin where the raw materials are grown, cultivated or produced.

The data shows that 23% of MMCFs used can be traced to their country of origin. China is in the lead, followed by Austria, India, Thailand, and Indonesia.

Recycled MMCF portfolio



Recycled MMCFs are in the early stages.

Recycled MMCFs are very limited, making up only 1% of the total portfolio, with most coming from pre-consumer waste. Chemical processes are most commonly used for recycling.

The latest research says that recycled MMCF production is expected to grow significantly in the coming years thanks to increased investment in research and development.



Other Fibers

Other fibers



The Materials Benchmark survey includes specific sections for 14 of the raw materials most frequently reported on by respondents. However, there are many more fibers and raw materials available.

50 participants reported on their use of other fibers and materials, with volumes accounting for 2% of the overall materials uptake.

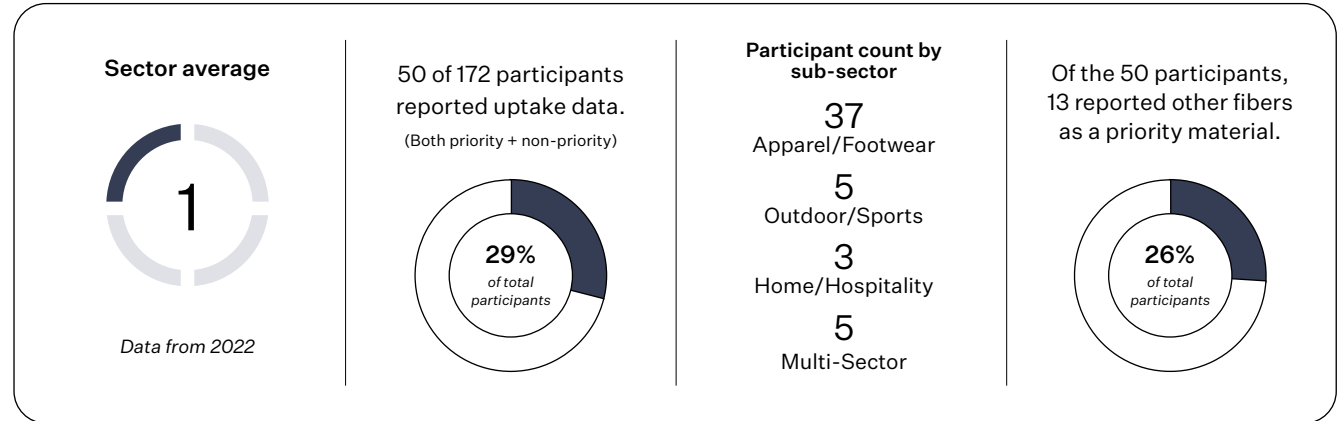
Overall, conventional materials account for 99% of total volumes for “other fibers,” with less than 1% being preferred and recycled.

For plant raw materials, most are still conventional. The raw material most frequently mentioned by the participants is conventional natural rubber, with a share of 83%, followed by conventional jute.

Most animal raw materials are also conventional. Less than 1% are preferred and come from organic silk.

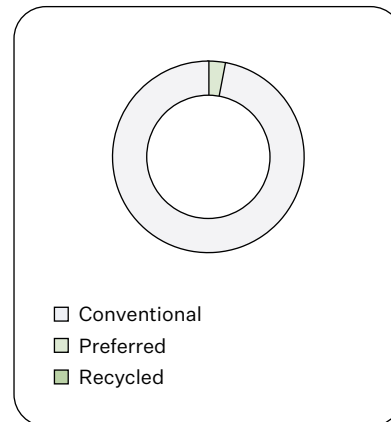
For synthetic raw materials, the vast majority (nearly 100%) remain conventional. Only a very small amount is recycled.

Participant profile

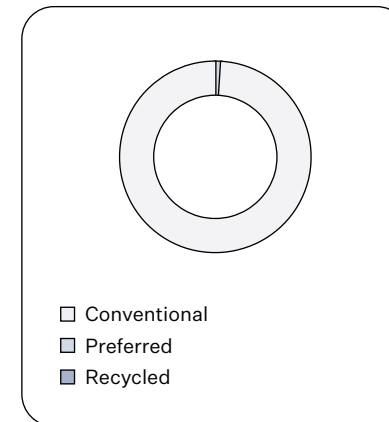


* 7 participants reported they use other fibers but did not provide uptake volumes.

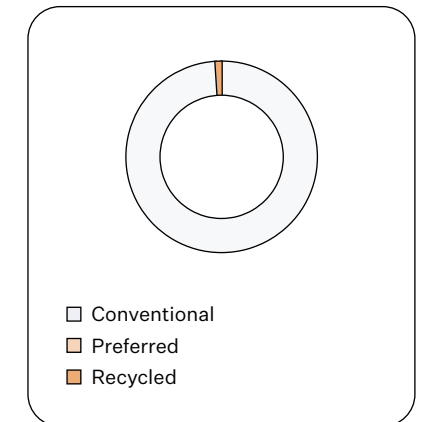
Plant fiber portfolio



Animal fiber portfolio



Synthetic fiber portfolio



Fundamentals

2023 updates

Updated performance bandings

We updated our [scoring methodology in 2023](#), working with internal teams and key stakeholders. The scoring methodology was last updated in 2019, and alongside changes to the framework, it was a good time to revisit and revamp the scoring to ensure it was fully aligned with Textile Exchange’s Climate+ goals. Some of the key changes for this year are the removal of “absolute” uptake volumes, the alignment with Climate+ goals, the alignment with the scoring used in the Preferred Fiber and Materials Matrix, and the fact that not all questions are scored.

New Materials Benchmark framework

We enhanced collaboration and alignment with organizations such as the [Sustainable Apparel Coalition](#) and [Ellen MacArthur Foundation](#), as well as climate and nature experts. We streamlined Section I: Business Integration and Circular Economy; remodeled Section II: Materials Portfolio, and updated Section III, which now focuses on climate and nature impact areas.

Enhanced partnerships and alignment

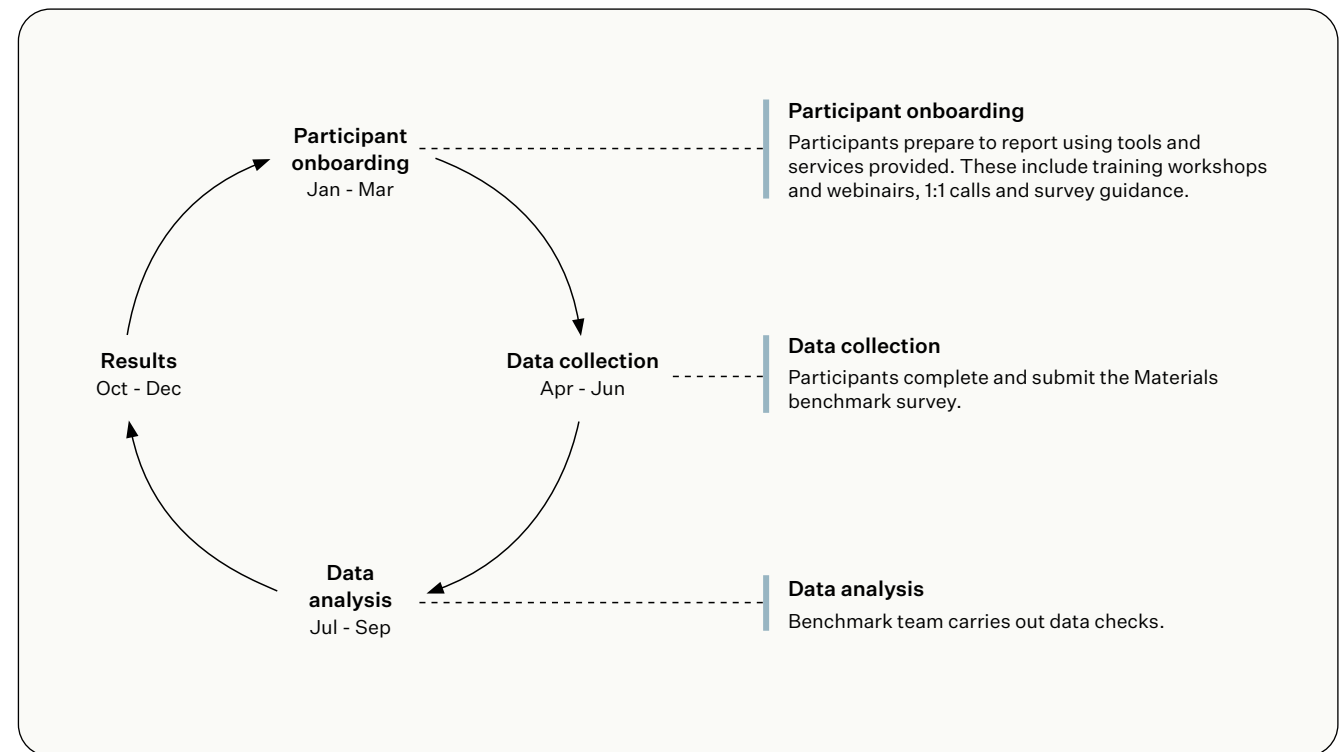
We have been fortunate to continue to work with Ellen MacArthur Foundation on our circular economy module, and they have been a key adviser to ensure these questions were updated. Another key partnership was with the Sustainable Apparel Coalition (SAC). We first started to work on alignment with the SAC last year. The timing of this alignment with the Higg Brand & Retail Module (BRM) 2023 made sense as the questions for both were being revised.

Suppliers and manufacturer’s survey

For the first time, the Suppliers and Manufacturers Materials Benchmark survey has been moved out of the pilot phase, following supplier consultation with participants and other partners. We adjusted the questions to ensure that they were all relevant to this cohort. The scoring methodology is the same as for brands.

Updated reporting cycle

Finally, we have made a change to the reporting cycle to provide results to participants in the same year as the survey’s completion.



Get involved

Next steps

- [Take part in the Materials Benchmark](#)
- [Sign up](#) to the Sustainable Cotton Challenge
- [Sign up](#) to the 2025 Recycled Polyester Challenge
- [Sign up](#) to the Deforestation-Free Call to Action for Leather

Benchmark results & Hub community

The Materials Benchmark community continues to grow. We know that participants value not only the results provided, but also the peer-to-peer learning, knowledge-sharing, collaboration and support. That is why we have our Hub Community.

[Join the Community on the Hub](#)

Confidential Scorecard



Assess your progress towards preferred.

Material Change Index (MCI)



Discover the “race to the top.”

Climate+ Dashboard



Gain insights into the textile industry’s impacts

Challenges Dashboard



Uncover the Materials Challenges signatory’s progress.