Preferred Fiber and Materials Matrix

Methodology

Textile Exchange

Version 3.0

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Acknowledgements

With special thanks to Gap Inc.

The Preferred Fiber Toolkit by Textile Exchange builds upon the work of Gap Inc. to help inform its designers and product teams of the implications of each fiber and material choice they make. While we were involved in the early phases of Gap Inc.'s work, we are grateful to have been given the responsibility of evolving the tool further, from 2020. We will continue to improve upon the foundational work of Gap Inc. to create a tool that combines quantitative and qualitative data from materials into a decision-making tool for the industry. This tool will drive the work of Textile Exchange towards meeting its Climate+ goals. We would like to thank Gap Inc. for providing the foundation of this tool to drive a deeper understanding of preferred fibers and materials.

In addition, Textile Exchange would like to thank Zalando for their generous contribution to the PFMM in 2021.

In terms of further methodological developments, we would like to thank those that generously offered their time in providing feedback and contributing to the development of the environmental criteria. For the development of the human rights criteria, we would like to thank the team at Ergon and all those that responded to our public consultation on the criteria in March 2023. For development of the initiative integrity criteria, we would like to thank the team at New Foresight and the external stakeholders that were interviewed to inform the methodology. For details on those that were involved in the stakeholder engagement process, see the Annex.

Contents

Glossary

Term	Description
Canopy's Hot Button Report	The report is a fiber sourcing analysis tool for the fashion sector that focuses on forests. This includes the CanopyStyle brands, retailers, and designers that are committed to eliminating the use of Ancient and Endangered Forests in viscose and other cellulosic fabrics, and to giving preference to textiles made from innovative fibers.
Certification	The provision by an independent certification body of written assurance (a scope certificate) that the product, service, or system in question meets specific requirements.
Certification Bodies	Third-party conformity assessment body operating certification schemes. A certification body can be non-governmental or governmental (with or without regulatory authority).
Chain of custody	A system to document and verify the path taken by a defined input material through all stages of transfer and production, to the final product. The chain of custody preserves the identity of the input material.
Due diligence	Due diligence is an on-going, proactive and reactive process through which companies can identify and address actual or potential risks in order to prevent or mitigate risks of contributing to adverse impacts associated with their activities or sourcing decisions.
Greenhouse Gas (GHG) emissions	Greenhouse gases (GHGs) are gases in the earth's atmosphere that trap heat. A greenhouse gas absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect. Primary GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Textile Exchange encourages the use of The Greenhouse Gas Protocol (GHGP) - an all-inclusive framework applicable globally for the management of greenhouse gas emissions from all private and public sector organizations. The GHGP provides accounting and reporting standards, guidance, calculation tools, and training for businesses and governments all around the globe. The GHG Protocol classifies a company's GHG emissions into three "scopes:" Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.
Higg Materials Sustainability Index	A tool developed by Cascale to quantitatively measure and score the environmental impacts of commonly used materials.
IFOAM	The core of the IFOAM Organic Guarantee System. It contains all standards officially endorsed as organic by the Organic Movement. Textile Exchange recognizes the IFOAM Family of Standards as farm level inputs to the Organic Content Standard.
LCA+	An approach for impact measurement that goes beyond "carbon tunnel vision" to also account for biodiversity, soil health, water, animal welfare, and livelihoods.
Life Cycle Assessment / Life Cycle Analysis	Life Cycle Assessment, also known as Life Cycle Analysis, (LCA) is a tool for the systematic evaluation of the environmental aspects of a product or service system through all stages of its life cycle. LCA provides an adequate instrument for environmental decision support. The

Term	Description
	International Organization for Standardization (ISO), a world-wide federation of national standards bodies, has standardized this framework within the series ISO 14040 on LCA.
Organic Agriculture	Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.
Organic farm standard	Organic Farm Standards vary from country to country but are mandatory for recognition as organically grown. The complete list of Organic Farm Standards are available in IFOAM Family of Standards. At present the main standards include the EU Organic Regulations in Europe (EU-Reg), USDA National Organic Program (NOP) in United States, and the National Program for Organic Production (NPOP) in India.
Qualitative	Qualitative data is data describing the attributes or properties that an object possesses. The properties are categorized into classes that may be assigned numeric values. However, there is no significance to the data values themselves; they simply represent attributes of the object concerned.
Quantitative	Quantitative data is data expressing a certain quantity, amount or range. Usually, there are measurement units associated with the data, e.g., meters, in the case of the height of a person.
Regenerative production	Regenerative production provides food and materials in ways that support positive outcomes for nature, which include but are not limited to healthy and stable soils, improved local biodiversity, improved air and water quality. In agriculture, regenerative production schools of thought include agroecology, agroforestry, and conservation agriculture.
Restoration	Defined by the Accountability Framework, restoration is the process of assisting the recovery of an ecosystem, and its associated conservation values, that has been degraded, damaged, or destroyed. The term is also used in the context of remediation of human rights harms, for which restoration may come in many forms (e.g., restoration of benefits, employment, or access to lands).
Standard systems	These are the organizations responsible for the activities involved in the implementation of a standard, including standard setting, capacity building, assurance, labelling and monitoring.
Textile Exchange 2030 Climate+ Strategy	Under the Climate+ strategic direction, Textile Exchange will be the driving force for urgent climate action with a goal of 45% reduced CO2 emissions from textile fiber and material production by 2030.
Theory of Change (ToC)	A planning and management tool that defines all building blocks required to bring about a given long-term goal. This set of connected building blocks – interchangeably referred to as outcomes or results is depicted on a map known as a pathway of change/change framework, which is a graphic representation of the change process.
Virgin material	Materials that have not yet been used in the economy. These include both finite materials (e.g. iron ore mined from the ground) and renewable resources (e.g. newly produced cotton).

Introduction

About the tool

The PFMM is an interactive tool that gives the owners of sustainability standards systems a way to view their performance in a standardized way and toward a shared "direction of travel" for beneficial impact, while also helping brands to make informed material sourcing decisions.
The core impact areas that the standard systems are assessed against are: climate, water, chemicals, land, resource use and waste, biodiversity, human rights, and animal welfare. In addition, initiative integrity, measuring the robustness and governance of a given standard system, is also considered.
The PFMM is intended to be used to understand essential context related to standard systems within the same fiber category, using indicators organized by impact area. While many standard systems have unique strengths, improved outcomes can be achieved when standard systems (or pairing of standard systems) aim to excel across all impact areas.

Originally conceived by Gap Inc. to help designers and product teams understand the benefits and trade-offs of their fiber and raw material choices, Textile Exchange adopted the PFMM in 2020. Since that time, we've been working to update and refine the tool, drawing on expertise from across the sector. Our overarching vision for the PFMM is for it to support the industry in taking an "LCA+" approach to decision-making related to fibers and raw materials.

The purpose of this document is to provide an overview of the PFMM methodology. It introduces the impact areas, the materials and standard systems assessed, and identifies the scope of assessment and methods for scoring. Links are provided to the assessment documents for a more detailed understanding of the criteria that underpin the assessment.

Preferred fibers and materials

Textile Exchange defines preferred fibers and raw materials as those that deliver consistently reduced impacts and increased benefits for climate, nature, and people against the conventional equivalent,

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through a holistic approach to transforming production systems. Please see Textile Exchange's Preferred Fibers and Materials: Definitions Initial Guidance for further context.

In 2024-2025, Textile Exchange will undertake further development of the PFMM methodology, enabling the inclusion of additional standards systems – as well as branded fibers and other sustainability programs – into the tool. The ultimate goal is for the PFMM to provide further clarity to the industry around what constitutes a "preferred" material.

Scope of the PFMM

The scope of the PFMM is focused on extraction, processing, and production of raw materials, commonly referred to as "Tier 4" of textile supply chains (see graphic below). Each material type has different raw material feedstocks and by the nature of different production processes, has differing hotspots and associated risks. The PFMM was designed to tailor the assessments to materials, as such it was not designed to compare materials across different material types.
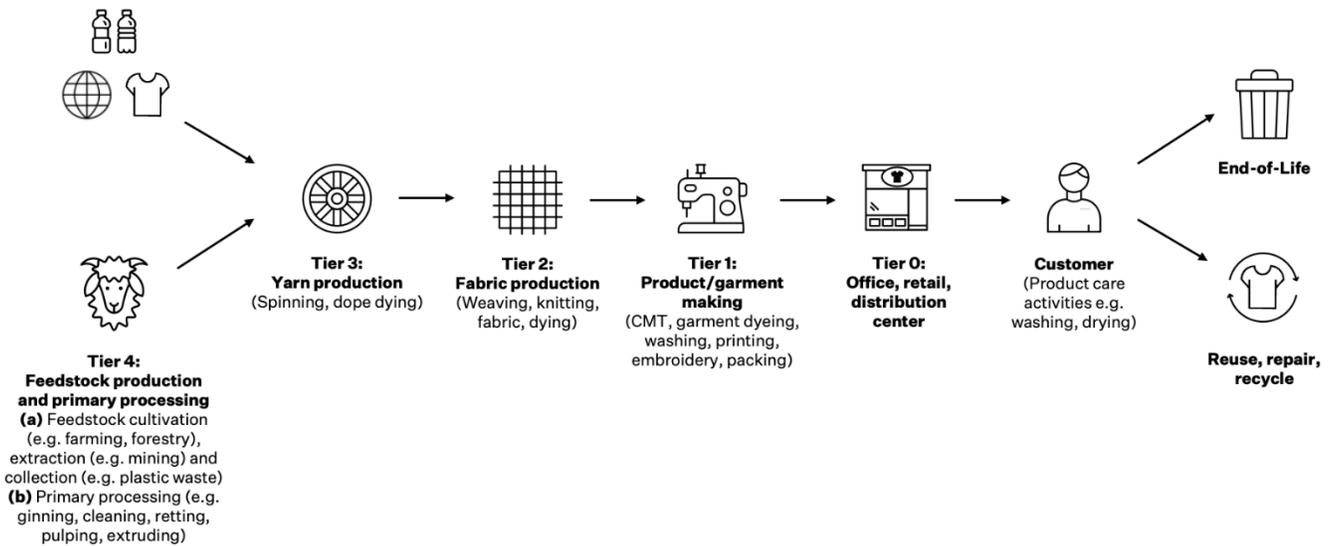
Evolution of the PFMM:

PFMM Version 1.0

Version 1.0 of the PFMM focused on developing a framework for multiple data sources, standard systems and scoring requirements. Forty indicators were introduced into the PFMM focusing on climate, water use, water pollution, chemicals and toxicity, land use, soil health, resource use and waste, human rights and animal welfare. The assessment comprised of six Higg MSI, 18 WWF Certification Assessment Tool (CAT) and 23 Textile Exchange Custom Indicators.

PFMM Version 2.0

Version 2.0 of the PFMM focused on updating the methodology and introducing new impact areas and indicators. The changes included: a new biodiversity impact area developed with The Biodiversity Consultancy; the removal of the WWF Certification Assessment Tool (CAT) environmental indicators, that were replaced with new Textile Exchange custom indicators; development of new management and monitoring indicators; a more nuanced way of measuring performance with progressive and multiple-choice scoring structures; separation of raw material extraction and processing criteria; and introduction of 'level of execution' indicators for partial scoring credit. As a result of these changes, new assessments of standard systems were conducted, and results presented in the matrix in March 2023.

PFMM Version 3.0 (Public Launch)

This public launch of the tool signifies having brought the PFMM methodology fully in-house, as we have now replaced the initiative integrity and human rights indicators that were previously sourced from WWF's Certification Assessment Tool. Further, we have separated the assessment of paired standard systems to show individual standard system performance.

Finally, we've updated the tool interface to remove the overall standard system scores and provide further transparency on indicator scores. We've also been working on improving the user experience of the tool.

Data and Scoring Sources

Types of data

Qualitative data

Going beyond LCA data, the PFMM also includes custom indicators that cover qualitative considerations. Standard systems can achieve points for having explicit program requirements or by demonstrating beneficial environmental outcomes. Qualitative indicators comprise 74 out of 80 total indicators.

Quantitative data

The quantitative indicators within the PFMM are based on normalized Life Cycle Assessment (LCA) data from the Higg Materials Sustainability Index (MSI). Normalized LCA data is useful as it ensures that information is comparable. Six of the 80 total indicators are quantitative and based on LCA data.

Data sources

Cascale – The Higg Materials Sustainability Index (Higg MSI)

For quantitative data, the PFMM utilizes data from Higg MSI, a cradle-to-gate material assessment tool using a Life Cycle Assessment (LCA) approach. It quantifies the environmental impacts of material production from the extraction or production of raw materials through the manufacture, finishing, and preparation for assembly. Users can adjust material inputs and production processes to analyze factors affecting environmental impact. Recognizing that there is not always LCA data available for various standard systems, in instances where the exact raw material/fiber standard systems is not captured in the Higg MSI, conventional production for the given raw material/fiber is used as a proxy. The Higg MSI's environmental impact measurements, which are included in the PFMM, are:

Impact area	Higg MSI environmental impact measurements utilized in the PFMM
Climate	Global warming potential Abiotic resource depletion, fossil fuels
Water	Eutrophication potential Water scarcity Water consumption
Chemicals	Chemistry

The scores arising from the quantitative Higg MSI indicators weigh 50% of the total score for the climate, water and chemicals impact areas. For example, 'global warming potential' and 'abiotic resource depletion' scores are each weighted at 25% within the climate impact area.

Standard systems sources

For qualitative data, the standard systems' documentation is used to score against the PFMM Methodology. Secondary research may be used in addition to standard systems documentation to determine scoring. Secondary research assessed may be from academic or non-governmental organization sources. Secondary research is namely used to provide information on production processes and associated environmental outcomes and is primarily used to define production processes where there is no standard system in place.

Version 2.0 assessments of standard systems were conducted in Q4 of 2022 and Version 3.0 (human rights, initiative integrity and chemical management only) were conducted in Q2 of 2023. All assessments were conducted using up-to-date certification documentation available at the time. A list of certifications assessed can be found in the Annex.

Material categories

The material categories included in the PFMM were chosen based on industry production volumes, detailed within the Materials Market Report.

Material categories and standard systems included in PFMM Version 3.5 are listed below:

Cotton	Better Cotton
	Cotton with no standard system
	Cotton made in Africa (CmiA)
	Fairtrade Cotton
	myBMP
	EU Organic Cotton + Fairtrade Cotton + GOTS Certified
	EU Organic Cotton + GOTS Certified
	EU Organic + OCS Certified
	ISCC EU
	Recycled Cotton – GRS Certified
	Recycled Cotton – RCS Certified
	CottonConnect REEL Code of Conduct
	CottonConnect REEL Regenerative
	Responsible Brazilian Cotton (ABRAPA)
	US Cotton Trust Protocol
Flax	Dew-Retted Flax with no standard system
	Water-Retted Flax with no standard system
	EU Organic Dew-Retted Flax + GOTS Certified Dew-Retted Flax
	EU Organic Dew Retted Flax + OCS Certified Dew-Retted Flax
	EU Organic Water Retted Flax + GOTS Certified Water-Retted Flax

	EU Organic Flax Water-Retted Flax + OCS Certified Water-Retted Flax	
Man-Made Cellulosic	Viscose with no standard system (Forestry) Viscose with no standard system (Pulping/Fiber)	
	Bamboo Viscose with no standard system (Forestry) Bamboo Viscose with no standard system ((Pulping/Fiber)	
	Viscose FSC Certified (Forestry) Viscose with no standard system (Pulping/Fiber)	
	Viscose PEFC Certified (Forestry) Viscose with no standard system (Pulping/Fiber)	
	Modal with no standard system (Forestry) Modal with no standard system (Pulping/Fiber)	
	Modal FSC Certified (Forestry) Modal with no standard system (Pulping/Fiber)	
	Modal PEFC (Forestry) Modal with no standard system (Pulping/Fiber)	
	Lyocell with no standard system (Forestry) Lyocell with no standard system (Pulping/Fiber)	
	Lyocell FSC Certified (Forestry) Lyocell (with no standard system (Pulping/Fiber)	
	Lyocell PEFC Certified (Forestry) Lyocell with no standard system (Pulping/Fiber)	
	Acetate with no standard system (Forestry) Acetate with no standard system (Pulping/Fiber)	
	Acetate – FSC Certified (Forestry) Acetate with no standard system (Pulping/Fiber)	
	Acetate – PEFC Certified (Forestry) Acetate with no standard system (Pulping/Fiber)	
Synthetics	Polyester with no standard system	
	Chemically Recycled Polyester – GRS Certified	
	Chemically Recycled Polyester – RCS Certified	
	Mechanically Recycled Polyester – GRS Certified	
	Mechanically Recycled Polyester – RCS Certified	
	Polyamide (Nylon) with no standard system	

|	
	Mechanically Recycled Polyamide (Nylon) – GRS Certified
	Mechanically Recycled Polyamide (Nylon) – RCS Certified
	Acrylic with no standard system
	Recycled Acrylic – GRS Certified
	Elastane with no standard system
	Recycled Elastane – GRS Certified
Wool	Wool with no standard system
	EU Organic Wool + GOTS Certified
	EU Organic Wool + OCS Certified
	Recycled Wool – GRS Certified
	Recycled Wool – RCS Certified
	Responsible Wool Standard

Materials with no standard system

Previously known as "conventional," these materials are characterized by production that has no standard system in place and are considered the status quo, or business-as-usual. These are included in the matrix to provide a baseline reference and comparison of material production processes.

Organic materials

For all organic materials, Textile Exchange used the European Union organic regulation (recognized within the IFOAM Family of Standards) as a proxy for assessing on-farm/field organic requirements. These are combined with either Global Organic Textile Standard (GOTS) or Organic Content Standard (OCS) certifications to assess the environmental outcomes associated with sourcing organically grown cotton, flax and wool. While IFOAM on-farm/field organic requirements align to key aspects of organic farming, such as non-use of synthetic pesticides and improved soil management, standards differ in regard to other criteria, such as the inclusion of animal welfare for animal fibers. Organic standards are assessed at the farm level (i.e., European Union organic regulation). Both OCS and GOTS standards apply after the farm and are chain of custody-focused standards.

Supply chain tiers

The table below outlines the tier of the supply chain assessed for each standard system. Where chain of custody is not assessed for a standard system, it is because the standard predominantly operates at one level of the supply chain – therefore chain of custody is not included in the scope.
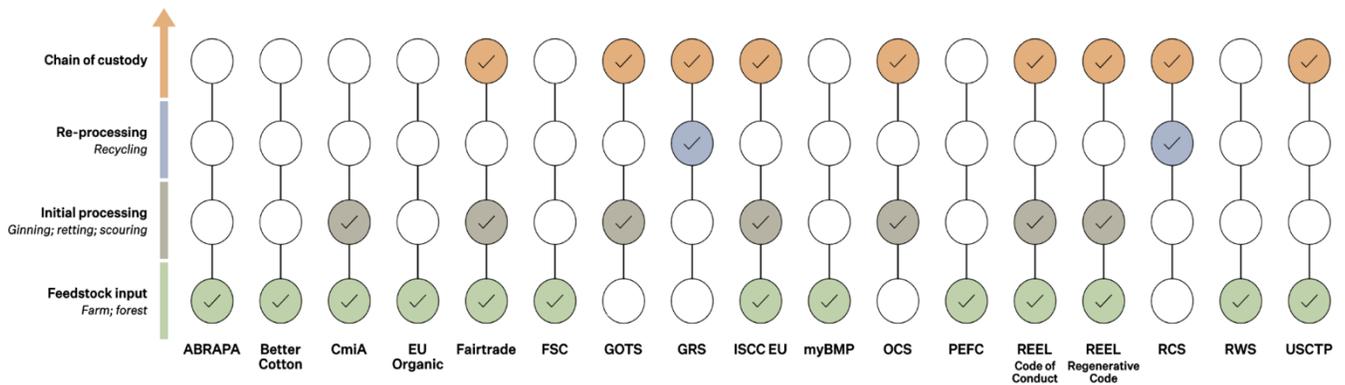
The claims system applied by standard is also noted in the tool – they fall into two categories; Mass Balance or Chain of Custody, or a mix of the two. Information on the system a standard uses can be found below its name on the website. Where a standard employs a Chain of Custody system exclusively, it is viewed as more robust. A key is provided within the tool to denote the tier of the supply chain that is assessed for a given standard, and the type of claims system that is deployed.
The following key is included on the PFMM website page.

Key:
Line 1: Name of standard system

Line 2: Tier of supply chain assessed:

- F = Feedstock (forest, farm or oil and gas extraction)
- IP = Initial Processing (ginning, retting and scouring, pulping / fiber)
- R = Reprocessing (recycling)
Line 3: Claims system:

- CoC = Chain of Custody claims system
- MB = Mass Balance claims system
Line 4: Denotes cases where a standard system operates in one country or region only.

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Impact areas

Climate

The climate impact area evaluates the management of greenhouse gas (GHG) emissions, climate resiliency actions and protection of ecosystems to capture and store carbon. The indicators assess factors such as the GHG management plan, GHG monitoring, level of ambition in reducing emissions, decarbonization methods, climate adaptation and mitigation measures, carbon stock protection, and soil carbon sequestration. The aim is to ensure the protection of ecosystems, consider local community and environmental impacts, and promote the reduction of emissions throughout the value chain. The indicators encourage the adoption of sustainable practices and the use of standardized methodologies for measuring and accounting for carbon sequestration.

Water

The water impact area evaluates water risks in the context of fiber and material cultivation. These indicators assess the structure of water management plans, adaptive monitoring of water resources (withdrawal and contamination), ambition in prioritizing water health, and comprehensiveness of water health strategies. The focus is on protecting ecosystems, considering social and environmental impacts, and prioritizing water areas.

Chemistry

The chemical impact area evaluates chemical management in the context of fiber and material cultivation. These indicators assess the structure of chemical management plans, management systems minimizing risk and chemical volume, adaptive monitoring of chemical management, ambition in prioritizing chemical management, and comprehensiveness of chemical management strategies. The focus is on protecting ecosystems, considering social and environmental impacts, and ensuring efficient and responsible chemical usage. Additionally, there is an emphasis on continuous improvement and alignment with local contexts. In 2023, we worked with ZDHC to review and update the chemistry indicators.

Land

The land impact area evaluates land, forest, and soil management in the context of fiber and material cultivation. These indicators assess the structure and scope of management plans, adaptive monitoring, ambition in prioritizing land, forest, and soil health, comprehensiveness of strategies, and commitment to preventing deforestation and land conversion. They emphasize the protection of ecosystems, consideration of social and environmental impacts, restoration actions, and positive outcomes. The indicators aim to promote regenerative practices and minimize disturbance to ecosystems.

The impact area of is made up of many components that are key to fiber production - three have been outlined as sub-impact areas in the PFM Matrix: Land, Soil and Forestry.

- Land Use sub-impact area weightings have been derived to reflect the most salient features to a given fiber production system.
  - o In cotton, flax and wool production, this has been identified as Soil
  - o In manmade cellulosic production, Land and Forestry were determined to be more important
  - o Synthetics derived from crude oil do not demonstrate a crop land-based production system and therefore are not scored against any indicators in this impact area.

The respective weighting of each sub impact area is defined as follows.

Fiber	Land	Soil	Forestry
Cotton	25%	75%	0%
Flax	25%	75%	0%
Wool	25%	75%	0%
Synthetics	0%	0%	0%

Fiber	Land & Forestry	Soil
Manmade cellulosics	75%	25%

Processed fibers including synthetics, recycled cotton, and recycled wool are not scored for Land or Soil indicators.

In relation to forestry in particular, Textile Exchange recommends that brands and other users of the PFMM refer to Canopy's Hot Button Report for further due diligence on supplier-focused sourcing decisions.

Biodiversity

The biodiversity impact area evaluates the conservation, restoration, and enhancement of biodiversity in relation to fiber and material cultivation. These indicators assess the structure and scope of management plans for addressing biodiversity, measure adaptive monitoring of biodiversity, and examine the level of ambition in prioritizing biodiversity. The indicators also focus on habitat and ecosystem diversity, including restoration and preservation efforts. They emphasize the protection of natural habitats, minimizing impacts, and active management and restoration. Additionally, the indicators address human-wildlife conflict and promote positive coexistence, as well as mitigation of invasive species to preserve biodiversity.

Resource Use and Waste

The resource use and waste impact area evaluates waste management and mitigation strategies. These indicators assess the plans and procedures for waste reduction and evaluate the commitment to tracking and separating raw materials to achieve long-term waste reduction. The indicators also measure the efficiency of waste stream utilization, the strategies employed for waste utilization, and the degree of circularity achieved. Furthermore, they measure the proportion of feedstock sourced from certified organic agricultural waste, post-consumer waste, or post-industrial waste.

Animal Welfare

The animal welfare impact area evaluates the structure and scope of a management plan for animal welfare under The Five Freedoms in fiber and material cultivation. The indicators assess mistreatment prevention, measure the social and environmental impacts, and monitor animal welfare. They measure the level of ambition, nutrition, living environment, health practices, and handling/transport. Additionally, there is an emphasis on assurance schemes to ensure high welfare potential is delivered.

Human Rights

The human rights impact area evaluates the level of performance on human rights. The indicators assess fair treatment of hired workforce, including minimum wage levels, reasonable working hours, adequate leave, and non-discrimination. They assess the level of prohibition of forced labor and child labor, the promotion of freedom of association and collective bargaining, as well as safe working conditions. The indicators measure the level of increase in incomes and improvement to livelihoods. Additionally, they assess the respect to land and water rights, Indigenous people's rights, and participation in community decision-making and enabling of environments. Grievance mechanisms are assessed and measures against gender-based discrimination, violence, and harassment are also included. The human rights impact area was updated in 2023 to reflect the evolution in this topic and latest good practice. Textile Exchange engaged Ergon to support the redevelopment of its human rights indicators, for its expertise in human rights, labor standards and gender equality. The human rights categories and indicators are based on international human rights norms, including: the United Nations Guiding Principles on Business and Human Rights, the International Bill of Human Rights (UDHR, ICESCR and ICCPR) and the ILO Core Conventions. The indicators often aggregate multiple human rights (e.g. wages and working conditions, livelihoods) or cut across multiple rights (e.g. grievance and remedy). On the whole this framework represents all internationally recognized human rights considered to be:

- Potentially impacted by activities involved in the production of one or more fibers used in textile/fabric production, and;
- Assessed as being within the capability of private, voluntary standards to influence.

 Human rights indicators, developed with Ergon Associates, resulted in generally lower scores and levels than previous versions of the PFMM. This was due to the raised ambition and specificity of the new criteria and the demonstration of a closer representation of standard system performance.

Expert stakeholders were interviewed to inform the development of the criteria and an open consultation was held in March 2023. Feedback was gathered from the consultation and used to update the criteria as necessary. Details of the stakeholder engagement process and open consultation can be found in the Annex. The new human rights indicators can be found in the indicator file. Further, you can find the scoring guidance document here.

Initiative Integrity

The initiative integrity impact area evaluates the structure and scope of operations and procedures set out by each standard system. The indicators assess the Theory of Change through its objective of the standard, strategies and activities, measurable goals, and stakeholder engagement and sharing it among stakeholders. The indicators measure standards setting procedures through the standards development, review and updates to the standards, the degree of public consultations and analysis of integration. They assess the execution through the level of transparency, policies for impartiality and inclusiveness, and clear roles for its Secretariat, implementation of claims, procedures for conformity assessment, and accredited Certification Bodies. Additionally, they assess enforcement level through assurance oversight, enforcement mechanism and risk management. Finally, they assess evaluation and learning through Feedback, Complaints & Grievances and Monitoring, Evaluation & Learning (MEL) system and goals linked to Theory of change.

Textile Exchange engaged NewForesight in the process of redeveloping the initiative integrity indicators which were previously sourced from the WWF Certification Assessment Tool (WWF CAT). To develop the new integrity methodology, the existing CAT methodology and the ISEAL Code of Good Practice were analyzed. Stakeholders from Textile Exchange, WWF, and the World Benchmarking Alliance were interviewed to inform the criteria. Next, mock assessments were conducted to test the feasibility of assessing against the criteria, ability of standards to adhere to the criteria, and data availability. We then optimized the methodology to define a final indicator framework. The indicators are organized into two categories based on the Principles and Elements of integrity (see below). The Elements follow a sequenced order, from setting a vision and strategy for the program, to executing and enforcing it, to measuring, evaluating and learning. The methodology tests to what extent these Elements of programs adhere to the Principles of being credible, actionable and incentivizing for actors to improve the sector. The new initiative integrity indicators can be found in the indicator file.
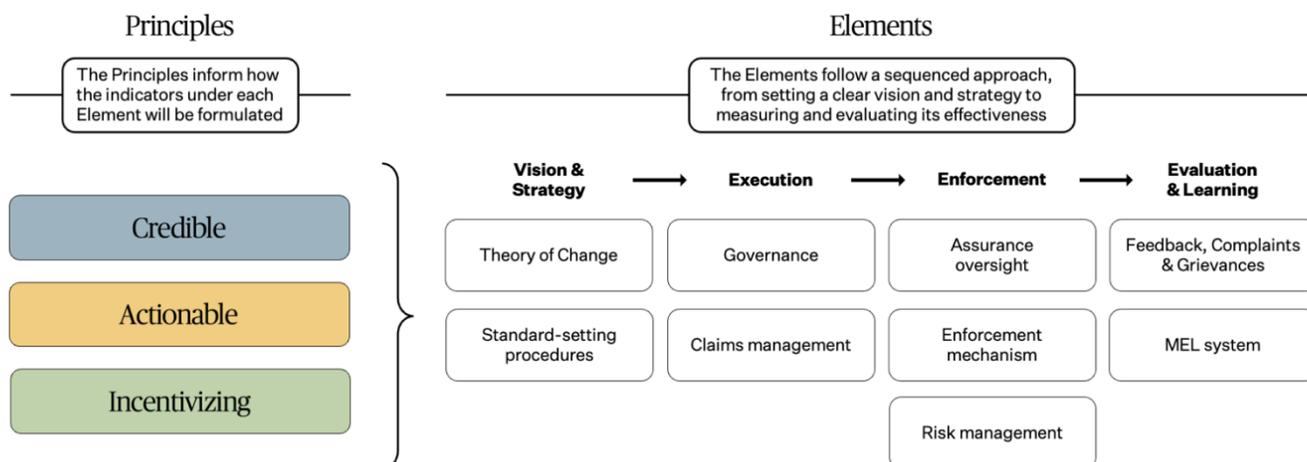
Indicator Applicability

See here for a table detailing the set of indicators assessed for each material category. The detailed indicator file which includes the indicators for each impact area, forming the basis of the PFMM assessment, can be found here. Each tab/page comprises an impact area and details the indicators and criteria assessed.

Scoring

The PFMM scores standard systems across five levels. Each standard system is scored on a 100pt scale which is divided into 20pt bands. The banding is consistent across standard systems and material types. The banding structure is intended to help users view the content in the PFMM in a simplified and digestible format. While the levels are an indication of performance, it is advised that users review the individual scores and descriptions associated with the indicators for a deeper level of understanding.

Five levels of performance:
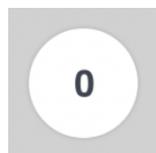
Level 0 – Baseline (scoring 0-19%)

Standard systems with impact areas scoring in this banding may be characterized by lower environmental and/or social impact; however, not enough criteria are met, or evidence is lacking to progress to level 1. While there may be some positive actions, there will be factors limiting performance, such as not having management and monitoring procedures in place.

Level 1 – Foundational (scoring 20-39%)

Standard systems with impact areas scoring in this banding may be characterized by some initiative being demonstrated – generally focused on risk mitigation and harm reduction. Management plans are focused on the communication and collective understanding of impact, underpinned by monitoring that evaluates pressures on the system in question.

Level 2 – Improved (scoring 40-59%)

Standard systems with impact areas scoring in this banding may be characterized by engagement in comprehensive harm reduction and/or steps toward demonstrable beneficial outcomes. Ambition is demonstrated through the implementation of actions that are site attuned, reviewed annually, and incorporate adaptive responses.

Level 3 – Progressive (scoring 60-79%)

Standard systems with impact areas scoring in this banding may be characterized by clear commitments to positive outcomes. Experts and relevant stakeholders are consulted in best-practice implementation and goal setting. Harm reduction and beneficial outcomes are established for areas outside of the production unit, and continuous improvement is essential.

Level 4 – Transformational (scoring 80-100%)

Standard systems with impact areas scoring in this banding may be characterized by regenerative and/or circular actions that holistically address challenges that arise. Impacts are quantified where possible and tangible impact reduction and/or beneficial outcomes are being measured over the long term. Long-term goals are set and tracked for both the production unit and the surrounding areas.

Indicators

Indicator structure

Each indicator follows a framework, developed with a group of expert stakeholders, aimed at defining a continuum towards best practice. The indicator structure comprises of the following methodological elements to assess performance.

- Indicator Structure Type – Either multiple choice or progressive structure.

- <u>Level</u> – The levels are arranged in 25, 50, 75 and 100 increments.
- <u>Score</u>- Details the number of points achieved at each criteria level. The maximum score at each banding level is 25. If there are multiple criteria within an indicator, the maximum number of points is divided equally by the number of criteria.
- <u>Criteria Reference</u> – Each criteria has an associated reference for review and scoring purposes.
- <u>Criteria</u> – The action and/or practices set out within the indicator.
- <u>Supporting Details</u> – Additional details that help support the criteria. These can include examples of ways to fulfil the criteria, components of criteria or further information on subjects central to the indicators.

Indicator Type

There are two types of indicators: progressive and multiple choice. These were developed for a systematic approach and to allow for greater nuance to be demonstrated in performance.

Progressive Indicators

The progressive indicators assemble a set of criteria that build on each other to attain progressive scoring achievement. These indicators are designed specifically for criteria with a relationship to one another. The first set of criteria at 25 points is generally noted as a "Foundational" set of requirements that demonstrate responsible actions. Each action thereafter builds toward best-in-class performance for a given environmental or social concept.

The key difference between progressive and multiple-choice indicators are the gating criteria to be fulfilled (or partially fulfilled) for progressive indicators. The gating criteria is referred to as criteria that must be completed before progressing to the next level. Multiple choice, however, achieve scores based on the number of criteria that are fulfilled.

For the human rights and initiative integrity impact areas, the gating criteria process varies. The human rights indicators do not require each criterion to be completed to pass to the next level; instead, a selection of criterion must be fulfilled (including partial), to be able to qualify for assessment at the proceeding level. These criteria are highlighted in either a yellow or peach color. While the yellow highlights correspond to the regularly recurring gating function throughout the human rights indicators, the peach corresponds to a secondary gating function, relating to grievance mechanisms. This secondary gating function works as a cross-check against the grievance mechanism indicator by preventing any standard system from progressing beyond levels where the grievance gating function is not met. The human rights indicators are designed in this way to recognize the importance of grievance mechanisms in human rights due diligence.

The program provides for **secure channels for workers to raise grievances and concerns** and access remedy	There is a requirement that certified producers **not employ AND not directly or indirectly benefit** from forced labour as defined in ILO 29 and ILO 105 and ILO protocol 29 within the certified operation, and (where the standard applies) in the production of key feedstocks and raw materials.

In regard to initiative integrity, the first criteria listed in an indicator (always the 'Credible' criteria) represents the gating criteria. Standards can't progress to other 'Credible', 'Actionable' or 'Incentivizing' criteria without having met the gating criteria first.

Credible	The organization defines **procedures for standards development.**	2
	The organization **reviews and updates** the standard with a full revision process at least every 5 years.	2
Actionable	There are procedures and mechanisms for making **urgent substantive changes** and **non-substantive changes** outside a full revision process.	2

The progressive indicator type includes management indicators that apply across all impact areas. These management indicators include criteria on management, monitoring, ambitiousness and comprehensiveness of strategy.

Multiple-choice indicators

The multiple-choice indicators offer a range of criteria that combine to determine the score, allowing for flexibility and including salient criteria for performance without being prescriptive about which criteria must be met. The multiple-choice indicator structure is designed for indicators that have individual practices, procedures or outcomes that, when combined, reflect best-in-class performance for a given environmental or social concept.

Level of execution

The "level of execution" scoring component captures the degree to which a practice may be implemented. As a result, this scoring component allows for a more nuanced assessment of performance and is designed to incentivize standard systems to obtain a higher "level of execution" of a given practice or process; for example, by moving from a pilot project to implementing a practice across an entire production system. The "level of execution" functions as a score modifier at the criterion-level. It helps to differentiate where standard systems have required actions versus time-bound or recommended actions. The preference for demonstrated action over continuous improvement or recommended actions is demonstrated by the multiplier table below.

Level of execution	Score multiplier
Pilot project	0.2

Level of execution	Score multiplier
5-10%	0.1
11-30%	0.2
31-50%	0.4
51-70%	0.6
71-90%	0.8
91-100%	1
Required	1

Assessment

Here you can find the detailed [indicator file](#) which forms the basis of the PFMM assessment. Each tab comprises an impact area and details the indicators and criteria assessed.

LCA data quality

To reflect that LCA data has limitations, all Higg MSI data is adjusted by the Higg MSI data quality score, accessed through the Higg portal. The Higg MSI data quality score is based on four quality criteria: technological representativeness, geographical representativeness, time-related representativeness, and parameter uncertainty. Further details regarding Higg MSI data can be found at Higg MSI.

Recognizing that there is not always LCA data available for various standard systems, in instances where the exact raw material/fiber standard system is not captured in the Higg MSI, conventional production for the given raw material/fiber is used as a proxy. The tables below outlines where standard system-specific LCA data is applied and where LCA proxy data is applied.

Material	Standard systems	Proxy?	Value Used
Cotton	Responsible Brazilian Cotton (ABRAPA)	Yes	Conventional Cotton Higg MSI LCA
Cotton	Better Cotton	Yes	Conventional Cotton Higg MSI LCA
Cotton	Cotton made in Africa	No	CmiA Higg MSI LCA
Cotton	EU Organic	No	Organic Cotton Higg MSI LCA
Cotton	Fairtrade	Yes	Conventional Cotton Higg MSI LCA
Cotton	GOTS	No	Organic Cotton Higg MSI LCA

Material	Standard systems	Proxy?	Value Used
Cotton	OCS	No	Organic Cotton Higg MSI LCA
Cotton	GOTS + Fairtrade	No	Organic Cotton Higg MSI LCA
Cotton	GRS	No	Recycled Cotton Higg MSI LCA
Cotton	RCS	No	Recycled Cotton Higg MSI LCA
Cotton	MyBMP	Yes	Conventional Cotton Higg MSI LCA
Cotton	ISCC EU	Yes	Conventional Cotton Higg MSI LCA
Cotton	REEL Code of Conduct	Yes	Conventional Cotton Higg MSI LCA
Cotton	REEL Regenerative Code	Yes	Conventional Cotton Higg MSI LCA
Cotton	US Cotton Trust Protocol	Yes	Conventional Cotton Higg MSI LCA
Cotton	Conventional	No	Conventional Cotton Higg MSI LCA
Synthetics	Conventional Polyester	No	Conventional Polyester Higg MSI LCA
Synthetics	Mech Recycled Polyester - GRS	No	Mech Recycled Polyester Higg MSI LCA
Synthetics	Mech Recycled Polyester - RCS	No	Mech Recycled Polyester Higg MSI LCA
Synthetics	Chem Recycled Polyester - GRS	No	Chem Recycled Polyester Higg MSI LCA
Synthetics	Chem Recycled Polyester - RCS	No	Chem Recycled Polyester Higg MSI LCA
Synthetics	Conventional Polyamide	No	Conventional Polyamide Higg MSI LCA
Synthetics	Mech Recycled Polyamide - GRS	No	Recycled Polyamide Higg MSI LCA
Synthetics	Mech Recycled Polyamide - RCS	No	Recycled Polyamide Higg MSI LCA
Synthetics	Conventional Elastane	No	Conventional Elastane Higg MSI LCA

Material	Standard systems	Proxy?	Value Used
Synthetics	Recycled Elastane - GRS	Yes	Conventional Elastane Higg MSI LCA
Synthetics	Conventional Acrylic	No	Conventional Acrylic Higg MSI LCA
Synthetics	Recycled Acrylic - GRS	Yes	Conventional Acrylic Higg MSI LCA
MMCF	Lyocell	No	Conventional Lyocell Higg MSI LCA
MMCF	Viscose	No	Conventional Viscose Higg MSI LCA
MMCF	Bamboo	No	Conventional Bamboo Higg MSI LCA
MMCF	Acetate	No	Conventional Acetate Higg MSI LCA
MMCF	Modal	No	Conventional Modal Higg MSI LCA
MMCF	Lyocell FSC	Yes	Conventional Lyocell Higg MSI LCA
MMCF	Lyocell PEFC	Yes	Conventional Lyocell Higg MSI LCA
MMCF	Lyocell FSC/PEFC	Yes	Conventional Lyocell Higg MSI LCA
MMCF	Viscose FSC	Yes	Conventional Viscose Higg MSI LCA
MMCF	Viscose PEFC	Yes	Conventional Viscose Higg MSI LCA
MMCF	Viscose FSC/PEFC	Yes	Conventional Viscose Higg MSI LCA
MMCF	Bamboo Viscose FSC	Yes	Conventional Bamboo Higg MSI LCA
MMCF	Bamboo Viscose PEFC	Yes	Conventional Bamboo Higg MSI LCA
MMCF	Bamboo Viscose FSC/PEFC	Yes	Conventional Bamboo Higg MSI LCA
MMCF	Acetate FSC	Yes	Conventional Acetate Higg MSI LCA
MMCF	Acetate PEFC	Yes	Conventional Acetate Higg MSI LCA

Preferred Fiber and Materials Matrix Methodology

Material	Standard systems	Proxy?	Value Used
MMCF	Acetate FSC/PEFC	Yes	Conventional Acetate Higg MSI LCA
MMCF	Modal FSC	Yes	Conventional Modal Higg MSI LCA
MMCF	Modal PEFC	Yes	Conventional Modal Higg MSI LCA
MMCF	Modal FSC/PEFC	Yes	Conventional Modal Higg MSI LCA
Flax	Conventional Dew-Retted	No	Conventional Dew-Retted Flax Higg MSI LCA
Flax	Conventional Water-Retted	No	Conventional Water-Retted Flax Higg MSI LCA
Flax	EU Organic + GOTS Dew-Retted	Yes	Conventional Dew-Retted Flax Higg MSI LCA
Flax	EU Organic + GOTS Water-Retted	Yes	Conventional Water-Retted Flax Higg MSI LCA
Flax	EU Organic + OCS Dew-Retted	Yes	Conventional Dew-Retted Flax Higg MSI LCA
Flax	EU Organic + OCS Water-Retted	Yes	Conventional Water-Retted Flax Higg MSI LCA
Wool	Conventional Wool	No	Conventional Wool Higg MSI LCA
Wool	EU Organic + GOTS Wool	Yes	Conventional Wool Higg MSI LCA
Wool	EU Organic + OCS Wool	Yes	Conventional Wool Higg MSI LCA
Wool	Recycled Wool GRS	No	Recycled Wool Higg MSI LCA
Wool	Recycled Wool RCS	No	Recycled Wool Higg MSI LCA
Wool	Responsible Wool Standard	Yes	Conventional Wool Higg MSI LCA

Frequently asked questions

How can I provide feedback and recommendations on indicators or datasets to the PFMM?

We welcome the industry's input into the further development of the Preferred Fiber and Materials Matrix. Please email matrix@textileexchange.org.

Why does the PFMM no longer have an overall score for each standard system?

Version 3.0 of the PFMM removed the overall impact area score and introduced the indicator level score, aiming to encourage users to engage with the data and individual impact areas. The overall score discouraged this and could be seen as quite a blunt metric. Consequently, impact area weightings were removed from score calculations to focus on the impact area performance rather than overall. The weightings only functioned to compute the overall score.

Why does the PFMM not include branded materials?

Branded materials or materials supplied by a specific supplier will be included in the forthcoming Materials Directory. This Directory will list information on material suppliers, specific information on the materials they produce/process, and additional sustainability benefits at the supplier-specific branded material and facility-level compared with the generic material baseline.

What is used as the farm level standard for organic certification?

GOTS and OCS are standards that verify organic content in the final product. Both have chain of custody requirements, but GOTS also has additional requirements for socially and environmentally responsible textile processing. Neither GOTS nor OCS certifies at the farm level, but instead recognizes pre-existing farm level organic certification, provided it is carried out to a standard or regulation that is recognized as part of the International Federation of Organic Agriculture Movements (IFOAM) Family of Standards.

IFOAM is the international umbrella organization for organic worldwide, and its Family of Standards includes national, regional, and private organic standards that meet a common baseline, while still allowing for regional variations between standards. Textile Exchange selected the EU Organic Regulation to be used for the on-farm component of each organic assessment, as it is one of the key regulations recognized by IFOAM, as well as it being the foundational and most established, widely used set of standards applied worldwide.

How can I find out more about man-made cellulosic fibers and forestry?

Textile Exchange supports the use of other industry tools alongside the PFMM. We recommend referencing Canopy's Hot Button Report when considering sourcing decisions for man-made cellulosic fibers.

Annex

Standard systems' documentation and sources assessed

Cotton:

- ABRAPA - Associação Brasileira dos Produtores de Algodão (Responsible Brazilian Cotton): https://www.abrapa.com.br/EN-US/BibliotecaSustentabilidade/ABR%20%E2%80%93%20Algod%C3%A3o%20Brasileiro%20Respons%C3%A1vel/Guia%20VDP%20290x205%20ABRAPA%202016.pdf
- Better Cotton (Environmental impact areas assessment): https://bettercotton.org/wp-content/uploads/2019/05/Better-Cotton-Principles-Criteria-V2.1.pdf
- Better Cotton (Human Rights and Initiative Integrity): https://bettercotton.org/better-cotton-principles-and-criteria-v-3-0/
- Cotton Inc: https://cottontoday.cottoninc.com/carbon-in-your-closet-exploring-cotton-and-biogenic-carbon-sequestration/
- Cotton Inc: https://cottontoday.cottoninc.com/wp-content/uploads/2022/07/Cotton-Incorporated-Fact-Sheet-ConventionalOrganic_Final-Approved_06.25.20.pdf
- Cotton Inc: https://cottontoday.cottoninc.com/our-sustainability-story/circularity/cottonseed-an-and-crop/
- Cotton Made in Africa: https://cottonmadeinafrica.org/wp-content/uploads/CMIA_Standard_ENG.pdf
- Cotton Made in Africa: https://cottonmadeinafrica.org/wp-content/uploads/CmiA-Assurance-Manual-V1.1.pdf
- EU Organic Regulation: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
- Fairtrade:(Environmental Assessment, Human Rights and Initiative Integrity) https://files.fairtrade.net/standards/SPO_EN.pdf
- Fairtrade (Human Rights and Initiative Integrity Assessment): https://files.fairtrade.net/standards/TextileStandard_EN.pdf
- Fairtrade (Environmental Assessment): https://www.fairtrade.org.uk/media-centre/news/fairtrade-and-earthworm-foundation-join-forces-in-landmark-partnership-to-combat-deforestation/
- Global Organic Textile Standard (GOTS) (Environmental assessment): https://global-standard.org/images/resource-library/documents/standard-and-manual/gots_version_6_0_en1.pdf
- Global Organic Textile Standard (GOTS) (Social assessment): https://global-standard.org/images/resource-library/documents/standard-and-manual/GOTS_7.0_SIGNED_.pdf
- Global Recycled Standard: https://textileexchange.org/app/uploads/2021/02/Global-Recycled-Standard-v4.0.pdf
- ISCC EU: https://www.iscc-system.org/wp-content/uploads/2022/05/ISCC_EU_201_System_Basics-v4.0.pdf

ISCC EU: https://www.iscc-system.org/wp-content/uploads/2022/05/ISCC_202_Sustainability_Requirements_3.1.pdf

- ISCC EU: https://www.iscc-system.org/wp-content/uploads/2022/05/ISCC_EU_202-1_Agricultural-Biomass_ISCC-Principle-1-v4.0.pdf
- ISCC EU: https://www.iscc-system.org/wp-content/uploads/2022/08/202_2_Agricultural-Biomass_ISCC-Principles-2-6_v1.1_August_2.pdf
- ISCC EU: https://www.iscc-system.org/wp-content/uploads/2022/07/ISCC-Impact-Report-2022.pdf
- MyBMP: https://www.mybmp.com.au/user/modules.aspx?id=AE641B48-3E9D-4E25-BD58-C7BCE166DC65&p_id=5256D01B-CD90-4F19-A799-0FE9FF441F5A
- Organic Content Standard (OCS): https://textileexchange.org/app/uploads/2021/02/OCS-101-V3.0-Organic-Content-Standard.pdf
- Recycled Claim Standard: https://textileexchange.org/app/uploads/2021/02/Recycled-Claim-Standard-v2.0.pdf
- REEL Code of Conduct: https://static1.squarespace.com/static/5ff5d85f409193661a071749/t/6194cbc423f52c385328360c/1637141479285/CC_REEL_cotton_code.pdf
- REEL Regenerative Code: https://static1.squarespace.com/static/5ff5d85f409193661a071749/t/618e1f0ec9ff2326482112f0/1636704025121/CC+REEL+Regenerative.pdf
- CottonConnect: https://static1.squarespace.com/static/5ff5d85f409193661a071749/t/63fde58ad604766bbeee2805/1677583777362/CC_impact_report_28022023.pdf
- CottonConnect: https://static1.squarespace.com/static/5ff5d85f409193661a071749/t/6508312213032e58a0c3eb73/1695035721365/CC_WIC_report_2023_v07+%281%29.pdf
- US Cotton Trust Protocol: https://trustuscotton.org/wp-content/uploads/2020/09/USTCP_Cotton-Principles-Criteria_v3.pdf#new_tab
- US Cotton Trust Protocol: https://trustuscotton.org/wp-content/uploads/2021/11/U.S.-Cotton-Trust-Protocol-2020_21-Annual-Report-Final.pdf
- US Cotton Trust Protocol: https://trustuscotton.org/wp-content/uploads/2022/05/U.S.-Cotton-Trust-Protocol-Worker-well-being.pdf#new_tab
- US Cotton Trust Protocol: https://trustuscotton.org/wp-content/uploads/2021/09/US_Cotton_Trust_Protocol_Theory_of_Change_02.pdf#new_tab

Flax:

- EU Organic Regulation: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
- EU Organic Regulation https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
- Global Organic Textile Standard (GOTS) (Environmental assessment): https://global-standard.org/images/resource-library/documents/standard-and-manual/gots_version_6_0_en1.pdf

- Global Organic Textile Standard (GOTS) (human rights and initiative integrity assessment): https://global-standard.org/images/resource-library/documents/standard-and-manual/GOTS_7.0__SIGNED_.pdf
- Organic Content Standard (OCS): https://textileexchange.org/app/uploads/2021/02/OCS-101-V3.0-Organic-Content-Standard.pdf

MMCF:

- FSC: https://us.fsc.org/preview.fsc-std-usa-v1-1-2018.a-719.pdf
- PEFC: https://cdn.pefc.org/pefc.org/media/2019-01/b296ddcb-5f6b-42d8-bc98-5db98f62203e/6c7c212a-c37c-59ee-a2ca-b8c91c8beb93.pdf

Synthetics:

- Global Recycled Standard: https://textileexchange.org/app/uploads/2021/02/Global-Recycled-Standard-v4.0.pdf
- Recycled Claim Standard: https://textileexchange.org/app/uploads/2021/02/Recycled-Claim-Standard-v2.0.pdf

Wool:

- EU Organic Regulation https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
- EU Organic Regulation https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
- Global Recycled Standard: https://textileexchange.org/app/uploads/2021/02/Global-Recycled-Standard-v4.0.pdf
- Recycled Claim Standard: https://textileexchange.org/app/uploads/2021/02/Recycled-Claim-Standard-v2.0.pdf
- Responsible Wool Standard: https://textileexchange.org/app/uploads/2020/08/RAF-101a-V2.2-Responsible-Wool-Standard.pdf
- Global Organic Textile Standard(GOTS): https://global-standard.org/images/resource-library/documents/standard-and-manual/gots_version_6_0_en1.pdf
- Organic Content Standard (OCS): https://textileexchange.org/app/uploads/2021/02/OCS-101-V3.0-Organic-Content-Standard.pdf

Phases of stakeholder engagement

Version 1.0

Following the Textile Exchange conference in Vancouver, Canada in 2019, a steering committee was formed to guide the initial development of the PFMM. This steering committee provided input on the identification of suitable datasets for the PFMM, identifying appropriate indicators and their groupings, guidance on the launch of the PFMM, etc. The steering committee was composed of members of the below organizations and was active throughout 2021:

- Gap Inc.
- Marks & Spencer
- Outerknown
- Cascale
- Williams-Sonoma Inc.
- WWF (Worldwide Fund for Nature)

Furthermore, a public consultation was held in December 2020 to receive feedback from any interested party. User Interface design feedback was provided by both the steering committee and brand and retailers such as G-Star RAW and Zalando. Additional feedback was collected from fiber standard systems in June 2021 and October 2021.

Version 1.0 Expert Consultation

Version 1.0 public consultation feedback

The summary below has been prepared to provide an overview of the comments received during the Public Consultation on the Preferred Fiber and Material Matrix.

Open feedback period

December 17, 2020, to January 20, 2021

Participation

We received comments from 15 organizations during the Public Stakeholder feedback period. Stakeholders from North America, Europe, and Asia participated.

- Material Producers: six responses
- Civil Society: five responses
- Brands/Retailers: four responses
- Supply Chain: three responses

Feedback received during the public stakeholder consultation

The comments received during the Public Stakeholder Consultation are summarized below in the following topics: Scoring and Methodology, Indicators, Materials and Material Categories, Governance and Stakeholder Representation, and Communication Guidelines.

Scoring and methodology

- Add clarity to which indicators have been included or not.
- Avoid duplication of indicator areas. Comment on the limitation of LCAs: not always independently reviewed, not representative of production methods or regions, out-of-date research.
- Land management and biodiversity should be integrated.
- Should layer in standard system robustness with the indicators where applicable.
- Should aim to be transparent in the data sources for each indicator.
- Will independent reviews be included? How transparent will scoring results be made?

Scope of Impact areas

- Consider water consumption.
- Include energy use.
- Suggestion to include the use of carbon credits or offsets.
- Suggestion to include the relationship between animal welfare and biodiversity.
- Include results of Canopy audits.
- Include ZDHC MMCF tools.
- Microplastic leakage should be included.
- Should include biogenic carbon.
- Need more in-depth biodiversity indicators.
- Missing a slaughter component?
- Reference to using the Delta framework.

Scope of materials and material categories

- Include pre- and post-consumer feedstocks (differentiate between bottle-to-fiber and fiber-to-fiber recycling).
- Suggestion to add branded materials to provide more specificity.
- Suggestion to include elastane.
- Suggestion to include down.
- Consider adding hemp.
- Should include leather.
- Need a way to include materials that may not fall into a known category, such as Cupro.
- Include materials with tracer technologies.
- Would like to see metallic materials used.

Governance and stakeholder representation

- Should be transparent who is included in decision-making groups.
- The decision by consensus is ambitious.
- Need more information about how to participate.

Communication guidelines

- Disappointed to not be able to communicate on the product.
- Need clear guidance on how to communicate usage of the PFMM Version 2.0 Expert Consultation for Members-Only Launch

Version 2.0 Expert Consultation

Expert stakeholder feedback period

In September 2022, we received feedback from several organizations and experts which informed the development of the methodology. Organizations and individuals included:

- Apparel Impact, Tamara Wulf
- Common Threads Consulting, Sarah Kelley
- Conservation International, Franklin Holley and Margot Wood
- Hohenstein, Ben Mead
- Independent Consultant, Pavithra Ramani
- Cascale, Joël Mertens
- The Organic Center, Amber Sciligo
- The Biodiversity Consultancy, Peter Burston
- World Resources Institute, Matt Ramlow
- WWF-Germany, Rebekah Church
- 2050, Stephanie Maurice

The below feedback, listed by impact area, details what has been considered and incorporated.

Scoring and methodology

- Introduce the indicator templates/structure earlier in the methodology and expand upon the details with specific examples
- Reconsider heading in indicator structures/templates
- Consider demonstrated values under 75% to account for a wider range
- Clarification on the measurements of units
- Consider five "banding" levels rather than four
- Increase weight of Climate Impact area

Scope of Impact areas

Climate:

- Ordering of climate indicators
- Restructure "Climate Resilience" and reframe to "Climate Adaptation" and "Climate Mitigation" and associated criteria
- Increase level of progression across "Climate Resilience"
- Include quantitative metrics for "Evidence of carbon sequestration"
- Additional validation on "Protection Peat Soils"
- Adjustment of language on "Protection of Below-Ground Carbon Stocks and Peat Soils"

Water:

- Reduced overlap across water and chemistry
- Review progression of level in Impacts of oil and gas extraction
- Inclusion of indigenous groups
- Separate water monitoring into contamination and withdrawal
- Include point source pollution from fertilizer into criteria
- Removal of monitoring mention from management
- Level of execution reviewed
- Inclusion of monitoring effluents

Chemistry:

- Review of chemical restrictions list
- Inclusion of additional chemical management practices and procedures
- Inclusion of sludge and air pollution
- Split of chemical management procedures and practices

Soil:

- Specific criteria to distinguish against the crop practices
- Inclusion of crop residues
- Alignment across monitoring and management criteria
- Language use across the of six dimensions
- Additional details on Indigenous knowledge
- PSR framework across banding levels

Land & Forestry:

- Removal of conversion from land management
- Inclusion of positive impacts into "Ambitiousness of Forest Strategy"
- Increase general ambition in "Forest Management"
- Cut off dates reviewed for "Deforestation"

Textile Exchange logo, top right

- Inclusion of indigenous people across not only deforestation but all indicators
- Inclusion of small holders throughout "Land Management"
- Refinement on language across "Deforestation", promote restoration rather than gross deforestation and alignment to accountability framework
- Revisions to "Forest Harvesting" description
- Revisions to "Land Management Planning" criteria
- Clarification and additional criteria added "Land Management Planning" and "Forest Management"
- More precise and clearer criteria across land and forestry
- Disbursement of requirements across bandings in "Ambitiousness of Forest Strategy"
- Inclusion of a combined HCV-HCSA approach

Biodiversity:

- Indicator name changes
- Restructure of "Biodiversity Management"
- Review of progression of levels for "Biodiversity Management"
- "Mitigation" indicator removed and reallocated criteria
- Restructure of "Biodiversity Monitoring"
- Inclusion of both plant and animal invasive species
- Inclusion of enhancing and restoration of habitats
- Additional focus on local native species
- Consideration to the surrounding areas of production sites.
- Inclusion of hunting, fishing, or gathering of threatened and endangered plant and animal species is prohibited

Animal Welfare:

- Language use in relation to the Five Domains

Version 3.0 Expert Consultation

Human rights criteria stakeholder engagement

Expert stakeholder interviews were held with the following organizations and individuals:

- Fairtrade
- Better Cotton
- Forest Stewardship Council
- ISEAL Alliance
- World Benchmarking Alliance
- Transformers Foundation
- H&M
- Jessica Grilo

Human rights public consultation

A public consultation was held in March 2023 to gather feedback on the draft human rights criteria for the PFMM. The following organizations and individuals responded to the open consultation:

- Fairtrade USA
- Cotton Connect
- H&M
- BSR
- Jessica Grillo
- Inditex
- Chanel
- Lululemon
- Adidas
- Fairtrade
- Chanel
- Better Cotton
- Transformers Foundation

Feedback was collated and grouped according to the relevant human rights indicator, criterion or theme. The feedback received supported us to:

- Refine and improve the focus of each set of indicator criteria.
- Create a new indicator specifically focused on non-discrimination.
- Strengthen connections and references to international human rights instruments.
- Improve the diagnostic value of the tool and improve the tool's relevance to the factors that matter most for a company's human rights due diligence strategy.

The team discussed with Ergon and agreed how to balance instances where feedback on common areas reflected multiple or divergent perspectives. Implemented recommendations were those which:

- Improved or refined the understanding of human rights implementation quality at each stage of maturity.
- Did not give rise to internal consistency issues within the tool.
- Aligned most closely with the international normative framework on human rights.
- Were measurable across different fiber production contexts, in a way that delivers reliable results.
- Clarified the level of ambition the tool should set (in light of our understanding of the capabilities of standards systems).

Initiative Integrity criteria stakeholder engagement

The following organizations were interviewed to inform the development of the initiative integrity criteria.

- Textile Exchange
- WWF
- World Benchmarking Alliance

Chemistry criteria stakeholder engagement

Zero Discharge of Hazardous Chemicals (ZDHC) were engaged to review and help update the indicators relating to chemical management.