MMCF 2030: Envisioning the Future of Man-made Cellulosic Fibres

FORUM FOR THE FUTURE

TextileExchange
Creating Material Change

A shared Vision for the MMCF sector to make a Net Positive contribution to society and the environment

The defining decade

As this Vision for the future of Man-Made Cellulosic Fibres (MMCF) is being written, we face an unprecedented pandemic that has catalysed a global socio-economic crisis.

This sits in the context of almost inevitable future global disruptions as we race to limit global warming to a maximum of 1.5°C, bring to a halt the sixth mass extinction, and tackle inequality, factionalism and increasingly vulnerable livelihoods.

The decisions we make today are critical in building our socio-economic resilience and regenerating our social and natural systems so that we avoid or reduce the likelihood of these future shocks. Humanity faces an existential race against time.

The Vision we outline here is the MMCF industry's response to this unprecedented call to action.

The role of the MMCF value chain

MMCF such as Viscose/Rayon, Lyocell, Modal and Cupro constitute the second most important group of cellulosic fibres after cotton, with an annual production volume of around 6.7 million tons annually - or approximately 6.2% of the total fibre production volume.[1] Prior to COVID-19, MMCF volumes were expected to increase rapidly over the next 15 years, possibly reaching 10 million tons annually.[2]

The MMCF value chain has the potential to tackle some of the apparel and broader textile industry's most significant sustainability challenges and, as a consequence, make a very real contribution to building resilience and accelerating regeneration. Its unique prospects for realising circular fashion, for instance, contrast sharply with the linear models of economic growth that have left many of our ecosystems on the verge of collapse. As a derivative of wood pulp and other natural plant materials, MMCF can play an important role in regenerating many of these ecosystems, as well as ensuring the health of carbon sinks, which play an essential role in stabilising the Earth's climate.

To date, however, the sector has faced considerable social and environmental challenges – from deforestation and biodiversity impacts related to raw material sourcing, to safe chemical use and labour rights concerns in the production process. As an industry on the cusp of massive growth, there is a narrow window of opportunity to fully harness MMCF's potential.

The MMCF 2030 Vision aims to do just that.

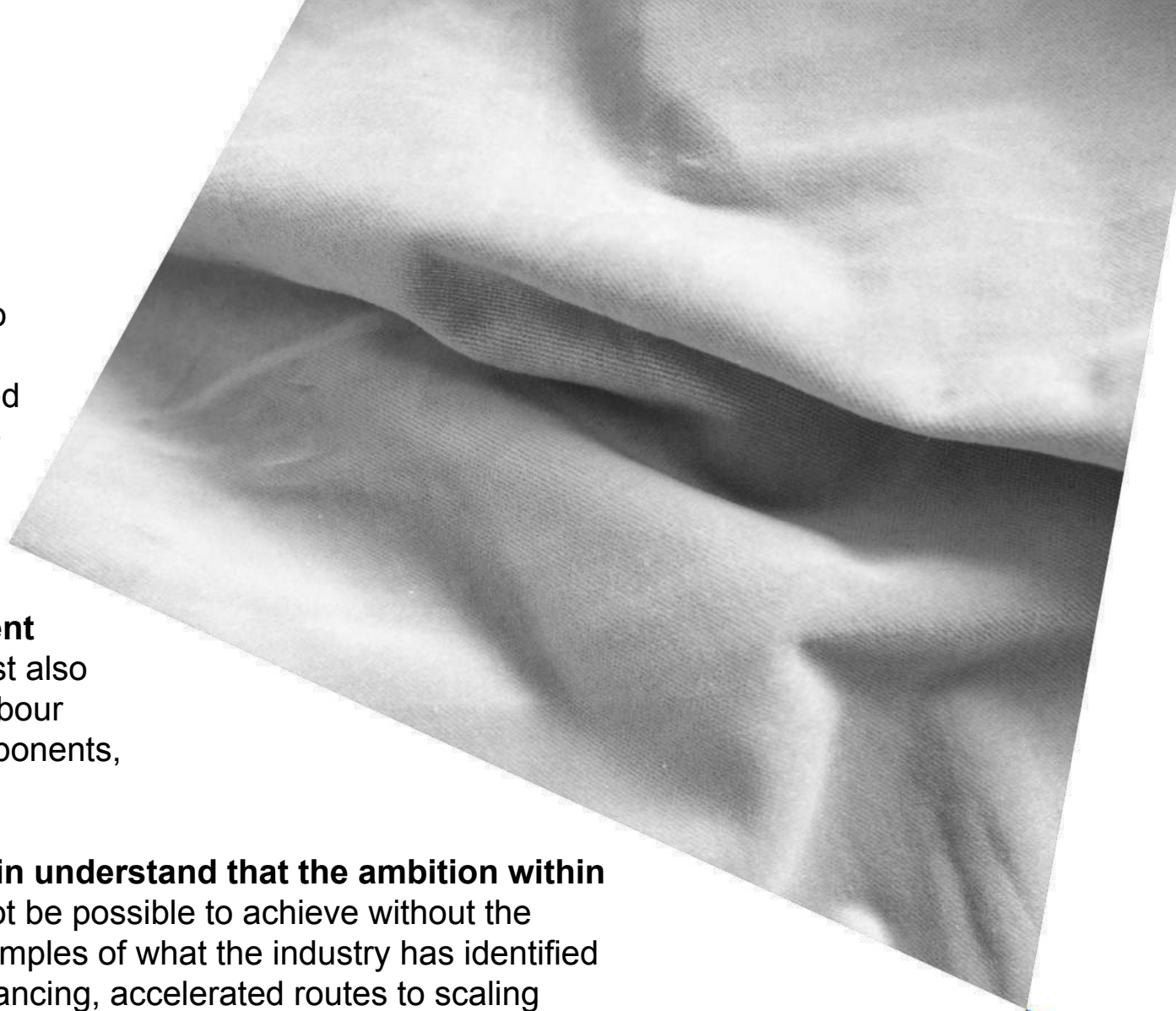
Net Positive MMCF 2030

A Vision for building resilience and accelerating regeneration

In 2030, MMCF will be:	1. Regenerating Ecosystems	2. Producing with Zero Harm	3. Enabling Circular Systems	4. Creating Prosperity	5. Upholding Rights
Through…	• Protection of primary forests • Natural ecosystem restoration • Carbon negative value chain • Landscape approaches	• Zero emissions production • Zero discharge and minimal use of hazardous chemicals • Closed-loop production systems • Radically reduced freshwater withdrawal	• Zero textiles to waste-streams • Circular materials • Incentivising circularity	• Economic value distributed equitably • Living wage and gender parity • Universal access to healthcare and education	• Community empowerment and related access rights • Protecting individual, indigenous and community rights
Enabled by…	Collaboration across the value chain | Sharing best practice and accelerating innovation Full transparency & traceability | Robust metrics for measuring impact | Governance & self-regulation | Flows of finance Affordability of solutions | Enabling Policy | Positive voice and advocacy | Consumer education				

For more detail on how you can get involved, visit the Textile Exchange MMCF Round Table or the Forum for the Future MMCF 2030 page.

The MMCF 2030 Vision



The MMCF 2030 Vision sets out five components where the value chain has real potential to contribute to resilience and regeneration at this critical moment and into the future. Led by co-convenors Forum for the Future and Textile Exchange, these components have been co-created through engagement with over 50 stakeholders from more than 40 organisations representing views from across the MMCF value chain and their stakeholders.

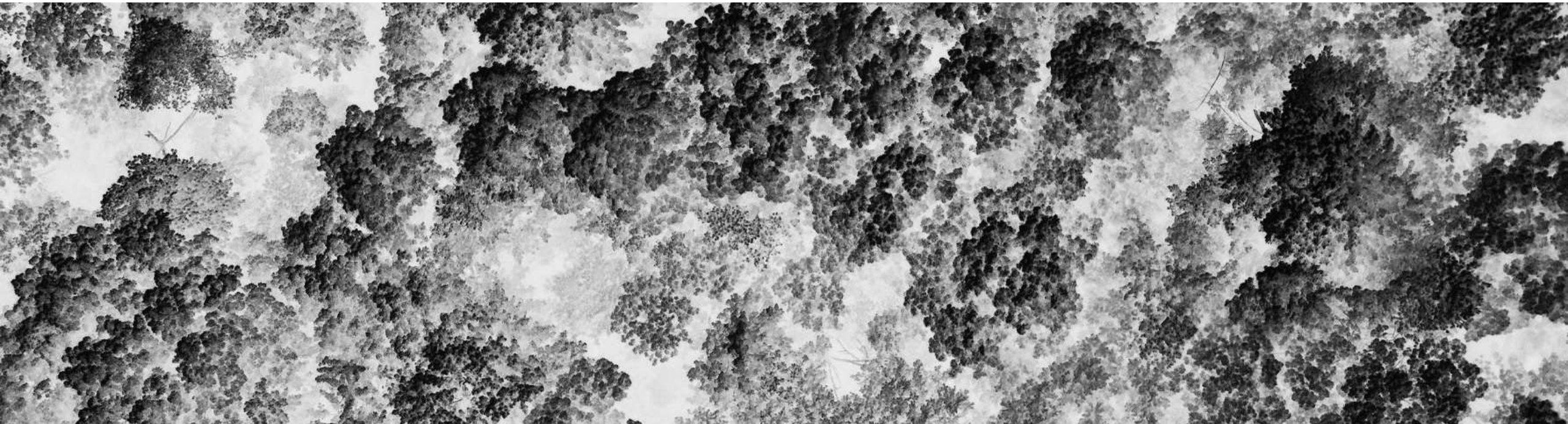
In keeping with the Vision's systemic approach, the five components are to be viewed as interdependent and mutually reinforcing. As such, each component must also inform all other four categories. For instance, regard for labour rights and social well-being must be upheld within all components, and cannot be worked upon in isolation.

Importantly, stakeholders across the MMCF value chain understand that the ambition within this Vision is both necessary and challenging. It will not be possible to achieve without the ten key enablers that constitute its foundations. Three examples of what the industry has identified as enablers to influence and harness are new forms of financing, accelerated routes to scaling innovation and an enabling policy environment.

The MMCF 2030 Vision

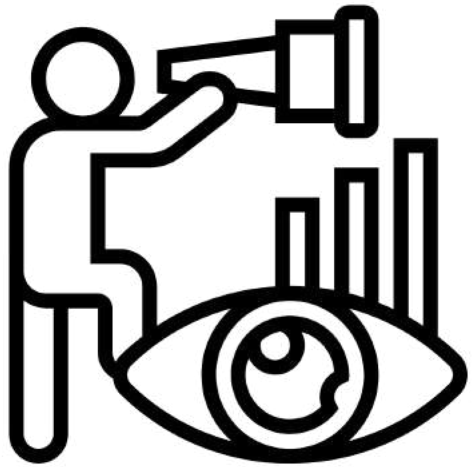
A great deal of activity is taking place already underneath these components and enablers. The purpose of the MMCF 2030 Vision is to help bridge gaps between existing initiatives, standards and the bigger whole, through the adoption of a systems approach.

The Vision seeks to stretch ambition levels towards Net Positive outcomes. Meeting today's standards and showing continuous improvement is an absolute minimum, as becoming Net Positive requires us to look *beyond* what is considered good today. It calls upon the sector to collectively respond to what society and the planet need: resilience and regeneration from source to finished product and beyond.



What does the MMCF 2030 Vision do for me?

- **For producers**, the Vision brings together all the different elements they are working towards in one consolidated whole.
- **For brands**, the Vision provides a consolidated set of ambitions that their sourcing can contribute to.
- **For not-for-profits and other change makers**, the Vision shows how their work is contributing to the greater whole and supports their ambitions.
- **For everyone**, the Vision provides a shared sense of direction and a recognition of what is needed to get there. It sharpens the focus on what everyone can contribute their best skills to.



The MMCF 2030 Vision is not a formal commitment document or standard against which organisations will be measured. It should be used instead to test existing strategies against what is needed to meet Net Positive ambitions, thus informing future research, investment and other priorities. It also seeks to encourage exploring new forms of partnerships, to enable learning and access to new resources for accelerated impact.

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Call to action

This Vision must be achieved through both individual and collective action. We are calling for members of the MMCF value chain and its stakeholders to:

1. **Collectively tackle key innovation and implementation gaps:** The inherent value of this Vision is that it creates the space to explore the most sustainable pathways forward in a collaborative manner. *What innovations can you accelerate to scale? Who can you collaborate with to implement pioneering systems more quickly?*

2. **Embed the Vision ambition into your strategies and policies:** Aligning decision-making to the ambition within the Vision will enable organisations to add up to more than the sum of their parts. *Do your corporate and project targets align with the level of ambition in the MMCF 2030 Vision? How might you contribute more over time? Are the components and enablers within this Vision reflected in your sourcing policies, marketing approaches, innovation priorities?*

3. **Join the collective to make this Vision a reality:** Progress towards the MMCF 2030 Vision will be driven through workstreams related to each Vision component. *Textile Exchange's MMCF Round Table and the new Hub will act as a space to review progress, set objectives, learn together and move towards the Vision. To further explore what role you might play, visit the Textile Exchange MMCF Round Table or the Forum for the Future MMCF 2030 page.*

About the co-convenors

Forum for the Future is an international non-profit with a mission to accelerate a big shift towards a sustainable future. It works with global organisations, to address complex challenges in systems such as food, energy, apparel, textiles, nutrition and shipping.

Forum has over 20 years of experience in using futures processes to arrive at a shared vision across diverse stakeholders, and has helped conceive and successfully run a number of initiatives in the apparel system. These include Fashion Futures, Cotton 2040 (a collaboration to accelerate the mainstreaming of sustainable cotton), as well as Circular Leap Asia (a programme that empowers apparel manufacturers in Asia to fast-track circular fashion solutions).

Forum's most critical value in all of the initiatives it leads is its role as a **neutral convenor**. In other words, we have no vested interest in any one material over another, one company over another. Our key focus is in supporting companies across a range of sectors to engage in transformational change to optimise sustainability outcomes.

Find out more at www.forumforthefuture.org or by following @Forum4theFuture on Twitter.

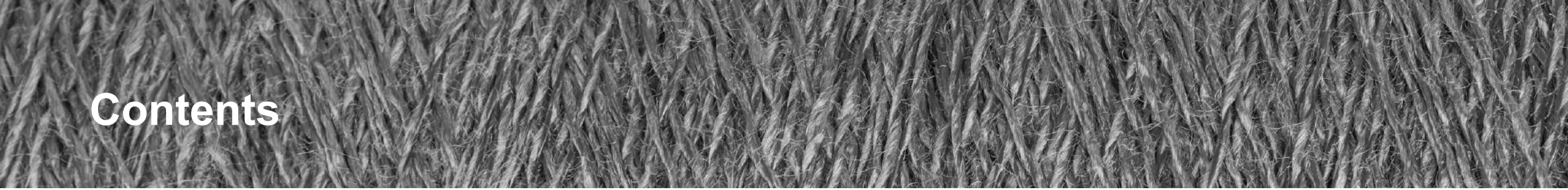
About the Co-Convenors

Textile Exchange is a global non-profit that works with its members to drive industry transformation in preferred fibres, integrity and standards and responsible supply networks. Textile Exchange identifies and shares best practices regarding farming, materials, processing, traceability and product end-of-life in order to reduce the textile industry's impact on the world's water, soil and air, and the human population.

With staff and ambassadors located in 14 countries, and member companies and organisations from more than 25 countries, Textile Exchange is an ideal co-convenor for *MMCF 2030*, providing an industry platform to take forward collaborative actions that emerge from the visioning exercise.

Textile Exchange brings its existing network built around its MMCF Round Table sessions, as well as industry-specific knowledge and insights gleaned through its signature programmes, such as the Corporate Fiber and Materials Benchmark (CFMB) and Preferred Fiber and Materials Market Report.

Find out more at www.TextileExchange.org or follow us on Twitter at @TextileExchange.



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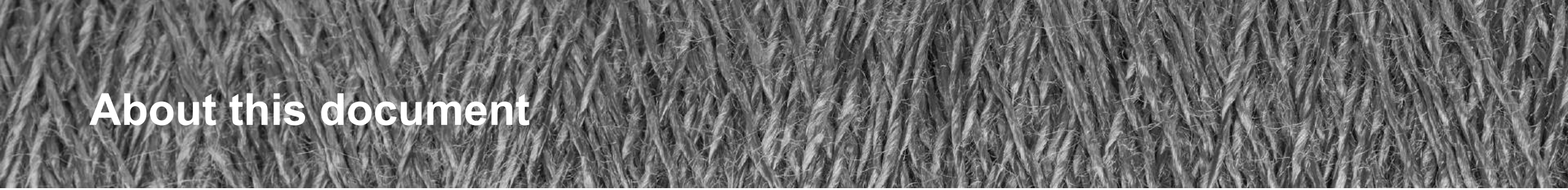


About this document

Man-Made Cellulosic Fibres (MMCF) could revolutionise the textile and fashion industries, with ripple effects that would be felt deep into society and across our environment. This publication sets out how the industry aims to make that impact 'Net Positive' throughout its lifecycle. The MMCF 2030 Vision is the culmination of engagement with over 50 stakeholders from more than 40 organisations, representing views from across the MMCF value chain and beyond. This process was led by co-convenors Forum for the Future and Textile Exchange.

In the following pages, you will find:

- **An explanation of what being 'Net Positive' means**: the principles upon which this Vision is built and the logic behind moving beyond today's best practice to what the planet and society need.
- **The MMCF 2030 Vision**: a handy short summary version, and the detail behind all five Vision components and their enablers, including the outcomes that it seeks to achieve, examples of actions that are required to meet the level of ambition, examples of current practice, and what industry says must still happen in order to meet Net Positive ambitions.
- **A call to action**: how to immediately use this Vision, key innovations required, and how to join the community involved in making this Vision a reality.
- **In annexes**: the process followed to arrive at this Vision, who has contributed, how it was funded, and key references.

Forum for the Future and Textile Exchange hope that this document will be used by MMCF producers, buyers and other stakeholders to inspire more transformational strategies, operational and sourcing policies, funding flows, as well as collective innovation, in order to ensure that the Vision becomes reality.

Introduction

Why MMCF? And why a Vision?

MMCF such as Viscose/Rayon, Lyocell, Modal and Cupro constitute the second most important group of cellulosic fibres after cotton, with an annual production volume of around 6.7 million tons annually - or approximately 6.2% of the total fibre production volume.[3] Prior to COVID-19, MMCF volumes were expected to increase rapidly over the next 15 years, possibly reaching 10 million tons annually.[4]

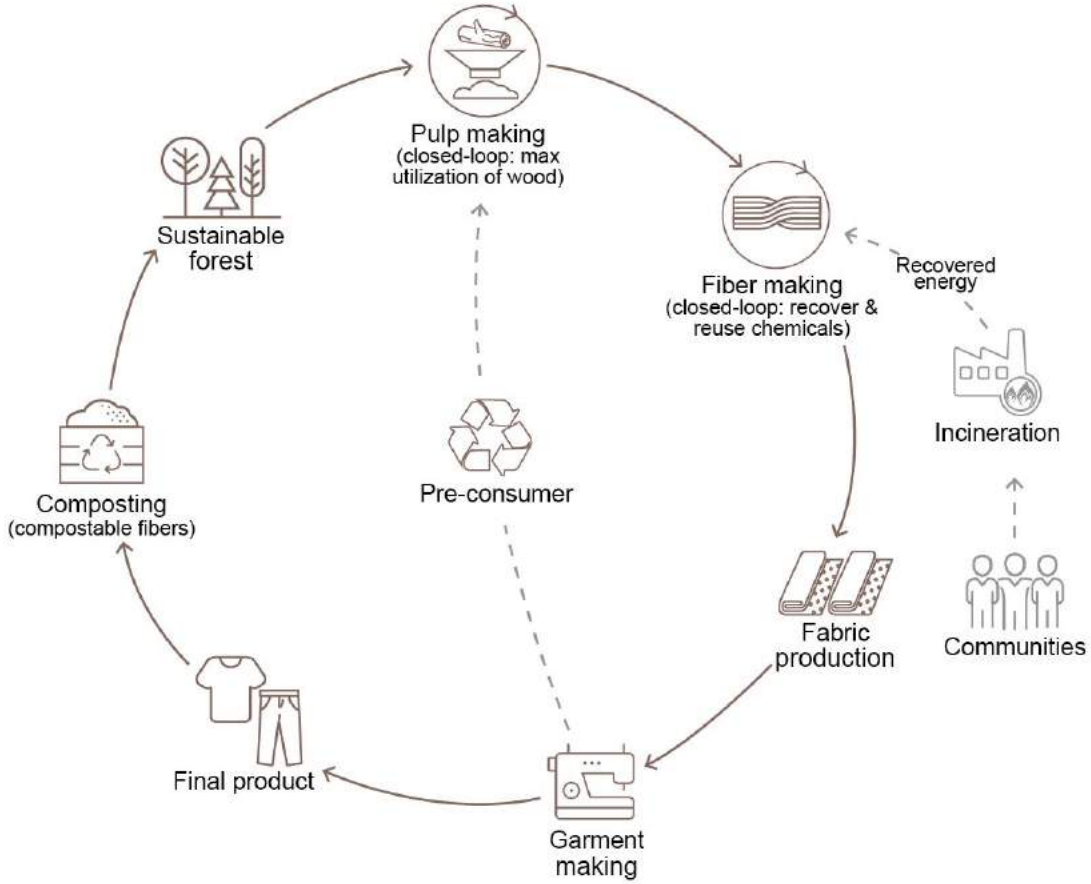
As a sector on the cusp of massive growth, MMCF has the potential to tackle some of the apparel and broader textile industry's most significant sustainability challenges. Just two examples of this are its unique prospects for realising circular fashion through pioneering the reconstitution of fibres, and its potential in regenerating ecosystems and providing carbon sinks within its value chain. Yet, to date, the MMCF sector has faced considerable social and environmental challenges – from deforestation and biodiversity impacts, as well as labour rights concerns related to raw material sourcing, to toxic chemical use and discharge in the production process.

Introduction

Why MMCF? And why a Vision?

Significant strides have been made in traceability, transparency, accountability mechanisms, greater dialogue between key actors in the industry, capital investment in cutting-edge technology, as well as movements in policy and in brand sourcing norms. Yet, many of these challenges persist to varying degrees. In part, this is due to initiatives being focused on particular scopes, limiting the ability to connect with others in a systematic manner that enables learning and accelerated impact.

Crucially, the industry recognises that a holistic approach to addressing interrelated challenges within the full value chain would offer huge **opportunities for deeper systemic change**. The MMCF 2030 Vision shows this holistic picture, and enables the industry and its stakeholders to view each part in the context of the whole.



(Source: Lenzing)

Building on existing standards

It is important to acknowledge that much is already being done that goes some way towards the MMCF 2030 Vision. The overall purpose is therefore to help bridge gaps between existing initiatives and the bigger whole – through the adoption of a systems approach – to help realise the full potential of MMCF as a sustainable fibre.

In doing so, the Vision seeks to complement existing standards and initiatives by inspiring actors to look *beyond* what might be possible today – a call to action that seeks to stimulate new kinds of partnerships and investment.

Accordingly, **the MMCF 2030 Vision is not intended as a formal commitment document or standard against which organisations will be measured**. Instead, the core purpose is to reflect – and continue to strengthen – a collective sense of ambition that needs to be held and tracked by the industry in order to move the sector forward. For this reason, existing standards* are cited as a reference point to what must constitute the minimum level of commitment, but are not the focus of the Vision itself.

This visioning has been possible with the support of:

APR · AsahiKASEI · Forum for the Future · Partnership for Sustainable Textiles · Sateri · Target · Textile Exchange – Creating Material Change

*for more information on relevant standards please refer to the Textile Exchange MMCF resources on https://textileexchange.org/

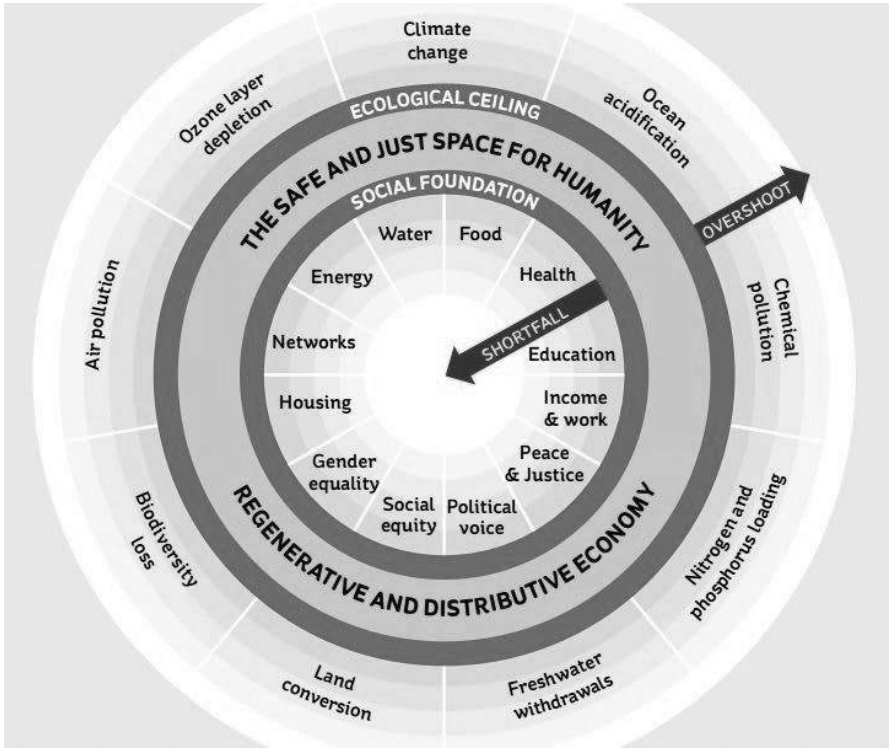
Principles behind the MMCF 2030 Vision

The ultimate goal of sustainable development is to enable all to flourish - current and future generations - within the means of the planet. To achieve this, the Doughnut Economics framework invites us to think more broadly about the true inputs and outputs of our economic cycle.[5] The MMCF 2030 Vision has adopted this approach to explore how the industry can more effectively contribute to the strengthening of our social foundations and the regeneration of our ecological systems.

Using the 'Doughnut' has enabled the MMCF industry to build a collective understanding of its most significant contributions and its potential, and how its work in one area can strengthen or undermine another. For instance, it is keenly aware of the need to mitigate climate change and biodiversity loss through the management of sustainable forests. But what steps must be taken to ensure that the sector's growth improves socio-economic outcomes for those whose livelihoods depend on them? Similarly, how can progress in chemicals management further enhance social outcomes related to health, food security or access to clean water?

The framework has also enabled a systematic analysis of where there are real opportunities for further action. Unlocking these opportunities involves exploring how disproportionate impacts on marginalised groups can be further mitigated. Other related questions include: to what extent can circular economy pilots support a just transition?

The challenges set out in relation to each component of the Vision are informed by the imperative to thrive within the planet's environmental and social boundaries.

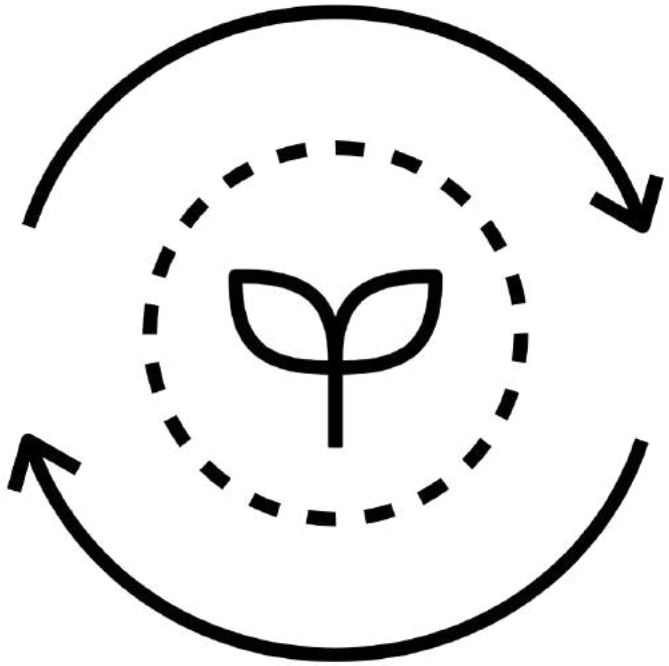


Principles behind the MMCF 2030 Vision

The Vision sets out what the MMCF industry collectively agrees is required to operate within the 'Doughnut'. The industry is setting out an ambition to not only do less harm, but in fact, to have a Net Positive impact by building resilience and scaling regeneration. This requires a shift in ways of doing business. It means operating by Net Positive principles (see next page) that are designed to elevate ambition beyond risk avoidance and incremental improvements.[6]

MMCF has unique Net Positive potential in many ways, including:

- **It could realise circular fashion**. Being able to honestly and credibly share progress on this area, and going beyond pilots to catalysing the collection and sorting infrastructure on a global scale could exemplify one area of Net Positive ambition.
- **It could re-generate key ecosystems and ensure the health of vital areas of high carbon stock (HCS) and conservation value (HCV)**.
- **It could anchor much needed cross-commodity, landscape-level approaches** to building long-term community prosperity and resilience.
- **It could exemplify the acceleration of climate and other science**. With regards to innovation, contributing to accelerating the science openly and enabling others to implement related measures is an additional reflection of Net Positive ambition.



Science-based approaches and social impact
While the Vision does not set new standards for forestry, chemicals, or any other part of the supply chain, its focus on alignment behind Net Positive ambitions seeks to serve as guidance to inform scientific and lifecycle-based approaches. This must include a greater focus on social impact.

What do we mean by ‘Net Positive’?

Material

Focuses on the industry’s greatest impacts on society and the environment, as well as on its largest areas of unique future potential. A positive impact in one material issue cannot compensate for the negative impact or footprint in another. For instance, because MMCF have the potential to reconstitute quality fibres from waste they have a major and unique role in closing the loop for fashion.

Regenerative

Revitalises the natural world, strengthens communities, and improves individual wellbeing over the long-term. A Net Positive approach generates long-term beneficial impacts and does not cause irreversible losses in biodiversity. This involves the MMCF sector managing its waste and use of hazardous chemicals, improving biodiversity outcomes on land impacted by sourcing and distributing value equitably across the value chain.

Transparent

A Net Positive approach requires that progress be shared openly and honestly. This requires the MMCF sector to have a clear and agreed way to measure progress across geographies. Reporting on actions and progress easily accessible. While Net Positive is a journey, and progress is recorded, absolute reductions or improvements matter most.

Systemic

A Net Positive approach seeks to influence and catalyse positive change across the value chain, and commit to influencing wider social, environmental, and economic systems. This could include industry-led partnerships with government to develop consistent global standards on banned chemicals in all regions. Also, collaborating at a landscape level, taking a cross-commodity approach to regenerating land and watersheds is critical.

MMCF 2030 Vision

Where it came from and the importance of interrelationships

Forum for the Future and Textile Exchange have engaged with over 100 stakeholders across more than 80 organisations, representing views from across the MMCF value chain and beyond in the creation of the Vision that is set out in the following section.

The engagements were anchored around a visioning workshop at the Textile Sustainability Conference in Vancouver in October 2019, two online visioning sessions with stakeholders based in China and wider Asia in March 2020, surveys, as well as ongoing engagement with Advisory Partners. Together, we arrived at five Components to the Vision and a set of Enablers, as summarised in the graphic on the following page.

In line with taking a systemic approach, the MMCF 2030 Vision requires stakeholders to regard the five components as interdependent and mutually reinforcing. To this end, the regenerative principle set out in the first component is one that must also inform all other four categories. Similarly, regard for labour rights and social wellbeing must be upheld alongside all other components relating to economic prosperity and environmental protection.

Importantly, it will not be possible to achieve the Vision without the ten key enablers that constitute its foundations. New forms of financing, accelerated routes to scaling innovation and an enabling policy environment are just three examples of what the industry recognise as enablers they must influence and harness.

Net Positive MMCF 2030

A Vision for building resilience and accelerating regeneration

In 2030, MMCF will be:	1. Regenerating Ecosystems	2. Producing with Zero Harm	3. Enabling Circular Systems	4. Creating Prosperity	5. Upholding Rights
Through…	• Protection of primary forests • Natural ecosystem restoration • Carbon negative value chain • Landscape approaches	• Zero emissions production • Zero discharge and minimal use of hazardous chemicals • Closed-loop production systems • Radically reduced freshwater withdrawal	• Zero textiles to waste-streams • Circular materials • Incentivising circularity	• Economic value distributed equitably • Living wage and gender parity • Universal access to healthcare and education	• Community empowerment and related access rights • Protecting individual, indigenous and community rights
Enabled by…	Collaboration across the value chain | Sharing best practice and accelerating innovation Full transparency & traceability | Robust metrics for measuring impact | Governance & self-regulation | Flows of finance Affordability of solutions | Enabling Policy | Positive voice and advocacy | Consumer education				

The following pages contain further details on the five Vision components and enablers.
To find out how you can get involved, visit the Textile Exchange MMCF Round Table or Forum for the Future MMCF page.

#1 Regenerating Ecosystems

Why this matters
for a Net Positive MMCF sector in 2030

MMCF are primarily derived from the ‘cellulose’ or wood pulp from fast-growing, regenerative trees such as eucalyptus, beech and pine. More than 150 million trees are logged from forests and plantations every year as a result. If placed end to end, the trees used to produce cellulosic fibres would circle the Earth seven times.[7]

While the heavy reliance on wood pulp has raised concerns over deforestation, forecasts in growth likewise highlight the increasing influence that the MMCF industry can have in determining how carbon sinks are managed and how biodiversity outcomes might be optimised in the sourcing of feedstock.

This is critical in light of the IUCN’s declaration that halting the loss and degradation of natural systems, and promoting their restoration, have the potential to contribute over one-third of the total climate change mitigation required by 2030.[8] It is additionally so as more than 1 billion people depend on forests for their livelihoods worldwide.[9]

The sector’s push for alternative feedstocks such as bamboo, soy and sugar cane further extends MMCF’s potential to regenerate agricultural land. Managing effluents is also essential to the health of waterways, crops and communities in proximity to production sites.

In all cases, the sector also has a critical role to play in ensuring that regenerative efforts build the resilience of both the ecosystems and the communities that rely upon them.

#1 Regenerating Ecosystems
is underpinned by three key action areas:

Protection of primary forests

- Zero deforestation, protect primary forest
- Conservation of remaining areas of primary forest, areas of High Carbon Stock (HSC) and High Conservation Value (HCV)
- Planting of new forests and restoring degraded forests
- Significant reduction of feedstock from HCS areas

Natural ecosystem restoration

- Ensuring sustainable forest management or actively restoring degraded production forests (including certifications, and restoring natural ecosystem processes)
- Allocation of biodiversity conservation and regeneration areas in line with science

Carbon negative value chain

- Managing land for minimum emissions and maximum carbon sequestration, particularly for High Carbon Stock areas
- Significant increase in use of renewable energy throughout the value chain
- Phase out fossil fuels throughout the value chain

Landscape approaches

- Fostering landscape interventions that generate positive impacts for people and nature

Key challenges
we need to address collectively

Sustainable forest management certification, traceability and chain of custody need to be scaled significantly in order to understand and incentivise progress. This means tackling complex structural barriers within and beyond the value chain.

Industry and experts are advocating science-based and more systemic approaches to make the right choices, particularly when exploring alternative feedstocks. This will require greater transparency of data and case-by-case exploration of possible unintended consequences.

As new feedstocks scale in MMCF, these new value chains must face the same rigour as, and learn from, the forestry value chain. Ensuring the MMCF industry plays its key role in creating and maintaining carbon sinks will require difficult choices - particularly for those with plantations on High Carbon Stock areas - and will need finance mechanisms that recognise new forms of value creation, such as protecting ecological services.

Regenerating ecosystems will require deep partnerships with local communities. This must include their involvement in landscape based approaches and additionally depends on the development of suitable financial mechanisms to support communities who are well-placed to drive change.

#1 Regenerating Ecosystems

Protection of primary forests

What is already happening?

- Brand commitments to sustainable sourcing of wood fibre materials and cellulosic fibres including using CanopyStyle criteria to avoid areas of HCV and HCS
- Existing standards (and certifications) in responsible / sustainable forestry / forest management
- Zero deforestation commitments from fibre producers
- Producers supporting reforestation projects in specific precincts
- Improving efficiency in manufacturing to reduce losses and waste, reducing demand for feedstock
- Producers audited and assessed against CanopyStyle criteria

What else does the industry say needs to happen?

- Ensure standards continuously improve to reflect science and drive best practice
- Ensure standards are in line with community development and support community-managed forests or local conservation projects, in partnership with local communities and NGOs
- Ensure that financial mechanisms support a value proposition for communities well placed to drive change
- Ensure decision-makers are exposed to and understand the forestry part of value chain
- Industry-wide effort on forest protection, conservation and restoration

Voices from the Industry

"Measure biodiversity outcomes rather than setting area-based targets that may have little to do with the goal of restoring ecosystems. Aim for no net loss of biodiversity."
(Forestry expert)

#1 Regenerating Ecosystems

Protection of primary forests

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- 50% of land under protection (no resource extraction or land conversion) by 2050 **(UN Biodiversity Report, 2019)** [10]
- 30% of land under protection (no resource extraction or land conversion) by 2030 **(National Geographic, Campaign for Nature, Wysse Campaign for Nature, 2019)**[11]
- Eliminate 70% of the pulp fibres coming from 'original forests' (i.e., never-before logged) and 30% of the pulp fibres from plantations that endanger rich carbon stores and prime habitat **(Canopy, 2020)** [12]
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss **(SDG 15 / UN Global Forest Goals)** [13]

Examples of actions recommended by other stakeholders

- Systems must be established to measure, track, assess, and report on the status of ecosystem services, and an architecture must be created to integrate this information into national development policies and planning (Background Analytical Study 1 for UN Forum on Forests)[14]
- Supporting, expanding and promoting effectively managed and ecologically representative networks of well-connected protected areas and other multifunctional conservation areas, such as other effective area-based conservation measures (UN Biodiversity Report, 2019)
- Using extensive, proactive and participatory landscape-scale spatial planning to prioritize land uses that balance and further safeguard nature and to protect and manage key biodiversity areas and other important sites for present and future biodiversity (UN Biodiversity Report, 2019)

#1 Regenerating Ecosystems

Natural ecosystem restoration

What is already happening?

- Brand commitments to regenerative agriculture protocols and targets
- Brand commitments to sustainable sourcing of wood fibre materials and cellulosic fibres including using CanopyStyle criteria to avoid areas of HCV and HCS
- Existing standards (and certifications) in responsible / sustainable forestry / forest management
- Producers supporting reforestation projects in specific precincts
- Production protection model where producers take responsibility for economic, social and environmental imperatives in managing landscapes
- Producers audited and assessed against CanopyStyle criteria

What else does the industry say needs to happen?

- Ensure standards continuously improve to reflect science and drive best practice
- Robust assessment of alternative feedstocks in comparison to sustainable wood products (e.g. understanding the merits of bamboo)
- Manage plantation forests as part of a wider landscape, moving towards increased natural ecosystem services and measuring biodiversity and other conservation gain outcomes as key indicators of success
- Industry-wide effort on forest protection, conservation and restoration
- Ensure standards are in line with community development and support community-managed forests or local conservation projects, in partnership with local communities and NGOs
- Ensure that financial mechanisms support a value proposition for communities well placed to drive change
- Ensure decision-makers are exposed to and understand the forestry part of value chain
- National governance framework to set up accountabilities and roles of private companies in natural ecosystem restoration
- Enable fair distribution of cost of certification

Voices from the Industry

"It's challenging to set a target for recycled content without first understanding its impact. We need to think holistically."
(Fibre producer)

"Alternative feedstock is absolutely something we should be striving for. But working together to identify the most viable alternative should take priority over a focus on a set percentage until it has been scientifically informed."
(Fibre producer)

"We need to translate brand commitments to regenerative protocols into value chain action,"
(Civil society)

#1 Regenerating Ecosystems

Natural ecosystem restoration

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- Eliminate 70% of the pulp fibres coming from 'original forests' (i.e., never-before logged) and 30% of the pulp fibres from plantations that endanger rich carbon stores and prime habitat **(Canopy, 2020)** [12]
- Replace 1.5% (50,000 tonnes) of wood pulp with virgin wood from new well-managed and well-sited plantations/ forests **(Canopy, 2020)**
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss **(SDG 15 / UN Global Forest Goals)** [13]
- The New York Declaration on Forests that builds on and extends the Bonn Challenge to restore 350 million hectares by 2030

Examples of actions recommended by other stakeholders

- Systems must be established to measure, track, assess, and report on the status of ecosystem services, and an architecture must be created to integrate this information into national development policies and planning (Background Analytical Study 1 for UN Forum on Forests)[14]
- Using extensive, proactive and participatory landscape-scale spatial planning to prioritize land uses that balance and further safeguard nature and to protect and manage key biodiversity areas and other important sites for present and future biodiversity (UN Biodiversity Report, 2019)

#1 Regenerating Ecosystems

Carbon negative value chain

What is already happening?

- Enabling independent scientists to understand greenhouse gas (GHG) emission patterns from plantations and forests
- Alignment between the Fashion Climate Charter and Science Based Target initiative (SBTi) and associated working groups
- Update GHG Protocol for accounting of carbon emissions from land use, carbon removals and capture
- Some pulp producers view forest plantations as carbon sinks and commit to restore degraded forests
- Some pulp producers have convened independent expert working groups to inform science-based decision making on High Carbon Stock areas
- Remote sensing and monitoring methods to estimate carbon storage
- Some producer emissions targets, with some committing to net zero targets
- Some producers reducing carbon emissions through renewable energy and carbon credit schemes
- Leading brand commitments to RE100 and other renewable energy targets
- Some retailers improving the energy efficiency of stores, offices, distribution networks and supply chain
- Some brands working directly with supply chain actors to improve energy efficiency through application of the Higg Index Facility Environmental Module (FEM 3.0)

What else does the industry say needs to happen?

- Halt further plantation development, construction of canals, and other infrastructure within peatland.
- If peatland is already planted, companies should have a measurable plan in place to mitigate emissions, and where possible, restore the peat ecosystem in collaboration with local communities.
- Align across brands on methodology for supply chain carbon accounting and data collection
- Develop carbon sequestration technologies / incentivise change through sustainable finance and policy
- Ensure that improving efficiency and emissions controls is the norm
- Advance science-based understanding and management of tropical peatland landscapes.
- Commit to science-based targets for carbon emission reduction aligned with global targets of zero net emission by 2050.

Voices from the Industry

"We must actively work together to identify carbon hotspots in the supply chain and push for the development of innovative funding mechanisms to reduce carbon emissions within them."
(Producer)

"We need to think about what low GHG viscose looks like."
(Civil society)

"We can't let not having perfect metrics and measuring systems hold up urgent climate action. We need to take science aligned action when metrics aren't yet fully there. This includes regenerative agriculture"
(Civil society)

"We have to foresee unintended consequences and mitigate them when taking on new approaches."
(Civil society)

#1 Regenerating Ecosystems

Carbon negative value chain

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- 50% of land under protectection (no resource extraction or land conversaion) by 2050 **(Global Deal for Nature)**[15]
- Designate 20% of land as Climate Stabilisation Areas **(Global Deal for Nature)**
- 7.5 million hectares of new forest planted on land not prioritised for food production, habitat restoration or conservation or carbon sequestration to enable restoration of plantations on HCS and HCV areas **(Canopy, 2020)**
- 100% renewable energy by 2050 at the latest **(RE100)**[16]
- Internal combustion engines phased out by 2050 **(in line with IPCC 1.5 degree scenario)**[17]
- Coal phased out entirely by 2040 in developed nations and 2050 in developing **(in line with IPCC 1.5 degree scenario)**
- Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy **(SDG 13)**[18]

Examples of actions recommended by other stakeholders

- Commit, develop, submit and announce Science Based Targets on climate change mitigation and emissions abatement (Science Based Targets Initiative)[19]
- Partner with experts, businesses, investors, environmental advocates and other stakeholders to develop and implement a decarbonization strategy for the fashion industry, including by developing a work programme and tools necessary to achieve the GHG emission reduction targets (UNFCCC Fashion Charter)[20]
- Join the call to action to world leaders for a net-zero recovery from COVID-19 (Science Based Targets Initiative)
- Conservation of 30-50% of world's forests by 2030. Eliminate feedstocks from HCS areas from MMCF supply chain. Identify appropriate sites for planting trees for fibre to enable restoration of HCS and HCV areas (Canopy, 2020)
- Identify 50 million to 60 million tonnes of agricultural fibre feedstock per year that is logistically available while ensuring that soil carbon is not compromised (Canopy, 2020)

#1 Regenerating Ecosystems

Landscape approaches

What is already happening?

- Industry collaboration with research institutions that study, champion and implement landscape approaches
- Areas for Priority Transformation (APT) programmes, consisting of robust landscape diagnostics using the Starling satellite monitoring system to observe forest cover change and understand the sources and drivers of deforestation
- UN Decade on Ecosystem Restoration collaboration with private sector, for example the 20x20 initiative partners with stakeholders from public and private sector to upscale restoration projects.
- Standards in commodity value chains are tending towards landscape level approaches or recognising their importance
- Tropical Forest Alliance and Forest Positive Vision
- IDH Production Protection Inclusion model
- WRI's Global Restoration Initiative

What else does the industry say needs to happen?

- Map all existing sourcing regions for MMCF, along with corresponding opportunities and challenges in each. This mapping should seek to determine how the MMCF sector can use its leverage to intervene in a manner that complements and accelerates the goals already established through multi-commodity or cross-sectoral approaches
- Use natural ecosystem indicators to determine how landscapes are functioning
- Promote production-protection model to encourage those who produce from the land to invest back in the protection and management of conservation areas and in restoration
- Invest in nature and recognize nature-based solutions to climate change

Voices from the Industry

"It remains critical to get decision makers around a map, boots on the ground, armed with facts. We can then work together to foster lasting value propositions for and with local people and key stakeholders."
(Civil Society)

"We need to be mindful of the limitations of a top down approach. Partnerships with local communities is key to driving environmental and social outcomes."
(Civil society)

"The MMCF sector should look at how other commodities are resolving similar challenges, and lend its support to leverage good landscape approaches."
(Civil society)

#1 Regenerating Ecosystems

Landscape approaches

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss **(SDG 15)**
- End hunger, achieve food security and improved nutrition and promote sustainable agriculture **(SDG 2)**
- Ensure sustainable consumption and production patterns **(SDG 12)**
- Promote integrated landscape management with the goal of adapting to and mitigating climate change **(The African Resilient Landscapes Initiative (ARLI))**

Examples of actions recommended by other stakeholders

- Landscapes and their components have multiple purposes; trade-offs must reconcile multiple needs, preferences and aspirations (IISD)[21]
- Landscape approaches need to provide a framework to integrate policy and practice for multiple land uses, within a given area, to ensure equitable and sustainable use of land while strengthening measures to mitigate and adapt to climate change (Reed et al)[22]
- Promote sustainable agricultural and agroecological practices, such as multifunctional landscape planning and cross-sectoral integrated management, that support the conservation of genetic diversity and the associated agricultural biodiversity. Incorporate knowledge from various systems, including the sciences and sustainable indigenous and local practices. (UN Biodiversity Report, 2019)
- Use a combination of measures and practices, including: (a) well-managed and connected protected areas and other effective area-based conservation measures; (b) reduced impact logging, forest certification, payment for ecosystem services, among other instruments, and reduced emissions from deforestation and forest degradation; (c) support for ecological restoration; (d) effective monitoring, including public access and participation as appropriate; (e) addressing illegal activities; (f) the effective implementation of multilateral environmental agreements and other relevant international agreements by their parties; and (g) promoting sustainable, biodiversity based food systems. (UN Biodiversity Report, 2019)

#2 Producing with Zero Harm

Why this matters
for a Net Positive MMCF sector in 2030

One of the greatest criticisms of the MMCF sector is its current reliance on a number of highly toxic and corrosive chemicals - most notably carbon disulphide (CS_2). This chemical solvent, which is at the heart of the Viscose and Modal production process, has been linked to numerous serious health conditions due to water and air pollution around MMCF production sites.[23]

The MMCF sector actively acknowledges the serious threat that these chemicals can pose to human health and the environment, if not adequately managed. Leading producers have committed to responsible chemical management practices and closed-loop production systems, which capture and reuse chemical input instead of releasing it into the environment.

In April 2020, the ZDHC Roadmap to Zero Programme (ZDHC), an industry-led collaboration of brands, value chain affiliates and associates, released a set of MMCF Guidelines on limits for wastewater, sludge, air emissions and chemical recovery during fibre production. While these guidelines are essential in driving immediate improvements in manufacturing practices, the sector must continue to strive beyond today's best practices.

To achieve production with zero harm by 2030, the MMCF sector must invest in research that will allow for its transition towards production processes that are less reliant on CS_2 and other hazardous substances, including NaOH and H_2SO_4.

#2 Producing with Zero Harm
is underpinned by four key action areas:

Zero emissions production

- Radically reduce air emissions relating to hazardous chemicals used in producing fibres
- Radically reduce scope 1, 2 and 3 GHG emissions throughout the value chain

Zero discharge and minimal use of hazardous chemicals

- Radically reduce hazardous input substances
- Best-in-class chemical management
- Increase use of clean chemicals that enable circularity
- Zero discharge of hazardous wastewater and sludge

Closed-loop production systems

- 100% chemical recovery in production of fibres
- Closed loop production in line with EU BAT

Radically reduced freshwater withdrawal

- Radically reduce freshwater withdrawal in the production of fibres
- Radically reduce freshwater use throughout value chain

Key challenges
we need to address collectively

The recently released ZDHC MMCF guidelines provide a clear point of reference for sector-wide benchmarking and best practice sharing on hazardous emissions and chemicals management. There is also the opportunity for producers to transition towards the less chemically intensive lyocell production process, following the patent's expiration in 2015.

What remains challenging will be the sector's ability to self-regulate by holding all players accountable to time-bound targets that drive continuous improvement. This will likely require adequate sanctions for producers who fail to consistently meet requirements.

Simultaneously, the sector will be held accountable for the carbon and water intensity of the entire MMCF value chain, in adherence with the 17 Global Sustainable Development Goals. This entails understanding any potential trade-offs in terms of energy intensity required to close the loop on water and chemicals. The ideal set up will be dependent on the water and energy profile of the production region.

What is clear is that MMCF producers face an unenviable list of competing capital investment needs to pilot and scale various technologies to achieve improved performance across all metrics. There is an urgent need for financing mechanisms that will allow for these investment risks to be shared collectively, and more equally, across the entire MMCF value chain.

Zero emissions production

What is already happening?

- Brand and producer are setting carbon emissions reductions targets
- Producers are aligning to ZDHC MMCF air emissions guidelines (published April 2020)[24]
- Clean by Design collaboration to reduce waste, improve efficiency and overall performance of environmental management systems in manufacturing

What else does the industry say needs to happen?

- Continuous process and technological improvements to reduce carbon intensity of manufacturing process, supported by sustainable finance mechanism
- Common textile value chain decarbonisation goal set in alignment with the UN Fashion Industry Charter and Science-Based Targets Initiative
- Engage, evaluate, track, monitor and reduce Scope 3 emissions as per the GHG Protocol standards

Voices from the Industry

"Collaborations like Clean by Design provides a model for how we can work effectively together to achieve real results across the supply chain. That was focussed on fabric mills, but surely we can apply the same principles working with fibre producers."
(Brand)

"Regarding scope 3 emissions, some brands try to reach out to our supply chains, but data is difficult to secure and even more difficult to compare. The data we report is based on averages, rather than real emissions. But we have to be careful not to go down the route of trying to secure fully accurate data, when we can already take action on key areas which we know are most responsible for emissions."
(Brand)

Zero emissions production

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Aspirational levels (highest of three -level approach) limit values on air emissions **(ZDHC MMCF Guidelines)**[25]
- Fibre producers to achieve closed loop production, including emission controls, in line with EU BAT over 3-5 year timeframe **(Changing Markets Foundation)**[26]
- Zero GHG emissions by 2030 **(in line with B-Corp targets announced in Madrid)**[27]
- 30% aggregate GHG emission reductions in scope 1, 2 and 3 of the Greenhouse Gas Protocol Corporate Standard, by 2030 against a baseline of no earlier than 2015 **(UN Fashion Industry Charter for Climate Action)**[28]
- Net zero greenhouse gas emissions by 2050 **(UN Fashion Industry Charter for Climate Action)**
- Brands achieve 100% renewable energy by 2030 **(The Fashion PACT)**[29]
- Ensure sustainable consumption and production patterns **(SDG 12)**

Examples of actions recommended by other stakeholders

In April 2020, the ZDHC released a set of Interim Air Emissions Guidelines for the production of MMCF. It provides a unified approach for manufacturing facilities to monitor and test emissions, and systematically and efficiently share emission data with brands and other interested parties.[30]

The ZDHC proposes a three-level approach - ‘foundational’, ‘progressive’ and ‘aspirational’, with recommendations to achieve ‘progressive’ and ‘aspirational’ levels through the application of technologies such as those mentioned in the Reference Document EU Best Available Techniques for the Production of Polymers (BAT).

In its November 2019 report, Changing Markets Foundation underlined its position that the EU BAT is currently the most ambitious and comprehensive standard to address pollution in viscose fibre production. The report emphasised that ambitious and forward-looking standards should be in line - at a minimum - with EU BAT standards.[31]

#2 Producing with Zero Harm

Zero discharge and minimal use of hazardous chemicals

What is already happening?

- Brands and producers commiting to clean chemicals and good chemical management
- ZDHC and other pilots on eliminating hazardous wastewater, sludge and air emissions from production
- Phasing out of CS_2 production technology and replacement with cleaner technology (e.g. lyocell process)

What else does the industry say needs to happen?

- Meet ‘aspirational’ levels published in ZDHC MMCF guidelines, or provide assurance of minimal biological and physico-chemical impact on environment
- Close cooperation with ZDHC to define parameters for MMCF production and dissolving pulp
- R&D and alignment on the types of solvents used and their impact on recyclability
- Complete phase-out of CS_2 technology and replaced with green chemistry
- Analysis of biological and physicochemical impacts to ensure operating within planetary boundaries

Voices from the Industry

“We definitely see producers in China moving in the direction of investing in less chemically intensive production processes like Lyocell. We are also seeing new facilities build in the flexibility for potential alternative feedstock.”
(Fibre producer)

“The work that ZDHC is doing is very good and provides clear value. It will help the industry to be aligned on how we measure and benchmark performance. We should all lend them our full support.”
(Fibre producer)

#2 Producing with Zero Harm

Zero discharge and minimal use of hazardous chemicals

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Normalised best practice chemical consumption rates **(ZDHC MMCF Guidelines)**
- Aspirational levels (highest of three -level approach) for wastewater and sludge limits **(ZDHC MMCF Guidelines)**
- Ensure sustainable consumption and production patterns **(SDG 12)**
- Conserve and sustainably use the oceans, seas and marine resources for sustainable development **(SDG 14)**

Examples of actions recommended by other stakeholders

In April 2020, the ZDHC released a set of Responsible Fibre Production Guidelines and Interim Wastewater Guidelines for the production of MMCF. These provide an aligned approach to both the use and discharge of hazardous chemicals in the MMCF production process. Metrics include chemical recovery rates, recommended consumption of chemicals for Viscose and Modal, as well as wastewater parameters.[32]

"Many factories are responsible for significant historical pollution in the areas where they operate… manufacturers (should) engage with local communities and authorities and consult with them on the best ways to remediate any damage caused to their livelihoods and health. This could include corrective actions to ensure healthy water for drinking, personal use and irrigation (i.e. testing the quality of water, improving monitoring and reporting and ensuring corrective action if pollutants are detected), actions to restore ecosystems (i.e. cleaning up local water bodies and soil, and removing solid waste), etc."

- Roadmap towards responsible viscose and modal fibre manufacturing, Changing Markets Foundation, December 2017[33]

Closed-loop production systems

What is already happening?

- Chemical (CS_2) recovery in production at 92-100%
- Cross-industry sharing of best practice
- Collaboration on ZDHC MMCF Guidelines which include chemical recovery rates

What else does the industry say needs to happen?

- Sector-wide accountability framework and alignment on the standard and verification methods for closed-loop production
- Sector-wide adoption of EU BAT (or equivalent standards) to all processing units
- 100% closed-loop production within manufacturing and production plants and/or actual impact analysis on communities and environment

Voices from the Industry

"There is a relatively small number of MMCF producers. Therein lies the opportunity, but also the bottleneck for change. Ultimately, to achieve sector-wide impact, we must work with all fibre producers and not just the top ten, even if they represent a significant percentage of the production." (Brand)

#2 Producing with Zero Harm

Closed-loop production systems

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Aspirational (highest of three -level approach) chemical recovery rates for sulphur and sulphate **(ZDHC MMCF Guidelines)**
- Closed loop production, minimally in line with EU BAT within a three-to-five year timeframe **(Changing Markets Foundation Roadmap)**
- Ensure sustainable consumption and production patterns **(SDG 12)**
- Conserve and sustainably use the oceans, seas and marine resources for sustainable development **(SDG 14)**

Examples of actions recommended by other stakeholders

The ZDHC's MMCF guidelines adopt a three-level approach – 'foundational', 'progressive' and 'aspirational' – to address suppliers' current levels of performance and capacity. In response to this, Changing Markets Foundation has highlighted the importance of holding producers accountable to a time-bound target to move from 'foundational' to 'aspirational':

"...the danger of a three-level approach is that some companies could remain at the foundational level, and fail to make headway, while still claiming they follow the ZDHC guidelines.

For this reason, the ZDHC should introduce a measurable and time-bound requirement for continuous improvement. Members should be required to improve over time, and, as technology progresses, to consistently ramp up ambition towards the highest ('aspirational') level, according to predefined metrics.

The ZDHC should also commit to addressing non-compliance by defining a set timeframe for each manufacturer to progress to the next level. Meaningful sanctions and exclusion criteria should be set for cases in which members consistently fail to meet these requirements."

- "Dirty Fashion Disrupted", Changing Markets Foundation, November 2019

#2 Producing with Zero Harm

Radically reduced freshwater withdrawal

What is already happening?

- Closed loop water systems in production
- Water efficiency measures

What else does the industry say needs to happen?

- Scale water recovery systems in production to the same efficacy as chemicals recovery (92-100%)
- Collaboration across value chain to support regional approaches to water management
- Regional limits / requirements for freshwater withdrawal and compliance reporting informed by assessment of biological and physicochemical impacts
- All modern plants to be built with consideration to future standards and targets

Voices from the Industry

"Producers face competing capital requirements for carbon and water reduction. The costs involved in upgrading old plants is particularly prohibitive, and there is also a need to balance energy-intensive closed-loop water systems with an assessment of the water availability in the region of production."
(Pulp producer)

"We need to appreciate the context of different MMCF production facilities. For example if they are operating in an industrial park with its own closed-loop wastewater treatment, this will be quite different to a facility drawing water and releasing wastewater directly into river systems."
(Fibre producer)

#2 Producing with Zero Harm

Radically reduced freshwater withdrawal

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Ensure availability and sustainable management of water and sanitation for all **(SDG 6)**
- Ensure sustainable consumption and production patterns **(SDG 12)**

Examples of actions recommended by other stakeholders

- Optimise water reuse, focus on water reductions to set the baseline for minimum consumption and identify technological solutions appropriately **(Water Online)**[34]
- Confirm the exact water quality specifications for the specific use. Continuously monitor water quality to confirm that quality is maintained **(WBCSD)**[35]
- Ensure evaluation of initiatives takes account of the full cost of water. Build a case around non-financial benefits (public perception, risk avoidance, benefits to community from reducing water use). Consider developing an alternative ROI that reflects the intrinsic value and business risks associated with water. Investigate whether there are government grants that could be leveraged **(WBCSD)**

#3 Enabling Circular Systems

Why this matters
for a Net Positive MMCF sector in 2030

The current linear take-make-waste industrial model of our global economy has left many ecosystems on the verge of collapse. In response, public, private and civil society actors are championing the transition to a circular economy. This means decoupling economic activity from the consumption of finite resources, as well as designing waste and pollution out of the system.

The fashion and textiles industries have been called out as significant contributors to waste, with an estimated USD 500 billion value is lost every year due to clothing that is barely worn and rarely recycled.[36]

In the face of this vast challenge, the MMCF sector is particularly well placed to make a Net Positive contribution, as the MMCF production process allows for waste cellulosic fibres, including blended fibres, to be turned into new fibres without the quality loss associated with mechanical recycling. Therein lies the potential for keeping materials at maximum value through cycles of reuse.

Despite this potential, there is the recognition that the MMCF sector cannot advocate for chemical recycling of fibres as the only circular solution, without addressing wasteful consumption of textiles products in the first place. A Net Positive approach will also need to holistically consider the carbon, energy and water footprint associated with the recycling process, and deliver on this promise with zero harm (i.e. safe chemicals).

#3 Enabling Circular Systems
is underpinned by three key action areas:

Zero textiles to waste-streams

- Circular business models that prolong the life of textiles and apparel (for example rental, repair and resale)
- Design specifications that prioritise long apparel life, recycled content and recyclability
- Collection, sorting, separating and recycling technologies and infrastructure at scale

Circular materials

- Development of next generation feedstocks value chains and processing capacity, prioritising waste
- All new production facilities are capable of processing alternative feedstocks

Incentivising circularity

- Policies, regulations or incentives that support the shift to circularity across consumption, production and waste management models
- Consumer behaviour change programmes that complement collection and sorting infrastructure

Key challenges
we need to address collectively

A number of exciting partnerships and technological breakthroughs have driven significant interest in the MMCF sector's potential contribution to circular fashion and textiles. However, recycled fibres remain a very niche product offering, and much of the physical and social infrastructure needed to realise MMCF's Net Positive potential at scale does not yet exist. To do so will require collective investment from players across the entire value chain, as well as an enabling policy and trade environment.

This includes pre-competitive collaboration across producers to understand the social and environmental benefits of recycled fibres, and to agree on technical specifications for waste textile or agricultural waste fibres that can serve as alternative feedstock into MMCF production processes. This would allow for greater optimisation and scaling of the reverse supply chain (collection, sorting and separation) to meet these specifications, while maintaining transparency on the source of alternative feedstocks. There is also the need for platforms and mechanisms to match the supply of this feedstock to demand.

Finally, stakeholders spoke to the need for an industry-wide position on how the MMCF sector can contribute to circularity, pooling the existing efforts and commitments of individual actors. This will support industry-led advocacy for enabling legislation to support the sector's circular economy ambitions.

Zero textiles to waste-streams

What is already happening?

- Rental models for high-end apparel and goods
- Reuse campaigns and initiatives understanding consumer demand for reuse
- Niche brands experiment with product and service offers (for example access vs ownership, subscription, resale models) for a new generation of consumers
- Guidelines to design with sustainability and circularity in mind, targeted at fashion designers (for example Parsons New School for Design, circular.fashion, Redress Awards)
- Take-back and collection programmes collecting post-consumer textiles waste for recycling
- New sorting technology (for example Fibersort) and reverse logistics networks are emerging
- A niche brand and fibre producer partnering to experiment with a subscription model where consumers own the same set of materials that go into different product iterations (for example first product is in the form of a backpack)

What else does the industry say needs to happen?

- Circular business models dedicated to upcycling and repurposing
- Explore use of artificial intelligence to analyse consumer needs in support of rental, re-commerce or repair models and scale experiments through mainstream brands
- Greater involvement of designers and commitment from brands to include circular principles in the design of all products (for example reduced components and materials for ease of disassembly)
- Rapid roll out of reverse logistics platforms alongside scaling of collection, sorting and recycling methods and facilities
- Sorting technology that identifies fibre composition of fabrics and has the ability to extract fibres accordingly to create high quality inputs
- Coordinated industry-wide marketing and promotion strategy to increase consumer awareness and demand for products made from circular materials
- Industry-led advocacy to encourage regulations such as taxing waste disposal and/ or supporting diversion of waste to recycling

Voices from the Industry

"We need effective, technology-driven collection and sorting infrastructure at consuming countries where waste textiles are generated, in order to scale waste textiles as a feedstock for production."
(Brand)

"It's important for producers to work with collectors and recyclers to provide the latter with consistent demand – this needs to link back to the whole supply chain."
(Brand)

Zero textiles to waste-streams

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Extend the life of at least 650,000 tonnes of clothing containing viscose through reuse and material efficient design by 2030 **(Canopy, 2020)**[37]
- Ensure sustainable consumption and production patterns **(SDG 12)**

Examples of actions recommended by other stakeholders

First launched at the 2017 Copenhagen Fashion Summit, Global Fashion Agenda led 90 leading fashion companies in endorsing the 2020 Circular Fashion System Commitment. The four action points indicated below are relevant to the MMCF value chain. The Year Two status report provides an update on progress by signatories:[38]

- ***Implement design strategies for cyclability***
- ***Increase the volume of used garments and footwear collected***
- ***Increase the volume of used garments and footwear resold***
- ***Increase the share of garments and footwear made from recycled post-consumer textile fibres***

In January 2020, Canopy released a report recommending the following actions to maximise the value of textiles in the system by 2030:[39]

- ***Increase the life of garments by at least 50%***
- ***Specify higher than 50% recycled content***
- ***Identify and develop systems to aggregate the 2.6 million tonnes of waste cotton and viscose textiles for the supply chain and apply technologies to effectively separate blended fibres***

Circular materials

What is already happening?

- Brands adopting and setting ambitious targets on next generation feedstocks
- Producers piloting product ranges, using recycled fibre as partial feedstock
- Producers investing in firms with technologies to scale existing material innovations and working with brands to increase quality of recycled materials
- Guidelines on circular materials and products by Cradle2Cradle, Fashion Positive and Ellen MacArthur Foundation's Jean Redesign initiative
- Chinese Collaboration for Sustainable Development of Viscose (CV) is seeking to coordinate the consolidation of demand for waste feedstock, standardising specifications and evaluation of circular materials
- Producers exploring life-cycle analysis to holistically compare environmental and social benefits of circular materials with existing MMCF materials

What else does the industry say needs to happen?

- Robust comparison of sustainable wood inputs versus post-consumer textile waste (covering energy, chemicals and fibre quality) to inform sourcing decisions
- Work with CanopyStyle platform to define "next generation" feedstocks and identifying potential sources of these feedstocks
- Involve technical manufacturing experts to collectively define common specifications (for example acceptable material blend ratio) and set an industry-level roadmap for technological progress to take on wider ranges of materials without compromising quality
- Government involvement to ensure industry decisions over feedstock support environmentally sound socio-economic development land-use plans
- Industry-wide commitment to share cost of conversion to circular systems (for example brands committing to products incorporating circular materials through offtake agreements)
- Develop localised circular industrial zones with new production facilities set up with room for flexibility and customisation to handle alternative feedstocks as raw material

Voices from the Industry

"Waste management needs to be seen as a raw material sourcing opportunity – i.e. a specialised waste collector to feed into production sites."
(Brand)

"When exploring the use of waste as alternative feedstock, we must adopt a systems approach to ensure that ramping up production of the alternative does not lead to unintended consequences."
(Pulp producer)

"The consideration of alternative feedstocks must be science-based. We need to take into account their relative energy consumption and GHG emissions throughout their lifecycle for instance."
(Fibre producer)

Circular materials

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Replace 50% of wood pulp with pulp derived from alternative fibres by 2030 **(CanopyStyle Next Gen Vision, 2020)**(63)
- Ensure sustainable consumption and production patterns **(SDG 12)**

Examples of actions recommended by other stakeholders

In January 2020, Canopy released a report recommending the following actions to scale next generation alternative feedstocks by 2030:[40]

- ***Build 17 recycled cotton garment and / or microbial-cellulose dissolving pulp mills***
- ***Ensure that future dissolving pulp capacity projected to come on line by 2030 is built to process recycled cotton and cellulosic fabrics, agricultural fibres and/or microbial cellulose***
- ***Raise $340 million to $1.02 billion (10%–30%) equity financing to help unlock debt financing to convert existing mills or build new Next Generation dissolving pulp mills***
- ***Avoid unintended consequence of encouraging use of agriculture waste, e.g. land conversion to agriculture***

- “SURVIVAL - A Pulp Thriller: A Plan for Saving Forests and Climate”, Canopy, January 2020.

#3 Enabling Circular Systems

Incentivising circularity

What is already happening?

- Brands and retailers have launched take-back programmes with incentives for consumers to return used clothing with some success
- Recognition that price differential to the end-consumer cannot be prohibitive in order for circular materials to mainstream
- City-level circular economy programmes that include, and go beyond, textile products

What else does the industry say needs to happen?

- Challenge paradigm of consumption in fashion industry
- Explore behavioural science to see how circular and sustainable business practices are understood by consumers and what will be needed to shift consumer behaviour
- Policy inventory on policies across the globe that support or hinder the scaling of the circular economy
- Country and city-level governance frameworks that improve recycling infrastructure
- Role of industrial associations to set out industrial practice regarding fibre recycling

Voices from the Industry

"We must be careful in how we incentivise circularity, especially when it comes to consumers. Ultimately, pushing for circularity should not result in people buying more than they normally would, but to buy differently."
(Brand)

"There needs to be demand from brands and consumers for products using circular materials. Uptake is currently quite low and this means little incentive for producers to invest in the infrastructure for alternatives."
(Fibre producer)

#3 Enabling Circular Systems

Incentivising circularity

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Ensure sustainable consumption and production patterns **(SDG 12)**

Examples of actions recommended by other stakeholders

In a landmark report published in November 2017, the Ellen MacArthur Foundation spoke to the role of policy at the supranational, national, regional, and city/municipality levels in re-aligning incentives to support the transition to a circular economy for textiles:

> ***"Policymakers at various levels can set direction for the transition and create the right enabling conditions. Cities and municipalities often control the after-use collection infrastructure and can be key partners in initiatives related to textile collection and processing. Policymakers are well positioned to contribute to the change through realigning incentives, connecting different players pre-competitively, influencing aspects of design and standards in a positive way, and stimulating innovation… As governments often control large budgets for procurement and infrastructure spending, acquiring textiles through new service models and directing infrastructure spend where it most supports a new textiles economy would not only have a clear impact but would also lead the way for the private sector to follow."***

- A New Textiles Economy: Redesigning Fashion's Future, Ellen MacArthur Foundation, 2017 [41]

#4 Creating Prosperity

Why this matters
for a Net Positive MMCF sector in 2030

As with many other land-based commodity value chains, the MMCF industry was originally founded on an extractive model reliant on cheap labour and low resource costs. But times have changed and the industry is welcoming in a new era where economic value can be more fairly distributed between value chain members and across workforces; where working arrangements and wages can provide more certainty and resilience; inherent biases and discrimination can be questioned and addressed without fear; and where we move away from assuming that simply by providing jobs, value chain members are playing the most significant role they can in creating prosperity.

There are three major hotspots in the MMCF value chain where the creation of prosperity for all can be undermined: at raw material extraction and processing; textile and apparel manufacture; and end of life waste management. These are the points at which the most vulnerable communities and individuals are involved, and equity is least seen.

Whilst this Vision does not cover textile and apparel manufacture, as it is already being covered by various impactful initiatives, the industry recognises and is acting upon the need to play their role. There are also opportunities for pioneering practice at other stages of the value chain, including the actual production of the fibres themselves.

#4 Creating Prosperity
is underpinned by three key action areas:

Economic value distributed equitably

- Equitable distribution of value throughout the value chain
- Engagement with groups and mechanisms that enable equitable distribution of value and enhance local development priorities and the implementation of localised Forest Management Units
- Ensuring coherence between company purchasing policies and practices and human rights commitment(s)
- Fundamental recognition that cost is not the primary decision factor in purchasing

Living wage and equal opportunity

- Living wage throughout the value chain
- Regular reviews of living wage definition with relevant trade unions
- Market mechanisms and financing schemes enable smallholder foresters to have access to reputable markets
- Equal opportunity for all

Universal access to healthcare and education

- Enabling of universal access to education & healthcare for all employees and families, as well as for local communities
- Prevention of accidents and illness at work, health & safety best practice

Key challenges
we need to address collectively

All land-based commodity value chains face massive transformation challenges in tackling their exploitative, extractive history, and MMCF is no different. Achieving equitable value distribution through the value chain challenges the fundamentals of modern capitalism and needs to be done in a way that utilises those with power for good.

Many across the industry have worked hard on community engagement and legal compliance in this area of the Vision, but recognise that the conversation has focused more on environmental issues lately, and that there is room for greater leadership. The recovery from COVID-19 disruption is a key opportunity for this as building resilience in all communities, within and beyond the value chain, is essential.

There are very real opportunities to increase the quality of participation of relevant stakeholders, to act in concert with progressive Government national action plans, to move to landscape approaches that engage beyond communities directly involved in the value chain to enable longer lasting and more systemic outcomes. None of this is easily done, and will require collective voice and action.

#4 Creating Prosperity

Economic value distributed equitably

What is already happening?

- Fair and just promotion mechanisms
- Schemes to strengthen smallholder aggregation
- Examples of Integrated Forestry and Farming System (IFFS) programmes (e.g. mixed-living strategies)
- Requirements to allocate percentages of pulpwood concessions as 'livelihood plantings'
- Localised Forest Management Units support forest governance reform
- Stakeholder collaboration on social forestry, including developing license proposals, agricultural development and effective models for forest management

What else does the industry say needs to happen?

- Greater engagement with waste worker collectives that equitably distribute value
- Circular retail models provide equal access to services and jobs
- Training, development and promotion of technicians and workers across all levels
- Move from equitable distribution of wealth within individual companies, to equitable distribution of value across the entire value chain
- Greater enforcement of legislation and regulation across the board
- Mapping to better understand where smallholder sourcing is coming from to improve aggregation.
- Bottom-up approach to strengthening community resilience
- Adoption of benefit-sharing schemes and access rights for communities impacted by large-scale land acquisitions
- Cross-sectoral collaboration between multi-level government, local and international NGOs, private sector, indigenous groups and local communities to improve the effective forest and resource management

Voices from the Industry

"There should be a more conscious effort towards building community resilience. Driving innovative approaches towards this could prove to be a huge differentiator for the sector."
(Civil society)

"The value generated as a sector must not only be considered at the production level, but also the value it can bring from a protection point of view. The ambition also needs to be about forest conservation and restoration."
(Forestry expert)

"We should strive for localisation in the supply chain where possible and when it does the most good to maximise social impact."
(Workshop participant)

#4 Creating Prosperity

Economic value distributed equitably

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Achieve an inclusive value chain including strengthened equality of opportunity; reduced territorial inequalities; diversity and inclusion; and reduced gender inequality **(OECD Business Pledge against Inequalities)**
- End poverty in all its forms everywhere **(SDG 1)**
- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all **(SDG 8)**
- Reduce income inequality within and among countries **(SDG 10)**

Examples of actions recommended by other stakeholders

Build inclusive workplaces through:

- good jobs with decent wages; diversity and gender balance;
- progress toward achieving pay equity across equality areas (e.g. gender, ethnicity, disability, sexual orientation);
- and training, re-skilling and up-skilling to enable employees to adapt to the future of work.

Strengthen inclusion in company value chains and business ecosystems by:

- working to provide workers in supply chains with the opportunity to earn a decent income;
- strengthening inclusive sourcing;
- and supporting training and/or community development programs for vulnerable groups (e.g. unemployed youths and women) in territories where companies operate.

OECD Business Pledge against Inequalities [42]

In turn, **WRI Indonesia** emphasises that including a diversity of stakeholders in forest management processes is key to achieving a balance between conservation, economic and sustainable development, and poverty alleviation. “[T]he inclusion of diverse systems of knowledge; combining local, indigenous knowledge with scientific and technical knowledge is a vital action for achieving equitable outcomes”, as is “applying an intersectional lens (...) to acknowledge the different streams of knowledge required to synergise all aspects of environmental management.” [43]

#4 Creating Prosperity

Living wage and equal opportunity

What is already happening?

- Non-discriminatory recruitment, remuneration and promotion policies
- Increasing adherence to the Employer Pays Principle related to responsible recruitment

What else does the industry say needs to happen?

- More transparent wage and labour policies, with particular regard to women an migrant workers
- Ensuring that differentiated circumstances of women and minorities are taken into account to create more equitable working conditions.
- Training schemes take into account women and men's differentiated needs e.g. time and safety
- Financing schemes to support the sustainable management of land, taking into account the needs of workers and communities whose livelihoods currently depend on related employment

Voices from the Industry

"The price paid to smallholders must be enough to ensure that they are properly resourced and trained" (Workshop participant)

"Gender equality must be brought to the forefront." (Workshop participant)

#4 Creating Prosperity

Living wage and equal opportunity

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Women have a say in how businesses are run **(Oxfam: Fair Value: 2018)**
- Achieve gender equality and empowerment of all women and girls **(SDG 5)**
- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all **(SDG 8)**
- Living wage throughout the value chain **(CHRB D.2.1.a / ETI, 5)**
- Reduce income inequality within and among countries **(SDG 10)**
- End poverty in all its forms everywhere **(SDG 1)**

Examples of actions recommended by other stakeholders

- Address wage discrimination and recognise unbalanced responsibility for unpaid care work **(Oxfam: Faire Value: 2018)**[44]
- Regular reviews of the definition of a living wage with relevant trade unions. **(CHRB D.2.1.a / ETI, 5)**[45]
- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making (in political, economic, public life) **(SDG 5 indicator)**[46]
- Take steps to give women equal rights over economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources **(SDG 5 indicator)**[47]

Universal access to education and healthcare

What is already happening?

- Supplementary medical insurance including women's maternity and serious illness
- Complementary health examination and gynaecological examinations for female employees
- Cooperation with education institutions on applied research in relevant fields, at pre-university, undergraduate and postgraduate levels
- Safety, health and environmental (SHE) compliance programmes
- Appropriate use of personal protective equipment
- Training on health and safety procedures

What else does the industry say needs to happen?

- Upward intergenerational economic mobility achieved via education and vocational training
- Reinvestment in communities, take back programmes, skilled labour training
- Improve and ensure access to education and healthcare

Voices from the Industry

We seek to go beyond compliance with relevant industry standards. Basic healthcare services are available at all our sites, with the aim of compensating for the deficits in the health systems of the various countries we operate in. We also use medical partners in the areas where its production sites are located to offer its employees diagnosis and therapy services tailored to local needs.
(Fibre producer)

#4 Creating Prosperity

Universal access to education and healthcare

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all **(SDG 4)**
- Employees, families and communities have education that is available, accessible, acceptable and adaptable **(UN CESCR General Comment 13 on the Right to Education, 1999)**[48]
- Ensure healthy lives and promote well-being for all at all ages **(SDG 3)**
- Employees, families and communities have health services that are available, accessible, acceptable, of sound quality **(UN CESCR General Comment No. 14 on the right to health, 2000)**[49]

Examples of actions recommended by other stakeholders

Education

Support State obligations to provide technical and vocational forms of education as a means to 'achieve steady economic, social and cultural development and full and productive employment'. **(Art. 6(2) of the International Covenant on Economic Social and Cultural Rights)**[50]

Health

Independent auditing should cover not only chemical management, emissions to water and air, workers' health and safety at production sites but also the potential impacts on local communities. The auditor should also provide recommendations for improvement and remediation. **(Changing Market Foundation, 2019)**[51]

Support states to ensure that health facilities are:

- available in sufficient quantities, within safe physical reach (including for persons with disabilities);
- sensitive to gender and life-cycle
- requirements;equipped with skilled medical personnel, scientifically approved and unexpired drugs, and appropriate hospital equipment. **(UN CESCR General Comment No. 14 on the right to health, 2000)**

#5 Upholding Rights

Why this matters
for a Net Positive MMCF sector in 2030

Because of the geographic distribution of the MMCF value chain, the industry has a wide variety of roles to play in upholding rights. From forests that are home to indigenous communities in North America, Scandinavia, Africa, Indonesia and beyond, to staff in manufacturing plants handling hazardous chemicals, to the garbage dumps of fast fashion-consuming markets, there are multiple risk points for the industry.

As human rights become increasingly important to a range of business stakeholders – including employees, shareholders, investors, customers, consumers, local communities and NGOs – failure to respect rights has damaging impacts on businesses.[52] Whether these come in the form of reputational harm, irreparable brand damage, shareholder divestment, withdrawn financing, litigation or unplanned operational costs, it is clear that all undermine the ability to thrive. If MMCF is to emerge as a leading sustainable fibre, it must act quickly to address these challenges.

The strength of a rights-based approach is in the processes that underpin it – beginning with the due diligence that must be conducted to identify, prevent and mitigate adverse impacts. It is key to holding actors accountable and a process through which we must pursue the development of all other 2030 Vision components.

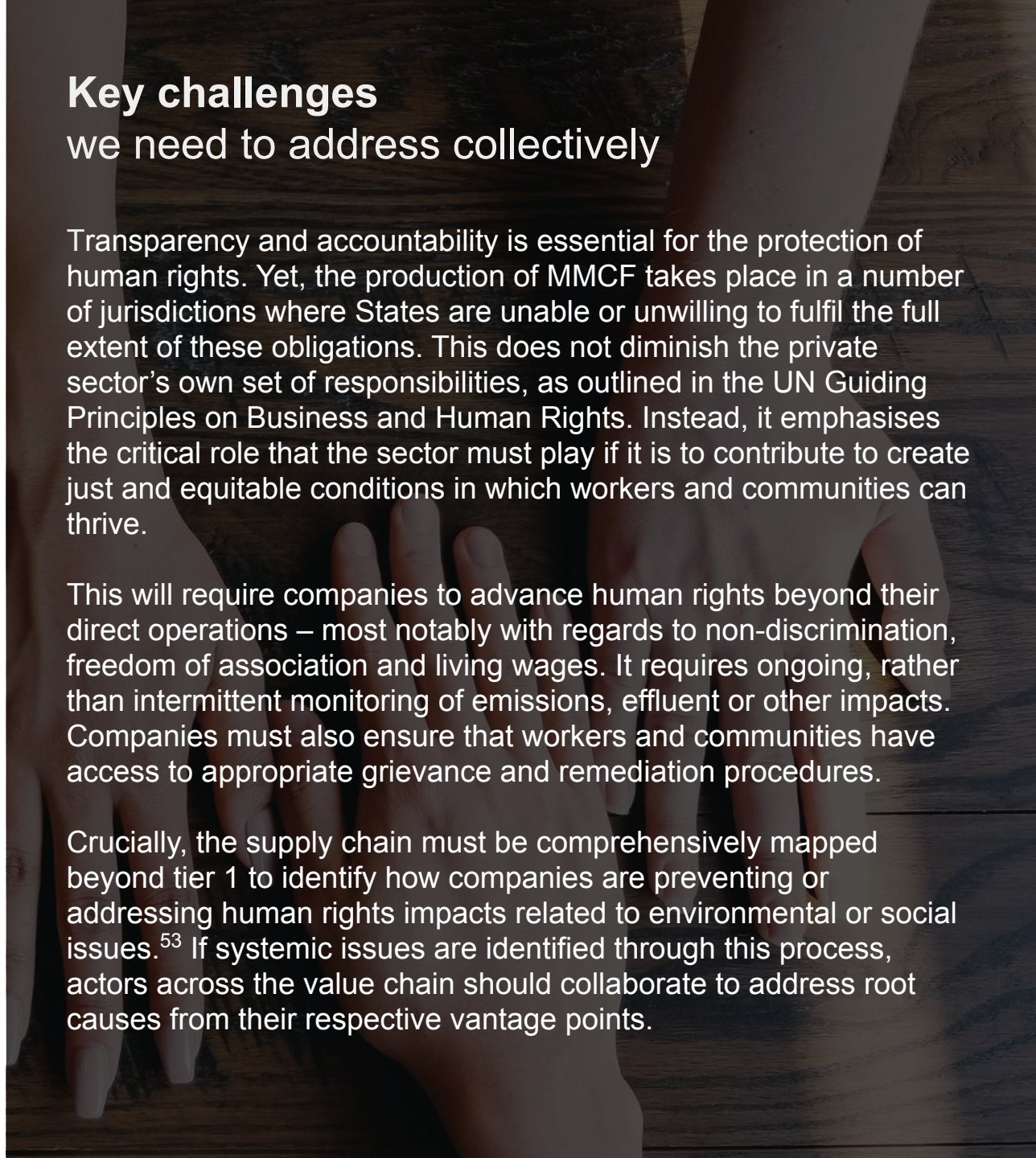
#5 Upholding Rights
is underpinned by two key action areas:

Community empowerment and related access rights

- Identify and uphold Indigenous Peoples' legal and customary rights of ownership, use and management of land and resources affected; Free Prior and Informed Consent
- Ensure fundamental needs and rights of local communities are upheld, including access to nutrition and energy, by engaging them on their priorities and use of resources
- Communities participate in decisions that affect them, based on information provided in accessible language and format
- Ongoing engagement, from the outset of new operations

Protecting individual, indigenous and community rights

- Advocacy and championing of indigenous and all human rights
- Identify, avoid and mitigate significant negative social, environmental and economic impacts on affected communities
- Proactive monitoring of implementation of human rights policy commitment(s) across operations and business relationships
- Implementing and championing channels for workers to file grievances or concerns related to their operations
- Requiring suppliers to provide grievance mechanisms or provide suppliers' workers access to their own
- Providing access to safe drinking water as a human right



Key challenges
we need to address collectively

Transparency and accountability is essential for the protection of human rights. Yet, the production of MMCF takes place in a number of jurisdictions where States are unable or unwilling to fulfil the full extent of these obligations. This does not diminish the private sector's own set of responsibilities, as outlined in the UN Guiding Principles on Business and Human Rights. Instead, it emphasises the critical role that the sector must play if it is to contribute to create just and equitable conditions in which workers and communities can thrive.

This will require companies to advance human rights beyond their direct operations – most notably with regards to non-discrimination, freedom of association and living wages. It requires ongoing, rather than intermittent monitoring of emissions, effluent or other impacts. Companies must also ensure that workers and communities have access to appropriate grievance and remediation procedures.

Crucially, the supply chain must be comprehensively mapped beyond tier 1 to identify how companies are preventing or addressing human rights impacts related to environmental or social issues.[53] If systemic issues are identified through this process, actors across the value chain should collaborate to address root causes from their respective vantage points.

#5 Upholding Rights

Community empowerment and related access rights

What is already happening?

- Prioritising sourcing of raw materials from local or regional suppliers
- Prioritising local employment and commitment to upskill local workers for available roles
- Community engagement programmes, including support for cultural and environmental programmes, sport, celebration of festivals, and contribution to maintenance of key community infrastructure
- Communities participating in landscape approaches to create land use plans that capture their vision for management of surrounding land.
- Initial steps towards responsible conflict management implementation of HCV 5 and 6 through Integrated Sustainable Forest Management Plans (ISFMP)

What else does the industry say needs to happen?

- Well managed forests contribute to local nutritional needs
- Development of new plantations recognise prior rights and land uses
- Support legal and procedural reforms on territorial rights recognition and forest conservation on forest peoples' lands
- Rigorous periodic reviews of the implementation of conflict management guidelines by third parties, in consultation with affected communities

Voices from the Industry

"There is lots happening on the ground, but it would be good to know what the sector thinks success looks like. This would probably vary depending on regional context."
(Pulp producer)

And as previously cited under the Regenerating Ecosystems' component of the Vision:

"We need to be mindful of the limitations of a top down approach. Partnerships with local communities is key to driving environmental and social outcomes."
(Civil society)

#5 Upholding Rights

Community empowerment and related access rights

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels **(SDG 16)**
- Ensure availability and sustainable management of water and sanitation for all **(SDG 6)**
- Land leases or purchases are fully transparent, and revenues are used for the benefit of the local population. **(Special Rapporteur on the right to food, 2009)**[54]
- Increase capabilities and improve range of choices for the community as a result of economic development **(UN Declaration on the Right to Development; Art. 22 African Charter on Human and Peoples' Rights)**[55]

Examples of actions recommended by other stakeholders

- Empower local communities through landscape approaches, support for local level projects, whether social or conservation focused **(Earthworm Foundation)**[56]
- Consultation with communities must be conducted from the outset and on-going, in accordance with Free, Prior and Informed Consent principles. **(UN Declaration on the Rights of Indigenous Peoples, 2007)**[57]
- Engage with communities as active stakeholders, rather than passive beneficiaries **(Right to Development, Art. 22 African Charter on Human and Peoples' Rights)**[58]
- Adopt procedural requirements regarding informed participation and benefit-sharing **(UN Special Rapporteur on the right to food)**[59]

#5 Upholding Rights

Protecting individual, indigenous and community rights

What is already happening?

- Some producers require suppliers to have policies and measures in place to respect the rights of indigenous communities in their places of operation
- Professionals in North America liaising with tribal representatives on forest management where forests have significance to tribal culture, combined with involvement of archeologists to ensure that sacred sites are preserved.

What else does the industry say needs to happen?

- Transparent disclosure to ensure labour and human rights practices are in alignment with the needs and practices of local communities
- All workers to have greater agency over labour and political affiliations
- Rigorous periodic reviews of the implementation of Free Prior and Informed Consent (FPIC) guidelines by third parties, in consultation with affected indigenous communities
- Recognition that Indigenous peoples' way of life is integral to the zoning and management of HCVs
- More support to community mapping efforts
- Support regional networks such as the Indigenous Knowledge and Peoples of Asia (IKAPA), dedicated to consolidating initiatives and actions related to community-based monitoring and information systems

Voices from the Industry

"Human rights are the foundation of a healthy society and sustainable business."
(Brand)

"There is lots written about the human rights issues of workers in the cotton industry, but far less information focused on the situation of those in the MMCF context. If there was more information, it would be easier for us to take more action and interest."
(Fibre producer)

"Actions related to human rights should be informed by the SDGs."
(Fiber producer)

#5 Upholding Rights

Protecting individual, indigenous and community rights

The following goals and targets are currently informing progress to varying degrees. Not all have been universally agreed or adopted by the sector. Meeting these, and innovating beyond them to reach Net Positive ambitions, will require alignment and collaboration behind a shared Vision.

Existing or recommended goals that inform the Vision

- Free Prior and Informed Consent (FPIC) principles are upheld in instances where indigenous peoples face displacement and/or encroachment on their ancestral lands **(UN Declaration on the Rights of Indigenous Peoples)**
- Freedom of association and the right to collective bargaining **(ILO No. 87 & No. 98, UDHR Art. 20 and 23)**
- Promote peaceful and inclusive societies, provide access to justice for all and build effective, accountable and inclusive institutions at all levels **(UN SDG 16)**

Examples of actions recommended by other stakeholders

- Advance human rights in direct operations and supply chains by: working to combat child labour and forced labour; and respect freedom of association. **(OECD Business Pledge against Inequalities**
- Real-time continuous monitoring data for water pollutants' release and actions taken to continuously improve environmental and health protection **(Changing Markets Foundation, 2017)**
- Transparency and accountability into suppliers **(Changing Markets Foundation / Modern Slavery Act)**
- Conduct robust due diligence to identify, prevent, mitigate and account for how impacts on human rights are being addressed **UN Guiding Principles on Business and Human Rights 15b)**
- Businesses provide legitimate processes to facilitate access to effective remedies **(UN Guiding Principles on Business and Human Rights 22, 29 and 30)**
- Adopt Responsible Recruitment policies and practices in keeping with the **Employer Pays Principle**
- Take steps to ensure that activities do not adversely impact on the right to food and food security of local communities. **(UN Special Rapporteur on the Right to Food)**

Enablers

Ten Enablers
critical to achieving Net Positive MMCF 2030

There is a clear need for industry-wide alignment on the action areas outlined in the five Vision Components. However, our extensive engagement with stakeholders across the MMCF ecosystem drove home the point that *how* the sector works collectively towards the Vision will be just as - if not more - important, to successfully arriving at a Net Positive MMCF sector by 2030.

The following section introduces ten enablers that brands, producers, standards bodies, advisors and NGOs have described as being critical to achieving such ambitious change in the span of the next ten years.

The enablers are relevant across all five Vision Components. They will serve as a starting point when the sector comes together to discuss how best to begin working in collaboration to realise the Net Positive MMCF 2030 Vision.

Ten Enablers

that underpin the Net Positive MMCF 2030 Vision

i. Collaboration across the value chain

Strengthening existing and building new relationships. Enhancing communication and trust that enables collective action towards the Vision.

ii. Sharing best practice and accelerating innovation

Use of platforms, networks and collaborations to share learning and best practice. Employing techniques that encourage and enable faster innovation and scale to market.

iii. Full transparency and traceability

Greater visibility of key decisions, behaviours and impacts across the value chain. Reporting to internationally recognised standards that enable comparison and improvement.

iv. Robust metrics for measuring impact

Commitment to employ and, where they don't yet exist, support the development of internationally recognised methodologies that enable the tracking of collective and individual impact.

v. Self-regulation

Collective tracking of progress and addressing of challenges towards the Vision. Open and transparent governance that earns trust and facilitates external scrutiny.

vi. Flows of finance

Development and use of financial mechanisms that incentivise action areas such as carbon sequestration, conservation and enhancing community prosperity. Access to finance for investment into alternative feedstocks and emissions reduction.

vii. Affordability of solutions

Using the buying power of the industry, shifting management decision-making criteria and reducing the cost of finance to accelerate affordability of investment in capital, large-scale collaborative pilots and other Net Positive solutions.

viii. Enabling policy

Supporting the development and implementation of enabling policy, legislation and regulatory frameworks at both the national and international levels.

ix. Positive voice and advocacy

Initiating and supporting dialogue between governments, civil society and business championing the MMCF 2030 ambition, and advocating for the conditions to accelerate positive impact.

x. Consumer education

Clarity of messaging and science-based awareness-raising for MMCF customers and consumers. Empowering them to play their part in realising the Vision through enhanced dialogue and trustworthy information.

Enabler

i. Collaboration across the value chain

The complex and interconnected challenges and opportunities that the MMCF sector is facing must be tackled systemically – and that is only possible when actors across the value chain and beyond work together to solve common problems.

Circularity, for instance, is impossible for a manufacturer of MMCF to achieve without collaboration with those who are in touch with the end consumer. To turn ‘waste’ into new fibres, you must collect the ‘waste’ in the first place. Circularity is also a good example of where entirely new collaborations are required – from logistics, to sorting, to seperation – new and repurposed relationships are essential.

In upholding rights, establishing long-term relationships with tier 2 and 3 suppliers will enable improvements in the human rights protection of workers and surrounding communities across the value chain.

Examples of alignment with existing initiatives

This enabler aligns with SDG 17, which centres on strengthening the means of implementation and revitalising the global partnership for sustainable development.

The UNFCCC Fashion Charter for Climate Action calls for the communication of a shared vision and understanding through the development of a common strategy and messaging. This includes championing climate action within the fashion industry through an enhanced and trust-building dialogue with relevant stakeholders. Greater collaboration in the MMCF value chain will support this action.

The CanopyStyle audit criteria emphasise that where suppliers are found not to have aligned with policies, producers will first engage them to change practices before re-evaluating their relationship with them. This highlights the importance of collaborating and sharing learning to enable better practice.

Enabler

ii. Sharing best practice and accelerating innovation

Though strongly related to the Collaboration enabler, stakeholders wanted to highlight this separately because it is so material to achieving the MMCF 2030 Vision. Innovation in circularity and in cutting edge chemicals management, as well as landscape approaches to community benefit, remain relatively niche.

More systematic and open sharing of results, challenges and how they were overcome will help innovations to scale more quickly. What is more taxing, but critical, is overcoming competitive mindsets and issues of trust to ensure more and better forms of pre-competitive collaboration as a route to scaling innovations.

The industry is already piloting cutting edge technology and approaches in circular systems, and Fashion for Good provides a valued platform to further support innovation. There is a recognition that meaningful pilots and offtake agreements need to serve as signals to the wider market to accelerate uptake. Incentivising the application of sustainable technologies through means such as tax rebates or better access to capital, will also accelerate innovation. The concept of collectively financing of innovation - value sharing through a 'Net Positive Fund' - could also contribute to unlocking innovation in unusual places.

Examples of alignment with existing initiatives

Fostering innovation is a core part of SDG 9. Canopy has called for industry players to commit to offtake agreements or forward procurements to enable quicker scaling of innovations, and for structured, multi-stakeholder pre-competitive R&D on alternative feedstocks.[60]

Enabler

iii. Full transparency and traceability

Full transparency and traceability on steps being taken to address social and environmental impacts has become a basic expectation from civil society, as well as discerning buyers and financiers. The call for accountability not only extends to companies themselves, but to the oversight they must have over their supply chains.[61]

Forest-to-fashion traceability has become a key differentiator for MMCF manufacturers already. The industry recognises that being more open about challenges is instrumental to moving the sector forward.

Adopting more traceability and transparency tools such as satellite monitoring will enable best practice in multiple Vision components. In addition, greater transparency on Life-Cycle Analysis studies will aid science-based decision making for regenerating ecosystems, zero harm production and enabling circular systems.

Examples of alignment with existing initiatives

Acting on this enabler aligns closely with SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Greater transparency on greenhouse gas emissions would also contribute to the UNFCCC Fashion Charter for Climate Action goal: Quantify, track and publicly report our GHG emissions, consistent with standards and best practices of measurement and transparency.

A key criterion of CanopyStyle audits is that MMCF producers must publicly communicate and be implementing the Fiber Sourcing/Forest Policy and that they only source raw material from suppliers that are transparent, traceable and are in conformance with the policy.

Enabler

iv. Robust metrics for measuring impact

A multitude of metrics exist across the various environmental and social impacts along the MMCF supply chain, from certification schemes to NGO-led indices and self-reporting.

The industry has agreed there is a need for yet more alignment and greater clarity across geographies and impacts. This will help to understand collective progress, as well as guide procurement policies and capital investments. Crucially, metrics and standards must be based on science and a broad view of systemic consequences. The exclusion of particular impacts from Life-Cycle Assessments cannot be tolerated, as robust information is required to make decisions on alternative feedstocks.

The industry has called in particular for more robust measurement related to climate change mitigation. One suggestion is the creation of a collective carbon offset tool and the creation of a thriving marketplace, though offsets must be considered as the last resort in climate action. Because of the importance of conserving carbon sinks, the industry also seeks clarity on what metrics would be required for effective payment for ecological services.

Examples of alignment with existing initiatives

Metrics and accountability are core to achieving SDG 16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels - and the commitments within the UNFCCC Fashion Charter for Climate Action. Changing Markets Foundation has asked that guidelines are finalised and rolled out which allow ZDHC brands and their suppliers to share metrics in a systematic, comparable and efficient manner.

Enabler

v. Governance & self-regulation

When coupled with true transparency, self-regulation can mean an accelerated journey towards the MMCF 2030 Vision.

As a value chain, and in collaboration with its ecosystem of stakeholders, the MMCF industry must collectively monitor progress across the interconnected components of this Vision, identify gaps or areas of challenge, and address them in a timely manner. Doing so across the many countries represented in the MMCF value chain will mean that complying with weak national legislation and regulation can no longer be seen as acceptable.

Self-governance structures must earn the trust of civil society by demonstrating openness and transparency, as well as by welcoming constructive dialogue and collaboration.

Examples of alignment with existing initiatives

The German Partnership for Sustainable Textiles calls for ethical business behaviour and the prohibition of corruption. To be regarded as legitimate, any self-regulation would need to prove just this.

SDG 16 includes access to justice for all and the building of effective, accountable and inclusive institutions at all levels. For self-regulation to function well, accountability will be key. The industry itself has called for a sector-wide accountability framework that is consistent and science-based.

Enabler

vi. Flows of finance

There is broad agreement within the industry that the level of ambition set out in the MMCF 2030 Vision is commensurate to the environmental and social challenges at hand, and is precisely what the value chain must work towards achieving.

However, the level of capital expenditure required to meet these ambitions is significant. Whether the focus is on capital investment in carbon emissions reductions, closed loop chemicals in production, investing in early-stage pilots in circular fibres and new processing plants for alternative feedstocks, or managing High Carbon Stock areas in line with 1.5 degree ambitions - everything will require financing and resourcing to an unprecedented level within the industry.

New finance mechanisms, such as green bonds tailored to the industry, are required to de-risk and accelerate this investment. While signs of such forms of financing are emerging from the banking and investment industry, the value of this investment must be equitably borne across the value chain in order to ensure resilience and shared benefit.

Examples of alignment with existing initiatives

Canopy has identified that to move to alternative feedstocks from agriculture and other waste requires a $64.8 billion investment over 10 years to build compatible mills, and approximately $4.2 billion is required to plant new plantations to replace volumes from plantations currently cited on areas of HCV or HCS.[62]

Enabler

vii. Affordability of solutions

With much of the innovations, technology and solutions needed to achieve the Vision being relatively niche still, they have not yet reached the stage of maturity that sees their price falling as they achieve economies of scale. The industry can accelerate the affordability of these solutions through their collective and individual commitment.

Ensuring the affordability of solutions is linked inextricably with the flows of finance and accelerating innovation enablers. It could be achieved through genuinely reducing the cost of technologies or reducing the cost of finance. Alternatively, it could involve changing the leadership mindset and decision-making criteria involved in extending return on investment thresholds. More controversially for those who pay, it could also be achieved by increasing the cost of unsustainable solutions, for instance, through fiscal measures.

It is not only essential that solutions in line with this Vision are affordable for producers and brands, but also for end consumers. Sustainable fashion cannot remain niche.

Examples of alignment with existing initiatives

Affordable solutions are necessary for the achievement of SDG 12: Ensuring sustainable consumption and production patterns.

Enabler

viii. Enabling policy

Robust enabling policy is critical in the achievement of the MMCF 2030 Vision. For instance, robust country and regional-level governance frameworks are central to enabling the textile recycling industry. Likewise, national priorities for land governance and regulation greatly impact the behaviours of individual smallholders and large plantation owners alike. The *Positive voice and advocacy* enabler recognises the power of the industry to influence this policy landscape to some degree. However, the role of civil society and governments is key in ensuring this voice is heard and acted upon.

Organisations including Fashion Revolution and ZDHC are working to influence policy, legislation and regulation. Aligning narratives and action with these organisations will accelerate the creation of an enabling policy environment.

Examples of alignment with existing initiatives

This enabler aligns with SDG 17, strengthening the means of implementation and revitalising the global partnership for sustainable development as well as potentially enabling many other SDGs.

Enabler

ix. Positive voice and advocacy

The MMCF value chain is powerful in many geographies, both in terms of influencing buyer and consumer behaviour, as well as the the wider enabling context.

Harnessing the voices along the value chain to speak as one coherent industry will contribute to ensuring that governments, industry and society create the context required for this Vision to become reality. This is particularly relevant to areas of the Vision that require commitments from government bodies, on top of industry commitment, such as the protection of land for biodiversity conservation.

Alignment behind a shared Net Positive ambition will give policy makers, customers and financiers confidence to take the bold steps needed.

Examples of alignment with existing initiatives

Initiatives such as CanopyStyle are already providing a collective voice to parts of the value chain. The industry has called for the well established Textile Exchange MMCF Round Table to be a space that can hold the industry accountable.

The UNFCCC Fashion Charter for Climate Action calls for industry players to establish a dialogue with governments in key countries to enable renewable energy, energy efficiency and the necessary infrastructure for a systemic change beyond the fashion industry. By building a positive industry voice, other actors can more clearly identify their roles to support the acceleration of progress.

Enabler

x. Consumer education

Although the MMCF sector has grown significantly in sales volumes, end consumers and buyers remain relatively ignorant about the fibres. However, it is widely accepted that in order to make more sustainable buying decisions, customers and consumers require at least a basic level of information on products and their life-cycle impacts.

The industry is therefore calling for a concerted and collective drive for better communication and awareness-raising of the sector's potential to tackle some of the apparel and broader textile industry's most significant sustainability challenges. Transparency about remaining challenges and how the sector seeks to address them will also need to be part of the story.

To this end, industry is inviting more brands to engage consumers and to join hands for the development of product transparency and shared messaging in order to improve consumers' ability to make sustainable choices.

Examples of alignment with existing initiatives

Consumer awareness is key to the achievement of SDG 12: Ensure sustainable consumption and production patterns.

The UNFCCC Fashion Charter for Climate Action calls for the establishing of a closer dialogue with consumers to increase awareness about the GHG emissions caused in the use and end-of-life phases of products, building towards changed consumer behaviours that reduce environmental impacts and extend the useful life of products.

What can I do now? A call to action…

This Vision must be achieved through both individual and collective action. We are calling for members of the MMCF value chain and its stakeholders to:

1. **Collectively tackle key innovation and implementation gaps:** The inherent value of this Vision is that it creates the space to explore the most sustainable pathways forward in a collaborative manner. *What innovations can you accelerate to scale? Who can you collaborate with to implement pioneering systems more quickly?*

2. **Embed the Vision ambition into your strategies and policies:** Aligning decision-making to the ambition within the Vision will enable organisations to add up to more than the sum of their parts. *Do your corporate and project targets align with the level of ambition in the MMCF 2030 Vision? How might you contribute more over time? Are the components and enablers within this Vision reflected in your sourcing policies, marketing approaches, innovation priorities?*

3. **Join the collective to make this Vision a reality:** Progress towards the MMCF 2030 Vision will be driven through workstreams related to each Vision component. *Textile Exchange's MMCF Round Table and the new Hub will act as a space to review progress, set objectives, learn together and move towards the Vision. To further explore what role you might play, visit the Textile Exchange MMCF Round Table or the Forum for the Future MMCF 2030 page.*

Annexes

TextileExchange
Creating Material Change

FORUM FOR THE FUTURE

Participants and Contributors

Contributors

We would like to extend special thanks to the following organisations for contributing significantly to the development of this Vision:

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Our journey in building a shared Vision for MMCF 2030

Pre-engagement and Collecting Input to Vision	In-person and Online Visioning Workshops	Launch of Shared Vision for Net Positive MMCF 2030	Implementation of Collective Actions
Jul to Oct 2019	**Oct 2019 to Mar 2020**	**June to July 2020**	**2020 and beyond**
• Engaged with key stakeholders to gather diverse perspectives on their vision for Net Positive MMCF. • Developed a value chain map that presents the MMCF system, highlights current initiatives, gaps and the potential to become Net Positive. • Developed a common vision framework by integrating the priorities and objectives of key stakeholders that can be discussed in the visioning engagements.	• Held a 1-day visioning workshop with global stakeholders in Canada, and 2 online visioning sessions with stakeholders in China • Inspired participants to articulate a shared Vision reflecting views across the MMCF sector. • Built momentum for cross-sector ambition and receptiveness to collaborative action. • Developed a range of options to monitor and track progress for discussion.	Launch and communication, including, of an engaging and powerful industry-led shared Vision for Net Positive MMCF • Outreach through Textile Exchange and Forum for the Future channels • Engagement with wider industry via trade publications • Two online public webinars hosted by Textile Exchange and Forum for the Future, with industry voices	Textile Exchange's MMCF Round Table and Hub will act as a space to review progress, set objectives, learn together and move towards the Vision. The detailed implementation mechanism of the Vision will be dependent on how value chain actors dedicate resources to this work.

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