

COTTON AND CORPORATE RESPONSIBILITY

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This paper has two parts:
 The first part has the most relevant findings and advice.
 The second part has further analysis if you want to know more about related topics.

EXECUTIVE SUMMARY





Cotton has more potential for sustainability than synthetic fibres, but if retailers and brands don't change their relationship with cotton farmers and their value chains, the damage to livelihoods, environments, and future production may become irreversible.

There are some things we know for certain:



OUR CURRENT SITUATION IS POOR

Cotton farming practices too often are ecologically damaging, economically unfair, and smallholders - the vast majority of cotton farmers - are not supported, trained, or paid enough.



WE NEED ACTION AND RESPONSIBILITY

While all value chain actors have a role individually and collectively, some have a greater influence - and therefore, responsibility - than others; especially retailers and brands.



CUSTOMERS EXPECT BETTER

Consumers are concerned about sustainability and expect brands to change behaviour.



MORE CHALLENGES ARE TO COME

Within the foreseeable future almost every cotton producing region will be negatively affected by climate change, and smallholder farmers in poverty will not be able to adapt fast enough to ensure reliable production. The alternative, cheap plastic fibres, will only deprive poorer communities of income and worsen our impact on our planet.




TOO MANY COMPANIES ARE FAILING TO DO EVEN THE BARE MINIMUM

Uptake of 'more sustainable' cotton through standards and certifications has increased over the past decade, but still too many companies are choosing not to use all certified cotton. Nonetheless, given standards' inherent limitations, companies need to go further and embrace a range of tools and approaches, including traceability so they know where their cotton comes from.

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THE SOLUTION

Farmers can be supported to adapt to climate change, and earn a living income, but only if retailers and brands change their relationship with cotton farmers, workers, and their value chains. Companies should invest money and resources in smallholder production, lead their value chains, and collaborate with all stakeholders to change this course.

 **COMPANIES CAN
CREATE A WORLD
WHERE BEING A COTTON
FARMER DOES NOT MEAN
A LIFE OF POVERTY.**

VALUE CHAIN LEADERSHIP

This paper highlights the responsibility of corporate actors in the cotton value chain, most especially consumer-focused retailers and brands. The accompanying company rankings looks at which of the large companies are doing the bare minimum of sourcing 100% of their cotton from certified sources, and there remains a wide variety of other tools and standards that can enable companies to improve their approach.








Companies can create a world where being a cotton farmer does not mean a life of poverty. They can enable producers to adapt and grow cotton in a changed climate. And consumers can buy cotton with the confidence that it has been grown without harming people or their planet. These are entirely achievable possibilities.

An unsustainable cotton sector is a choice... we hope this paper will help the cotton community to choose instead to lead their value chains to protect this valuable resource and the communities who rely on it.



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Summary of recommendations for cotton corporations

-  Take responsibility for your value chain by investing in producers
-  Improve purchasing practices
-  Raise the bar on transparency
-  Make clearer performance demands from traders
-  Support Standards to add more value
-  Proactively engage with Multi-Stakeholder Initiatives (MSIs)
-  Create durable, recyclable, and circular products

See more on page [19](#).

Chapter 1

INTRODUCTION

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A New Sustainable Cotton Hub

This paper is published on SustainableCottonHub.org which seeks to lay out the sustainability challenges in cotton production, looking at economic, social and environmental sustainability factors through a series of studies and papers. New papers will be added throughout the year, including a closer look at the impacts of hazardous agrochemicals, the realities of labour in cotton and textiles, the projected water risks for cotton growing regions, and the persistent issue of poverty in the supply chain. Concrete recommendations for the various actors across the cotton value chain will accompany many papers, offering realistic ways forward to make real change.

The Sustainable Cotton Hub is a home for supply chain actors in the cotton sector. Expert voices from the cotton field will provide new insights into the sector's persistent sustainability problems, supported by new research and hard data. It will ultimately provide a broad overview of sustainability developments in the sector, along with recommendations for actions that they can take today.

Following in the footsteps of three editions of the Sustainable Cotton Ranking published in 2016, 2017, and 2020, the Sustainable Cotton Hub will provide a platform for a more holistic overview of the entire cotton sector.

From farmers to retailers, and beyond certified supply and demand approaches, through a variety of expert publications, the publishers aim to drive sustainability across the sector. These papers will cover a range of topics and will be added throughout 2023 and beyond.

Please get in touch with your comments and questions, or join the conversation on social media and search or use [#sustainablecottonhub](https://twitter.com/sustainablecottonhub). The Sustainable Cotton Hub is open for collaboration with other civil society organisations. Currently the collaborating organizations are Pesticide Action Network UK and Solidaridad Europe.

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Cotton's value chain

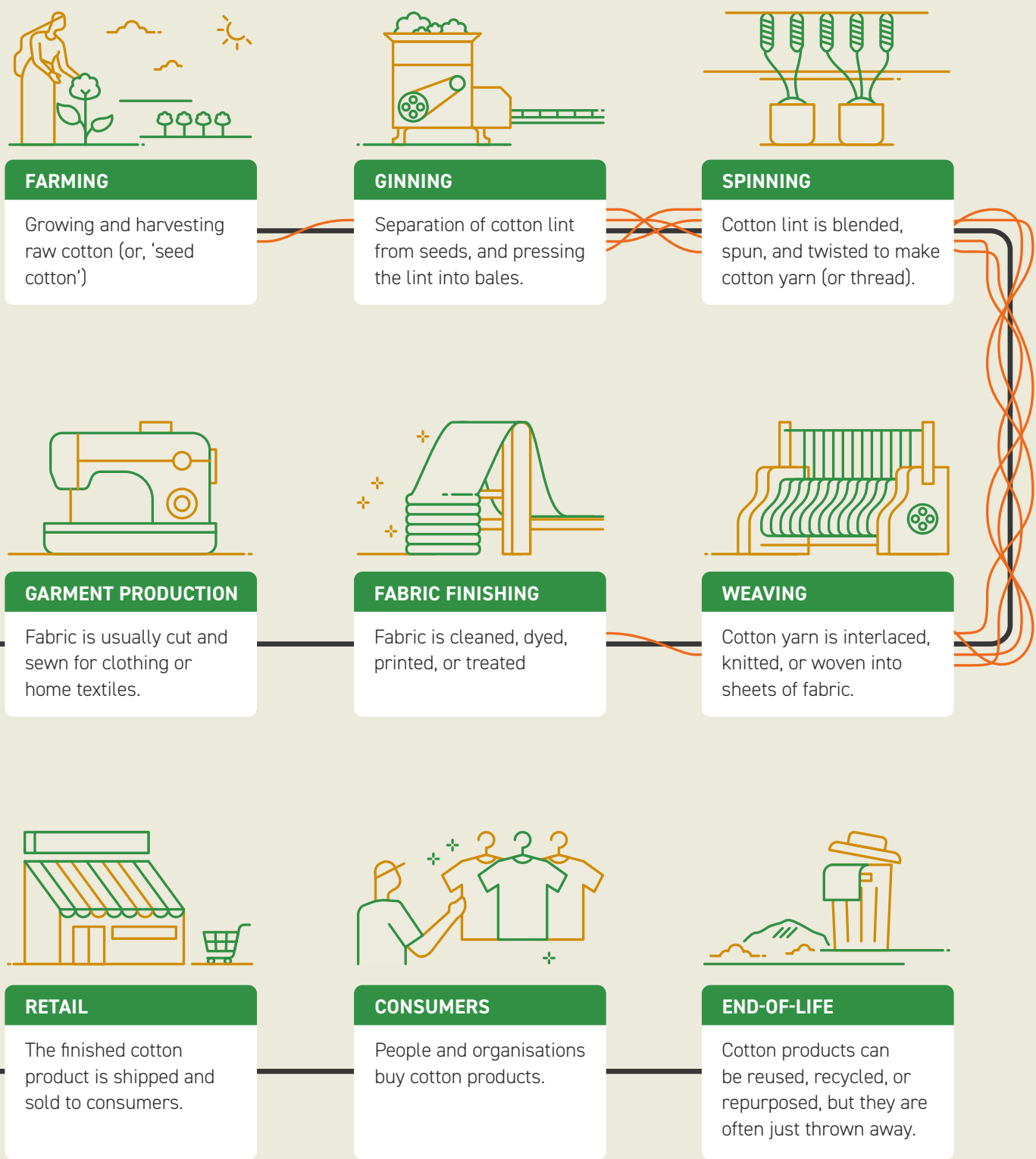
FIGURE 1 COTTON'S VALUE CHAIN

Legend

- Cotton's value chain main flow
- Traders involvement

TRADERS

Cotton is mixed, stored, and transported to different locations.



Chapter 2

THE CHALLENGE FACED BY COTTON FARMERS



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Cotton farming practices too often are ecologically damaging, economically unfair, and smallholders - the vast majority of cotton farmers - are not supported, trained, or paid enough.^{1 2}

To make matters worse, within the foreseeable future almost every cotton producing region will be negatively affected by climate change³, and smallholder farmers in poverty will not be able to adapt fast enough to ensure reliable production.



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Smallholder production

Smallholder cotton production is less mechanised, with associated risks from heavy lifting, long hours in hot environments, and exposure to harmful agrochemicals.^{4 5} Better training to understand agroecological practices, soil health, ecosystem dynamics, and pest management can help. Economic pressures remain a key driver - particularly for smallholder producers dependent on cotton to earn a living. But support to reduce reliance on expensive chemical inputs and improve productivity is rarely available.

SMALLHOLDER FARMERS IN POVERTY WILL NOT BE ABLE TO ADAPT FAST ENOUGH TO ENSURE RELIABLE PRODUCTION.

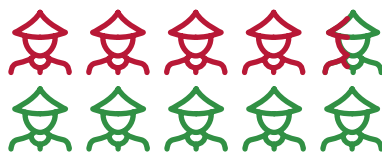


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Agrochemical use

Pesticide use in cotton is particularly a problem. Symptoms of pesticide poisoning include burns, convulsions and even death.⁶ Exposure can have long-term health effects such as increased risk of cancer, infertility and Parkinson's disease. Some impacts can pass down through generations.⁷ Pesticide poisoning is estimated to affect around 345 million (44%) farmers and workers every year, and in a low-income cotton producing country like Burkina Faso the figure is as high as 83%.⁸ In 2022, surveys of cotton farmers found two out of five farmers in India, Tanzania and Benin reported acute pesticide poisoning each year, with more than half of positive cases reporting two or more poisoning incidents in the past year.⁹ Pesticides are so lethal and widely available that they are one of the most common methods of suicide^{10 11}, with high levels of farmer debt a factor in hundreds of thousands of suicides in India.¹²

Some companies might think that disengaging with cotton is the easiest choice, which would be a mistake. The main alternative to cotton, cheap plastic fibres, will only deprive poorer communities of income and worsen our impact on our planet. Supporting smallholder farmers to adapt to grow cotton in a sustainable, regenerative way, while earning a living income, is the responsible course of action for companies.



PESTICIDE POISONING IS ESTIMATED TO AFFECT AROUND 345 MILLION (44%) FARMERS AND WORKERS EVERY YEAR.

ABOVE PHOTO © DAVID / ADOBE STOCK

Climate change adaptation

While interventions to improve the longer-term economic circumstances faced by cotton smallholders are essential, there remains a time-sensitive need to adapt to growing cotton in a changed climate.

Climate change and extreme weather are becoming significant challenges for the cotton sector. As Cotton 2040 identify; "Climate change can cause direct damage to cotton crop either through gradual, incremental, changes, such as atmospheric warming or changes in total rainfall, or through sudden changes and extreme weather events such as flooding, hailstorms or heatwaves."¹³

Farmers in all cotton growing regions (including significant producers like China, India, USA, Brazil, Pakistan, Australia, West Africa, and Turkey) are exposed to increased climate risk, and smallholder farmers will be less equipped to adapt. Both the quality and quantity of cotton, as well as working conditions, will be increasingly affected, and these climate hazards are projected to become more frequent, lengthy, and intense.¹⁴

Climate change will prove highly disruptive to cotton production, which will only exacerbate the volatility we have seen in the market.¹⁵ Supporting climate change adaptation is in effect a business-continuity investment; shoring up production in the face of increased volatility.



FARMERS IN ALL COTTON GROWING REGIONS ARE EXPOSED TO INCREASED CLIMATE RISK, AND SMALLHOLDER FARMERS WILL BE LESS EQUIPPED TO ADAPT.

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Towards a living income

Empowering smallholder farmers has often been viewed through in narrow production terms, with interventions intended to improve farmers' livelihoods usually being through attempts to increase productivity, improve access to markets and market information, and/or stronger producing organisations. However small-scale cotton farmers are still poor, and in few cases do they have the agency to adapt to changing climatic conditions or adopt agroecological farming practices. The root causes are not being addressed.

Taking income as an example; IDH, the sustainable trade initiative, identifies the drivers of income for farmers in general (see Figure 2) and the range of interventions organisations should use to support a living income for farmers.¹⁶ If we apply this model to cotton production we see that value chain actors have focused on some of these interventions more than others;

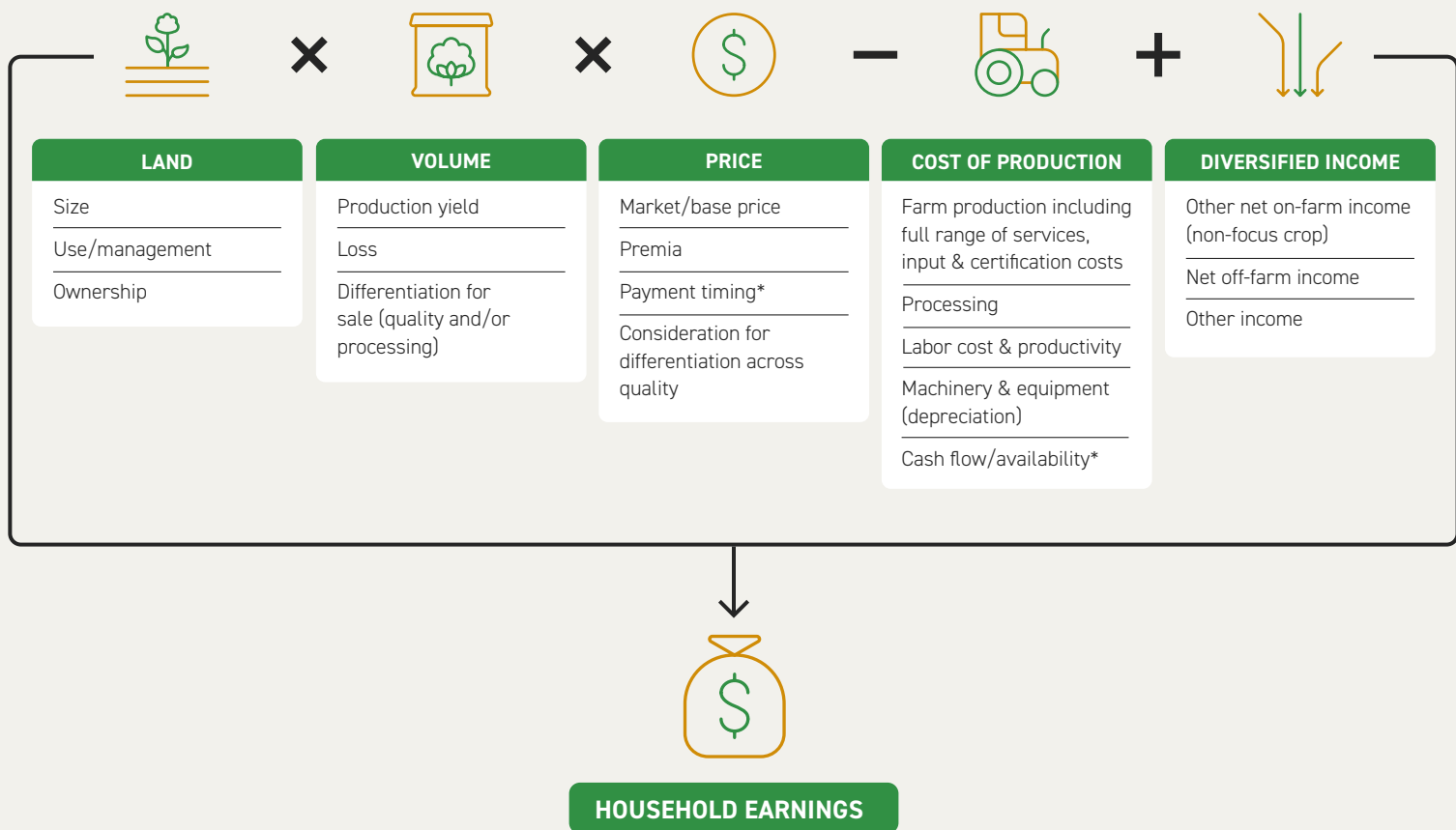
WHAT IS A LIVING INCOME?

Living Income is the net annual income required for a household in a particular place to afford a decent standard of living for all members of that household. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs including provision for unexpected events. A living income is not an end target, but a bare minimum.

FIGURE 2 INCOME DRIVERS: PARAMETERS AFFECTING FARMERS PROFIT

Land, volume, price, production costs and diversified income are the five income drivers for all farmers.

Strategies to achieve living income need to address these in combination yet 'price' has been ignored. Adapted from IDH.



expanding farm land to grow cotton, increasing yields, managing production costs, and cotton's common use as a rotation crop to help diversify income.

One driver is usually the elephant in the room in cotton sustainability discussions: price - and the connected topics of company purchasing practices, unequal power¹⁷ and value distribution across the value chain.

It has been noted that for some smallholder farmers, a small increase in yield may equate to a large increase in profits.¹⁸ This line of thinking not only overlooks the cost implications of increasing yields, but also attempts to put the responsibility for responding to poor prices onto farmers, which can subsequently exacerbate over-production and poor farming practices - seeking short-term yield gain at the expense of resilience and

long-term soil health and productivity.¹⁹ We should not only be making progress on what farmers can do to earn a living income, but also what companies should be doing to support farmers to earn a living income while also improving farming practices.

Furthermore, training is an integral factor to tackling cotton poverty. While some retailers, brands, or standards may arrange enough farmer training to gain certification, their success is often only measured in yield over one season, and not longer term profitability or resilience. High-quality training has been shown to both decrease production costs and increase incomes.^{20 21 22}

A Living Income is still the bare minimum a family needs to live in dignity. Living income is the starting point of a conversation on farmer livelihood, not a finish line.



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Chapter 3

A NEW RELATIONSHIP BETWEEN FARMERS AND BRANDS

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Throughout the cotton sector the common business model creates an uneven playing field. Companies aim to pay the lowest prices to suppliers while obtaining high-quality goods. As a result, unequal, short-sighted, and purely transactional relationships emerge.

This applies to both consumer-focused retailers and brands, as well as commodities traders, who significantly influence the price paid to producers, and the flow of cotton around the world. The unfair distribution of power allows large companies to dictate the terms of contracts and supplier codes of conduct, while placing the responsibility for sustainability audits and unforeseen circumstances solely on actors further down the value chain. This ultimately has negative consequences for producers and workers.

Consumers are concerned about sustainability and expect brands to change behaviour.^{23,24} One crucial aspect that determines whether brands can establish fair partnerships with producers and suppliers is their willingness to change their perspective. It requires shifting the focus beyond solely pursuing profits and instead valuing and respecting everyone involved in the supply chain. This means recognizing the people who are affected by commercial practices, and affirming their inherent dignity by doing what should have always been done; treating them as equals.



CONSUMERS ARE CONCERNED ABOUT SUSTAINABILITY AND EXPECT BRANDS TO CHANGE BEHAVIOUR.

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What do we mean by an equal partnership?

[The Common Framework for Responsible Purchasing Practices \(CFRPP\)](#) describes equal partnerships between purchasers and suppliers as “the purchasing company and their suppliers respect each other as equal business partners, engage in respectful sourcing dialogue, and pursue win-win situations, with a shared responsibility to improve working conditions.”²⁵

In practice, this means:

-  Building long-term, secure sourcing relationships,
-  Reducing the churn of suppliers,
-  Formulating agreements on mutual responsibilities for responsible purchasing,
-  Only using force majeure clauses responsibly,
-  Improving communication,
-  Solving problems together, and
-  Employing responsible exit strategies.

Initiatives like the CFRPP are an indicator that progress is being made on purchasing practices with direct suppliers. However this principle has not gone far enough. Retailers and brands are doing the right thing by improving their relationships with direct suppliers, they must apply the same principle to actors from the very beginning of the value chain.

Barriers to equal partnerships

Cleaning up value chains can be a challenging task for brands, but it's important to recognise the urgent issues faced by producers and workers who struggle to earn a living wage while cultivating raw cotton for major retailers. The cotton value chain is plagued by significant environmental and social problems, many of which stem from the power dynamics within business relationships, with retailers and brands holding a dominant position. To address this, one solution is to foster equal partnerships.

 **THE COTTON VALUE CHAIN IS PLAGUED BY SIGNIFICANT ENVIRONMENTAL AND SOCIAL PROBLEMS.**

In the next page, there are some common problems that brands encounter when trying to establish more equal partnership with cotton growers:

PROBLEM**SOLUTION**

Complex sourcing and buying processes spread across departments working in silos. People don't know who does what, and suppliers may have contact with multiple brand staff.

Review and respond to the whole picture by mapping your company's sustainability and purchasing practice issues alongside one another, including the critical path of how products are designed, the materials are sourced, and ultimately constructed and sold with sustainability in mind. By analysing purchasing practices and sharing the findings you can create greater awareness within your company. This way different departments can pinpoint issues and approach suppliers accordingly.

Many retailers and brands work through third-party agents to select and manage suppliers, meaning they do not have direct contact with their suppliers, let alone producers and workers. Suppliers themselves often sub-contract when capacity is low, further distancing the two ends of the value chain. Not knowing where your cotton is produced only makes it more difficult to reassure yourself and your customers that your materials are what you wanted, let alone sustainable. Brands need to regain responsibility for their relationships with both suppliers and producers.

Brands often assume that it's too difficult to get manufacturers' information from their agents without having even attempted to. It starts with a conversation. Building equal relationships with suppliers begins with knowing who and where they are. This doesn't mean cutting out intermediaries, but it does mean companies should use their position responsibly to insist that agents are transparent about how and where business is happening.

In collaboration with their agents, companies should define what is acceptable in terms of subcontracting to uphold equal partnerships with both direct suppliers, and third parties.

Profit-driven leadership means a lack of sustainable direction. If management is solely focused on making profit, negotiating better relationships with suppliers is immediately undermined. Establishing equal partnerships within a business ecosystem as a precursor to ethical purchasing practices requires purpose-led leadership behaviours from senior managers and directors.

Managers and board members should determine corporate social responsibility goals, resource them effectively, and monitor their execution. This should include both sustainable material and transparency goals. Sustainability-focused key performance indicators should be monitored alongside financial indicators, with meaningful board level oversight - including on goals regarding the impact of buying practices.

Auditing, certification, and feedback is a one-way process that interrogates a supplier's activities, but not the purchasing company's. It also often stops at immediate suppliers, and does not extend further into the value chain.

Companies should review their commitments towards suppliers and producers, and vice versa, to assess how balanced the relationship is.

One-way behaviour monitoring is no longer acceptable. Two-way auditing and certification processes facilitate behaviour change by enabling companies to look at their actions through the eyes of their suppliers and producers.

Dialogue with smallholder producers should include feedback and dialogue with farmer cooperatives and representative groups - and with suppliers with their workers via trade unions, worker representatives councils or committee processes.

The uncertainty and fast pace of the fashion industry means long-term partnerships aren't a priority.

Companies should be clear about the critical path their materials have to go through, with clear production planning that's communicated and agreed upon with all parties involved.

PROBLEM

SOLUTION

Companies work with hundreds of suppliers, using cotton grown by perhaps thousands of farmers and workers. We can't engage with everyone.

This is easier with accurate forecasting in collaboration with both internal teams and suppliers. When producing repeat products, work with strategic suppliers on a long-term basis.

Many retailers and brands do not know where the cotton they use comes from. Many traceability efforts stop before they reach the farming stage, and therefore many retailers and brands are unfamiliar with the specific issues facing their producers. Because they are not transparent about their value chains, they are unaware of the risks they are taking, or of the right decisions to make.

While systemic problems require systemic solutions, companies need to begin somewhere. Changing the relationship with trusted suppliers and partners can help with building experience and lessons that can help be expanded upon with time. Building better relations with producers in particular can be facilitated through partnerships with cooperatives, farmers representatives, standards, and civil society organisations. Progress is better than perfection.

Traceability and transparency are increasingly becoming a business imperative.²⁶ Operational and reputational risks around supply chain sustainability are becoming too costly while technologies that enable traceability are readily available, and constantly improving.²⁷ Selecting the best system for your value chain is a good place to start.

The more publicly transparent companies are about their value chains, and the challenges they find in them, the more support they will be able to receive. Sufficient transparency and traceability is a precursor to informed decision-making and risk management.²⁸










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Improving purchasing practices


In most contexts downstream companies have the most power, set trading conditions which trickle down through the whole value chain, and capture most of the value. With specific consideration for procurement and purchasing practices, companies have to take their responsibilities more seriously to pay prices which enable producers and workers to earn a living income, and to mitigate human rights violations and environmental degradation.²⁹

While many holistic interventions will lead to durable change over time, supporting climate change adaptation and addressing cotton poverty cannot wait. Most best practices can be implemented by individual corporate actors within a relatively short period.

-  Purchase 100% of cotton from certified sources. This is a bare minimum that too many companies are failing to achieve, and is a necessary first step. Select a certification provider that aligns with your values as an organisation, and engages with smallholder farmers to improve their livelihoods.
-  Engage with traceability systems. While there is no one-size-fits-all approach, there are a variety of partner-led solutions, and many basic accounting and auditing principles can be leveraged (such as the traceability of invoices and points of purchase, receipts of the farm of origin, and up-to-date lists of approved and non-approved buyers).

-  Work with value chain partners to contract farmers to grow cotton, with spread payments, and yield-dependent bonuses. Contracts should be long term and have a sufficiently high farm gate price to afford a living income. Because of market volatility, and cotton's role in providing crucial income for smallholder households, more reliable and stable cash flows are highly desirable. Companies cannot, and must not, use the influence of commodity traders, speculators, or market volatility as a reason to not ensure that producers are treated fairly.
-  Build relationships into the value chain beyond immediate suppliers, and implement two-way auditing and feedback processes, including with producers.
-  Conduct robust due diligence risk analyses that include the full value chain. As recommended by the OECD, these should include identifying actual and potential impacts in the company's own operations and in its supply chain, as well as potential choke points.³⁰
-  Be publicly transparent about your purchasing practices and progress on improvement plans, including impact data and farm gate prices.
-  Have a responsible exit strategy, especially for egregious cases such as forced labour. If it is not possible to guarantee that there is sustainable production, and the issues are irresolvable, then responsible disengagement should be a necessary last resort.³¹



 **MOST BEST PRACTICES
CAN BE IMPLEMENTED
BY INDIVIDUAL CORPORATE
ACTORS WITHIN A RELATIVELY
SHORT PERIOD.**

RECOMMENDATIONS




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Consumers are concerned about sustainability and expect brands to change behaviour.^{32 33} As the community with the greatest share of money and influence in the value chain, cotton retailers and brands must be a driving force for good.

Take responsibility for your value chain by investing in producers:

-  Go beyond just purchasing 100% of cotton from certified sources and invest in supporting producers.
-  Establish an agriculture budget for funding farmer support and research, both directly and through sector initiatives, to enable farmers to adopt agroecological farming practices and build resilience to adapt to climate change before its impacts worsen.
-  Take responsibility for improving sustainability in your value chain and partner with farmers to improve the conditions under which your products are grown and made.
-  Include cotton farming in your due diligence to identify, mitigate, and remedy risks from the root.

Improve purchasing practices:

-  Require long term contracts for producers with a sufficiently high farm gate price to afford a living income.
-  Spread payments throughout the year, creating more reliable cash flows for smallholder households.
-  Be transparent about your purchasing practices and progress on improvement plans, including impact data and farm gate prices.

 **COTTON RETAILERS AND BRANDS MUST BE A DRIVING FORCE FOR GOOD.**

Raise the bar on transparency:

- Embrace due diligence; know exactly where your cotton comes from, be publicly transparent about it, and ensure you are paying suppliers sufficiently to facilitate traceability.
- Demand proof that a living income and wage will be received by producers and workers as a prerequisite for commercial arrangements.
- Focus on having an impact on farmer poverty, decent work and environmental improvements, and expect your partners to be able to prove their impact.
- Improve the data literacy of your teams, and only make honest and verifiable marketing claims.³⁴
- Help consumers understand the sustainability challenges in your supply chain, and the need to act on them.³⁵

RETAILERS AND BRANDS SHOULD EXPECT THAT THEY FACILITATE CONNECTION ACROSS THE VALUE CHAIN, AND MAKE TRANSPARENCY AND TRACEABILITY THE NORM.

Make clearer performance demands from traders:

- Traders are the gatekeepers of the cotton sector. Retailers and brands should expect that they facilitate connection across the value chain, and make transparency and traceability the norm.
- Traders should use their purchasing practices to guarantee a living income and sustainable farming as a prerequisite for commercial arrangements, and proactively support producers who are transitioning to more sustainable production. Retailers and brands should hold them to these standards.
- If working with traders who are involved in cotton production, ensure that they are actively empowering smallholder farmers, not controlling them.³⁶
- Expect traders to fully adopt best practice into their daily operations, and align with;
 - United Nations Guiding Principles on Human Rights Due Diligence³⁷
 - OECD-FAO Guidance for Responsible Agricultural Supply Chains³⁸
 - OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector³⁹
 - The EU Directive on Unfair Trading Practices^{40 41}
 - Former UN Special Rapporteur on the Right to Food, Olivier de Schutter's 7 principles for more just business relationships.⁴²





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Support Standards to add more value:

- 🌱 Standard systems are playing a crucial role to address some of the worst harms in cotton production, but retailers and brands should encourage them to raise their ambition, prove their impact, and involve farmers even more.
- 🌱 Request the standards organisations you work with to facilitate partnerships with smallholder cotton farmers, so you can significantly increase your financial investment in regenerative agro-ecological practices and climate change adaptation.
- 🌱 Work with standards that lead to a measurable price premium, responsible purchasing practices, and a living income for smallholder cotton farmers.
- 🌱 Encourage standards to adapt to cover under-represented sustainability issues; see the recent [Benchmarking of Sustainability Standards used in Cotton Production](#).
- 🌱 Consumers find standards complex. Help them understand the sustainability challenges in cotton's supply chain, and how by working with standards you are helping to address them.⁴³

Proactively engage with Multi-Stakeholder Initiatives (MSIs):

- 🌱 MSIs can play a critical role in providing forums and interventions to address issues in the cotton value chain. Engage with MSIs that bring smallholder farmers and workers to the table in a meaningful way, and enhance partnerships with producer organisations to support and enable genuine participation.
- 🌱 Use MSI forums to push for long-term solutions, including supporting diversification as a strategy for avoiding overproduction and its consequences.

Create durable, recyclable, natural, and circular products:

- 🌱 Make durable products with a minimal and measured environmental and social impact.
- 🌱 Extend product life by enabling, and encouraging, repair and maintenance.
- 🌱 Embrace circularity, and proactively find ways to feed circular systems through closed-loop recycling and repurposing.⁴⁴

ANALYSIS



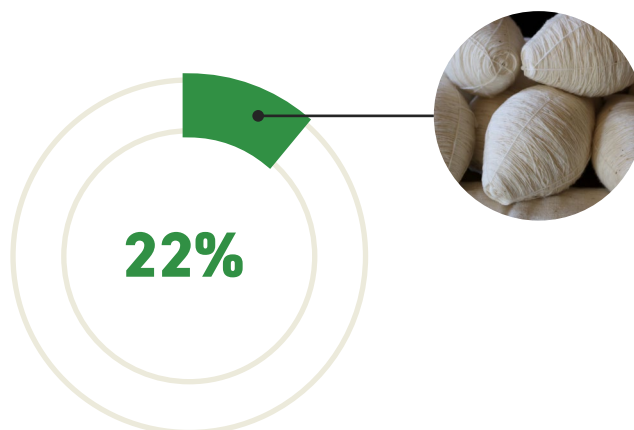
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Overview of the cotton sector

Cotton lint is the most widely used natural fibre in the world. Out of all the 113 million tonnes of textile fibres produced in 2021, cotton accounted for 22% - second only to synthetic polyester at 54%.⁴⁵

The crop is grown in warmer climates and among cotton's millions of farmers in 70 countries around the world the vast majority are smallholders. Cotton is harvested from fields by hand or machine, then processed locally in ginning factories where the fibre is separated from the seeds, after which it is traded (domestically or internationally), spun into yarn, and then often traded again to textile factories.

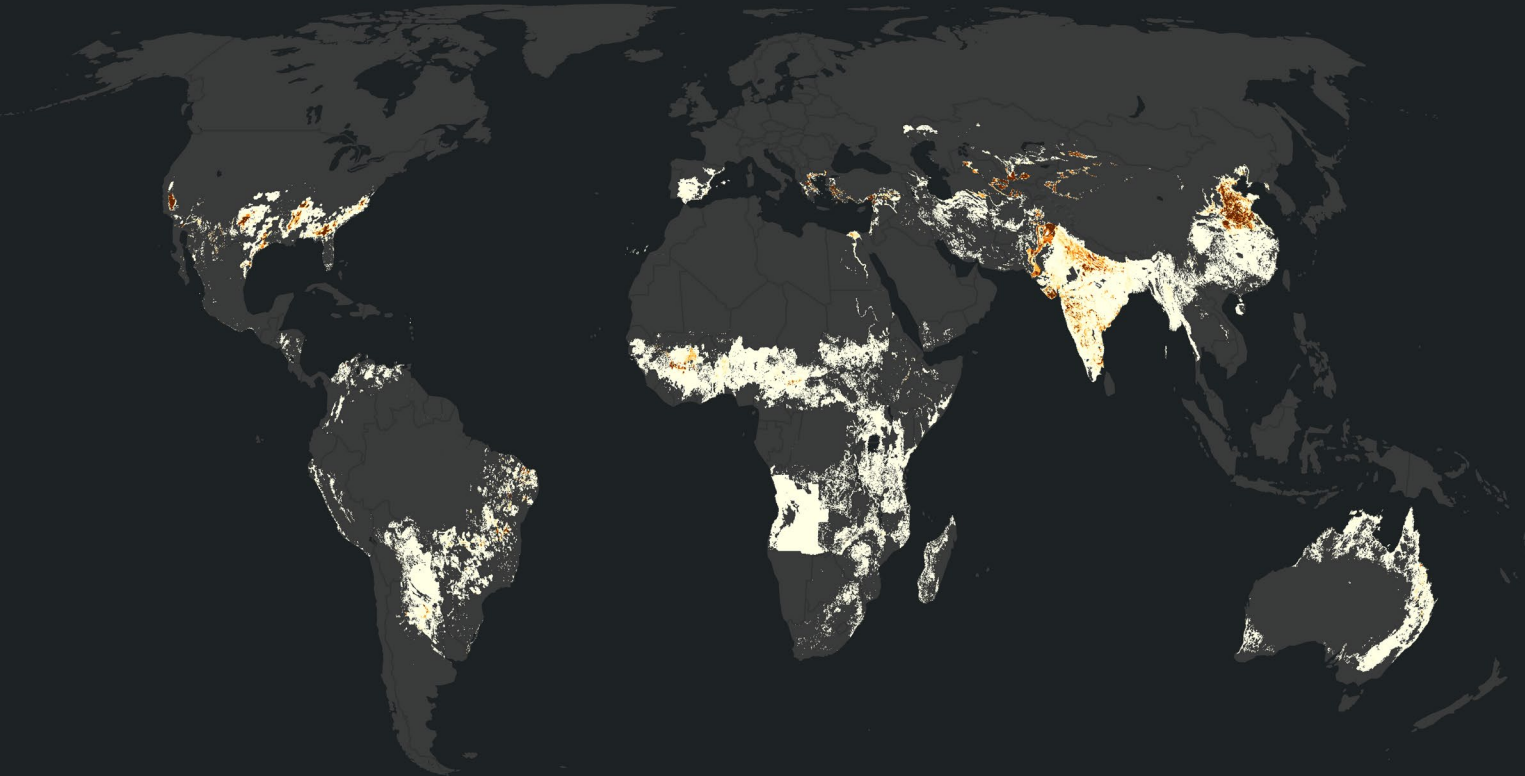
Cotton production is not simple, and is subject to multiple external forces; global supply and demand, changing environmental conditions, volatile production costs, local policies and practice, regulation (or lack of), and an array of voluntary standards. Supporting farmers and workers to grow cotton in a sustainable way requires everyone in the value chain, and those who influence it, to act responsibly and proactively for the long-term good of the sector - and those with the greatest influence bear the greatest responsibility.



22% OUT OF ALL THE 113 MILLION TONNES OF TEXTILE FIBRES PRODUCED IN 2021, COTTON ACCOUNTED FOR 22%.

ABOVE PHOTO © PAN UK

FIGURE 3 COTTON PRODUCING REGIONS ACROSS THE GLOBE⁴⁶



COTTON 2015 PRODUCING REGIONS BASED ON FROLKING ET AL. 2020

Cotton Production



“ AMONG COTTON’S MILLIONS OF FARMERS IN 70 COUNTRIES AROUND THE WORLD THE VAST MAJORITY ARE SMALLHOLDERS.



© PAN UK



Actors of the Cotton's Value Chain

Farmers

There are an estimated 24 - 32 million cotton farmers worldwide^{47, 48}, with millions more seasonal workers. While in a few countries cotton is grown on a large scale, the majority of the world's cotton farmers are smallholders who are facing the greatest challenges of anyone in the cotton value chain.

Ginners

Ginneries operate close to farms due to the high weight of the raw cotton. Ginners process raw cotton, sourced directly from farmers or through cooperatives or traders, and sell cotton lint to spinners or traders.

Traders

Hundreds of private and state-owned companies trade in cotton exports worldwide. Larger international traders have offices in all major importing countries, and are regularly in touch with other actors to identify specific demand (e.g. quantity, quality).

Spinners

Spinning mills source cotton lint and produce cotton yarn by blending cotton from different origins. Countries with a domestic textile industry are the biggest consumers of cotton fibre. Some (like Bangladesh or Vietnam) depend on cotton lint imports, while others (like China, India, Pakistan, Turkey or Uzbekistan) process domestic cotton, as well as imports when necessary.⁴⁹

Weavers and knitters

Textile processing units, such as weavers, knitters, or integrated garment units around the world source their raw material - cotton yarn - from spinning mills, normally through traders.

Fabric finishers

Cotton textiles are chemically treated to create a desired finish, such as dyeing, printing, and washing, which carry significant health and environmental risks from the water, chemicals and energy used in processing, and working conditions in factories.

Garment producers

Finished fabrics are cut and sewn into ready-made garments and home textiles by manufacturers. Some finishing can also take place after cut and sew before retail. Workers have not consistently had safe or fair working conditions in this sector.

Retailers & brands

Retailers and brands design cotton clothing and textile products, contract manufacturers to produce them, and sell to the end consumer. Many companies are entirely divorced from the producers of their cotton, and are not meaningfully supporting sustainable and ethical production. For more information, please see our accompanying [Retailers & Brands company rankings](#).

Consumers

Cotton remains the most popular natural fibre with consumers who are the end users of cotton products. Their purchasing decisions and preferences affect business decisions right back to the cotton farm.

Spotlight on Traders

Cotton traders can be involved at almost every stage of the value chain, and particularly in the process of procuring ginned cotton bales directly from ginning factories, selling them to spinning factories, and then often trading again between spinners and manufacturers.


Some of the largest international cotton traders companies include:

-  Cargill, Inc.
-  COFCO International Ltd.
-  ECOM Agroindustrial Corp., Ltd.
-  Glencore Agriculture, Ltd.
-  Louis Dreyfus Company (LDC)
-  Olam International Limited
-  Paul Reinhart AG

Some agricultural trading companies have expanded so they can now influence both the processing of cotton as well as its production; extending their control over the global value chain. Traders will either own or lease land, and enter into contractual agreements with largely unorganised small-scale producers to shore-up production.⁵⁰

While farmers are often over-exposed to price volatility, traders will usually hedge cotton prices to protect themselves. As farmer supply and spinning demand vary, traders take a price risk when entering into contracts, bridge the gap between different currencies, and look for the most efficient means of transport. However, trading companies' lack of transparency gives them commercial advantages, and has been identified as a part of the trading business model.⁵¹

Given their crucial role in influencing the prices paid to producers, as well as their control of the flow of cotton around the world, it is crucial that all commodities traders who handle cotton play their part in ensuring that transparency, traceability, sustainable production, and a living wage and income are the norm. These expectations should be reinforced by brands and retailers.

 **IT IS CRUCIAL THAT ALL COMMODITIES TRADERS PLAY THEIR PART IN ENSURING THAT TRANSPARENCY, TRACEABILITY, SUSTAINABLE PRODUCTION, AND A LIVING WAGE AND INCOME ARE THE NORM.**







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Spotlight on Standards

Sustainability standards aim to provide assurance to buyers and consumers that a product is produced, processed, or traded in a way that fulfils specific environmental, social, or economic requirements. Major standard-setting organisations in cotton production include:

-  Better Cotton Initiative (BCI)
-  Cotton made in Africa (CmiA)
-  Fairtrade
-  Organic production regulated by national governments (especially India, USA and the EU)

Between 2008 and 2018 the proportion of the world's cotton produced under one or more sustainability standards increased from 1% to 25%.⁵² This growing trend suggests that sustainability standards are important to the cotton sector, have an influence on the direction of cotton sustainability, and should be engaged with and improved to be as effective as possible.

According to the International Institute for Sustainable Development, certifications and standards have been pivotal in operationalising sustainability into practices and norms, identifying the most material impacts,

developing metrics to measure progress, training and smallholder inclusion, incentivising farmers to form unions, and encouraging better production methods.⁵³ In the rest of the value chain they have been credited with harnessing market incentives and forces for sustainability, mobilising investments in producer organisations, providing greater transparency and assurance, and building awareness of sustainability challenges among consumers, producers, and the industry.

However, certifications and standards have their limitations, including lack of demand, high implementation costs, limited impact assessments or mixed impact results, insufficient funding, variable quality of auditing, impaired credibility due to impact and assurance issues, and growing consumer confusion around labels and what they mean. As predominantly voluntary schemes they are not able to influence all actors in the cotton value chain, and they face pressures to find a balance between providing sufficient reassurances about the manner in which cotton is produced without making requirements so stringent and costly that value chain actors refuse to engage. These limit their effectiveness in realising holistic and complete sector transformation.

Given the lack of sufficient global governance to ensure sustainable cotton production, consumers and many cotton value chain actors have no choice but to rely on these standards. This can be difficult considering that

standards can be confusing, with each operating under its own scope, geography, and conditions. To make matters more complex, some initiatives are 'benchmarked' against other standards, meaning that cotton produced under the rules of one scheme can be counted and sold with the label of another standard (e.g. 'ABR' cotton in Brazil is benchmarked, and can be sold, as BCI cotton). The relative impact of each standard can therefore vary depending on the amount of cotton produced under its rules, as well as the veracity of the standard's sustainability claims.

Standards are an important tool for sustainability and should be engaged with, used and pushed to improve - but they are not the only important tool.

Relying on voluntary standards alone can create 'islands of sustainability' where the poorest performers remain excluded and sustainability is not achieved across the sector.

Sustainability efforts need to go beyond certification and into business model transformation, with authorities providing the incentives that will deliver results at the speed and scale necessary to address the tipping points the planet is facing. Certification is a stepping-stone and needs to be complemented with other interventions.

For more information, please read the [Benchmarking of Sustainability Standards used in Cotton Production](#).



SUSTAINABILITY EFFORTS NEED TO GO BEYOND CERTIFICATION AND INTO BUSINESS MODEL TRANSFORMATION, WITH AUTHORITIES PROVIDING THE INCENTIVES.

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Comparing Retailers and Brands' performance

The root cause of unsustainability in the cotton sector is a lack of investment in producers. The solution is in the hands of retailers and brands.

Nonetheless, sourcing 100% of cotton from certified sources is a bare minimum that too many companies are failing to achieve.

The minimum threshold

We have previously published the Sustainable Cotton Rankings in 2016, 2017, and 2020.⁵⁴ This year's Company Rankings found, with data gathered in the second half of 2022, that only 9 of the 82 largest cotton-sourcing companies in the world are sourcing 99% or more of their cotton from certified sources. All other large companies are falling short, or doing nothing.

These are consumer-facing companies that use significant amounts of cotton - over 10,000 metric tonnes of cotton lint per year. The ranking covers companies rather than individual brands, as entire companies need to change sourcing practices across all their brands to transform cotton cultivation. The selection of companies was based on sector indices and benchmarks, as well as lists of top companies in the fashion and garment sector and their respective markets.

The assessment covered two areas: actual uptake of certified cotton, and transparency about the use of specific standards. Uptake was assessed by the percentage of purchased cotton that is certified. Underpinning the assessment is the expectation that companies report publicly on the uptake of certified cotton. Transparency through public reporting is vital for demonstrating sustainability leadership and enabling accountability to stakeholders. Therefore companies were assessed only on the basis of publicly available information. In most cases, the information came from the companies' sustainability reports.

Companies received a score in order to be ranked, however it is worth noting that while in some cases low scores may reflect a true lack of action on the part of companies, in other cases imprecise or unclear public disclosure on efforts taken by a company may also result in lower scores. For instance, companies that use inaccurate wording or data in their reporting, such as "almost all cotton is from more sustainable sources", are rightly considered as "unclear".



Increased scrutiny around 'green' claims

With sustainability becoming a more attractive business narrative⁵⁵, retailers and brands are making claims about their sustainability efforts.⁵⁶ However, problems with some claims range from inconsistent terms and methods, to unverified and misleading claims.

New guidelines from Dutch and Norwegian consumer authorities⁵⁷, as well as new legislation in France⁵⁸, and anticipated regulation for the EU⁵⁹ emphasise that the clothing industry and others should be using standard assessment methods for making sustainability claims to consumers.

Similarly the Delta Framework is intended to create greater alignment on data collection and use by agreeing a shared language and approach to measuring and communicating agricultural sustainability progress globally.⁶⁰ Some companies have in effect been fined for greenwashing and not being clear enough about their claims.^{61 62}

Traceability & Transparency

Retailers and Brands have a responsibility to conduct due diligence, and be open about their findings. This requires effective traceability and transparency approaches.

Cotton traceability

Traceability is the 'ability to identify and trace the history, distribution, location and application of products, parts and materials, to ensure the reliability of sustainability claims, in the areas of human rights, labour (including health and safety), the environment and anti-corruption.'⁶³ It means we should be able to know where (geographically) and how (by what means, processes and under what conditions) each component of a product is made. For a cotton product, it includes where and how the cotton was produced, and its path through the entire value chain.

In practice there are many details and questions that need to be answered in order to select and implement a traceability system⁶⁴, and within the cotton sector a variety of technologies are available to help with that choice (such as Permanent Bale Identification, applied markers [such as pigments], blockchain, supply chain mapping, isotopic tracing, or DNA analysis). There is no 'one size fits all' approach however, and the different information needed to trace a material through its unique value chain can result in different levels of traceability. Thus, not all traceability systems are equal, or fit for the purpose for which they are intended.

 **THERE IS NO 'ONE SIZE FITS ALL' APPROACH WHEN IT COMES TO TRACEABILITY IN THE COTTON VALUE CHAIN.**

ISOTOPIC ANALYSIS

One method to verify cotton's geographic origin is isotopic analysis. Isotopes are atoms of the same chemical element but contain a different number of neutrons. Similar to a fingerprint, every geography has a unique ratio of isotopes in the environment which is incorporated into plant tissues (e.g. cotton) through soil and water. Once the ratio of selected isotopes in cotton is referenced to specific landscapes, then cotton fibre from unknown or ambiguous origin can be analysed and matched to the region where it was grown.

In a project funded by the German Federal Environmental Foundation, WWF and its partners investigated whether original landscape chemical signatures are retained in cotton after textile processing. Using isotope ratio mass spectrometry (IR-MS), which is also used for other agricultural commodities and animal products, the research confirmed that isotope testing can identify processed cotton fibre and yarn back to the country of origin with a sensitivity of 90%. This means that the unique isotopic ratio is retained in cotton fibre even after it has gone through textile-specific treatment processes, such as pretreatment (e.g., bleaching, scouring, acidifying), dyeing, chemical, and mechanical finishing. Although azo dyes and flame retardants were found to mask the original isotope fingerprint.^{65 66}

The knowledge gained in this study could enable the development of a geo-referenced database for cotton and textiles, especially for the traceability of certified cotton, and can be very useful in answering specific compliance questions, such as if a cotton product sold by a Brand comes from a region known for forced labour, for example.

Transparent value chains

Traceability and transparency are closely related, but distinct. Transparency 'relates directly to relevant information being made available for all elements of the value chain in a harmonised way, which allows for common understanding, accessibility, clarity and comparison.'⁶⁷ Transparency essentially is about (public) disclosure and awareness of the actions of value chain actors.

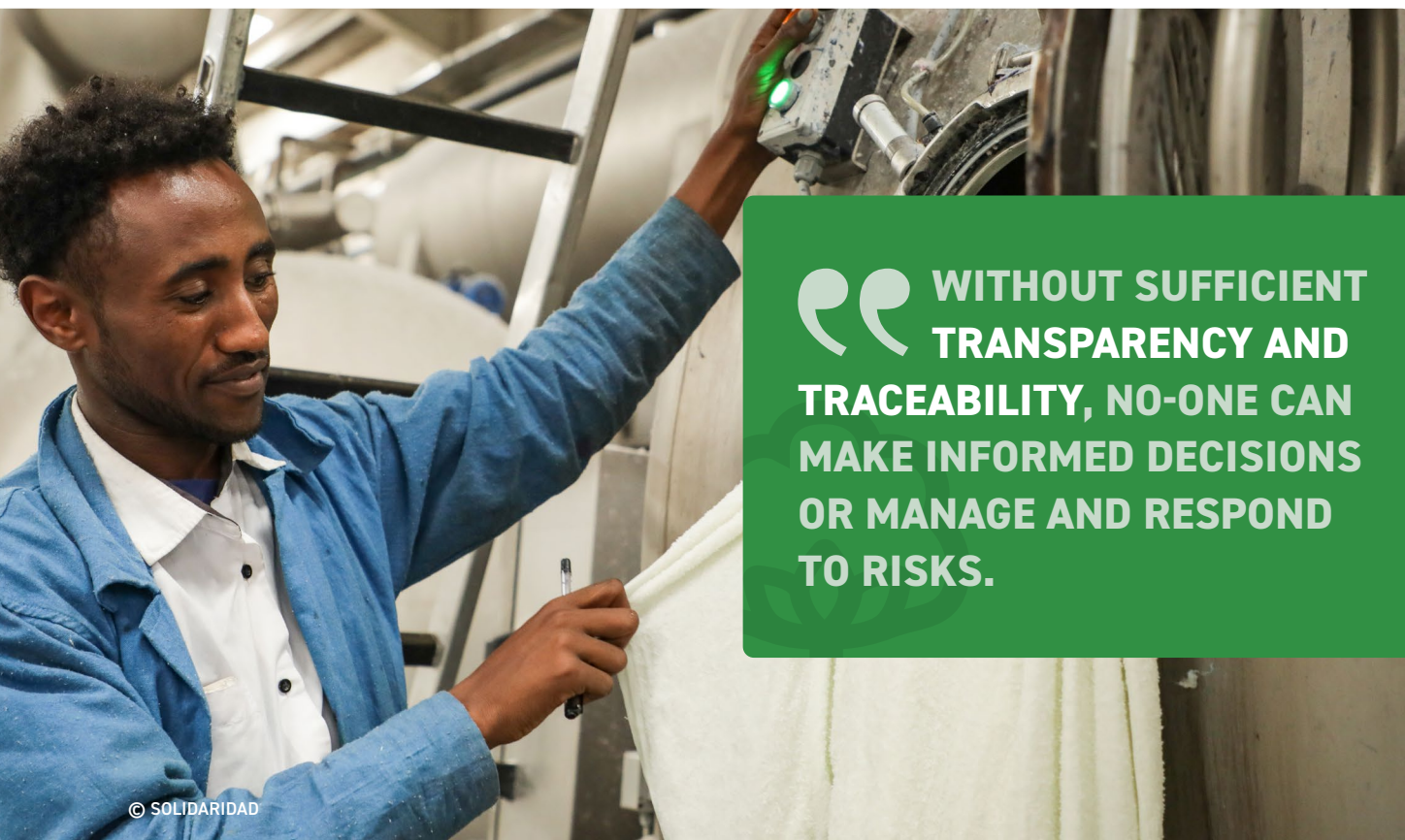
Traceability should feed into transparency so that sustainability risks in cotton's long, fragmented, and opaque value chain can be managed and the relevant actors held accountable for their sustainability performance. Traceability and transparency are increasingly becoming a business imperative⁶⁸ and patience with companies who fail to improve their supply chain traceability and transparency is wearing thin; with operational and reputational risks around supply chain sustainability becoming too costly while technologies that enable traceability are readily available.

The evolving regulatory environment in textile consuming markets⁶⁹, due diligence legislation⁷⁰, as well as consumer demand, is emphasising more than ever before that Retailers and Brands should know where the cotton in their products comes from - and to communicate publicly about it.

What is needed is the will and commitment by value chain actors to implement traceability systems, supported by the policies, norms and standards, capacity building and collaboration needed to ensure its proper functioning. Without sufficient transparency and traceability, no-one can make informed decisions⁷¹ or manage and respond to risks.

Consumers, investors, CSOs and governments are all putting pressure on companies to prove their sustainability claims and that they are not connected with illegal practices like forced labour, deforestation, or pollution.⁷² Some players in the industry are finally investing in traceability that will enable companies to implement and comply with due diligence requirements.⁷³ How successful these efforts are will depend on the extent to which producers (particularly smallholder farmers and workers) and their environments benefit. All value chain actors should therefore remain vigilant that traceability or transparency do not become tools to exclude disadvantaged cotton farming communities.⁷⁴

Having traceability and transparency are not the end in themselves. They do not equal sustainability. Rather traceability and transparency are an important (though not the only) set of tools needed in pursuing supply chain sustainability.



**WITHOUT SUFFICIENT
TRANSPARENCY AND
TRACEABILITY, NO-ONE CAN
MAKE INFORMED DECISIONS
OR MANAGE AND RESPOND
TO RISKS.**

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Circularity and recycling

Cotton circularity

Our take-make-waste textile system harms both nature and people, and some governments are introducing legislation or policies to move toward more circular economies.⁷⁵ In a circular textile economy however, waste and pollution are eliminated, textiles are produced from responsible raw and recycled materials, they are designed for longevity and durability, and at the end-of-life stage they are repurposed.⁷⁶ Circular economic systems can also increase disposable income and improve public health.^{77 78}

As a natural fibre, it is possible to use all parts of the cotton plant, including lint, seeds, and stems. Cotton fabric can also biodegrade and be recycled, although recycling can come with some challenges.

Cotton recycling

Recycled cotton can be made from either pre-consumer or post-consumer textile waste. Pre-consumer waste from the fabric and garment production process (yarn and fabric off-cuts, damaged yarn, etc) is easier to sort since there is more consistency in colours and fibres. Post-consumer waste, made of already produced garments, towels, etc is more difficult to sort and recycle due to the wide variety of colours and fibre blends that are used.

Cotton can be mechanically or chemically recycled. Mechanical cotton recycling involves cutting and shredding waste cotton to recover intact staple length

fibres, which are re-spun. Since the quality of fibres spun from mechanically recycled cotton is lower than original virgin cotton, it is usually blended with other fibres for durability (such as virgin cotton, polyester, etc) and therefore it cannot be recycled further. Mechanically recycled cotton had an estimated market share of just over 1% of the total cotton production in 2021.⁷⁹

Chemical recycling of cotton involves dissolving the fabric in chemicals in order to be turned into cellulose, spun into yarn, and converted into "manmade cellulosic fibres" (MMCFs) like Viscose, Acetate, and Lyocell. MMCFs are primarily produced from wood, with less than 1% coming from other recycled sources like cotton.⁸⁰ This manufacturing process can be very energy and chemically-intensive, and if not produced in a closed-loop system with wastewater being sufficiently treated, there can be significant impacts on workers, the environment, and local communities due to water contamination.

While 'open-loop' recycling uses materials to make new products, 'closed-loop' recycling refers to when the recycled material is largely the same as the original material.⁸¹ It is generally preferable to design cotton products that can be recycled in a closed-loop system, such as by not blending fibres, and using high quality fibres.

Overall, recycled cotton diverts many products from landfills, and the amount of energy, water, and dye use is reduced. While the transport and processing of cotton scraps involves some emissions, recycled cotton can contribute to reduced GHG emissions. But on the whole, textile recycling at scale remains underdeveloped, and there continues to be a growing need to support the use of cotton waste and recycled cotton in the industry.

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