



China Council for International Cooperation
on Environment and Development

Sustainable Consumption

– Fashion, Textile and Apparel

Discussion Paper 2024



Executive Summary

About two-thirds of global greenhouse gas emissions originate from household consumption across the food, mobility, living, and leisure sectors, which also include consumer goods and tourism. However, lifestyle changes in the area of consumer goods have mainly focused on limited, targeted production efforts without addressing what drives consumption. Prioritizing design, production, and consumption patterns in these domains will address about three-quarters of environmental impacts. Factors such as lack of affordable, accessible and desirable options, while proliferation of targeted marketing campaigns strongly influence decision making.

Research around consumer intentions and behavioral change notes that understanding environmental awareness does not translate into long-term lifestyle changes, highlighting the need for a radical rethink of how best to meet people's needs to make sustainable living the default option. For policy, it means finding ways to edit in and out sustainability options, and for the private sector, it implies new business models that are not based on resource consumption. Social media influencers play a big role in shaping consumption behaviour, especially that of young people and teenagers. Identifying relevant Key Opinion Leaders (KOLs) and involving them in green consumption campaigns could have a significant impact on promoting sustainable practices. Key marketing influencers have already established connections and trust with a wide audience base; enlisting their participation would help the message to be more wide-reaching and impactful.

The initiatives highlighted in the report, including global alliances, company-specific initiatives, and enterprise efforts to reduce emissions, can be mapped onto different levels of the circularity hierarchy; this includes informed purchasing, sustainable efforts in production, and increased product longevity. Important to note is that while many initiatives have been launched, few, if any, address the need to reduce overconsumption. It is difficult to manage overconsumption in an industry that built its business model on more consumption; therefore, this paper also looks into innovative solutions that must be introduced, including new technology to reduce GHG and environmental impacts in the supply chain, and mainstream business models that reduce resource consumption and waste and encourage circular economy solutions in the sector.

Lastly, the paper examines public sector measures to counter greenwashing in three key categories. First, mandatory standards or official product labels aim to provide transparent information on environmental impacts. Second, mandatory requirements cover global supply chains, which aim to standardize sustainability reporting. Third, measures to counter greenwashing involve modifying advertising trends and enhancing consumer awareness to prevent misleading environmental claims.

Part One: Sustainable lifestyles – motivations for greener consumption

The 1.5-degree lifestyles approach examines GHG emissions and reduction potential using consumption-based accounting, which covers household carbon footprints from domestic sources and emissions embodied in imported goods while excluding emissions embodied in exported goods. The European Commission has funded a multi-year research project EU 1.5-Degree Lifestyles; in Finland, Sitra has adopted the 1.5-degree lifestyles approach to further develop the Shift-1.5 Method that has engaged almost a fifth of the country.

It is important to note that green consumption is not the same as sustainable living; sustainable living incorporates green consumption where necessary and extends to immaterial aspects of broader societal well-being. While green consumption and eco-labelled products might be better than conventional ones, buying too many of them may unconsciously lead to rebound effects, potentially erasing the environmental value. Sustainable lifestyle should be reframed to focus on well-being and the core needs of humanity, including education, community engagement, and access to culture; a core principle of sustainable societies involves consuming within the earth's regenerative limits rather than abstaining entirely. Social innovations, movements, and grassroots initiatives play a crucial role in introducing new possibilities and fostering acceptance of sustainable solutions.

Thus, in the context of living sustainably, the focus should be on the benefits to be gained when opting for more environmentally sustainable lifestyle options, including higher quality of life and strengthened community ties. Notably, Sitra identified seven different motivation profiles (see Appendix 1) among Finnish people and utilized them to catalyze more action on sustainable lifestyles. There is no one-size-fits-all pathway; as the values and motivation factors vary across different profiles, it has been noted that different motivation profiles will have different pathways and enablers when transitioning to a low-carbon lifestyle. A common perspective is that they need to feel that the transition is fair.¹

From a more practical perspective, there is a gap between consumers with green intentions and actual consumption choices, and the common considerations within this gap include product price, access, efficacy, and trends. Offering more green options that are not affordable, available, or desirable will not address the key issues. Behaviour changes are needed to meet the climate challenges; implementing behavior change interventions, underpinned by the COM-B model, is how to influence “motivation” to change behaviour. Research shows that one of the best ways to change behaviour is to make sustainable options the default options; thus, policy-makers and businesses alike have an important role to play in the “choice editing” of green products.

Youth, consumption, and the rise of fast fashion: As observed in the Sitra motivation profiles analysis, individuals' profiles will evolve over time, including age, income, and various life milestones. Arguably, the most vested demographic profile in a sustainable future is youth;² there is unprecedented awareness

¹Inequality and perceived unfairness in society is a strong predictor of whether an intervention will fail or succeed. People will accept radical solutions if they are justified and everyone is perceived as bearing a fair share of responsibility. Ensuring sustainable lifestyles will fail if efforts are not made to address the extremes of poverty and wealth in society.

²The UN defines “youth” as those persons between the ages of 15 and 24.

and engagement from youth in advocating for a more sustainable future as they are keenly aware of the consequences of inaction. While the youth of this generation are more environmentally conscious than their predecessors, they are also the driving force for an industry that has been turbocharged in the past decade: fast fashion.

In the consumer goods domain, clothing remains one of the highest spending categories by consumers. Consequentially, fast fashion rooted itself as a pivotal element of our fast-paced lifestyle, has also faced substantial criticism due to its negative environmental and social impacts. The younger generation, particularly millennials and Gen-Z, has assumed a crucial role as the major consumer group in this context.

As a consumer group with growing purchasing power, young people have been noted to follow the example of the people they admire and are drawn to phenomena that go viral; their purchasing behaviour stems from seeking novelty and “fun” within their peer group. As they are often restricted in a financial sense, the affordability and super-fast production³ cycle of fast fashion become increasingly alluring; this characteristic is not only limited to Finnish youth but common amongst teens cross-culturally; hence, we cannot underestimate the role of social media and “influencers” (also known as content creators).

The rise of fast fashion is inexplicably linked with the rise of social media. Social media’s influencer economy is built on the foundation of consistently generating new content on the platforms to keep users engaged, similar to the rapid production cycle of major fast fashion companies. On top of the usual motivations that drive young people, including peer recognition and acceptance, this is also an extremely lucrative business worth USD 24 billion. Market research shows almost 1/3 of millennials and Gen Z users have made a purchase after seeing someone endorse a product on social media. Therefore, identifying key opinion leaders on social media and involving them in green consumption campaigns could have a significant impact on promoting sustainable practices.

In China, livestream marketing is becoming increasingly popular, especially among teenagers. In 2022, the gross merchandise value of the live commerce market was 3.5 trillion yuan, compared to only 2.27 trillion yuan in 2021. There is a “fandom culture” among young Chinese consumers to preferentially buy products put forward by trusted “Key Opinion Leaders” (KOLs), over 80% under 24 years old. KOLs’ product endorsements are highly effective in generating sales and interest in new retailers. Traditional policy safeguards in protecting youth from potentially negative marketing find themselves in a grey area in the KOL industry.

³From 2022–2023, Shein introduced 1.5 million products - 37 times more than Zara and 65 times more than H&M, with a price average of \$5 t-shirts and \$10 sweaters.

Part Two: Why the Fashion, Textiles, and Apparel Sector Matters

The fashion, textiles, and apparel sector is massive and diverse, both in the scope of upstream and downstream processes it encompasses and the diversity of goods and services consumed. The sector employs an estimated 300 million people worldwide and has an estimated total market size of between USD 1.4 trillion (UNCTAD) and USD 1.7 trillion annually. Trade and global supply chains are significant: the WTO World Trade Statistical Review estimates that textiles and clothing trade together was USD 915 billion, or 6% of global merchandise exports, in 2023. China is the world’s leading exporter and is expected to become the world’s largest textiles market by 2025, at USD 378 billion by 2025. The goods and services associated with the sector comprise hundreds of categories, from luxury brand fashion to fast fashion, bags, footwear, and accessories.

Environmental Footprint: Various assessments have measured the combined environmental footprint of the sector, using life-cycle assessments across multiple stages, including raw material extraction, processing, packaging, transport, and end of life. Today, the sector has a significant environmental footprint, with differences between materials such as leather, cotton, wool, polyester, and other materials. Today’s environmental footprint is expected to increase, driven largely by the sharp growth in fast fashion, which is characterized by inexpensive clothing and footwear with low durability and quality, which, in turn, has sharply increased landfill waste.

The WEF notes that while consumers have increased clothing purchases by 60% in the past two decades, on average, they kept clothes for half as long. Past fashion cycles generally comprised two or four annual collections. Today, mass brands like Zara release as many as 24 collections a year, mainly aimed at younger buyers. This increase in the scale of the volume of goods produced will, in turn, increase the sector’s environmental footprint—an estimated 85% of textiles will end up in landfills.

Each year, the sector uses an estimated 93 billion cubic meters of fresh water, or roughly 4% of annual global fresh water use. An estimated 8,000 synthetic chemicals are used during production, including inks, dyes, flame retardants, phthalates, and other substances. Roughly one-fifth of industrial wastewater is linked to textile dyeing and finishing. The sector is the second largest source of water pollution (following agriculture). Given the extensive use of polymers and polyester in synthetic textiles, the sector is also a major source of plastic use and pollution: IUCN estimates that 35% of all microplastic pollution comes from synthetic textiles.

The sector has a significant carbon footprint; several assessments estimate between 2%–8% of global GHG emissions are linked to the sector. Estimates from the Fashion Network, an independent industry group, suggest that 56% of energy used in the global fibres sector is fossil-fuel-based, with synthetic fibres like polyester having the largest relative GHG footprint. Other estimates suggest between 8%–10% of total GHG emissions are linked to the sector.

The sector is often associated with significant direct and indirect impacts on nature. For example, cotton is a major user of insecticides and pesticides, and its farming occupies slightly over 2% of global arable land. In turn, cotton production is associated with soil degradation. Leather’s ecological footprint is particularly

significant, including the clearing of tropical forests and other high-value habitats for cattle grazing. Some estimates show that, on average, one hectare of land needs to be cleared to produce 10 leather bags in Brazil, while 17 pairs of leather boots require the clearing of the equivalent of 1.5 American football fields.

The apparel industry is also a significant contributor to biodiversity loss. Apparel supply chains are directly linked to soil degradation, conversion of natural ecosystems, and waterway pollution. Statistics from a study conducted by McKinsey & Company show that the negative impact on biodiversity comes from three stages in the value chain: raw material production, material preparation and processing, and end of life. For example, cotton agriculture accounts for 22.5% of the world's insecticide use—more than any other single crop—and 10% of all pesticide use; Wood-based natural fibers/human-made cellulose fibers, 30% of which may come from endangered and primary forests; Textile dyeing and treatment: approximately 25% of industrial water pollution comes from textile dyeing and treatment; Microplastics: an estimated 35% of primary microplastics in the world's oceans originate from the washing of synthetic textiles; Waste: nearly three-fourths (73%) of textile waste is incinerated or ends up in landfills, which releases pollutants into their surroundings and contribute to habitat loss.

Part Three: Private sector standards and case studies

Responding to increasing pressures from environmental groups as well as increasing calls for consumer boycotts, scores of initiatives have been launched and revised to address the environmental footprint of the sector.⁴ Three are briefly noted below: global alliances, company-specific initiatives, and highlights of utilizing innovative technology to reduce emissions and footprints.

Global Alliances: In the same way that other sectors have adopted net-zero, nature-positive, and other collective voluntary targets, the fashion, textiles, and apparel sector has signed on to various international pledges and initiatives.

The UNFCCC Fashion Industry Charter on Climate Change was signed in 2018 by over 100 fashion companies, including athletics brands like Adidas, New Balance, and Puma, fast fashion brands like the Gap, Levi Strauss, Guess, the Kering Group, mid-market brands like Ralph Lauren and Burberry, and high-end brands like CHANEL, that commit to a 50% reduction in GHG emissions by 2030. Related UN-sponsored initiatives include the UN Alliance for Sustainable Fashion related to the SDGs and the International Trade Center's Standards Map, with in-depth information on over 300 voluntary sustainability standards.⁵ A key tool of the SAP is the Higg Index, which had hoped to evolve as an international benchmark covering textile standards until it lost market credibility with a greenwashing scandal involving H&M. Examples of more specific initiatives include the Sustainable Leather Foundation and the Better Cotton Initiative.

Company-specific Initiatives: There are a growing number of individual company initiatives to reduce waste and encourage circular economy solutions in the sector. Examples of product return, recycling, and

⁴Even greater attention has focused on its social dimensions, notably worker safety and conditions, labour standards, and other issues not examined here.

⁵Applicable sectors including agriculture, textile and garments, consumer products, forestry, mining and services. The Standard Map is active in 192 countries and sorted across 1,650 criteria.

second-hand clothes retail producers include the U.S.-based outwear giant Patagonia's Worn Wear, Eileen Fisher's Renew, Danish Underprotection Take-Back-Program, Australian Etiko Take-Back-Program, and dozens of other brands that are primarily marketed for the younger consumer. H&M committed to having 100% of materials and products be recycled or sustainably sourced by 2030. H&M is aiming at circular fashion in which resources and products stay in use for as long as possible and circular customer journeys, enabling customers to adopt new ways of behaving and using fashion easily. Initiatives such as COS Resell, a digital space launched in 2020 for buying and selling preowned items, and recycling experience with the in-store recycling machine Looop.

Though these business initiatives are growing in number, their impacts require further analysis and remain dwarfed by increases in fast production cycles and business models that encourage more consumption. It should also be noted that the economics of fast fashion in resale are challenging as the original retail value is already low; it has been noted by experts that unless a second-hand program results in a reduction in the manufacturing of new products, which contributes the majority of emissions in a company's supply chain, resale won't have a material impact.

Innovative developments to reduce footprints: Continual advancements in technical solutions, such as enzyme processing, natural dyeing, laser technology, and plasma technology, are being developed to tackle the textile industry's significant energy, chemical, and water usage.

Esquel's Waterless Dyeing technology, for instance, has been proven to reduce water consumption to address the industry's notorious issue of excessive water usage in the dyeing process (Appendix 2, Case Study on Esquel Group). Innovations like 3D printing enable on-demand garment production, cutting fabric waste by about 30%. Emerging technologies like CLO's 3D rendering allow brands to swiftly edit designs and review changes instantly. Enzymes, one of the most sustainable alternatives in biotechnology, have already found commercial success in textile processing. New Fashion Factory's patented approach integrates 3D design, biomaterial creation, and automated robotic construction, offering a comprehensive, digital, biological, and circular solution for the entire fashion supply chain.

Mylo and MYCL⁶ are sustainable leather alternative made from mycelium, grown in less than two weeks inside a state-of-the-art vertical farming facility powered by 100% renewable electricity. Both have sparked a "mushroom leather" revolution and is favoured by renowned brands such as Stella McCartney and Lululemon. Another innovation, AppleSkin, utilizes landfilled waste from the fruit, jam, and juice industry to create certified materials, such as those used by brands like Tommy Hilfiger and Samara, with Oeko-Tex Standard 100 certification.

⁶Mycotech Lab (MYCL), an Indonesia-based company founded in 2012 and certified as a B Corp, has received multiple recognitions, including the MIT Solve Low Carbon Award, the SEED Low Carbon Award 2019 and is a finalist for the Earthshot Prize 2024 and the Vogue Singapore x TaFF Innovation Prize. Additionally, Mylea™ has been selected as part of the Solar Impulse Foundation's '1000+ Efficient Solutions' initiative, aimed at tackling urgent environmental challenges.

Closed-loop systems in the fashion and textile industry to address waste have been steadily gaining traction, and consumers are willing to pay a premium of almost 15% for clothing made with recycled materials. Norway-based textile sorting company TOMRA has been an industry leader in creating a circular textile value chain based on the principles of engaging all stakeholders (including encouraging brand commitments and advocating for EPR fees) and scaling up circular infrastructure (including producing high-quality feedstock⁷ and enabling textiles of various materials and compositions to be recycled into new fibres).

However, the recent bankruptcy filing of Renewcell, a Swedish textile recycler backed by H&M, highlights the ongoing challenges within this industry, including but not limited to scalability issues, complexities in manufacturing processes, and the burden of rising costs. Improvements in sustainable fashion should become mainstream rather than remaining niche activities limited to high-end brands and large players. Fostering a sustainable future requires companies to collaborate in innovative ways to establish infrastructure, expand supply chains, and absorb potential price increases. It is crucial that these innovations prioritize a just transition and eventually become open-source for widespread adoption across the industry.

Part Four: Public and Mandatory Measures

As noted above, voluntary industry-led sustainability initiatives in the sector continue to evolve. At the same time, the proliferation of voluntary labels coupled with other factors—the lack of international standards, risks of greenwashing, and increased scope of climate mitigation actions—has helped make the case for greater government-led action.

Public sector measures can be grouped into three categories: first, mandatory standards or official product labels. Second, requirements and standards covering global supply chains. And third, measures to counter greenwashing, including reducing and/or modifying current advertising trends and strengthening education for awareness.

First, government-led mandatory carbon labels represent a subset of broader official or mandatory consumer labels that have existed for decades in other consumer goods categories; notable examples include mandatory food labels that provide information about nutrition and calories or labels for organic foods, and consumer labels for consumer appliance energy efficiency or automobile efficiency.

Examples of official carbon labels include Australia's CarbonFree program, two official carbon labels in South Korea, and the evolving carbon footprint label requirement in France, as well as examples from Germany, Sweden, Switzerland, and others.⁸ These schemes differ and range from the awarding of an official label based on meeting criteria to mandatory labels covering specific product categories. Like voluntary schemes, they also convey different types of information, from a quantitative carbon footprint score to carbon-neutrality labels. China initiated a pilot carbon footprint label in 2018, covering electronics and the electronic sector. In 2022, a plan was introduced to set out evaluation criteria for a carbon label for solid

⁷Textile waste that is fed into the recycling process to create new products.

⁸To illustrate, Germany's Carbon Reduction Label, launched in 2007, indicates that a given product has been assessed, but its footprint is not communicated.

waste, including plastics in packaging and automobiles. The China Environmental United Certification Center (CEC) is currently working on developing criteria for textile products; criteria will be based on a life-cycle approach (from cradle to grave), look at human health, climate change, biodiversity, and pollution and will include social aspects along the value chain. The provinces of Guangdong, Jiangsu and Zhejiang in 2021 have also launched environmental and carbon label initiatives.

From these general schemes, there are more limited examples of official carbon labels for the apparel, textiles, and apparel sector. The most notable is France's 2023 climate impact label, which will require all clothing brands to have a label disclosing their carbon footprint with more strictly enforced environmental claims, product origin and fair trade certifications, extended producer responsibilities (EPR), and clearer information for consumers on environmental impact. This new requirement is intended to complement its 2021 circular economy regulation.

Second, there are evolving examples of mandatory requirements covering global supply chains. Drawing on approaches initiated in Germany, the Netherlands and other member countries, the European Union has introduced a range of reporting and other requirements linked to supply chain imports. The EU's 2023 Corporate Sustainability Due Diligence Directive (CSDDD), for example, is intended to standardize rules related to corporate sustainability performance. Sector-specific measures include the proposed EU Strategy for Sustainable and Circular Textiles, which intends to create a comprehensive framework for the textiles sector linked to circularity, chemicals, and the EU Green Deal plans.

Third, marketing a product as "eco-friendly," "safe for the environment," or using other vague, exaggerated terms may appeal to consumers' growing environmental concerns; however, unsubstantiated environmental claims may lead to legal consequences as well. In March 2022, the FTC sued Walmart and Kohl's Inc. for falsely advertising bamboo products that were actually made using rayon, resulting in a \$5.5 million settlement. More recently, in early 2024, Stand. Earth filed a complaint against Lululemon for misleading environmental impact claims, with an ongoing confidential investigation by the Canadian Competition Bureau.

UNEP's Guidelines for Providing Product Sustainability Information came out in 2017 is a comprehensive document aimed to provide practical advice to companies and other stakeholders on how to communicate credible and accurate information about the sustainability of their products and services to consumers.

Public measures to counter greenwashing are gaining traction. In the United Kingdom, the Competition and Markets Authority (CMA) issued the Green Claims Code in September 2021 to enforce compliance with consumer protection laws on environmental claims. The UK government may grant the CMA additional powers to levy fines without court proceedings. In Canada, the Competition Act, Textile Labelling Act, and Consumer Packaging and Labelling Act prohibit false representations, with active enforcement by the Competition Bureau. Bill C-59, introduced in November 2023, aims to enhance greenwashing regulations and has recently expanded its access to allow private parties to bring greenwashing claims before the Competition Tribunal, effective June 2025. In France, the Consumer Code and Climate and Resilience Law regulate greenwashing, with violations leading to imprisonment and fines. In the U.S., the FTC's Green Guides, last updated in 2012, provide guidance on environmental marketing claims and are under review for updates. The European Commission's "Green Claims" regulation, proposed in March 2023, requires companies to use verified and scientifically supported claims for sustainable products.

Research indicates that “exposing” greenwashing activities may negatively impact consumers' attitudes and purchase intentions; once consumers recognize greenwashing is taking place through unfavourable media attention via lawsuits and stricter government scrutiny, they may avoid supporting the brand in question. Faced with the threats of reputational damage and legal troubles, a consequence of enforcing stricter marketing measures may result in “green hushing” as well. While climate reporting from companies is mostly voluntary, public reporting is changing soon, including in the EU: climate disclosures will become mandatory in 2025.

Appendix 1: SITRA Summary of the motivation profiles

| |  Ambitious experience seeker 3% |  Headstrong traditionalist 14% |  Tribal follower 7% |  Joyful everyday juggler 21% |  Thrifty optimizer 14% |  Well-being and nature enthusiast 17% |  Uncompromising eco-warrior 18% |
|--------------------------------|---|--|---|--|---|---|---|
| What motivates them? | Career, success, status Trying out new things New experiences and pleasure Self-development Quality and trends | Does not want to waste resources Stability brings comfort, does not need variety Considers trends as someone is not affected by the example of others | Better balance Keeping up with the trends Novelty Joy of discovery The example of others Being accepted by others | Small everyday joys Bringing more peace to life Saving time, making daily life easier Balance Finding bargains | Emotion and self-discipline Saving money Goals-based choices A simpler life Tradition Health | Physical and mental well-being, health The meaning of local action Fresh and local products Being an example to others Personal goals | Concern for the environment and others Quality over the quantity of production Equity and fairness Being an example to others The meaning of local action |
| Remember when planning! | Boost status, especially from the perspective of advanced and smart technology Create an experiential aspect Highlight the quality Create a premium option | Avoid pull-trigger and appealing to environmental friendliness or values Highlight independence and individual image Emphasize the responsibility of using resources | Hide the product or service advertising and images Hide use of influencers and influencers in marketing Use images and placements to help ease concerns Focus on sustainability if they have good examples to follow | Focus on reasons (user to adapt and use) Hide the relative risk that it makes everyday life easier Bring on to everyday life Use special offers | Clearly highlight the most listed in areas Emphasize small steps, services that are easy to include in everyday activities | Highlight positive health and well-being impacts Bring up benefits to the environment Emphasize quality, durability and long life | Green washing won't fly – inform about real impacts Emphasize quality, durability and long life |

Appendix 2: Case Study on Esquel Group

Among the sector's biggest ecological footprints result from water use and water pollution. Each year, the fashion, textile, and apparel sector uses 93 billion cubic meters of water, roughly 4% of annual freshwater use, or enough for 5 million people. Esquel's Waterless Dyeing Technology, for instance, has been proven to reduce water consumption by over 60%, addressing the industry's notorious issue of excessive water usage in the dyeing process.

Esquel makes sustainable products available as comparable alternatives to encourage consumers to choose the more sustainable option. The focus is on improving the unit economics of sustainable products, with the belief that increased consumer demand for these products will encourage other retailers to adopt sustainable options.

DETERMINANT is the modern-day shirting solution, aiming to create great shirts for modern professionals. DETERMINANT leads the shift toward waterless dye technology, focusing on water management and achieving the Sustainable Development Goals' targets 6.3 and 6.4. The company is committed to driving positive change and creating value for the environment and community through innovation and partnerships. Key milestones include championing water stewardship with waterless dye technology and rethinking packaging to be biodegradable and recyclable.

The higher cost of sustainable products is prohibitive for many consumers, making it essential for them to understand the impact of their everyday choices. Brands need to offer sustainable products that are comparable in quality, functionality, and price to conventional options. Increased demand for sustainable products will encourage retailers to adopt green manufacturing technologies. Currently, while sustainable technologies exist, low consumer adoption leads to higher production costs, making achieving scale crucial for driving change.

DETERMINANT acknowledges the need to offer the market sustainable products that are comparable in quality, functionality, and price. The goal is for consumers to recognize the impact of their consumption and choose sustainable product options, with DETERMINANT absorbing the investment costs and not transferring green premiums to consumers. ECOHUES' Cotton Waterless Dye is a groundbreaking dyeing technology that uses a proprietary recyclable organic solvent, achieving a dye utilization rate of over 97% and eliminating the need for fabric washing after dyeing. This process ensures that no hazardous chemical residuals are discharged into the environment.

Through Cotton Waterless Dye technology, 40 litres of water can be saved per shirt. If a consumer buys 10 shirts a year, traditional dyeing will use 400 litres of water, which is equivalent to 5.6 months of drinking water. This saved water can significantly impact various areas: rehydrating individuals, restoring the health of local water systems by preventing toxic effluents, ensuring food security by countering lower crop yields from heat waves and drought, and preserving water for recreational and well-being purposes.

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