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ETHICAL AND SUSTAINABLE FASHION INITIATIVES IN INDIA AND AUSTRALIA

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ABSTRACT

Clothing is a basic human need, but contemporary clothing production, consumption, and disposal have been so rapid that the fashion industry has been deemed to be amongst the most polluting in the world. This paper investigates ethical and sustainable fashion initiatives in two countries: India, which is one of the world's largest producers of ready-made garments, and Australia, which is the world's largest per-capita consumer of apparel. Several innovative approaches were found amongst exemplary businesses in both countries. The paper concludes with some suggestions on business models that could further reduce the negative impacts of the global textiles and apparel industry.

KEY WORDS

Sustainable apparel; Fashion industry; Circular economy; Textile recycling; Ethical fashion.

1. INTRODUCTION

Fashion is acknowledged as one of the most polluting industries in the world (EMF, 2017; KANT, 2012; QUANTIS, 2018; REMY et al, 2016). Radical business models are needed to shift thinking away from business-as-usual in the way society consumes and produces its clothing and to transform this mass-consumeristic industry into a more environmentally sustainable and socio-ethical one. The principles of ethical and sustainable fashion advocate sourcing, manufacturing, and designing 'fashion with a conscience', or clothes that value fair trade principles with sweatshop-free labor conditions while not harming the environment and the workers (JÖRGENS, 2006; NIINIMÄKI, 2015).

India is one of the world's largest producers and exporters of ready-made garments (AMED & BERG, 2019; BALCHIN & CALABRESE, 2019), while Australia is the world's largest consumer of apparel by per-capita spending (CASTLE, 2014; MILBURN, 2016). Fast fashion incurs a heavy toll on the environment, and all producers and consumers need to rethink how this industry could be more sustainable and responsible. Designers can learn from the world's best practices in ethical and sustainable fashion to achieve significant environmental and socio-economic gains. This study proposes to collect and exchange knowledge, expertise, and experiences in India and Australia about ethics and sustainability in the global apparel industry.

2. THEORETICAL FOUNDATION

To a large extent, the global fashion industry operates on a take-make-waste model of production and consumption which is not likely to lead to sustainable development. Such a linear economic system accompanied by the throwaway culture stimulated by fast fashion exerts pressure on our natural resources, pollutes and degrades our natural ecosystems, and negatively impacts human society at all levels (EMF, 2017). Recent investigative journalism has exposed the addiction of Western consumers to fast fashion, and how this insatiable demand from developed countries has resulted in a series of disasters in developing countries, rooted in the terrible working conditions that led to the tragic deaths of thousands of garment workers, the pollution and biological death of local rivers and ecosystems from textile dyeing and bleaching, the dumping of unwearable castoff clothing, and the deleterious effects to the health and wellbeing of agricultural workers growing the textile fibers. Exposé documentaries include BBC's 'Fashion's Dirty Secrets' (DOOLEY, 2018), CBC's 'Made in Bangladesh' (KELLEY, 2013), DW's 'Eco-Friendly Fashion' (DIETRICH & RISCH, 2020), ABC's 'Dead White Man's Clothes' (BESSER, 2021), and 'The True Cost' (MORGAN, 2015). These video reports highlight the devastating human and environmental impacts of the global fast-fashion industry and the urgent need for pragmatic change towards more sustainable and more ethical apparel.

One in six people on the planet works in a fashion-related job (UNECE, 2018); needless to say, fashion is a key economic sector in global terms. This massive industry needs to use resources efficiently, with a focus on sustainable production and consumption coupled with economic development supported along the value chain and addressing the social and environmental issues (JACOMETTI, 2019).

Sustainability as a concept focuses on balancing the economic, social, and environmental resources without compromising the ability of future generations to fulfill their needs in sustainable ways (BRUNDTLAND, 1987). It considers the triple bottom line of people, planet, and profit in a sustainable manner (ELKINGTON, 1999). A circular economy coupled with sustainable development aims for a business model that designs out waste and pollution, keeps products and materials in use for as long as possible, and regenerates natural systems (EMF, 2019). By promoting resource reductions, reuse, recycling, and materials recovery during the production, distribution, and consumption process, a circular economy lessens the material footprint of goods and services (DAÑO et al, 2020; KIRCHHERR et al, 2017; REPP et al, 2021). Circularity in the fashion sector aims at minimizing the production and consumption loop by preferring ecological and sustainable raw materials and recycling and re-using clothing products in other manufacturing processes (JACOMETTI, 2019).

Several fashion researchers have explored and identified strategies for sustainability and approaches for moving from a linear to a circular economy and these provide helpful resources for designers who are conscious of the environmental and social footprints of their creations. Many of these proposed strategies and approaches are overlapping. The published sustainability strategies and constructs by other fashion researchers were tabulated by the authors of this paper (Table 1), structured on the Circular Fashion Framework proposed by VECCHI (2020), which is based on the inclusion of all the stakeholders – namely designers, producers, retailers, and customers – and the stages of the product life cycle in the fashion industry.

		DISSANAYAK E & WEERASING HE (2021)	VECCHI (2020)	GORDON & HILL (2015)	GWILT (2014)	FLETCHER (2008)	HENNINGER <i>et al</i> (2016)
Resources	Eco-friendly materials	✓	✓	✓	✓	✓	✓
	Reduced resource use	✓					
	Waste minimization	✓					
	Use of mono materials				✓		
Design of products	Design for longevity	✓	✓	✓	✓		
	Design for disassembly	✓			✓		
	Design for re/upcycling	✓	✓		✓		
	Design for composting	✓					
	Design for customization		✓		✓		
Production	Minimal use of chemicals		✓			✓	
	Energy & water reduction		✓			✓	
	Production innovation		✓	✓			
	Quality of craftsmanship			✓			
	Sustainable processing			✓			✓
	Involve local communities	✓			✓		✓
	Ethical labor practices	✓		✓	✓	✓	✓
Retail	Repairing services		✓		✓		
	Sharing platforms		✓				
	Take-back model		✓				
Consumption	Beyond fast fashion		✓		✓		
	Cleaning of clothes				✓	✓	
End of life	Reuse	✓	✓			✓	
	Remanufacture/remake	✓					
	Recycle	✓	✓	✓		✓	
	Zero-waste fashion				✓	✓	

Table 1: Sustainable fashion approaches as outlined in publications of fashion researchers. SOURCE: Prepared by the authors.

The different papers assessed emphasize the sustainable strategies throughout the lifecycle of the garment with a focus on design, production, retail, and end-of-life of the product including the ethical practices followed in production. Less emphasis is found on the consumption side which involves the participation of the consumers in the circular economy. Considering the same, the best practices followed by the brands in India and Australia are explored in the initial stage of the project. This paper attempts to investigate primary and secondary case studies on sustainable and ethical fashion initiatives of Indian and Australian garment industries as a means of addressing the circular economy.

3. METHODOLOGY

The primary data sources for this paper include the observation visits by the authors to various sustainable fashion businesses in 4 states in India in Jan 2020; most of these companies were small and medium scale enterprises and recycling business units. Secondary data sources include the websites and annual reports of sustainable fashion brands, many of whom publicly report their economic, environmental, and social sustainability initiatives and performance (KOZLOWSKI et al, 2015).

To identify the fashion brands to be used as cases for this study, a systematic internet search was carried out, using various combinations of such keywords as sustainable, ethical, responsible, eco-fashion, apparel, garment, ethical clothing. This case study collection and the literature review on sustainable and ethical apparel, circular economy in garment production and consumption, collaborative fashion consumption, and policies on best practices supporting sustainable apparel industries, form the initial phase of a joint project between the University of New South Wales (UNSW) in Australia and Manipal Academy of Higher Education (MAHE) in India. This larger project aims to explore

innovative business models to achieve sustainability within the global apparel industry. It involves identifying challenges and opportunities in sustainable fashion in India and Australia, through on-site visits and structured interviews with Indian clothing reuse and recycling businesses, Indian garment and textile manufacturers, Indian suppliers to major Australian fashion brands, and leaders in ethical apparel manufacturing in Australia.

4. RESULTS

4.1. Textile and apparel industry initiatives in India

India's textiles and apparels industry provides direct employment to over 45 million people and is the second largest provider of employment to Indians after agriculture. Exporting 17 billion USD worth of garments annually, India ranks as the 5th largest exporter of ready-made garments in the world USD (WTO, 2019). A growing economy, rising disposable income, and the growing aspirations of Indian consumers are expected to drive growth in the Indian textiles and apparels industry (SHABNAVIS, 2019).

In the developed world, fashion is consumed rapidly via the linear economic model of take-make-dispose; the alternative circular economy model promoting consumption reduction, repair, reuse, repurposing, and recycling is also gaining some ground (BAIRAGI, 2014). Some of the waste avoidance or other ethical and sustainability initiatives in Indian garment production and consumption are listed in Table 2.

Panipat District	Haryana	This historic site used to be a woolen yarn spinning district and was known as India's 'City of Weavers'. In the last 50 years, it has become the global center for recycling textiles and was nicknamed the world's 'castoff capital'. Discarded clothing from developed countries arrive in Panipat and are sorted by color and material; zippers, buttons, snaps, and linings are salvaged, and then the fabric is slashed into rags and shredded into 'shoddy', a fluffy woolen yarn fiber used to make inexpensive blankets and insulation material (GUPTA, 2012; JAIN & GUPTA, 2016; SIKKA & BRAR, 2018). These heavy and coarse but exceptionally warm blankets find a market in Africa or are sold to disaster relief organizations worldwide and in India. Recently the lighter, softer, and cheaper polyester fleece blankets from China have been threatening India's textile recycling industry; Panipat production has declined to half its original business (GHOSH, 2018).
Port of Kandla	Kutch, Gujarat	This site is India's largest port by volume of cargo handled. Established in 1965, Kandla is Asia's first export processing zone. Kandla's seaport is where all the world's shipments of unwanted clothing end up. In factories here, thousands of women sift through tons of used garments, separating the wearable ones into 200 different categories for resale in Africa. Workers are trained to spot valuable haute-couture brand items. Jeans and T-shirts are repaired to fetch higher prices. Only about 30% are suitable for resale. Some are too stained and ripped, these are sliced up into wiping rags. The rest are treated as 'mutilated clothing' which are sent to Panipat for recovery of fibers and twisting into yarns (BELLMAN, 2016; GARGOULLAUD <i>et al</i> , 2017).
Circular Apparel Innovation Factory: CAIF	Mumbai, Maharashtra	CAIF is an industry-led platform aiming to build an ecosystem for searching, seeding, supporting, and scaling circular innovations in the Indian textile and apparel industries. Commenced in 2018, CAIF aims to change current polluting textile systems and redesign products, processes, and systems across the value chain through a systematic and collaborative approach to innovation.
Circular Design Challenge: CDC	Mumbai, Maharashtra	Launched in 2019, CDC is India's first and largest sustainable fashion award, awarding a cash prize of 2 million INR (41,000 AUD). It is a competition for young fashion entrepreneurs to showcase their innovative ideas and collections incorporating circular components across the textile value chain, and to upcycle materials from diverse sources of waste including plastic. CDC is a collaboration between UN Environment, 'Fashion for Earth' by R Elan, and Lakmé Fashion Week.
Lakmé Fashion Week: LFW	Mumbai, Maharashtra	Held bi-annually, LFW is one of the premier fashion events in India, with an entire day dedicated to sustainable fashion. It celebrates the efforts of designers who have been pursuing eco-conscious fashion. For instance, the 'Grown in Australia, Made in India' campaign during LFW showcased handmade textiles from Australian merino wool with the signature styles of the Indian fashion label Péro, produced by the Bhutticu wool weavers' cooperative from Himachal Pradesh. Another LFW campaign, 'Who Made My Clothes?' by FashionRevolution.org pushes for transparency in the fashion supply chain. Others showed garments recycled from marine plastic waste and PET bottles.

Table 2: Textile and apparel initiatives in India. SOURCE: Prepared by authors.

4.2. Ethical and sustainable apparel in India

Sustainable and ethical clothing marks a new beginning in the Indian market with a focus on organic fashion and socio-ethical imperatives. These are listed in Table 3.

Bhu:sattva: Rising Tradelink Ltd	Ahmedābād, Gujarat	Established in 2009, promotes organic and vegan clothing and supports farmers in cultivating organic cotton and providing them livelihood. Other natural fibers used are hemp, bamboo, soybean, and Ahimsa silk (also known as 'peace silk', 'non-violent silk' or 'cruelty-free silk' because it allows the silkworm to complete metamorphosis to the moth stage, compared to traditional silk harvesting where silkworms are killed in their cocoon stage). Uses herbal dyes from beetroot, turmeric, teak leaves, and the like, and engages local women artisans in hand-painting, embroidery, and block-printing the fabrics.
Doodlage	Delhi	With a mission towards zero waste, creates well-finished premium clothes out of industrial refuse, by post-cutting and stitching offcuts, end-of-the-line fabrics, and garment rejects. From their cutting room wastes, creates textured panels of fabric bits and pieces for their bags and home collections.
Eleven-Eleven: CellDSGN Pvt Ltd	Delhi	Luxury prêt-à-porter ('ready-to-wear') label that endeavors to create links between farmers and weavers, vegetable dyers, and block printers. The brand promotes <i>khādi</i> , the traditional hand-spun and hand-woven cotton cloth of India. Symbolic of India's freedom struggle and promoted by Mahatma Gandhi to end dependency on foreign supplies, <i>khādi</i> is considered a 'national treasure of India'. It represents a way of making fabric with a very little negative impact on the environment, through cultivating a natural material and transforming it by hand into cloth with an inconsistent irregularity and imperfection that is considered very beautiful. Dyes their products in 100% natural colorants from barks, petals, and leaves and can trace their supply chain story 'from seed to stitch'. Local block printing and mirror work artisans are employed to produce 'luxurious <i>khādi</i> ', a concept gaining ground in Indian fashion.
Ethicus: Appachi Ecologic Cotton Pvt Ltd	Pollachi, Tamil Nadu	Launched in 2009, claims to be 'India's first eco-logic and sustainable farm-to-fashion brand'. Grows its own organic cotton via a contract farming model. All products are handcrafted using traditional handlooms and enhanced by traditional Indian hand painting, printing, or embroidery. Every product bears a hangtag that identifies the designer and the master weaver, including the time taken to produce the work (SANKAR, 2012).
House of Wandering Silk Pvt Ltd	Delhi	Founded by an Australian woman in 2011, inspired by Mahatma Gandhi's philosophy that 'there is no beauty in the finest cloth if it makes hunger and unhappiness'. It partners with marginalized women producers and artisans from India and throughout Asia, crafting authentic and ethical textile-based lifestyle products using upcycled, hand-made and vintage materials. Provides fairly paid, dignified, and secure home-based work, to empower women to achieve economic independence and create better lives for themselves, their families, and their communities.
I Was a Sari: 2 nd Innings Handicrafts Pvt Ltd	Mumbai, Maharashtra	Takes an eco-ethical approach to fashion. Upcycles and reinvents pre-loved <i>saris</i> – the iconic draped attire of South Asian women – into contemporary womenswear, bags, shoes, and costume jewelry. Empowers marginalized communities and uplifts underprivileged women through recurring income opportunities as artisans.
Ka-Sha: Change by Design LLP	Pune, Maharashtra	Celebrates handcraft on natural fabrics hinged on modern functionality and implements fair means of trade while building on artisanal crafts through seasonal exploration of clothing and accessories. The company's zero-waste policy is embodied in its 'Heart to Haat' brand, which gives new life to post-production remnants via innovative repurposing techniques.
No Nasties	North Goa	Sells 100% organic, 100% fair trade, 100% vegan cotton clothing, launched in 2011. Aims to provide customers with both sustainable apparel and sensible couture designs. Contributes towards tackling the grave issue of farmer suicides in India by paying fair wages and by creating a market for organic cotton that is free of GMO seeds, synthetic pesticides, child labor, and price exploitation.
Upasana Design Studio	Auroville, Tamil Nadu	Founded in 1997, creates 'women's conscious fashion' through such initiatives as: using natural dyes from true indigo and ayurvedic herbs such as holy basil, neem, and red sandalwood; upcycling fabric scraps into unique dresses, bags, and pouches; using handwoven <i>khādi</i> textile; promoting and reviving vanishing Indian handloom weaving traditions such as the <i>jamdani</i> of Bengal and the <i>kadua</i> of Varanasi and applying these into contemporary fashion; and encouraging plastic-free shopping through their 'Small Steps' program, where Tamil village women sew reusable cloth bags. Through the Upasana Conscious Fashion Hub, present-day social issues such as farmer suicides in India, plastic pollution, production waste, women empowerment, and craft revival are discussed and tackled to reverse the negative impacts of the fashion industry.

Table 3: Textile and apparel initiatives in India. SOURCE: Prepared by authors.

4.3. Ethical and sustainable apparel in Australia

Australia ranks as the world's 10th largest importer of clothing, buying overseas-made clothes to the value of 7 billion USD annually (WTO, 2019). The fashion companies and brands operating in Australia are reviewed and graded yearly in the Behind the Barcode project, using 44 ethical sourcing criteria, and the results are published in the Ethical Fashion Report and Ethical Fashion Guide (BWAA, 2019a; b). The report assesses the systems that clothing manufacturers have in place to protect their workers from exploitation and mitigate environmental damage, while the guide helps consumers make responsible fashion choices. Tables 4 shows some of the best-rated Australian fashion companies in the 2019 Report, while Table 5 shows some broad initiatives in fostering a more sustainable garment industry in Australia.

Cotton On Australia Pty Ltd	Geelong, Victoria	Founded in 1991, now Australia's largest global retailer of fashion clothing and stationery brands. Has over 1,500 stores in 18 countries and employs 22,000 workers globally. Includes youth fashion brands Factorie and Supré. Suppliers in China, India, and Bangladesh are audited to adhere to the Cotton On 14 Rules of Trade, covering working conditions, prohibition of child labor, bribery and corruption, and the environment. Joined the Better Cotton Initiative. Sustainable cotton-growing program in Kenya.
Country Road International Pty Ltd	Melbourne, Victoria	Began in 1974, Australia's first lifestyle brand. Sources its apparel and accessories offshore. Drafted its own Code of Labor Practice that ensures payment of living wages and bans child labor, discrimination, and excessive work hours. It follows principles for sustainable farming and sourcing of raw materials, water, and energy efficiency, and reducing waste across the business, and helping customers to do the same. Through its 'Fashion Trade' program, customers donating pre-owned Country Road clothing to the Australian Red Cross are rewarded with an AUD 10 discount voucher.
Etiko Pty Ltd	Melbourne, Victoria	Founded in 2005 with a mission to respect and promote human rights. The first clothing company in the Southern Hemisphere to become Fairtrade certified. Runs a take-back program for their sneakers and thongs at the end of their life; the returned footwear gets recycled into outdoor furniture by another Melbourne company, Save Our Soles. Products are manufactured in India, Sri Lanka, and Pakistan. The company pays premiums to all their employees to ensure they get proper living wages, which means that their minimum income is adequate to meet workers' basic needs of food, housing, and clothing.
Industrie Clothing Pty Ltd	Sydney, NSW	Founded in 1999, specializing in menswear. Use only suppliers that passed International Audit. Signatory of Uzbek Cotton Pledge and YESS (Yarn Ethical Sustainably Sourced). Use only leather, feathers, and down that are by-products of another industry. No angora or wild animal fur.
Mighty Good Basics Pty Ltd	Sydney, NSW	Specialize in premium basic underwear. Developed a strong supply chain located in India. All suppliers carry certification under Fairtrade Labelling Organization, Global Organic Textiles Standards GOTS, and SA8000 social accountability standards.
Nobody Denim Denim 108 Pty Ltd	Melbourne, Victoria	Established in 1999, specializing in women's premium denim wear. Works with raw material suppliers who meet ISO14001 standards. Uses fabrics accredited to OEKO-TEX Standard 100. Use natural enzymes and laundry dyes meeting European REACH standards. Offers a repair service on jeans within 12 months of purchase. Reduced fabric waste by 9% through automated cutting. Uses Australian-grown carbon-positive cotton.
Outland Denim Pty Ltd	Queensland	Founded in 2011 with a mission to help survivors of human trafficking in Asia. Employs those who have experienced human trafficking, sexual exploitation, and other vulnerable members of society in Cambodia to make jeans with artisanal quality, contemporary fit, and durability to ensure they become a part of the wearer's life story. Provides living wages.
RREPP The Goddard Trust	Sydney, NSW	Launched in 2013, specializes in T-shirts. Sources 100% Organic Fairtrade cotton from Chetna Organics India. Garments stitched by Rajlakshmi Cotton Mills India which is certified for SA8000 social accountability, GOTS Global Organic Textile Standard, and Fairtrade.
Sportscraft SABA JAG APG & Co Pty Ltd	Melbourne, Victoria	Founded in 1914, Sportscraft is a century-old iconic Australian clothing brand and is the official uniform supplier to the 2020 Australian Olympic Team. SABA was created in 1965 and offers a contemporary tailored wardrobe. JAG has been focused on denim innovation since 1972 and is the original Australian denim brand. Their parent company APG & Co requires suppliers to abide by the Code of Conduct including modern slavery, working conditions, animal welfare, environment.

Table 4: Selection of Australian ethical and sustainable apparel brands. SOURCE: Prepared by authors.

National Clothing Textile Waste Roundtable	Australia-wide	In May 2021, stakeholders in the textile waste industry convened in Canberra to discuss the key challenges and opportunities to reduce the 800,000 tons of textile waste sent to Australian landfills each year. The Australian Minister for the Environment announced a 1 million AUD (754k USD) investment to support a National Product Stewardship scheme for clothing textiles waste. A National Summit will be held later in 2021 to develop a set of product stewardship goals for a circular economy for clothing textiles.
Australian Circular Textile Association	Sydney, NSW	Established in 2019, ACTA represents the voice of the circular textile industry and focuses on delivering a nationwide takeback program for textiles by 2030. ACTA runs the Australian Circular Fashion Conference (ACFC), which aims to educate and start conversations with amongst the most influential parties in the Australian retail fashion industry.
Australian Fashion Council Ltd	Sydney, NSW	AFC has represented the Australian fashion and textile industry as its peak body for over 65 years. Among its strategic initiatives is developing sustainability, technology, and diversity strategy resources. It makes available to members the AFC Responsible Industry Toolkit, with modules on sustainability fundamentals, ethical sourcing, and circularity for product design.
BlockTexx Pty Ltd	Sydney, NSW	In 2018, clean technology company BlockTexx and researchers at Queensland University of Technology co-developed a proprietary resource recovery process called S.O.F.T.™ (Separation of Fiber Technology) which would result in high-quality recovered cotton and polyester fibers, as well as polyester chips and cellulosic powder.
Circular Centre Pty Ltd	Sydney, NSW	Launched in 2019, Circular Centre is a solutions-based inter-industry business for facilitating circular initiatives in fashion, textiles, and textile waste. It includes the STSC Sustainable Textile Supply Chain, which develops and sells wholesale eco-textiles to the garment and interior sectors; and the CTWS Circular Textile Waste Service, aimed at closing the loop, keeping resources within Australia, replacing toxic synthetics with more environment-friendly substitutes.
Garage Sale Trail Foundation Ltd	Nationwide	Garage Sale Trail (GST) was piloted as a 'Second-Hand Saturday Community Recycling Pilot' by Sydney's Waverley Council in 2010. Searching for treasure from other people's trash was the mantra to encourage a circular economy while at the same time bring the community together. With the support of councils across Australia GST became a national event on 10 Apr 2011. Interested households register online for free and get listed on a national map are receive downloadable posters and social media tiles; sellers keep their own proceeds. In 2019, about 430,000 Australians sold their pre-loved stuff in their own garages. GST is now in its 10 th year.
Southern Cross Recycling SCR Group	Melbourne, Victoria	SCR Group is Australia's largest clothing reuse and recycling company: every year, they re-home 41 million items of unwanted clothing in communities where they are needed most. Over 1,500 SCR clothing drop-off hubs can be found in car parks, train stations, and schools around Australia, accepting clothing, shoes, handbags, and fashion accessories. They partner with Australian Disability Enterprises and charities to service some of the hubs. During National Recycling Week in 2018 SCR launched in Melbourne the Feel-Good Hub, a bin with illuminated posters to make clothing donation more engaging to consumers.
Sustainable Schoolwear Worn Up Fullthom Pty Ltd	Sydney, NSW	Sustainable Schoolwear makes school uniforms from blends of recycled polyester and GOTS-certified organic cotton. Yarns used for socks, tights, and underwear are sourced from OEKO-TEX 100 certified producers. Its sister business Worn Up collects unwanted school uniforms and collaborated with the University of New South Wales to upcycle the materials from non-wearable uniforms into new value-added products such as phone cases.
Thread Together Ltd	Sydney, NSW	Founded in 2012, this charity redistributes surplus clothing donated by Australian fashion brands – that potentially would have been dumped into landfill – and gives these brand-new clothes and shoes to people who are doing it tough. These include women who have escaped domestic violence, men who have been released from jail, refugees, homeless youth, bushfire victims, cancer patients, and many others. Through these clothes, people are offered choice, dignity, and hope for a better tomorrow. Over 150,000 people have been helped.

Table 5: Current actions and initiatives towards sustainable apparel in Australia. SOURCE: Prepared by authors.

5. DISCUSSION AND CONCLUSION

The approach provided by the fashion houses and brands in India and Australia provides examples to address the sustainability challenges connected to consumption and production through closing the material loops and employing circular economy approaches. The use of organic farming, designing for zero-waste, or designing from pre-and-post consumer waste, providing services for reuse and recycling services, all contribute towards this achievement.

Progressive initiatives can be used to combat the environmental pollution and societal misery that results from industrial fashion production systems. The examples included in this paper represent the wide range of services and approaches

by which some fashion houses and brands in India and Australia attempt to balance ecological, socio-ethical, and economical sustainability in their business. A paradigm shift is observed when designing with emphasis on the use of organic and natural materials, recovery and recycling of discarded textile and apparel, and production with emphasis on inclusiveness through artisan involvement and fair trade.

While these initiatives are inspiring, we question if they are enough to shift the direction of the global fashion industry towards a more positive course. The problem is a two-way street: consumers believe fast fashion is unsustainable because the clothing is not very durable and therefore encourages disposability (JOY et al, 2012), and on the other hand manufacturers usher new stylistic trends to entice customers to keep purchasing new stuff.

As some fashion brands are already embodying sustainable initiatives, what is the best way to measure and genuinely communicate their positive impact? Consumers are already tired of all the greenwashing around them and have grown to distrust sustainable fashion claims (CMF, 2021). Many global fashion brands and retailers are not transparent in disclosing their real social and environmental policies, practices, and impact (FASHIONREVOLUTION.ORG, 2019).

The Nordic Council of Ministers have mapped sustainable textile initiatives, and offer four approaches (NORDEN.ORG, 2015): REPLACE: DDT ('design destined for trash') with W2W ('wonderful to wear'); REDUCE: CWCW (chemicals, water, carbon dioxide, and waste), implement IRS (intelligent resource stewardship); REDIRECT: OSG (off-shoring globally) to OSL (on-shoring locally); and RETHINK: ED (excluding design), implementing ID (including design).

The sustainable initiatives taken up by the brands in India and Australia focus mostly on the supply side (production) and less on the demand side (consumption). Articles have been written about design strategies to make fashion production and consumption more sustainable, including multiple life cycles, slow fashion, customization, halfway products, modular structure, co-creation, local production, design services, unique design, and services for longer or intensive utilization (NIINIMÄKI & HASSI, 2011). Creating awareness on the impacts of fast fashion amongst consumers cannot be enough; they have to be empowered and enabled to make responsible fashion choices, such as through persuasive design (FOGG, 2009). Perhaps a renewed focus on product-service systems – in particular product sharing, swapping, renting, restyling, rejuvenation, maintenance agreements, and take-back schemes – could provide new inspiration against premature disposal and replacement of apparel (ARMSTRONG, 2013). It is optimistic to imagine that one day, all fashion would be ethical and sustainable, that the clothes we wear do not harm other people, animals, or the environment, and that such a day will truly come.

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