Globally, the textile sector has witnessed a shift towards sustainable practices driven by a number of factors. Across the textile value chain, stakeholders have become more aware of the impacts of their decision-making. Consumer buying behaviour ultimately dictates the decisions of brands and manufacturers and awareness among consumers and other stakeholders has prompted brands to increase transparency in their supply chains, with clear responsibility on manufacturers, suppliers and raw material providers to make sure their processes are environmentally and socially sustainable. It has now been widely accepted that Circular Economy or Circularity in the textile and apparel sector (circular apparel) can provide some of the solutions. Circular economy is an economic system where materials and energy circulate in loops and stay within the value chain, as opposed to a linear system of take-make-dispose. In a circular economy the concept of waste is eliminated, material value is reused, recycled, and repurposed.

**OVERVIEW OF ACTIVITIES**

Centre for Responsible Business (CRB) has initiated multiple projects on circular apparel, that aim to identify and facilitate key policy and practice interventions that can provide impetus to nudge the Indian Textile and Apparel sector onto a circular path and thereby support balanced and sustainable growth of the industry. This Factsheet provides an overview of these interventions in terms of their objectives, achievements so far and the way ahead:

- **Circular Apparel Policy Innovation Lab (CAPIL)** was launched in 2019 with support from Laudes Foundation (erstwhile C&A Foundation) to facilitate a process of inclusive policy making for circular textiles and apparel in India (select clusters) through dialogues involving brands, suppliers, industry experts, policy makers and other key stakeholders. The CAPIL project focuses on identifying CE priorities and linked potential policy interventions based on interaction with stakeholders on the ground. These stakeholders include national and international brands, suppliers and manufacturers, design institutes, innovators and start-ups operating on CE business models, academia, and relevant central and state policy actors.

- CRB is working on a **Status Paper for Circular Textiles and Apparels in India**. This paper is being prepared on inputs gathered through secondary research, inputs from clusters/industry actors and advise/insights received from a group of sectoral experts (brands, academia, industry association and textile chemical experts). Findings from this paper will be shared with key Ministries/organs of the government that would be relevant for promoting Circular Apparel in the country.

- **Promoting Responsible Value Chains in India for an Effective Contribution of the Private Sector to the SDGs (PROGRESS project)** is a multi-year project focused on the relationship between brands and their value chain actors on communications and influence related to adoption of sustainable or circular practices. Partnering with Aston University (UK), and supported by the International Development Resource Centre (IDRC of Canada), CRB is exploring how the private sector can support the journey towards achieving certain critical Sustainable Development Goals (SDGs) in India. Textile and Apparel is one of the four sectors in scope for the project and the objective is to highlight how brands are or can promote Circular Apparel in their value chains in India. Under PROGRESS, CRB has held multi-stakeholder consultations in New Delhi and Ahmedabad, and a number of personal interviews to determine the level of sustainability influence between entities in a value chain. Best practice case studies on circular practices have been compiled to facilitate dissemination and also to identify any supportive policy action that may be needed. A toolkit for practitioners to promote CE principles in the apparel and textiles sector is also being developed.
In Ahmedabad, stakeholders felt that local infrastructure (ginning, etc.) at farm level should be provided to generate employment opportunities, as well as increase income for farmers (cotton growers). Additionally, this would preclude baling of cotton for transportation; baling leads to higher breakage in fibre. Reverse logistics appeared to be an important issue, as viable business models are lacking. A partnership between transport aggregators and apparel pick-up centre/Producer Responsibility Organizations (PROs) could be explored.

In Bengaluru, significant demand emerged for Standards on garment manufacturing, declaring eco-friendly or circular input (chemicals, energy, water, etc.). Labelling was deemed to be important to let customers make informed choices. Regulations could play a big role: usage of recycled water should be made mandatory for dyeing operations, and banning landfilling of textile and apparel waste (trimmings, post-consumer waste, etc.). Incentives like TUFs (Technological Upgradation Fund Scheme) should be revamped to include energy efficient and low resource-intensive equipment. All stakeholders unanimously mentioned that the state (Karnataka) needed a stable renewable energy policy—In recent years the renewable energy policy had been altered too many times. This had prevented many businesses from investing in renewable energy technologies.

Stakeholders in Panipat had pointed out that domestic collection of textile and apparel recycling must be shored up in, to avoid dependence on imports. Panipat is a recycling hub; in some ways Panipat had numerous examples of circular activities. Dyeing units in Panipat felt that ZLD (Zero Liquid Discharge) was the way forward to move forward to ensure minimum groundwater extraction. Viability of solar energy without subsidies is minimal for MSMEs; after withdrawal of subsidy, only large exporters are able to invest in solar installations.
Further, during CRB’s Annual conference India and Sustainability Standards 2019, a high-level plenary session was organized to discuss innovations and circular practices in the sector and the way forward. Panelists were invited from different segments of the apparel value chain, including brands, suppliers, academia and entrepreneurs. The panel felt that R&D into applications of Industry 4.0 is crucial for India to compete with apparel manufacturing hubs like Bangladesh and Vietnam. The need for a multi-stakeholder platform on circular apparel was also felt with key circular economy advocates (businesses and organisations) collaborating to develop the platform.

The discussions also highlighted the need for circularity to embed aspects of social sustainability and inclusive growth. A crucial aspect of circular practices is also the working conditions and safety of the workforce. This also becomes very relevant in light of the current COVID19 pandemic wherein the poor plight of migrant workers, contract labour, home-based workers has come to fore as a glaring gap in the current system and industry set up.

Over the course of last year (2019), significant headway has been made in mobilising stakeholders in a few significant apparel and textile sectors in the country. As part of its current interventions in Ahmedabad, Bangalore and Panipat, CRB aims to create Cluster Action Committees to facilitate the momentum on these dialogues and to undertake suitable action for both policy and practice action. However, there is immense scope for interventions for Circular Apparel and CRB will continue its efforts through potential areas of action such as:

- Facilitating CE dialogues in more textile and apparel clusters across the country to identify policy and practices areas
- Capacity building for stakeholders including policy actors in different clusters on potential for Circular Textile & Apparel
- Designing pilots for showcasing circular practices (e.g. How can local municipalities play a role in supporting reverse logistics for garment manufacturers to promote recycling)
- Documenting existing best practices and innovations for Circular Apparel
- Facilitate standard setting for circular apparel in India

CRB is looking for strong institutional partners who are committed towards creating a circular economy in the Indian textile and allied industries to explore partnerships. Given that the fashion industry will account for about 25% of global carbon budget because of increasing emissions by 2050, it is high time for the Indian value chain to incorporate a circular economy and unleash its full potential.

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<table>
<thead>
<tr>
<th>Circular Economy Aspect</th>
<th>Fibre production</th>
<th>Textile production</th>
<th>Ready-made garments (RMM) production</th>
<th>Logistics and retail</th>
<th>Post-consumer processing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design - Circular design</strong></td>
<td>Reduce environmental impacts, more durability, more reliability</td>
<td>Design and development of new materials</td>
<td>Circular Design guidelines for longevity and durability</td>
<td>Design for sustainable reverse logistics</td>
<td>R&amp;D on fibre separation and sorting, recycling</td>
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<tr>
<td><strong>Raw Material - Conventional &amp; Alternative fibres</strong></td>
<td>Availability of cotton for local spinning mills</td>
<td>Manufacturers should be incentivised to work with alternative materials</td>
<td>Raw materials should be incentivised to ensure sustainable production</td>
<td>Traceability required; consumers should be able to trace their choices</td>
<td>Collection and sorting of post-consumption apparel, assessment for different options - repair, re-manufacturing, re-commerce, etc.</td>
</tr>
<tr>
<td><strong>Chemicals/Spacer/Accessories - optimal/reduction in use of chemicals, use of natural dyes, quality of finished products, etc.</strong></td>
<td>Organic fertilizers, herbicides</td>
<td>List of excluded chemicals</td>
<td>Green chemicals</td>
<td>Organic waste at retail</td>
<td>RE-enhanced biodegradable packaging</td>
</tr>
<tr>
<td><strong>Waste - Material/ Water/ Hazardous Waste - reduction/elimination of use of hazardous chemicals (in place of hazardous wastes), reuse of industrial symbiosis (waste from one industry as input for another)</strong>*</td>
<td>Quality of raw material (cotton has seeds, leaves etc. leading to higher waste)</td>
<td>Integrated facilities are preferred as they can reuse waste (in-house)</td>
<td>Reduce need for water - use of technology to capture and reuse steam - need to take stock of all available technology for reducing waste for various aspects</td>
<td>Plastic waste at retail</td>
<td>Sorting at source, directive to consumers not to dump garments/textiles with municipal waste</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td>Use of energy efficient machines, clean energy</td>
<td>Energy efficient technology, sources of clean energy</td>
<td>Energy efficient transport, transportation infrastructure services (for reverse logistics)</td>
<td>Reverse logistics with less impactful options (e.g., electric powered vehicles)</td>
<td>R&amp;D on energy-efficient recycling equipment (fibre separation)</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>Less water-intensive fibres</td>
<td>Automation can lead to savings of water but challenging for smaller dyeing units due to space constraint in individual units; use recycled water</td>
<td>Common infrastructure development for smaller units (ERP, coloured water holding tanks, separate tanks for chemical sludge - to be recycled separately)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Business Models/Practices</strong></td>
<td>Incentive farmer to switch to alternative fibres</td>
<td>Place creates clusters, help clusters modify, price points not only consideration for suppliers</td>
<td>Buy back used clothes: provide collection points along with outlets</td>
<td></td>
<td>Collection, sorting and reverse logistics</td>
</tr>
</tbody>
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