

Policy Note

# Ideas for Green and Inclusive Recovery for Tamil Nadu's Textile and Apparel Clusters

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# Policy Intervention Ideas for Green and Inclusive Recovery for Tamil Nadu's Textile and Apparel Clusters

## Background

Globally, the apparel and textile (A&T) sector is witnessing a shift to sustainable practices. Customers as well as brands are demanding sustainable products. Suppliers and manufacturers have also adopted sustainable practices to remain competitive. 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. In turn, the choices made by brands and their suppliers have impact on natural ecosystems, resources and societies (working conditions, wages, etc.) Awareness among consumers 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.

Tamil Nadu, also known as the yarn bowl of India, contributes to 1/3<sup>rd</sup> of the total textile business in India. Tamil Nadu is the largest producer (40 %) and exporter of cotton yarn in India and the second largest producer of blended yarn.<sup>1</sup> The state hosts the largest number of textile mills in the country. Tamil Nadu leads with 46% of the spinning capacity, 60% of the yarn export, 20% of the power loom capacity, 12% of handloom capacity and 70% of Cotton fabric knitting capacity in the country<sup>2</sup>.

Tamil Nadu New Integrated Textile Policy 2019 addresses most of the existing structural challenges faced by the industries of the state and the concepts of circular economy can be easily incorporated into the textile policy. But challenges like water crisis and environmental pollution still loom large on the clusters. Usage of coal and wood for boiler fuel is still rampant.<sup>2</sup> More recently, the Covid-19 pandemic has disrupted the business-as-usual scenario in Tamil Nadu as well as other A&T clusters in India. Lockdown of the economy had affected orders from both domestic and international buyers, resulting in default in payments, job losses, and migration of labour forces. *Circular economy* can show the way forward for recovery.

## Circular Economy

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. Ideally, a circular economy would run wholly on renewable energy. The Ellen Macarthur Foundation lays down the following three principles for circular economy: <sup>3</sup>

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems

Sustainability issues like climate change, pollution, malnutrition, and unemployment are urgent, and can't be solved by incremental actions, that fail to nudge the system from status quo. The Circular economy principles provide a framework and means to transform the system and to

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<sup>1</sup> Tamil Nadu Industrial Guidance & Export Promotion Bureau. 2020. <https://www.investingintamilnadu.com>. <https://www.investingintamilnadu.com/focus-sectors/textiles-and-apparels/>.

<sup>2</sup> Personal Communications. Sectoral expert (Tamil Nadu's A&T sector)

<sup>3</sup> Ellen Macarthur Foundation. Circular Economy in Details. Accessed at <https://www.ellenmacarthurfoundation.org/explore/the-circular-economy-in-detail> on 14 Dec 2019

address these issues. There are numerous cases where circular business models and practices have improved not only resource efficiency, but also improved livelihoods of stakeholders. This is not a new concept; but the application of the concept in a holistic manner, to an entire sector or an economy is a more recent attempt.

### **Incorporating circular economy in Tamil Nadu's Textile Policy**

**Centre for Responsible Business (CRB)** along with **Intellectap** and **Fashion For Good (FFG)** have held several workshops and individual stakeholder consultations to understand priority areas for the A&T sector stakeholders in Tamil Nadu. These consultations have been held under a project called **Circular Apparel Policy Innovation Lab (CAPIL)**, funded by the **Laudes Foundation**. CAPIL's objective is to explore how public policy can help in accelerating circular economy transition in the Indian A&T sector. The following policy intervention ideas have been gathered from stakeholders in Tamil Nadu, such as spinning mills, dyers, manufacturers, and innovators.

#### *Materials*

- Broadly, public policy should **encourage the industry to move away from cotton**, and promote alternative natural fibres as well as artificial fibres. Growing and exporting cotton in the form of yarn, fabric, linen, apparel, etc. also leads to a loss of embedded water, energy, chemicals, etc. Taiwan, Vietnam, etc. have revolutionized their A&T sectors by promoting artificial fibres. Moving away from cotton would ensure revenue from exports but would also reduce the impact on India's water resources.
- Transition to synthetics should also consider recycling options and collect back mechanisms
- Policy intervention/ incentives will need to be explored for technology upgradation to support transition to alternate materials
- **Tax-incentives can be provided on products made from alternative or artificial fibres**

#### *Waste*

- More policy support/ intervention for management of hazardous waste needs to be looked at as most of the other waste is being utilised
- Design of industrial parks should consider potential for waste utilisation across different kinds of industry. Need to follow approach of "homogeneity in waste, heterogeneity in use"
- **Landfilling of fabric wastes (pre-consumer) and apparel waste (post-consumer) should be discouraged.** Capacity building initiatives can be taken for MSMEs to reduce, reuse, recycle wastes. The A&T sector could become Zero Waste.
- Formalization of the collection chain and so-called scrap economy should be done and promoted. It will enhance the resource efficiency and help in tracking the material usage and wastage. This can be extended to the policy of incentivising building of critical infrastructure.

#### *Water*

- Water availability of Tamil Nadu varies greatly with zones, unfortunately most of the textile clusters in the state are located on the water scarce areas. More than 95% of the

surface water and 80% of the ground water have already been put into use.<sup>4</sup> So, dependence on fresh water needs to be reduced considerably. **Treated water from municipal sewage treatment plants should be made available to the A&T industry in Tamil Nadu.** This would prevent usage of potable water for industrial purpose, and also alleviate water scarcity. Similar practices are at place in Surat, Gujarat. Municipal STPs can be run on a Public Private Partnership (PPP) model.

- **Guidelines and incentives are required to explore the possibility of treating process water and releasing it as potable water.** ZLD processes currently in place are energy-intensive and also leads to evaporation to water, which could otherwise be utilized for industrial/domestic purposes.

### *Chemicals*

- **Promote natural dyes** by incentivizing farmers to produce crops needed for dyestuff. Reactive dyes (currently in use) require excessive amount of water, and are also difficult to be removed from waste-water and waste fabric/yarn material. Direct dyeing processes must be encouraged. Reactive dyes are already seeing a decline in most textile manufacturing countries.
- **Manufacturing of salt-free dyes should be incentivised.** Salt content in existing dyes prevents mixed textiles waste from being utilized in cement plants for RDF (Refuse-derived Fuel) too<sup>5</sup>. Further, technology upgradation funds should be extended to innovative processes that help separate dyes and substrate from waste materials and water, thus reducing the potential for pollution.
- **Roadmap to Zero (ZDHC – Zero Discharge of Hazardous Waste) norms should be followed.**<sup>6</sup>

### *Energy*

- Energy costs for effluent treatment are high. Earlier, Tamil Nadu has seen increasing uptake for wind energy when incentives were in place. Many dyeing and manufacturing units in Tirupur are keen to install solar plants. Currently, incentives to install solar are available only for those dyeing units that seek to modernise their ETPs; this is a costly affair for smaller units. **Waiving off the modernization clause** would help more industries uptake solar energy.
- Under the Amended Technological Upgradation Fund Scheme, capital assistance ranging from Rs. 2.23 lakh to Rs. 8.55 lakh is being provided to the small power loom units having up to 8 looms for installation of solar PV cells<sup>7</sup>. **The purview of the scheme can be extended to the medium scale industries as well.**
- Replacing coal and wood is a high priority for Tamil Nadu's A&T clusters. **Availability of piped natural gas** would help the industry switch to cleaner fuel and thus reduce air pollution and improve energy utilization per unit of fuel, thus reducing carbon footprint.

### *Ecosystem*

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<sup>4</sup> ENVIS Centre. 2020. ENVIS Centre: Tamil Nadu. 13 Jan. [http://tnenvis.nic.in/Database/TN-ENVIS\\_791.aspx#:~:text=The%20demand%20for%20water%20in,average%20of%20%2C200%20cubic%20meters](http://tnenvis.nic.in/Database/TN-ENVIS_791.aspx#:~:text=The%20demand%20for%20water%20in,average%20of%20%2C200%20cubic%20meters).

<sup>5</sup> RDF is the last-resort for material loops, when further reuse or repurposing isn't feasible economically or environmentally. Under circular economy, RDF is therefore considered only marginally better than landfilling.

<sup>6</sup> <https://www.roadmaptozero.com/>

<sup>7</sup> Handlooms, Handicrafts, Textiles & Khadi Department. 2019. Tamil Nadu New Integrated Textile Policy. Chennai: Handlooms, Handicrafts, Textiles & Khadi Department. [http://www.spc.tn.gov.in/policy\\_doc/TN\\_Textile\\_Policy\\_2019.pdf](http://www.spc.tn.gov.in/policy_doc/TN_Textile_Policy_2019.pdf).

- **Green Finance** should be made available to A&T industry stakeholders in Tamil Nadu, as they have innovated on all major aspects of circular apparel, such as raw materials, water conservation, energy efficiency and renewable energy, and chemicals.
- **Common facilities and research centres** are needed, where industrial R&D can be done by individual mills or associations.
- **Capacity building/ awareness programs for various stakeholders in the textile and apparel sector.** This is also important to ensure action at the right stage. For e.g. management and recovery of chemicals at the weaving stage would imply more efficient management of waste water at the dyeing stage and the quality of the treated waste water would be much higher.
- Encourage **tie-ups between industry and academia** where engineering graduates can be offered attractive packages to join innovation centres for the textile industry. This would have a cascading effect on the value chain, as research and innovation will pick up.
- Develop a standard/certification for India with global acceptance to reduce certification/audit time for textile and apparel companies
- Tamil Nadu new integrated policy mentions 50% capital subsidy for construction of labour quarters and workers' hostel if encumbrance free land is mobilized by the Cluster / Textile Park SPVs. Since **majority of the textile units are MSME sectors, the registration fee and other taxes for the buildings specifically meant to be constructed as workers residences, could be waived off.**