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Transitioning Towards a Circular Textile Economy: Sharing Knowledge and Best Practices from Sri Lanka

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Abstract

The textile and apparel industry is Sri Lanka's largest manufacturing sector, accounting for 44 percent of total exports in 2018. Sri Lanka takes pride in leading sustainable apparel manufacturing in the region. This industrial sector is a key contributor to generating income for local communities, especially for women. However, the traditional lifecycle of the industry is centered around the "Take/ Make/ Use/ Dispose" model. This linear approach utilises excessive amounts of resources, including water and energy during its manufacturing process that creates negative environmental and social impacts. Furthermore, there is limited consideration on the possibility of valorising the products at the end of their lifecycle which leads to large volumes of waste ending up in open dumps. Previous studies have uncovered opportunities for integrating circular economic principles into the manufacturing sector. However, there is limited research on best practices that could enable textile manufacturers to 'close the loop'. The aim of this study, therefore, is to evaluate best practices in waste and water and management in the Sri Lankan textile industry using a circular economy as a theoretical framework. The study investigates best practices in 7 large-scale textile companies in Sri Lanka. This study adopted a mixed-method approach which included a questionnaire survey and in-depth interviews with sustainability personnel of the companies. Data were cross-checked with reports submitted to organisations such as the Central Environment Authority, Global Reporting Initiative and the UN Global Compact. Data were analysed using a thematic analysis to identify the best practices. The findings show that the best practices include recycling and upcycling textile waste, co-processing waste, utilising sludge from wastewater treatment to make bricks, rainwater harvesting for washing and gardening, water intensity reductions and sustainable procurement. As such, the key findings highlight that through a number of initiatives and best practices, the selected companies actively promote the circular economy and try to integrate sustainability into their business strategy. The authors highlight the importance of improving data availability and transparency. It is also recommended to establish Zero Emission Export Processing Zones in Sri Lanka. Furthermore, sharing these findings could assist small and medium textile companies in the country and in the region to evaluate their current practices, and in so doing, identify best practices that they could implement in transitioning to a circular economy.

Keywords: Textile industry, Circular economy, Wastewater, Sri Lanka