TOWARDS AND INCLUSIVE AND JUST CIRCULAR ECONOMY TRANSITION IN THE TEXTILE AND APPAREL VALUE CHAIN

POLICY BRIEF

INDIA

ASHOKA

SMART GREEN INDUSTRY

Utrecht University

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Laudes Foundation

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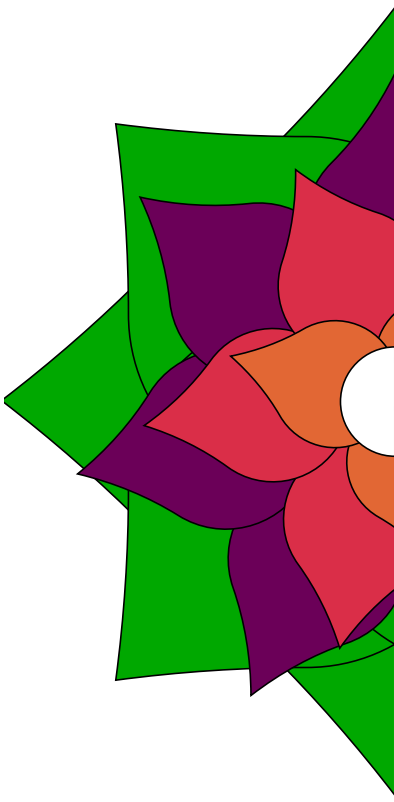


EXECUTIVE SUMMARY & KEY HIGHLIGHTS

The transition to a circular economy (CE) in the textile and apparel value chain (TAVC) presents an opportunity to address the environmental challenges of the industry. However, without a strong focus on social equity, this transition risks perpetuating poor working conditions, gender inequality, and vulnerability for workers, particularly in low-wage, labor-intensive roles. To ensure a just and inclusive CE transition, this policy brief identifies five key recommendations for policymakers. These recommendations are aimed at addressing these challenges and promoting a Just and Inclusive Circular transition of the textile sector.

1. **Align CE Goals with Just Transition Principles:**
    - Set targets to reduce overproduction, and promote sustainable business models.
    - Prioritize social outcomes such as job quality and community well-being alongside environmental goals.
    - Increase social ambition to meet increasing transparency standards required globally by new and ongoing EU compliance regulation.
    - Develop goals to increase the creation of inclusive and decent circular jobs that benefit diverse workers across the value chain.
2. **Identify and Protect Vulnerable Populations:**
    - Collect and utilize data to address vulnerabilities, particularly for informal workers, women, and migrant populations.
    - Collaborate across government levels to ensure the creation of quality jobs and ensure vulnerable workers (e.g. informal workers) are protected in the CE transition.
3. **Address Income Disparity and Strengthen Labor Regulations:**
    - Reduce income disparity by penalizing gender wage gaps
    - Strengthen labor regulations to ensure living wages, fair employment, and mandatory human rights due diligence across the value chain.
    - Ensure global accountability in Extended Producer Responsibility (EPR) schemes, protecting workers in regions where EU textile waste is exported.
4. **Enhance Participatory Mechanisms and Access to Justice:**
    - Ensure inclusive participation in policy processes, empowering marginalized groups through citizen assemblies and NGO collaboration.
    - Reverse the burden of proof in legal frameworks, and provide financial and legal support to vulnerable workers seeking justice.
5. **Implement Restorative Mechanisms and Support Reskilling Initiatives:**
    - Support NGOs, trade unions, and companies to reskill vulnerable workers for the circular economy.
    - Provide resources for businesses to create quality circular jobs and ensure sustainable textile waste management globally through stronger EPR mechanisms.

These recommendations promote a CE transition that balances environmental sustainability with social equity, ensuring a fairer future for all in the global textile industry.

1. INTRODUCTION

The textile and apparel value chain (TAVC) is a complex global system involving numerous large and small businesses across different geographies spanning from raw material extraction in countries like China, Bangladesh, India, and Vietnam to high-consumption regions such as Europe, North America, and Japan (Peters et al., 2021; WTO, 2022). The European Union is a major player, in both importing and exporting textiles, with over 80% of used textiles exported to Asia or Africa (EEA, 2023, Brink, H et al,. 2021). India's textile and apparel industry forms 11 per cent of the country's total exports (Raichurkar and Manickam 2015). It is considered the fifth-largest exporter of textiles and apparel in the world (UN Comrade and Wazir Analysis 2021). It is also the second-largest employer in the country after agriculture employing directly more than 45 million people and indirectly around 60 million people more (Economic Survey of India, 2019-20; NIPFA, 2020)

In terms of environmental impacts, the sector is characterized by overexploiting natural ressources, polluting and one of the most wasteful sectors (Niinimäki, 2018; Kaplinsky and Morris, 2000; WBCSD, 2014). While in terms of social impacts it employs over 10% of the global workforce it is characterized by poor working conditions from the material extraction to the end-of-life stages (World, 2012, Suarez-Visbal et al., 2022a). Furthermore, women, account for more than 75% of this workforce and are disproportionately represented in the most vulnerable jobs (Fletcher and Tham, 2014; Neetha, 2002; Ascoly, 2009).

To pursue sustainable development, and promote social, environmental, and economic benefits, the sector has increasingly adopted (CE) strategies, developing business around rental, repair, remanufacture and recycling amongst others (Henry,M. et al., 2019). In terms of circularity, India is well position in the textile recycling arena, where sector such as Panipat, has become a hub for recycling emptying over 20,000 people and brings over $62 million in annual revenues (Sikka et al., 2018). Furthermore, the country has a long tradition of producing and exporting recycled fibres, yarns and textiles. According to Suarez-Visbal et al., (2022a), with an established garment production capacity circular strategies such as remanufacture are well position to flourish and compete in the international arena. Additionally, other circular strategies such as repair, refurbishing and recycle are well established however in a very informal way. In-house repairing services and new platform models that provide rental, and clothing resales are growing given the increase of its local market and coexist with the more informal, second-hand market and the street repair vendors, creating a vast and diverse offering of circular strategies in the sector (Suarez-Visbal et al., 2022a).

At the business level, there are several cases across countries, including India that evidence the positive impact that the adoption of circularity strategies has on material efficiencies and reduction of waste generation in the sector (Alonso-Muñoz, S. Et al., 2022;Farhana, K. Et al., 2022;Saha, K., et al., 2022;Suarez-Visbal et al., 2024c). However, CE strategies have very weak consideration of the social dimension of sustainability, particularly regarding their impact on workers and communities (Suarez-Visbal et al., 2022a).

Our research in Suarez-Visbal et al., (2022b) confirmed and identified that current CE practices in the sector emulate the linear value chain model, perpetuating poor working conditions, low wages, and the feminization of the workforce. Addressing these issues is critical, otherwise, applying circularity in the sector could exacerbate social inequities undermining global sustainability efforts.

At the Policy level, India has a CE national policy, and the Ministry of Textiles is promoting sustainability with initiatives such as Su-Re (sustainable revolution) Aayog N (2021). However, textiles are not consistently prioritised in the CE national plan. Furthermore, the conversation around just transition and green jobs is very weak in the policy ambition on the sector. This lacking a robust approach that incorporates how the impact on workers will be assessed and tackled is critical as circularity represent for the sector a great opportunity (Suarez-Visbal et al., 2022a, Suarez-Visbal et al., 2024c).

To achieve a comprehensive sustainable CE transition, it is pivotal to apply a transformative policy approach, rooted in a Just transition lens, that aligns policy, industry, vulnerable workers, and communities, aiming to leave no one behind. In this sense, a Just CE Transition means ensuring that the shift towards a circular economy is fair and inclusive, developing shared objectives that balance social, economic, and environmental considerations (Suarez-Visbal et al 2024b).

2. APPROACH, OBJECTIVES & METHODOLOGY

This policy brief is based on a 4-year research project whose aim was to assess and provide recommendations for the improvement of the social impacts of circular strategies in the Textile and Apparel Value Chain. The project consisted of the following phases:

1.How to measure	2.Assess	3.Envision	4.Test	5.Amplify
Social Impact Assessment framework (SIAF) for Circularity	**Current** situation Circular strategies & their **social impacts** in the Textiles and apparel value chain	Transformative Inclusive Circular textile **Futures**	**Business** Piloting of transformative Circular recommendations	Transformative **POLICYMAKERS** recommendations to increase uptake on JUST & inclusive circular strategies

The research project was carried out with the participation of 90 stakeholders including 20 circular businesses with operations either in the Netherlands, 20 in Spain, and 20 in India, social NGOs, workers representatives, CE academics, and policymakers. A mixed method approach was applied where qualitative and quantitative methodologies were used to i) identify the most pressing social impacts of circular strategies applied in the sector ii) co-create transformative CE visions for the sector, iii) test transformative recommendations for business, and iv) co-develop transformative policy recommendations rooted in a just transition lens.

A framework to assess the social impact of CE was developed and implemented to provide evidence in three dimensions: the quality of jobs, community well-being, and gender equality of selected circular strategies in the sector (Suarez-Visbal et al., 2022). This framework is called SIAF-CE♀♂ (the Social Impact Assessment for Circular Economy) shown in Figure 1. The SIAF-CE♀♂ is composed of 15 multi-attribute, qualitative indicators across three dimensions: quality of job (QOJ) in orange; sustainable livelihood (SL) in pink; and gender equality and inclusivity (GE&I) in purple. This framework was tested, validated, and implemented with over 30 companies in the three study countries, with more than 230 workers surveys and 45 companies and experts' semi-structured interviews.

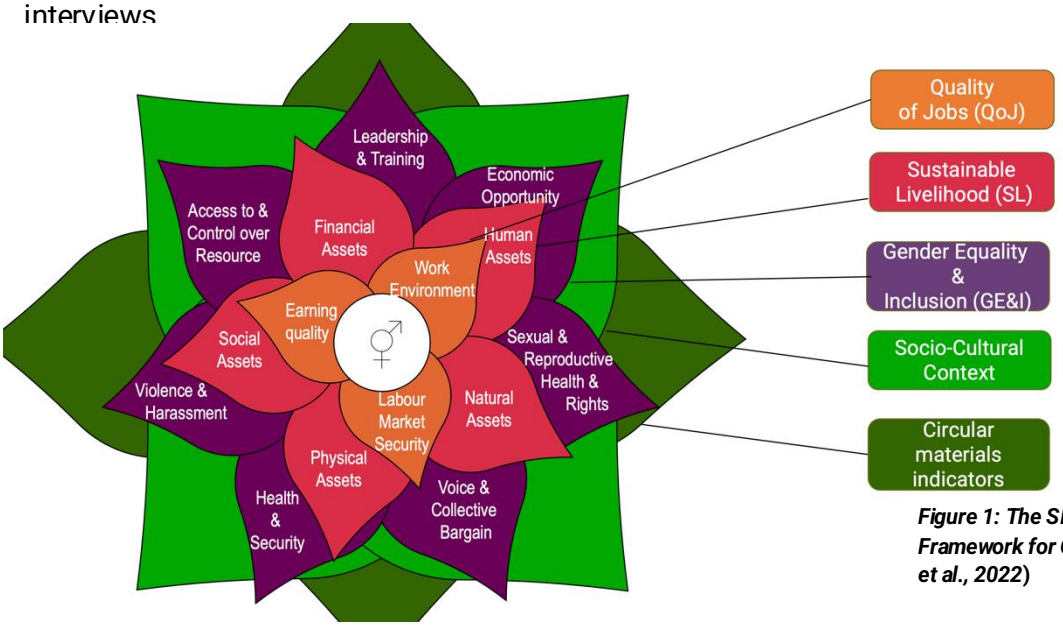


Figure 1: The SIAF-CE♀♂: The Social Impact Framework for Circularity. Source: (Suarez-Visbal et al., 2022)

3. MAIN FINDINGS

3.1 Social impacts of Circular Strategies in the Indian textile sector

Figure 2, showcases the result of applying the SIAF-CE in the Indian case. Each Circular strategy is represented by an R and a number according to the circular hierarchy. The flower graphic represents the 15 aggregated indicators per male and female worker. The closer to the center the lower the indicator is valued. Figure 2.1 shows that more traditional Indian circular jobs, such as repair R5, remanufacture R6, second-hand market resale R4 and recycling R7 (including collection, sorting, and actual recycling). evidence low wage and job security indicators, due to the high informality and the absence of formal contracts even in established businesses. Gender gaps affect female workers in terms of payment and job security. Furthermore, both male and female workers in these CSs have low social assets which signified isolation, lack of integration and lack of family time, as most of these workers are internal migrant workers.
These findings suggest that informal women migrant workers active in resale (R4) and recycling(R7) are the most vulnerable workers as they do not have minimum rights guaranteed and have the lowest voice and bargaining power. In contrast resale (R4) and rental (R3) based on internet platform models led by pioneer startups have a higher earning quality, gender pay gaps persist as well as low job security, and low voice and collective bargaining.

Figure 2.Social impact assessment of Circular strategies implemented in the Indian textile Value Chain

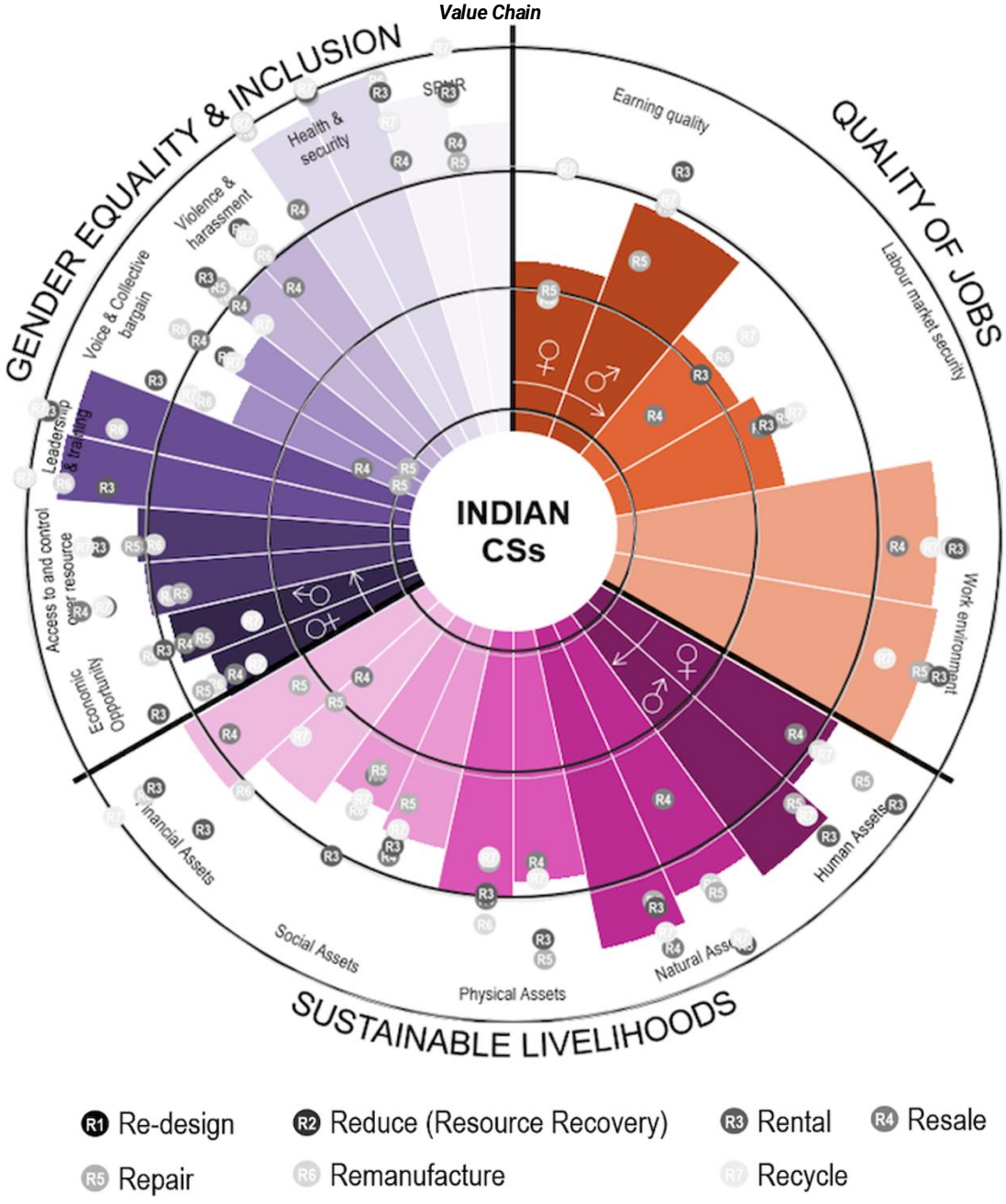
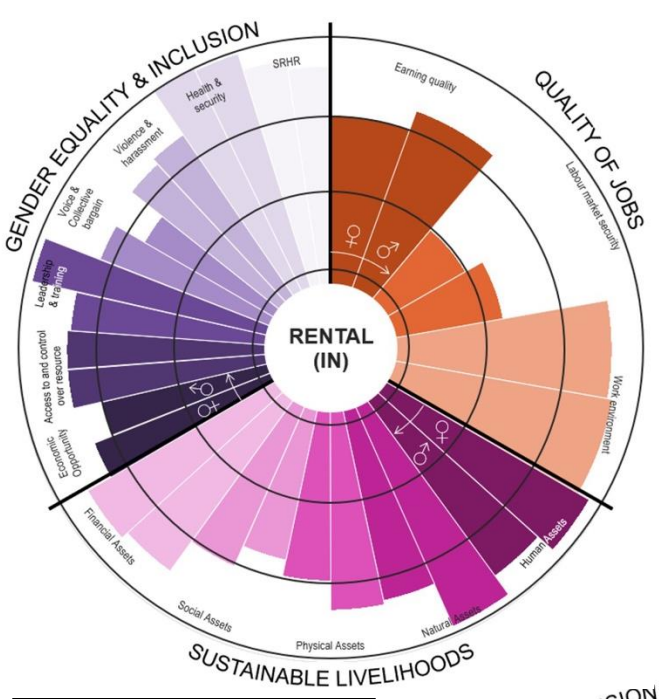
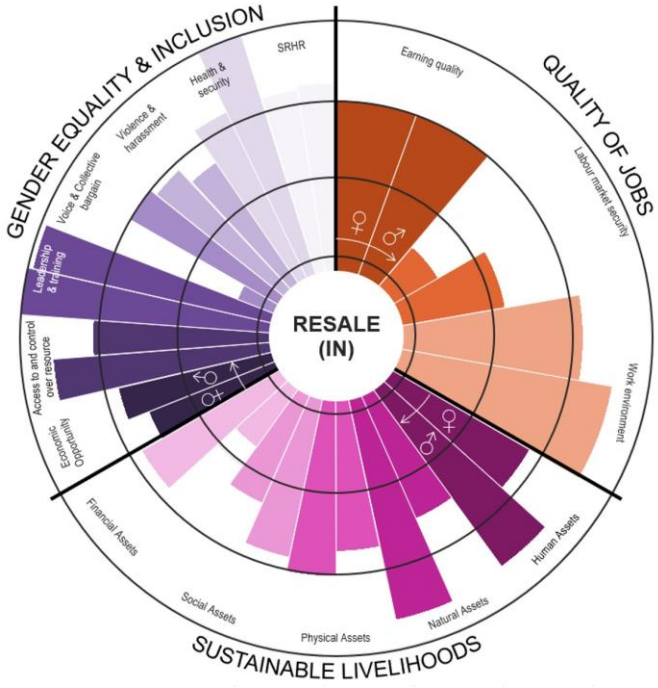


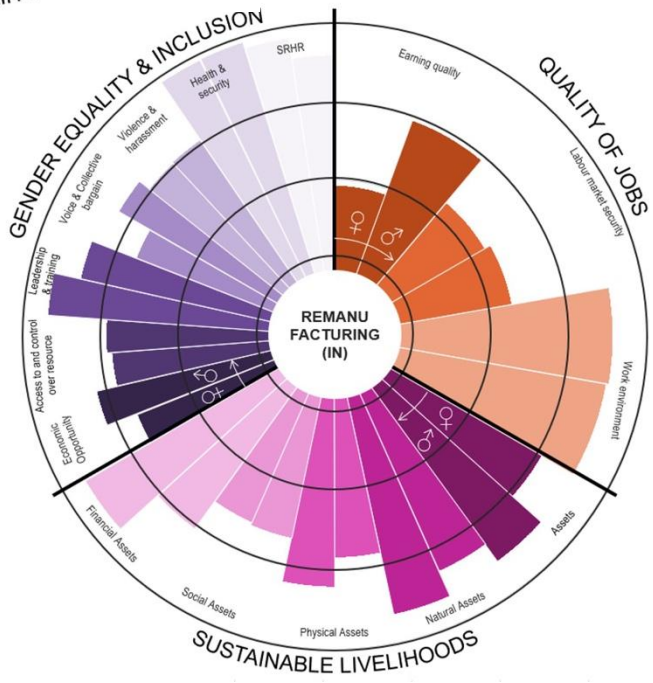
Figure 2.1.Social impact assessment of Circular strategies implemented in the Indian textile Value Chain





R3 Rental: 90% Male worker
60%Full-time contract

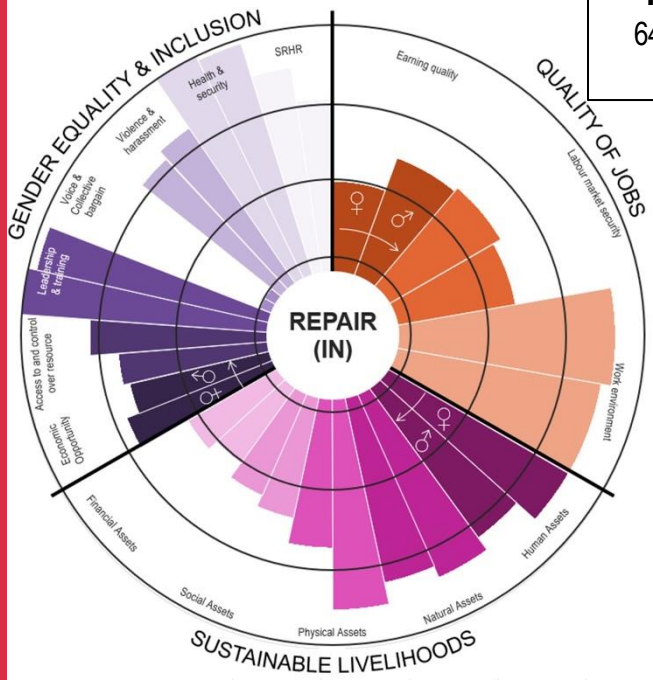
R4 Resale: Platform : 70% women, part-time
Market: 30% women 100% informal

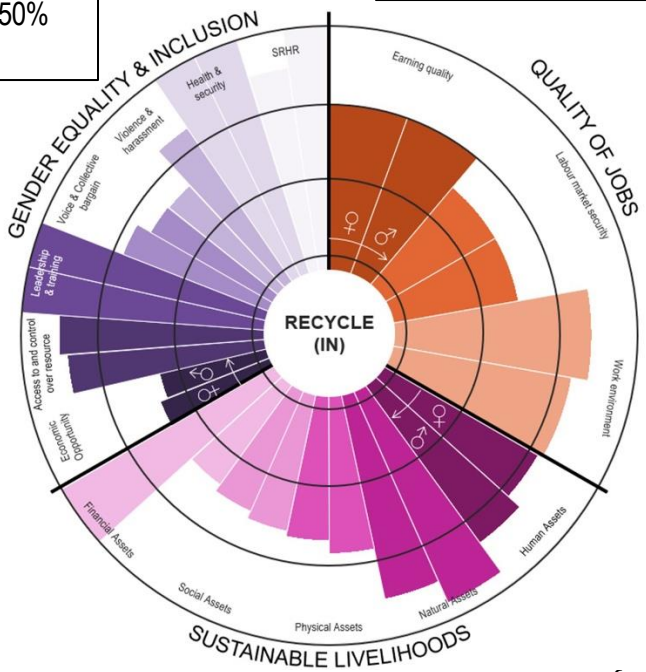


R5 Repair: 72% male,100% informal worker

R6 Remanufacture:
64% female workers,50% informal workers

R7 Recycle (formal)
100% male
100% full-time





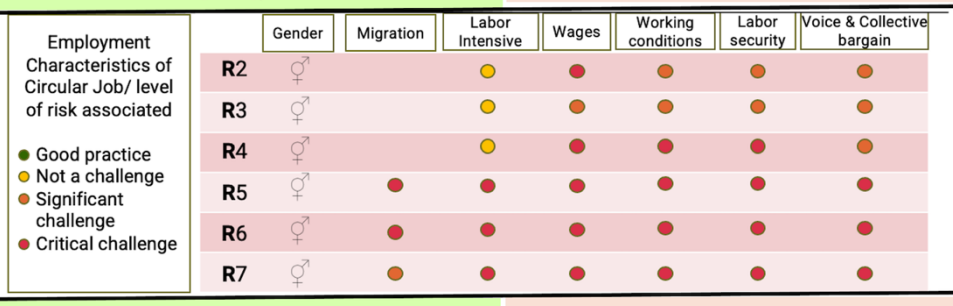
Our research suggests that circularity as it is applied today does not necessarily improve workers' conditions. Social impacts—such as decent pay, gender equality, and labor conditions—are often neglected. The social dimension, typically measured by job creation, fails to consider job quality and broader community impacts. Thus, circular policy strategies must address these impacts to ensure a fair and inclusive transition. As these circular strategies are deployed in different parts of the value chain, in different countries with a distinct level of development and regulatory frameworks it is pivotal for the sector to take a holistic approach that does not stop at the borders.

As circularity has been adopted in several geographies by both governments and companies across the globe, we expect the level of circularity to increase. This uptake of circularity will create, displace and reduce jobs across the whole value chain (*Repp,L.,* et al., 2020; Llorente et al., 2020). According to Suarez-Visbal et al., (2024b); jobs in repair, remanufacturing, and recycling logistics will be especially crucial for the transition to a circular economy. Figure 4 shows the potential effect for workers across the value chain if circularity surges via more i) servitization (more services than products are created) or ii) more strategies towards closing the loop (equal manufacturing of products but increasing the life of products).

If circularity increases through servitization (with more services like resale, repair, remanufacture, and recycling), the number of circular jobs on the consumption side of the value chain (often in developed economies) will most likely increase (*Repp,L.,* et al., 2020). Nevertheless, this will also lead to some jobs being transformed to fit new needs, or some jobs being lost, particularly in the production side -often happening in developing economies-(Schroeder, P. et al.,2018). However, the rise in circular jobs is likely to be dominated by labor-intensive roles, which could result in an increase in vulnerable workers within the circular economy (Llorente et al., 2020; Suarez-visbal 2024c). This risk is heightened if a just transition approach that considers the social impact on workers throughout the value chain is not incorporated into the current definition and goals of the Circular Economy as applied in the sector (Suarez-Visbal, et al,.2024c; EEA., 2024; Sharpe, 2023).

Figure 4. The potential effect of an increase of CE in Jobs

	Develop CE through Servitization	**Develop CE through Re-circulation closing the loop**
Characteristic of Jobs in linear production	Workers in extraction and manufacturing characterized by being labor intensive, generally informal, low pay, low working security. Generally female, generally refuge or migrant	
Circular Jobs needed on Circular transition	**R3**-Rental, **R4**-Resale, **R5**-Repair, **R6**-Remanufacture, **R7**-Recycle (collection, preparation for recycling and recycling)	**R2**-Reduce, **R3**-Rental, **R4**-Resale, **R5**-Repair, **R6**-Remanufacture, **R7**-Recycle (collection, preparation for recycling and recycling)
Potential Effect	↑ Critical vulnerable jobs & vulnerable workers (in repair remanufacture and recycle). ↑ Significant vulnerable workers in Rental, Resale. ↑ Vulnerable workers of linear system losing their job.	↑ Critical vulnerable jobs & vulnerable workers (in repair, manufacture and recycle). ↑ Significant vulnerable workers in resale. ↑ Vulnerable workers of linear system losing their job.



In India jobs associated with circular strategies of repair (R5), remanufacture (R6), and Recycling (R7) are usually low-paying jobs, with most salaries close to minimum wage. Many of these jobs are also held by informal and self-employed individuals who experience significant job insecurity. Furthermore, these jobs are often held by an increasing immigrant population (as shown in Figure 4) (Suarez-Visbal et al., 2023). They are also classified as low-skill, (which explains the low payment), despite requiring critical expertise. For instance, garment repair and remanufacturing jobs demand specific knowledge of garment construction, materials, and sewing techniques. While Recycling requires knowledge of materials and market trends (Suarez-Visbal et al., 2023).

If circularity increases by closing the loops, there would be a rise in recycling, repair, and remanufacturing jobs. On the production side, job losses can be lower than by servitization, as production will not necessarily be reduced (*Repp,L.,* et al., 2020). However, as recycling repair and remanufacturing are characterized by being vulnerable jobs, workers' livelihoods and well-being will not improve unless there is an intentional effort and ambition to improve social impacts for workers and communities within the CE framework.

3.2 Co-designing alternative Just, and transformative Circular futures

According to our study, circularity needs a plurality of transformative circular visions for an inclusive and just circular transition in the sector. Our research suggests that three main perspectives (see Figure 5) should be combined to accomplish this outcome. First, social impact considerations should be paired with environmental ones from the beginning and through the process, requiring multidisciplinary teams for the circular transition including experts on both labor, environmental impacts and socially (workers focused) and environmental NGOs . Second, a systems thinking approach should be integrated. Such an approach considers not only the need to establish harmonized policies that account for impact across the different value chain geographies. It should also consider the different TAVC stakeholders, their roles, and relations acknowledging the existing power asymmetries. Finally, it should consider the stakeholders organizational mental models (set of implicit socio-cultural aspects, beliefs and behaviors). Third, a futuring approach characterized by long-term visions co-created by a diverse range of stakeholders, should be envision to ensure that future circular economy ambitions are inclusive and comprehensive.

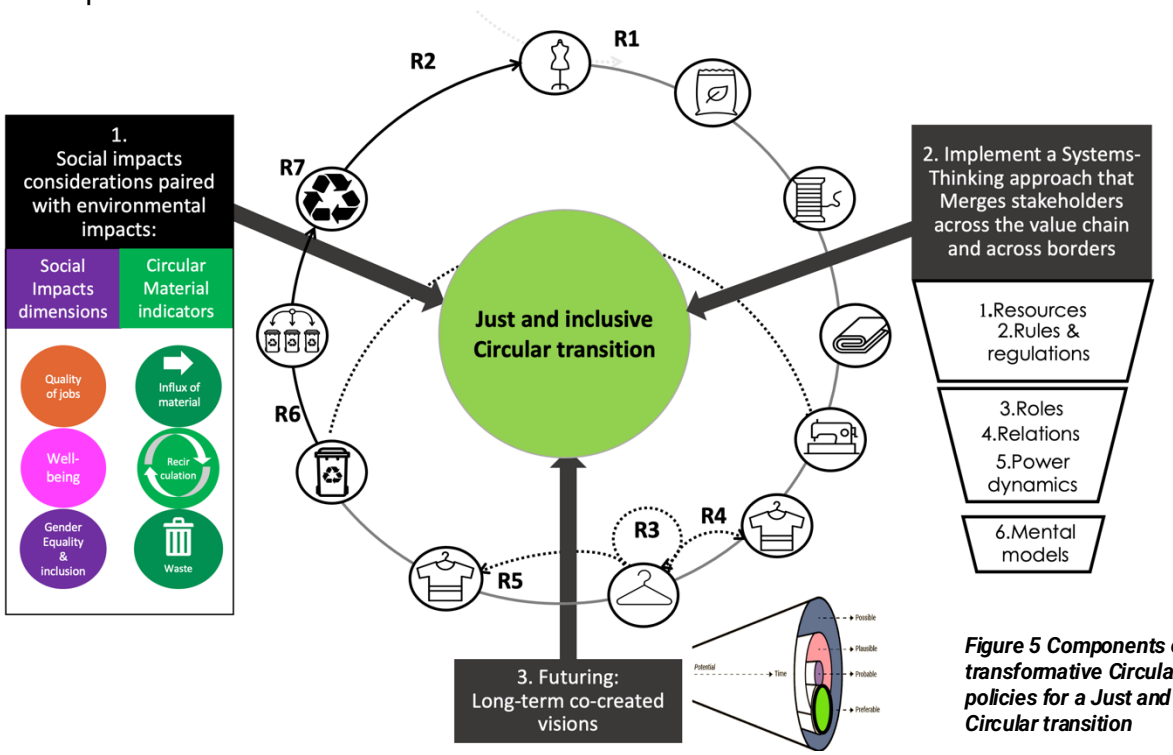


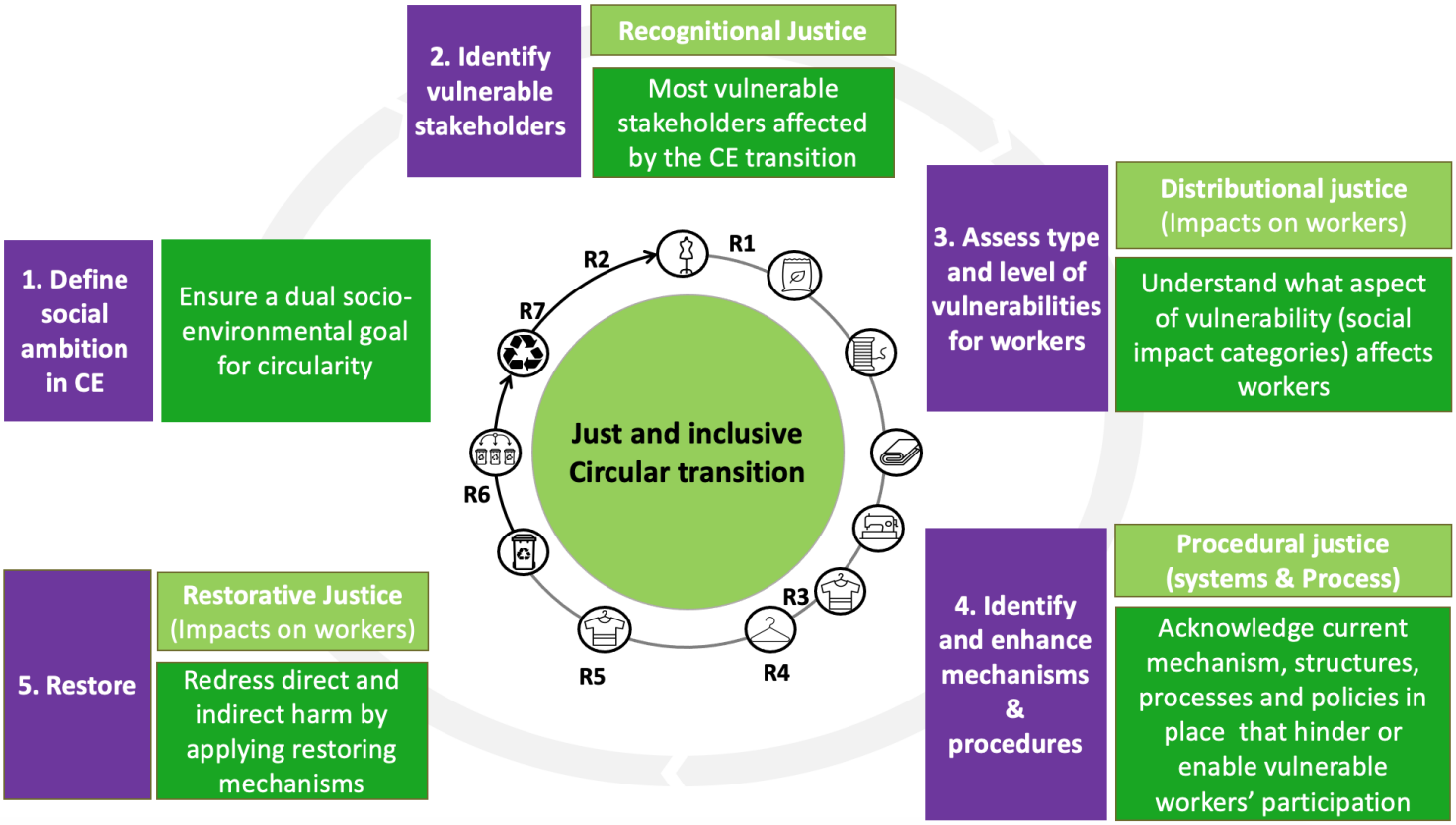
Figure 5 Components of transformative Circular Economy policies for a Just and Inclusive Circular transition

3.3. A Just transition lens to contextualize Policy recommendations

A just CE transition pursues shared objectives that balance social, economic, and environmental considerations and is implemented in the most equitable, participatory, and inclusive way possible (Suarez-Visbal et al,.2024c; EEA., 2024; Sharpe, 2023). A just transition perspective is based on four dimensions or types of justice: Recognitive Justice, Distributional Justice, Procedural Justice, and Restorative Justice (EEA., 2024,Repp et al., 2020).

The interplay of these dimensions, alongside the recognition of limited resources and the imperative of ecosystem restoration, seeks to enable a CE that leaves no one behind. According to Suarez-Visbal et al (2024c); EEA, (2024), and Sharpe, (2023), using a just transition approach could help to achieve the following five objectives as shown in figure 6. These objectives seek to recognize the socio-ecological aspects of circularity along with the positive and negative impacts that the transition to a Circular economy can have on people and planet. These objectives are the pillars on which the recommendations for policymakers are build upon (Suarez-Visbal, et al., 2024).

Figure 6 CE Just Transition lens, goals and objectives



4. POLICY RECOMMENDATIONS FOR A TRANSFORMATIVE & JUST CIRCULAR ECONOMY TRANSITION IN THE SECTOR

CE policymakers in textiles should adopt a global Just Transition approach to address and mitigate the impacts on vulnerable workers and communities affected by the shift to an inclusive circular economy. This approach should aim at reducing gender inequalities and improving overall worker well-being while shifting towards truly sustainable development that goes beyond achieving only decarbonization. The most critical aspects of vulnerability and their distribution were assessed, selecting critical hotspots using the social impact assessment framework SIAF-CE♀♂. Our research concluded that the following objectives should be addressed to ensure a fair circular transition.

Objective 1: Adjust the CE Goal with Just Transition Principles

- Set clear targets to reduce textile overproduction and ensure the EU's ecological footprint remains within planetary boundaries.
- Discourage unsustainable business models, promoting the adoption of sustainable criteria for evaluating 'green activities', this could be inspired in the current European taxonomy.
- Increase social ambition to meet increasing transparency standards required globally by new and ongoing EU compliance regulation, including CSRD and the CSDDD amongst others.
- Develop goals to increase the creation of inclusive and decent circular jobs that benefit diverse workers across the value chain.
- Enhance social Aspects in CE definitions by focusing on **both** the quantity and quality of jobs created.
- Incorporate a systemic value chain approach that contemplates direct and indirect workers across countries participating in global textile value chain.

Objective 2: Identify vulnerable populations

- Increase recognition of the multiple lived realities and vulnerabilities of stakeholders in the global T&A value chain. This could be done by :
  - **-Collecting** disaggregated data on various vulnerabilities (e.g., gender, type of worker) to ensure comprehensive recognition and effective mitigation measures.
  - **-Explicitly recognizing and accounting for** vulnerable groups such as informal workers, ethnic minorities, refugees, and agricultural workers in policy frameworks.

- Extend traceability up to Informal Workers, acknowledging the needs of diverse workers groups.
- Work collaboratively across ministries and governmental bodies at municipal, national, and regional levels to ensure the creation of quality circular jobs.
- Promote experimentation and collaboration for mutualized services in sorting and preparing recycling materials, ensuring decent job conditions.

Objective 3: Identify critical vulnerabilities and their distributional aspects

- Address Income Disparity by:
  -Establishing an upper cap on top leaders' salaries to redistribute income and reduce disparity.
  -Acknowledging and addressing gender and inclusion imbalances in CS and penalize gender income gaps in companies of all sizes.

- Strengthen Regulation for Fair Labor Practices by:
  -Ensure Ratification and Implementation of International Labour Standards
  -Implement mandatory human rights due diligence, including incorporating workers' committees in all negotiations.
  -Incentivize longer-term employment contracts.
  -Embrace living wages as part of the fair labor ambition to be implemented across countries and companies participating along the value chain
  -Negotiate a "global accountability" paragraph in the European Extended Producer Responsibility (EPR) to cover all regions where EU textile waste is currently exported and processed.

Objective 4: Identify and enhance Participatory Mechanisms and Access to Justice

- Ensure Inclusive Participation:
  -Including meaningful participatory mechanisms in EU policies to ensure the democratic inclusion of different voices and actors in decision-making processes.
  -Establishing citizen assemblies and collaborate with NGOs to democratically incorporate informal workers, minimizing power asymmetries and empowering marginalized voices.
  -Facilitating access to Justice: Reverse the burden of proof in legal frameworks to ensure affected stakeholders can prove their cases.
  -Providing educational, financial, and legal assistance to ensure access to justice, particularly for those facing multiple vulnerabilities.

- Ensure global accountability by:
  -Developing globally accountable Just Transition policies with financial and technical support for the Global South.
  -Incorporating a globally accountable Just Transition Mechanisms (JTM) into the EU textile strategy to address the global dimensions of socio-ecological impacts and ensure sustainable transformation of production practices.
  -Mandating circular companies to report on both environmental and social performance.
  -Incentivizing startups to adopt early social and environmental assessment mechanisms regarding circularity.

Objective 5: Establish restoring mechanisms

- Incentive Reskilling and Training Initiatives targeted to identify vulnerable populations by:
  -Supporting NGOs and trade unions to provide companies, with workers' rights and responsibilities training focusing especially on vulnerable and migrant populations, and informal workers that will be affected by the circular transition.
  -Co-creating financial and technical support across borders for a just and inclusive CE transition for businesses implementing circular strategies to reskill, retain, and create more circular quality jobs accessible for male and female workers.
  -Negotiating with other governments the establishment of provisions for workers that will be negatively affected by the Circular transition.
  -Ensuring financial and technical resources are provided to support the sustainable recovery and disposal of textile waste globally through a global and Just EPR.

5. CONCLUSION AND WAY FORWARD

The transition to a circular economy (CE) in the textile and apparel value chain (TAVC) represent an incredible opportunity to play a significant role in the sector as it promises for reducing environmental impact. However, as implemented today it risks exacerbating existing social inequalities if not carefully managed. Integrating systems-thinking and adopting a holistic perspective within a CE transformative approach that considers simultaneously the social and environmental impacts of the circular transition is crucial.

The current focus on circular strategies such as repair, remanufacturing, and recycling often overlooks the social dimension, perpetuating poor working conditions, low wages, and gender disparities. This policy brief pave the way to a just and inclusive transition, where social equity, decent work, and community well-being are prioritized alongside environmental sustainability.

Key recommendations include aligning CE goals with Just Transition principles, addressing overproduction and promoting collaboration across the value chain. Vulnerable populations, such as informal workers, women, and marginalized communities, should be recognized, with policies ensuring their protection and inclusion. Strengthening labor regulations, ensuring fair wages, and promoting participatory mechanisms are critical to creating equitable outcomes. Finally, global accountability, reskilling initiatives, and restorative mechanisms are essential to mitigate the negative impacts of circularity and ensure a fair and sustainable future for all stakeholders in the textile sector.

Through these comprehensive and inclusive strategies, the CE transition in textiles can foster positive social, economic, and environmental outcomes, contributing to a more equitable and sustainable global value chain.

6. AUTHORS AND CONTACT INFORMATION

This policy brief is based on the output of the various scientific publications during the 4 years-research called **"Assessing and improving the social impacts of Circular Strategies in the Textiles and Apparel Value chain".** The authors contributing to this policy brief are Lis Suarez-Visbal, Jesus Rosales-Carreon, Blanca Corona, Kanika Ahuja and Anita Ahuja.

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7. RESEARCH PARTNERS AND FUNDERS

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