# Establishing a Vision & Roadmap for Circular Fashion in Vietnam

In recent years, Vietnam has notably emerged as a formidable player in the global textile and garment sector, a field deeply interwoven with the nation's rich history in textile craftsmanship. Rapid transformation fueled by strategic geographic advantages, competitive labor costs, and a robust commitment to technological innovation has positioned Vietnam as a key hub for garment manufacturing and fashion brands globally.

As of 2022, the industry's export prowess was evident, with textile and garment exports reaching approximately $44 billion, marking a significant 14.7% year-on-year growth. This growth trajectory underscores Vietnam's vital role in the global market despite facing fluctuations that challenge the sustainability of such rapid expansion.

The textile and garment industry are not just a commercial powerhouse in Vietnam but also a major employer, providing over 2.5 million jobs, thus playing a critical role in the socio-economic fabric of the nation. However, this rapid growth brings with it substantial environmental and social challenges, particularly in waste management and resource consumption.

Recognizing the urgent need for sustainable practices, Vietnam has seen initiatives like the Sustainable Textile and Apparel Program by the Vietnam Textile and Apparel Association (VITAS) and strategic guidelines by the World Wildlife Fund (WWF) aimed at greening the sector. Furthermore, Vietnam's ambitious Development Strategy to 2030 with a Vision to 2035 aims to pivot the industry towards a circular economy model, emphasizing resource efficiency and waste reduction.

Establishing a National Circular Fashion Partnership (NCFP) in Vietnam could align with and propel these existing initiatives, enhancing the industry's sustainability while maintaining its economic vitality. Through the adoption of innovative technologies and collaborative efforts, this partnership seeks to foster a sustainable transformation that not only meets global standards but sets new benchmarks for environmental stewardship in the textile and garment industry.

In the second half of 2023, GFA started collaboration with GIZ Vietnam team, exploring the potential for establishing a Circular Fashion Partnership in Vietnam. Through these engagements GFA became aware of GIZ's plan for launching projects on post-industrial waste management practices. The conversation with GIZ included both understanding the intended impact from the GIZ led project and how GFA and NCFP partners can collaborate with GIZ to further scale the ongoing activities and accelerate the apparel manufactring industry's transition to circularity.

On November 13, 2023, GFA & GIZ co-hosted a webinar with an objective to share inform the stakeholders on the need for transition to a circular economy model, GFA's ambitions to establish a NCFP in Vietnam and GIZ's intention to recruit brands and their manufacturing partners to their pilot prgrams.

The webinar was attended by over 500+ industry professionals, representing brands, apparel manufacturers, recyclers, service providers and NGO's, form both within and outside Vietnam. The event generated significant interest and support from the stakeholders towards a project like CFP, that would help the industry's transition to a circular model, specially on the areas of recycling of the post-industrial waste from manufacturing processes.

During the webinar 4 working group activities were announced, where the GIZ team tool the lead on first three and GFA on the working group 4, titled "Establishing a Vision & Roadmap for Circular Fashion in Vietnam."

# Working Group 4

WG4 gathered stakeholders from both within and outside Vietnam with an objective to identify a vision statement that best depicts the countr's ambitious journey to becoming circular and design a roadmap with milestones towards achieving that vision.

The detailed list of the working group members is mentiond at the end of the report.

To define the vision statement the group started with identifying:

- Top 5 Ideal Conditions for Circular Fashion in Vietnam:
    - **Enhanced Recycling Infrastructure:** Development of facilities capable of efficiently processing and repurposing textile waste.
    - **Circular Supply Chains:** Creation of supply chains that are regenerative by design, minimizing waste through innovative business models and efficient resource usage.
    - **Government Support:** Implementation of supportive regulations and policies that facilitate the shift to circular practices within the fashion industry.
    - **Training in Waste Management:** Comprehensive education and training programs for apparel and textile manufacturers on effective waste sorting and management techniques.
    - **Brand Collaboration:** Increased cooperation among brands, both within their own supply chains and across the industry, to share resources and best practices for circularity.

- Goals for a Successful and Just Circular Economy Transition in Vietnam:
    - **Textile Reuse:** Achieve an economy where textile waste is exclusively repurposed for new textiles, eliminating alternative uses.
    - **Zero Waste to Landfill:** Adoption of a policy by the Vietnamese government, making landfilling and incineration illegal in the country.
    - **Elimination of Textile Waste Disposal:** Prevent textile waste from being sent to landfills or incinerated.
    - **Centralized Recycling Facilities:** Establish centralized plants to collect, sort, and distribute quality waste to recyclers.
    - **Capability Building:** Ensure textile suppliers have the capacity and support to implement circular economy practices effectively.

- Intended Industry Impact:
    - **Waste Retention in Industry:** Maintain 100% of waste within the textile industry while reducing dependency on external resources.
    - **Local Value Creation:** Enhance the local value chain to boost the Vietnamese industry economically.
    - **Optimal Recycling Practices:** Maximize the recycling rate and integrate recycled materials back into new products, aiming for zero waste-to-energy practices.
    - **Integrated Sustainability Approach:** Address interconnected sustainability challenges such as climate change, water management, and circularity through a holistic strategy.

## Textile Post-industrial waste value chain

The working group has provided valuable insights into the current waste value chain in Vietnam and identified key players who can support policy advocacy with the Vietnamese government.

Vietnam hosts over 6,000 apparel and around 2,200 footwear manufacturers, each with an average workforce of 600-800. The country also boasts a diverse textile industry comprising approximately 200 spinning mills, over 400 weaving factories, more than 100 knitting factories, and around 100 dye houses. Together, these facilities generate an estimated 935,000+ tonnes of post-industrial waste annually.

Most apparel manufacturers operate as cut-to-pack facilities, generating the highest volume of waste, averaging 25-40 tonnes per year. Together with the working group members, we have outlined both the current state of the waste value chain and the envisioned future.

## Present situation:
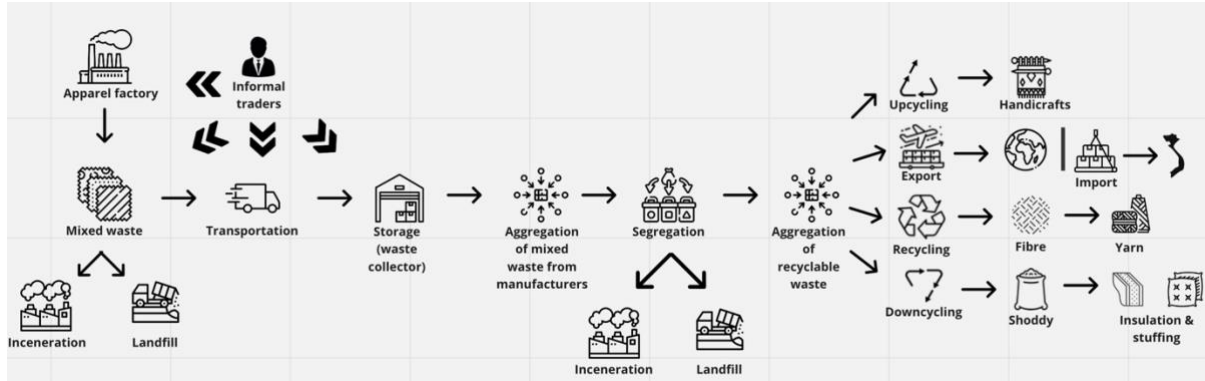


- **Waste Classification and Segregation:** All fabric waste is considered non-hazardous. Currently, little to no segregation happens at the source. Waste exits factories as mixed waste, often referred to as "contaminated waste," which includes fabric scraps, sewing waste, sweeping dust, paper, and plastic waste. Fabric end rolls and leftover fabrics are stored separately.

- **Waste Collection:**
    - Generated waste is stored in warehouses and collected by waste collection companies or scrap buyers, with collection frequency ranging from every few days to once per month. While some factories segregate fabric waste and incinerate it in their boilers to generate energy, most of the waste is sold or given to waste collectors.
    - Contracts between manufacturers and collectors depend on waste type and the function of the waste contractor. Each manufacturer may have different contractors for various waste types, or a single contractor may provide all solid waste collection services and scrap buying.

- **Local Market Use:** Fabric end-rolls and leftover fabric waste typically end up in the local market, where they are used to create new products for domestic consumption.

- **Waste Collector Services:** Waste collectors provide two types of services:
    - **Waste Disposal:** Waste is dumped into controlled landfills or incinerated. In these cases, factories pay the collector for their services, usually monthly.
    - **Recycling Services:** Waste is manually segregated into fabric, paper, plastic, etc. Segregated waste is divided into recyclable and non-recyclable categories. Recyclable waste is either sold directly to recycling companies or to waste aggregators. Non-recyclable waste is usually landfilled or incinerated.

- **Aggregator Role:** Aggregators accumulate large volumes of waste before selling it to domestic and international recycling companies. Secondary manual sorting may occur at the aggregator's facility to separate any non-recyclable waste, which is then landfilled or incinerated.

- Potential Use Cases for Recyclable Waste in Vietnam:
    o **Upcycling:** A very small fraction of the waste is upcycled into artisan clothing, footwear, and handicraft items.
    o **Recycling and Export:** Vietnam has mechanical (for cotton, cotton-rich) and thermo-mechanical (for polyester, nylon) recycling processes that handle a portion of post-industrial waste. However, due to insufficient capacity and capability, a significant portion of the waste is exported to recycling companies in China, India, and other countries.
    o **Downcycling:** A large portion of the waste, both recyclable and non-recyclable, is downcycled into non-woven fabrics, insulation materials, stuffing for pillows, cushions, and mattresses. Another prevalent recycling use case in Vietnam involves making mops from textile scraps.

- **Semi-Informal Nature of the Waste Value Chain:** Despite the absence of a dominant "waste mafia," the waste value chain in Vietnam operates as a semi-informal sector. This sector is characterized by off-the-book transactions and non-transparent business practices. In some areas, local muscle groups enforce dominance over the waste trade, adding another layer of complexity to the industry. These practices hinder the development of a fully transparent and efficient recycling industry and highlight the need for formalization and regulation to ensure sustainable and fair practices.

This comprehensive understanding of the waste value chain and the identification of potential improvements are essential for fostering a more sustainable and circular textile industry in Vietnam.

## The preferred tomorrow
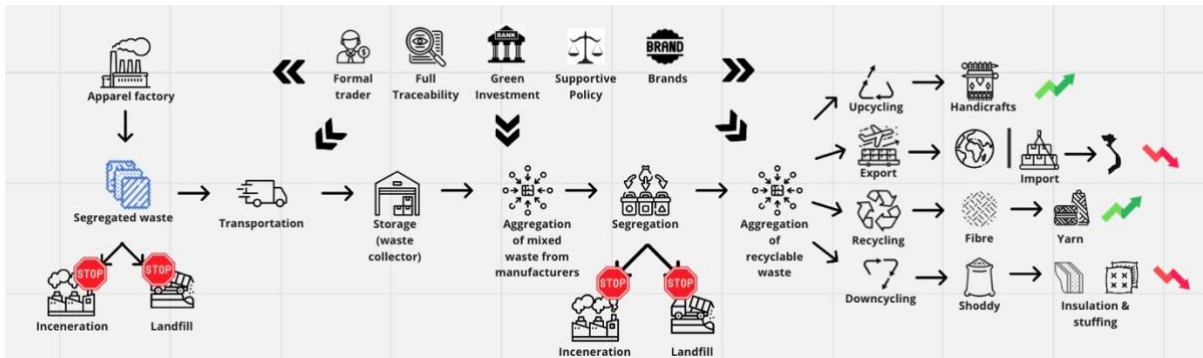


We also visualized a preferred future for the textile and apparel industry in Vietnam. Here's what it looks like:

o **Efficient Waste Management:** Factories produce only segregated waste with clear labeling, facilitating efficient sorting and recycling processes. This ensures that waste is easily identifiable and can be processed without contamination.
o **Circular Textile System:** Achieve a circular system where textile waste is recycled into new textiles, predominantly through domestic recycling facilities. This promotes resource efficiency, reduces environmental impact, and minimizes reliance on imported raw materials.
o **Supportive Government Policies:** This preferred future is underpinned by conducive government policies that incentivize sustainable practices. These policies include tax breaks for green investments, subsidies for sustainable innovations, and stringent regulations that enforce environmental responsibility.
o **Investment in Green Technologies:** We envision increased investment in green technologies and infrastructure, ensuring that Vietnam is equipped with state-of-the-art facilities for recycling and waste management. This includes advancements in mechanical and chemical recycling technologies, as well as the development of renewable energy sources to power these facilities.
o **Collaborative Efforts by Brands:** Brands collaborate to drive sustainability initiatives throughout the supply chain. This includes shared commitments to circularity, joint ventures in recycling projects, and collective efforts to educate and train workers on sustainable practices.

- Economic and Environmental Benefits: The envisioned future also brings significant economic and environmental benefits. Efficient recycling reduces production costs and creates new job opportunities, while sustainable practices help preserve natural resources and mitigate climate change impacts.
- Enhanced Consumer Awareness: There is a marked increase in consumer awareness and demand for sustainable products. Brands respond by prioritizing transparency and sustainability in their production processes, thereby aligning with global trends and consumer expectations.

In summary, our vision for Vietnam's textile and apparel industry is one of sustainability, innovation, and collaboration. It is a future where waste is not just managed but transformed into valuable resources, driving economic growth while protecting the environment.


## Overview of Current Legislation, Gaps, and Recommended Steps

Our WG members also helped us identify how Vietnam's environmental regulatory framework has evolved rapidly to keep pace with economic growth and sustainable development goals. However, there are still significant gaps regarding the management of fabric scraps:

- Fabric Scrap Classification: Fabric scraps can be defined as either scrap or recyclable non-hazardous waste. High-value scraps include materials like iron, steel, copper, and plastic, while lower-value recyclable waste often comprises mixed materials such as blended fabrics.
- Legal Definitions: According to the Law on Environmental Protection (LEP) 2020, scrap is defined as materials that can be recovered, classified, and used as raw materials in another production process.
- Waste Management Requirements: Decree 38/2015 and LEP 2020 require manufacturers to segregate non-hazardous waste into categories such as recyclable for production material, recyclable for building material, and non-recyclable waste.
- Waste Codes and Reporting: Circular 02/2022 introduces solid waste codes to increase transparency and traceability. However, no specific waste code exists for fabric scraps.

- **Gaps in Legislation:**
  - Specific Regulations for Fabric Scraps: There is no specific legislation addressing the management and recycling of fabric scraps, leading to inconsistent practices and low economic incentives for recycling.
  - Lack of Identification and Traceability: Current regulations do not specify which types of fabric materials are recyclable and lack methods for tracking waste volumes and recycling processes.
  - Semi-Informal Waste Sector: The waste value chain operates semi-informally, characterized by off-the-book transactions, non-transparent practices, and sometimes local muscle groups enforcing dominance.
  - Inadequate Infrastructure: Insufficient investment in green technologies and recycling infrastructure hampers the development of a robust recycling industry.

- **Recommended Steps:**
  - Develop Specific Regulations for Fabric Scraps: Introduce clear legislation that defines the management, recycling, and disposal practices for fabric scraps, including the classification of recyclable and non-recyclable materials.
  - Enhance Traceability and Reporting: Implement a robust system for tracking waste volumes and recycling processes, ensuring transparency and accountability in the waste value chain.
  - Formalize the Waste Sector: Transition the semi-informal waste sector to a formalized system by enforcing transparent business practices and regulating waste trade activities.
  - Incentivize Green Investments: Provide tax incentives, subsidies, and land endowments to attract investment in green technologies and recycling infrastructure.
  - Strengthen Government Policies: Enact policies that encourage sustainable practices, including waste segregation at source, and provide support for circular economy initiatives.

o **Increase Awareness and Education**: Promote education and awareness among stakeholders about the benefits of recycling and sustainable waste management practices.

The WG also helped to identify key Vietnamese stakeholders that are imperative to engage with to advance policy advocacy efforts with the Vietnamese government. The list includes but not limited to:
- Ministry of Natural Resources and Environment (MONRE)
- Ministry of Industry and Trade (MOIT)
- Ministry of Planning and Investment
- Vietnam Textile & Apparel Association (VITAS)
- Vietnam Leather, Footwear and Handbag Association (LEFASO)
- Vietnam Cotton and Spinning Association (VCOSA)
- Vietnam Chamber of Commerce and Industry (VCCI)
- International Finance Corporation & World Bank
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
- United Nations Development Programme (UNDP)
- IDH
- Brands & Retailers

By addressing these gaps and implementing the recommended steps, with the support of the identified stakeholders Vietnam can develop a more efficient and sustainable textile recycling industry, supporting both environmental and economic goals.

The working group's engagement concluded with the finalization of a vision statement for circular fashion In Vietnam and drafting a roadmap on milestones to give direction to NCFP activities in the country.

## The vision statement:

*By 2035, Vietnam will redefine apparel industry standards, serving as an inspiration to the world by establishing comprehensive policies, state-of-the-art recycling facilities, and a collaborative network that transforms every scrap of textile waste into valuable resources, positioning itself as the premier destination for sustainable apparel and leading the way towards achieving zero waste.*

# The Timeline & Milestones

| Phase 1: 2024-2025 | Phase 2: 2026-2030 | Phase 3: (2031-2040) |
|---|---|---|
| **Initial setup & Standardization** | **Scaling & Enhancing Infrastructure** | **Scaling & Expansion & Zero Waste** |
| **Policy Dialogue & Advocacy** | | |
| • Identify, engage & align key stakeholders on policy priorities.<br>• Identify and analyze govt. policies & pinpoint investment opportunities to promote a circular textile economy.<br>• Lead the development of a national strategy & roadmap for textile PI waste. | • Implement a legal framework for waste importation that promotes recycling but also protects Vietnam from becoming a textile waste dumping ground.<br>• Develop incentives for textile-to-textile recycling. | • Adoption of a Zero waste to landfill or energy policy by the Vietnamese government for the textile & apparel manufacturing industry. |
| **Awareness building & Training** | | |
| • Train 500 manufacturers on waste segregation. Target 75% to implement source sorting & track waste via platform.<br>• Training of industry stakeholders (associations, government organizations, etc.) on circular economy principles & upcoming EU legislations. | • Expand manufacturer capacity building initiatives to achieve 100% coverage through peer learning programs.<br>• Establish a reporting framework to capture waste volumes and disposal methods of all trained suppliers. | • Significant progress has been made to educate the industry on circular economy model.<br>• The entire industry is actively pursuing awareness and implementation of circular economy principles. |
| • Establish a baseline for textile PI waste composition and volume.<br>• Establish a target of 50% or greater for PI waste to be diverted to direct textile-to-textile (t2t) recycling applications.<br>• Establish a comprehensive directory of textile recyclers and waste aggregators. | • Capture traceability for 100% of all PI waste.<br>• Segregate and trace 50% of all PI textile waste to recycling outlets.<br>• Ensure 30% of waste is traceable from recyclers to spinners for high-quality yarn production. | • The industry develops adequate textile to textile recycling capacity to recycle all recyclable PI & PC waste.<br>• 100% of all fabric waste is upcycled, recycled or downcycled. |
| **Recycling Targets & Infrastructure Development** | | |
| • Establish a baseline for textile PI waste composition and volume.<br>• Establish a target of 50% or greater for PI waste to be diverted to direct textile-to-textile (t2t) recycling applications.<br>• Establish a comprehensive directory of textile recyclers and waste aggregators. | • Capture traceability for 100% of all PI waste.<br>• Segregate and trace 50% of all PI textile waste to recycling outlets.<br>• Ensure 30% of waste is traceable from recyclers to spinners for high-quality yarn production. | • The industry develops adequate textile to textile recycling capacity to recycle all recyclable PI & PC waste.<br>• 100% of all fabric waste is upcycled, recycled or downcycled. |

In Phase 4 (2041-2050), also known as "Consolidation & Global Leadership," which isn't included in the table above, Vietnam emerges as the:

- **Regional Recycling Hub:**
  - Vietnam will become a leading center for textile waste recycling in the region.
  - This signifies Vietnam's capability and capacity to handle 100% of all textile waste, encompassing both post-industrial (from manufacturing) and post-consumer (used clothing) waste streams.
- **Continuous Innovation:**
  - There will be a constant focus on developing and improving technologies and processes related to textile waste recycling.
  - This implies Vietnam's commitment to staying at the forefront of textile recycling advancements.

## National Circular Fashion Partnership in Vietnam

In recent years, Vietnam has emerged as a formidable player in the global textile and garment sector, driven by strategic geographic advantages, competitive labor costs, and a commitment to technological innovation. In 2022, the industry achieved approximately $44 billion in exports, reflecting a 14.7% year-on-year growth. The textile and garment industry are a major employer, providing over 2.5 million jobs, thus playing a critical role in Vietnam's socio-economic fabric. However, this rapid growth brings substantial environmental and social challenges, particularly in waste management and resource consumption.

Vietnam's initiatives, such as the Sustainable Textile and Apparel Program by the Vietnam Textile and Apparel Association (VITAS) and strategic guidelines by the World Wildlife Fund (WWF), are aimed at greening the sector. Furthermore, Vietnam's Development Strategy to 2030 with a Vision to 2035 aims to pivot the industry towards a circular economy model. Establishing a National Circular Fashion Partnership (NCFP) in Vietnam could significantly align with and propel these initiatives, enhancing the industry's sustainability while maintaining its economic vitality. This partnership, through the adoption of innovative technologies and collaborative efforts, seeks to foster a sustainable transformation that not only meets global standards but sets new benchmarks for environmental stewardship in the textile and garment industry.

Additionally, there is a significant opportunity for initiatives like NCFP to build upon the existing knowledge and align approaches with other key projects. Collaboration with GIZ on the Waste No More project can enhance manufacturers' capacity to collect, monitor, and trace waste. Similarly, aligning with IDH's program to build larger waste aggregation facilities and IFC's focus on developing large recycling facilities can provide a robust framework for scaling sustainable practices. Fashion For Good is also seeking to start work within the same waste recycling space, presenting another potential collaborative partner.

**Key Focus Areas for NCFP in Vietnam**

- **Enhanced Recycling Infrastructure:**
  - Develop facilities capable of efficiently processing and repurposing textile waste.
  - Invest in advanced recycling technologies to manage post-industrial waste.

- **Circular Supply Chains:**
  - Create supply chains that are regenerative by design, minimizing waste through innovative business models and efficient resource usage.
  - Encourage brands to design products with circularity in mind.

- **Government Support and Regulations:**
  - Implement supportive regulations and policies that facilitate the shift to circular practices within the fashion industry.
  - Develop specific legislation addressing the management and recycling of fabric scraps.

- **Training and Education in Waste Management:**
  - Implement comprehensive education and training programs for apparel and textile manufacturers on effective waste sorting and management techniques.
  - Increase awareness among stakeholders about the benefits of recycling and sustainable waste management practices.

- **Brand Collaboration and Industry Partnerships:**
  - Foster cooperation among brands to share resources and best practices for circularity.
  - Facilitate joint ventures in recycling projects and collective efforts to educate and train workers on sustainable practices.

- **Traceability and Reporting Systems:**
  - Enhance traceability and reporting systems to ensure transparency and accountability in the waste value chain.

- o   Implement a robust system for tracking waste volumes and recycling processes.

- **Incentives for Green Investments:**
  - o   Provide tax incentives, subsidies, and land endowments to attract investment in green technologies and recycling infrastructure.

- **Supportive Government Policies:**
  - o   Enact policies that encourage sustainable practices, including waste segregation at source, and provide support for circular economy initiatives.
  - o   Align with Vietnam's Development Strategy to 2030, emphasizing resource efficiency and waste reduction.

By focusing on these areas, the NCFP can help Vietnam develop a more efficient and sustainable textile recycling industry, supporting both environmental and economic goals. This comprehensive approach will ensure that Vietnam not only meets global standards but also sets new benchmarks in the circular economy for the textile and garment industry.

Establishing a National Circular Fashion Partnership (NCFP) in Vietnam is crucial given the country's significant role in the global textile and garment sector, achieving approximately $44 billion in exports in 2022. Vietnam's rapid industry growth presents environmental and social challenges, particularly in waste management. The NCFP must align its activities with ongoing initiatives such as GIZ's pilots, IFC's project with Nike and other global brands, IDH & Gherzi's research study, and Fashion for Good's planned projects. Despite the complexities, it is essential to coordinate with all parties to fine-tune NCFP activities. Given the industry's size and the number of brands eager to participate, the project should launch promptly with initial activities focused on engaging brands and manufacturers, adopting waste management practices, matchmaking, and tracing waste to recycling. The NCFP should enhance and scale existing projects by GIZ, IDH, IFC, and FFG wherever possible. By enhancing recycling infrastructure, fostering circular supply chains, securing government support, and collaborating with brands, the NCFP can drive Vietnam's textile industry towards a more sustainable and economically viable future.

## Participants: Working Group 4

| Organization Type | Company Name |
|---|---|
| Dev. Org. | Circle Economy Foundation |
| Consultant | CL2B |
| Consultant | Closed Loop Fashion |
| Manufacturer | Crystal Group |
| Manufacturer | Eclat |
| Consulting | Gherzi |
| Dev. Org. | GIZ |
| Brand | H&M Group |
| Dev. Org. | IDH |
| Fin. Institution | IFC |
| Consulting | Illies |
| Brand | Lululemon |
| Brand | Nike |
| Brand | Puma |
| Dev. Org. | Reverse Resources |
| Recycler | Samsara |
| Manufacturer | TAL Apparels |