



Local Governments
for Sustainability

AFRICA

Project: Promotion of circular economy in the textile and garment sector through the sustainable management of chemicals and waste

UNIDO Textiles And Garments Regional Inception Workshop
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Africa

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ICLEI'S REACH



ICLEI – Local Governments for Sustainability is a global network, working with more than 2500 local & regional governments committed to sustainable urban development.

We have put 'urban' firmly on the sustainability agenda, working with and effectively advocating for local and subnational governments in the global arena for

30+ years



Working with

2500+

local & regional
governments



Active in

125+

countries





ICLEI'S

APPROACH

We **influence** sustainability policy and drive local action for **low emission, nature-based, equitable, resilient** and **circular development**.

OUR 5 PATHWAYS



Low emission development

to curb climate change, create new economic opportunities and improve the health of people and natural systems.



Nature-based development

to protect and enhance the biodiversity and ecosystems in and around our cities, upon which we depend for the well-being of our communities.



Circular development

new models of production and consumption to build sustainable societies that use recyclable, sharable and regenerative resources, to end the linear model of “produce, consume, discard”



Resilient development

to anticipate, prevent, absorb and recover from shocks and stresses, in particular those brought about by rapid environmental, technological, social and demographic change, and to improve essential basic response structures and functions.



Equitable and people-centred development

to build more just, liveable and inclusive urban communities and address poverty.



ICLEI'S INFLUENCE

ICLEI is the **largest** and **oldest** global association **of cities and subnational governments** dedicated to sustainable development.

1

We work with **all** cities and regions, **large and small**, remote or well-connected, no matter where they are on their sustainability journey.

2

We work with cities to optimise **finance for sustainability**, while also seeking new funding.

3

We co-produce projects with our cities and modify actions based on **real needs**.

4

We are dedicated to **facilitating the right connections** to strengthen action and drive change.





ICLEI AFRICA'S IMPACT

At **ICLEI Africa**, we work across the **various development agendas**, aligning with African and global policies, and contextualising our work within the **realities of our continent**.

ICLEI Africa continues to enlarge its footprint in Africa, reaching over **450 cities and regions in 53 countries** across the continent , influencing sustainability policy and driving local action.



We manage over

50

projects and
programmes



We support or host

8

major networks
and initiatives



We offer close to

40

technical and capacity
building services

OUR CHANGEMAKERS

ICLEI AFRICA TEAM

We have an incredibly diverse team that bring together a variety of perspectives, experiences, & skills. This is one of our greatest strengths.



60+

multi-skilled
staff



560+

combined years of
experience



145+

degrees, including **40+**
postgraduate degrees,
of which **10** are PhDs



25+

languages spoken



ICLEI AFRICA'S

AREAS OF ENGAGEMENT

We support and engage our cities through various means, including:



Advocacy and
representation



Leadership
development and
networking



Peer-to-peer learning
and exchange
opportunities



Local
implementation
projects



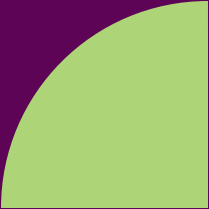
Technical
tools



Engaging in African-led collaborative
research that results in positive impacts
for urban Africans



Virtual platforms



OUR OFFERINGS SERVICES

We offer a range of **diverse services** across all sustainability issues and development agendas, such as:



Policy
development



Strategy and
Action Plans



Assessments



Capacity
building and
training



Finance
concept notes



SDG
localisation



Inventories

Contact us to discuss tailored services for your city.



WHY JOIN FORCES WITH ICLEI AFRICA?

Our ICLEI Members benefit from getting:

- ❖ **CONNECTED:** connect and share with other cities and regions through ICLEI initiatives.
- ❖ **INFORMED:** Stay up to date, participate in regular webinars and courses through our LearnWithICLEIAfrica platform, access technical reports, case studies and guidebooks.
- ❖ **RESOURCES:** Make use of ICLEI's leading tools, reporting platforms, methodologies and associated support to achieve your sustainability goals.
- ❖ **INVOLVED:** Vote, elect and apply to participate in the political representatives that define the global strategic direction of the entire network.
- ❖ **FEATURED:** Host a global or regional event in your city, have your city and sustainability achievements profiled in our newsletters, at events, and via our social media channels.





WHAT IS THE CE IN TG PROJECT?

PROJECT OVERVIEW

Objective: Promote circular economy (CE) principles within the textiles and garment (TG) sectors in South Africa, Ethiopia, Lesotho and Madagascar.

Approach focuses on a value chain methodology addressing

- ❖ **Upstream:** Emphasis on the efficient resource use and sustainable chemistry practices to minimize environmental impact.
- ❖ **Downstream:** Emphasis on extending product lifespan through reuse recycling and waste to value processes – thus reducing waste and offer economic and social benefits

Implementation: National executing entity (NEE) in each country is responsible for managing on-ground operations in alignment with ICLEI Africa

Timeline: The project will be executed over a 3-year period from April 2024 till March 2027.



ICLEI AFRICA's ROLE IN THIS PROJECT

PROJECT OVERVIEW

To develop a robust CE model that promotes sustainable growth and resilience in the TG sectors

ICLEI Africa's is involved in two outputs :

- ❖ **Output 1.1:** Legal and institutional framework for life cycle management of the TG supply/value
 - ❖ Gap Analysis
 - ❖ Policy and Institutional Recommendations
 - ❖ Capacity Building and Training
 - ❖ Assessment of Implementation of National Schemes
- ❖ **Output 1.2:** Regulation and incentive scheme for promotion and sustainability of the circular economy in the TG sector
 - ❖ Targets for Circular Economy Practices
 - ❖ Masterplan/National Strategy Support
 - ❖ Public-Private Partnerships (PPP) Facilitation





ICLEI AFRICA's WORK UNDERTAKEN

Work undertaken thus far:

- ❖ **Initial meetings with each of the participating countries** (South Africa, Ethiopia, Lesotho, and Madagascar) occurred on 2 May 2024; 30 April 2024; 31 July 2024; and 5 August 2024 respectively. **Regular Bi-weekly meetings.**
- ❖ **Beginning with the GAP Analysis:** The gap analysis will identify regulatory and institutional shortcomings within the TG sector, identify gaps that hinder the promotion of CE principles, and limited compliance with the Stockholm Convention. This will set the tone for the next steps in the project including the policy and institutional recommendations, and capacity-building initiatives, ensuring effective implementation of circular economy principles and sustainable chemical management.

WHAT IS A

Circular Economy

*“The circular economy is a system where **materials never become waste** and **nature is regenerated**. In a circular economy, products and materials are **kept in circulation** through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting.” - [Ellen MacArthur Foundation](#)*



It is based on three principles driven by design:

- Eliminate waste and pollution,
- Circulate products and materials (at their highest value),
- Regenerate nature.



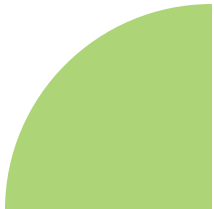
A CIRCULAR APPROACH TO THE

Textile and Garment Sector

The connection between **circular economy** and the **textiles sector** is centered around shifting from a **linear model (take, make, dispose)** towards closed-loop practices – reduce, reuse, recover, refurbish, repurpose, repair, remanufacture and recycle. a more sustainable system.

The Purpose of integrating CE principles into TG sectors:

- ❖ Enhances resource security and access across the whole system
- ❖ Reduces overall burden on the system - efficiency model
- ❖ Stimulates job creation
- ❖ Enhance social and environmental well-being
- ❖ Supports sustainable economic development
- ❖ Build a resilient TG sector adaptable to environmental challenges aligned with global sustainability agendas



WHY FOCUS ON

POLICY FIRST?

With a focus on policy first it establishes a foundational understanding of the regulatory environment and identifies regulatory barriers in the TG sector.

The method comprises of the following four analysis:

- ❖ **Stockholm Convention Compliance Analysis:** Evaluate TG sector adherence to the convention, focusing on sustainable chemical use in upstream processes.
- ❖ **Policy Landscape Analysis:** Map and assess existing regulations and policies influencing CE implementation in the TG sector. Identify policy gaps and opportunities to create a regulatory environment that supports CE practices.
- ❖ **CE in the Textile and Garment Sector Analysis:** Examine current production and waste management practices to identify where CE principles can be integrated. Establish baseline data on CE in TG sector by mapping resource flows etc. across the value chain
- ❖ **Gap Analysis Framework:** Identify specific areas where TG sectors do not meet CE objectives. Priorities gaps based on potential impact, feasibility of implementation, and sector readiness.



Stockholm Convention Analysis

Stockholm Convention on Persistent Organic Pollutants is an international environmental treaty in effect since 17 May 2004. The treaty aims to eliminate or restrict the production and use of persistent organic pollutants (POPs)

POP's as mentioned in the Convention

Elimination/Prohibit	Relevance to the TG Value Chain	Usage	Status of Compliance
Aldrin	Historically used in cotton production, though largely phased out, residual contamination possible.	Pesticide	
Chlordane	Similar to Aldrin, used in agriculture; residual contamination in natural fibers possible.	Pesticide	
Dieldrin		Pesticide	
Endrin	Used in agriculture; residual contamination in natural fibers possible.	Pesticide	
Heptachlor	Used in agriculture; residual contamination in natural fibers possible.	Pesticide	
Hexachlorobenzene (HCB)	By-product of chemical production, can be a contaminant in pesticides used in cotton farming.	Industrial chemical	

The treaty is not specific to the textile and garment sector

APPROACH AND METHODOLOGY

Policy Landscape Analysis

Category	Policy/Strategy/Plan/Regulation	Year	Relevance to Textiles and Circular Economy	Availability	SC/ POPs	CE
General Circular Economy Policies						
Circular Economy	A Circular Economy Guideline for the Waste Sector— A Driving force towards Sustainable Consumption and Production	2020	A guideline not a policy. To reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development	https://www.dffe.gov.za/sites/default/files/docs/circulareconomy_guideline.pdf ">https://www.circulareconomy.co.za/#:~:text=The%20transition%20to%20a%20circular,progress%20towards%20achieving%20the%20SDGs.>	✓ for 'Chemicals' and makes reference to "Stockholm Environment Institute"	✓
	Amendments To The Regulations And Notices Regarding Extended Producer Responsibility, 2020	2020	Mandate producers to take responsibility for the entire lifecycle of their products, including take-back, recycling, and disposal.	https://www.dffe.gov.za/registration-terms-regulations-regarding-extended-producer-responsibility-2020 https://www.gov.za/sites/default/files/gcis_document/202105/44539gon400.pdf	X	✓
Extended Producer Responsibility (EPR)	Article: We need Extended Producer Responsibility (EPR) policy for textiles		Not South Africa focus, more general.	https://www.ellenmacarthurfoundation.org/epr-policy-for-textiles		
	Regulations Regarding Extended Producer Responsibility (2020) as per NEMA Waste Act	2020				
Resource Efficiency and Sustainable Consumption	Government Immovable Asset Management Act: Regulations: Integrated Renewable Energy and Resource Efficiency	2024	No acts/policies directly on sustainable consumption. Promote policies encouraging resource efficiency and sustainable consumption practices.	https://www.gov.za/documents/notices/government-immovable-asset-management-act-regulations-integrated-renewable-0	X	X
Green Public Procurement	Public Procurement Bill	2023	A public procurement bill exists but does not mention 'green' or 'circular'. It does however mention sustainable development. Establish criteria for public procurement that prioritize products and services with lower environmental impacts and support circular economy principles.	https://www.gov.za/sites/default/files/gcis_document/202312/b18b2023publicprocurement.pdf	X	X

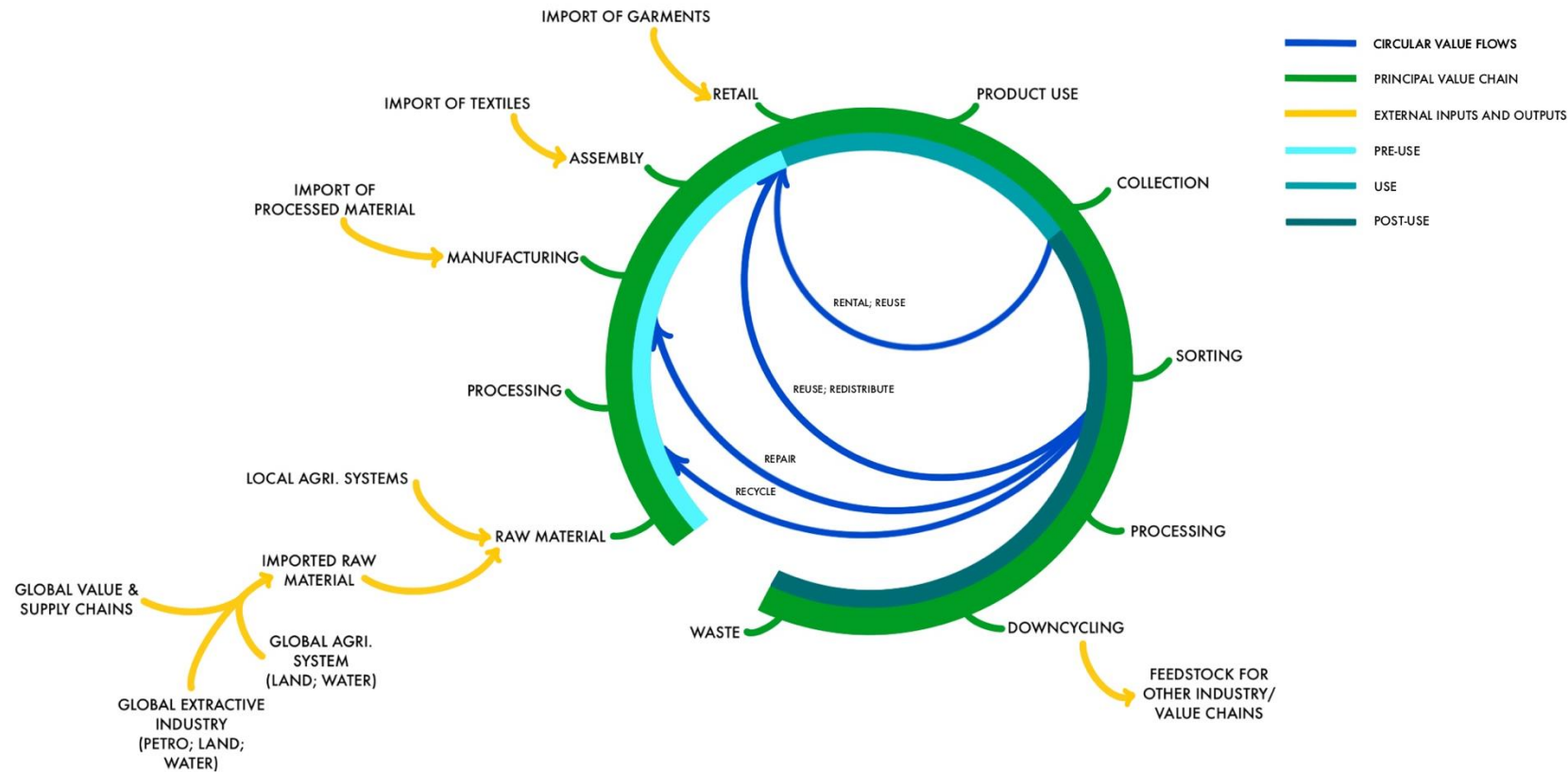
APPROACH AND METHODOLOGY

Textile and Garment Sector Analysis

Source of information	Employment	CE	Raw materials		Processing (Fiber production)
			Local Agri Systems	Import	
SA Textile and Garment Sector Guideline	Unfortunately, the textile and clothing sector's contribution to national GDP declined from 6% in 2005 to 3% in 2016 and 0.7% in 2021, as did formal employment from 143 000 to 81 000 over the same period. The textile and clothing value chain contributed R70 billion to South Africa's GDP in 2016 and within a global context	Key garment design considerations for South African brand houses, design studios and clothing manufacturers in the development of new product ranges, promoting circular economy practices and reducing waste, include: • Designing clothing for durability to extend its lifecycle and reduce disposal of worn clothing; • Inserting flexible features into garments, e.g. adjustable waistbands to reduce the size range required and inventory levels;	It[SA] is also recognised as a producer of high-quality wool, mohair and cotton, which is mainly exported for processing. Pg. 10 has a table that illustrates which raw materials are being locally produced	South Africa's role is predominately that of an importer of textiles, clothing and footwear.' Pg. 10 has a table that illustrates which raw materials are being imported	The value chain of textiles consists of six stages: Fiber Preparation, Spinning Fibre into Yarn, Production of Fabric, Pre-treatment of yarn and fabric, Dyeing process, Finishing process
Textile Recycling and Fibre Recovery Industry Brief	South Africa's CTFL industry has experienced a sharp decline in the last two decades largely due to global competition.	The industry is in the process of updating the R-CTFL Masterplan, and have included a sustainability focus driven by a sustainability working group. Much of the focus of this working group will be on tackling textile related waste. No commitments have been determined as yet. But if the industry seeks to localise production, it would	Raw products, such as wool, cotton and hides are exported	Textiles form an integral part of the South Africa's clothing, textile, and footwear and leather (CTFL) sector. However, South Africa is a net importer of textiles and finished products. In 2022, R60.2 billion	Cape Town does not offer as much capacity or capability as KwaZulu-Natal in terms of fabric production and finishing.
InTex Policy Recommendations for Eco-Innovation	The South African clothing and textiles industry is a highly diverse and mature industry, with an important role to play as an employer in the country. Current: The sector employs over 200 000 people in both a formal and informal capacity (StatisticsSA,	The concept of eco-innovation centres on life cycle thinking. It is thus necessary to understand the life cycle of a product from the extraction of raw material through material processing, manufacturing, distribution, use, repair and maintenance to recycling, and reuse or disposal...Product eco-innovation can include elements of reduction in resource use and use of hazardous materials at any stage of the value	Cotton is a key component of the CTFL sector. Cotton requires the use of pesticides and is a very water intensive crop. Innovation in cotton farming practices is greatly needed to reduce pesticide, land and water use. There is no final or approved policy on	The CTFL sector has been discussed intensively in the IPAP over time, due to efforts being made to assist the survival of the sector in an environment where imports threaten one of the country's largest employers.	The production of cotton is firmly embedded in the agri-processing sector. Current: In South Africa, Sasol is responsible for making synthetic fibre for clothing such as polyester and rayon. Sasol converts coal into synthetic fuels

APPROACH AND METHODOLOGY

Circular Value Chain Analysis

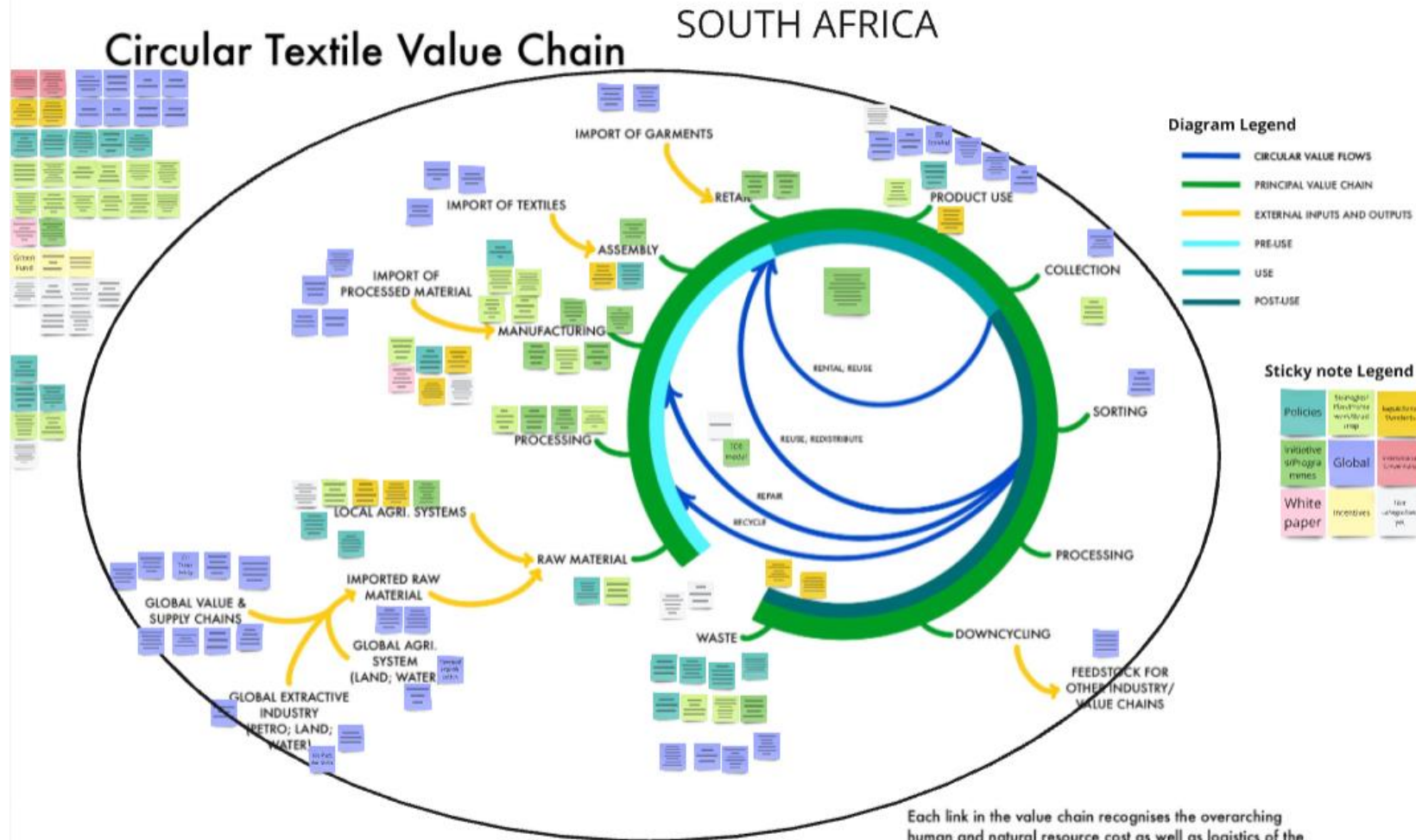


Each link in the value chain recognises the overarching human and natural resource cost as well as logistics of the material exchange. True circularity requires effective and just labour practice as well as management and monitoring of material/chemical shedding in the system.

APPROACH AND METHODOLOGY

Circular Value Chain Analysis-Example

With insights from the workshop 26/09



APPROACH AND METHODOLOGY

Gap Analysis Framework

Priority	Indicators	Description	Policy Inputs	Legislation Inputs	Regulation Inputs	Infrastructure Inputs	Strategy Inputs
	Stockholm Indicators						
High	Elimination of Perfluorooctane sulfonic acid (PFOS) and Related Chemicals	PFOS is used in the textile industry for its water and stain repellency properties. Given its persistence, toxicity, and bioaccumulation potential, phasing out PFOS and substituting it with safer alternatives should be a top priority.					
	Reduction of Dioxin and Furan Emissions	Dioxins and furans can be unintentionally produced during certain chemical processes in textile dyeing and finishing. Implementing best available techniques (BAT) and best environmental practices (BEP) in these processes is crucial to minimizing these toxic by-products.					
	Safe Disposal and Management of polychlorinated biphenyls (PCBs)	PCBs may still be present in older equipment used in the textile industry. Identifying and safely disposing of such equipment, as well as preventing any PCB contamination, is critical for compliance and environmental protection.					
	Substitution of Harmful Pesticides in Raw Material Production	Residual use of harmful pesticides such as dichloro-diphenyl-trichloroethane (DDT), lindane, and toxaphene in cotton and other natural fiber production should be eliminated. This includes promoting and adopting sustainable agricultural practices to reduce dependency on these hazardous chemicals.					
Moderate	Management of Chemical Stockpiles and Contaminated Sites	Stockpiles of harmful chemicals like hexachlorobenzene (HCB) and pentachlorobenzene, as well as contaminated sites associated with textile manufacturing, should be identified and remediated. Proper disposal and clean-up are necessary to prevent ongoing environmental harm.					
	Monitoring and Reporting on POPs in Textile Products	Establishing robust monitoring and reporting systems for POPs in textile products and raw materials ensures transparency and accountability in the supply chain. This will help track compliance and inform consumers and regulators about potential risks.					
	Public Awareness and Industry Training	Educating stakeholders, including manufacturers, suppliers, and consumers, about the risks associated with POPs in the textile industry is essential. Training programs should be implemented to promote the use of safer alternatives and adherence to best practices.					
	Strengthening Legal and Regulatory Frameworks	Ensuring that national regulations align with the Stockholm Convention, particularly in the context of the textile industry, is necessary for effective compliance. Strengthening enforcement mechanisms is also important to ensure adherence to these regulations.					
Lower	Research and Development for Safer Alternatives	Investing in research to develop safer alternatives to harmful chemicals used in the textile industry, such as non-toxic water repellents and sustainable dyeing techniques, is vital. Encouraging innovation in this area will help the industry transition to safer practices.					
	Sustainable Textile Production Practices	Encouraging broader adoption of sustainable practices in textile manufacturing, including the reduction of chemical use and the promotion of eco-friendly materials and processes, will support long-term compliance and environmental health.					
Lowest	Historical Assessment and Archiving	Documenting historical use and contamination of POPs in the textile industry can help inform future decisions and provide a reference for long-term environmental assessments. Although less urgent, this archival work is valuable for understanding the industry's impact over time.					
	Public Participation in Decision-Making	Engaging the public, particularly communities affected by textile production, in decision-making processes can enhance the legitimacy and effectiveness of compliance measures. While this may be less urgent than direct risk reduction, it plays a role in ensuring equitable and inclusive approaches to managing POPs.					

APPROACH AND METHODOLOGY

Gap Analysis Framework

Circular Economy Indicators	
Raw Material	Sourcing sustainable and renewable fibres, such as organic cotton or recycled materials, to minimise environmental impact and reduce the need for virgin resources.
Processing 1	Employing eco-friendly processes, such as low-impact dyeing and water recycling, to reduce chemical use and environmental pollution during the transformation of raw materials into fabrics.
Manufacturing	Implementing energy-efficient and waste-reducing practices in the production of garments, focusing on durability and design for disassembly to enable future recycling.
Assembly	Assembling garments using methods that minimise waste and facilitate easy disassembly, such as using non-toxic adhesives or mechanical fastenings instead of permanent stitching.
Retail	Promoting sustainable consumption by offering products with extended lifespans, take-back programmes, and educating consumers about the environmental impact of their purchases.
Product Use	Encouraging consumers to maintain and care for their garments to extend their useful life, including proper washing, repair, and responsible disposal practices.
Collection	Establishing efficient systems for collecting used textiles from consumers, ensuring that garments are returned to the value chain instead of ending up in landfills.
Sorting	Sorting collected textiles by material type and quality to determine the most suitable next steps, such as reuse, recycling, or processing for downcycling.
Processing 2	Within the post-use system, employing eco-friendly processes, such as low-impact dyeing and water recycling, to reduce chemical use and environmental pollution during the transformation used textiles and garments before they are down-cycled.
Downcycling	Converting textiles that cannot be reused or recycled into lower-value products, such as insulation materials or industrial rags, to prevent waste and keep materials in circulation.
Waste	Minimising the amount of waste generated throughout the value chain and ensuring any remaining waste is responsibly managed, such as through composting or energy recovery, to close the loop on material use.
Rental	Providing garment rental services to allow multiple users to share items, extending product life and reducing demand for new resources.
Reuse	Encouraging the direct reuse of garments through resale or donation, keeping products in circulation and reducing waste.
Redistribute	Redistributing unsold or surplus garments to areas of need or donation channels, preventing excess stock from becoming waste.
Repair	Promoting garment repair services and self-repair to extend product life and reduce the need for replacements.
Repurpose	Transforming garments into new items, like accessories or decor, giving them a second life and reducing waste.

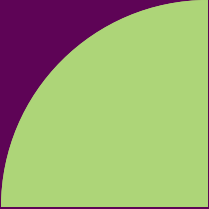


Next Steps

With a goal of creating a resilient and sustainable textile and garment industry across South Africa, Ethiopia, Lesotho, and Madagascar, next steps include:

- ❖ Validation of the approach, value chain, framework, and list of policies by relevant stakeholders
- ❖ Finalisation of the gap analysis
- ❖ Draft an action plan to address the identified gaps, using the prioritization criteria from the framework: impact, ease of implementation, and sectoral readiness.
- ❖ Outline specific actions for sustainable transformation within the TG sector - leveraging insights and recommendations from previous analyses.
- ❖ Provide a roadmap for implementing CE principles in the target countries.





CONTACT US

GET IN TOUCH

We aim to be collaborative in each stage of the project.

If you have any suggestions or input, please reach out!



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Thank you!