

Promotion of circular economy in the textile and garment sector through the sustainable management of chemicals and waste in Lesotho, Madagascar and South Africa

Part I: Project Information

GEF ID
10543

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
 CBIT
 NGI

Project Title
Promotion of circular economy in the textile and garment sector through the sustainable management of chemicals and waste in Lesotho, Madagascar and South Africa

Countries
Regional, Lesotho, Madagascar, South Africa

Agency(ies)
UNIDO

Other Executing Partner(s)
Ministry of Tourism, Environment and Culture of Lesotho; Ministry of Environment and Sustainable Development of Madagascar; Department of Trade and Industry of South Africa; Africa Institute for the Environmentally Sound Management of Hazardous and other Wastes (TBC)

Executing Partner Type

Government

GEF Focal Area

Chemicals and Waste

Taxonomy

Emissions, Chemicals and Waste, Focal Areas, Persistent Organic Pollutants, Unintentional Persistent Organic Pollutants, Best Available Technology / Best Environmental Practices, Open Burning, Sound Management of chemicals and waste, Waste Management, Hazardous Waste Management, Industrial Waste, Disposal, Green Chemistry, Demonstrate innovative approaches, Influencing models, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Private Sector, Stakeholders, SMEs, Large corporations, Type of Engagement, Information Dissemination, Consultation, Participation, Partnership, Communications, Public Campaigns, Awareness Raising, Education, Civil Society, Non-Governmental Organization, Academia, Community Based Organization, Gender Mainstreaming, Gender Equality, Beneficiaries, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Knowledge Generation and Exchange, Participation and leadership, Capacity Development, Multi-stakeholder Platforms, Food Security in Sub-Saharan Africa, Integrated Programs, Small and Medium Enterprises, Knowledge Generation, Capacity, Knowledge and Research, Workshop, Professional Development, Training, Enabling Activities, Learning, Theory of change, Innovation, Knowledge Exchange, Sustainable Development Goals, Polychlorinated Biphenyls, New Persistent Organic Pollutants, Deploy innovative financial instruments, Individuals/Entrepreneurs, Local Communities, Behavior change, Strategic Communications, Access to benefits and services

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 0

Duration

60In Months

Agency Fee(\$)

703,000

Submission Date

3/23/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CW-1-1	GET	7,400,000	45,000,000
	Total Project Cost (\$)	7,400,000	45,000,000

B. Indicative Project description summary

Project Objective

To promote the concept of circular economy (CE) in the textile and garment (TG) sector of Lesotho, Madagascar and South Africa through the reuse, recycling and conversion of textile/garment discards and related wastes into economically viable and socially beneficial products and services.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Strengthening of regulatory and institutional capacities for adoption and promotion of Circular Economy in the textile and garment (TG) sector.	Technical Assistance	1.1 Strengthened regulatory and institutional framework and capacities for adoption of Circular Economy in the TG sector.	1.1.1 Legal and institutional framework for life cycle management of the TG supply/value chains. 1.1.2 Regulations and incentive scheme for promotion and sustainability of circular economy in the TG sector. 1.1.3 Technical Committee for Circular Economy in the TG sector	GET	700,000	4,000,000
2. Recyclability of textile and garment wastes is enhanced through POPs-free textile manufacturing process and the implementation of BAT/BEP and RECP investments.	Technical Assistance	2.1 BAT/BEP/RECP and Circular Economy concept are implemented through technical assistance in selected textile production facilities for the ESM and prevention / reduction	2.1.1. Technical guidelines for environmental sound management of POPs chemicals and wastes	GET	400,000	3,000,000

of POPs, hazardous chemicals and wastes while improving process efficiency and profitability at plant level.

2.1.2 Standard Operating Procedures (SOPs) and Checklists for POPs pollution prevention and control

2.1.3 Techno-economic feasibility of BAT/BEP and RECP options

2.1.4 Training and Capacity building in BAT/BEP, RECP and Circular Economy.

2.	Investment		2.1.5 BAT/BEP and RECP options identified (during PPG) and implemented in at least one facility for each country.	GET	700,000	5,000,000
3. Introduction of Circular Economy concept for UPOPs emission reductions and contaminated	Technical Assistance	3.1. BAT/ BEP and Circular Economy concept are implemented through technical assistance	3.1.1 Environmentally sound management	GET	900,000	6,000,000

land mitigation through ESM of textile and garment wastes and pilot demonstration of textiles/garment wastes recycling and reuse.

in selected TG and recycling facilities for the reuse, recycling and ESM of textile and garment wastes.

(ESM) plan for textile/garment wastes.

3.1.2 Training and capacity building in ISWM and BAT/BEP for ESM of textile and garment wastes.

3.1.3 Financing mechanisms and business models for circular economy.

3.1.4 Techno-economic feasibility study of BAT/BEP options for recycling/reuse of textile and garment wastes.

3.1.5 Socio-economic impact assessment of project intervention

3.1.6 Partnership and cooperation mechanism for supply chain management.

3.

Investment

GET

3,500,000

20,000,000

3.1.7 BAT/BEP demonstration for ESM of POPs chemicals and textile/garment wastes

4. Knowledge management for scaling up.	Technical Assistance	4.1. Upscaling of project results to global textile and garment sectors and reporting to MEAs via access to knowledge.	4.1.1 National capacity and awareness programmes increase ability of textile sector and policy makers to manage and control POPs and CoC	GET	600,000	3,500,000
			4.1.2. Global Knowledge Exchange and Management tools accessed by users globally			
			4.1.3 Gender and Social Action Plan implemented and benefits accrued to women workers			

4.1.4
Sustainability
assessment and
opportunities
for replication and
up scaling.

5. Monitoring and evaluation.	Technical Assistance	5. M&E framework in accordance with UNIDO and GEF requirements	5.1.1 Project progress monitoring and reporting	GET	300,000	1,500,000
			5.1.2 Mid-term review and terminal evaluation conducted			
Sub Total (\$)					7,100,000	43,000,000
Project Management Cost (PMC)						
				GET	300,000	2,000,000
Sub Total(\$)					300,000	2,000,000
Total Project Cost(\$)					7,400,000	45,000,000

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	Government of Lesotho	In-kind	Recurrent expenditures	2,700,000
Government	Government of Madagascar	In-kind	Recurrent expenditures	2,700,000
Government	Government of South Africa	In-kind	Recurrent expenditures	4,500,000
Government	Government of Lesotho	Grant	Investment mobilized	150,000
Government	Government of Madagascar	Grant	Investment mobilized	200,000
Government	Government of South Africa	Grant	Investment mobilized	250,000
Private Sector	Formosa Textile Company, C&Y Garments (Lesotho) and other TG companies. Rebirth Recycling and Eco solutions Recycling (Lesotho) and other recycling companies.	In-kind	Recurrent expenditures	3,600,000
Private Sector	Epsilon Textiles company, Aquarelle Madagascar (Madagascar) and other TG companies.	In-kind	Recurrent expenditures	3,700,000
Private Sector	Trade Call Investments Apparel (TCI), K-Way Manufacturers, Rotex Fabrics PTY Limited, Migra Fabrics Pty (South Africa) and other TG companies. Private textile and garment waste collectors, Rewoven Co, Contantia Recycling and Waste CC, Connacher, Feltex, Frame (South Africa) and other recycling companies.	In-kind	Recurrent expenditures	4,000,000
Private Sector		Grant	Investment mobilized	5,000,000

Formosa Textile Company, C&Y Garments (Lesotho) and other TG companies. Rebirth Recycling and Ecosolutions Recycling (Lesotho) and other recycling companies.

Private Sector	Epsilon Textiles company, Aquarelle Madagascar (Madagascar) and other TG companies.	Grant	Investment mobilized	5,000,000
Private Sector	Trade Call Investments Apparel (TCI), K-Way Manufacturers, Rotex Fabrics PTY Limited, Migra Fabrics Pty (South Africa) and other TG companies. Private textile and garment waste collectors, Rewoven Co, Contantia Recycling and Waste CC, Connacher, Feltex, Frame (South Africa) and other recycling companies.	Grant	Investment mobilized	9,500,000
Others	Lesotho Textile Exporters Association (LTEA), Lesotho National Development Corporation (LNDC) (Lesotho). Economic Development Board of Madagascar (EDBM), Groupement des Entreprises Franches et Partenaires (GEFP) (Madagascar). Textile federation of South Africa , South African Cotton Textile Manufacturer's Association, South African Clothing and Textile Workers Union and National Cleaner Production Centre (NCPC) (South Africa). NGO Geography & Environmental Movement (GEM) and NGO Participatory Ecological Land Use Management (PELUM) (Lesotho), NGO Voarisoa Observatoire (Madagascar), ASOS, Puma, Levi's, Adidas, Cepovett company, Petit Bateau, J-Crew company, Woolworths, Cotton On , PEP and Edcon group	In-kind	Recurrent expenditures	3,000,000
Others	Lesotho Textile Exporters Association (LTEA), Lesotho National Development Corporation (LNDC) (Lesotho). Economic Development Board of Madagascar (EDBM), Groupement des Entreprises Franches et Partenaires (GEFP) (Madagascar). Textile federation of South Africa , South African Cotton Textile Manufacturer's Association, South African Clothing and Textile Workers Union and National Cleaner Production Centre (NCPC) (South Africa). NGO Geography & Environmental Movement (GEM) and NGO Participatory Ecological Land Use Management (PELUM) (Lesotho), NGO Voarisoa Observatoire (Madagascar), ASOS, Puma, Levi's, Adidas, Cepovett company, Petit Bateau, J-Crew company, Woolworths, Cotton On , PEP and Edcon group	Grant	Investment mobilized	500,000
GEF Agency	UNIDO	In-kind	Recurrent expenditures	150,000

GEF Agency UNIDO

Grant

Investment
mobilized

50,000

Total Project Cost(\$) 45,000,000

Describe how any "Investment Mobilized" was identified

The implementation of the RECP and BAT/BEP in the textile and garment production process will result in the development of new technical tools (guidance documents, guidelines, checklists, standard operating procedures etc.) for tracking, managing and controlling the consumption of hazardous chemicals and wastes in the production process. These activities and the experiences gained and lessons learnt therefrom will have implications for policy review, development of regulations and standards, and development and installation of new compliance monitoring and enforcement procedures. The Governments of the participating countries will have to invest in capacity building and training; development/establishment of environmental management plans/systems, structures and standards; investment in new monitoring equipment/devices; and waste segregation, collection and treatment facilities. The promotion of the circular economy and the pilot demonstration of recycling textile and garment wastes will be implemented and will involve undertaking the review of the existing waste management policies and identification and analysis of gaps. This will necessitate some recommendation of policy reforms; review of existing waste management strategies and development of an environmentally sound management (ESM) plan for municipal solid waste. Specifically, the development of an integrated waste management system will involve policy review; development of planning tools (waste management modeling; database management; monitoring and evaluation tools; chemical tracking and labeling; emission estimation etc.); waste characterization; assessment and evaluation of appropriate waste treatment technologies; life cycle assessment; implementation mechanism (public-private partnership, etc.); and application of smart system (data acquisition and storage, data communication, remote sensing and global positioning and remote sensing). Government investment is foreseen in these areas to provide the requisite investment resources in capacity building and training; infrastructure development; provision of green investment financing to prospective entrepreneurs. During the development of this proposal, two to three textile and garment factories were visited and/or consulted per country on the project, Formosa Textile Company, C&Y Garments (Lesotho), Epsilon Textiles company, Aquarelle Madagascar (Madagascar), Trade Call Investments Apparel (TCI), K-Way Manufacturers, Rotex Fabrics PTY Limited and Migra Fabrics Pty (South Africa), totaling 9 TG facilities to seek project collaboration, partnership and sustainability through co-financing and in-kind commitments. All companies visited were regularly investing and were planning to continuously invest in BAT/ BEP measures in order to move forward on factory efficiency. The companies' cash contribution is only within the planned financial investment or any required actions such as plant retrofits and equipment purchase. During the visit, they all agreed to participate in the project. The investment will be mobilized for the acquisition of green technologies and BAT/BEP that will require process plant modification, installation of new equipment, training of operating personal and introduction of innovative techniques and practices. In addition, National Textile Associations and National Development Agencies in each participating country were also visited for project partnership, and collaboration and cooperation arrangements. The identified textile and garment sector industries also have business dealings and/or supply contracts with many of the international fashion brands/retail outlets who are members of the Sustainable

Apparel Coalition (SAC), AG Apparel and Footwear International Restricted Substances List Management (AFIRM) Group or others and have signed the Science Based Targets Initiative in September 2018 committing to set emission reduction targets consistent with global efforts to limit warming to well below 2 degrees Celsius. This will provide the opportunity for local industry to work and collaborate with these players at the downstream segment of the supply/value chains to promote sustainable consumption and production as part of their corporate social responsibility and mobilize private sector financing to leverage GEF financing. UNIDO got the buy-in of international brands like Levi (in South Africa and Lesotho); ASOS (Madagascar); Puma (Madagascar and South Africa) and Woolworths (South Africa) and in talk with others. The aim is to collaborate with the private sectors to implement the international brands CSR and sustainability programs such as: Better Cotton Initiative, Eco design, Partnership for a Cleaner Textile PaCT, Science Based Targets initiative, AFIRM, Zero Discharge of Hazardous Chemicals (ZDHC), etc.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNIDO	GET	Lesotho	Chemicals and Waste	POPs	2,350,000	223,250	2,573,250
UNIDO	GET	Madagascar	Chemicals and Waste	POPs	2,350,000	223,250	2,573,250
UNIDO	GET	South Africa	Chemicals and Waste	POPs	2,700,000	256,500	2,956,500
Total GEF Resources(\$)					7,400,000	703,000	8,103,000

E. Project Preparation Grant (PPG) PPG Required



PPG Amount (\$)

200,000

PPG Agency Fee (\$)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNIDO	GET	Lesotho	Chemicals and Waste	POPs	50,000	4,750	54,750
UNIDO	GET	Madagascar	Chemicals and Waste	POPs	75,000	7,125	82,125
UNIDO	GET	South Africa	Chemicals and Waste	POPs	75,000	7,125	82,125
Total Project Costs(\$)					200,000	19,000	219,000

Core Indicators

Indicator 9 Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
5.50	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride	5.50			

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)

Metric Tons (Expected at CEO Endorsement)

Metric Tons (Achieved at MTR)

Metric Tons (Achieved at TE)

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Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)

Metric Tons (Expected at CEO Endorsement)

Metric Tons (Achieved at MTR)

Metric Tons (Achieved at TE)

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Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)

Number (Expected at CEO Endorsement)

Number (Achieved at MTR)

Number (Achieved at TE)

3			
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Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
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Indicator 9.6 Quantity of POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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4,000.00			
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Indicator 10 Reduction, avoidance of emissions of POP to air from point and non-point sources (grams of toxic equivalent gTEQ)

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
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11.50			
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Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)

Number (Expected at CEO Endorsement)

Number (Achieved at MTR)

Number (Achieved at TE)

3

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)

Number (Expected at CEO Endorsement)

Number (Achieved at MTR)

Number (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	4,400			
Male	3,600			
Total	8000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

It is estimated that project will reduce, dispose/destroy, phase out, eliminate and avoid 5.5 tons of PFOS and 4,000 tons of POPs contaminated wastes in the environment and in processes, materials and products. Furthermore, the project will result in the reduction of 11.5 grams of toxic equivalent gTEQ of emissions of POPs to air from point and non-point sources. These targets are estimated based on the data available and will be elaborated during the PPG phase. Direct beneficiaries of this project will be:

- Private sector companies employee (with an estimated number of 4 companies per each country for the pilot demonstration) involved in the production, who will be trained on BAT/BEP/RECP. This training will also be open for the wider TG sector companies.
- Policy makers will be trained on legal and institutional framework for Environmentally Sound Management (ESM) of POPs and Circular Economy concept.
- Regulatory, compliance monitoring bodies and custom officers will be trained on Hazardous chemicals tracking, monitoring and enforcement.
- Training banking and financial institutions on green financing appraising.
- Prospective entrepreneurs who are interested in recycling business will be trained.
- Training of NGOs and public awareness raising on hazardous chemicals including POPs, recycling and investment opportunities

Part II. Project Justification

1a. Project Description

1. a. The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

1. The garment production industry is a highly resource-intensive sector activity. According to the report from Ellen Macarthur Foundation, "A new textiles economy: redesigning fashion's future", in 2015 alone, the industry's greenhouse gas (GHG) emissions from textiles production totaled 1.2 billion tonnes (1,200 million tonnes in Europe) of CO₂ equivalent, more than all international flights and maritime shipping emissions together. Textile production (including cotton farming) uses around 93 billion (93 million in Europe) cubic meters of water annually, which is about 4% of global freshwater withdrawal. Garment manufacturing uses over 66% of this water. Each year, around 0.5 million tonnes of plastic microfibers, equivalent to more than 50,000 million plastic bottles, resulting from textiles washing are estimated to be released into the ocean. More than USD 100 billion worth of materials each year is lost due to the fact that less than 1% of the material used to produce clothing is recycled into new clothing and only 13% of the total material input is in some way recycled after clothing use.

2. The two major environmental impacts of textile production and processing are basically the discharge of chemical pollutants including POPs; and the consumption of water and energy. Moreover, many textile industries in many African countries are still using POPs chemicals in their industrial operations and due to lack of waste management policy framework and infrastructure; off cuts and textiles discards are either disposed in open burning operations and or in open landfills. The open burning operations results in the emission of dioxins and furans and greenhouse gases with serious harmful effects on humans and the environment.

3. Many African countries have been experiencing rapid industrialization particularly in the agro-industry and agro-allied sector in which the continent enjoys some comparative advantages due to abundance and low cost of raw materials and labor. The rapid industrialization has resulted partly because of the incentives and opportunities offered by the African Growth Opportunity Act (AGOA), a preferential trade agreement to facilitate exports from African countries to the United States through duty-free entrance of certain products into the United States including textiles. The combined apparel and footwear market in sub-Saharan Africa is estimated to be worth US\$ 31 billion, according to data from Euromonitor International. Africa's textile and garment industry is optimistic that, its shipments to the United States, the world's biggest market for such products, will surge following the 10-year renewal of AGOA. In 2013, ten countries (all of them located in Eastern and Southern Africa) saw some US\$ 2.5 billion in apparel exports from sub-Saharan Africa as shown in table 1. However for African countries to be able to benefit maximally from the opportunities offered by AGOA they also need to minimize the environment impacts and footprints of their businesses in other to remain economically competitive and comply with global standards and norms.

Country	Apparel exports 2013; US\$ million
Mauritius	761.3
South Africa	502.9
Lesotho	417.9
Madagascar	381.1
Kenya	279.3
Botswana	72.4
Swaziland	52.8
Ethiopia	36.5
Tanzania	17
Malawi	10.6
Total	2,531.5

Table 1: The top 10 apparel exporting countries in Africa

4. In Lesotho, Madagascar and South Africa, the textile and garment sector contributes significantly to the national economy and to the national export of goods and services. In 2012, Madagascar apparel products accounted for more than 50% of commodity exports and the garment industry employed more than 100,000 workers. Although the industry experienced adverse shocks in the 2000s, garment export growth did not collapse. In Lesotho, apparel represents 60% of total exports and 80% of Lesotho's manufacturing workforce.

5. The Eastern and Southern Africa TG sector presents big challenges that are common to the different countries: weak policy and institutional framework, skills shortage, lack of industry-specific training facilities, and inadequate physical infrastructure for sound management of solid wastes. Thus, leading to most of the wastes, offcuts and discards from the TG industries to be disposed through open burning operations and at dumpsites and improvised landfills. UNIDO is therefore developing the project initiative to promote Circular Economy in the textile and garment value chain in these selected countries through sustainable management of POPs chemicals and wastes; and the reuse, recycling and remanufacturing of textile/garment discards and wastes. In addition to promoting the economic competitiveness of the sector the project will also support the adoption of international best practices and compliance with international standards, norms and/or regulations.

6. The vulnerability of these countries to climate change especially the island state of Madagascar has been taken into consideration in this project. A regional approach has been adopted for the implementation of the project due to the relatively small size of the countries for cost-effectiveness and to provide the opportunity for building a regional network for experience-sharing and information exchange. The textile and garment sector industries also have business dealings and/or supply contracts with many of the international fashion brands/retail outlets who are members of the Sustainable Apparel Coalition (SAC), Apparel and Footwear International Restricted Substances List Management (AFIRM) Group or others and have signed the Science Based Targets Initiative in September 2018 committing to set emission reduction targets consistent

with global efforts to limit warming to well below 2 degrees Celsius. This will provide the opportunity for local industry to work and collaborate with these players at the downstream segment of the supply/value chains to promote sustainable consumption and production as part of their corporate social responsibility and mobilize private sector financing to leverage GEF financing.

7. During the consultation meetings held with the countries of Lesotho, Madagascar and South Africa to develop this proposal, the TG sector emerged as a key growing sector but with one of the priority sources of POPs, hazardous chemicals use, waste, hazardous waste and wastewater generation as well as water and energy consumption necessitating urgent local, national and international actions. Based on the consultations meetings with the Ministries of Environment and Ministries/Department of Industry of participating countries, the national governments expressed the urgent need to take action to advance in the circular economy agenda due to the NIP Updates of Lesotho, Madagascar and South Africa as well as the growing natural resources demand and associated environmental/ health problems, In order to achieve this, the primary objective is promoting BAT/ BEP/ RECP measures in the whole TG sector, taking into consideration specific country-based features of the sector, common practices and the socio-economic scenario of each country in order to move forward while reducing/ avoiding economic, social and environmental impacts.

8. Several root causes and barriers to the full implementation of Circular Economy in the TG sector including commitments set by the Stockholm Convention (SC) have been identified in general terms during the stage of PIF preparation in Lesotho, Madagascar and South Africa. Major barriers include the following:

- Insufficient or weak legal and regulatory framework. No specific BAT and BEP legal framework and promotion in the TG industry exists in any of project participating countries.
- Lack of capacity for implementing, enforcing and monitoring rules and standards;
- Limited human and financial resources;
- Lack of technical information about Circular Economy, BAT, BEP and RECP options;
- Absence or limited local technical expertise;
- Lack of incentives to encourage the adoption of BAT/ BEP/ RECP.
- Inadequate physical infrastructure for sound management of solid wastes.
- TG wastes disposal through open burning operations and at dumpsites and improvised landfills.
- Vulnerability to climate change especially the island states.
- Lack of awareness.

b. The baseline scenario and any associated baseline projects

9. In the absence of the proposed GEF project, open burning of TG wastes containing POPs chemical will continue resulting in high level of uPOPs emissions, as well as wastes being disposed at dumpsites and improvised landfills. Also, the lack of sufficient policy and regulatory framework will continue. There will be lack of technical information and awareness about Circular Economy, BAT, BEP and RECP options. The continuity of the current status at the participating countries will hamper the development of these countries and harm the environment. Without the involvement of the GEF, TG wastes management would probably improve marginally due to limited investment. This will lead to a severe

impact on the environment and human health as well as a loss of valuable resources, which could otherwise be recovered to re-enter the production process. Also, there will be no regional cooperation and partnerships between the participating countries and collaboration with other players in the global TG supply chain.

10. Every country has a different size of the TG sector, level of development and size of the challenges, this will be reflected in the size of the baseline scenario.

Lesotho. Baseline scenario

11. The textile garment industry in Lesotho is comprised of about 66 companies, located mainly in two industrial parks in Maseru and Maputsoe, employing more than 46,500 people, according to Tralac (Trade Law Centre) while contributing about 20% of the GDP. Lesotho's garment industry produces approximately 90 million knitted garments per year. It is estimated that Lesotho consumes between 22,000 and 26,000 metric tons of knitted fabric per year (Tralac, 2017).

12. According to research and interviews with several waste collectors and recyclers and data from the visited TG companies, the estimated quantity of textile offcuts generated by the sector in Lesotho is about 16,800 tonnes. According to the same sources, a maximum of 20% of textile offcuts are either recycled locally producing some products such insulation material and mops, up cycled into "raw cotton" to be reused in a local fabric firm or sent to South Africa for recycling. The other 80% is either burned, incinerated or dumped in landfills causing relevant environmental and health impacts. In some TG companies it is common practice to use textile offcuts as fuel in boilers as stated in the UNIDO project report of 2018 "Promotion of BAT and BEP to reduce UPOPs releases from waste open burning in Lesotho" and as observed on the field during the PIF development. According to the same project, the approximate quantity of textile offcuts generated is at least 8,733 tonnes per year, taking into account that data from major generators of textile offcuts and cotton waste is missing. The estimated quantity of textile and garment waste that could be burned or incinerated is at least 1,000 tonnes per year. There is a textile and garment recycling company that stated that its daily potential total production for reusing and recycling cotton, textile and garment waste is about 12 tonnes per day, totaling 3,600 tonnes per year, being at the moment unfeasible to operate due to recycling taxes imposed by the National Tax Revenue Department on tonnes of textile waste collected. At the moment, they produce a limited quantity of low value products such as under-carpet insulation material, shoe soles and cotton mops.

13. Lesotho is a party to several POPs related international agreements namely, the Stockholm Convention, Bamako Convention, Basel Convention, and Rotterdam Convention. Lesotho works through the National Environment Policy, approved in 1998, and the Environmental Act, 2008 to regulate hazardous chemicals, although laws that deal with or refer to toxic and hazardous chemicals are fragmented having no specific legislation, which regulates POPs. Existing laws are not adequate to address the management of POPs, other hazardous chemicals, the Stockholm Convention and related Convention requirements (NIP Update 2018), having no specific laws tackling POPs, hazardous chemicals and hazardous waste.

14. Related to the TG sector, two main POPs have been considered and inventoried under the NIP Update 2018, Polychlorinated Biphenyls (PCBs) and PFOS (perfluorooctane sulfonic acid). According to the NIP 2018 inventory, PCBs oils from transformers in Lesotho might be up to 284 tonnes. There was no information available on PCBs containing transformers in the TG sector. According to NIP estimates, the total range of

calculated PFOS based on available data in the country is between 1,910 to 18,832 kg of PFOS. No information was available on the possible import and/or use of PFOS, Chlorinated Paraffins or any other POP in the TG sector. As it is stated in the NIP update, activities that affect communities include farming, textile industry, waste combustion and mining. The use of POPs chemicals has resulted in environmental quality changes, affecting the health of the people, economic development and the biophysical environment (KEMI, 2017).

15. Related to BAT and BEP, there is no legislation and a clear application of its principles in the industry, including the textile and garment sector. BAT/ BEP principles are managed by the Ministry of Tourism, Environment & Culture as the lead agency and other Ministries such as Industry, Health, Local Government, Finance, Planning, and Energy as partner institutions. International reference documents on BAT and BEP are used as reference but still at an initial stage. No subsidies and/ or incentives are available to promote BAT and BEP neither financial mechanisms to promote them in the industry, including the textile and garment sector. In the NIP Update, BAT and BEP application are presented as a strategic tool for present and future industrial progress to attain NIP implementation and SC objectives (page 5 and 12 of NIP). The textile and garment sector is one of the possible sources identified in the NIP to reduce POPs impact on human health and the environment, in particular on the possible PFOS import and use in textiles, since it could be found in surface protection products such as carpets and clothing.

16. Moreover, insufficient solid waste handling and disposal at casual dumpsites take place in all towns of Lesotho. Industrial solid waste is disposed together with domestic solid waste or burned at industries in open fireplaces. Solid waste is generally not incinerated, but due to the insufficient collection system, random and intensive burning of waste does take place. This burning of wastes (including industrial wastes) causes considerable air pollution. Recycling of solid waste is performed by one or two private contractors, and only if this is financially attractive. There is currently no legislation enforcing or promoting recycling. Recyclable materials are mainly collected by the public and a few organizations. These materials are then collected by or delivered to private contractors.

17. No information is available on the total energy consumption by the TG sector in Lesotho. The application of Best Available Technology (BAT) on energy efficiency and the use of renewable energy is not usual practice in the sector. Several TG facilities were visited showing relevant consumption of energy and greenhouse gas (GHG) emissions with room to attain BAT and BEP.

18. Regarding training, education and awareness raising, the Ministry of Tourism, Environment & Culture has received some trainings on topics related to this proposal such as UNEP training on Cleaner Production & Sustainable Consumption, development of a National Chemicals Management Profile 2010 by UNITAR, development of SADC BAT/BEP guidelines under UNIDO/ UNITAR support and a chemicals information & exchange network activity, which will be reviewed during the PPG phase to assess knowledge gaps to meet project objectives and targets.

Baseline projects

19. The Government of Lesotho has already promoted the following initiatives, from which the proposed project will benefit:

- Promotion of BAT/BEP to reduce u-POPs releases from waste open burning, a project implemented by United Nations Industrial Development Organization (UNIDO) in participating African countries of SADC sub-region. The project is being carried-out by the Department of Environment in the Ministry of Tourism, Environment, and Culture of the Government of Lesotho as Lesotho is one of the participating countries, UNIDO, 2018; and

· Lesotho Highlands Water Project, including the construction of Polihali dam and generation of Hydropower at Kobong.

20. This current project will be implemented in close linkages with the BAT/BEP open burning project with participating African countries of SADC sub-region. With this project, resources and information will be shared to ensure synergy. Already under the open burning project, the wastes from the TG sector has been identified as priority for the reduction of uPOPs emissions from open burning operation. Under the same the project, study tour was arranged for counterparts to undertake industrial visit to TG wastes recycling facilities in Italy. This project will leverage on the capacity built and information gathered under the SADC Open Burning project.

Madagascar. Baseline scenario

21. The textile and garment industry first took off in 1989, and today includes more than 100 foreign-owned and local firms employing more than 150,000 people (EDBM, 2017). From 2015 to 2016, for example, there was a 12% increase in textile and apparel exports with a total export of USD 645 million. Most of the textiles and clothing are exported to Europe with almost 69% of the total and 18% exports to the USA under AGOA, being the top 5 importers the EU, USA, South Africa, UK and Canada (EDBM, 2017).

22. According to research and interviews with several stakeholders and data from companies, the estimated quantity of textile and garment waste (cotton and offcuts) generated by the sector in Madagascar is quite large and about 10,000 tonnes per year. A small fraction of textile offcuts are either reused or recycled, larger quantities are incinerated in some companies, this being a common practice in the sector according to the project report "Promotion of BAT and BEP to reduce UPOPs releases from waste open burning. Assessment of the cotton, textile garment sector of Madagascar" was undertaken and field observations made during the PIF development visits. The largest quantity of textile and garment waste is sent to landfills and sometimes burned there. Some of these textiles are used in households as fuel, therefore, burned causing serious health problems and environmental pollution including uPOPs. The estimated quantity of cotton, textile and garment waste that could be burned or incinerated according to this project data and field observations could be as high as 7,000 tons per year. No existing textile and garment reuse and recycling facilities and infrastructure are currently available in Madagascar.

23. Madagascar through the Law No. 90-033 of 21 December 1990 on the Malagasy Environment Charter and the new Decree 2018-1145 of October 18, 2018 which bans the import and regulates the export of waste, hazardous waste, dangerous substances and materials containing them in Madagascar, seeks full compliance with application of the Stockholm Convention and Rotterdam Convention. There is limited information on POPs and New POPs possible import and use in the country, having no specific legislation, which regulates New POPs. Existing laws might not be enough and enforcement is very limited to address the management of POPs and hazardous chemicals and the Stockholm Convention and related conventions requirements.

24. Related to the TG sector, the New POP PFOS (perfluorooctane sulfonic acid) have been considered and inventoried under the NIP Update 2017. According to NIP 2017 survey of textile chemical suppliers, since 2008 to 2010, 70,000 Liters of product containing PFOS that improves the quality of stain and stain fabrics called Oleophobol C, were sold to a fabric manufacturer for product export. According to this source, the fabric manufacturer continues manufacturing this fabric but with another fluorocarbon product brand other than oleophobol, but with no specific further information. No information is available from other TG companies that might be using any POPs at the moment. The NIP 2017 plans for the development of awareness activities for the textile and garment sector as possible importers and users of PFOS, holders and exporters of PFOS-containing materials (clothing industry, carpets, etc.) as well as relevant authorities, with the objective of reducing the release and finally preventing the use PFOS. In addition, the NIP plans for implementing an exhaustive inventory of articles and products possibly containing PFOS and related substances as well as its environmentally sound management and final disposal. According to POP inventories conducted in 2015 in Madagascar, dioxins and furans emissions are occurring and increasing under particular combustion conditions in all sectors including the incineration of waste and uncontrolled combustion processes of burning household waste. This situation is due to the lack of adequate infrastructure and increase in population.

25. Related to BAT and BEP, there is no specific legislation promoting BAT and BEP in the textile sector. However, BAT/ BEP principles are a main strategic objective of the NIP for the implementation of the SC in Madagascar (page 14 of NIP, on National Priorities and National objectives on POPs management). The Textile and Garment sector is one of the priority sectors identified in the industrial policy of Madagascar and one of the priority lines set in the NIP to reduce POPs impact on human health and environment, in particular the possible PFOS import and use in textiles.

26. The TG sector in Madagascar as the global TG sector consumes large quantities of electricity generating a relevant greenhouse gas (GHG) emissions and carbon footprint. One visited facility during the consultation process, consumed on average about 0.38 kWh and emitted about 0.12 Kg of CO₂ eq per garment produced, being lower than similar garment facilities in Lesotho. Heating in both facilities was produced with biomass boilers, a best environmental practice (BEP) common in the sector due to low prices and availability of biomass products. Chemical consumption in one visited facility was about 30 tonnes per year, having some room for BAT/ BEP improvements.

27. Regarding training and awareness raising, the Ministry of Environment and Sustainable Development has received some trainings on awareness of POPs from UNEP, waste management in cooperation with the Moroccan Government, awareness raising on international conventions on chemicals, awareness on climate change, etc.

Baseline projects

28. The following list comprises the most important national and international projects on circular economy, BAT/ BEP, POPs, waste, hazardous waste including those implemented or planned with the TG sector in Madagascar:

- Promotion of BAT and BEP to reduce UPOPs releases from waste open burning in the participating African countries of SADC sub-region, UNIDO, 2018. The project is aimed at achieving continuing minimization of unintentionally produced POPs (u-POPs) releases in the open burning sector of participating African countries of SADC region through introduction of best available techniques and best environmental practices (BAT/BEP) measures at selected priority demonstration sites, including Madagascar;

- Textile City, managed by the Economic Development Board of Madagascar (EDBM) which is currently promoting a new industrial area in Moramanga (eastern side of Madagascar) of size between 100 to 600 hectares, dedicated to about 100 textile and garment facilities to operate;
- CHEMOBS in Madagascar, UNEP. The Africa ChemsObs project aims at developing an integrated guidance to build capacity necessary to set up an integrated health and environment observatory surveillance and information management system that will enable African countries to establish evidence based policies and make sustainable decisions on sound management of chemicals and related disease burdens;
- Southern Africa Development Community (SADC) project on POPs management; and
- The National Fuel Ethanol Program, whose objective is to replace the use of charcoal and fuelwood by ethanol as a household fuel to protect the health of the local population. The project is being managed by the Ministry of Industry, Trade and Handicraft. The Interdepartmental Technical Committee for the fuel ethanol program has been set up and is already operational;

29. This project will be implemented in close linkages with the BAT/BEP open burning project with participating African countries of SADC sub-region. With this project, resources and information will be shared to ensure synergy. Already under the under open burning project, the wastes from the TG sector has been identified as priority for the reduction of uPOPs emissions from open burning operation. Also, this project will identify and assist relevant facilities that can facilitate the implementation of this project. The textile city will be identified as potential demonstration site for this project to take advantage of the existing facilities.

South Africa. Baseline scenario

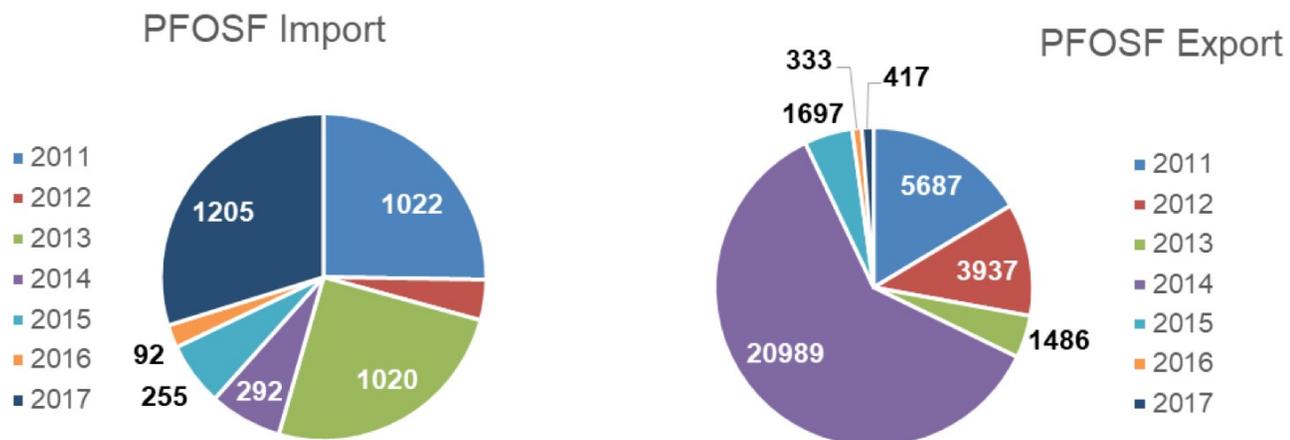
30. The South African textile industry has reacted in varying ways to the changing global economic environment and the past global economic crisis. South Africa has sufficient production capacity available locally and the drop in production has been attributed to the cheap imported products. Textile factories were only operating at about 66% of capacity and clothing factories were operating at 76% of capacity during 2017. Its contribution to the Balance of Payments (given an average duty of 10.5 per cent) is approximately R1-billion annually. The local textile industry represents approximately 1 per cent of the GDP for South Africa and the country currently consumes less than one per cent of the world's textile fibres.

31. The textile and garment sector in South Africa is predominately found in the two provinces of Western Cape and Kwazulu Natal. There is insufficient literature on the amount of textile and clothing manufacturing and export but a study that comes close to giving insight on the topic is one that was undertaken by the Potchefstroom University in 2004 showed that of the 98 textile manufacturers surveyed, 35 percent of these practiced recycling of fibre, yarn and fabric off cuts. Very little information on fabric recycling in South Africa is published and it is difficult to obtain information on this practice. However, the available literature and the field visits and discussions with the players in the industry puts the amounts of textile and garment waste generated at various stages on the life cycle. According to a study in 2019, about 3500 -3700 tons of textile waste is collected for recycling in South Africa locally and a further 1500 tons per month of textile waste was imported from Eswatini, Mauritius and Madagascar. The fluctuation in the amount of textile waste used in recycling is consistent with results found internationally.

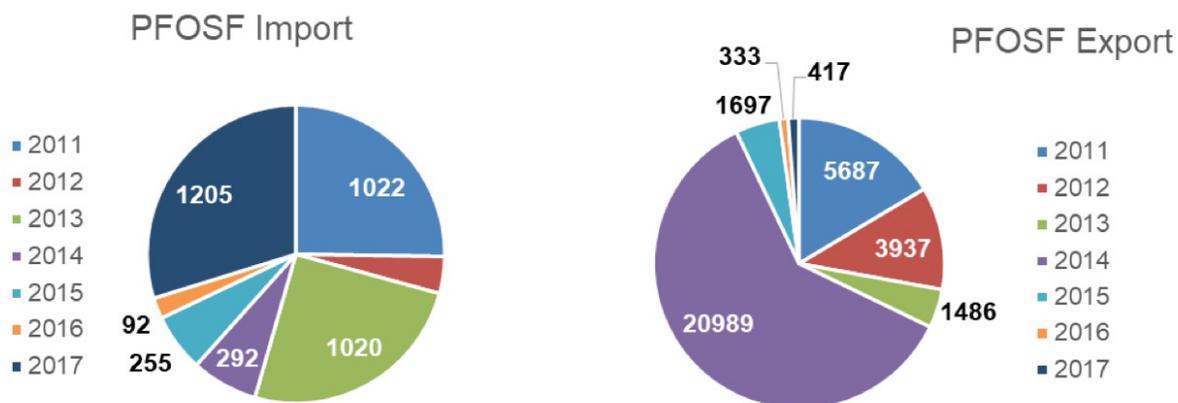
32. Though there is vertical integration in a number of textile companies in South Africa, the majority of waste still go through the value chain of transportation, bailing, sorting, recycling and remanufacturing. The SME industry that utilises the material for high end products continues to be a small contributor to the industry as its uptake of textile waste is very minimal. The importation of fabric waste into South Africa seems to play a significant role in how the textile industry functions. Evidence on the ground shows that there is very little textile waste going to the landfill in significant numbers but even then if any such waste found itself at the landfill, it would be collected by private transporters. However, previous studies have found that 14.6 percent of pre-consumer textile waste would find itself at the landfill. In Durban, it is estimated per month 410 tons, 2400 tons, 1400 tons of wastes are landfilled or burned, recycled and imported respectively, which is about 50,520 tons per year. While in Cape Town, it is estimated per week 165 tons, 182 tons, 241 tons of wastes are landfilled, recycled and burned respectively, which is about 30,576 tons per year. Thus, from only these two cities the total TG wastes generated annually is about 81,096 tons. These figures are estimated based on the little data available and will be elaborated during the PPG phase.

33. South Africa is a party to various multilateral environmental agreements including the Stockholm, Rotterdam and Basel Conventions, which deal with hazardous waste and chemicals management. The policy, regulatory and institutional framework used to address the management of chemicals and waste in South Africa is anchored in various pieces of legislation and government departments. Generally these policy and regulatory framework falls under the Departments of Environment, Agriculture, Water, Health, Labour and Trade and Industry. The Department of Environment, Forestry and Fisheries (DEFF) has given notice of its intention to Phase-out the use of Persistent Organic Pollutants, through regulations (GN 744 in GG 41790 of 24 July 2018) under section 44(1) (a) read with section 47 of the National Environmental Management Act 107 of 1998. The proposed Regulations includes notification, development of phase-out plans and reporting duties that will be imposed on users, producers, distributors, importers or exporters of listed chemicals. The following are the POPs of concern in South Africa:

- Decabromodiphenyl ether is listed in Annex A with various specific exemptions. Decabromodiphenyl ether (also known as decaBDE, DBDE, decabromodiphenyl oxide, DBDPO, or bis (pentabromophenyl) ether) is a brominated flame retardant used to protect many products and materials from the risk of fire, including electronic equipment, furniture cushions, upholstery textiles, carpet backings, mattresses, vehicles, aircrafts and building materials (Posner, 2004). There is no evidence regarding import and export data of Decabromodiphenyl ether (Commercial mixture, cDecaBDE) in South Africa.
- Hexabromobiphenyl is listed in Annex A without specific exemptions and belongs to the group of polybrominated biphenyls, which are brominated hydrocarbons formed by substituting hydrogen with bromine in biphenyl. Hexabromobiphenyl was used as a fire retardant in three main commercial products. There is no evidence of import and export for Hexabromobiphenyl between 2011 and 2017.
- Import and Export of Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF). The graphs below represent the import and export quantities (kg) of Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) obtained from the DTI Trade Statistics and the ITC website using the SARS Tarrif code and the HS Code.



· Tetrabromodiphenyl ether and pentabromodiphenyl ether are listed in Annex A with specific exemptions for use (recycling articles that contain these chemicals). Tetrabromodiphenyl ether and pentabromodiphenyl ether are the main components of commercial pentabromodiphenyl ether (C-pentaBDE). The graphs below represent the import and export quantities (kg) of Tetrabromodiphenyl ether and Pentabromodiphenyl ether (c-pentaBDE) obtained from the DTI Trade Statistics and the ITC website using the SARS Tarrif code and the HS Code.



34. There is little or no manufacturing of flame-retardants. Therefore, most of the flame-retardants used in the country are imported. The largest source of the POPs flame-retardants results from the imports of fully manufactured products such as textiles, foams and electronics that have been treated with flame-retardants.

35. There are currently two companies that deal with the treatment, destruction and disposal of waste. Both the companies have hazardous waste licence sites in Gauteng province. A-Thermal Retort Technologies (Pty) Ltd is a waste management company that specializes in the thermal treatment, incineration and management of hazardous and toxic waste from the pharmaceutical and chemical manufacturing industries. The facility has a design capacity of 120 Tons of thermal destruction, currently operating at 60% of the design capacity. Enviroserv Waste Management (Pty) Ltd, the largest hazardous waste management company in South Africa, applies various types of treatment technologies for the treatment and disposal of hazardous waste including POPs wastes. Hazardous waste treatment practices include physical, chemical, immobilization and solidification.

36. South Africa has the capacity to ensure compliance and monitoring of the environmental legislative provisions of the country. However, there is frail enforcement of the existing legislation relevant to POPs management. There are currently no comprehensive national monitoring programmes to monitor POPs in the South African. Number of specific studies have been undertaken which monitored the levels of POPs in specific environmental media and related the results to effects on human health or impacts on the environment. However, these studies are limited and require strengthening in terms of specialized training and upgrading of infrastructure such as equipment and laboratories.

37. There is no legislation and a clear application of on related to BAT and BEP principles in the industry, including the textile and garment sector. International reference documents on BAT and BEP are used as reference but still at an initial stage. No subsidies and/ or incentives are available to promote BAT and BEP neither financial mechanisms to promote them in the industry, including the textile and garment sector. In the NIP Update, BAT ad BEP application are presented as a strategic tool for present and future industrial progress to attain NIP implementation and SC objectives (page 5 and 12 of NIP). The textile and garment sector is highlighted as one of the possible sources identified in the NIP to reduce POPs impact on human health and the environment, in particular on the possible PFOS import and use in textiles, since it could be found in surface protection products such as carpets and clothing. Moreover, insufficient solid waste handling and disposal at selected disposal sites are evident in the countryside. South Africa has one of the best legislative framework that supports recycling but the enforcement of the legislation and compliance has proven to be a challenge. Regarding training, education and awareness raising, the Department of Trade and Industry hosts the NCPD and continues to benefit from various trainings on Cleaner Production & Sustainable Consumption.

38. The Government of South Africa has already promoted the following initiatives, from which the proposed project will benefit:

Baseline projects

- Minamata Initial Assessment in South Africa, a project implemented by United Nations Environment. The project is being carried-out by the Department of Environmental Affairs Fisheries and Forestry;
- The development a project preparation grant document on the Environmentally Sound Management and Disposal of Polychlorinated Biphenyls [PCBs] in the Republic of South Africa. The project had the Development Bank of Southern Africa (DBSA) as the implementing agency. The focal point is DEFF.

39. This project will support the UNIDO mandate of promoting inclusive and sustainable industrial development (ISID) and the selection of the Department of Trade and Industry (DTI) as a lead agency underscores the relevance and importance of this project to the achievement of ISID objectives. Through the greening of the industries and the creating of new green industry in the TG sector, the project will contribute to UNIDO ISID programme in South Africa. UNIDO has established through previous projects the National Cleaner Production Centre (NCPC), which will be used as a technical agency to implement RECP, BAT/BEP techniques in the TG sector.

c. The proposed alternative scenario, GEF focal area strategies, with a brief description of expected outcomes and components

40. The alternative scenario proposed in this full-sized project will address the above mentioned barriers by strengthening the sound management of industrial chemicals and their wastes through better control, and reduction and/or elimination in Lesotho, Madagascar and South Africa to promote Circular economy in the textile garment sector. Furthermore, the use of POPs will be prevented by promoting the environmentally sound management (ESM) of POPs and waste through the introduction of BAT/BEP measures to protect human health and the environment.

41. The project will promote circular economy in the textile and garment sector through the following among others:

- Product and process system design in the entire value chain for durability, multipurpose application, reusability, recyclability, maintainability and reparability; i.e. adoption of a life cycle thinking (cradle to cradle) approach.
- Adoption of low carbon and cleaner technologies through the application of resource efficient and cleaner production (RECP) tools and techniques
- Productivity improvement and waste minimization through process optimization; equipment modification and acquisition of cleaner technologies;
- Non-hazardous manufacturing and production operations for POPs and other toxic chemicals pollution prevention and control through the implementation of BAT/BEP in the textile industries and garment making industries.
- Waste recovery, reuse and recycling enhancement and improvement through avoidance of hazardous chemicals and waste in the textile and garment production process;
- Adoption of “zero waste to landfill” business strategy in the TG value chain through waste minimization of process wastes, recycling and reuse of end-of pipe wastes with the establishment of green industries that will convert textile and garment wastes and offcuts into cotton fibre for reuse as input materials in the textile fabric making industries and downstream in the garment making industries.
- Support of the regenerative of economy through substitution of recycled natural cotton and synthetic fibre for raw cotton fibre as input resources in the textile manufacturing process; and use of renewable energy, biodegradable inputs and bio-chemicals.
- Restoration of contaminated and degraded land through reduction of wastes to landfill and by keeping materials and products in use.

42. The TG sector will be strengthened and broadened through the development of waste recovery and recycling segment of the TG value chain that will create new green industries and related services. The project will undertake a technoeconomic assessment of the circularity of the TG sector and development of viable business models and financial mechanisms for the economic viability and financial profitability of the recycling chains. The lessons learnt and experiences gained in the pilot demonstration of the circular economy concept in the TG sector will guide policy reforms and regulatory framework that will be required to promote circular economy in the TG value chain. These will be in form of green products

design and standards, tools and methodologies for chemicals tracking; compliance monitoring and enforcement of regulations and standards; development of guidelines for an integrated textile and garment value chain; products traceability and tracking. The outcomes and results of the pilot demonstration of textile/garment wastes/offcuts will have implications for the review of existing municipal solid waste management practices; policies related to establishment of industrial clusters and parks; and transboundary movement of wastes and used clothes and clothing. The technoeconomic assessment of the circularity of the TG sector will also identify investment capital and operating cost regimes that would enable and sustain the implementation of the circular economy concept. In addition the required fiscal and policy incentives, investment financing and promotion guidelines that would support its sustainability will have to be prepared, enacted and implemented. In order to replicate and upscale the activities of the project the requirements for regional and global networking and partnership will need to be identified and the requisite conditions for enabling and implementing it will be addressed. The knowledge management component will establish a platform that will provide the opportunity for interactive information exchange and experience sharing and facilitate the dissemination of the lessons learnt and experiences gained from the pilot demonstration with the active involvement and participation of the international brands and other global players like the Ellen McArthur Foundation and the Zero Discharge of Hazardous Chemicals (ZDHC).

43. The selection of sites for the pilot demonstration was based on the following criteria: textile and garment industries at locations with high wastes generation; industrial locations which pose high environmental pollution challenges; national government priorities and preferences to jumpstart the implementation of the circular economy concept; and industrial parks where ancillary support facilities for waste collection, separation; and transfer and transportation can be easily provided and/or upgraded. In addition, through the adoption of the value chain approach, industrial locations and sites where textile manufacturing industries and textile production share contiguous boundaries was also given consideration for ease of logistics.

44. The industries were identified based on size, production capacity and processes, connection to international fashion brands; willingness to participate in the project; readiness to implement recommendations for process improvement and readiness to provide requisite co-financing to complement GEF resources. Industrial facilities that large production capacities and offer opportunities and operational flexibility for process modifications; equipment retrofitting and upgrade; and ability and capacity to acquire and absorb environmentally sound technologies (ESTs) were given preference. Industries that have combined textile and garment production facilities were also identified as they offer the opportunity for an integrated business model development.

45. The project will at least has one-demonstration pilots in Lesotho and Madagascar, while at least 2 in South Africa. The demonstration pilots will target three stages: textile manufacturing, garment making and recycling/reuse.

46. The project will establish regional cooperation and network for information exchange and experience sharing as well as regional and interregional knowledge management. Specifically the project will be implemented with close linkage with UNEP regional textile project in Asia.

47. The TG industry is becoming increasingly relevant for the economies of the above-mentioned countries. Extrapolating the current trend leads to a growing environmental pollution but it can also bring new opportunities. Currently, a multitude of initiatives are arising at governmental, private, local and international levels in order to make a contribution towards a sustainable and competitive industry. This intervention aims at bringing about convergence, coordination and broader adoption of these initiatives in order to generate a durable change in the TG sector. If all the assumptions made are in place, this transformational change is expected to occur at all levels: social, economic, environmental and governmental, as shown in the theory of change in Annex D.

48. Considering this purpose, the project will consist of five different components, which are described as follows:

Component 1: Strengthening of regulatory and institutional capacities for adoption and promotion of Circular Economy (CE) in the textile and garment sector

49. The main goal of Component 1 is the creation of the necessary institutional frameworks, effective policy control and incentives and technical resources to advance in the Circular Economy agenda in the TG sector along the whole value-chain by promoting BAT/ BEP/ RECP while preventing/ reducing POPs and other hazardous chemicals.

Output 1.1.1 Legal and institutional framework for life cycle management of the TG supply/value chains.

50. This first group of activities will consist of gap analysis on legal mandates, institutional capacities and review of the relevant existing laws and regulations, leading to proposing a revised legal framework to strengthen the legal and institutional framework to promote circular economy in the TG sector including technical infrastructure for implementation of BAT/ BEP on POPs, hazardous chemicals and textile waste management as well as RECP options (energy efficiency, renewables) will be promoted and strengthened.

51. Once the appropriate hazardous chemicals including POPs and New POPs specific legislation has been incorporated in the Ministries of Environment Lesotho, Madagascar and South Africa, tasks will revolve around building capacity to enforce regulations. An implementation of a National Centre for segregation and storage of POPs will be also assessed in Lesotho and Madagascar in accordance with BAT/ BEP guidelines to meet SC/ BC and other relevant criteria. The Ministries of Environment will work with the Ministries of Industry and Ministries of Finance (National Revenue Authority, in particular) among others, to commit in-kind and in-cash contributions towards enforcement of these regulations.

Output 1.1.2 Regulation and incentive scheme for promotion and sustainability of circular economy in the TG sector.

52. Based on the gap analysis evaluation report and to strengthening the legislative network, targets and/or incentives will be set to promote the practices and sustainability of circular economy in the sector. For example, incentives for collection and recycling of textile waste while banning its incineration, especially in Lesotho and Madagascar where this practice is still occurring and in all participating countries where most of the textile and garment waste is sent to landfills.

Output 1.1.3 Technical Committee for Circular Economy in the TG sector

53. A Multisectoral Technical Committee for Circular Economy in the TG sector will be legally established and made operational. The strengthening of capacity to promote Circular Economy in the TG Sector is multifaceted, involving establishment of a coordination mechanism and targeted training. Coordination with other POPs projects in the African region such as, in the case of Madagascar, a Southern Africa Development Community (SADC) project on POPs management and the Africa ChemObs project will also be ensured and will contribute to overall POPs management and monitoring in the country. The project "Integrated health and environment observatories promoting legal and institutional strengthening for the sound management of chemicals in Africa – African ChemObs" aims to enable countries to meet their reporting obligations under the Basel, Rotterdam and Stockholm Conventions, promote evidence based policy making as well as increase investment on chemical and waste infrastructure.

Component 2: Recyclability of textile and garment wastes is enhanced through POPs-free textile manufacturing process and the implementation of BAT/BEP and RECP investments

54. The main goal of Component 2 is to implement BAT/ BEP/ RECP methodology and Circular Economy concepts for the prevention and reduction of POPs and other hazardous chemicals and materials use in textile and garment production facilities as well as its substitution by Environmentally Sound Alternatives (ESA) including non-chemical alternatives, in line with the requirements of the SC and National priorities, while enhancing the recyclability and reuse of textile and garments wastes through POPs-free textiles and garment manufacturing. The component will also introduce RECP options such as wastewater minimization, pollution control and management, energy efficiency and renewable energy implementation.

55. In the textile manufacturing process, process improvement strategy will deploy UNIDO/UNEP resource efficient and cleaner production (RECP) techniques to improve production efficiency, reduce resource intensity; minimize waste and prevent pollution. Best available techniques and best environmental practices (BAT/BEP) will be implemented to prevent the use and formation of POPs chemicals in the dyeing and finishing sections through the avoidance of chemicals containing elemental chlorine and other POPs precursors as articulated in the BAT/BEP Guidelines of the Stockholm Convention.

56. In cooperation with the international brands and ZDHC, some environmental footprint performance improvement programmes such as the zero discharge of hazardous wastes, restricted substances list management, better cotton initiative, sustainable apparel coalition etc. will be implemented. The adoption of international standards and implementation of certification schemes by the participating industries will be supported by the project.

Output 2.1.1. Technical guidelines for environmental sound management of POPs chemicals and wastes

57. This component will provide technical guidance to participating TG production facilities including the introduction of the Circular Economy concept, RECP for resource conservation and waste minimization and BAT/BEP for prevention/reduction of POPs and improvement of process efficiency along the whole lifecycle of the textile / garment sector in selected facilities.

Output 2.1.2 Standard operating procedures (SOPs) and checklists POPs pollution prevention and control

58. Also, the component will provide technical guidance on and standard operating procedures (SOPs) for BAT/BEP, development of investment prioritization criteria, as well as construction supervision, testing and full operation of BAT and BEP, ISWM and RECP interventions.

Output 2.1.3 Techno-economic feasibility of BAT/BEP and RECP options

59. Techno-economic feasibility of BAT/BEP for POPs alternatives (also non-chemical alternatives) including financing mechanisms and business models will be carried out.

Output 2.1.4 Training and Capacity building in BAT/BEP, RECP and Circular Economy.

60. The component will provide a training and Capacity building of relevant stakeholders including industries' personnel in BAT/BEP, RECP and Circular Economy.

Output 2.1.5 BAT/BEP and RECP options identified (during PPG) and implemented in at least one facility for each country.

61. The investment intervention of this component will demonstrate BAT/ BEP/ RECP options involving equipment retrofitting, technology/equipment transfer, process modifications; installation and commissioning of new equipment and related building capacity and training. The purpose of this intervention is to ensure that textile/garment facilities prevent and reduce the import and use of POPs, New POPs and other hazardous chemicals while textile and garment and TG wastes do not contain POPs and other hazardous chemicals; thereby making them highly recyclable and more available for recycling operations by the implementation of specific private sector investments.

62. The outcome of this component will be linked to the demonstration of the economic feasibility of the identified BAT/ BEP/ RECP options, even those under development, in the TG sector. Therefore, besides the BAT/ BEP/ RECP implemented in the selected companies, these co-financed investments will encourage wider circular economy investments in the whole TG sector in order to be in line with both national regulations and the market demand.

Component 3: Introduction of Circular Economy concept for UPOPs emission reductions and contaminated land mitigation through ESM of textile and garment wastes and pilot demonstration of textiles/garment wastes recycling and reuse.

63. The main goal of component 3 is to promote the implementation of Pilot demonstration for the reuse and recycling of textile and garment wastes through the introduction of circular economy concepts, BAT and BEP in existing and future reuse-recycling facilities with the final objective of reusing and recycling 100% of wastes in the future in an environmentally sound manner.

64. In the garment making production process; BAT/BEP will be implemented to avoid the use of hazardous chemicals in garment making and finishing. This will entail the introduction of eco-design design techniques to minimize the generation of wastes; off-specs and offcuts in the production process. The international brands such Nike, Puma, ASOS, Adidas, etc. are already implementing some of these activities under their corporate social responsibility (CSR) programmes individually and in cooperation with other players in their supply chains. This cooperation will be strengthened and coordinated by the project especially for garment makers that are suppliers to more than one global brand.

65. The project will promote the circularity of textile and garment value chain through adoption of sustainable wastes management plans and strategy. The project will identify opportunities for forward integration by the textile and garment sector through the reprocessing and recycling of TG wastes into the textile manufacturing process. For contaminated wastes the project will support the disposal in an environmentally sound manner through the application of appropriate BAT/BEP.

Output 3.1.1 Environmentally sound management (ESM) plan for textile/garment wastes.

66. The technical assistance task of this component will provide technical guidance to key stakeholders including the introduction of the Circular Economy concept by developing an environmentally sound management (ESM) plan for textile/garment wastes.

Output 3.1.2 Training and capacity building in ISWM and BAT/BEP for ESM of textile and garment wastes.

67. This component will develop trainings and building capacity of key stakeholders (Output 3.1.2) on integrated solid waste management (ISWM) and BAT/BEP for ESM of textile and garment wastes/discards for uPOPs/ GHGs prevention/reduction and degraded land reduction/mitigation.

Output 3.1.3 Financing mechanisms and business models for circular economy.

68. Develop business models and financing mechanisms for sustainability of TG wastes recycling and reuse operations; entrepreneurship development and business linkages, socio-economic impact assessment of project intervention on the TG sector and value addition to national economy.

Output 3.1.4 Techno-economic feasibility study of BAT/BEP options for recycling/reuse of textile and garment wastes.

69. Techno-economic feasibility study of BAT/ BEP options for recycling/reuse of textile and garment wastes will be done in order to see the potential of application of BAT/BEP technologies that would lead to reduction of environmental impact. The assessment will also review the main aspect that needs i.e. administrative, managerial and technical further improvements.

Output 3.1.5 Socio-economic impact assessment of project intervention

71. Socio-economic impact assessment of project intervention on the TG sector and value addition to national economy will be done. The assessment will include the social impacts (e.g. health), economic impacts (can include effects on employment) and environmental impacts.

Output 3.1.6 Partnership and cooperation mechanism for supply chain management.

72. The project will establish partnership and cooperation with global fashion brands, their suppliers and global textile organizations. Although currently the cooperation between many of the textile and garment makers and the international brands focuses mainly on meeting contractual obligations and commitments. There are a lot of opportunities for cooperation and partnership between the textile and garment producers and the international fashions in jointly implementing mutually beneficial corporate social responsibility programmes. The project will facilitate this cooperation by supporting the textile garment producers to sign in to relevant programmes and encouraging the fashion brands to provide necessary support the TG producers.

Output 3.1.7 BAT/BEP demonstration for ESM of POPs chemicals and textile/garment wastes

73. The investment intervention of this component will demonstrate BAT/ BEP options involving technology/equipment transfer, equipment retrofitting, process modifications, development of operation manuals, installation/commissioning of new equipment and related training and building to demonstrate the reuse, recycling and ESM of textile and garment waste in selected TG and recycling facilities, by assuring private sector investment implemented for the ESM of TG waste in selected TG facilities and private sector investment on reuse/ recycling facilities.

Component 4: Knowledge management for scaling up.

74. This component aims to ensure that project results are sustained and scaled at national and global levels. This Component is shared with the UNEP project in Asia, both projects following the same basic structure, although specific activities will be developed as needed in each region.

75. The outcome will be achieved through sharing technical successes and lessons to the wider textile sector via national capacity and awareness raising, including ensuring access to information for regulators to meet international reporting obligations. At a global level, information will be shared between the UNEP and UNIDO projects, via SAICM and international networks, and with global supply chains, to ensure appropriate incentives for textiles facilities are in place. Gender and social impacts are particularly important in the sector and will be addressed in Output 4.1.3.

Output 4.1.1 National capacity and awareness programmes increase ability of textile sector and policy makers to manage and control POPs and CoC

76. During the PPG a review of the internal processes and mechanisms for reporting at the national level will be conducted, as well as Stockholm Convention reporting data gaps related to textile sector, and will guide the use of project funds.

77. Activities may include:

- National workshops and consultations with sector groups and regulators; publication of annual reports and inventories; and coordination with customs, statistics and other potential sources of relevant data, building on national steering committees developed in particular in the context of the Stockholm Convention as well as existing projects under the Special Programme
- Development of national databases and data collection systems and mandates including an open-access platform for internal users (chemical suppliers, Tier 2 and 3 users, and Tier 1 clients and brands) and the wider public, including regulators and project partners. Systems will include incentives for users to update them (e.g. space for advertising themselves or a chat function to connect on possible new opportunities).

Different approaches will be considered including mobile phone apps, browser-based interfaces, and PRTR-model data collection and reporting tools. The tools and processes will be linked to existing sustainability reporting and monitoring, including any certification or standards partners already have in place.

- Development of training modules and teaching resources on ESM of chemicals and POPs-contaminated wastes, and training of users (governments and private sector actors) in the use and interpretation of data from reporting tools, linking to country reporting under the Stockholm Convention and SAICM. These resources can also be used in existing school curricula and university research programmes.
- Multimedia sensitization campaign targeting multiple/various demographics (decision makers, industry, Ministries, local governments, community leaders, recycling companies, informal sectors, women and youth group associations, NGOs, academies, media, etc.).

Output 4.1.2. Global Knowledge Exchange and Management tools accessed by users globally

78. This output will be delivered jointly with UNEP, to ensure all tools relevant to a sector can be found in a common space and build on each other.

79. Activities may include.

- Development of a dedicated section for textiles in the SAICM Knowledge Management platform being developed under a related GEF Full Size Project (GEF ID 9771), and dissemination of project results and tools via global networks including UNIDO and UNEP websites, the UN Sustainable Fashion Alliance and government or regulatory networks and SWITCH Med and SWITCH Asia;
- Collection of relevant tools, guidance and best practices, from the project, the project implemented by UNEP, government and private sector initiatives;
- Engagement of global supply chain actors including brands, retailers (including online) to overcome communication barriers between a highly globalized industry, and ensuring that the communicating partners understand each other and that the right information is coming from, arriving to and understood by the correct persons
- Development and roll-out of a public information strategy with due consideration of the UN Environment Programme's "*Guidelines for providing product sustainability information*" to the textile sector with specific case studies drawn from the project countries.
- One of two global Conferences in coordination with the UNEP Asia project (i.e. UNIDO in Africa, UNEP in Asia) bringing together representatives of both projects and common stakeholders notably from the brands and private sector partners including certification, labelling, and consumer partners.

Output 4.1.3 Gender and Social Action Plan implemented and benefits accrued to women workers

80. This output will build on a PPG analysis of the gender mainstreaming issues, in consultation with the UNEP and UNIDO gender advisors. The analysis will focus on chemical safety issues but also review wider and well-established gender issues and initiatives in the industry around workplace rights, violence and access to training and jobs. The gender activities will be integrated with the technical components, bringing a gender lens and additional budgetary resources to identify and mitigate impacts of unsound chemical management on women and marginalized groups including children or illegal labourers.

81. Activities in the project may include:

- Gender analysis as part of the facility visits to identify and describe gender differences in handling, exposure and impacts of chemical management practices;
- Training and awareness raising specifically targeting women workers, e.g. by provision of childcare to encourage participation and increasing access to training and jobs.
- Creation of safe spaces for dialogue on chemical safety, labour and women's rights in the workplace, including access to training and protective equipment and practices.
- Prioritization of women-owned or women-managed businesses for demonstration pilots and capacity building.

82. *Output 4.1.4 Sustainability assessment and opportunities for replication and up scaling.*

83. In addition, a project sustainability assessment and strategy will be implemented exploring and promoting opportunities for replication and upscaling in the whole textile and garment sector in the country, as well as in the region and other key global TG regions.

Outcome 5: Monitoring and evaluation.

84. This component relates to monitoring the project impact indicators, evaluation of the achievements and taking corrective measures if needed. All of the above outcomes will be monitored and verified through the activities included in this component.

Output 5.1.1. Project progress monitoring and reporting

85. An effective monitoring process of project impact and sustainability will be designed and implemented, including setting a periodic review process to monitor the quality and the state of progress of the project. Gender issues and environmental and social safeguards will be fully integrated in the project's activities.

Output 5.1.2 Mid-term review and terminal evaluation conducted

86. Independent mid-term review and independent terminal evaluation are conducted in accordance with established UNIDO and GEF procedures.

d. Alignment with GEF focal area and/or Impact Program strategies.

87. This project is aligned with the GEF-7 Industrial Chemicals & Waste Focal Program in the facilitation of enabling environments and strengthening of national legislation and regulatory capacity for meeting obligations, with regard to POPs. Thus, seeking to significantly reduce POPs, hazardous chemicals and waste which are: (i) used by the TG sector along its value-chain; (ii) emitted through unsound processing and (iii) environmentally unsound incineration, disposal and recycling, not implementing improved sustainable recycling initiatives along the entire value-chain of the TG sector aligned with Circular Economy principles. This project is assuring TG private sector engagement while setting up sustainable financial models to ensure project ownership, quality, tradability, sustainability, replicability and scaling up.

88. The project by addressing the GEF-7 specific area of prevention of waste/ products containing persistent organic pollutants and hazardous chemicals from entering material recovery supply chains (including textile and garment waste management with the aim of preventing TG waste from entering solid waste) demonstrating alignment with the GEF focal area of Chemicals and Wastes especially Chemicals used/emitted from/in processes and products and Chemicals and Waste at end of life. The project will also introduce and use circular economy concepts along the entire life/value-chain with strong private sector engagement at national to global scales, BAT/ BEP / RECP to minimize and ultimately eliminate releases of POPs and other hazardous chemicals which will be pilot-tested in at least six selected demonstration sites.

e. Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing.

89. The participating countries were selected based on the size of the TG sector, TG exports and environmental challenges in the African continent. North African countries were not selected due to SWITCH MED II (SMII), an existing project targeting the sector in that region funded by the EU. However, the experience and knowledge acquired during the implementation of SMII will be shared with this project.

90. The countries were selected based on established UNIDO's network of contacts, knowledge of the countries, available data and information, engagement of stakeholders and alignment of the project with the national development priorities. The selection of these countries, which are high volume garment exporting countries, will provide very good opportunities for information sharing, knowledge management and replication and upscaling.

91. The project will be implemented as a regional one, which will facilitate regional outreach and dissemination of information and building of synergies with ongoing national and regional initiatives within the African continent.

92. The project will be implemented along the entire TG value chain i.e.: textile industry, garment making and wastes recycling and reuse. This implies that the project is not addressing only the issues of POPs chemical but also wastes and create investment opportunities to promote circular economy.

93. GEF funds will help the participating countries to develop capacity and create an enabling environment to promote circular economy framework that will facilitate implementation of environmentally sound management (ESM) plan, BAT/ BEP/ RECP, scaling up investment, modifying TG production and alternatives, consumer use, and TG waste management, and ultimately reduces u-POPs, greenhouse gas emissions and degraded land reduction/mitigation.

94. The project will also enable the participating countries to comply with their obligations under the Stockholm, Basel, and Rotterdam Conventions, among others. The capacity of national stakeholders will be strengthened to establish TG wastes reuse and recycling approaches and TG wastes prevention and minimization, including a strengthened legal and institutional framework, technology transfer, and implementing demonstration activities for circular economy, BAT/ BEP/ RECP in TG sector.

95. The GEF funding will also be used to support national, regional, and international activities that would not occur without its involvement. For example, coordination and partnerships with private companies/facilities, National Associations, National Development Agencies and major international brands, and other key partners. In additions, experience sharing and knowledge management exchange between TG sector in Africa and Asia will be promoted.

96. The project will achieve its impact through the implementing the project activities along the TG value chain in the participating countries demonstrating economic, environmental and social benefits achievable through better sound design, manufacture and use. The purpose of the GEF funding will be also to attract substantial co-financing provided by other stakeholders within the public and private sectors. Co-financing is essential for achieving the objectives of this project, especially partnering directly with private sector companies and associations that have expressed their interest in the project. The GEF fund will catalyze the results and achievements of private sector investments in environmental performance improvement, and provide assurances to private sector participants that investments in the ESM of TG waste in and reuse/ recycling facilities is conformity with global trends and practices.

97. The global outcomes to be achieved from this project include a strengthened institutional capability to implement a circular economy framework that facilitates sustainable wastes management leading to improved human health and environment, and reduction of uPOPs, GHGs and degraded land reduction/mitigation.

98. This project will implement pilot demonstrations across the three segments of the value chain: textile manufacturing, garment making and wastes recycling and reuse. It will also apply RECP techniques in the textile production for productivity improvement and wastes minimization; and BAT/BEP for management of POPs chemical. Eco design, wastes minimization technique and BAT/BEP will be applied in the garment making process. Opportunities will be identified for establishing of economically viable and financially profitable green investment projects from the recycling and reuse of the textile wastes.

99. As earlier stated this project will be implemented in close linkage with UNEP regional project in Asia, it should be however noted that more resources will be required in Africa due to differences of level of development of the TG sector, the economies of the two regions and the depth of involvement of the private sector. The textile sector in Africa is not as developed as in Asia, hence the project will address the issue of capacity

building, regulatory and institutional framework, appropriate technologies, evaluation and selection, awareness raising and public education will have to be addressed with greater emphasis. There is a lack of capacity in chemical tracking in Africa and the project will identify and apply the appropriate tools SAICM for the tracking and management of the chemicals in the TG sector.

100. During the development of this proposal, two to three textile and garment factories were visited and/or consulted per country on the project, totaling 9 TG facilities to seek project collaboration, partnership and sustainability through co-financing and in-kind commitments. Their contributions include but not limited to: process improvement/upgrade, house keeping, the staff time, the use of their vehicle or office spaces, etc. All companies visited were regularly investing and were planning to continuously invest in BAT/ BEP measures in order to move ensure continued competitiveness of their operations and compliance with the environmental laws and regulations. The companies' cash contribution is only within the planned financial investment or any required actions like purchasing equipment. During the visit, they all agree to collaborate in the project.

101. The relationship between baseline projects by co-financing and GEF supporting activities is detailed in the table below.

Baseline project	Alternative scenario supported by GEF
<p data-bbox="226 191 768 220">Capacity building and regulatory strengthening.</p> <p data-bbox="226 269 888 683">In Lesotho, no legal instruments specifically target POPs, New POPs and hazardous chemicals. In Madagascar, some legal instruments relate to management of POPs, hazardous waste and chemicals but none explicitly target New POPs management. No specific BAT and BEP legal framework and promotion in the industry exists in any of project participating countries. In South Africa, there is an absence of national policy and strategy for managing industrial solid wastes and there is no legislation and a clear application of on related to BAT and BEP principles in the industry, including the textile and garment sector.</p> <p data-bbox="226 732 888 878">No current international or national projects are supporting the drafting regulations for the Sound Management of Chemicals, including management of POPs in any participating countries.</p>	<p data-bbox="913 191 1079 220">Component 1.</p> <p data-bbox="913 269 1577 683">The project will assist on designing and implementing POPs, hazardous chemicals and waste regulations and guidelines in Lesotho while finalising and operationalizing regulations for ESM of POPs and New POPs, develop national guidelines for POPs, hazardous chemicals and TG waste management in Madagascar while training key stakeholders on design, implementation and enforcement aspects in all participating countries. Under the project, a multisectoral Technical Committee for Circular Economy in the TG sector will be legally established and operationalized in each participating country.</p> <p data-bbox="913 732 1577 951">The legal and institutional framework to promote circular economy in the TG sector including technical infrastructure for implementation of BAT/ BEP on POPs, hazardous chemicals and textile waste management as well as RECP options (energy efficiency, renewables) will be promoted and strengthened.</p> <p data-bbox="913 1000 1577 1146">An implementation of a National Centre for segregation and storage of POPs will be assessed in Lesotho and Madagascar in accordance with BAT/ BEP guidelines to meet SC/ BC and other relevant criteria.</p>
<p data-bbox="226 1162 533 1192">BAT/ BEP in the TG sector.</p> <p data-bbox="226 1240 888 1346">No specific promotion of Circular Economy concepts and BAT/ BEP/ RECP exists in Lesotho, Madagascar and South Africa in the TG and any other industrial sector.</p>	<p data-bbox="913 1162 1079 1192">Component 2.</p> <p data-bbox="913 1240 1577 1419">Under the project, promotion of circular economy in the value-chain of the TG sector, demonstration (technical assistance and investments) of BAT/ BEP for ESM of POPs, hazardous chemicals and TG waste as well as RECP options in selected TG facilities and infrastructure and training</p>

<p>BAT/ BEP/ RECP might be partially and indirectly promoted through the legal Environmental Impact Assessment (EIA) process in participating countries to comply with local legislation, but is away from BAT/ BEP/ RECP on POPs, hazardous chemicals and waste and materials management, energy efficiency and renewable energy among other issues, in the case of Lesotho and Madagascar.</p> <p>No BAT/ BEP infrastructure on POPs and hazardous chemicals and waste management exists in the TG sector in the participating countries.</p>	<p>g and awareness of the TG facilities managers, sustainability managers and key workers based on best international practice, will be carried out.</p>
<p>Management of textile and garment (cotton, textile, and garment offcuts) waste.</p> <p>In Madagascar, most of the textile and garment waste is sent to landfills and many times incinerated or burned (total waste estimated at about 8.000 tonnes per year), with no local reuse-recycling infrastructure present. In Lesotho, at least 80% of the textile and garment waste (about 13.440 tonnes per year) is sent to landfills and sometimes incinerated by TG companies and used (burned) by households as fuel, with limited infrastructure available. In South Africa 14.6 percent of pre-consumer textile waste would find itself at the landfill. In Durban, it is estimated per month 410 tons of wastes are landfill or burned. In general, reuse and recycling of textile and garment waste is very low, causing current TG waste practices important health and environmental problems. All reuse and recycling activities are mainly promoted by the private sector, detecting little or no involvement from the public sector to promote circular economy.</p>	<p>Component 3.</p> <p>The project will provide technical assistance, training and investment to develop textile and garment (cotton, textile/garment offcuts) waste ESM plan and infrastructure, using a PPP model while following BAT/ BEP in each participating country. The component target is to achieve the reuse and recycling of at least 8.000 tonnes of cotton, textile and garment waste per year in the 3 participating countries together, stopping its incineration and burning in participating countries, while minimizing as much as possible the TG waste sent to landfills, reducing/ avoiding associated health and environmental problems. The final project aim is to reuse and recycle 100% of TG wastes in the future in all participating countries.</p> <p>The project will also conduct in-depth assessment of two (2) possible TG waste reuse-recycling companies/ facilities for scaling up in South Africa, and a possible TG reuse-recycling companies/ facilities in Lesotho and Madagascar, using BAT BEP including training of key stakeholders.</p>

	Socio economic impacts of the project intervention on informal sectors will be assessed and environmental management plans (EMP) developed, implemented and monitored.
<p>Training and awareness of POPs</p> <p>In Lesotho, there is no ongoing baseline projects/ activities on training and awareness raising on POPs, hazardous chemicals and TG waste except for the National Implementation Plan (NIP) currently being implemented by Lesotho and Madagascar's participation on a regional project from Southern African Development Community (SADC) on PCBs management.</p>	<p>Component 4.</p> <p>The project will provide and disseminate integrated training and awareness activities and materials on Circular Economy concepts, BAT/ BEP on POPs, New POPs, hazardous chemicals and reuse and recycling of TG waste, as well as RECP options, contributing to the Circular Economy on the TG sector of participating countries and its sustainability, seeking national scaling up and regional replication of the project.</p> <p>In addition, the project will provide National and regional platforms/networks for information and knowledge exchange and experience-sharing on circular economy; global knowledge sharing platform with GEF regional textile project in Asia (UNEP); web-based portal for knowledge management on CE, RECP and BAT/BEP for ESM of POPs chemicals and wastes in the textile and garment sector and a gender plan to address and mainstream gender issues in all project outcomes/outputs.</p>

f. Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF).

102. The project falls within the GEF Focal Area Strategies for Chemicals and Waste in the GEF-7 cycle. The issues relating to phasing-out POPs are particularly aligned with GEF C&W program 1 on Industrial Chemicals. An estimate of the global environmental benefit achievable during the life of the project can be carried out on the basis of the prevention and reduction of POPs, uPOPs and hazardous chemicals use and default emission factors using the UNEP Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs under Article 5 of the Stockholm Convention. Assuming that BAT and BEP measures implemented in at least six demonstration facilities during the

current project with the support of GEF, this could bring companies from the current, baseline technology level to a BAT/BEP-based level, by preventing/ reducing POPs and hazardous chemicals use and reducing uPOPs and GHG emissions, the minimum targets and results are being estimated in the following table:

Participating country	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced) (PFOF)	Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ)
Lesotho	2.5	4.164
Madagascar	2.0	2.100
South Africa	1.0	5.236
TOTAL	5.5	11.500

103. It is estimated that project will reduce, dispose/destroy, phase out, eliminate and avoid 5.5 tons of PFOS in the environment and in processes, materials and products. Furthermore, the project will result in the reduction of 11.5 grams of toxic equivalent gTEQ of emissions of POPs to air from point and non-point sources. These targets are estimated based on the little data available and will be elaborated during the PPG phase. This benefit in terms of metric tons of POPs/ hazardous chemicals prevented/reduced, grams of toxic equivalent of uPOPs emissions avoided and metric tons of TG waste reuse/recycled per year, can reasonably be extended for a period of 10-15 years corresponding to the duration of the BAT/ BEP/ RECP investments in pilot plants. Moreover, the benefit gained during the project life will be leveraged in the future by the strengthening of the national regulatory mechanisms and by the extension of the techniques and measures implemented during the project to the entire TG sector in the countries.

104. Direct beneficiaries of this project will be:

- Private sector companies employee (with an estimated number of 4 companies per each country for the pilot demonstration) involved in the production, who will be trained on BAT/BEP/RECP. This training will also be open for the wider TG sector companies.
- Policy makers will be trained on legal and institutional framework for Environmentally Sound Management (ESM) of POPs and Circular Economy concept.
- Regulatory, compliance monitoring bodies and custom officers will be trained on Hazardous chemicals tracking, monitoring and enforcement.

- Training banking and financial institutions on green financing appraising.
- Prospective entrepreneurs who are interested in recycling business will be trained.
- Training NGOs and public awareness raising on hazardous chemical including POPs, recycling and investment opportunities

105. As co-benefits, the project will reduce the GHGs emissions from the open burning operations and land contamination and surface /underground water pollution. The project also will reduce/prevent land degradation through improving waste management practices and prevention of open burning taking into consideration the limited available land and vulnerability of these countries to climate change.

g. Innovation, sustainability and potential for scaling up.

Innovation

106. The introduction of circular economy concepts as well as BAT/ BEP/ RECP in the TG sector is a relatively new and innovative strategy in all participating countries as well as the overall GEF POPs program. The innovative approach of this project proposal lies mainly in the promotion of Circular economy in the TG sector through BAT/ BEP actions for the prevention and reduction of POPs/ hazardous chemicals use and waste and TG waste with the simultaneous implementation of RECP measures on possible energy efficiency, materials efficiency and renewable energy measures. This will enhance circular economy of the TG sector by reducing the use of natural resources, preventing/ reducing the use of POPs and hazardous chemicals, reducing health and environmental impacts while improving the efficiency and augmenting the profitability of TG facilities.

Sustainability

107. The project has a high probability of being sustainable as it will partner directly with private sector companies and associations that has expressed their interest in the project and improving and investing in their environmental performance. The project objectives are aligned with national policies of participating countries. The enhancement and improvement of national regulatory mechanisms to promote circular economy in the TG sector will provide the framework for ensuring the sustainability of the project in the future years after project completion. The TG industry (both facilities and National Associations, National Development Agencies and major international brands) involvement in the PIF preparation as well as in all project stages will ensure ownership, commitment, cooperation and partnership from TG companies top management to move forward in the circular economy agenda. Minimizing chemicals, water, energy, materials consumption and waste generation will bring relevant economic benefits which will balance required BAT/ BEP/ RECP investments improving the TG facilities efficiency while reducing/ avoiding economic, social and environmental risks and impacts.

108. Project activities will also provide the basis for the development of domestic research programs and services in the circular economy, BAT/ BEP/ RECP fields in the TG sector or others. This would generate a new breed of professionals with specialized expertise in this field and the development of new job opportunities, thus contributing to the economic growth while supporting moving forward in the circular economy agenda of the TG sector, other industrial sectors and participating countries as a whole.

Scaling up

109. The basis for scaling up and replication of circular economy in the TG sector is embedded in the training, awareness and capacity building activities with the dissemination of circular economy concepts, BAT/ BEP/ RECP relevant information, experience and lessons learned. The holistic approach to prevent/reduce POPs/ hazardous chemicals use and its substitution by non-chemical alternatives if possible, the application of the RECP methodology including energy efficiency and renewable energy technologies, coupled with an effective promotion and enforcement of BAT/ BEP, could be used as a reference for the TG sector of other countries, the African region and other major TG regions facing similar challenges.

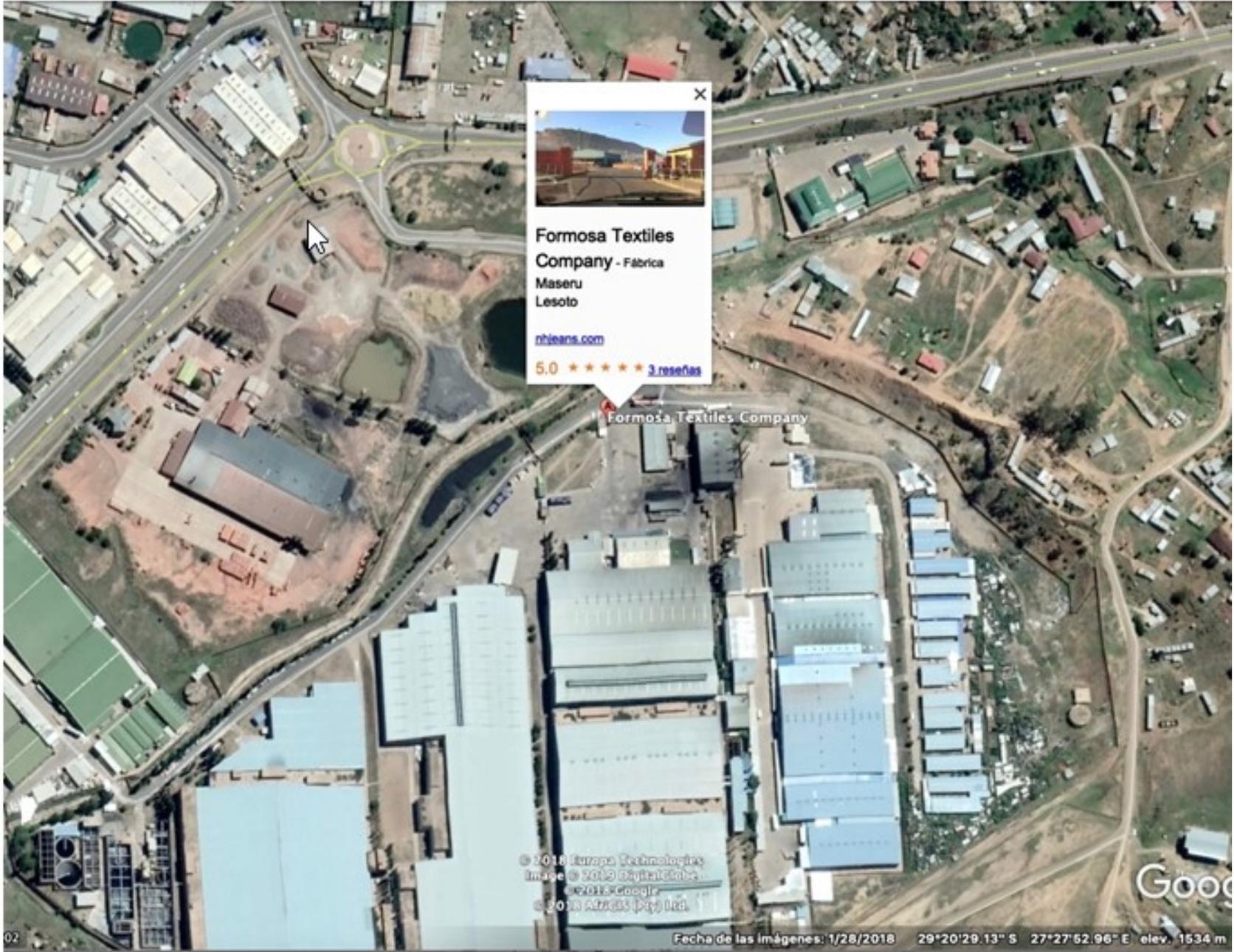
110. Through facilitating access to low cost investment financing sources like Levi's work on PaCT, suppliers can get access to low-cost financing to invest in up scaling the project.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

Lesotho

FORMOSA Textiles Company (S29°20'29" E27°27'52") (Lesotho)



✕



Formosa Textiles Company - Fábrica
Maseru
Lesoto

nhjeans.com

5.0 ★★★★★ 3 reseñas

Formosa Textiles Company

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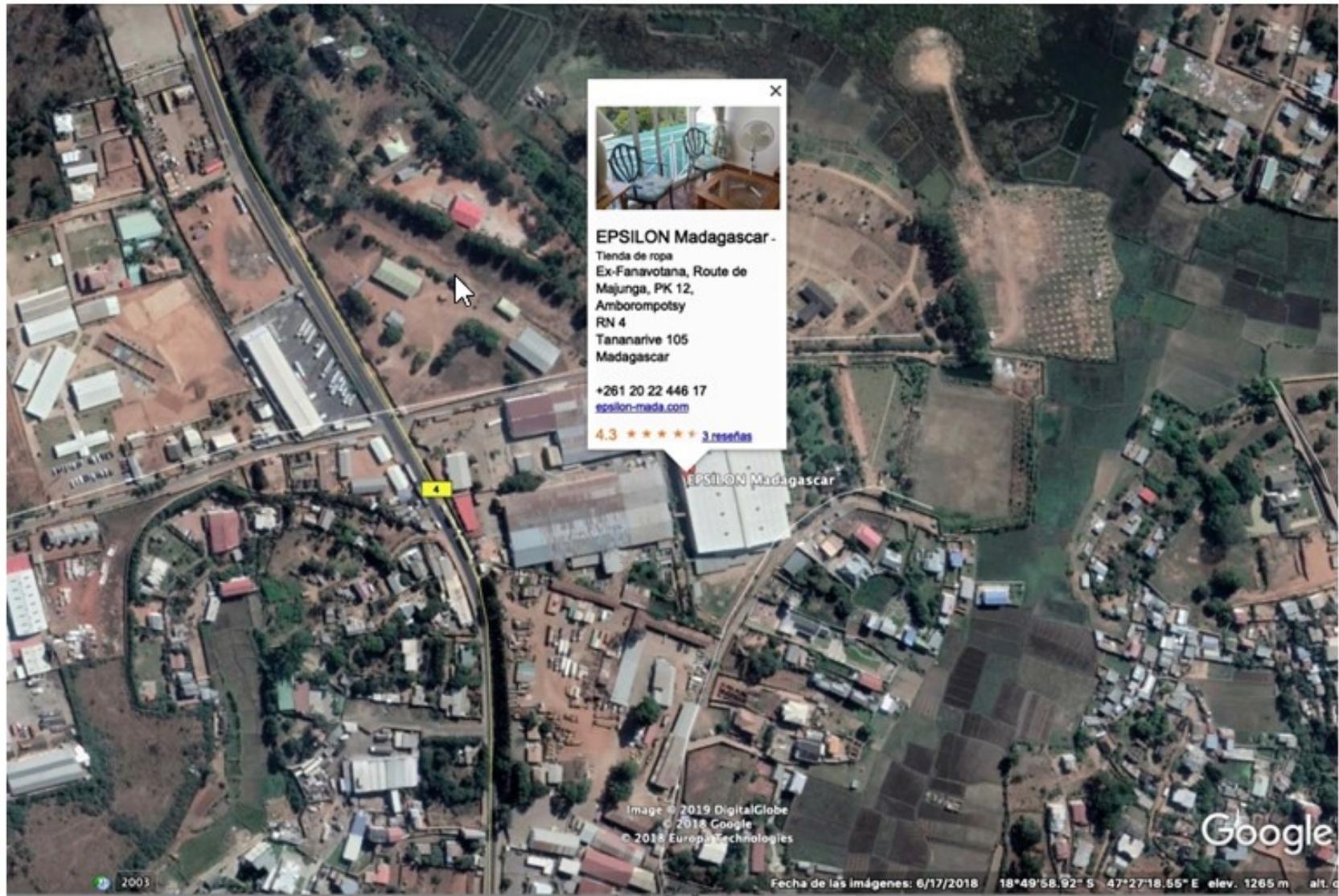
Fecha de las imágenes: 1/28/2018 29°20'29.13" S 27°27'52.96" E elev. 1534 m

C&Y Garments Company (PTY) Ltd. (S29°20'30" E27°27'34") (Lesotho)



Madagascar

EPSILON Madagascar (S18°49'58" E47°27'18")



Aquarelle Madagascar (S18°57'06" E47°30'59")



South Africa

Levi Strauss – Cape Town 2 Gunners Cir, Epping, Cape Town, 7460



TCI Apparel – Cape Town

T C I APPAREL



T C I APPAREL
4.0 ★★★★★ (26)

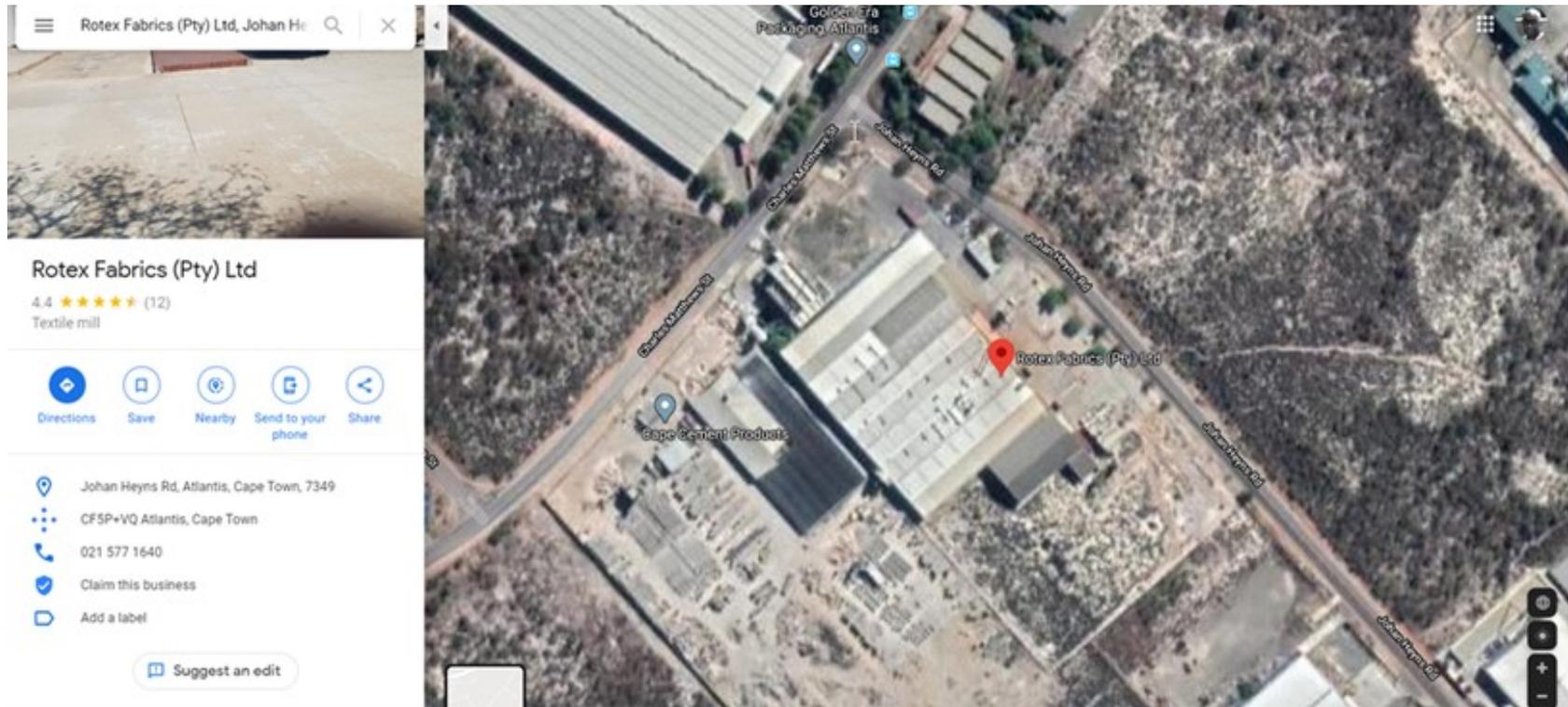
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Rotex Fabrics



K-way Manufacturers – Cape Town

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K-Way Manufacturers (Pty) Ltd
4.4 ★★★★★ (8)
Manufacturer

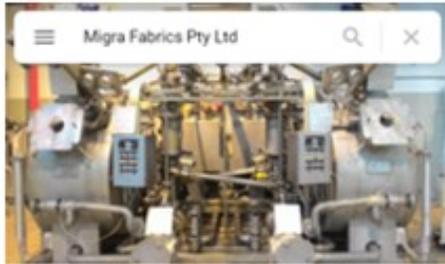
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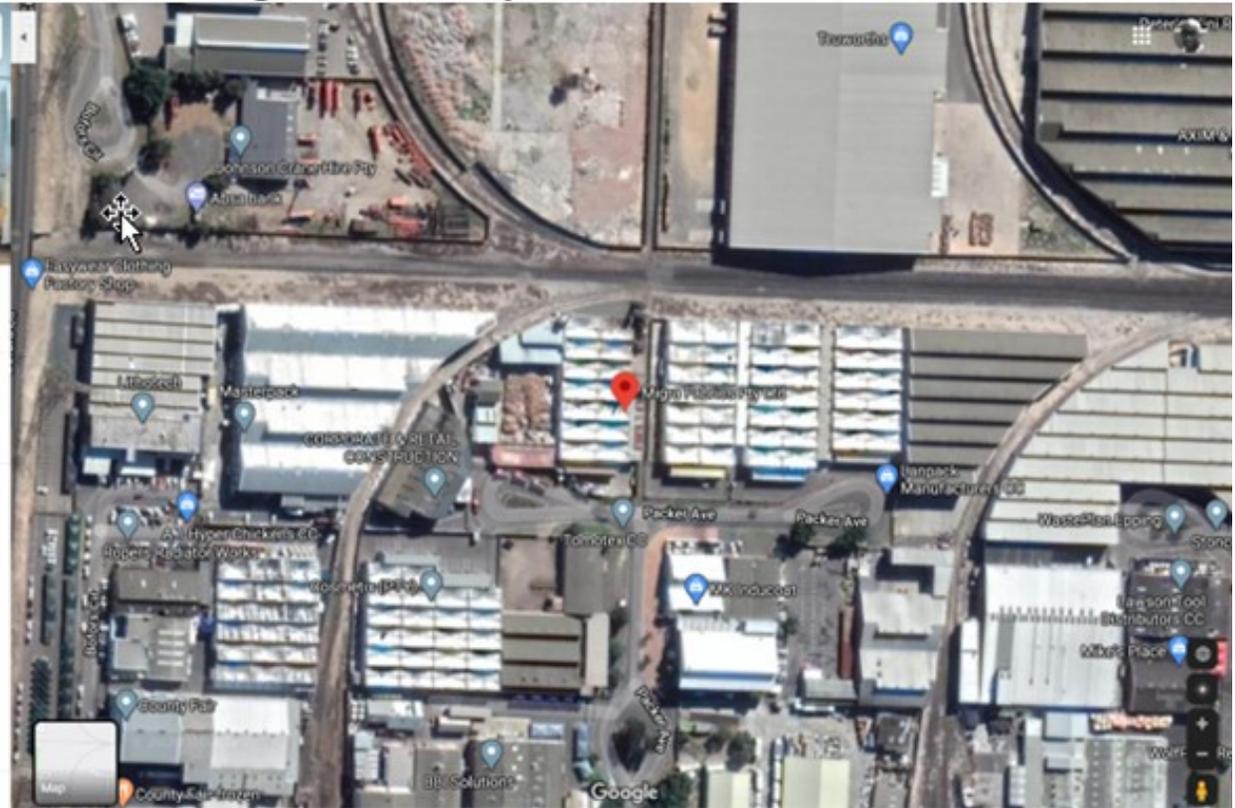
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Photos



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

1. During the consultation meetings held with the countries of Lesotho, Madagascar and South Africa to develop this proposal, the following stakeholders were met and consulted:

- Ministry of Tourism, Environment and Culture of Lesotho, Ministry of Environment and Sustainable Development of Madagascar and Department of Trade and Industry of South Africa. The ministries were involved in identifying the private sector companies and the planning of the visits in each country as the following:

Lesotho

- Lesotho National Development Corporation
- Ministry of Local Government & Chieftainship
- FORMOSA Fabric mill
- LESOTHO TEXTILE EXPORTERS ASSOCIATION (LTEA)
- Rebirth Recycling Company

Madagascar

- Accord knits
- Future Mada
- Aquarelle group
- General Garment Sarl
- Epsilon
- GEFP
- EDBM
- CCIA
- Cepovett
- Petit bateau

South Africa:

- National Cleaner Production Centre of South Africa
- Migra Fabrics

- K-Way Manufacturers
- Trade Call Investments
- Rotex Fabrics (PTY) Limited
- Mvithi7 Waste Recycling
- Contantia Recycling and Waste CC
- Eric Slabbert Agencies (Pty) Ltd
- Matsapha, Eswatini
- Economic Development, Tourism and Environmental Affairs
- Provincial Government of Kwazulu Natal
- Connacher Natal (Pty) Ltd
- Joyce Fashions
- South African Textile Federation

2. UNIDO held discussion meetings and got the buy-in of international brands like Levi (in South Africa and Lesotho); ASOS (Madagascar); Puma (Madagascar and South Africa) and Woolworths (South Africa) and in talk with others. Future collaboration and cooperation was agreed and details of their CSR programmes and case studies were shared with UNIDO. Ellen MacArthur Foundation, a Foundation that has been promoting the concept of circular economy and launched reports/studies with one on the TG sector, was consulted and agreed to partner with UNIDO on the project. . This project and UNEP Asia textile project will be implemented in close linkages with joint activities in knowledge management. ZDHC will be cooperating with UNEP in the implementation of the Asia project and also with UNIDO under this project. This will further strengthened private sector participation especially e the international brands that UNIDO consulted and will be partnering with as almost all of them have signed on to the ZDHC programme. The involvement of the ZDHC in the project will promote synergy and complementarity between the two projects and in cooperation with the international fashion brands.

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

1. All stakeholders will be consulted for collaboration, strategy and partnership during the project preparation grant (PPG) phase to verify baseline information, repopulate further data and consulting for project implementation, including potential roles and responsibilities during project implementation. Private sector collaboration and partnership is key to attaining success on BAT/ BEP/ RECP implementation on prevention/ reduction of POPs, hazardous chemicals use and ESM, as well as TG waste reuse and recycling.

2. They will also be consulted widely to identify all national stakeholders and discuss their needs including their expected roles in the project. Stakeholders will include broadly defined major stakeholder groups such as: governmental institutions (especially ministries dealing with environmental, health, industrial, research, and scientific issues); TG manufacturers, waste collectors, and recyclers from the formal and informal sector; communities or cooperatives; research and academic institutes; national cleaner production centers; and NGOs, traditional leaders and local communities, and faith-based organizations, among others.

3. Different ministries will be involved in the execution of the proposed project such as the Ministries of Industry (TG sector); Ministries of Energy (Energy Efficiency and Renewable energy), Ministries of Finance and National Revenue Authorities (tax relief, tax incentives/subsidies, project co-financing, building capacity), Customs Departments (control of import/ export of POPs, hazardous chemicals, hazardous waste, waste), Economic Development Agencies (Lesotho National Development Corporation and Economic Development Board of Madagascar) (support on project development, co-financing (in-kind and in-cash) of project activities); Ministries of Education (on curricula, training and POPs awareness module), Ministry of Local Government (waste management and recycling, landfills design and management, local capacity development).

4. Table 2 below provides a preliminary list of the main stakeholders, their interest in the TG sector, and their potential roles and responsibilities. During the PPG phase, additional stakeholders will be identified and invited to participate. Bilateral meetings will be held with all key stakeholders, and national stakeholder consultation and validation meetings will also be organised. The consultations will include soliciting stakeholders' views on the appropriateness of the project, how it affects them, and how they can contribute to project implementation by defining specific roles that they can play. Final selection of participating textile and garment facilities suitable for technical assistance and investment on BAT/ BEP/ RECP under this project will be done during PPG, including commitment of in-kind and cash co-financing and investment.

Table 2. Stakeholders and potential roles

NAME	TYPE	SPECIALIZATION	ROLE IN THE PROJECT
UNIDO	International Organisation	Specializes in international development related work	Implementing Agency
EXECUTING PARTNER			
Regional Executing Entity (REE): Africa Institute (Will be confirmed during PPG)	Technical agency/organization	Management of Technical cooperation projects	<ul style="list-style-type: none"> · REE will coordinate with NEEs in the three countries a consistent approach · Compile single project reports and plans (e.g. annual reports, workplans, budgets, etc) at regional levels. · REE will serve as Secretariat to the Regional Steering Committee.
National Executing Entities (NEEs): Ministry of Tourism, Environment and Culture of Lesotho, Ministry of Environment and Sustainable Development of Madagascar and Department of Trade and Industry of South Africa (Will be confirmed during PPG).	Government	Responsible for policy formulation and economic, scientific and technological interventions; Setting standards and regulations; coordinates all matters related to environmental management	<ul style="list-style-type: none"> · Rotating chairing the PSC · NEE will host the PMU and execute project activities at the national level · Coordinate project activities · Supports national training and capacity conducted under the project

			<ul style="list-style-type: none"> · Leads the formulation of the circular economy frameworks for the TG sector and supports its implementation. · Supports the formulation for the ISW M and ESM for textile and garment wastes/discards. · Facilitates the identification and implementation of appropriate incentives to promote CE and BAT/ BEP/RECP in the TG sector. · Supports and establishes a framework for BAT/ BEP/RECP transfer. · Stockholm Focal points in participating countries are responsible for POPs and national reporting between national stakeholders and the Secretariat of the Stockholm Convention and UNIDO.
Ministry of Finance	Government		<ul style="list-style-type: none"> · Part of the PSC

		Resource mobilisation for the implementation of the strategy; Distribution of financial resources to national stakeholders; collection of levies on imported plastic products at the point of entry.	<ul style="list-style-type: none"> · Propose and implement the economic incentives, tax rebates and others. · Provide financial mechanism(s) to support the activities of the project
Private sector including TG facilities/companies/supplier, Formosa Textile Company, C&Y Garments (Lesotho), Epsilon Textiles company, Aquarelle Madagascar (Madagascar) and Trade Call Investments Apparel (TCI) and K-Way Manufacturers, Rotex Fabrics PTY Limited, Migra Fabrics Pty (South Africa)).	Private sector	Textile and Garment manufacturing	<ul style="list-style-type: none"> · Implement BAT/ BEP/ RECP methodology and CE concept for the prevention and reduction of POPs and other hazardous chemicals and materials use in their textile and garment production facilities. · Introduction of CE concept, BAT and BEP in existing and future reuse-recycling facilities · Invest (in-kind or cash) in improving their manufacturing process.
Private sector including, chemical suppliers, waste/recycling companies and other supply c	Private sector	Chemical supplier, waste recycling and waste transportation	<ul style="list-style-type: none"> · Proactive members of the business community with experience of financing, business planning detail

<p>main actors via the representation in industry associations and initiatives.</p> <p>Rebirth Recycling and Eco solutions Recycling (Lesotho) and Private textile and garment waste collectors, Rewoven Co, Contantia Recycling and Waste CC, Connacher, Feltex, Frame (South Africa)).</p>			<p>design, development and operation of textiles sector CiP information systems.</p> <ul style="list-style-type: none"> · Identification of POPs and other priority CoCs with initial experience of alternative assessment and transition to alternatives activities.
Regional convention centres	Technical centers	Training, capacity building and technical support of the implementation of multilateral agreement	<ul style="list-style-type: none"> · Identification and assessment of alternatives to POPs and other priority CoCs in the project countries. They have a mandate to build national capacity for data collection and reporting to the Stockholm Convention.
Resource Efficient and Cleaner Production Network (RECP/Net) members	Technical and capacity building centers	Promote RECP in the industry, provide technical support and capacity building	<ul style="list-style-type: none"> · Act as business intermediaries, and support implementation of eco-innovation in countries. RECP/Net members in the project countries and wider region · Industry assessment · Policy advice
International brands:	Retailers and fashion		

<p>ASOS, Puma, Levi's, Adidas, C epovett company, Petit Batea u, J-Crew company, Woolwort hs, Cotton On , PEP and Edcon group</p>	<p>ion companies</p>	<p>Making clothes and apparel and sell the m</p>	<ul style="list-style-type: none"> · As global partnersh ip, collaborates with t he relevant governme nts and companies o n implementing BAT/ BEP/RECP. · Fast track the adopt ion of circular econo my practices national ly and regionally · Facilitate access to their sustainability an d low cost investmen t financing sources th rough their programs and network
<p>UNEP</p>	<p>International Orga nisation</p>	<p>Specializes in intern ational development related work</p>	<ul style="list-style-type: none"> · Global collaboration between UNIDO proje ct in Africa and the U NEP project in Asia
<p>Non-profit and non-governmen t organizations active on che micals, textiles issues and in t he region: NGO Geography & Environmen tal Movement (GEM) and NGO Participatory Ecological Land Use Management (PELUM), Le sotho Textile Exporters Associ ation (LTEA), Lesotho National Development Corporation (LN DC) (Lesotho), Economic Deve lopment Board of Madagascar (EDBM), Groupement des Entr</p>	<p>Civil society</p>	<p>Knowledge of needs and interests of loca l communities</p>	<ul style="list-style-type: none"> · Manage and coord inate multi-sector pro jects in the textiles an d other sectors. · Assist in communi cation/ outreach acti vities at regional and international levels, s upport awareness rai sing at national level.

epprises Franches et Partenaire
s (GEFP), NGO Voarisoa Obser
vatoire (Madagascar), Textile f
ederation of South Africa , Sou
th African Cotton Textile Manu
facturer's Association, South
African Clothing and Textile W
orkers Union and National Cle
aner Production Centre (NCP
C) (South Africa)

· Participates in the
design and operation
alizations of the TG c
ollection/buyback ce
nters

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

1. Gender and Development (GAD) considerations will be made as an integral part of the project strategy in consideration of the Gender policies of the GEF, UNIDO as well as those of the Government of Lesotho, Madagascar and South Africa. Gender is a critical component in the area of textile and garment sector as well as sound management of POPs, chemicals, waste and hazardous waste because the percentage of women working in the textile and garment sector in general terms is higher than men, so more women might be exposed to toxic chemicals. According to a study on the textile industry and leather apparel in Madagascar developed by the Industrial Global Union and the Friedrich Eber Stiftung Foundation (Germany) on December 2015, women represent more than half of the employed. According to the same study, there is a general disparity in the remuneration of men and women, which confirms the persistence of discrimination in this area. In 48% of free zone companies included in the study, the maximum salary paid to men is higher than the remuneration of women.
2. In addition, women and children predominate in the lowest levels of waste gathering, that is, those that depend on the least valuable wastes whose retrieval demands the greatest amount of simple labor for the lowest cash returns. Thus, on dumpsites that received largely organic and inert rubbish including textiles offcuts but sometimes also mixed with hazardous waste, one finds women and children, except in rare cases men join them. Waste pickers and informal waste recycling communities working on dumpsites/landfills are directly exposed to various infectious diseases and toxic substances during collection and sorting of wastes, open burning and open dumping of wastes that may cause illnesses and accidents. The health of these workers must be considered in the environmentally sound management of POPs, hazardous chemicals and waste. In general terms, this is happening in the participating countries of Lesotho and Madagascar.
3. A gender plan to address and mainstream gender issues in all project outcomes/outputs will be designed in the PPG phase and implemented in the project. The communication strategy will include activities for disseminating information on environmental and socio-economic risks associated with POPs, hazardous chemicals and waste and related issues to the general public especially to women and children groups, textile-garment community, relevant community groups, etc. The project will also take a concerted effort to target women and children in the training and information dissemination as well as involving them in the environmentally sound management of POPs, hazardous chemicals and waste.
4. In addition, mandatory UNIDO gender markers will be applied, and that the project shall be rated for gender relevance. Gender marking entails inclusion in project reporting of the following data by year 2 and on completion, including: (i) Total number of full-time project staff that are men/women; (ii) Number of jobs created by the project that are held by men/women; (iii) Number of gender sensitive publications produced.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

1. The private sector engagement is particularly prominent in this project. At the national level there is often a lack of strategic coordination between the various government officials and private sector actors involved in respectively regulating and undertaking TG manufacturing, collection, recycling, and trade. There is also an absence of dedicated capacity within regulatory agencies to address TG wastes, management of their disposal and related issues. However, the government has a fundamental responsibility to ensure the provision of adequate waste management services by creating an enabling environment for the private sector (and other stakeholders), invest in waste management activities, promote TG recycling and material substitution, and create jobs. Thus, the regulatory and policy work will be undertaken by the public sector in close consultation with the private sector. However the actual work will be done by private sector companies.
2. The private sector has technical knowledge, skills, resources, and capacity to scale-up investment and provide innovative solutions along the entire TG life/value-chain. Therefore, this project will promote private sector engagement and the forming of partnerships between government and the private sector at the national and international levels to bring about the desired solutions.
3. During the development of this proposal, several textile and garment factories were visited and consulted in each country in the project, to seek project collaboration, partnership and sustainability through co-financing and in-kind commitments. All companies visited were regularly investing and were planning to continuously invest on BAT/ BEP measures and they all agree to collaborate in the project. In addition, National Textile Associations and National Development Agencies in each participating country were also visited for project partnership, agreeing on collaboration and partnership in the project. Given the local knowledge and representativeness of the TG sector, National Textile and Garment Private Sector Associations such as the Textile and Garment Sector Association (Lesotho), the Groupement des Entreprises Franches et Partenaires (GEFP) (Madagascar) and the Textile federation of South Africa , South African Cotton Textile Manufacturer's Association, South African Clothing and Textile Workers Union and National Cleaner Production Centre (NCPC) (South Africa) will be involved on specific project activities to maximize the applicability to the local context and project sustainability and scaling up. The TG private sector will be clearly attracted and incentivized by these National Associations and the project by showing the potential increase of the TG plant efficiency and profitability through BAT/ BEP/ RECP actions. Also, this project will establish partnership and cooperation with global fashion brands for the promotion of recycling and reuse of TG wastes. The access to these brands network, sustainability and financing programs, will facilitate knowledge and experience sharing and access to low cost investment sources. Increasing the participation and contributions from the private sector will enable the GEF-funded interventions to be sustained after the project's completion. The project is expected to become a true catalyst for private sector engagement and related sustainable behavioural change.
4. The private sector which only engages in profit making and economically viable investment, is vital to the sustainability of this project, guaranteeing the economic sustainability of the project and any venture. With the involvement and participation of the private sector this project will benefit from the entrepreneurial drive, business case and appetite for growth and expansion. The project will undertake techno economic

feasibility study and develop viable business model for the promotion of CE in the TG sector using the knowledge, business acumen and expertise of the private sector. This will provide a catalogue of business plans for establishment of viable green investment, leading to transformational change of the TG sector. The private sector will provide investment funds that will also contribute to the transforming of the business ideas articulated under this project into real investment, advancing the economic growth and development of the participating countries and the region.

5. This project will ensure national and regional knowledge management sharing to ensure replication of the case studies and a long-term promotion of circular economy efficiency, learning innovation among the countries and partners. On the global level, the cooperation with UNEP similar project in Asia, will ensure global corporations which play an important role to ensure the exchange of knowledge, lesson learnt and case studies.

6. The project was conceived based on the development trends in the textile and garment industry to address the issues of environmental protection and sustainability in the sector. Notably the European Union, the European Textile Association and the international fashion brands launched a number of initiatives individually and within the sector to address resource availability and productivity, environmental pollution prevention and sustainability; and climate change. It is the shared vision of a greener and sustainable textile and garment value chain that prompted UNIDO to engage and partner with the international fashion brands and textile and garment production industries to implement this project.

7. The GEF resources will be used to leverage on ongoing CSR programmes and activities of the private sector industries and global brands such as the Sustainable Apparel Coalition (SAC), Better Cotton Initiative (BCI) and Apparel and Footwear International Restricted Substances List Management (AFIRM) programme, zero discharge of hazardous wastes (ZDHC), etc. With the active involvement and participation of the sector, the RECP, BAT/BEP and CSR activities will be implemented along the entire value chain and will provide the development of standards, norms, structures and systems for the sustainable management of the entire global TG value chain. ZDHC will be partnering with UNIDO in implementing this project and with UNEP in implementing the Asia textile project in Bangladesh, Indonesia, Pakistan and Vietnam to address the sustainable management of hazardous chemicals and wastes. The project will therefore try to identify and establish a forum that will be able to harmonize some or all of this CSR initiatives and bring them under a global umbrella for the desired transformational change. The UN Fashion Alliance which has already been established but yet to be fully active could be used as one of the pivots to develop these initiatives and programmes under a global framework.

8. The project has also got the support and buy-in of the Ellen MacArthur Foundation which has carried out some studies and published “ A new textile industry: Redesigning Fashion’s future” and “ Completing the Picture: How the Circular Economy tackles Climate Change” . The publications contain a lot of information on the textile and garment sector and the opportunities the circular economy will provide in reducing environmental footprints, ensure sustainability and address the climate challenge. The cooperation and partnership with the Ellen MacArthur Foundation will provide access to a large repository of information on the sector and also opportunities to share ideas and experience on the strategic

transformation of the sector. The Foundation is also working with the PVH and Nike brands which will also facilitate cooperation and partnership and broadened the scope and coverage of cooperation. This will also catalyze global adoption of the recommendations, result and outcomes of the project.

5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risks	Rating	Proposed mitigation
<p>Inadequate political support, regulatory framework partly formulated and not fully implemented and enforced.</p>	<p>Low</p>	<p>Policy/ decision makers will be involved from the inception stage of the project, especially on awareness activities on issues related circular economy, POPs, hazardous chemicals, hazardous waste, wastewater, waste (including textile and garment offcuts), air emissions as well as its environmental and public health implications.</p>
<p>Difficulties in enhancing the regulatory system within the project timeframe</p>	<p>Low</p>	<p>The Government of the participating countries, by developing/ ratifying its NIP and by formally applying for this project has already established strong pillars towards the sound management of chemicals and waste. In this project, the relevant Minister and parliamentarians from the environmental select committee will be engaged as early as possible. Specific awareness raising events will be organized and targeted at them. The project will include the review of the legal framework to enable the inclusion of specific provisions regarding TG wastes and CE into the existing legislation, regulations, etc. This is usually more efficient and results in a faster endorsement process compared to the drafting and adoption of new regulations. Having the Ministry of Justice lead the regulatory review has proven to be a best practice in other countries where UNIDO is implementing GEF projects, as challenges are identified and addressed early on, rather than encountered during the approval endorsement phase.</p>
	<p>Medium - Low</p>	

<p>Project resources are not sufficient to ensure the necessary interventions to achieve the planned CE and waste management targets.</p>		<p>Full ownership of the project will be ensured through regular meetings and discussions with the TG private sector, local TG recycling companies and government authorities from the project inception phase to implement BAT/ BEP/ RECP in the TG sector as well as on the reuse-recycling of TG waste, using a Public Private Partnership (PPP) model, in this last case. The project will allocate enough grants and secure co-financing resources to implement sustainable BAT/BEP/RECP to address the issue of hazardous chemical and TG wastes. Furthermore, the private sector pledged or is expected to pledge and fulfil its commitment to scaling-up local investment in TG wastes management.</p>
<p>Lack of investment on BAT/ BEP/ RECP and know-how for textile waste reusing and recycling and appropriate project partner for recycling.</p>	<p>Medium - Low</p>	<p>BAT/ BEP/ RECP will be developed and implemented supporting national financial schemes and mobilizing private sector engagement and partnership ensuring cost-effectiveness and sustainability of technology transfer, improved plant efficiency and company profitability after the project life.</p>
<p>Lack of key technical capacity from public servants, technicians from the private sector, non-governmental agencies and academia on circular economy, POPs, hazardous chemicals, hazardous waste, TG waste and wastewater ESM as well as energy efficiency and renewable.</p>	<p>Medium - Low</p>	<p>Promoting and monitoring mechanisms will be established to ensure necessary training, capacities and coordinated efforts in implementation and enforcement of regulations.</p>
<p>Lack of coordination and clear roles and responsibilities of key ministries in waste management.</p>	<p>Low</p>	

		The project intends to address this risk by establishing a strong supervisory mechanism supported by TORs. The project steering committee will be drawn from a wide variety of national stakeholders, fully engaged.
Lack of cooperation and co-financing from the government due to more urgent national needs such as poverty alleviation in compare to the circular economy in the textile garment sector, especially in Lesotho and Madagascar.	Low	Policy/ decision makers and the formal and informal waste management sector, will be involved from the project inception stage, especially on awareness activities related circular economy and its direct connection to sustainable economic development and local companies and jobs creation on sectors such as waste management-recycling, BAT, BEP, wastewater management, energy management, renewable energy, etc.
Lack of cooperation from the informal sector to release textile and garment waste as well other waste potentially containing POPs.	Low	Potential options and financial mechanism designed to incentivize the formal and informal sector. Economic incentive schemes will be explored and implemented to transform the informal sector into formal companies and jobs making the economy more circular and socially and environmentally sustainable.
Target groups not reached in a timely manner and further replication impeded.	Low	Proper awareness and trainings, communication actions and educational materials for information dissemination as well as the incorporation of circular economy, BAT BEP RECP, POPs, hazardous chemicals and waste for all key stakeholders will be developed and implemented.
Risk of climate change on the project (e.g. floods, and droughts).	Low	The project will take into consideration the vulnerability of these countries to climate change especially the island, Madagascar. The proje

		ct will raise awareness with regards to climate change and the project reduction of the GHGs emissions from the open burning operations, land contamination and surface /underground water pollution.
Low private sector involvement in the project.	Low	Extensive consultation and engagement have already been done, which will further be deepened during the PPG stage. Also, the TG industry was selected based on those who are supplier to the international fashion brands and are committed to adoption of international best practices

As per UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), the project has been categorized as "B". Category B projects are likely to have less adverse impacts on human populations or environmentally important areas than those of Category A projects. As a result, an Environmental and Social Management Plan (ESMP) will be developed during the PPG phase.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

1. During the stakeholders consultation and engagement process which included governments, private sector industries, business associations; non-governmental organizations (NGOs); a number of potential regional institutions were identified for consideration as regional executing entity.
2. The regional executing entity (REE) for this project will manage the day-to-day execution of the project including the coordination of the activities at national level, with the private sector and report to the implementing agency. The regional executing entity (REE) will provide execution, management and coordination services at the regional level in close consultation and cooperation with the national partners. The regional executing entity will prepare consolidated project reports and plans; execute regional activities such as regional assessment studies, international experts' meetings, training and workshops, arrange study tours and organize industrial visit training and coordinate knowledge management activities. The regional executing entity will arrange regional events such as dissemination of knowledge management results and project steering committee meetings. The regional executing entity will also provide relevant procurement services and also coordinate cooperation/collaboration with international global brands. REE will serve as the secretariat of the regional Project Steering Committee and host its meetings. The regional executing entities will work with the national coordinating agencies and coordinate the activities of the national executing entities, which will be identified and engaged in the three participating countries.
3. The project execution at the national level will be managed and coordinated by three agencies of the Government of the participating countries; namely, the Ministry of Tourism, Environment and Culture of Lesotho, Ministry of Environment and Sustainable Development of Madagascar; and Department of Trade and Industry of South Africa. The agencies will serve as the national executing entities and coordinate the preparation of country reports for consolidation by the regional executing entity. The coordinating agencies will provide representatives to the Regional Steering Committee and participate in the deliberations and meetings of the Committee.
4. The national executing entity (NEE), which will be engaged by the UNIDO in each of the three participating countries. The NEE will execute policy and institutional framework review; capacity assessment, provide some procurement services; organize awareness raising and public education; national workshops and training programmes, national stakeholders' mobilization and engagement; coordination of national pilot demonstration; progress monitoring and reporting. The NEE will also prepare national progress reports; provide inputs into regional reports; and arrange national Project Implementation Committee (PIC) meetings. The NEE will establish the National Project Management Unit (PMU); provide necessary administrative and secretarial support to the PIC and host its meetings. The NEE will identify competent national experts, agencies, institutions, business associations, and NGOs/CSOs that will execute country specific activities and monitor progress of implementation.
5. The Africa Institute for the Environmentally Sound Management of Hazardous and other Wastes; based in Pretoria, South Africa has been identified as a potential entity with the requisite technical competence and project management experience for consideration as the regional executing entity for the project. The Africa Institute for the Environmentally Sound Management of Hazardous and Other Wastes commonly known as the Africa Institute, established as an intergovernmental Organization hosts both the **Basel Convention Regional Centre (BCRC)** and the **Stockholm Convention Regional Centre (SCRC)** for English speaking African countries. It began operating in October

2009. As an Intergovernmental Organization, its supreme governing body known as Council is composed of the representatives of its member countries. There are altogether 23 countries that comprise the English-speaking region in Africa. These include Angola and Mozambique that are commonly known as Portuguese speaking African countries. The Africa Institute (AI) has been an executing agency for projects being implemented by UNEP, UNIDO and Development Bank of Southern Africa. Currently the Institute is executing a UNIDO project on the Promotion of BAT and BEP to reduce uPOPs releases from waste open burning in the participating African countries of SADC sub-region. It is intended at this stage that the Africa Institute will be considered for the role of the regional executing entity however final decision will be taken after the outcomes of stakeholders' consultation and engagement, and institutional capacity assessment that will be undertaken during the PPG phase.

6. At the national level it is intended that the national coordinating agencies will manage the execution of project activities. However as applied to the REE, the final decision will be taken after the institutional assessment that will be undertaken the PPG phase. UNIDO will make budgetary provision from the PPG for the institutional capacity assessment and selection exercise for the roles of regional executing entity and national executing entity. The consultation process and capacity assessment exercise during the PPG phase will also provide the opportunity to define and delineate in details, the roles, responsibilities and duties of the regional REE, the national partners and other stakeholders. Due consideration will be given to availability of requisite capacities, comparative advantage, synergy and the need to consolidate existing structures and networks; and establishment of linkages and complementarities with ongoing regional and national projects and initiatives.

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Funding Partner The Global Environment Facility (GEF)

Implementing Agency UNIDO

Project Execution



- 7. The project will closely build on findings of the NIP update project for provision of recent inventory data on releases of POPs and New POPs in the case of Lesotho and Madagascar. UNIDO has a strong international network in the field of BAT/ BEP/ RECP and POPs and hazardous chemicals management.
- 8. Coordination with other initiatives:

· The project will be jointly delivered with the UNEP project on textiles sector in Asia, “Reducing uses and releases of chemical of concern, including POPs, in the textiles sector”. Both projects address the same basic problem and include technical components on managing and replacing toxic chemicals in production processes. Both UNEP and UNIDO projects will invest in technical demonstration projects in around 10-13 facilities, to directly achieve GEB. Both projects will intervene at a policy level to promote circular economy approaches throughout the value chain, including regulators and consumers. Finally the shared KM component will ensure efficient sharing of practices and coordination of reporting.

· This project will exchange information with and draw on knowledge, experiences and lessons learned from other relevant GEF-supported projects listed in Table 3. This project will also learn from existing industrial initiatives of implementing CE/RECP in the textiles sector This project will also explore the linkages with environmental monitoring tools such as Pollutant Release and Transfer Registers (PRTRs) where industrial facilities report on releases of chemicals.

9. Table 3. Ongoing Relevant GEF and Special Programme Projects in the Participating Countries

1.	1. Ongoing Relevant GEF Projects
Regional	"Promotion of BAT and BEP to reduce UPOPs releases from waste open burning in the participating African countries of SADC sub-region" includes Lesotho and Madagascar.
South Africa	"Environmentally Sound Management and Disposal of PolyChlorinated Biphenyls[PCBS] in the Republic of South Africa

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

1. The government of the three participating countries are receptive to new global initiatives and development trends and ready to transition their economy from a linear one to a circular one. A number of recycling and reuse activities and business are currently ongoing in these countries but however there is a lack of policy and regulatory framework, business model and financial mechanism to unlock the CE potential in the industrial sector.

Lesotho

2. The TG sector has been identified as priority for the reduction of uPOPs emissions from open burning operation in accordance with the National Implementation Plan (NIP) of the Stockholm Convention (SC) on POPs, 2005 and National Implementation Plan (NIP) Update of the Stockholm Convention (SC) on POPs, 2018. Moreover, the TG sector is highlighted as a strategic sector for economic development and poverty reduction as in the National Strategic Development Plan, 2012-2017, National Vision 2020, 2003 and Poverty Reduction Strategy 2004 - 2007.

3. The project will complement and build on current Environmental policies to reduce emissions and protect the environment such as

- National Environmental Policy, 1996. Revised in 1998.
- National Climate Change Policy, 2017 - 2027.
- Lesotho's National Adaptation Programme of Action (NAPA) on climate change, under the United
- Nations Framework Convention on Climate Change, GEF, 2007.
- Nationally Determined Contribution under the UNFCCC, 2017.
- National health strategic plan 2017 – 2022

4. Through engaging private sector and developing business models and financing mechanisms for sustainability of TG wastes recycling and reuse operations, the project will align with the country strategies and policies encouraging investment such as:

- Medium-term debt management strategy, 2018.

- Fiscal policy for 1999 - 2000 and beyond.
- Transport infrastructure and connectivity project (TICP), 2017.
- National Investment Policy of Lesotho, 2015.

5. This project will deliver training, capacity building and dissemination of technical successes and lessons to the wider textile sector and society via national capacity and awareness raising activities and materials, including ensuring access to information and public education, aligning with Lesotho's ICT Policy for Lesotho, 2005, Communications Policy 2008. And Education Sector Plan 2016–2026.

Madagascar

6. BAT/ BEP principles are a main strategic objective of the NIP for the implementation of the SC in Madagascar (page 14 of NIP, on National Priorities and National objectives on POPs management). The Textile and Garment sector is one of the priority sectors identified in the industrial policy of Madagascar and one of the priority lines set in the NIP to reduce POPs impact on human health and environment, in particular the possible PFOS import and use in textiles (National Implementation Plan (NIP) of the Stockholm Convention (SC) on POPs, 2008 and National Implementation Plan (NIP) Update of the Stockholm Convention (SC) on POPs, 2017).

7. The project will complement and build on current Environmental policies to reduce emissions and protect the environment such as

- National Pollution Management Strategy, 2017.
- National Policy for Medical Waste Management and Injection Safety in Madagascar, 2014.
- General State Policy, 2018.
- National Action Plan for Adaptation to Climate Change, 2006.
- Madagascar's National Adaptation Programme of Action (NAPA) on climate change, under the United Nations Framework Convention on Climate Change, World Bank and GEF, 2006.
- National Biodiversity and Action Plans, 2015 - 2025.
- New Energy Policy (NEP), 2015.

- Environmental Program for Sustainable Development, August 2016.
- National plan for the management of medical waste in Madagascar, 2014 – 2018.

8. The project will provide training, capacity building and dissemination of technical successes and lessons to the wider textile sector and society via national capacity and awareness raising activities and materials, including ensuring access to information and public education, aligning with Madagascar's National Strategy for Information and Environmental Communication for Sustainable Development, 2016.

South Africa

9. The TG sector has been identified as priority for the reduction of uPOPs emissions from open burning operation in accordance with the National Implementation Plan (NIP) of the Stockholm Convention (SC) on POPs, 2012 and the National Implementation Plan (NIP) Update of the Stockholm Convention on Persistent Organic Pollutants (POPs), 2020.

10. The project will complement and build on current Environmental policies to reduce emissions and protect the environment such as:

- White Paper on Integrated Pollution and Waste Management for South Africa, (March, 2000)
- The National Waste Management Strategy
- National Environmental Management Act, 1998 (Act 107 of 1998)
- National Water Act, 1998 (Act 36 of 1998)
- National Waste Management Bill (December, 2007)
- Environment Conservation Act 1989, (Act 73 of 1989)
- Health Act, 1977 (Act 63 of 1977)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- Municipal Structures Act, 1998 (Act 117 of 1998)
- Municipal Systems Act, 2000 (Act 32 of 2000)

- Hazardous Substances Act, 1973 (Act 15 of 1973)
- Occupational Health and Safety Act, 1993 (Act 85 of 1993)

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

1. UNEP is also developing a proposal for circular textiles in Asia (“Reducing uses and releases of chemical of concern, including POPs, in the textiles sector”). The shared KM component (component 4) will ensure efficient sharing of practices and coordination of reporting.
2. An information management mechanism will be put in place covering: (a) generation of information such as compilation of regulatory and research information governing the execution of project activities; inventories of POPs and chemicals releases from in-country processes and those contained in imported products; information from import and use of POPs and hazardous chemicals through routine monitoring and research, and information from the general public and implementing agencies; (b) archiving and sharing of general information, which mainly describes mechanisms and tools that will be used in the dissemination of information to all stakeholders and project implementers in order to assess the project performance and progress; and (c) appropriate institutions involvement and feedback mechanism for free flow and exchange of information between the project management, all stakeholders and the general public.
3. The established national information management mechanisms in each participating country under the proposed project (for example, through a web-based portal for knowledge management on CE, RECP and BAT/BEP for ESM of POPs chemicals and wastes in the textile and garment sector, will be linked to the UNIDO website for wider sharing of information, lessons learned, knowledge and technology transfer of BAT/BEP/ RECP. It is planned to promote national and regional platforms and networks for information and knowledge exchange and experience-sharing on circular economy. Annual meeting will be organized to share knowledge and experience in the global scale especially with UNEP, who will be implementing GEF TG project in Asia.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Mr. Zaheer Fakir	GEF Operational Focal Point	Department of Environmental Affairs	3/18/2020
Monsieur Hery Andriamirado Rakotondravony	GEF Operational Focal Point	Ministere de l'Environnement et du Developpement Durable	3/19/2020
Mr. Stanley M. Damane	GEF Operational Focal Point	Ministry of Tourism, Environment and Culture	3/12/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

The project Map and coordinates for each country have been provided in PIF