



Reduction of industrial persistent organic pollutant chemicals in manufacturing and recycling sectors through life-cycle approaches in Georgia

Part I: Project Information

GEF ID

11005

Project Type

MSP

Type of Trust Fund

GET

CBIT/NGI

CBIT **No**

NGI **No**

Project Title

Reduction of industrial persistent organic pollutant chemicals in manufacturing and recycling sectors through life-cycle approaches in Georgia

Countries

Georgia

Agency(ies)

UNIDO

Other Executing Partner(s)

Regional Environmental Centre for the Caucasus (REC Caucasus)

Executing Partner Type

Others

GEF Focal Area

Chemicals and Waste

Taxonomy

Focal Areas, Chemicals and Waste, Persistent Organic Pollutants, New Persistent Organic Pollutants, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approaches, Transform policy and regulatory environments, Stakeholders, Communications, Awareness Raising, Civil Society, Non-Governmental Organization, Private Sector, Large corporations, Beneficiaries, Type of Engagement, Information Dissemination, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Capacity Development, Capacity, Knowledge and Research, Knowledge Generation, Knowledge Exchange, Learning, Indicators to measure change, Theory of change

Sector

Mixed & Others

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 0

Submission Date

4/13/2022

Expected Implementation Start

7/1/2022

Expected Completion Date

6/30/2025

Duration

36In Months

Agency Fee(\$)

190,000.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CW-1-1	Strengthen the sound management of industrial chemicals and their waste through better control, and reduction and/or elimination	GET	2,000,000.00	14,600,000.00
Total Project Cost(\$)			2,000,000.00	14,600,000.00

B. Project description summary

Project Objective

Protect human health and the environment through a lifecycle approach aimed at reducing import, use and build-up of industrial persistent organic pollutants (POPs) in manufacturing and recycling sectors.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. Policy strengthening by integrating a life-cycle approach into the existing legislative framework to prevent future build-up of POPs in manufacturing and recycling sectors	Technical Assistance	1. Enhanced national policy and regulatory framework to comply with the Stockholm Convention (SC) requirements on new POPs and implement national circular economy tools in selected manufacturing and recycling sectors	<p>1.1. New POPs integrated in the existing environmental regulation and in the regulation on chemical management</p> <p>1.2. Policy tools (e.g customs monitoring tools, EPR schemes), including financial mechanism, with a focus on phase out of industrial POPs developed for selected manufacturing sectors as one of the pillars of the implementation of circular economy in Georgia</p> <p>1.3 Country specific guidelines for the phase out of industrial POPs throughout the life-cycle drafted</p>	GET	590,000.00	2,200,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2. Life-cycle approaches and BAT/BEP for the reduction of POPs in the manufacturing and recycling sectors implemented	Investment	2. POPs present in manufacturing or recycling sectors are disposed of using best available technologies (BAT) and best environmental practices (BEP), and future POPs-containing material build-up prevented through life-cycle approaches reduction and phasing out of POPs in the manufacturing and recycling sectors implemented	<p>2.1 Verification of manufacturing sectors potentially using or releasing industrial POPs like HBCDD (EPS/XPS manufacturing, plastic), SCCP (paint manufacturing), PFOS/PFOAs and PBDE (ELV recycling) carried out</p> <p>2.2. Specific environmentally sound management plans (ESM) for manufacturing and recycling sectors to reduce POPs, recycle valuable materials and final disposal of POPs-containing waste</p> <p>2.3 BAT and BEP for the reduction and final disposal of POPs in manufacturing and recycling sectors to facilitate the adoption of a circular approach for a POPs-free manufacturing and recycling</p>	GET	760,000.00	6,700,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
3. Capacity building and knowledge management	Technical Assistance	3 Environmental authority, manufacturing and recycling sectors are empowered to phase out industrial POPs releases with positive effect on the establishment of a circular economy approach along the lifecycle of products	<p>3.1. Multi-stakeholder platform created to sustain the phasing out of industrial POPs and ensure the timely exchange of information and resources among business sectors and the regulators</p> <p>3.2. Capacity-building training, including gender dimensions, for selected manufacturing sectors, governmental stakeholders carried out on POPs and circular economy, and custom authorities strengthened to prevent the import of POP containing materials</p> <p>3.3. Knowledge materials on POP management and their implication on circular economy developed and disseminated to wide range of stakeholders, including</p>	GET	370,000.00	3,572,727.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 4: Monitoring and evaluation through results-based monitoring	Technical Assistance	4. Project implementation based on results-based management (RBM) and lessons learned/good practices documented and disseminated	4.1. RBM system and adaptive management promoted through capturing key results of the project 4.2. Gender mainstreaming action plan and environmental and social management plan elaborated and implemented 4.3. Gender-Sensitive Project Monitoring & Evaluation Plan in place 4.4. Mid-term review and terminal evaluation conducted	GET	100,000.00	800,000.00
Sub Total (\$)					1,820,000.00	13,272,727.00
Project Management Cost (PMC)						
			GET	180,000.00	1,327,273.00	
			Sub Total(\$)	180,000.00	1,327,273.00	
			Total Project Cost(\$)	2,000,000.00	14,600,000.00	

Please provide justification

Please find project justification starting from paragraph 1 later in this document

C. 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(\$)
Recipient Country Government	Ministry of Environmental Protection and Agriculture of Georgia (MEPA)	In-kind	Recurrent expenditures	450,000.00
Other	REC Caucasus	In-kind	Recurrent expenditures	2,050,000.00
Other	REC Caucasus	Equity	Investment mobilized	2,000,000.00
Private Sector	Eco Service Georgia	In-kind	Recurrent expenditures	4,020,000.00
Private Sector	Medical Technology	In-kind	Recurrent expenditures	6,030,000.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	50,000.00
Total Co-Financing(\$)				14,600,000.00

Describe how any "Investment Mobilized" was identified

Project co-financing was identified during consultation led by UNIDO and the REC Caucasus as the Project Executing Entity (referred to in the document as PEE or lead executing agency). "Eco Service Georgia" is a leading company in the field of waste management. The company provides waste disposal and recycling services to the private sector. The in-kind co-financing committed by the company for the three-year period of the Project implementation will be provided in the form of: - Human Resources Cost: Company's personnel/staff time directly contributing to project activities - Travel and Subsistence Costs: travel expenses (transportation and per diems) related to participation of Company's personnel/staff in the Project meetings, conferences, workshops and field visits; - Office Space and Equipment Costs: use of Company's office space and equipment for the Project's needs. Ltd. "Medical Technologist" was established in 2010 and provides services to pharmaceutical, medical, industrial, chemical and other companies for waste disposal (incineration). The company also carries out treatment of hazardous waste, which can be treated as solid municipal waste. Company scope of activities include: de-mercurisation of mercury-containing waste, regeneration (recovery) of used oils, processing of electrical equipment, dismantling and processing of used vehicles, collection and disposal of pharmaceutical, laboratory and medical waste. The in-kind co-financing for the three-year period of the Project implementation will be provided in a form of: - office Space and equipment allocated for the project's needs, - time spent by company's employees for the planning and implementation of the project activities, - co-investment in

BAT/BEP for POPs-free manufacturing and recycling processes, - travel and accommodation cost of company staff participating in project's events and steering committee meetings . REC Caucasus is currently implementing three projects: (i) "Supporting the update of the National Waste Management Strategy 2016-2030 and Action plan 2022-2026" - "European Union for Environment (EU4 Environment)"; (ii) "Enhancing national capacities, reporting and synergies between Basel, Rotterdam, Stockholm and Minamata Conventions and SAICM for the sound management of chemicals and waste in Georgia" ? funded by Special Programme Trust Fund; (iii) "Institutional capacity building for chemical safety and security in Georgia" ? funded by the State Department of USA. These three projects amount to a total of 2,000,000 USD, which will directly contribute to the activities and objectives GEF Project. In addition, REC Caucasus, will support project activities with a total of USD 2,050,000 in-kind co-financing in the form of voluntary labor, provision of meeting and office premises, use of vehicles and equipment.

D. 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	Georgia	Chemicals and Waste	POPs	2,000,000	190,000	2,190,000.00
Total Grant Resources(\$)					2,000,000.00	190,000.00	2,190,000.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **false**

PPG Amount (\$)

PPG Agency Fee (\$)

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
Total Project Costs(\$)					0.00	0.00	0.00

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	0	0	0	0
Expected metric tons of CO ₂ e (indirect)	0	81000	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)		81,000		
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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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)
0.00	50.00	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)
SelectHexabromocyclodecane (HBCDD)		50.00		

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)
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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)
	1,795.00		

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		400		
Male		600		
Total	0	1000	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

Part II. Project Justification

1a. Project Description

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

1. Persistent organic pollutants (POPs) are organic compounds that are resistant to environmental degradation through chemical, biological, and photolytic processes. They are toxic chemicals that adversely affect human health and the environment. The Stockholm Convention on Persistent Organic Pollutants, an international environmental treaty adopted in 2001, aims to eliminate or restrict the production and use of POPs. The initial meeting in 2001 made a preliminary list of twelve chemicals (the "dirty dozen") that are classified as POPs.
2. After the initial 12 POPs, several "new" POPs were listed in the Annexes A or B of the Stockholm convention, as summarized in the list below:

COP number	COP date	Substances
COP 9	29/04 to 10/05 2019	Dicofol
		Perfluorooctanoic acid, its salts and PFOA-related compounds
COP 8	24 April to 5 May 2017	Decabromodiphenyl ether
		Short-chain chlorinated paraffins
		Hexachlorobutadiene
COP 7	4 to 15 May 2015	Polychlorinated naphthalenes
		Hexachlorobutadiene
		Pentachlorophenol and its salts and esters
COP 6	28 April?10 May 2013	Hexabromocyclododecane
COP 5	25-29 April 2011	Endosulphan
COP 4	4-8 May 2009	Chlordecone
		Hexachlorobiphenyl
		Pentachlorobenzene
		Lindane
		Alpha hexachlorocyclohexane
		Beta hexachlorocyclohexane
		Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether)
		Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether)
		Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride (PFOS)

3. Currently, the following may be considered as 'industrial POPs', as they have been or are still used in industrial processes, including recycling of waste materials.:

? commercial PBDE mixtures (c-deca, c-tetra, c-penta, c-hexa and c-hepta BDE);

? Hexabromobiphenyl;

? Hexabromocyclododecane;

? Hexachlorobenzene;

? Hexachlorobutadiene;

? Pentachlorobenzene;

? PFOS and PFOAs;

? Short Chain Chlorinated Paraffins (SCCP);

4. With the exception of PFOS, (listed under annex B) all these chemicals are listed under Annex A of the Stockholm Convention (elimination) and should therefore be phased out from any industrial process.

5. The EU risk assessment documents and the Stockholm Convention Risk profiles identify, among others, polymers plastic, paint manufacturing and food packaging as potential sectors using POPs Brominated Flame Retardants, (including PBDEs, HBCDD), PFOS/PFOAs and SCCP. New POPs, like PFOS and SCCP are also used in other manufacturing sectors, like the electro-plating industry and the paint manufacturing industry.

6. For some POPs, one of the main issues in preventing industrial use is the variety of commercial names under which they are marketed. Moreover, these chemicals may be sold as mixtures. A number of commercial products, including paint and foam, do not contain information on POPs in their label or label verification review. Therefore, industries may not be aware that the chemicals they use contain POPs. This is the case, for instance, of the several brominated flame retardants classified as POPs, like the HBCDD, which is marketed with at least 40 different names; or the SCCP mixtures, which may contain different POPs chemicals and are sold with not less than 60 different commercial names .

7. Based on the Stockholm Convention risk profiles, around 18,000 tons of HBCDD were produced in 2010; around one million tons of chlorinated paraffins (inclusive of SCCP species not entirely classified as POPs) were produced in 2009. Based on a research carried out by Oeko Institute for ACEA (the European Association of Car Manufacturers, deca-BDE has been used in the manufacturing of specific car components (including cabling) until 2017, with a concentration range between 10 and 21%. SCCP may be used in certain products (like rubberized paints) in concentration ranging from 10% to 15%.

8. Moreover, POPs use or release in the manufacturing industry depends on each sector and national regulatory framework. For instance, in countries where fire prevention policies require strict flammability standards, the import, manufacture and use of brominated flame retardants, including POPs, is more likely to occur.

9. Similarly, in countries such as Georgia where the import of hazardous chemicals and POPs is not adequately controlled, the import of POP chemicals can still occur. Besides, there is a limited number of POPs which are still manufactured or used in industrial processes, like PFOS, PFOAs, some SCCP, HBCDD, whilst the production of other POPs has ceased almost everywhere. However, large chemical industries manufacturing brominated or chlorinated POPs, like HBCDD or SCCP, need now to reconvert their production to non- POPs chemicals, with significant impact on the manufacturing chain downstream. The issue of POPs in industry may therefore be summarized as follows:

- a) The chemical industry is still producing POPs like SCCP, PFOS/PFOAs, HBCDD;
- b) The manufacturing industry is still importing and using POPs including the limited amount of decabrominated biphenyl ether (DBDE) which may still be available, or PFOS, PFOAs, SCCP, HBCDD;
- c) POPs like HBCDD, c-PBDEs, PFOS, PFOAs are present in end of life products recycled or reused in industrial processes.

10. Given the situation outlined above, and the fact that Georgia does not have any chemical industry manufacturing POP, the issue related to POPs in the manufacturing and recycling industry mostly relate to three areas:

- ? Import of POPs chemicals or POPs-containing products,
- ? Manufacturing of products using imported POPs chemicals or POPs-containing products (like insulating foam in buildings using HBCDD, special paints using SCCP, food packaging or cookware with PFOS/PFOAs surface treatment),
- ? Presence of POPs in recycled materials (like POP-PBDEs in electronics and end-of-life vehicles).

11. COVID-19 situation strongly impacted Georgia and led to negative short-term economic growth, decline in employment and foreign direct investments. (https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/CDP_Comprehensive_Study_2021.pdf), leading to national lockdowns, restrictions and other COVID-19 related issues.

12. In line with UNIDO common response to COVID-19, UNIDO actively contributed to efforts of the international community, including the G20, and the United Nations. As a specialized agency of the UN, UNIDO's mandate is to promote inclusive and sustainable industrial development. UNIDO's response framework is to prepare and contain, respond and adapt, and recover and transform. The UNIDO approach is strategically aligned and synergized with:

? The United Nations ?Framework for the immediate socio-economic response to COVID-19? to implement the Secretary General?s report ?Shared responsibility, global solidarity: Responding to the Socioeconomic impacts of COVID-19?

? The 2030 Agenda for Sustainable Development, and the UN Decade of Action calling for the acceleration of sustainable solutions to all the world?s biggest challenges

? The UN 75th Anniversary ?The World Needs Solidarity?, prioritizing the human family and how we can build a better future for all. Thus, the following applicable but revised COVID-19 measures related to this project will be applied:

13. Potential COVID-19 risks have also been incorporated into the risk table to ensure proper mitigation measures, in case the pandemic will continue to impact the participating countries during the project duration. COVID-19 risks and opportunities are described in the CEO approval risk section.

1.1. Root causes and barriers

14. Root causes and barriers of POPs chemicals and waste problems in Georgia is related to a large reliance on imports without sufficient policy and regulatory framework. Root causes are also linked to a lack of technical and financial capacity to implement life-cycle approaches, including environmentally sound final disposal, and circular economy approach for manufacturing and recycling sector.

15. The below problem tree presents the main barriers, which need to be addressed during the project, and their consequence (Figure 1):

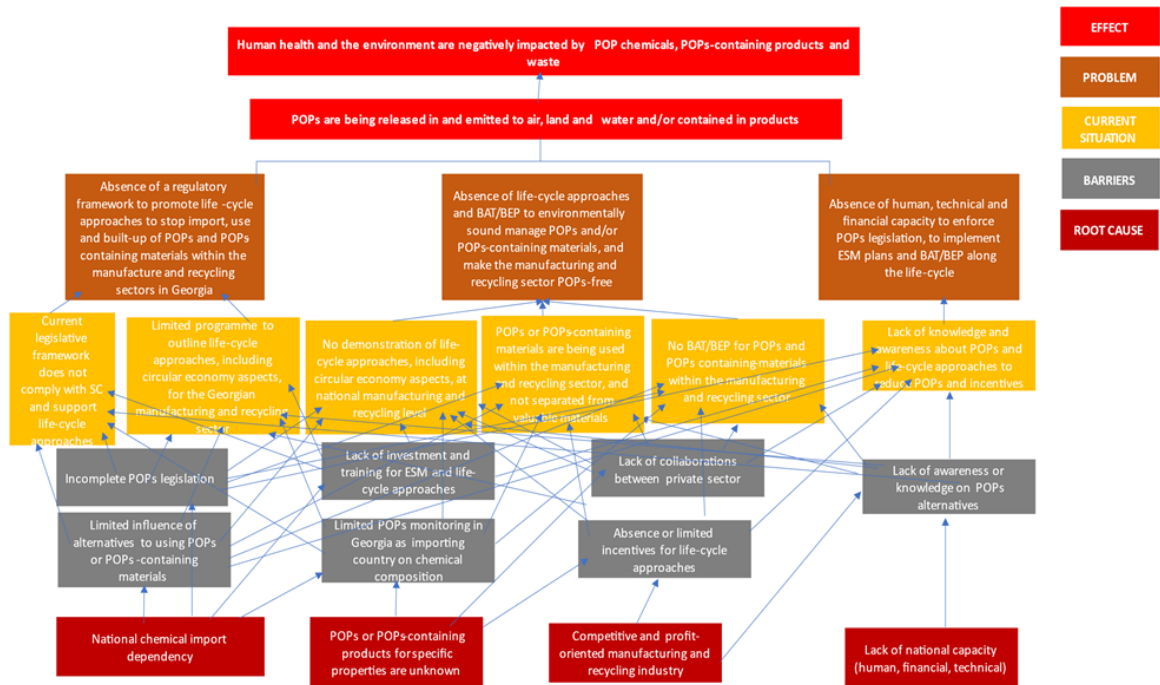


Figure 1: Problem tree

- ? Incomplete POPs legislation related to new industrial POPs;
- ? Limited influence of alternatives to POPs or POPs-containing materials;
- ? Lack of investment and training for ESM and life-cycle approaches related to new industrial POPs;
- ? Limited POPs monitoring on the basis of chemical composition;
- ? Lack of collaboration within the private sector on finding environmentally sound ways to deal with industrial POPs;
- ? Absence of or limited incentives for life-cycle approaches dealing with industrial new POPs;
- ? Lack of awareness or knowledge on alternatives to new industrial POPs.

2. The baseline scenario and any associated baseline projects.

Baseline scenario

16. In the absence of the proposed GEF project, industrial POPs and POPs-containing materials will continue to be imported, used and built-up in the country, which does not have sufficient technical and financial capacity to reduce, separate, replace and dispose of POPs chemicals or POPs-containing materials in an environmentally sound manner. There is also not enough knowledge, expertise and training on BAT/BEP related to sound chemicals disposal, life-cycle approaches or substitution to POPs-free alternatives.

17. Georgia has not benefitted from a GEF-7 project on POPs chemicals, and the current situation may lead to severe build-up and negative impact on human health and the environment. Workers, who are in direct contact with POPs or POPs-containing chemicals during the manufacturing or recycling process are particularly at risk.

Georgia as party of international conventions on Chemicals

18. Georgia signed the Stockholm convention (SC) on Persistent Organic Pollutants (POPs) on May 23, 2003 and ratified it in April 2006. The aim of SC is to take measures for reducing or eliminating POPs releases from intentional and unintentional production and use, including the releases from existing stockpiles and wastes.

19. Georgia has ratified several multilateral treaties and international conventions like the Basel, Rotterdam, Stockholm and Minamata Conventions. Georgia has also signed the association agreement with the EU which requires incorporating EU laws into national laws, including legislation related to POPs and chemicals and waste management. Detailed description of the legislative situation can be found in Annex H.

20. In light of the above, Georgia has taken responsibility to develop a national legislation framework on waste and chemical management that would be in line with EU directives and provision of EU policies and legal framework.

21. EU defines circular economy as aiming to ? maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste (?) This process starts at the very beginning of a product's lifecycle: smart product design and production processes can help save resources, avoid inefficient waste management and create new business opportunities.?

22. In general, waste is classified hazardous when it contains hazardous chemicals, which cannot be directly recycled. POPs-containing waste cannot be recycled, and if the concentration of POPs exceeds the acceptable threshold value, waste cannot be landfilled but should be eliminated with proper technologies.

23. The first NIP of Georgia was developed by the project with financial support from GEF and technical assistance from UNDP and UNITAR in the framework of the project entitled ?on ?Preparation of the Persistent Organic Pollutants (POPs) National Implementation Plan under the Stockholm Convention??. The NIP was adopted by Decree No 907 of April 21, 2011, for the period 2011-2015.

24. Subsequently, in compliance with article 7 of the Convention, Georgia submitted, on May 23rd, 2018, the update and review of the NIP, including action plans for PCBs, POP pesticides, PBDEs, HBCDD, PFOS and related chemicals, and u-POPs. The NIP update does not include yet

inventory or action plans for POPs listed in the Convention after the COP 6, including PFOAs, SCCP, deca-BDE.

25. The estimates related to new POPs in the NIP are as follows:

- PBDE: Georgia has imported and is importing different (used) vehicles manufactured between 1975 and 2004, which could have PUR foams and textiles containing POP-PBDE. A total amount of 91 tonnes of POP-PBDE, out of which 60 tonnes in passenger cars, 7 tonnes in trucks and 24 tonnes in buses has been estimated. It has been also estimated that around 10000 tons of PUR foam exist in vehicles, which could be partially contaminated by PBDE.
- the estimated amount of POP-PBDEs in cathode ray tube (CRT) electronic equipment (TVs or computer monitors) ranges between 4.4 tonnes to 12.9 tonnes. The total amount of polymeric fraction of the estimated CRTs containing POP-PBDEs is estimated to 5060 tonnes.

26. According to the inventory, HBCDD and PFOS and related chemicals are not produced in Georgia. However materials and products containing HBCDD, PFOS and related chemicals have been imported in Georgia, in particular:

- HBCDD mostly in insulating materials used in the construction sector and special protection uniform
- PFOS/PFAS and related substances mainly in firefighting foams, textile, aviation hydraulic fluids and food packaging

27. The NIP inventory has also identified:

- 700 tonnes of insulation foam imported to Georgia containing an estimated amount of between 4000 to 20000 kg (years 2006-2012) of HBCDD,
 - 1600 tonnes of special protection uniform imported to Georgia, amounting to 35324 to 240992 kg (years 2006-2014) of HBCDD
 - For the period 2006-2014 6600 tonnes of aviation hydraulic fluids were imported to Georgia, amounting to 3338 to 6673 kg of PFOS and related substances ranges
 - For the period 2006-2014 340 tonnes of firefighting foams were imported to Georgia amounting to 1647 to 19776 kg of PFOS and related substances ranges
- Use of industrial POPs in Georgia.

31. Based on the inventory carried out under the NIP update, the following has been found in term of import / use of POPs:

32. PFOS/PFOAS and related chemicals are currently not manufactured in Georgia. Most of the consumer products and articles containing PFOS and PFOAS enter the country through import, for use or manufacturing of firefighting foams, aviation hydraulic fluids and food packaging.

33. The total estimated amount of PFOS and related chemicals in imported aviation hydraulic

fluids for the period 2006-2014 ranges from 3338 kg to 6673 kg. This estimate is a high estimate since only a minor part of the aviation hydraulic fluids contain PFOS after 3M phased out PFOS in 2002.

34. The total estimated amount of PFOS and related chemicals in imported firefighting foams (AFFF and related foams) for the period 2006-2014 ranges from 1647 kg to 19776 kg. This estimate is an upper estimate since it has not been confirmed that PFOS was actually included in the foams. Only a part of the firefighting foams contain PFOS since 3M stopped PFOS production in 2002 and only China produces PFOS with uses in firefighting foam. No export of PFOS and PFOS containing articles and products are considered for Georgia.

35. SCCP is used in significant quantities as additive in specialized paints like rubberized chlorinated paint used outdoor. SCCP-containing paint is still manufactured in India and China. In Georgia, small companies are active in the paint manufacturing industry. In most cases, paints are imported in Georgia, and SCCP most likely enter as product or mixture rather than as substance.

36. HBCDD: Georgia has never produced and used HBCDD but imports and uses expanded (EPS) and extruded (XPS) polystyrene insulation foam in the construction sector and the textile applications containing HBCDD. The total amount of HBCDD in insulation foam imported in Georgia (700 tonnes of polystyrene insulation foam imported during the period 2006 ? 2012) ranges between 4,000 and 20,000 kg. The estimation can be considered a high one since some of the EPS/XPS insulation material might not contain HBCDD. However, the total amount of imported XPS/EPS is likely higher today since imports also occurred before 2006.

37. HBCDD has been also imported in uniforms imported between 2006 and 2014, for an amount ranging between 35,324 and 240,992 kg. This amount is a high estimate since not all uniforms were treated with HBCDD and the amount could be considerable smaller.

38. PBDEs: Georgia has never produced PBDEs but has imported and used materials and products containing PBDEs such as electrical and electronics products, fire resistant materials, vehicles and possibly other appliances. Preliminary inventory results showed the presence of PBDEs in electrical and electronics products, in the transport sector and in environmental media and human milk. High concentration of PBDEs have been detected in some products and around landfills and electronic waste recycling scrapyards. However, there is a lack of data on PBDE concentration in products and proper monitoring needs to be implemented.

39. The main challenge concerning PBDEs in Georgia is the end of life management of POP-PBDE containing materials from vehicles and electrical and electronic equipment (EEE) POP-PBDEs have been imported in particular in electrical and electronic equipment (EEE) and in used vehicles prior to 2004. Cathode ray tube (CRT) TVs or computers monitors are no longer on the market but are

still imported in significant quantities as second hand equipment or waste. Old EEE and vehicles produced and imported prior to 2004 also contain POPs and lead to management challenged when reaching end of life.

40. POP-PBDE are mostly found in the plastic casings of end of life cathode Ray Tubes and in PUR foam in used vehicles. In Georgia, there are approximately 675,000 CRTs containing 4.4 to 12.9 tons POP-PBDEs in 5060 tons plastic. The total estimated amount of POP-PBDEs in imported vehicles was 91 tonnes: 60 tonnes in passenger cars, 7 tonnes in trucks and 24 tonnes in buses. The total estimated amount of PUR foam in vehicles is estimated to approx. 10,000 tonnes where only a share is impacted by PBDEs.

41. As vehicles manufactured before 2005 were not exported from Georgia, the total number of imported vehicles manufactured before 2005 is the same as the registered number of vehicles currently in the country. Therefore, the total estimated amount of PUR foam and POP-PBDEs in imported vehicles is similar with the total estimated amount of PUR foam and POP-PBDEs in in-use vehicles.

The manufacturing sector in Georgia.

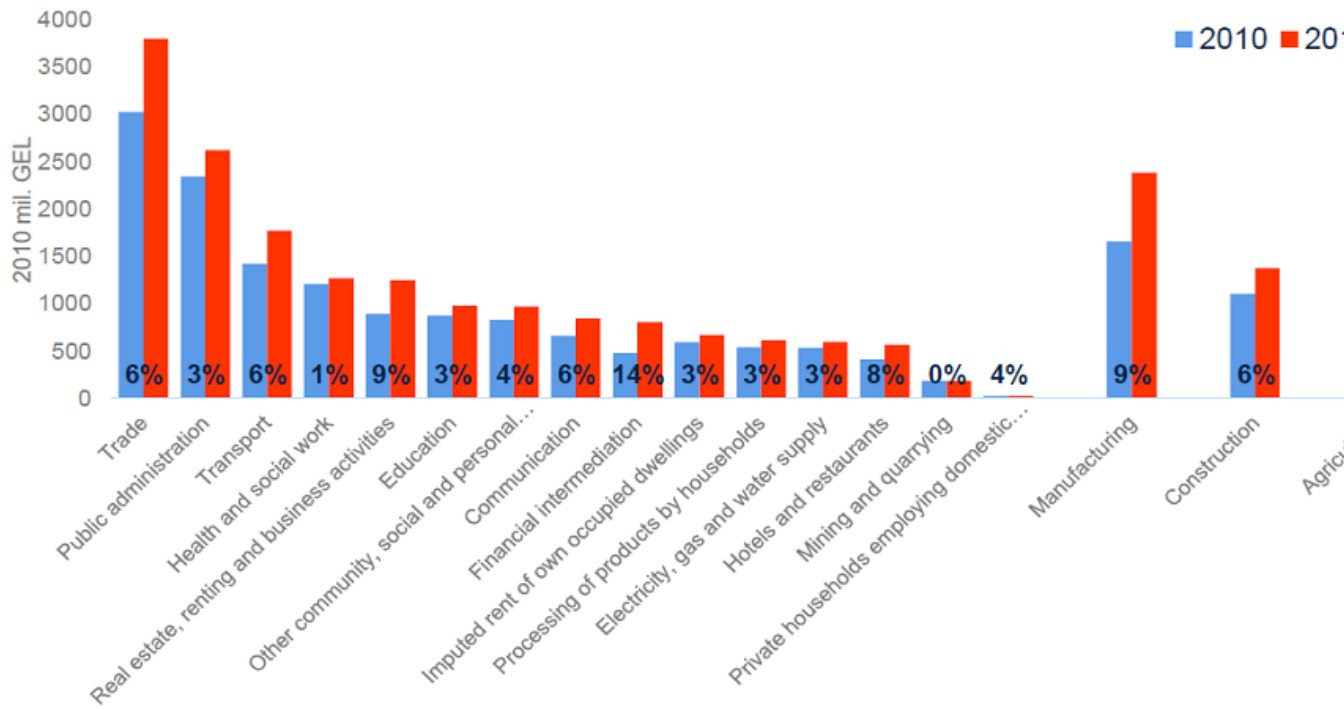
42. In Georgia, economic growth has been solid, averaging 5 percent per year between 2005 and 2019. Sound macroeconomic policies and improved governance led to the rapid decline of poverty, decreasing by half between 2007 and 2019. However, the economy has not created sufficient employment, and many Georgians still remain engaged in low-productivity agricultural activities. In the period 2010-2014, manufacturing grew 9% whilst construction grew at a 6% rate and agriculture 4%.

43. The relative importance of manufacturing sectors in Georgia is reported in the following table. Beside food processing, the five most important sectors in 2020 where manufacture of non metalling products, basic metals, chemicals and chemical products, rubber and plastic products (Table 1).

Economic sector	Mil. GEL (2000)	Mil. GEL (2020)	Growth rate (2020/2000)	% over manufacturing 2000	% over manufacturing 2020
Manufacturing	4,990.8	10,062.4	2.0	100.0	100.0
Manufacture of food products	1,448.4	2,342.3	1.6	29.0	23.3
Manufacture of other non-metallic mineral products	606.6	1,340.9	2.2	12.2	13.3

Manufacture of basic metals	884.3	1,206.3	1.4	17.7	12.0
Manufacture of chemicals and chemical products	362.0	486.4	1.3	7.3	4.8
Manufacture of rubber and plastic products	116.8	395.2	3.4	2.3	3.9
Manufacture of wearing apparel	60.7	315.3	5.2	1.2	3.1
Manufacture of paper and paper products	45.0	145.8	3.2	0.9	1.4
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	88.5	95.7	1.1	1.8	1.0
Manufacture of textiles	10.1	30.8	3.0	0.2	0.3
Manufacture of leather and related products	22.1	21.9	1.0	0.4	0.2

GDP (mil. GEL) and GDP Annual Growth (%) 2010-2014 by Sectors



Management of waste electric and electronic equipment and end of life vehicles.

44. There is currently no system for separate collection and disposal of waste from electrical and electronic equipment (WEEE) and End-of-life Vehicles (ELV) in Georgia. As of 2016, there was no landfill for hazardous or special waste and only few landfills have separate cells for special waste, like asbestos waste. Out of the 2000 villages of Georgia, only 480 have waste service systems in place. 1520 villages do not benefit from waste collection services, and uncontrolled landfills can be found in each village. Such uncontrolled landfills are located in ravines, channels, river banks and the streets. The environment pollution caused by uncontrolled dumping is critical. Waste prevention, reuse, recycling and recovery practices are underdeveloped, and only a limited number of recycling industry for paper, glass, plastic and other waste exist in Georgia (based on limited available data). Recycling is only carried out by private companies for which recycling produces secondary material lower than primary material.

45. Considering the lack of controlled landfills, materials potentially containing or contaminated by POPs may be dumped and subsequently openly burnt. The consequence of open burning, whether intentional or accidental, is the release of toxic fumes containing brominated and chlorinated dioxins, heavy metals, mercury, PAHs etc.

Waste management regulation and strategy in Georgia.

46. Georgia has recently embarked on an accelerated path towards a transition to a circular economy. With the concerted efforts of the government and international partners, Georgia initiated the development of a circular economy strategy and took some important steps to introduce the Extended Producer Responsibility (EPR) concept as part of the implementation of the National Waste Management Code.

47. EPR in Georgia is considered a key financial instrument to promote the implementation of waste management schemes, and the development of a circular economy. By introducing EPR, producers will take over the responsibility for collecting or taking back used goods and for sorting and treating them for potential recycling.

48. In Georgia, a new waste law entitled "Waste Management Code" was adopted on 26 December 2014 and came into force in January 2015. Although the newly adopted Code is in line with the principles and approaches of the the EU-Georgia Association Agreement (AA) and best international practices, a number of secondary legislation must be developed for the full implementation of the Code. With the "Waste Management Code", the Government of Georgia seeks to improve waste management practices throughout the country by mandating higher design and operational standards consistent with the EU.

49. On 1 April, 2016, the Georgian Government approved (Resolution #160) the 2016-2030 National Waste Management Strategy and the 2016-2020 Waste Management Action Plan for Georgia. The Strategy and Action Plan are an integral part of Georgia's Waste Management policies. The National Waste Management Strategy aims at creating the solid foundations for modern waste management requirements in Georgia, taking into account best international practices. The Waste

Management Strategy complies with the Waste Management Code that sets out the Waste Management Hierarchy:

- ? Prevention
- ? Preparation for re-use
- ? Recycling
- ? Other recovery, including energy recovery
- ? Disposal.

50. Moreover, the Strategy complies with the Principles of Waste Management introduced by the Waste Management Code: Precaution, Polluter pays, Proximity, Self sufficiency. The Strategy is in harmony with key EU Environmental Management principles of Sustainable development, waste prevention, Best Available Technology and Extended Producer's Responsibility and Integrated waste management.

51. The Waste Management Action Plan covers a period of 5 years (2016-2020). The action plan sets a number of actions needed to meet the objectives of the waste management strategy, including time targets, responsible institutions, related cost and potential source of funding.

52. The activities in the action plan are grouped according to the 9 general objectives of the strategy. Activities are designed considering the challenges accumulated in the waste management sector.

53. Achieving objectives and targets set by the strategy and action plan is quite costly. The main source of funding of the Action Plan is a waste management tariff for waste management services, in line with the Polluter pays principle. Beside the state budget, foreign investment and donors support is envisaged to ensure the proper implementation of the planned activities.

54. One of significant goals of the National Waste Management Strategy, within the capabilities, is to provide waste prevention, reuse, recycling and/or recovery. In this regard, ambitious indicators for reuse, recycling and recovery have been determined.

Table 1. The minimal indicators of paper, glass, metal and plastic waste recycling to be reached at the national level in Georgia

Type of waste	2020	2025	2030
Paper	30%	50%	80%
Glass	20%	50%	80%
Metal	70%	80%	90%
Plastic	30%	50%	80%

55. The Waste Management Code requires the municipalities to perform the function of municipal waste collection and transportation, as well as to implement waste recovery programs. Since 2019, the Code establishes that municipalities are under an obligation to implement waste separation practices. , By 2025, municipalities will have to establish waste separation system in immediate proximity for paper, plastic, glass and metal waste sources.

Extended Produced Responsibility in Georgia.

56. According to the Waste Management Code, manufacturers and legal entities who place products onto the market are responsible to ensure the reduction of the negative environmental impacts that may follow the production and use of the products and its waste recovery or disposal. Extended Producer Responsibility (EPR) is a new concept for Georgia and its introduction requires a relevant legal framework and adequate awareness of the public and private sector.

57. Generally, EPR is a mechanism that links the waste management to the design and production of products and seeks to close material loops at the end of life. EPR shifts the responsibility for waste management activities onto producers. By shifting the responsibility (financial and physical) for waste management to the party that has the most control over product design (i.e. manufacturers), there is a greater incentive to design out waste and produce easy-to-recycle products and material, to reduce costs associated with managing them at end-of-life. EPR is increasingly being seen as an important policy tool to drive the transition to a circular economy.

58. The Waste Management Code of Georgia introduces a concept of Extended Producer Responsibility (EPR) for the following 6 specific waste streams:

- ? packaging waste (plastic, paper/cardboard, wood, metal, glass),
- ? electrical and electronic equipment (WEEE),
- ? end-of-the life tires (ELTs),
- ? end-of-the life vehicles (ELVs) ,
- ? used oils,
- ? used batteries and accumulators.

59. The Ministry of Environmental Protection and Agriculture of Georgia (MEPA) elaborated respective Technical Regulations for each of the 6 specific waste streams:

- ? Technical Regulation on Packaging Waste;
- ? Technical Regulation on Used Batteries and Accumulators;
- ? Technical Regulation on End-of-the Life Vehicle (ELVs);
- ? Technical Regulation on Used Oil;

? Technical Regulation on End-of-life Tires (ELTs);

? Technical Regulation on Waste from electrical and electronic equipment (WEEE).

60. The purpose of the Technical Regulations is to establish regulatory and organizational framework for implementation of the Extended Producer's Responsibility (EPR) in accordance to Article 9 of the Waste Management Code of Georgia.

61. In 2019, the Ministry (MEPA) organized series of meetings with producers and all stakeholders for each waste stream.

62. In 2020, the Ministry of Environmental Protection and Agriculture of Georgia has submitted the Technical Regulations with the draft Governmental resolutions for specific waste streams. These documents were processed by various ministries within 2 rounds of governmental hearings.

63. Out of 6 the following 4 Technical Regulations have already been adopted by the Government of Georgia so far:

? Technical Regulation on Used Batteries and Accumulators (Government of Georgia #324; 25.05.2020);

? Technical Regulation on Used Oil (Government of Georgia #327; 25.05.2020);

? Technical Regulation on End-of-life Tires (ELTs) (Government of Georgia #325; 25.05.2020);

? Technical Regulation on Waste electrical and electronic equipment (WEEE) (Government of Georgia #326; 25.05.2020).

64. A regulation on End of Life Vehicles has been drafted, however it has not yet been adopted yet.

Georgia and the control of the import and export of POPs substances.

65. The Harmonized Commodity Description and Coding System generally referred to as "Harmonized System" or simply "HS" is a multipurpose international product nomenclature developed by the World Customs Organization (WCO). Georgia is a contracting party of the HS. Although for most POPs there are specific entries under the HS system, for a number of new POPs HS codes are not been established yet. These chemicals are often imported under generic HS codes.

66. For instance, there is no specific code for SCCP, and SCCP should be placed under one the following HS codes:

? 290319 Saturated chlorinated derivatives of acyclic hydrocarbons; n.e.s. in item no. 2903.1

? 51136 Other saturated chlorinated derivatives of acyclic hydrocarbons

67. For some new POPs, therefore, the situation concerning the import and export is uncertain. Some POPs are still being manufactured in some countries, like India and China. If customs in Georgia have not established specific rules for the import and export of such substances, the industry is continuing to import and use these substances, facing the risk of production closure once the Stockholm Convention requirements concerning the import of POPs will be strictly enforced.

Associated baseline projects.

Projects related to the proposed intervention currently ongoing in the country are listed in Table 2 .

Table 2: List of baseline projects

(i) Project ?Capacity Building for Sound Management of Chemicals.	Identification number: GE-2017-041-FO-41010. Total anticipated budget: 15 582 100 CZK; Implementation period: 2017 - 2023 Project location: Georgia. Sector: Bilateral Development Cooperation, Government and Civil Society.
Objective	The project contributes to the fulfilment of Sustainable Development Goal 16.6 in Georgia: ?Develop effective, accountable and transparent institutions at all levels?. Objective of the project is to increase the number of transposed EU environmental legislation into Georgian national legislation in the field of sound management of chemicals. The preparation of the legislative framework and the strengthening of the implementation and control capacities of Georgian institutions will create prerequisites for a future systemic solution for the proper management of chemicals at a standard international level in line with EU rules.
Targeted results	The project outlines the existing legislation and competencies of individual authorities on the management of chemical substances in Georgia, a concept for the harmonization of existing legislation with the requirements of the EU REACH and CLP regulations will be drawn up. Also a draft of Chemical Substances Act and a proposal for a methodology for effective control of obligations of these Regulations will be elaborated under the project. Within the project, the capacity of Georgian institutions and selected groups of manufacturers, users, importers and distributors of chemicals in the area of chemical marketing will be strengthened through training and workshops.

<p>Contribution of the baseline project (i) to the planned intervention and the alternative scenario</p>	<p>Georgia has ratified several multilateral treaties and international Conventions, as well as the association agreement with the EU which requires incorporating EU laws into national legislation, including those related to POPs and chemicals and waste management. However, Georgian industry relies heavily on imports without sufficient policy and regulatory framework in place.</p> <p>The above-described project will strengthen existing legislation and competencies on chemicals management in Georgia, in view of harmonizing existing legislation with EU REACH and CLP regulations. This will directly contribute to Component 1 of the GEF-Project. A stronger legislation on chemicals management will be an added value to the GEF Project, which will further work on the integration of new POPs into the existing environmental regulations of the country. Regulation developed by the GEF-project will also apply to restricting imports and export of specific substances, setting maximum authorized concentration of POPs in certain products.</p> <p>Furthermore, all policy work achieved by the Project "Capacity Building for Sound Management of Chemicals" will be a strong basis to implement the funding mechanism that the GEF-Project aims to promote.</p>
<p>(ii) Project: Review of the existing National Waste Action Plan 2016-2020 and development of a draft National Waste Action Plan 2022-2026 for the implementation of a National Waste Management Strategy in Georgia</p>	<p>Project ID: SSFA/2021/3756 Implementation period: 2021-2022 Project budget: USD 42,690</p>
<p>Objective</p>	<p>UNEP is one of five partner agencies implementing a newly launched EU-funded EU4 Environment (2019 - 2023). This regional programme will support six countries (Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine) in making policy planning and investment greener, stimulating the uptake of innovative products and technologies, and raising awareness about benefits of environmental action. The application of strategic approaches to waste management can assist in addressing countries' overarching waste management challenges. To this end, within EU4Environment's component 2.4 on "The use of strategic approaches on waste management" UNEP will support countries in promoting development of comprehensive sustainable waste management policies and policy instruments.</p>

Targeted results	Addressing countries' overarching waste management challenges, it will contribute to develop comprehensive sustainable waste management policies and policy instruments, responding to the request of countries. Under Activity 2.4.1 Develop draft of action plan for national waste management, UNEP will provide technical assistance and stakeholder consultation in Georgia through providing a review of the existing National Waste Action Plan 2016-2020 and development of a draft National Waste Action Plan 2022-2026 for the implementation of a National Waste Management Strategy in Georgia. To assist UNEP in the implementation of the aforementioned activities, the Regional Environmental Centre for the Caucasus was selected as an implementing organization to carry out actions under Activity 2.4.1:
Contribution of the baseline project (ii) to the planned intervention and the alternative scenario	Baseline assessment in Georgia shows that a number of areas still do not benefit from waste collection services, and that uncontrolled landfills can be found. The environmental pollution caused by uncontrolled dumping is critical. Waste prevention, reuse, recycling and recovery practices are underdeveloped. Only a limited number of industries are active in the recycling of paper, glass, plastic and other waste in Georgia. The above-mentioned UNEP Project aims to promote sound waste management in Georgia. This will directly contribute to the activities of the GEF-Project under component 2 for life cycle approaches. Systematic and sound waste collection is the basis on which to build sound life-cycle approaches. Innovating recycling technologies can emerge when waste is properly segregated. Circular economy approaches including potential reverse logistics will be facilitated by services put in place for collection. Proper waste management will also contribute to segregating industrial or dangerous waste, potentially containing POPs, preventing their disposal in landfills.
(iii) Project ?Develop draft of action plan for national waste management in Georgia.?	Project objective: Organization of stakeholder consultation in Georgia through providing a review of the existing National Waste Action Plan 2016-2020 and development of a draft National Waste Action Plan 2021-2025 for the implementation of a National Waste Management Strategy in Georgia.

Objective	<p>Specific objectives of the assignment: Assess the progress in the implementation of specific actions under each target during a five-year period starting from 2016 as stipulated in Annex 1 of the National Waste Action Plan 2016-2020; Assessment of the current municipal waste management and infrastructure in Georgia, including: i) legal, administrative and organizational system of the current municipal waste management, EPR requirements/trend development in EPR in the future; ii) inspection and enforcement; iii) waste generated, import and export; iv) existing waste collection systems, landfills, recycling and recovery systems; v) hazardous waste management and existing handling of specific waste streams; vi) contaminated waste disposals - illegal dumpsites; vii) cost-recovery mechanism; viii) waste data reporting; and ix) permit and registration for waste management activities; Identification of future needs - review the planned waste infrastructure development, including: i) waste generated in the future; ii) needs for future infrastructure systems (new landfills, future waste recovery systems); iii) closure of existing disposals (dumpsites and historical contaminations closed) and rehabilitation; iv) organization of waste management in the future; v) waste prevention; vi) cost-recovery mechanism; and vii) waste data reporting.</p>
Contribution of the baseline project (iii) to the planned intervention and the alternative scenario	<p>Baseline assessment in Georgia shows that a number of area still do not benefit from waste collection services, and that uncontrolled landfills can be found. The environmental pollution caused by uncontrolled dumping is critical. Waste prevention, reuse, recycling and recovery practices are underdeveloped. Only a limited number of industries are active in the recycling of paper, glass, plastic and other waste in Georgia. The above-mentioned Project aims to promote sound waste management in Georgia. This will directly contribute to the activities of the GEF-Project under component 2 for life cycle approaches. Systematic and sound waste collection is the basis on which to build sound life-cycle approaches. Innovating recycling technologies can emerge when waste is properly segregated. Proper waste management will also contribute to segregating industrial or dangerous waste, potentially containing POPs, preventing their disposal in landfills.. In addition, activities of the Project Develop draft of action plan for national waste management in Georgia? regarding EPR requirement would directly contribute to similar objective under Component 1 of the GEF Project. Regulatory and organizational requirement in place for EPR schemes would greatly contribute to replicate similar efforts specifically for hazardous waste management.</p>
(iv) Project: Enhancing national capacities, reporting and synergies between Basel, Rotterdam, Stockholm and Minamata Conventions and SAICM for the sound management of chemicals and waste in Georgia	<p>Reference Number: Special Programme/Fourth Round/Approved Project/04 Implementation period: 2018-2021 Sub-programme: 5. Chemicals, waste and air quality; Expected Accomplishment: a; Output: 5 Budget: USD 247,650</p>

Objective	The objective of the Project is to support country-driven institutional strengthening at the national level, in the context of an integrated approach to address the financing of the sound management of chemicals and wastes, taking into account the national development strategies, plans and priorities of each country, to increase sustainable public institutional capacity for the sound management of chemicals and wastes throughout their life cycle. Institutional strengthening under the Special Programme will facilitate and enable the implementation of the Basel, Rotterdam and Stockholm conventions, the Minamata Convention and the Strategic Approach to International Chemicals Management (SAICM).
Sub-programme to the project iv	The Special Programme is part of the sub-programme 5 on chemicals and wastes in UNEP's Programme of Work, in particular Project 515.2 Special Programme to support institutional strengthening at the national level to enhance the implementation of the Basel, Rotterdam and Stockholm conventions, the Minamata Convention and the Strategic Approach to International Chemicals Management (SAICM). It specifically addresses expected accomplishment (a) that countries increasingly have the necessary institutional capacity and policy instruments to manage chemicals and waste soundly including the implementation of related provisions in the multilateral environmental agreements (MEAs). Following the fourth call for applications, the Government of Georgia submitted their application for funding from the Special Programme Trust Fund to strengthen their capacities for national implementation of chemicals and waste related international agreements. The Executive Board of the Special Programme, at the first session of its sixth meeting, which was held online, from 1-5 March 2021, approved the application submitted by Georgia.
Objective	Objective of the project: The project aims to strengthen institutional capacities of the Government of Georgia and consolidate synergies between the Basel, Rotterdam and Stockholm Conventions, SAICM and promote practical implementation of the Minamata Convention at the national level through improving cooperation between government departments and agencies, industry, academic and civil society organizations in the field of chemicals and waste management. This will be facilitated by 1) creating a permanent inter-agency working group on waste and chemicals management and facilitate necessary national arrangements and consultations for ratification of Minamata Convention; 2) undertaking a comprehensive gap analysis on coordination for sound management of chemicals and provide package of legal amendments on chemicals and waste management with due gender consideration; 3) establishing an integrated database as a new mechanism to systematize joint information and data gathering and sharing; and 4) conducting awareness raising and capacity-building activities including training-of-trainers on SAICM and implementation aspects of BRS and Minamata Conventions. The project will be carried out in line with the Project Description below, which is part of the application received from Georgia.

<p>Contribution of the baseline project (iv) to the planned intervention and the alternative scenario</p>	<p>The above-mentioned project will strengthen existing legislation and competencies on chemicals management in Georgia, in view of harmonizing requirement of the Minamata, Basel and Stockholm Convention into national legislation. This will directly contribute to Component 1 of the GEF-Project. All activities planned on strengthening legal and regulatory framework will build on results obtained by the ongoing project.</p> <p>Activities of the Special programme on the Basel convention will be very useful to the GEF-Project as results may help regulating import of hazardous chemicals. The GEF Project, through technical guidelines, ESM Plans and pilot initiatives will contribute to showcasing the use of alternative chemicals in the industrial sector. This will further support reduction efforts on imports of hazardous chemicals.</p> <p>Any new requirement developed by the Special Programme on the Minamata Convention will be duly taking into account into ESM plans for hazardous waste management, in particular e-waste where mercury can be found.</p>
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3) The proposed alternative scenario with a brief description of expected outcomes and components of the project;

68. The project will build on the recent national efforts in the area of sustainable manufacturing (the ?upstream?) and waste management (the ?downstream?) to strengthen the environmentally sound management of POPs and POPs-containing material. This approach will contribute to sustainable manufacturing and recycling as well as effective management of end of life products, ensuring a higher rate of reuse and recycling. The project will strive to work on the sectors that will offer the greater potential of POP reduction, energy saving, and recycling potential. The objective tree for the project is presented in figure 2:

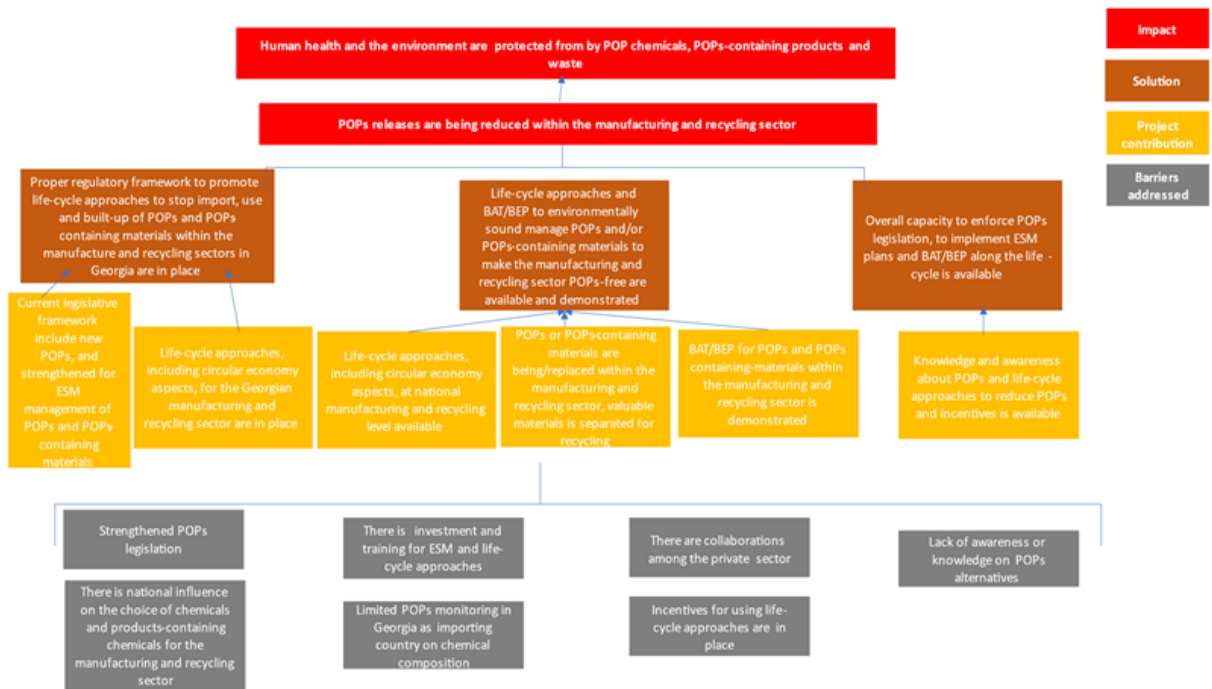


Figure 2: Objective tree

The project alternative scenario is proposed in response to the problem tree (Figure 1, baseline projects and objective tree). It should address the identified barriers using the logic of the Theory of Change (ToC), which is presented in Figure 3.

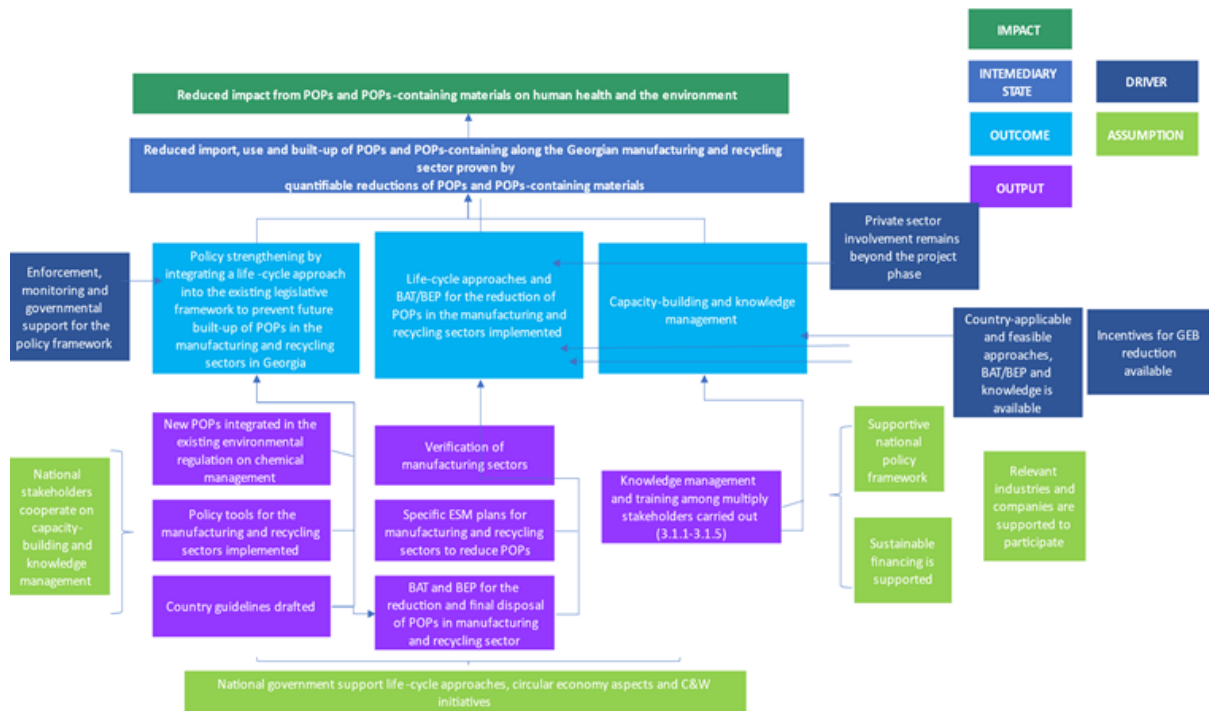


Figure 3: Theory of Change

Description of the Theory of Change:

69. Georgia is struggling with the reduction of import, use and build-up of POPs and POPs-containing materials within manufacture and recycling sectors. The project has been designed to address the barriers described in the previous section. Specifically, barriers faced by national stakeholders and the industrial manufacturing sector will be addressed by strengthening the regulatory framework related to chemicals and waste management, supporting sustainable funding mechanism for collection, treatment and final disposal of hazardous waste, and by promoting alternative material to POPs-containing chemicals and life cycle approaches for the industrial sector. The following outputs will be delivered to reach these outcomes:

- ? POPs integrated in the existing environmental regulations for a stronger regulation on imports,
- ? Waste management regulations to ensure that POPs-containing waste are disposed of in a sound manner,
- ? Customs monitoring tools,
- ? Financial mechanism for hazardous waste management,
- ? Specific ESM plans for the manufacturing and recycling sectors to reduce POPs
- ? BAT/BEP implementation for the reduction and final disposal of POPs in these sectors
- ? Strong knowledge management platforms and training for sustainability and scale-up

70. Lack of adequate policy, funding mechanism and infrastructure will be addressed with robust legal and technical assistance. Lack of knowledge and awareness on POPs will be addressed with targeted capacity-building for policy makers, enforcement authorities and the private sector. Training and communication will be planned to foster behavior change towards current consumption and production patterns. Knowledge generation, knowledge sharing and advocacy will enhance awareness amongst all stakeholders and increase the impact of the Project. It will also highlight the importance of sustainable funding mechanism in place for hazardous waste management, and will thereby contribute to important drivers of the theory of change.

71. IF these outputs are delivered THEN the following outcomes will be realized: policies are strengthened to enhance import control, regulate authorized concentrations of POPs in chemicals and material, promote life-cycle approaches and prevent future build up of POPs in the manufacturing and recycling sectors. Life cycle approaches and BAT/BEP are implemented to reduce the use of POPs in the manufacturing and recycling sectors. Capacity-building and knowledge management targeted towards the private and the institutional sector will strengthen the main drivers that will lead to the desired impact. Increased awareness of policy makers will foster the enforcement of improved policies and the implementation of the funding mechanism developed by the Project. Increased awareness of enforcement authorities will support improved controls for imports. ESM plans and BAT/BEP, duly documented in the knowledge platform will be used by other industries and achieve a larger impact.

72. BY identifying and supporting BAT/BEP and life-cycle approaches whilst increasing import control, chemicals content regulation and sustainable financing for hazardous waste management THEN industries will be ready to invest and build PPP for sound chemicals and waste management in Georgia. Improved processes and life-cycle approaches will ALSO contribute to the reduction of POPs and meet customers' expectation of sustainable consumption options. AS A RESULT Reduced quantities and release of POPs and POPs-containing material will reduce the impact of the industrial sector on human health and the environment.

73. This project focuses on the following project outputs:

1.1.1. New POPs integrated in the existing environmental regulation and in the regulation on chemical management;

1.1.2. Policy tools (e.g customs monitoring tools, EPR schemes), including financial mechanism, with a focus on the phase out of industrial POPs developed for selected manufacturing sectors as one of the pillars of the implementation of circular economy in Georgia;

1.1.3. Country specific guidelines for the phase out of industrial POPs throughout the life-cycle;

2.1.1 Verification of manufacturing sectors potentially using or releasing industrial POPs like HBCDD (EPS/XPS manufacturing, plastic), SCCP (paint manufacturing), PFOS/PFOAs and PBDE (ELV recycling);

2.1.2. Specific environmentally sound management plans (ESM) for manufacturing and recycling sectors to reduce POPs, recycle valuable materials and final disposal of POPs-containing waste;

2.1.3 BAT and BEP for the reduction and final disposal of POPs in manufacturing and recycling sectors to facilitate the adoption of a circular approach for a POPs-free manufacturing and recycling industry, in at least one pilot facility;

3.1.1. Multi-stakeholder platform created to sustain the phasing out of industrial POPs and to ensure the timely exchange of information and resources among business sectors and the regulators.

3.1.2. Sectorial training for selected manufacturing sectors carried out;

3.1.3. Sectorial training for governmental stakeholders on POPs and circular economy carried out;

3.1.4. Knowledge materials on POP management and their implication on circular economy developed and disseminated to wide range of stakeholders, including business sector;

3.1.5 Capacity of the custom authority to prevent the import of POP containing materials strengthened.

If the outputs are successfully being executed, then project components can serve as a dimension towards achieving the long-term impact along with the project's key drivers (a) Enforcement, monitoring and governmental support for the policy framework, (b) Private sector involvement remains beyond the project phase; (c) Country-applicable and feasible approaches, BAT/BEP and knowledge is available, and (d) Incentives for GEB reduction available.

Component 1. Policy strengthening by integrating a life-cycle approach into the existing legislative framework to prevent future build-up of POPs in manufacturing and recycling sectors

74. As reported in the baseline, Georgia is undertaking a big transformation in both the manufacturing areas and the management of waste. The two sectors are integrated, as a modern manufacturing sector cannot survive without the support of a proper waste management sector. Life-cycle approaches and circular economy aspects can support waste management by reducing or removing waste which can be reintroduced in the production. To ensure that POPs are properly addressed in the process, the project will undertake the following:

Outcome 1.1. New POPs integrated in the existing environmental regulation and in the regulation on chemical management

75. Under this outcome, the SC requirements, with specific reference to the new POPs which have been enlisted after the COP4, will be properly integrated into the environmental and technical regulation of the country.

Output 1.1.1. New POPs integrated in the existing environmental regulation and in the regulation on chemical management

76. Under this output, regulation on the following will be amended to ensure that all the POPs listed in the annexes of the Stockholm Convention are properly regulated:

? Regulation on the restriction or prohibition of import or export of specific substances, mixture or products

? Regulation on the maximum authorized concentration of POPs in specific products (to be aligned with the EU regulation Regulation (EU) No 2019/1021)

? Waste management (to ensure that POPs containing waste are disposal in compliance with the ?Updated general technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants (POPs)?

A Review and Gap analysis of Georgian legislation in the area of new POPs and implementation of SC (Year 1-2) will be conducted. A package of amendments / draft legal act for integrating SC requirements on new POPs in the national regulatory framework will be prepared.

Output 1.1.2. Policy tools (e.g customs monitoring tools, EPR schemes), including financial mechanism, with a focus on phasing out industrial POPs for selected manufacturing sectors to support circular economy in Georgia

77. Under this output, POP reduction will be mainstreamed into the ongoing regulatory effort. Technical assistance will be provided to develop technical documentation needed for the implementation of sound financial mechanism. Among other types of funding mechanisms, an Extended Producer Responsibility scheme will be explored for hazardous waste management.

78. Extended Producer Responsibility, also known as Product Stewardship in North America, is an economic and operational instrument that helps realize one of the underlying principles of circular economy i.e. waste becoming a resource. Since the 1990s, extended producer responsibility has been widely used in most industrialized countries to solve specific waste problems, and is rapidly becoming a policy of choice for emerging and developing economies.

79. There is evidence from several parts of the world that EPR systems help reduce the volume of waste going to final disposal. The REP system also helps to increase recycling rates. Implementing mandatory EPR systems also has economic benefits. First, it eases pressure on government budgets because producers take on financial responsibility and, in the case of some industrial and hazardous waste, operational responsibility as well. In addition, it attracts investment in new recycling infrastructure (mainly private) and increases well-paying jobs.

80. Currently, more than four hundred REP systems are operating worldwide, according to a recent study by the OECD. Most of them are found in Europe, North America and Australasia (Australia, China, India, Japan, New Zealand, Singapore and South Korea).

81. All of these REP systems are mandatory and derive from laws and regulations that set specific collection targets and controlled recycling targets. There are also several voluntary REP

schemes put in place by a sector or industry for many reasons, including as part of their corporate social responsibility programs.

82. EPR is a policy that manufacturers and importers in a market (also known as producers) must take responsibility for funding the collection and processing of post-consumer products. Establishing an EPR system requires legitimacy and support from stakeholders, including the consumer. The new system requires a change in behavior from all stakeholders in the operation. This means that producers must set up collection and processing financing systems, and often collaborate with their competitors to set up collection networks. In addition, the system must convince distributors to cooperate and consumers to change the way they dispose of waste. In addition, the government must put in place the right mechanisms to ensure compliance. The system must attract investment in new waste treatment facilities.

83. EPR systems require quantitative and qualitative objectives and goals (collection targets, recovery targets). For example, the Directive of the European Parliament and of the Council of the European Union 2012/19/EU for WEEE establishes a minimum annual collection of e-waste equivalent to 65% of the EEE that has been placed on the market on average in the previous three years

84. For many governments, EPR is a key instrument to implement the Polluter Pays Principle (PPP) and move towards a circular economy. It aims to ensure that the costs of pollution are borne by those responsible and not by taxpayers or society.

85. From an environmental perspective, EPR systems are proven to help reduce the volume of waste going to final disposal and increase recycling rates. According to the European Environment Agency, landfill rates for European municipal waste decreased by 50% in 2006-2017, from 46.5% to 24.1%. Recycling rates over the same period increased from 30.6% to 45.5%.

86. Beside the financial support which is envisaged through the EPR mechanisms, Producers will ensure that POPs are properly eliminated since the design stage of their products and that the entire lifecycle of their products is designed to reduce the release of GHG and maximize energy saving. This output will concern the key manufacturing sectors within the country, and POPs provisions will be incorporated in schemes for the following products :

- ? Automotive;
- ? Electric and electronic equipment;
- ? Building materials (insulating foam and paints)
- ? Manufacture of leather and related products

Output 1.1.3. Country specific guidelines for the phase out of industrial POPs along the life-cycle drafted

87. One of the key development strategy for emerging economy is to ensure the circularity of the economic model. Circular economy may be defined as an economic model aiming to reduce reliance on raw materials, extend product life, reduce waste and promote reuse and recycling. It therefore encompasses a shift in the design, production, and consumption stages of products, moving away from a linear 'take-make-dispose' model towards a circular approach.

88. The presence of hazardous chemicals in the manufacturing process hinders the recycling of end of life materials and reduces the circularity of the sectors. Material and products containing POPs cannot be recycled and must be disposed of in an environmentally sound manner with appropriate technologies. The presence of POPs in the manufacturing processes may be avoided both through chemical replacement with non-POPs alternatives (for instance, by replacing SCCP with MCCP in the formulating of chlorinated rubber paint) or by the design of intrinsically safe products (for instance, by replacing brominated flame retardant in plastic with materials which are intrinsically not flammable). Similarly, GHG reduction may be ensured through recycling of materials rather than manufacturing from virgin sources: for instance, recycling of PET in industrial processes may result in the saving of 35 MJ for each Kg of PET pellets recycled (Benavides et al., 2018); considering the energy required by the recycling process, a net energy saving of over 25 MJ/kg of PET can be achieved through recycling.

89. Given the situation of Georgia, guidelines will be drafted to ensure the proper implementation of POPs-free, energy efficient and circularity in selected sectors:

? Manufacture of food products (including packaging) with the aim to prevent the use of PFOAs containing packaging, the minimization of plastic packaging and the promotion of recyclable/reusable packaging;

? Manufacture of basic metals: guidelines aimed at increasing the reuse and recycling rate of metals, in compliance with the EU rules on End of Waste criteria for scrap metal; guidelines for the reduction of u-POPs releases through adoption of BAT/BEP in processes and Air Pollution Control systems; prevention of the use of PFOS in steel plating processes.

? Manufacture of chemicals and chemical products: prevention of the use of POPs in the formulation of products (with specific reference to HCBDD and SCCP); guidelines for the reduction of U-POPs releases through adoption of BAT/BEP in processes and Air Pollution Control systems;

? Manufacture of rubber and plastic products: guidelines aimed at increasing the reuse and recycling rate of plastic materials, including prevention of single-use plastic; avoidance of the use of PBDEs, HCBDD and SCCP in the formulation and manufacture of specific materials. POPs provisions in EPR schemes will be also explored for the following goods, which are mostly imported:

? Automotive: inclusion of rules on proper management of POP-PBDE, PFOS and PFOAs, and SCCP containing components of ELVs;

? Electric and electronic equipment; inclusion of rules on proper management of POP-PBDE and other POP-BFR in WEEE;

? Building materials (insulating foam and paints): prohibition of the import of building materials (paint and insulating foam) containing HCBDD and SCCP.

90. Policy tools may be structured as a financial mechanism supported by manufacturers to take care of their products when they reach end of life. For instance, EPR in the plastic packaging sector may be structured as a financial resource subscribed by the enterprises operating in the country made available to support collection, recycling and disposal of waste packages, under a Packaging Recycling Organization (PRO). A PRO may establish a financing mechanism opened to external contributions aiming to expanding the scope of the EPR. For instance, specific financial chapters may be established to support industries which intend to phase out POPs from their manufacturing or recycling activities, or reduce GHG emission through increased recycling or energy efficiency. While establishing a financial mechanism based on the EPR, the following will have to be considered:

? POPs reduction should be supported ?in the initial stage ? through GEF contribution under the criteria of incremental cost;

? Waste management and circular economy approach will have to be supported by the producers under the principle of the internalisation of their environmental cost (including the polluter pays principle);

? The EPR financial mechanism will have to be self-sustainable in the medium term. The apparently higher cost sustained by enterprises to support the PRO initiatives will be repaid through the avoidance of market losses and liabilities. This is already very clear to most of international enterprises and worldwide brands which currently include their commitments to SDG as part of their branding strategy.

Component 2. Life-cycle approaches and BAT/BEP for the reduction of POPs in the manufacturing and recycling sectors implemented

91. Under this component, the project will develop and pilot approaches aimed at eliminating POPs throughout the lifecycle of products. This component is innovative in comparison with previous projects carried out in the country which were mostly based on ?end of pipe? approach, i.e. were basically considering only the need to dispose in an environmentally safe way of the legacy of POPs stockpile (PCB and Pesticides) still present in the country. This project component aims to rethink key manufacturing process and avoid the use of POPs in the process, either as virgin products (for instance SCCP as additive in paint or PFOAs as surface treatment in food packaging) or as unwanted contamination through the recycling of POP contaminated materials (for instance, recycling of plastic contaminated by POP BFRs).

Outcome 2.1.: Lifecycle approaches for the reduction and phasing out of POPs in the manufacturing and recycling sectors implemented

Output 2.1.1 Verification of manufacturing sectors potentially using or releasing HBCDD (EPS/XPS manufacturing, plastic), SCCP (paint manufacturing), PFOS/PFOAs and PBDE (ELV recycling) carried out

92. A survey will assess the value chain manufacturing sectors to identify processes and materials which may be affected by the presence or release of industrial POPs.

93. The basic objective of the survey will be to verify key products and sections of the value chain where the limitation on the use of POPs and other substance of concern may be more effective. For instance, identification of plastic components in products which are still treated with flame retardants (electric cables or component near to a heat sources); industrial processes that can be optimized through a more efficient use of chemicals; importer or manufacturers of building materials (insulating foam and chlorinated paints), industrial processes which may require the use of POPs (like PFOS in steel plating or SCCP in leather treatment), recycling of unused chemical streams.

Output 2.2. Specific environmentally sound management plans (ESM) for manufacturing and recycling sectors to reduce POPs, recycle valuable materials and final disposal of POPs-containing waste.

94. For manufacturing sectors using POPs or POPs-containing materials, detailed ESM plans and disposal strategies will be developed to identify technically and economically feasible disposal alternatives and to support sound disposal practices. Once the BAT/BEP technologies are defined, a national elimination plan for each sector will be developed to align potential synergies and ensure cost-effectiveness in line with Georgia's commitment towards the Stockholm Convention.

Output 2.1.3. BAT and BEP for the phasing out of POPs in manufacturing / recycling process to facilitate the adoption of a circular approach in the manufacturing industry, in at least one pilot facility

95. At least one pilot facility in one of the surveyed sector will implement a BAT/BEP manufacturing process with avoidance of POPs, under this output. The following intervention will be considered in identified sectors and potential industries (see also Annex L):

? Paint and solvent sector (avoidance of SCCP, energy saving)

? Food packaging (increased recycling, reuse or avoidance of plastic packaging; avoidance of PFAS in food containers)

? Building sector (piloting of the recycling of building waste; avoidance of HBCDD in the manufacturing or import of XPS/EPS)

? Chemical industry: commitment to the development / import of POPs free alternatives for specific downstream sectors; support to the identification of POP containing chemicals.

Component 3: Capacity building and knowledge management

Outcome 3.1.:Environmental authority, manufacturing and recycling sectors are empowered to reduce industrial POPs with positive effect on the establishment of a circular economy approach along the lifecycle of products.

96. Under this component, an efficient system of knowledge exchange, technical support, and involvement of stakeholders in the manufacturing and recycling sectors will be established.

Output 3.1.1 Multi-stakeholder platform created to sustain the phasing out of industrial POPs and to ensure the timely exchange of information and resources among business sectors and the regulators

97. A knowledge exchange platform, will aim to facilitate disclosure of data concerning the import and use of POPs, which were not fully identified in the NIP inventories or which did not fit the scope at the time of NIP development. Knowledge on alternative materials and processes, trade names of industrial POPs, and international example on POPs replacement will be shared on the platform. Through the platform, technical exchange with other GEF related projects will be facilitated. The platform will be developed and managed by the government of Georgia for the duration of the Project. Decisions related to the ownership of the Platform will be approved in Project Steering Committees. As RECC will have resources for knowledge management: the management of the Platform may be delegated to them if approved by the steering committee.

Output 3.1.2.Capacity-building training, including gender dimensions, for selected manufacturing sectors, governmental stakeholders on POPs and circular economy, and custom authorities to prevent the import of POP containing materials strengthened carried out

98. Training on POPs, life-cycle approaches, and circular economy aspects will be delivered to selected manufacturing and recycling sectors. The training will cover at least the following topic:

- ? Stockholm convention and BAT/BEP guidelines;
- ? Introduction to the environmental regulation in Georgia and its future development
- ? Industrial POPs in the manufacturing industries: technical, environmental and toxicological properties; chemical and non-chemical alternatives;
- ? Introduction to circular economy and their opportunities in manufacturing industry
- ? The impact of POP on the circular economy
- ? The opportunity offered by recycling and reuse of end of life material on the energy balance
- ? Resource and Energy saving in the manufacturing processes

99. With respect to the prevention of illegal imports and marketing of POP chemicals, the project will undertake training of customs control officers to improve the efficiency of inspections of imported chemicals and the capacity to identify POPs and other banned chemicals.

100. The project will also develop and provide technical assistance and manuals with clear instruction to be followed during inspections in entry points.

Output 3.1.3. Knowledge materials on POP management and their implication on circular economy developed and disseminated to wide range of stakeholders, including business sector

Under this output, knowledge material used for the training course under output 3.1.2 and 3.1.3, as well as the material developed and circulated under output 3.1.1 will be shared on a dedicated website. Environmentally Sound Management Plans developed by the Project, along all knowledge material developed, will be shared on this website to further disseminate all technical information to stakeholders. All knowledge material developed by the Project will appropriately display the GEF logo.

The website will be developed and managed by the lead executing agency of the project. Ownership will be kept with the Ministry of Environment after project completion.

4) Alignment with GEF focal area and/or Impact Program strategies;

101. This project is aligned with the GEF-7 Chemicals and Waste Focal area, Programmes 1-1 on Industrial Chemicals. In particular, it promotes the elimination, restriction and control of POPs chemicals. It is also aligned with the CW 1-1 objective to strengthen the sound management of industrial chemicals and their wastes through environmentally sound management approaches. The project also intends to strengthen the national legislation related to the environmentally sound management of POPs aiming at more options for the recycling of valuable fractions or disposal of hazardous fractions while reducing the release of emissions. Following GEF-7 guidance on a country-driven approach through catalyzing innovative solutions based on local knowledge and locally developed technologies and practices.

102. The GEF Industrial Chemical program also funds enabling environment and strengthening of national legislation and regulatory capacity for meeting Stockholm Convention obligations, with regards to persistent organic pollutants. This will include the removal of market access barriers for alternatives for products containing GEF relevant chemicals, and which can reduce the production of harmful chemicals.

103. This project is aligned with the GEF-7 principles of cost-effectiveness; sustainability; innovation; private sector engagement and building on the use of existing national framework. The selected demonstration sectors will be an entry point to address the reduction of POPs along the national life-cycle, including the manufacturing side and an initial attempt towards broad adoption of life-cycle approaches, BAT/BEP and through commercially available POPs alternatives.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

104. The incremental cost reasoning and expected contribution from the baseline are described below in tabular format.

Baseline	Incremental Alternative scenario
<p>Component 1. Policy strengthening by integrating a life-cycle approach into the existing legislative framework to prevent future build-up of POPs in manufacturing and recycling sectors</p>	

The promulgation of the new waste law, the "Waste Management Code" was adopted on 26 December 2014 and came into force in January 2015. Although the newly adopted Code is based on the principles and approaches envisaged by the EU-Georgia Association Agreement (AA) and best international practices, it is necessary to develop and adopt a number of secondary legislation for the full implementation of the Code. The issue of POPs in waste could remain not adequately addressed in the absence of the technical support that could be provided through the GEF project. Moreover, there is currently no regulation aimed at a proper implementation of CE principle upstream, i.e. in the manufacturing sectors. The development of guidelines for avoiding the use of POPs in the manufacturing sectors is still absent. A similar situation affect the development of the policy tools (e.g. EPR strategy) in Georgia, which, although considered as a milestone for the support of the waste management system, does not consider any provision related to the concentration of POPs in waste through a proper implementation of waste recycling or avoidance.

"To ensure that POPs are properly embedded in the regulatory process, the project will strive to ensure that the Stockholm Convention requirements on new POPs are integrated in the national regulatory framework (Outcome 1). Furthermore, the Government of Georgia, through MEPA, will be involved in all stages of policy drafting that the policy drafting process will be led by the REC Caucasus and UNIDO will take supportive and advisory roles." Under this outcome, the SC requirements, with specific reference to the new POPs which have been enlisted after the COP4, will be properly integrated in the environmental and technical regulation of the country. More specifically, the project will provide the necessary technical assistance to ensure that new POPs are integrated in the existing environmental regulation and in the regulation on chemical management.

Moreover, the project will provide technical assistance to ensure that POP will be mainstreamed into the ongoing policy efforts. Beside the financial support which is envisaged through the EPR mechanisms, Producers (the "P" of EPR) will ensure that POPs are properly eliminated since the design stage of their products and that the entire lifecycle of their products is designed in such a way to reduce POPs.

Component 2. Life-cycle approaches and BAT/BEP for the reduction of POPs in the manufacturing and recycling sectors implemented

In Georgia, the only activities carried out so far for the elimination of POPs were focused on the disposal of PCBs from electrical equipment (project 'PCB-Free Electricity Distribution in Georgia', GEF 9227, under implementation) and the disposal of obsolete pesticides (Disposal of POPs Pesticides and Initial Steps for Containment of Dumped POPs Pesticides, GEF 4012). Currently there are no projects, either funded by the Government of Georgia or supported through GEF, dealing with a life-cycle approach for the phasing out of POPs in manufacturing or recycling sector. The government has adopted a number of technical regulations, including the 'Technical Regulation on Used Batteries and Accumulators (Government of Georgia #324; 25.05.2020); the 'Technical Regulation on Used Oil (Government of Georgia #327; 25.05.2020); the 'Technical Regulation on End-of-life Tires (ELTs) (Government of Georgia #325; 25.05.2020); the 'Technical Regulation on Waste electrical and electronic equipment (WEEE) (Government of Georgia #326; 25.05.2020) which may have POPs implications, however a proper policy to ensure that POPs are kept out of the manufacturing process, through enforcement of the rules and technical standards envisaged by the EU regulation on POPs and the Stockholm Convention guidelines on BAT/BEP has not yet been developed. The development of EPR framework in Georgia is now starting, however proper consideration of the responsibility of Producers / Importers concerning the need to eliminated POPs from the lifecycle of products manufactured or imported has not been considered yet.

In the absence of the GEF project, the country would miss an important opportunity to leverage on the implementation of the POPs and waste regulation to phase out POPs from the entire lifecycle of products.

Under this component, the project will develop and pilot approaches aimed at eliminating POPs along the national lifecycle of products. This component is innovative in comparison with previous projects carried out in the country which were mostly based on 'end of pipe' approach, i.e. were basically considering only the need to dispose in an environmentally safe way the legacy of POPs stockpile (PCB and Pesticides) still present in the country. This project component is therefore thought with the aim to rethink key manufacturing process with the aim to avoid the use of POPs in the process, either as virgin products (for instance SCCP as additive in paint, or PFOAs/PFAS as surface treatment in food packaging) or as unwanted contamination through the recycling of POP contaminated materials (for instance, recycling of plastic contaminated by POP BFRs). This will be carried out by leveraging on BAT/BEP approaches, including enhanced recycling opportunities, in the framework of circular economy aspects; carrying out a surveys of manufacturing sectors potentially using or releasing HBCDD (EPS/XPS manufacturing, plastic), SCCP (paint manufacturing), PFOS/PFOAs and POP-PBDEs (plastic recycling), in order to identify at least one sector/factory where to demonstrate the elimination of POPs from the manufacturing process.

Component 3: Capacity building and knowledge management

Georgia signed Stockholm convention on May 23, 2003 and ratified in April 2006. The first National Implementation Plan (NIP) of Georgia was developed with financial support from GEF and technical assistance from UNDP and UNITAR, and was adopted by the Decree No 907 of April 21, 2011, on approval of Persistent Organic Pollutants National Implementation Plan, for the years of 2011-2015.

Subsequently, in compliance with article 7 of the Convention, Georgia has submitted, on May 23rd, 2018, the update and review of the National Implementation plan, including action plans for PCBs, POP pesticides, PBDEs, HBCDD, PFOS and related chemicals, and U-POPs. The NIP update does not include yet inventory or action plans for POPs listed in the Convention after the COP 6, including PFOAs, SCCP, deca-BDE.

One of the priority action plan established under the updated NIP (2018-2022) concerns the awareness raising on POPs. This includes: Ensure availability of the information and participation of the social groups ; Informing and Raising awareness of different social groups on the adverse impact of POPs on human health and environment, prepare and disseminate respective printing materials, organize seminars, dissemination of the information through media, etc; enhance awareness on original POPs and new POPs, including trainings for industry on best available techniques and best environmental practices for the use of POP containing materials and articles and their alternatives. Currently, no specific resources are allocated by the GoG to ensure that in addition to the raising awareness activities scheduled under the implementation of the Waste Code, also the POPs-related aspects in manufacturing and recycling processes are properly communicated.

The project intends to support the Action Plan on awareness raising on POPs established under the NIP update through a number of activities including:

The establishment of a multi-stakeholder platform created to sustain the phasing out of industrial POPs, and to ensure the timely exchange of information and resources among business sectors and the regulators; The training on circular economy, policy tools and POPs for relevant manufacturing and recycling sectors in Georgia, which will include topics as Industrial POPs in the manufacturing industries: technical, environmental and toxicological properties; chemical and non-chemical alternatives; Introduction to circular economy and their opportunities in manufacturing industry; the impact of POP on the circular economy; the opportunity offered by recycling and reuse of end of life material on the energy balance; resource and energy saving in the manufacturing processes;

The training for governmental stakeholders on POPs and circular economy, including international examples of implementation and regulatory development; the impact of POP on the circular economy; introduction to environmental economy: policy tools, EPR, fiscal incentives, green loans, shifting from the economy of goods to the economy of services.

Furthermore, the capacity of custom authority to prevent the import of POP material will be strengthened to improve the efficiency of inspections of imported chemicals and the capacity to identify POPs and other banned chemicals.

6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

105. Following the latest NIP, which was updated in 2018, in the period 2006 to 2014, 2300 tons of insulation foam and articles (special clothes) treated with HBCDD were imported, containing pure HBCDD in a range comprised between 39.2 to 261.0 tons. Assuming that the trend continued from 2014 up to now, by finding alternatives to such materials (which indeed are already commercially available) and ensuring a better control of the import of HBCDD contained material, it is expected that the project can demonstrate the reduction of at least 50 tons of HBCDD.

106. The NIP provides no information concerning the use and import of SCCP. This is because SCCP were not listed under the Annex A of the Stockholm Convention when the NIP update was developed; moreover, a guidance on the inventory of SCCP is not available yet. However, large concentration of SCCP may be contained in some products of common use, like special anti-rust paint, paint for road signals, and pools, sealants and glue used in furniture manufacturing, and plasticiser used in plastic manufacturing. For instance, the concentration of SCCP in anti-rust and road sign paints (the so called rubber-chlorinated paints) is not less than 10%-12%. By controlling the import of SCCP containing products and limiting the use of such chemical in paint manufacturing, for an overall product amount of around 500 tons, a reduction of 50 tons of SCCP in import / use could be achieved. SCCP are still the POPs manufactured in largest quantity worldwide with manufacturers still active in China and India.

107. The NIP provides information on the use of part of vehicles and electronic equipment with PBDE. The estimated amount of POP-PBDE in these 2 sectors was 91 tons in imported vehicles and 4.4 to 12.9 tons in the casings of Cathode Ray Tubes. Management of PBDE in these two classes of end of life products is however quite challenging, due to fact that a formalised collection of ELV or WEEE in Georgia is absent. In more recent vehicles, POP-PBDE are mostly limited to Deca-BDE, which was the last PBDE chemical to be listed under the Stockholm Convention, and indeed it was still used in car manufacturing until 2017 (ACEA, 2018).

108. The project could likely demonstrate only a limited amount of PBDE elimination out of the proper management of ELV and WEEE. SAEFL (2003) estimates a content of 0.625 g/kg with respect

to the total weight of plastics in cars exclusive of EEE plastic components (switches, transformers, lighting appliances), whilst the Danish EPA estimates an average amount of 1 to 5 g of deca-PBDE for each car. The amount of plastic in car is around 5% to 20% weight basis. Adopting the SAEFL estimate, assuming an average weight of 1.5 tons for cars, the amount of deca-PBDE in each car would be around 47 to 188 g. With this concentration it is expected that a very limited amount of PBDE segregation from the ELV can be achieved, not exceeding 0,2 tons in case the segregation of this compound from around 1000 cars is demonstrated; amount to around 5 tons of POPs-containing PBDE plastics (assuming 25% of plastics).

109. No quantitative estimation is provided in the NIP concerning PFOS except the use of such chemicals in aviation hydraulic fluid and firefighting foam, for an overall PFOS content respectively in the order of 3.3 to 6.6 and 1.6 to 19,7 tons. Consequently, PFOs has not been included into the Core Indicators, however, might be added at a later stage.

7) innovation, sustainability and potential for scaling up

Innovation

110. Georgia has not receive an individual GEF-7 project on Chemicals&Waste, and thus did not sufficiently work on environmentally sound approaches towards reduction of new industrial POPs. Georgia needs this MSP to path the way towards life-cycle approaches involving the national manufacture and recycling sectors to avoid build-up of industrial POPs and industrial POPs-containing material. As these approaches are rather new for Georgia, innovation arises from the implementation and strengthening of relevant ESM and BAT/BEP concept to reduce the use and build-up of industrial POPs, while stopping the import of these chemicals.

Sustainability

111. The project has a high probability of being sustainable as it will partner directly with private sector companies and associations and improve and invest in their environmental performance. The project objectives are aligned with national policies of Georgia. The enhancement and improvement of national regulatory mechanisms to promote circular and sound management of POP in manufacturing and recycling sector will provide the framework for ensuring the sustainability of the project in the future years after project completion. The multi-stakeholder knowledge platform will dessiminate valuable information, like the ESM plans and BAT/BEP, and ensure that results achieved will be available over time to targeted industrial sectors and policy-markers. The strategy of the project to address sustainability of project outputs and achievement of its expected outcomes is hinged on the following principles:

? Alignment with and contribution to Georgia's goals and commitments for increased circular and sound management of POP in the country in order to strengthen Government's ownership of project outputs and outcomes;

? Complementarity and proximity of proposed POP policy and project interventions with existing initiatives, in order to limit initial incremental resource requirements on the side of the Government and other beneficiaries;

? Proximity with existing technical and stakeholder capacities, in order to ensure greater absorption and synergies;

? Increase the visibility and importance of POPs prevention in achieving national POP elimination targets and climate change mitigation goals and obligations vis-?-vis senior Government officials and within key national strategic and policy documents;

? Generate almost immediate tangible added value and benefits for key stakeholders, such as private sector, PROs, services providers and financing institutions, in order to create a stronger market pull for the continuation and replication of services and activities undertaken by the project;

? Involve and collaborate in the project execution with key stakeholders and private sector representatives in the field of POPs in the manufacturing and recycling sector.

Scaling-up

112. Project activities will also provide the basis for the development of national capacities and services in the field of safe manufacturing and recycling technologies, including the prevention of POPs throughout the lifecycle of products. This would generate a new breed of professionals with specialized expertise in this field and the development of new job opportunities, thus contributing to economic growth.

113. The potential for scaling up and replication of this project lies with the private sector and will be secured with training, awareness and capacity building activities on circular economy and sound management of POP in the context of Circular Economy. The holistic approach to prevent/reduce POPs through the lifecycle of products could be used as a reference for other sectors in the country and in other countries facing similar challenges.

1b. Project Map and Coordinates

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

will be part of a broader stakeholder engagement strategy, which will also engage central and local governments, civil society and others with an interest in the project.

116. The satisfaction of stakeholders with the project and its benefits will be regularly assessed. Stakeholder management will be a core activity of the implementation phases to ensure project success.

117. A detailed Stakeholder Engagement Plan (see Annex I) has been developed to plan stakeholders consultation throughout project implementation.

118. The Stakeholder Engagement Plan defines a technically appropriate approach to consultation and disclosure. The goal of this plan will be to improve and facilitate decision making and create an atmosphere of understanding that will actively involve project affected people and other stakeholders in a timely manner. The stakeholders will be provided sufficient opportunity to voice their opinions and concerns that may influence project decisions. The plan will be a useful tool for managing communications between the project and its stakeholders.

119. Information about the future roles of stakeholders and proposed means of future engagement, as well as how the project will keep engaging stakeholders through adequate means are shown in the table below:

Table: Role of the key stakeholders proposed means of future engagement

Key stakeholders	Anticipated role in the project
Regional Environmental Centre for the Caucasus (REC Caucasus)	<p>The Regional Environmental Centre for the Caucasus is a not-for-profit organisation. In 24 March 2000 RECCaucasus (hereinafter: "the IP") was officially registered as an independent, not-for-profit, non-advocacy foundation in Tbilisi, Georgia with ID: 204943552. REC Caucasus has been established to:</p> <ul style="list-style-type: none"> - contribute to the improvement of the Caucasus environment by facilitating introduction and implementation of global, European, regional and national environmental policies; - serve environmental stakeholders national and local governments, NGOs, , private sector, local communities, international community, within and outside the South Caucasus region; <p>provide a gateway for dialogue, networking and cooperation among environmental stakeholders and partners at global, regional, national and local levels;</p> <p><u>Role in the project:</u> The centre will act as project executing entity (PEE).</p>

<p>Ministry of Environmental Protection and Agriculture (MEPA)</p> <p>Waste and Chemicals Management Department</p>	<p>The Ministry of Environment Protection and Agriculture of Georgia (MEPA) is responsible for carrying out the state policy in the protection and rationale use of Natural Resources in the Country. Its competence is to coordinate the management of chemicals/waste (including POPs) in Georgia and to implement relevant policy. The MEPA is a DNA for the following conventions: Basel, Rotterdam, Stokholm, Minamata conventions and Monreal protocol. The main structural unit of the ministry responsible for the chemicals management (including POPs management) is the Wastes and Chemical Management Service</p> <p><u>Role in the project:</u> MEPA will be the national implementing institution of the project. It will also lead the project steering committee (PSC).</p>
<p>Ministry of Economy and Sustainable Development (MESD)</p>	<p>The Ministry of Economy and Sustainable Development (MESD) is responsible for the for-energy efficiency in buildings, transport and the issues of green economy.</p> <p><u>Role in the project:</u> The Ministry will be a member of the PSC.</p>
<p>Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia</p>	<p>Competence of the Ministry is to draft and enforce the state policy of the labour, employment, health and social protection of the population. In particular this Ministry is in charge of the elaboration, implementation and control the state programmes of health protection; assessment and monitoring the health condition of the population; development and implementation of priority activities in the field of maternal and child health and social protection; ensure healthy environment at the whole territory of the country, development, adoption and control of sanitary norms and rules.</p> <p><u>Role in the project:</u> Ministry will be a member of the PSC with the key role to provide indication on the risk management measures and PPE adopted by the operators involved in waste and chemicals management.</p>
<p>Customs Department of Revenue Service under the Ministry of Finance of Georgia</p>	<p>Competence of the Department is the management of control of Transboundary movement and custom's clearance of goods including waste and chemicals.</p> <p><u>Role in the project:</u> The custom department will be a member of the PSC, with the main task to provide support in issues concerning import and export of chemicals and waste.</p>
<p>Private Sector</p>	<p>Private Companies - Manufacturing enterprises, both large and SMEs, and their sector associations will play the key role as stakeholders, partners and beneficiaries of the project. Respective PROs and waste treatment/recycling companies will be also playing a key role and contribute to the achievement of project outputs.</p>
<p>Local Administrations (Municipalities)</p>	<p>Municipalities are responsible for collection and processing of municipal waste, and the control of environmental pollution in their territory. Municipalities adopt a Municipal Waste Management Plans for the management of the municipal waste produced within their territory. Municipalities also will be involved in implementation of EPR schemes.</p> <p><u>Role in the project:</u> Municipalities have to be informed on the activities to be carried out in their territory. Their role in the awareness raising activity is very important.</p>
<p>Local NGOs and CSOs (e.g. women initiative groups)</p>	<p>Local NGOs and CSOs play a prominent role in informing public policy about the options of improving public transport, reducing traffic congestion and promoting awareness on sustainable transport efforts.</p> <p><u>Role in the project:</u> Local NGOs and CSOs will help to identify gaps and challenges related to the management of waste and chemicals in the view of public participation.</p>

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

Stakeholders involved at the *national level*:

120. In reference to national stakeholders, strong emphasis will be placed on the participation of the private sector and civil society to ensure their active involvement in the execution of the project and sensitization towards POPs issues. NGOs, including research groups and academic institutions, industrial and professional associations, will be invited to stakeholder's consultations to contribute to the achievements of the project objectives. Special emphasis will also be placed on the participation of women, as one of the vulnerable groups to POPs, on the National Coordinating Mechanisms (NCMs) to ensure their active involvement throughout the project duration. Further, civil society organizations (CSOs) representatives will be involved in the NCMs as necessary. A preliminary and general list of national stakeholders has been identified and is given in what follows.

121. A list of national stakeholders include:

? The Ministry of Environment Protection and Agriculture is a government entity having a mandate for environmental and resource strategy development, legislation and policy formulation, environmental impact assessment and development of environmental quality standards. Ministry is the national authority of number environmental conventions, including Stockholm convention, Basel Convention, Rotterdam Convention, Minamata Convention (will be ratified soon) and United Nations Framework Convention on Climate Change (UNFCCC).

? Ministry of Labour, Health and Social Affairs of Georgia implements state governance and state policy in the fields of labour, health and social affairs, and its mission is to promote the population's good health and functional capacity, promote healthy working and living environments, ensure that there are sufficient social and health services.

? The Ministry of Economy and Sustainable Development with its subsidiary body - Technical and Construction Inspectorate carries out control of Limited Market Access Materials.

? The Ministry of Finance and Customs Department is a body that controls import, export and transit of the different products/goods.

? Private Companies ? PROs and similar companies/associations involved in EPR implementation in the Country will be playing a key role and contribute to the achievement of project outputs.

? Civil society organizations will be involved in the project to share all important information and experience accumulated in the public and local communities with regard to environmental and health aspects chemicals and its releases. Also they will be involved in the project preparation and implementation process as one of the main stakeholders, such participation includes attendance of project related meetings/events and revision of project documents. Civil society organizations will further be engaged in public consultation as per established UNIDO policies.

Select what role civil society will play in the project:

Consulted only; Yes

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

122. Gender mainstreaming means identifying gaps in gender equality using sex disaggregated data, developing strategies to close those gaps, putting resources and expertise into implementing strategies for gender equality, monitoring and implementation and holding individuals and institutions accountable for results. Gender mainstreaming is not an end in itself; it's a process whose goal is to achieve gender equality (Sustainable Development Goal 5).

123. Gender or vulnerable populations are not explicitly mentioned in the Convention text. Nevertheless, several decisions of the Convention's bodies have referred to gender. For instance, in 2013 the BRS Secretariat released the BRS Gender Action Plan with the vision that ?gender equality should be an integral part of the implementation of the Basel, Rotterdam and Stockholm Conventions?. Gender mainstreaming activities will be implemented in accordance to the gender mainstreaming plan of the project.

124. The level of exposure to POPs chemicals and its related impacts on human health are determined by social and biological factors. Women, children and men might be exposed to different kinds, levels and frequency of new POPs chemicals (e.g. in the household, agriculture, industry, school, etc.). The Stockholm Convention Global Monitoring Plan have bio monitored persistent organic

pollutants in human milk, in recognition to the fact that women are particularly impacted by the poor management of hazardous chemicals and wastes.

125. Gender equality is associated with the relationships between men and women and the social construction of gender and gender roles. While gender equality is not only a "women's issue", but also typically women who are disadvantaged in terms of control of and access to resources or decision making where gender inequality exists. Therefore, women's empowerment is a critical aspect of gender equality.

126. In Georgia there are legal mechanisms establishing the foundation for gender mainstreaming, however it does not ensure equality. International indexes as well widespread perception of gender equality in the country indicates on low awareness and low level of gender equality. Although the main goal of the project is not achieving gender equality, it is still focused on gender mainstreaming and empowerment, as one of the most important aspect. Equality is related to having power in decision making. Consequently, representation and participation are key conditions for achieving gender equality.

127. Approximately the same number of women (19.4%) and men (19.6%) are among people living below the absolute poverty line. The population under the absolute poverty line is 23.7% in rural Georgia and 16.4 percent in urban areas. Compared to 2018, in 2019 the absolute poverty rate of the rural population has increased by 3%. Every fifth person in Georgia lives below the poverty line, their monthly income is less than 166 GEL. 24.5% of families with one or two children and 34.4% of families of many children live below the poverty line. 88% have no money savings. Out of 1000 people, more than 645 have bank loans. Important to note, the average monthly income of a household in Georgia was 1,175.3 GEL (\$368.2/337.8) in 2019, while it amounted to 336.1 GEL (\$105.3/96.6) per capita.

128. There is vertical segregation issue, which is manifested in the fact that women are more employed in lower positions than men and consequently, earn less. Majority of public servants on decision-making positions are men, it is the same on national and municipal levels. As for Kutaisi, it is noteworthy that majority of heads of the departments of the Mayor's City Hall as well as deputy mayors are men. Furthermore, employed women often carry a double burden, as they have to perform both job and household chores. With this, Labor Code of Georgia is often criticized for not meeting internationally accepted standards. For example, maternity leave according to Labor Cod of Georgia is 126 days and the parental leave period is a minimum of 2 weeks each year, with a maximum of 12 weeks until the child is 5 months old and it is possible to leave him / her with a caregiver of either sex. The law does not provide any kind of job guarantee for pregnant women which will ensure that the employer will not dismiss them from the workplace. The aforementioned forces women to abstain from maternity leave, which puts women in more vulnerable position than men. Agriculture and Rural Development Strategy of Georgia mentions, that according to general gender statistics, men hold higher managerial positions in Georgia and earn more in agriculture and construction sectors, where particularly few women are officially employed. The strategy also highlights women's limited access to resources such as land and finance, as well as the limited involvement of women in the decision-making process. Furthermore, women have less access to information, modern technology and agricultural resources than men. However, despite the small representation of women in decision-making positions, the standpoint of the population towards female leaders both at the national and local levels is positive. Many studies show that both men and women think that women make great leaders and their role in decision-making should increase. Addressing the issue discussed above, Target 5 of SDG 5 calls for ensuring "women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life". Similar to the provisions applicable at the State level, the Gender Equality Law of Georgia sets an obligations for local self-governing bodies to ensure gender balance among staff, management and in advisory bodies and councils.

129. This project aims at contributing to the Stockholm Convention Action Plan through the development and implementation of a gender analysis and a gender strategy with gender indicators to mainstream gender throughout the project. It's recommended that the focal point of the Stockholm Convention follow a training on gender equality for a better understanding of the topic before working on the strategy. The following are some of the elements that have been considered and activities to be carried out during implementation:

130. Project Planning and Activities:

- ? Seek gender parity while setting project management unit;
- ? Ensure a gender-balanced leadership and decision making, **as well as gender expertise**, in project planning and implementation, this includes technical teams in various government bodies tasked with developing and implementing the NIP;
- ? Align project activities with national and regional gender protocols which can be used as benchmarks;
- ? Build capacity on gender issues among partners and beneficiaries;
- ? Develop and integrate mechanisms to ensure **gender expertise**, gender-balanced representation and women's participation in project activities; and
- ? Capture the voices of women and men, **and gender experts**, and develop gender-sensitive communication plans.

Please refer to Annex J for details of the Gender Analysis and project gender implementation plan.

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

Generating socio-economic benefits or services or women Yes

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

Yes

4. Private sector engagement

Elaborate on private sector engagement in the project, if any

131. The private sector has technical knowledge, skills, resources, and capacity to scale-up investment and provide innovative solutions along the entire 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.

132. Manufacturing enterprises, including SMEs, and their sector associations will play one of the key roles as stakeholders, partners and beneficiaries of the project. Different private companies will be attracted in the project activities that mostly will be facilitated through EPR schemes e.g. PROs and respective associations. The major focus will be devoted to the waste treatment/recycling companies that will also be playing a key role and contribute to the achievement of project outputs.

133. The project will work with a number of private institutions and firms, mostly on two sides:
 ? Representatives of private industries and industrial associations will be involved in the process of development and implementation of EPR schemes, even as co-financing partners.

? Selected factories on the relevant sectors (foam and polymer industry, automotive and electronic, building materials, upholstery) will be involved in the demonstration of POP-free manufacturing.

134. The involvement of the private sector, industrial associations and the PROs will be crucial for the project. There is an ongoing process of establishment of the PROs in the country, in accordance with the recently adopted technical regulations. As soon as the PROs are established, the project will ensure close cooperation and partnership to implement relevant outputs and deliverables. In addition, the following industrial associations were visited and consulted during the develop of this project, and their active involvement is envisaged during the implementation of the project:

Company Name	Activity
LTD Caparol Georgia	Paints production
LTD Geocolor	Paints production
LTD Reffix	Paints production
Ltd. GRC	Thermal Insulation Materials
LTD Georgian Leather	Leather production
LTD ?Eco Service Georgia?	PRO on ELV
LTD Medical technology	PRO on ELV
LLC. Adjara Textile	Textile production

135. The project will also build upon a strong private sector involvement for the pilot project such as capacity-building, technical support for POPs alternatives and utterly to ensure project commitment and co-financing. Additional information about the companies are given in the Annex ?Stakeholder Plan?.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Risk	Category	Risk before mitigation			Proposed Mitigation	Risk after mitigation		
		Probability	Impact	Risk		Probability	Impact	Risk
The situation of the pandemic still not completely solved before the project at project implementation .	Management	M	L	L	The project will include measures aimed at protecting all project participants from infections associated to the virus, in line with the recommendation of health care authorities.	L	L	L
Difficulties arising from the coordination among administrations of different levels	Management	L	L	L	<p>Representatives of different levels will be involved in the steering committee; the tasks of the PMU will include ensuring adequate communication with all project partners; roles and composition of each project institution will be clarified and agreed since the inception of the project.</p> <p>The risk will also be mitigated through building understanding and capacity of project counterparts and stakeholders during project preparation and implementation to ensure stronger ownership of project, and a clear definition of roles and responsibilities of counterparts, continuous monitoring and periodic reporting to main Governemnt counterparts and partners.</p>	L	L	L

Project activity impacted by GHG or climate change	Climate	L	L/M	L/M	The Project will not establish new infrastructure but only rearrange products, materials or industrial processes, Therefore, there will be no additional risk linked to climate change compared to the baseline	L	L/M	L/M
Gender Mainstreaming activities / goal not conducted or achieved	Social	M	M	M	Georgia is a favorable country in term of GM policies, therefore no structural or cultural obstacle are expected to hinder the GM related project policies and activities. In any case, a detailed GM logical framework, with budget and indicators, will be integrated in the project. GM targets will be considered as core project targets	L	L/M	L/M
Difficulties in evaluating GEB baseline and achievement	Technical	M	M	M	The main difficulties in assessing the GEB baseline will be addressed at the very initial stages of the project, where surveys on the manufacturing sectors will be undertaken. Criteria for the calculation of the reduced GEB achievable from the reduce consumption and release will be established in detail in these stages. A residual risk on the estimation of POPs cannot be completely eliminated, but adoption of conservative criteria for the estimation will ensure that the GEB at project design are more likely underestimated than overestimated	L	L/M	L/M

Small manufacturers not willing to participate, or not interested in improving their qualitative or quantitative capacity	Social	M	M	M	The risk that small manufacturers may not be very interested in participating in project activities will be addressed by properly communicating the economical benefit to take part in project training activities, and the risk to be not prepared to the fulfilment of standards that may be endorsed by the government on the matter.	L	M	M
Proposed policies, regulations and programs are not adequately adopted and implemented; weakening of political commitment.	Regulatory	H	M	M	This risk will be substantially mitigated by: (i) Engaging decision makers early on in the project preparation phase, building their understanding and keep them involved during the implementation; (ii) Carefully designing and providing capacity building programs tailored to policy-makers and institutional specific needs.	L	L	L
Companies and service providers fail to understand the technical/ business opportunities and potential benefits of implementing of POP-PBDE project.	Technical	M	M	M	This risk will be substantially mitigated by: (i) building clear understanding of target beneficiaries about POPs during project preparation; (ii) preparing effective information packages; (iii) carefully designing tailored capacity building programs for experts and enterprises clearly defining the targeted outcomes; (iv) setting up intermediate performance indicators to monitor, verify and report on progress.	L	L	L

<p>Following the POP-implementation assessment and report, private sector might not be willing to invest in POP-reduction or avoidance project</p> <p>Complementing project activities with the ongoing and future investment projects will not be achieved</p>	Technical	H	M	M	<p>This risk will be substantially mitigated by:</p> <p>(i) providing training for enterprises? top management and key personnel to build or strengthen their understanding of strategic, economic and financial value of investing in circular and sound management of POP-PBDE through EPR schemes</p> <p>(ii) During the project preparation/implementation phase active consultation meetings will be held with donors/investors, the private companies and state institutions to address this risk. Such coordination will clearly identify the complementing activities, their timelines and budgets, including rights and responsibilities of the concerned parties</p>	M	M	M
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COVID-19 risk and opportunity analysis

136. Georgia has been impacted by COVID-19 crisis and its severe health and socio-economic impacts, recurring pandemic waves and associated partial lockdowns. Georgia shifted its COVID-19 lockdown, sustaining assistance to vulnerable persons is key to preventing any renewed outbreak of the virus. The Government and the UN organizations prioritize providing home care support and other services to vulnerable people at high risk of contracting COVID-19. The project development team will make use of the Government's and UN country system to address the pandemic situation in a timely manner taking into consideration potential socio-economic impacts. For any hardware installation, works will be completed in line with public health and safety requirements. Based on future lock-down scenarios, project activities on the ground will be paused, and activities that can be done remotely or online will be prioritized. There is a tendency to shift away from shared mobility and public transit to reduce the risk of infection. The Project team will need to work with public health experts to ensure that the offered new technology options consider public health and ready for the new normal post-pandemic period. The Project will need national and international expertise during project development and implementation. Due to travel restrictions, priority will be given national expertise for the activities on the ground and stakeholder engagements. Project activities will include stakeholder engagement during the implementation phases. In case in-person meetings are allowed, public health requirements are followed. In cases when in-person

meetings are not possible, online tools will be used to organize meetings. To reduce data transfer traffic, documents and presentations will be shared with participants before the meetings.

137. However, the COVID-19 crisis can also provide opportunities to showcase the project's successes if its impact is successfully bundled with transformational shifts towards low-emission development and promotion of circular economy approaches with the consideration to reduce the risk of emerging infectious diseases in the future. The COVID-19 associated risks and opportunities are tabulated below.

Risk	Rating	Mitigation
Possible re-instatement of COVID-19 containment measures limits available capacity or effectiveness of project execution / implementation	Medium risk	The capacity of stakeholders towards remote-work and online interactions will be strengthened through regular online meetings. Activities under component 1 might be mainly carried out through online webinars, and therefore COVID-19 is not expected to pose a significant risk to most of the activities.
Some project supporters, co-financiers or beneficiaries may not be able to continue with project execution/implementation	Medium risk	The situation will be closely monitored in order to identify alternate supporters or co-financiers, or to readjust the list of beneficiaries if needed.
Price increases for procurement of goods/services	Medium risk	The project team will undertake efforts to support the identification of alternative providers and make sure that competitive pricing is maintained
COVID-19 Opportunities Analysis		
New business opportunities to build back better for business continuity and economic recovery post-COVID-19.	High opportunity	This MSP project will engage with manufacturing and recycling to reduce POPs and POPs-containing materials private sector to promote life-cycle approaches and alternatives for POPs in selected manufacturing and recycling industries.
Green and blue recovery from COVID-19 (?Building back better?)	High opportunity	The project contributes to green and blue recovery because countries have the opportunity to unleash additional recycling opportunities through reducing POPs and POPs-containing material use reaching environmentally sound management of chemicals in critical industrial sectors through making use of a capacity-building, POPs alternatives and life-cycle approaches.

Climate change: (source: Georgia Climate Risk Country Profile, 2021, by the World Bank Group and Asian Development Bank)

139. The identified key climate change risks specific to Georgia are listed below:

- Average temperatures in Georgia have increased steadily since the 1960s and are projected to rise by more than the global average by the end of the 21st century.

- By the 2090s, the average temperature in Georgia is projected to increase between 1.4°C to 4.9°C above the 1986-2005 baseline, for emissions pathways RCP2.6 and RCP8.5, respectively
- The frequency of heat waves is projected to increase significantly by the 2090s under higher emissions pathways, representing major risks to human health, livelihoods, and biodiversity.
- Rapid retreat of glaciers is expected and is likely to shift the regional hydrological regime, increasing the risk of flooding and ultimately driving transitions in local ecosystems.
- The effects of rising temperatures on agricultural output could threaten an important source of income and employment in poorer rural areas and may consequently increase inequality and raise the risk of malnourishment.
- Projected long-term reductions in the flow rates of rivers in Georgia, rising average temperatures, and existing issues with energy distribution networks are expected to increase the risk of water shortages in the spring and summer months. As such, there is a need for more international cooperation in the management of transboundary rivers in the South Caucasus.
- River flow reductions during summer months, coinciding with peak energy demand for residential cooling, have important implications for Georgia's energy supply, which depends primarily on domestic hydropower sources.
- The capital city, Tbilisi, is subject to urban heat island effect, making its residents vulnerable to health risks as the frequency of extremely high temperatures increases over the coming decades.

140. Key trends of climate projections:

- The overall climate trend for Western Asia and the South Caucasus sub-region shows a steady increase in average temperatures (increased temperatures of 0.3°C in western areas and 0.4-0.5°C in eastern areas since 1960s).
- In Tbilisi the number of days per year when the heat index reached dangerous levels increased by 14 in the period 1986-2010, relative to its 1961-1985 baseline.
- Winter warming has been more pronounced in the eastern parts of Georgia between 1986 and 2010 (relative to a baseline period of 1961-1985), whereas central parts have seen little change in winter temperatures and some western areas experienced a decrease in average winter temperatures.
- Georgia has the largest glaciated area and greatest number of glaciers in the Caucasus region, many of which have retreated dramatically since 1974 as temperatures have risen.

141. Vulnerability:

- climate trends show a slight decrease in mean precipitation over the past decade, although an increase in heavy precipitation has been observed in certain areas. There were increases in precipitation observed in many parts of the east, including the capital, Tbilisi.
- Temperature changes in Georgia are projected to increase significantly by the end of the 21st century under all model emissions pathways used by the World Bank report (see climate knowledge portal: Georgia)
- Georgia can experience high maximum temperatures, with an average monthly maximum of only around 12°C but an average July maximum of 24°C. The current median probability of a heat wave (defined as a period of 3 or more days where the daily temperature is above the long-term 95th percentile of daily mean temperature) is around 3%. The model ensemble projects that under the higher emissions scenarios (RCP6.0 and RCP8.5), the annual probability of a heat wave could increase significantly in Georgia by the 2050s and continue rising over the remaining decades of the 21st century.

- Georgia's population and economy are vulnerable to flooding and floods have occurred regularly in the past decades. The model ensemble does not project significant increases in the average maximum 1-day precipitation level, nor are 10 and 25-year return levels of precipitation (over 1-day, 5-day or 1-month time horizons) projected to increase significantly. Nonetheless, recession of the country's glaciers is expected to lead to increased flooding in Georgia due to changes in the seasonality of flows and increases in peak flows.

142. Climate risk related to Project intervention:

- Georgia faces significant disaster risk levels and is ranked 87th out of 191 countries by the 2019 Inform Risk. This ranking is driven strongly by the country's high exposure to hazard and very limited coping capacity. Earthquakes, droughts, and floods are significant physical hazards in Georgia.

- The effects of temperature rise and heat stress in urban areas are compounded by the phenomenon of the Urban Heat Island (UHI) effect. Dark surfaces, residential and industrial sources of heat, an absence of vegetation, and air pollution can push temperatures higher than those of the rural surroundings, commonly anywhere in the range of 0.1-3°C in global mega-cities. Urban Heat Island effects have already been shown to amplify the effects of heatwaves in Tbilisi

- It is unlikely that climate change impact in Tbilisi area would affect the project outcome. The functioning of the upgraded pilot company should not be put at risk by temperature rise and heat stress. Pilot companies have already been assessed against risk of flooding when obtaining environmental permits for their installation. It is difficult to predict whether the pilot company could be affected by floods. However, identified pilot companies are not located in a particularly at-risk areas.

- Increasing precipitation intensity can result in flooding, which can be addressed through creation of green and blue spaces in the territory of pilot company for improved drainage.

- Increased temperatures and more extreme heat waves that can cause negative health impacts, can be addressed through the cooling effect of green spaces.

- The main adaptation measures included in the pilot project are: the selection of pilot projects away from flood and landslide prone areas and the development of adequate evacuation plans.

- Geospatial information will be used when selecting pilot projects, and all information related to climate risk in the existing environmental and social management plans of the companies will be reviewed to further design mitigation measures if need be.

- The evacuation plans will help the pilot company to cope with climate change related risks. Additional features such as permeable structures into the building may be considered as part of the co-financing of the companies, in order to cope with excess precipitation.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

143. The project management structure is given below.

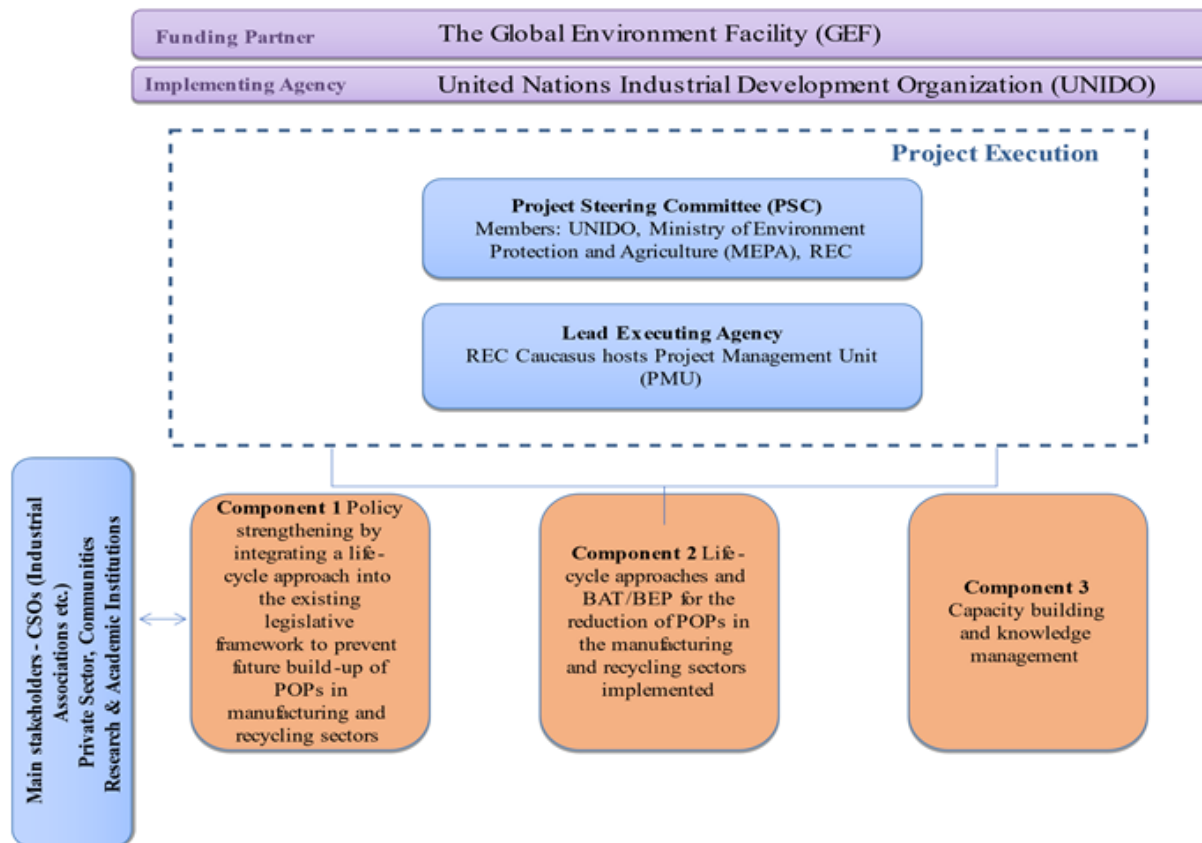


Figure 4 Project implementation structure

Project Implementation

144. UNIDO is the GEF Implementing Agency (IA) for the project. As the GEF IA, UNIDO will maintain oversight on the project implementation, manage the overall budget and supervise project execution. A project officer will be appointed in UNIDO HQ to oversee the implementation of the project.

Project Execution Entity (PEE)

145. Project execution will be led by Regional Environmental Center (REC) for the Caucasus as an executive body for day-to-day management of the project. REC will be responsible for the full execution of the project under a contractual arrangements with UNIDO as the IA. Based on a 2020 micro-assessment report completed by BDO LLP for FAO, it was determined that REC Caucasus would meet the requirements to act as a Project Executing Entity (PEE).

146. A Project Management Unit (PMU) will be set up in REC to run the project on a day-to-day basis. The PMU function will end when the final project terminal evaluation report, and other documentation required by the GEF and UNIDO, has been completed and submitted to UNIDO (including operational closure of the project). The PMU responsibilities will include (i) assignment and supervision of project activities; (ii) recruitment of national and international consultants; (iii) providing guidance to

national sub-contractors; (iv) coordination with stakeholders, donors, the IA, relevant national agencies and the private sector; (v) preparation of terms of reference (TORs) for project activities, (vi) review of project progress reports submitted by to national sub-contractors, (vii) supervising project procurement and financial resources (viii) organizing and convening project coordination stakeholder meetings, and (ix) review of project outputs and other tasks as required by the project.

147. REC will report on project progress related to Component 1, 2, and 3 to the Project Steering Committee (PSC) and UNIDO. PEE will be responsible for drafting all project reporting including progress reports, annual work plans, GEF project implementation report (PIRs), reporting against project and program indicators and country reporting requirements based on the prescribed formats. REC is also responsible for informing UNIDO of any delays or difficulties during the implementation so that appropriate support or corrective measures can be adopted in a timely and remedial fashion.

Project Steering Committee (PSC)

148. The Project Steering Committee (PSC) will review and monitor project execution progress, provide strategic advice, facilitate co-ordination between project partners, provide transparency and guidance, and ensure ownership and sustainability of the project results.

149. The PSC will include representation from UNIDO, MEPA and other stakeholders, as agreed upon during project inception.

150. The primary roles of the PSC are: (1) to provide overall guidance to the execution of the project; (2) to ensure good coordination among participating agencies and other organizations; and (3) to approve any substantial change or addition of new project outputs in response to the emerging issues, including the annual workplan. The PSC will meet at least once yearly to review and monitor the progress of the project implementation and to approve the work plan for subsequent years.

151. GEF Operational Focal points of Georgia will also be invited to the PSC meetings and will be regularly informed about the project progress.

Project stakeholder's and other aspects

152. As outlined in the Stakeholder Engagement Plan (SEP), private sector stakeholders will be engaged throughout the project, especially for the capacity building and pilot project activities and will provide the necessary co-financing support to the project activities.

153. The final Independent Evaluation will be managed by UNIDO, in coordination with its Independent Evaluation Division. The allocated budget for the project monitoring and final evaluation is USD 160,000. As the final evaluation falls under UNIDO's responsibility, the budget for this activity will be managed by UNIDO.

Coordination with ongoing initiatives

The Project will build synergies with the ongoing Project GEF ID 9227 in Georgia ?PCB-free electricity distribution in Georgia?. Project 9227 is implemented by UNIDO and executed at national level by the

same executing agency as the one planned for the planned project. Technologies identified at national level for elimination of PCB could be used to phase out some POPs (i.e. PBDE-contaminated plastics from WEEE, some POPs-contaminated chemicals etc). Sound PCB management will be crucial for any project activity in the WEEE sector as contaminated transformers may be found in scrapyards. The Project will capitalize on all training material and guidelines designed in the framework of the 9227 Project.

154. Full or partial ownership of equipment/assets purchased under the project may be transferred to national counterparts and/or project beneficiaries during the project implementation as deemed appropriate by the government counterpart in consultation with the UNIDO Project Manager.

155. "The Government of Georgia agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 1 July 1994."

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

156. The project is consistent with the NIP submitted in 2018, including action plans for industrial POPs. The project will assist in the development of the or action plans for POPs listed in the Convention after the COP 6, including PFOAs, SCCP, deca-BDE.

157. The project is fully in line with the new national waste law, the "Waste Management Code" adopted on 26 December 2014 which came into force in January 2015. Through the "Waste Management Code", the Government of Georgia seeks to improve waste management practices throughout the country by mandating higher design and operational standards that are consistent with those that exist in the European Union. The project is inline with the national policies currently being implemented by the European Union, with specific concern to the design and manufacturing of material which, due to the low content of hazardous additives like POPs, can be more easily recycled after reaching their end of life. The project is also fully compliant with the the principles and approaches envisaged by the EU-Georgia Association Agreement (AA) related to chemical management, waste management and environmental protection.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

The following table summaries the knowledge management items for this project:

Project knowledge and communication technologies	Project website	Training and AR events, Workshops, online meetings	UNIDO Website	Government websites	News papers	TV broad casting
Objectives and targeted audiences						
Project management office and consultants (upload/download of project documents; project monitoring and management)	Dedicated access based on user role	Dedicated training and workshop on project management				Videos on project implementation at factories and POPs
Communication with governmental institution (Meeting - minutes, milestones, relevant regulations, position papers etc.)	Dedicated section for project document upload/download, with access policies	Training for decision makers, customs, regulators, researchers	Project summary. Key project reports, news and events.	Project summary. National news and events, relevant regulations Links to project website	Interviews with gov. Officials, UNIDO experts, national experts, industry leaders, NGOs	Interviews with gov. Officials, UNIDO experts, national experts, industry leaders, NGOs
Communication with interested bidders (links to national and international bidding events)	Links to the tender section and jobs		Links to the tender section and jobs	Links to the tender section and jobs		
The general public	Public section in the project website, communication on POPs, environment, industrial processes		The UNIDO website is open to the public	Project summary. National news and events, relevant regulations Links to project website	Selected news on EPR, POPs, industrials sectors and project event	

Industrial partners	Training materials	Dedicated training and workshops	News related to industry and POPs			
NGOs	All the above except project management section	Dedicated training and workshops	The UNIDO website is open to the public			
International expert and gov. from other projects, and other countries	All the above except project management section	Dedicate online and in presence events for experience sharing and lesson learning	The UNIDO website is open to the public	Access to the section of the gov. Website translated in English		

9. Monitoring and Evaluation

Describe the budgeted M and E plan

158. According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies including Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and contractors are obliged to (i) make available studies, reports and other documentation related to the project and (ii) facilitate interviews with staff involved in the project activities.

159. The project results, based on the agreed logical framework, will be monitored annually and evaluated periodically during project implementation as part of the planning processes undertaken by the project team in accordance with established GEF and UNIDO monitoring and evaluation procedures. The evidence of outputs such as the number of participants in training activities, the release of reports and manuals, site visits at demonstration facilities, etc. will confirm the congruence of outcomes and objectives.

160. Day-to-day monitoring of project execution progress will be performed by the project team according to the work plan and identified indicators reported in the project's Annual Work Plan. The Project Team will inform UNIDO of any delays or difficulties faced during execution so that the appropriate support or corrective measures can be adopted in a timely manner. Periodic monitoring will be performed through site visits at the project demonstration facilities in the 6 countries by UNIDO and the PEE, as required. A field visit report will be prepared to ensure adherence to the agreed work plan.

161. Annual monitoring will be done through PSC meetings which will take place once a year with a UNIDO representative present. REC as PEE may also organize additional PCS meetings, as required. The first of such meetings will be held within 12 months of the start of full project implementation or as agreed during the Inception Meeting. The final evaluation will be performed at the end of project life and

will consider the implementation of the project as a whole, paying attention to whether the project has achieved its stated objectives and contributed to the global environmental objective.

162. The Results Framework is the logical framework that was developed to define the structure of the project, the relationship between the components, and connects components with activity-specific indicators to track process and achievements. Building on the Results Framework, the M&E Plan is the tool to be used for quarterly, mid-term, and end-of-project monitoring and evaluation.

163. Responsibilities for monitoring and evaluation are assigned to the various participating institutions, which are identified below, and to different project officers, according to their management functions and responsibilities. Day-to-day management and monitoring of project activities, and any consultants and subcontractors recruited to undertake them, will be the responsibility of the Regional Environmental Centre for the Caucasus (REC Caucasus). The timely preparation and submission of mandatory reports forms an integral part of the monitoring process.

164. In order to also evaluate effective operations of the project, the M&E plan will be used simultaneously with the Project Agreement Document signed by UNIDO and the Regional Environmental Centre for the Caucasus (REC Caucasus) which includes indicators related to timeliness of progress reports; achievement of performance targets, outputs and outcomes; promptly implementation of corrective actions when required; timely disbursements; and evidence of sound financial practices in audits reports.

165. The monitoring and evaluation process is expected to be a key component of each outcome area, within the project, based on a 3-year implementation plan. Monitoring and Evaluation (M&E) will be conducted utilising the results-based management approach. The Results Framework provides performance and impact indicators for project implementation along with corresponding means of verification. M&E will be an on-going process and is based on the following strategic directions:

166. The monitoring and evaluation process is participatory, consultative and aimed at ensuring delivery of project outputs and achievement of associated defined targets. Evaluation will be based on the status of implementation, through identification of gaps, and the measurement of impacts and level of success in the application of best practices.

167. United Nations Industrial Development Organization (UNIDO)'s Industrial Development Office and UNIDO's Evaluation Office will be responsible for managing the mid-term review/evaluation and the terminal evaluation. The Project Management Entity and partners will participate actively in the process.

168. In-line with the GEF's Monitoring and Evaluation Policy the project will be subject to a Terminal Evaluation (TE). The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes:

? to provide evidence of results to meet accountability requirements, and

? to promote learning, feedback, and knowledge sharing through results and lessons learned among UNIDO, the GEF, executing partners and other stakeholders.

169. The M&E plan includes an inception workshop and report, project implementation reviews, quarterly and annual review reports, and mid-term and final evaluations. The following sections outline the principal components of the M&E plan and M&E activities. The M&E plan for the project will be presented and finalized in an Inception report following a collective fine-tuning of indicators, means of verification, and the full definition of implementation arrangements related to executing partners and project staff.

170. The indicative Monitoring and Evaluation Work Plan is provided in the table below. The estimated cost of M&E activities is **USD 100,000**, fully integrated into the project budget, as shown below:

Type of M&E activity	Responsible Parties	Budget from GEF	Time Frame
Inception Meeting	PMU	5000	Within 2 months of project start-up
Measurement of project indicators (outcome, progress and performance indicators, GEF tracking tools) at national and global level	PMU	11000	Outcome indicators: start, mid and end of project Progress/perform. Indicators: annually (Cost incorporated in project components and management budget)
Project Steering Committee	PMU	7200	At least once a year, and via electronic media per request and need
Reports of PSC meetings	PMU	4800	Within 1 month after PSC meeting
Indicator monitoring and Project Implementation Review (PIR)	PMU	15000	Annually, part of reporting routine (Cost incorporated in project components and management budget)
Mid-term Review	UNIDO	12000	

Type of M&E activity	Responsible Parties	Budget from GEF	Time Frame
Independent Terminal Evaluation	UNIDO	25000	Within 6 months of end of project implementation
Project Final Report	PMU	5000	Within 2 months of the project completion date (Cost incorporated in project components and management budget)
Co-financing report	PMU	5000	Within 1 month of the PIR reporting period, i.e. on or before 31 July (Cost incorporated in project components and management budget)
Publication of Lessons Learnt and other project documents	PMU	10,000	Annually, also part of Semi-annual reports & Project Final Report
Total M&E Plan Budget		100,000	

Reportorial Requirements

171. Regular reporting of the achievement of the project objectives and activities forms part of the monitoring and evaluation process.

Inception Report (IR)

172. An Inception Workshop (IW) will be held within the first 3 months of project start. The IW will serve as the official launch of the project to and to provide relevant stakeholders and project partners of the overview of the project, the the first year Annual Work Plan (AWP) including appropriate indicators and related means of measuring performance. A detailed schedule of project review meetings and related M&E requirements and reporting activities, including the scheduling of the mid-term review and final evaluation, will also be developed during the IW. Subsequent meetings of the PSC will be planned and scheduled, too. The first PSC meeting should be held within the first 12 months following the IW. As an overall objective, the meeting will provide an opportunity to all partners to better understand and assimilate the goals and objectives of the project and take ownership of the project.

173. A Project Inception Report (IR) will be prepared at the beginning of project implementation and immediately following the Project Inception Workshop (IW). It will include: (i) a detailed Annual

Work Plan (AWP) for the activities of the first year of the project; (ii) a fine-tuning of verifiable indicators and corresponding means of verification to effectively measure project performance during the targeted 12-month timeframe of the AWP; (iii) a detailed project budget for the first year of implementation, prepared on the basis of the AWP. The Inception Report has to be prepared by REC and agreed with UNIDO.

Project Implementation Report (PIR)

174. The Project Implementation Report (PIR) is an annual management and monitoring process. It is an essential monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project will be under implementation for a year, the project team shall complete the PIR. The annual PIR is the main tool used by the GEF for monitoring its portfolio and reviews financial status, procurement data, impact achievement and progress in implementation. Final PIR will be submitted to GEF as per standard procedures.

Project Terminal Report

175. During the last three months, the PEE will prepare the Project Terminal Report (PTR), which will be the last PIR. It will be a comprehensive report summarizing the results achieved, areas where results may not have been achieved and lessons learned. The Project Terminal Report and the final evaluation (FE) report will form the final project documentation package to be discussed with the PSC during the Terminal Project Workshop.

176. The Terminal Project Workshop (TPW) will be held in the last month of project implementation. The TPW will be aimed at assessing the implementation of the project as a whole and if it has achieved its stated objectives and contributed to the broader environmental objective. Particular focus will be given to lesson learned and opportunity for sustainability and replicability of the project's results.

177. The Project Terminal Report (PTR) will be the definitive statement of the Project's achievements. This comprehensive report will be the overall evaluation of the project and will summarize all activities, outputs and outcomes of the Project, objectives met (or not met), structures and systems implemented, etc., paying particular attention to whether the project has achieved its immediate objectives and contributed to the global environmental objective. It will also serve as a source of lessons learned and will lay out recommendations for follow-up activities that may need to be taken to ensure sustainability and replicability of the Project's activities. The PEE will prepare the PTR during the last three months of the project lifetime. It shall be prepared in draft sufficiently in advance to allow review and technical clearance prior to the final PSC meeting.

Thematic Reports

178. As and when called for by UNIDO, the project team will prepare specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNIDO and will clearly state the issue or activities that need to be reported on. These reports will be used as a form of lessons learned exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered.

Technical Reports

179. Technical Reports are detailed, comprehensive documents covering specific areas of research within the framework of the overall project. The key areas where Technical Reports are expected to be prepared during the course of the Project will be individuated during annual PSC meetings. Technical Reports may also be prepared by external consultants and will be used as working documents for the Project implementation as well as to disseminate relevant information at local, national and international levels.

Project Publications

180. Project Publications in the form of articles in academic and peer-reviewed journals, multimedia publications, informational texts or other forms of distribution, will represent a method for a widely dissemination of relevant results and achievements of the Project. Publications can be based on Technical Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if Technical Reports merit formal publication, and will also (in consultation with UNIDO, the governments and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Publications setting out methodologies adopted in this project, achieved results and lessons learnt will be distributed to the industry, governments, Parties to the Convention. Any publication will observe UNIDO and GEF advocacy guidelines.

Independent Evaluations

Final Evaluation

181. The terminal evaluation (TE) is under the responsibility of UNIDO and will, ideally, begin six months before the completion of the project and after the end of the main planned project activities. This will allow the independent consultant to carry out the evaluation when major activities are already completed but with the project team still in charge. The terminal evaluation will focus on the same issues as the mid-term evaluation. However, since all the planned project activities set-out in the Project Results Framework will be completed at the start of the evaluation, a greater focus on identifying and extracting project impacts including the contribution in building local capacity, the achievement of global environmental goals, lesson learned, sustainability and replicability of project results will be reserved. This evaluation will be performed on the basis of the delivery of the project's results as initially planned, eventually as corrected after the mid-term evaluation, if any such correction took place. The TE will also provide recommendations on how to disseminate products and outputs of the project most efficiently within and outside the country. The Terms of Reference for this evaluation will be prepared by UNIDO in accordance with the generic TORs developed by its Independent Evaluation Division. The PMT and other stakeholders will be involved and consulted during the terminal evaluation process.

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCE/SCCF)?

182. Broadly, the project will result in the creation of jobs within the manufacturing and recycling sector, not only because of the financial assistance conveyed by the project, but mostly because these sector could be more attractive for the national and international market once they are more compliant with the chemical safety standards which requires the elimination of POPs from the manufacturing processes. The project intends to encourage enterprises in avoiding the use of POPs in the manufacturing of products and to be more careful in the import of chemicals or articles which may contain POPs. This will also ensure that such products can be more safely recycled at the end of their life, in compliance with Circular Economy criteria. This will help enterprises operating within several sectors including plastic, paint, solvents, plating, waste recycling and management to conduct product innovation and ensure resilience of business models during a transition to the circular economy.

183. As a result of the Gender mainstreaming action plan outlined in the project, women will be provided with specific training and learning opportunities to encourage their active participation in the sectors supported by the project.. Furthermore, the adoption of the gender mainstreaming strategy will take consideration of both men's and women's experiences, concerns, and needs. With the setting of targets for improving female participation in training in this project, as well as the enlargement of female participation in decision making, this project will contribute to an improved condition of gender equality within existing companies.

184. Behavioral changes are also expected as a result of training and communication activities within the project. Behavioral changes and attitudinal changes will promote circular economy and shift the perception of waste to be valued as a resource.

185. By incentivizing pilots to scale up operations in the project, additional waste will be collected which will reduce the presence of plastics and hazardous wastes in communities and help prevent POPs. Through communication activities, the project will raise awareness of the health hazards of POPs which will help shift consumption patterns toward sustainable alternatives.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approva I	MTR	TE
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Medium/Moderate

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

The preliminary ESS screening of the project classified it as Category B, so an Environmental and Social Management Plan (ESMP) has been developed as per UNIDO requirements. The screening sheet and the ESMP are attached herewith to the project.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Environmental and Social Management Plan (ESMP)_Georgia	CEO Endorsement ESS	
ES_Screening_Template_Georgia_POPs	CEO Endorsement ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Project Strategy	Indicators [in brackets UNIDO IRPF indicators]	Baseline	Final target	Women	Men
Project objective: Protect human health and the environment through a lifecycle approach aimed at reducing import, use and build-up of industrial POPs in manufacturing and recycling sectors.	Core Indicator 9. Reduction of POPs (metric tons of toxic chemicals reduced) [ENV 2]	0	50 tons of HBCDD, 50 tons of SCCP, 5 tons of deca-PBDE containing material		
Component 1. 1. Policy strengthening by integrating a life-cycle approach into the existing legislative framework to prevent future build-up of POPs in manufacturing and recycling sectors	-			-	
Outcome 1.1. Enhanced national policy and regulatory framework to comply with SC requirements on new POPs and implement national circular economy tools in selected manufacturing and recycling sectors	Core Indicator 11: Number of direct beneficiaries disaggregated by gender gaining awareness/knowledge on GC [KASA 1]	0	110	44	66
	Core Indicator 11: Number of direct beneficiaries disaggregated by gender againing skills on GC [KASA 2]	0	10	4	6
Output 1.1.1. New POPs integrated in the existing environmental regulation and in the regulation on chemical management	# of capacity building activities related to POPs provided [TCO 1]	0	5		
	# of toolkits and guidelines related to POPs and life-cycle approaches produced [TCO 3]	0	3		
	# of people obtained POPs-related policy training [KASA 1]	0	100	40	60

	# of institutions obtained POPs resources (trainings, awareness raising) [KASA 2]	0	10		
Output 1.1.2. Policy tools (e.g customs monitoring tools, EPR schemes), including financing mechanism, with focus on phase out of industrial POPs developed for selected manufacturing sectors as one of the pillars of the implementation of circular economy in Georgia	# of capacity-building events [CPO 1]	0	5		
	# policy tools outlined [TCO 3]	0	2		
	# of institutions obtained POPs resources (trainings, awareness raising)	0	10		
Output 1.1.3. Country specific guidelines for the phase out of industrial POPs along the life-cycle drafted	# guidelines for the phase out of industrial POPs developed [TCO 3]	0	3		
Component 2: 2. Life-cycle approaches and BAT/BEP for the reduction of POPs in the manufacturing and recycling sectors implemented					
Outcome 2.1.: 2.POPs present in manufacturing or recycling sectors are disposed of using best available technologies (BAT) and best environmental practices (BEP), and future POPs-containing material built-up prevented through life-cycle approaches reduction and phasing out of POPs in the manufacturing and recycling sectors implemented	Core Indicator 11: Number of direct beneficiaries disaggregated by gender gaining skills [KASA 2]	0	400	160	240
	Core Indicator 11: Number of direct beneficiaries disaggregated by gender gaining awareness/knowledge [KASA 1]	0	300	120	180
	# of POPs pilot developed or adapted [TEC 1]	0	1		
	Core Indicator 9. Reduction of POPs (metric tons of toxic chemicals reduced) [ENV 2]	0	50 tons of HBCDD, 50 tons of SCCP, 5 tons of deca-PBDE containing material		

Output 2.1: Verification of manufacturing sectors potentially using or releasing industrial POPs like HBCDD (EPS/XPS manufacturing, plastic), SCCP (paint manufacturing), PFOS/PFOAs and PBDE (ELV recycling) carried out.	# Manufacturing sector reports related to SC [TCO 3]	0	3		
Output 2.1.2: Specific environmentally sound management plans (ESM) for manufacturing and recycling sectors to reduce POPs, recycle valuable materials and final disposal of POPs-containing waste	# of people trained on ESM [KASA 2]	0	350	140	210
	# of people obtained SC, POPs, BAT/BEP and other related resources (trainings, awareness raising) [KASA 1]	0	300	120	180
Output 2.1.3. BAT and BEP for the reduction and final disposal of POPs in manufacturing and recycling sectors to facilitate the adoption of a circular approach for a POPs-free manufacturing and recycling industry, in at least one pilot facility	# of capacity building activities related to the pilot provided [TCO 1]	0	3		
	# of new pilots developed [TEC 1]	0	1		
	# of people trained on pilot implementation and execution [KASA 2]	0	50	20	30
	# processes without using POPs or POPs-containing materials [BUS 3]	0	1		
Component 3: Capacity building and knowledge management					
Outcome 3. Environmental authority, manufacturing and recycling sectors are empowered to phase out industrial POPs releases with positive effect on the establishment of a circular economy approach along the lifecycle of products.	Core Indicator 11: Number of direct beneficiaries disaggregated by gender gaining skills [KASA 2]	0	40	16	24
	Core Indicator 11: Number of direct beneficiaries disaggregated by gender gaining awareness/knowledge [KASA 1]	0	140	56	84
Output 3.1. Multi-stakeholder platform created to sustain the phasing out of industrial POPs and to ensure the timely exchange of information and resources among business sectors and the regulators.	# of multi-platform developed	0	1		

Output 3.2. Capacity-building training, including gender dimensions, for selected manufacturing sectors, governmental stakeholders on POPs and circular economy, and custom authorities to prevent the import of POP containing materials strengthened carried out	# of people trained on selected manufacturing sectors [KASA 2]	0	100	40	60
	# of people trained on selected manufacturing sectors [KASA 2]		40	16	24
	# of people obtained SC, POPs, BAT/BEP and other related resources (trainings, awareness raising) [KASA 1]		40	16	24
Output 3.3. Knowledge materials on POP management and their implication on circular economy developed and disseminated to wide range of stakeholders, including business sector	# of knowledge material developed		5		

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Not applicable

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Not applicable

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.



Tbilisi: 41.7151° N, 44.8271° E

Rustavi: 41.5226° N, 45.0430° E

ANNEX E: Project Budget Table

Please attach a project budget table.

Please see below a summary of the budget. A more detailed version of the budget table has been uploaded as an attachment to the project.

Expenditure Category	Detailed Description	Component (USD)							Total (USD)	Responsible Entity	
		Component 1	Component 2	Component 3	Component 4	Sub-Total	M&E	PMC			
		Sub-Total	Sub-Total	Sub-Total	Sub-Total	Sub-Total					
Contractual services	[2301] BAT and BEP in manufacturing / recycling process for the phasing out of POPs and the simultaneous adoption of a circular approach in the manufacturing industry.	0	446000	0	0	446000	0	0	446000	RECC	
	[2302] Publications and Communication Materials	6000	900	50000	0	56900	0	0	56900	RECC	
	[3301] National Workshops/Conferences	16801	1500	18000	4000	40301	4000	0	40301	RECC	
	[3302] Trainings	8000	7600	45000	3000	63600	3000	0	63600	RECC	
	[3303] Awareness raising Events	0	4300	27000	1000	32300	1000	0	32300	RECC	
	[5503] Inception Workshop	0	0	0	5000	5000	5000	0	5000	RECC	
	[5504] Steering Committee	0	0	0	7200	7200	7200	0	7200	RECC	
	[5501] Midterm Evaluation	0	0	0	12000	12000	12000	0	12000	UNIDO	
	[5505] Closing Workshop	0	0	0	4300	4300	4300	0	4300	RECC	
	[5502] Terminal Evaluation	0	0	0	25000	25000	25000	0	25000	UNIDO	
	[5506] Audit	0	0	0	0	0	0	8000	8000	RECC (recruitment of indep external)	
	sub-total	30801	460300	140000	61500	692600	61500	8000	700600		
International consultants	[1202-01] EPR Expert	30000	0	18000	0	48000	0	0	48000	RECC	
	[1202-02] POPs Expert	22500	18000	31500	0	72000	0	0	72000	RECC	
	[1202-03] Emissions Expert	32000	13800	27000	0	72800	0	0	72800	RECC	
	sub-total	84500	31800	76500	0	192800	0	0	192800		
National staff and consultants	Staff	[1101] Project Director	0	0	0	0	0	0	42000	42000	RECC
		[1102] Project Coordinator	0	0	0	0	0	0	36000	36000	RECC
		[1103] Project Administrative Assistant	0	0	0	0	0	0	15000	15000	RECC
		[1301] Financial Officer	0	0	0	0	0	0	27000	27000	RECC
		[1302] Driver	12459	10780	10450	0	33689	0	0	33689	RECC
		[1303] Administration/Procurement Officer	0	0	0	0	0	0	27000	27000	RECC
	Consultants	[1201-01] Legal Expert	34050	17670	0	0	51720	0	0	51720	RECC
		[1201-02] Technical Expert	32050	21000	0	0	53050	0	0	53050	RECC
		[1201-03] Institutional Expert	30051	18999	0	0	49050	0	0	49050	RECC
		[1201-04] Capacity Building Expert	31250	19366	41250	0	91866	0	0	91866	RECC
		[1201-05] Socio-Economic Expert	30060	15245	2998	0	48303	0	0	48303	RECC
		[1201-06] Industry Emissions Expert	26050	21000	8813	0	55863	0	0	55863	RECC
		[1201-07] EPR Expert	30108	12996	4800	0	47904	0	0	47904	RECC
		[1201-08] Financial Expert	15750	10350	5400	0	31500	0	0	31500	RECC
		[1201-09] PR&Communications Expert	25050	8499	5401	0	38950	0	0	38950	RECC
		[1201-10] Gender Expert	26050	7493	5600	8500	47643	8500	0	47643	RECC
		[1201-11] GIS Expert	30060	0	9396	0	39456	0	0	39456	RECC
		[1201-12] Environmental Policy Expert	14760	6660	5463	0	26883	0	0	26883	RECC
		[1201-13] Chemicals Management Expert	19737	21159	11094	0	51990	0	0	51990	RECC
		[1201-14] IT Expert	16050	3750	3900	5000	28700	5000	0	28700	RECC
[1201-15] Waste Management Expert	30996	33133	11784	0	75913	0	0	75913	RECC		
[1201-16] Circular Economy Expert	30168	27848	11267	0	69283	0	0	69283	RECC		
	sub-total	434699	255948	137616	13500	841764	13500	147000	988764		
Travel to meetings, project sites, workshops, etc.											
	Travel Local	7000	3750	0	7000	17750	7000	0	17750	RECC	
	International Travel/Air Fair	6000	1500	0	0	7500	0	0	7500	RECC	
	Per Diem, Accommodation	4500	2250	0	9000	15750	9000	0	15750	RECC	
	sub-total	17500	7500	10500	16000	51500	16000	0	51500		
Office (supplies, rent, equipment, etc.)											
	Computers/ Laptops 2 Unit	12500	0	0	0	12500	0	0	12500	RECC	
	Projector 1 Unit	2500	0	0	0	2500	0	0	2500	RECC	
	Roll-up Screen 1 Unit	1160	0	0	0	1160	0	0	1160	RECC	
	Communication	6340	4452	5384	9000	25176	9000	0	25176	RECC	
	Office supply	0	0	0	0	0	0	3000	3000	RECC	
	Banking costs	0	0	0	0	0	0	1000	1000	RECC	
	Office rent	0	0	0	0	0	0	12000	12000	RECC	
	Other services (tel/fax, electricity/heating, maintenance)	0	0	0	0	0	0	9000	9000	RECC	
	sub-total	22500	4452	5384	9000	41336	9000	25000	66336		
	grand total	590000	760000	370000	100000	1820000	100000	180000	2000000		
		Component 1	Component 2	Component 3	Component 4	Sub-Total	M&E	PMC	Total (USD)		

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

Not applicable

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

Not applicable

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

Not applicable