Norwegian Ministry of Foreign Affairs

Ministry of Environmental Protection and Agriculture of Georgia

CENN
Shaping the Future by Changing Today

National Plastic Waste

Prevention

Program for Georgia

2021

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1 Introduction

The National Plastic Waste Prevention Program (hereinafter - NPWPP) has been developed in line with the requirements of the Waste Management Code, the National Waste Management Strategy (2016-2030), and the National Waste Management Action Plan of Georgia. The NPWPP considers best international practices related to plastic management presented in the strategic documents, such as: the European Green Deal[1], an EU action plan for Circular Economy[2] and a European Strategy for Plastics in a Circular Economy[3]. Moreover, the NPWPP will support Georgia in meeting SDG goals for 2030.

The NPWPP aims to support Georgia's aspiration to become a plastic waste prevention and recycling-oriented country, fostering sustainable and safe consumption and production patterns of plastics. To this end, the document presents goals, objectives, and measures that will support introducing a circular economy practice of plastics management prioritizing prevention, reuse, and recycling processes.

The document includes situation analysis, strategy, and action plan. A problem tree analysis method has been utilized to realistically assess the current situation and formulate future strategic directions in the plastic sector of Georgia. Based on the analysis, priority directions have been identified and as a result, four main goals have been developed. For each goal, objectives have been set with indicated deadlines. For each objective measures have been developed, which represent the main part of the action plan.

The strategy covers a 10-year period (2021-2031) and an action plan that spans a 5-year period (2021-2026). The strategy and action plan might be revised based on the monitoring results and the development, or an update of strategic documents related to waste management in the country.

The NPWPP has been developed in an inclusive manner with the involvement of relevant stakeholders. For this purpose, a working group consisting of the agencies that are engaged in plastic waste management within their competencies was established. The activity of the working group was coordinated by the Ministry of Environmental Protection and Agriculture. The document was also discussed with various stakeholders, including the private sector.

The NPWPP has been prepared within the project supported by the Norwegian Ministry of Foreign Affairs and implemented by CENN in close cooperation with the Ministry of Environment Protection and Agriculture.

[1] Brussels, 11.12.2019 COM(2019) 640 final

[2] Brussels, 2.12.2015 COM(2015) 614 final

[3] Brussels,16.1.2018; COM(2018) 28 final

2 Situation Analysis

2.1 Methodology

A baseline study has been conducted to analyse the situation related to plastic waste management in the country to identify existing problems, their consequences and root causes supported by relevant data.

A problem tree analysis method has been utilized to realistically assess the current situation and provide evidence-based information for formulating future strategic directions in the plastic sector of Georgia. The following steps were implemented during the situation analysis:

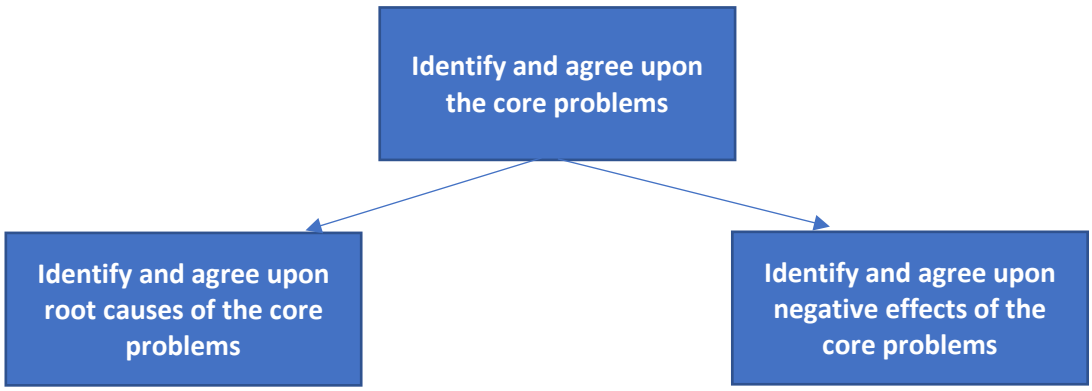


Figure 1: Tree analysis method

The process involved data collection from state institutions and relevant stakeholders, qualitative and quantitative analysis of data, and interactive meetings and discussions with key stakeholders to exchange opinions and agree upon the key findings and common vision of the situation.

The situation analysis includes:

- information about relevant reforms implemented in the country and a legislative framework regulating plastic waste management in Georgia;
- analysis of international trade and domestic production of plastic;
- generation and littering of plastic waste;
- plastic separation and recycling activities;
- the situation related to alternative feedstock and microplastics;
- implementation of international treaties;
- existing gaps, challenges and their root causes.

2.2 Relevant reforms implemented in Georgia

Along with an increase in economic development of the country, the amount of generated waste has also increased. The problems caused by improper waste management were complex. Uncontrolled disposal of household and hazardous waste on non-compliant landfills have been a major source of environmental pollution. The majority of municipal waste generated in the country has been illegally dumped. At the same time, the available official landfills have not been managed in accordance with relevant environmental standards, thus posing risks to the environment. The magnitude of the plastic

pollution problem and unaddressed issues in the field of waste management became critical in terms of human health and the environment.

To address these problems, a series of important reforms have been implemented in the field of waste management in recent years. In 2014, the EU-Georgia Association Agreement was signed that established requirements for the introduction of modern practices of waste management in the country. On January 15, 2015, the Waste Management Code, in line with the Association Agreement and the best international practices, was adopted. The Code defines the competencies and general obligations of state bodies involved in waste management, which was not clearly formulated in Georgian legislation until 2015.

The Code also defines administrative offences associated with waste management and littering/ pollution of the environment, as well as sets maximum amounts of fines and general procedures to be applied in case of waste-related violations.

Based on the Waste Management Code, to introduce the best practices of waste management in the country, up to 20 by-laws have been developed and approved by the Government. The National Waste Management Strategy (2016-2030), which sets goals and objectives for the next 15 years, and the National Action Plan (2016-2020), which specifies measures for achieving the goals and objectives of the Strategy, were approved in 2016. According to the declared political vision of the Government, Georgia strives to become a waste preventing and recycling country.

The country is trying to quickly address the accumulated environmental problems and get engaged in handling new international challenges, including global issues such as plastic waste pollution. This is demonstrated by the fact that the use of plastic bags in Georgia was restricted in 2018. The Government of Georgia has approved the by-law on Rules for Regulation of Plastic and Biodegradable Bags, which establishes main requirements for the production, import and sale of plastic, as well as biodegradable and compostable bags in the territory of Georgia. Furthermore, a draft version of the by-law on management of packaging waste, including plastic wastes, has been developed. The aforementioned actions have been first steps toward addressing the issue of plastic waste management. However, the Government of Georgia is expanding its activities in this area and plans to develop and implement a consistent policy.

2.3 Legislative framework

In Georgia, waste management, and particularly plastic waste management, is regulated by the following legislation and regulations:

Law of Georgia on Protection of the Environment (#519, December 10, 1996)
The Law regulates legal relations in the field of environmental protection and the use of natural resources between state bodies and natural and legal persons throughout Georgia, including its territorial waters, airspace, continental shelf and exclusive economic zone.

Waste Management Code (N2994-rs. December 26, 2014, Kutaisi)
The Code establishes a legal framework in the field of waste management to implement measures that will facilitate waste prevention and its increased re-use as well as the environmentally safe treatment of waste.

Law of Georgia on Import, Export and Transit of Wastes into the Territory of Georgia (№631. February 8, 1995, Tbilisi)
The Law regulates transboundary shipment of wastes throughout Georgia, including its territorial waters, airspace, continental shelf and exclusive economic zone.

Ordinance of the Minister of Labor, Health and Social Protection of Georgia "on Approval of the Environmental Quality Standards" (#297/n, August 16, 2001, Tbilisi)
This by-law regulates the sanitary rules and hygienic norms for water supply systems, protection and use of coastal waters, atmospheric air, soil, as well as for exposure to electro-magnetic radiation, noise and vibration.

Resolution of the Government of Georgia on "Approval of Technical Regulations for Protection of Surface Waters of Georgia from Pollution" (#425, December 31, 2013, Tbilisi)
This by-law regulates various types of economic activities that can affect the state of surface waters, as well as the quality of surface water bodies from point and diffusion sources of pollution.

Resolution of the Government of Georgia on "Approval of Technical Regulations on the Methodology for Calculation of Environmental Damage" (#54, January 14, 2014)
The purpose of the by-law is to establish the rule of determining (calculating) the damage caused to the environment as a result of violation of the legal norms established by the current Georgian legislation, which considers the damage caused to the environment during the use of natural resources and/or carrying out agricultural activities and the income that the state has not received, but would have received in case of proper implementation of standards established by the legislation of Georgia.

Resolution of the Government of Georgia on "Approval of Technical Regulations on Maximum Permissible Concentrations of Harmful Substances in the Work Zone Air" (#70, January 15, 2014)
This by-law establishes hygienic standards for chemical substances in the work zone air.

Resolution of the Government of Georgia on Determining List and Classifying Waste according to Types and Characteristics (№426. August 17, 2015, Tbilisi)
The resolution establishes a rule for the classification of wastes and determination of their hazardous properties to ensure proper implementation of the Waste Management Code and its by-laws.

Resolution of the Government of Georgia on the Approval of Technical Regulation on Collection and Processing of Municipal Wastes (#159, 29 April, 2016)
The resolution provides criteria and guidelines for setting up and operating MSW collection systems, including criteria and recommendations on the type of collection, container, vehicles, typical (average) generation index and typical (average) waste density for Georgia

Resolution of the Government of Georgia on the Approval of the Rule and Conditions for Registration of Waste Collection, Transportation, Temporary Storage and Pre-Processing (#144, 29 March 2016)
The resolution obliges all profit and non-profit organizations, generating certain amount of non-hazardous and hazardous wastes, including LSGs to register electronically, through MEPA's web-site, collection, temporary storage (for over 50 tonnes of non-hazardous municipal waste and 10-50 tonnes of hazardous waste) and pre-processing of waste. Registration form requires data input on the company/operator, amounts of waste stored, parameters of storage facility, pre-processing methods, etc.

Resolution of the Government of Georgia on the Approval of the Technical Regulation on the Rules of Waste Transportation (#143, 29 March, 2016)
Defines rules for waste transfer/transportation. This regulation applies to LSGs, organizations opting for having individual waste collection schemes and waste transportation operators serving LSGs

Resolution of the Government of Georgia on the Approval of Technical Plastic and Biodegradable Wastes (# 472, September 14, 2018)
This regulation puts a ban on single use plastic bags and requires use of multiple use bags/biodegradable/compostable bags. Biodegradable/compostable bags should meet EN 13432:2000 standard and should be labelled properly.

Resolution of the Government of Georgia on the Approval of the Technical Regulation on Waste Registration and Reporting Content and Format (#422, 11 August, 2015) and consequent Decree of the Minister of Environmental Protection and Agriculture on the Rule for Filling in Waste Inventory/Registration-Reporting Electronic Form (#2-11, 09 January, 2018)
Sets out requirements for large waste generator companies and waste collection and transportation operators for waste electronic registration/inventory and reporting on an annual basis; defines a format and content/input data needs for annual waste reports; require submission of following types of reports: Annual report on waste quantities; Annual report on waste treatment; Annual report on waste disposal.

Resolution of the Government of Georgia on Amendments to the Technical Regulation - Rule of Regulation of Plastics and Biodegradable Bags (# 346, July 26, 2019)
The regulation specifies exemptions from requirements of # 472 resolution including:

- plastic bags intended for packaging of goods and / or products, when the plastic bag is used to place, store, transport, deliver and remove the raw material as well as the processed product in the chain from the manufacturer to the consumer;
- for the purpose of production of plastic bags, oxy-degradable plastic bags and oxy-biodegradable plastic bags for export (except for the requirements provided for in Article 41 of this Technical Regulation);
- plastic bags no less than 50 microns thick and no less than 45X70 cm in size;
- on the import and sale of plastic bags intended for placement of goods sold in the free trade points defined by the legislation of Georgia by the holder of the free trade point activity permit. In addition, the inscription "Free Trade" and "DUTY FREE" must be printed in Georgian and English on each park in computer font."

2.4 Plastic waste management in Georgia

2.4.1 Main problems

Every year, 322 million tons[4] of plastic are produced worldwide - from Lego bricks to yogurt cups, from garden chairs to fishing nets, bicycle tires, protective goggles, car parts, cell phones, the blades of wind turbines or the syringes at the doctor's office - the world is full of plastic.

Plastics do not occur in nature and are produced artificially. There are very many types of plastics. They can be, for example, rubbery, soft, hard, acid-proof or insulating. Some are transparent, others are colourful. Plastics also last quite a long time. That's practical - but also a problem. Once they enter the environment, plastics don't disappear quickly. They don't decompose like wood or other substances from nature, but are ground up into smaller and smaller particles.

Plastic has become an ubiquitous material in our economy and daily lives. However, often the way it is produced, used and discarded harms the environment and human health in the country. Therefore, there is an urgent need to tackle existing problems and transition towards a circular approach of economic development in Georgia.

The existing situation and problems related to plastic waste management in Georgia according to the priorities of the NPWPP are presented below.

[4] Source: A European Strategy Plastics in a Circular Economy

2.4.2 Trade and production of plastics

2.4.2.1 International trade

The trend of total international trade (import, export, re-export) and production of plastic in Georgia shows that the amount has been increasing over the past 10 years and will continue increasing in the coming years (Table 1).

Imports of plastic materials into Georgia for further production activities refer mainly to the categories of PE, PET, PP, PVC, PU and PS. Furthermore, there are imports of plastic commodities into Georgia for various purposes: construction, packaging, and other consumption activities. Regarding export, Georgia is exporting plastic raw materials, but also certain final products made from various types of plastics. The main export commodities from the plastics sector are basic polymers such as polyethylene, but also polypropylene, polystyrene and other polymers. It should be noted that the volume of re-exports of plastic raw materials and final plastic goods in Georgia is quite low. And finally, domestic production includes production of plastic tiles, sheets, pipes, profiles, packaging materials, etc.

Table 1: Total international trade and domestic production in tons per year

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total exports (t)	825	3,546	6,052	6,418	4,905	6,258	9,416	12,281	12,605	9,072
Total re-exports (t)	166	1,415	1,804	2,580	1,714	1,713	1,912	4,338	5,251	3,258
Total imports (t)	79,348	97,299	96,139	108,725	106,196	111,626	125,996	137,369	147,915	145,433
Domestic production (t)	27,454	21,351	21,241	25,454	25,504	32,535	44,300	42,503	45,912	47,804*
Number of people employed in domestic production	4,159	4,611	5,021	6,256	6,734	7,152	6,838	6,954	6,610	5,973
Average salary of people employed in domestic production	516	639	643	561	816	721	738	975	1,143	1,197

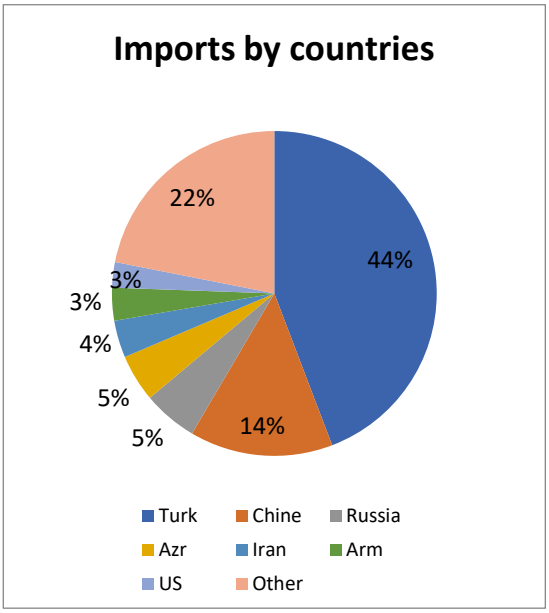
** Data point for year 2020 is preliminary; data point for Q4 of the year 2020 is not final[5].*

The data received form the National Statistics Office of Georgia show that exports in 2020 are 10 times higher than in 2011, with an average annual growth rate of 52%. Re-exports also show an extraordinarily large increase with an average annual growth rate of 101%. Imports were also growing, with a total increase of 83% over 10 years (an average growth rate of 7%), domestic production increased by 74% over the last 10 years (average growth rate of 8%).

2.4.2.2 Imports and exports by countries

The data received from the National Statistics Office of Georgia show that 80% of exports from Georgia go to Armenia (44%) and Azerbaijan (36%). 59% of imported plastic items and waste come from Turkey (44%) and China (14%). Imports from Russia and Azerbaijan make 5% of total imports each.

[5] Source: National Statistics Office of Georgia



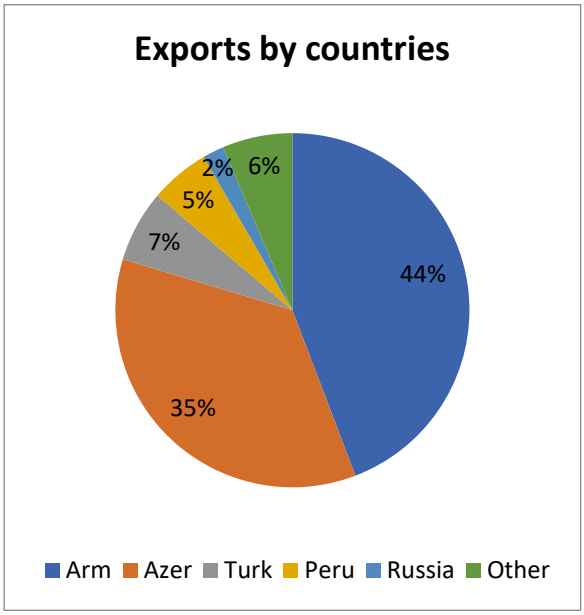


Diagram 1: Imports and exports of plastic items and waste by countries

From 2017-2010 the Ministry of Environmental Protection and Agriculture issued permits for the import of 47 827 tons of plastic waste.

Year	2017	2018	2019	2020
Plastic waste (ton/year)	10 895	2 200	9 760	24 972

According to the data of the Revenue Service of Georgia, during the last three years in total **734.239** tons of plastic waste have been imported into Georgia.

Table 2: Imports of plastic wastes (in tons)

Year	2019	2020	2021 (January-July)
Amount	522.824	162.127	49.287
		Total	**734.239**

2.4.2.3 Domestic production

According to information from the National Statistics Office of Georgia, there are about 1,375 companies producing commodities from plastics in Georgia and about 100 companies are producing plastic packaging. The following main polymers – PVC, PE and PET are represented in the production activities of Georgian companies.

Table 3 shows that production of PET granules is in a leading position both in terms of quantity and monetary value in the country and in 2020 the production of plastic goods in Georgia reached about 229.5 million GEL.

Table 3. Production of plastic goods in Georgia in tons per year

Product	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Manufacture of plastic tiles, sheets, pipes and profiles	Ton	4,798	6,297	5,954	6,761	7,674	13,216	16,221	13,212	15,070	14,919*
	Thousand GEL	18,114	22,079	19,682	26,063	31,075	56,107	66,273	53,212	64,319	70,563*
Production of plastic packaging	Ton	17,067	5,945	5,314	6,758	8,432	8,826	11,747	11,916	14,392	12,083*
	Thousand GEL	20,944	22,109	24,329	29,191	40,562	49,151	54,784	56,678	72,281	66,489*
Production of PET granules	Ton	173,835	270,781	286,966	390,750	353,040	348,524	552,886	642,883	670,798	821,582*
	Thousand GEL	24,608	33,957	35,641	44,528	39,102	39,816	66,439	79,842	81,836	92,421*

These figures show that the economic value generated with the production of plastic goods in Georgia is quite limited.

In 2020, the turnover of the production of plastic tiles, sheets, pipes, profiles and packaging reached about 567 million GEL and the number of employed and hired people was about 6,600 with an average monthly salary of 986 – 1300 GEL in Georgia. See Tables 4 and 5 below.

Table 4. Economic features of production of plastic tiles, sheets, pipes and profiles

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Turnover (million GEL)	129	166	161	240	244	307	332	376	413	384*
Production of final products (million GEL)	115	148	143	218	229	301	313	350	393	371*
Number of employed people	2,504	2,854	2,853	3,865	3,939	3,996	3,681	3,884	3,780	13,328*
Number of hired people	549	585	716	795	926	1,051	1,042	1,012	941	3,629*
Average monthly salary of the employees (GEL)	397	473	508	491	599	633	701	854	986	936*
Total salaries (million GEL)	11	15	16	19	23	24	27	33	38	34*

Table 5. Economic features of production of plastic packaging production

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Turnover (million GEL)	51,7	69,0	69,3	90,7	98,6	109,0	139,8	178,2	206,8	183*
Production of final products (million GEL)	43,3	56,5	59,3	78,7	88,3	101,4	127,9	160,2	186,9	176*
Number of employed people	557	587	736	801	943	1054	1073	1046	948	3,687*
Number of hired people	549	585	716	795	926	1051	1042	1012	941	3,629*
Average monthly salary of the employees (GEL)	634,9	804,2	778,9	631,4	1032,3	809,7	775,2	1095,5	1300,4	1,261*
Total salaries (million GEL)	4,2	5,6	6,7	6,1	11,5	10,2	9,7	13,3	14,9	14*

All of the companies producing plastic items in Georgia are small and medium-sized companies. In 2020, the average monthly salary of the employees involved in the production of plastic packaging was higher by 3% in comparison to the average monthly salary in Georgia, which amounted to 1,227 GEL (2020). At the same time, the turnover and production were permanently increasing from 2011 to 2019. In 2020, there was a decline in the case of both activities caused by the pandemic.

2.4.2.4 Summary

The data received from the National Office of Statistics shows that the amount of plastic items (trade and production) has increased by 71% over the last 10 years, with a 6% average annual growth rate. The amount of PET granules during the last 10 years has increased by 122% (with a 10% average annual growth rate). Disposable tableware also shows a large increase: the data of 2020 exceeds the data of 2011 by 135%. The average growth rate for other plastic items during the last decade was 8% (the share of other plastics in the total composition of plastic items is 75%), however the corresponding data of 2020 exceeds the data of 2011 by 90%. See Tables 6 and 7.

Table 6: Annual domestic production and import of plastic items in Georgia (t)

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
PET granules	11,200	15,400	15,000	17,400	14,800	15,300	19,000	19,800	20,400	24,900*
Production of plastic packaging	21,800	11,400	12,000	13,500	14,700	15,000	18,300	18,600	19,800	17,600*
Disposable tableware	800	900	1,000	1,100	1,200	1,500	1,700	1,900	2,200	2,000*
Other	71,900	85,900	81,500	93,200	94,400	104,300	120,000	123,000	133,600	136,400*
Total	**105,800**	**113,700**	**109,500**	**125,200**	**125,100**	**136,200**	**159,000**	**163,300**	**176,000**	**180,900***

Table 7: The percentage of plastic items annually produced and imported in Georgia

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PET granules	10.6%	13.6%	13.7%	13.9%	11.8%	11.3%	12.0%	12.1%	11.6%	13.7%
Production of plastic packaging	20.6%	10.1%	11.0%	10.8%	11.8%	11.0%	11.5%	11.4%	11.2%	9.8%
Disposable tableware	0.8%	0.8%	0.9%	0.9%	0.9%	1.1%	1.1%	1.2%	1.2%	1.1%
Other	68.0%	75.5%	74.5%	74.4%	75.5%	76.6%	75.5%	75.3%	75.9%	75.4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The diagram below shows the trend of plastic production and import in Georgia.

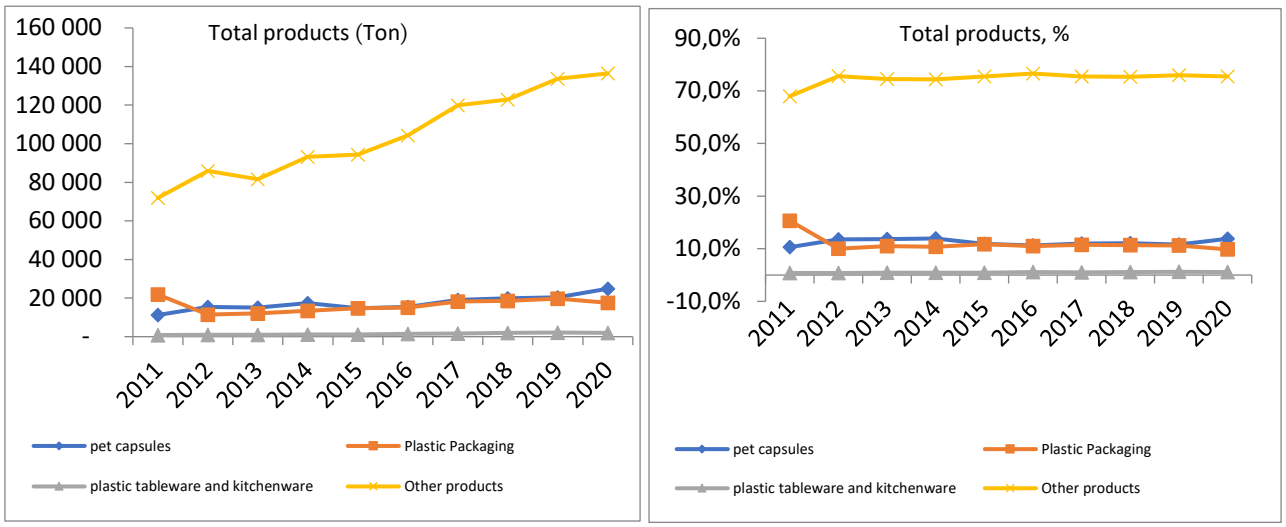


Diagram 2: Total production and import of plastic items - amount and percentage

Analysis of import, export, re-export, and production of plastic in Georgia shows that the total value of produced final plastic products within Georgia during 2020 was 176.3 mln Gel, this number is 5.7% lower compared to output of this industry during the year 2019 (186.9 mln Gel). The rate of negative growth in the plastic industry is very close to the whole GDP decrease rate, which was 6.2% for the year 2020 compared to year 2019 (mainly driven by the COVID-19 pandemic), this comparison shows that the plastic industry in Georgia is developing in accordance with the whole economy. The whole output of plastic industry in Georgia during the year 2020 (176.3 mln Gel) is 0.4% of the whole GDP of Georgia for the year 2020. Total import of the all-type plastic products during the year 2020 was 268 mln USD which is 3.3% of the whole import of the Georgian economy during the year 2020 (whole import of the whole economy in 2020 was 8 bln USD). Data also shows that total export of all types of plastic products during the year 2020 was 17 mln USD which is 0.5% of the whole export of the Georgian economy during the year 2020 (whole export of the whole economy in 2020 was 3.3 bln USD). The total number of employed workers in the plastic industry is 5,973 and this is only 0.5% of the total employed population of the country (total employed population of Georgia is 1,197,900).

2.4.3 Biodegradable plastics

Alternative types of feedstock – biodegradable plastic represents a very small share of the market. According to the *Technical Regulation for the Rule of Regulation of Plastic and Biodegradable Plastic Bags* (September 14, 2018), only the production, sale and import of relevant biodegradable and compostable bags meeting the requirements of EN 13432:2000 standards is permitted in Georgia. Production, import and sale of plastic bags and oxo biodegradable bags are prohibited in the country. However, implementation of this regulation is not fully implemented due to the issues related to the pandemic, an insufficient monitoring system (non-existence of a relevant laboratory, low capacity of municipalities) and slow implementation of the certification process on the production of biodegradable and compostable bags.

The National Office of Statistics does not have data about the amount of imported biodegradable materials (granules) and locally produced biodegradable plastic bags. At the same time, 3 companies own certificates of origin from international certifying bodies (TÜV AUSTRIA).

It should be mentioned that no other type of biodegradable and compostable products (except bags) is regulated, or promoted to be produced and used in Georgia, as well as no other types of oxo biodegradable products are prohibited in the country.

2.4.4 Microplastics

The issue related to microplastics has not been investigated in the county. Therefore, no data or regulations exist to curb microplastics pollution. Moreover, knowledge and awareness about the harm of microplastics is very low among all stakeholders in Georgia and needs to be addressed.

2.4.5 Quantities of plastic waste and littering

Around 1.1 million tons of municipal solid waste is generated in Georgia every year, and the tendency is incremental. According to waste composition studies, plastic waste comprises about 12-16% of municipal solid waste (MSW) collected and disposed of at landfills in Georgia. Accordingly, the amount of plastic waste disposed of at landfills vary from 132,000 - 176,000 t of plastic waste a year.

Large quantities of plastic waste leak into the environment from sources both on land and at sea, generating significant economic and environmental damage. According to the municipal solid waste management plans developed and approved by local governments in all municipalities, spontaneous dumpsites exist in almost all villages and in most cases are located near gorges, river banks and coastal areas. Official data about the composition of waste at dumpsites does not exist. However, clean-up activities conducted by local governments, various donor-funded projects, activists, etc., showed that plastic waste represents a significant amount of this waste.

According to the results of the EC-UNDP funded projects, Environmental Monitoring of the Black Sea (EMBLAS I and II) and Improving Environmental Monitoring in the Black Sea – Special Measures (EMBLAS Plus) plastic is the largest category of litter accumulated on beaches in Georgia and amounts to more than 95%.

Table 8: The percentage of plastic litter (%) in waste accumulated on the beaches of Georgia in 2019

Location	Tskaltsminda	Sarpi	Maltakva	Kobuleti	Ureki
Percentage	98.2	68.7	96.8	95.5	97.9

It should be noted that the Waste Management Code of Georgia imposes fines in case of illegal dumping of waste in a range of 80-3,000 GEL and the polluter is obliged to clean up the polluted territory. However, due to an insufficient monitoring system, lack of infrastructure (waste bins, trucks) and low awareness of the population, illegal dumpsites are still an issue in Georgia.

2.4.6 Types of plastic waste

The reuse and recycling of end-of-life plastics, including plastics packaging, is low in Georgia and potential for recycling plastic waste is unexploited. At the same time, the amount of **single use plastics** and landfilling rate of plastic waste is quite high in the country. According to municipal waste composition studies, plastic waste makes about 12% - 16% of total landfilled household wastes consisting of PET bottles (2-4%), plastic bags (5-8%) and other plastic waste (3-8%). In 2020, the total amount of municipal waste in Georgia was about 1.1 mln tons, out of which 168,000 tons was plastic consisting of about:[6]

[6] The calculation has been made based on data from the waste composition study conducted in Tbilisi in October 2020, which shows that plastic waste makes up about 15.3% of the total landfilled household waste. Furthermore, the assumption has

- **40,000 tons of PET bottles**,
- **80,000 tons of plastic bags** and
- **48,000 tons** of **other plastic waste**.

According to data received from the National Statistics Office, in 2020, the annual amount of produced and imported plastic items in Georgia was 180,900 tones. The analysis shows that **93% (168,300 ton) of this amount is transformed into waste**, consisting of 22% of PET bottles, 44% of plastic bags and 27% of other plastic waste. Table 8 below summarizes the data of this analysis for the last 10 years.

Table 9: Plastic wastes (ton)[7]

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PET bottles	23,200	24,900	24,000	27,400	27,400	29,800	34,800	35,700	38,500	39,600*
Plastic bags	47,000	50,500	48,600	55,600	55,500	60,500	70,600	72,500	78,100	80,300*
Other plastic	28,300	30,400	29,300	33,500	33,500	36,400	42,500	43,700	47,100	48,400*
Total plastic waste	**98,400**	**105,800**	**101,900**	**116,500**	**116,400**	**126,700**	**147,900**	**151,900**	**163,700**	**168,300***

Table 9 shows that the average annual growth rate of plastic items is 6%, while the 2020 data is 71% higher than the data of 2011.

2.4.7 Plastic recycling activities

Currently, 26 plastic waste recycling companies with a total design capacity of approximately 184,000 tons/year operate in Georgia. These companies vary significantly in design capacity ranging from 50 t/y to 120 000 t/y and the average monthly salary of people employed in companies is about 500-800 GEL.

Please see the list of recycling companies, their input materials, products and designed capacity in table 10 below.

Table 10: The list of plastic recycling companies in Georgia

No	Name of Company	Input materials	Products	Designed capacity, t/year
1	I/E Sergo Jojishvili	PE, PP	Granules, small construction and household items	693
2	Ltd PLK Eco Solutions	PE, PET, PP, PVC and tires	Furnace fuel	4,000
3	Ltd Leader Plastic	PE, PP, PS	Granules	960

been made that the composition of waste in the entire country (other regions) was similar to the composition of waste in Tbilisi.

[7] See the previous footnote.

4	Ltd U&N Group	PET, PE, PP	PET flex, granules and plastic pipes	7,620
5	Ltd Georgian Hongchuan	PMMA	Methyl methacrylate	20,000
6	Ltd LMY	PET, PP	Flex, granules	200
7	Ltd Zugo	PE	PE bags	840
8	Ltd Geo Polymer	PE, PP	Granules	1,584
9	Ltd Lazu Group	PE, PP	Fuel	2,000
10	Ltd Polyvim	PE, PET, PP, PVC	Fiber	2,270
11	Ltd Poly Plastics	PE	Polyethylene film	90
12	Ltd Georgian Synthetic Oil Company	PE, PET, PP, PVC and rubber products	Liquid fuel	3,120
13	I/E Boris Dzadzamia	PE	Polyethylene film	62
14	Ltd Global Recycling Co	PP. PE	Granules	120,000
15	I/E Givi Dzagania	PE	Polyethylene film	50
16	Ltd POLIMARR	PE	Polyethylene film	285
17	Ltd GCL	PE, PP	Granules	6,000
18	Ltd Aniko Gogochuri	PE, PP	Granules	80
19	I/E Ruben Pruidze	PE, PP	Granules	80
20	Ltd Supta Msoplio	PE	Granules	300
21	Ltd Geoplast	PE	Granules	3,144
22	Ltd Eco Geo Pet	PET	Granules	3,600
23	Ltd Supta Samkaro	PE, PP, PET	Granules	4,000
24	Ltd Davitsvat Garemo Kvlav Carmoebit	PE	Granules	700
25	Ltd TSC	PE, PP	Granules	600
26	Ltd Horizon International Group	PE, PP	Granules	720

Out of these 26 companies, 15 companies with the total design capacity of 150,000 tons/year produce intermediate products (flex, granules). The other 11 companies produce various types of end products (polyethylene bags, furnace fuels, methyl methacrylate, small construction and household items, etc.). The total design capacity of these companies is approximately 34,000 tons/year.

The companies face a lack of raw materials, modern equipment to produce high-quality products, and low capacity and skills of the workforce. At the same time, most of them have a stable market to sell their products.

2.4.8 Plastic waste separation and EPR scheme

The National Waste Management Strategy of Georgia established the following targets for plastic recycling in the country:

Year	Plastic Recycling Target
2025	50%
2030	80%

Respectively, 85,000 t of plastic waste should be separately collected and recycled in 2025 and 135,000 t in 2030. However, it should be mentioned that a draft technical regulation about Packaging Waste has been developed, which includes targets for plastic recycling. Therefore, the targets established by the National Waste Management Strategy of Georgia can be revised in the future.

At the same time, according to the Waste Management Code of Georgia, all municipalities in the country should gradually introduce waste separation systems starting February 1, 2019.

However, a municipal waste separation system is in the initial stage of development and has not been fully established in the country yet. This is mainly caused by the lack of infrastructure, low capacity of local governments to set up the system and limited recycling capacity in the country. At the same time, there are no quality standards for sorted plastic waste in line with EU guidelines.

It should be noted that with the support of the projects funded by donor agencies, waste separation systems have been piloted in different regions of Georgia. For example, with the support of the WMTR II program (implemented by CENN and financed by USAID), 47 waste separation corners have been established in public places of Tbilisi, Batumi, Kobuleti and Khelvachauri, where citizens can deposit their separated waste – PET bottles, paper, glass, and aluminium - to be recycled. Local governments collect the separated waste and provide it to recycling companies.

Furthermore, in the city of Kutaisi, with the support of the EU-funded black sea program and US Embassy in Georgia, 170 net bins have been installed for plastic waste separation. The local government collects the separated waste. Moreover, 60 (240 litter) bins have been placed in administrative buildings of the city for paper waste collection.

Six technical regulations on EPR have been developed in the country. Four regulations about Electrical and Electronic Equipment, End-of-Life Tires, Used Batteries and Accumulators, and Used Oils have been approved by the government. The regulation about End-of-Life Vehicles is in the approval process and the technical regulation about Packaging Waste, including plastic packaging, is expected to be submitted for approval in 2021.

An EPR scheme on packaging waste, including a deposit system, is an economic instrument that will support the introduction of effective plastic waste sorting and recycling processes and subsequently reduce plastic waste and littering. Moreover, it will promote a dialogue between producers, local authorities and recyclers and creating strong partnerships.

Furthermore, ecolabel and Green Public Procurement systems to further incentivize the use of recycled plastics have not been introduced in the country.

It should be noted that various donor funded projects conduct capacity building and awareness raising campaigns on waste separation, including plastic waste. However, this process does not have a

systematic character and does not cover the entire country. It is important that the GoG leads and implements the capacity building and awareness raising campaigns on plastic waste management. This can be done through the Ministry of Environmental Protection and Agriculture.

Please see annex 1: Relevant donor funded initiatives in waste management, related to plastic waste management in Georgia

2.4.9 Investment, role of R&D and innovation towards circular solutions

Georgia faces a lack of investment to improve infrastructure and promote innovations related to plastic waste management. There are a number of scientific institutions in the county that have the potential to conduct research and analysis. However, studies on new technological solutions related to the plastic value chain have not been conducted. Furthermore, there is no infrastructure (laboratory) for chemical testing and monitoring of compostable and biodegradable plastics in the country. It should be noted that there are scientific foundations, such as Rustaveli National Science Foundation, that can be encouraged to finance research on improving the plastic value chain in the country.

Although the private sector is involved in the plastic waste management process, there is no clear policy related to the Public-Private Partnership. Furthermore, stable investment from the private sector in infrastructure and research and development related to plastic value chain is lacking in the country.

2.4.10 Harnessing global action

Georgia is part of two conventions related to plastic waste, which set special requirements for its member states that have to be implemented by the parties:

- Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, and
- Bucharest Convention on the Protection of the Black Sea Against Pollution and its protocols

However, requirements of international conventions are not fully reflected in the national legislation of Georgia. The national law on Waste Import, Export, and Transit does not fully align with the requirements of the Basel Convention. The legislation should reflect recent changes in the Basel Convention related to plastic waste. It should be mentioned that a draft law has been developed, which includes all requirements of the convention.

As a party of the Convention on the Protection of the Black Sea Against Pollution and its protocols, Georgia is represented in the commission on the protection of the Black Sea Against Pollution. The commission unites 6 countries - Georgia, Bulgaria, Romania, Russia, Turkey and Ukraine. However, cooperation and coordination among countries within the commission is quite weak and needs to be improved to push forward implementation of the Convention. Moreover, according to the Black Sea Marine Litter Regional Action Plan[8], Georgia must develop a corresponding National Action Plan that will help the country tackle marine pollution.

[8] Adopted at the 34th Meeting of the Commission on the Protection of the Black Sea against Pollution (BSC).

2.4.11 Gaps, challenges and their root causes

The amount of plastic production and import has been increasing over the last ten years. In 2020, the plastics sector employed 5,973 people and generated a turnover of 567.1 mln GEL. However, the plastic industry represents a relatively a small share of the whole trade sector in Georgia.

Presented below are the main problems related to plastic waste management in Georgia and their root causes:

- A large amount of plastic items imported or produced in Georgia are designed to be used only once – short lived products
    - A regulation restricting the usage of plastic bags exists in the country. However, regulations to reduce the usage of single-use plastics, economic instruments or incentives schemes should be developed
- The reuse and recycling of end-of-life plastics is low
    - Lack of economic incentives schemes – EPR, Ecolabel and Green Public Procurement, low public awareness
- Municipal waste separation has not been introduced in the country (except pilot projects funded by donor agencies); an EPR system is in the process of being introduced in Georgia and is planned to be implemented starting in 2023. The process will take some time until it is fully operational; the landfilling rate of plastic waste is high
    - Lack of finances and infrastructure at the local level (municipalities); lack of capacity of local employees to plan the process of plastic waste management in line with the best international practices and national legislation; the situation related to the pandemic.
- Plastic waste recycling industry does not correspond to modern standards
    - Lack of raw materials, modern equipment to produce high-quality products, and low capacity and skills of the workforce
- Large quantities of plastic waste leak into the environment from sources both on land and at sea
    - Spontaneous dumpsites still exist in almost all villages in Georgia
    - Plastic is the largest category of litter accumulated on the beaches in Georgia
        - Weak monitoring system, lack of regulations to tackle marine litter, low awareness of the population
- Requirements of international conventions are not fully reflected in the national legislation of Georgia
    - Lack of human resources in the respective department of MEPA
- Low quality of sorted plastics and recycled plastic products
    - No quality standards for sorted plastic waste and recycled plastics in line with EU guidelines
- Landfilling rate of plastic waste is high
    - Low rate of plastic waste separation and recycling
- Alternative types of feedstock – biodegradable plastic represents a very small share of the market
    - Weak monitoring system to execute the ban on plastic bags, low capacity of domestic businesses to produce biodegradable plastic bags
- Issues related to microplastics have not been investigated - no data or regulations exist to curb microplastics pollution
    - Lack of human resources in respective governmental institutions, lack of infrastructure and capacity in scientific institutions
- Low public awareness on the importance and benefits of plastic waste prevention, reuse, sorting and recycling

- Lack of capacity building and awareness raising campaigns on plastic waste prevention, reuse, sorting and recycling
- Lack of human resources in respective governmental institutions

3 Strategy

3.1 Vision

Georgia strives to become a plastic waste prevention and recycling-oriented country, fostering sustainable and safe consumption and production patterns of plastics.

This will be achieved by introducing a closed cycle management of plastics prioritizing prevention, reuse, and recycling processes.

3.2 Priorities

3.2.1. Hierarchy

The NPWPP complies with the Waste Management Hierarchy principles set out in the Waste Management Code of Georgia, which gives top priority to preventing the creation of waste in the first place. When waste is generated, it gives priority to preparing it for re-use, recycling and other recovery, such as energy recovery. Waste disposal at landfills after pre-treatment has descending order of environmental preference.

The priority order of plastics waste management in Georgia is presented in Figure 2 below:

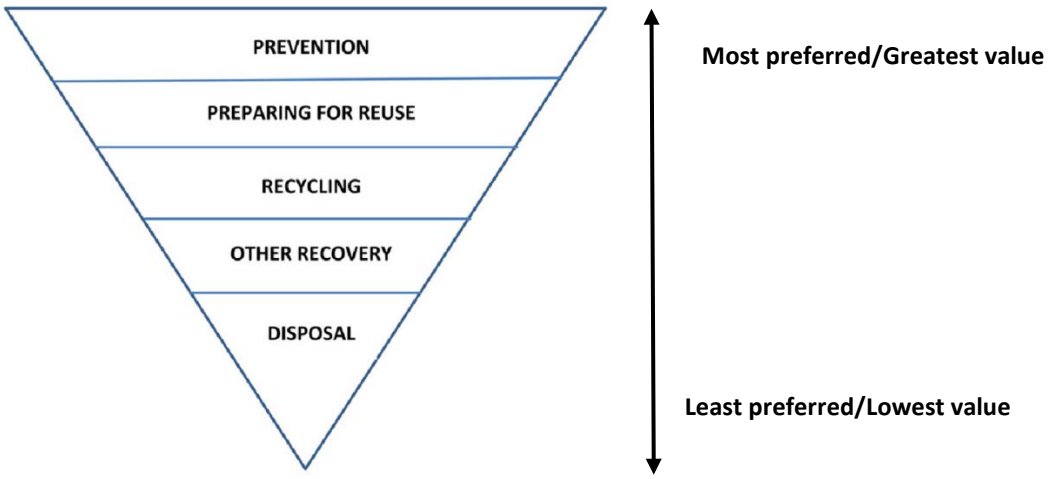


Figure 2: Plastic Waste Management Hierarchy in Georgia

3.2.2. Concepts

The main concepts the strategy utilizes are the following:

(a) **Life cycle thinking**: the approach is used for recommending methods for the management of plastic waste. The concept involves an assessment of all stages of the product's life in order to find out if and where the producer may act to reduce environmental impacts and optimize the use of resources. It allows assessment of the environmental impact taking into account local factors, such as the distance to a treatment facility, the energy recovery efficiency of the facility and the required quality of the outcome.

(b) **Waste as a resource**: the strategy presents numerous opportunities for increasing the utilization of plastic waste as a resource. For example, this fraction can be used as a resource for recycling and for heat, electricity and fuel by means of incineration, thereby reducing the generation of waste and promoting a more sustainable economy.

(c) **End-of-waste**: the use of end-of-waste criteria as specified in Article 6 of Directive 2008/98/EC on waste to clarify when certain plastic waste that has undergone recovery ceases to be waste.

(d) **Prevention**[9]: the concept mainly refers to the prevention of plastic waste and generates solutions to achieve waste prevention in this waste stream. Prevention means that measures are taken before a substance, material or product has become waste, that reduce:

a) the quantity of waste, including through the re-use of products or the extension of the life span of products;

b) the adverse impacts of the generated waste on the environment and human health; or

c) the content of harmful substances in materials and products.

3.2.3. Priority Directions

The priority directions of the NPWPP are in line with the goals of the Waste Management Code of Georgia and strategic documents – National Waste Management Strategy and Action Plan, and are based on the situation analysis described in Chapter 2 of the NPWPP. Moreover, the best international practices have been assessed, such as included in the European Strategy for Plastics in a Circular Economy and consultations with key beneficiaries and stakeholders have been conducted to consider their views and opinions and agree upon a common vision.

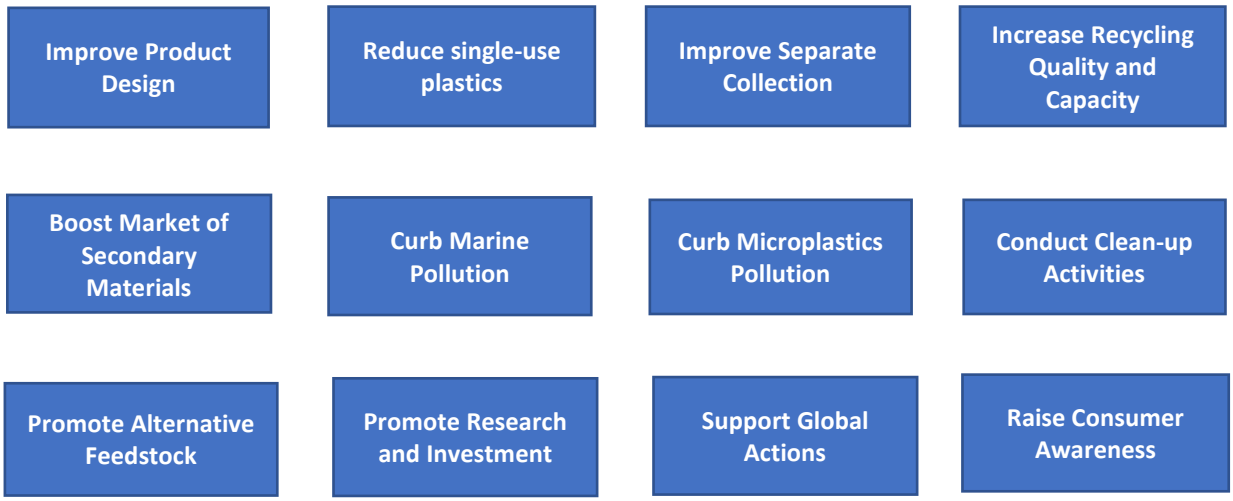


Figure 3: The priority directions for plastic waste management in Georgia

The priority directions listed above address the challenges posed by plastics in Georgia throughout the value chain and take into account the entire life cycle of the process. They cover both production and consumption patterns of plastic products and promote sustainable plastic waste management practices in the country.

[9] As defined in Article 3 of the Directive on waste (2008/98/EC).

3.3 Goals, Objectives and Targets

Analysis of the priority directions described in the sub-chapter 3.2.3 and grouping them by topics showed four main ways required for improving plastic waste management in Georgia, which are related to **(1)** Increasing quality and quantity of plastic recycling; **(2)** Reducing the generation of plastic waste and littering; **(3)** Promoting investment and supporting innovation; and **(4)** Taking part in global initiatives and implementing global treaties.

Therefore, based on the priority directions, the NPWPP identifies four goals of the program that are: **S**pecific – **M**easurable – **A**chievable – **R**elevant and **T**ime-bound (SMART).

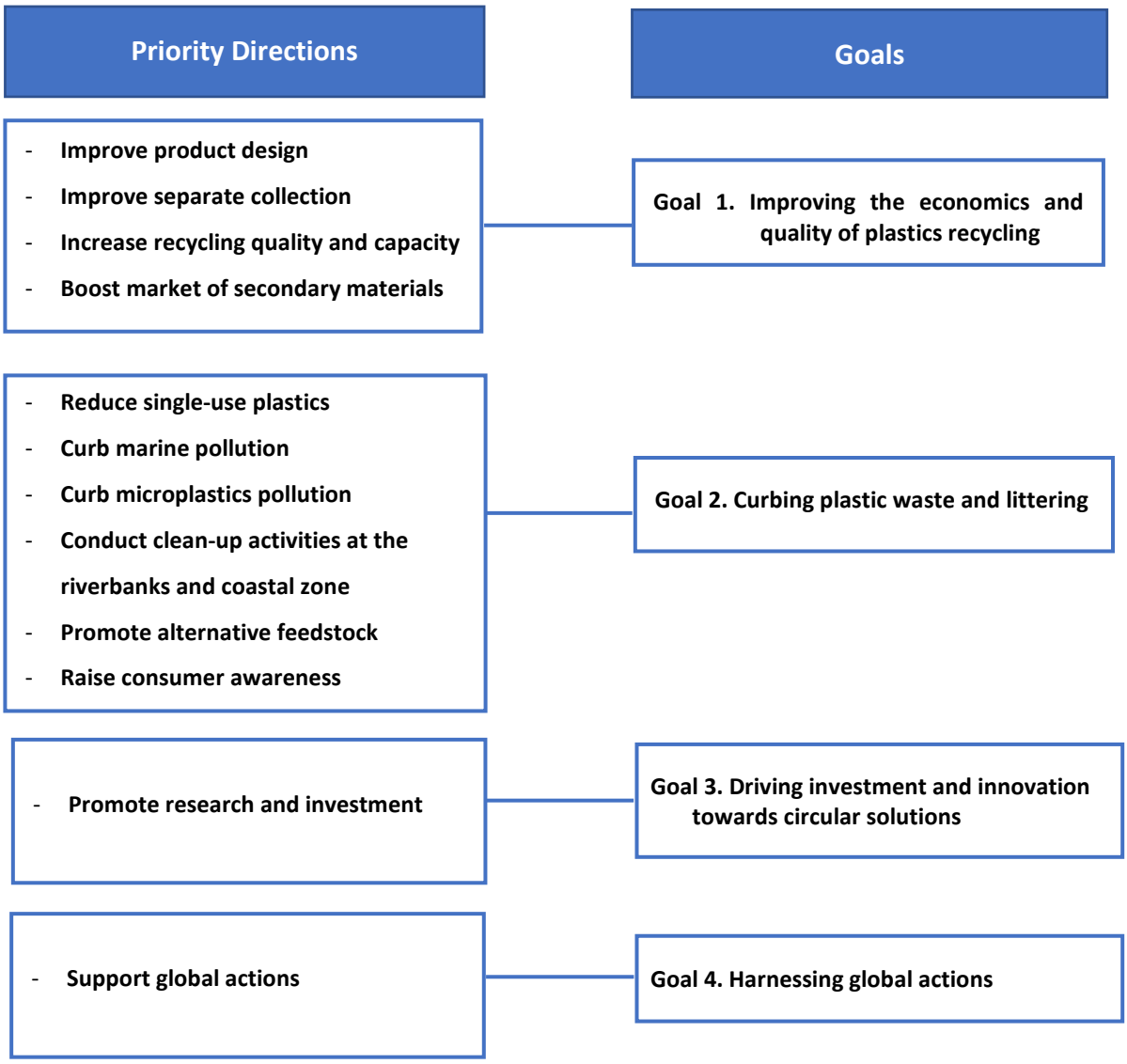


Figure 4: Grouping of priority directions and NPWPP goals

The sub-chapters below provide information about the goals, respective objectives and measures required for achieving sound plastic waste management in Georgia.

3.3.1 Goal 1: Improving the economics and quality of plastics recycling

Improving plastics recycling will bring both environmental and economic benefits to Georgia. However, the effectiveness of this process is primarily linked to the quality of the production and design of plastic products. Therefore, it is crucial to improve plastic products design in a way that makes it easier to recycle, and introduce and expand the already existing separate collection of plastic waste. Moreover, it is essential to improve the quality of this process to ensure that the recycling industry receives quality raw materials and expands and modernizes Georgia's sorting and recycling capacity and creates a market for recycled and renewable plastics.

Objectives of Goal 1. Improving the economics and quality of plastics recycling

Objective 1.1. Improve product design

Objective 1.2. Boost recycled content

Objective 1.3. Improve separate collection of plastic waste

3.3.2 Goal 2: Curbing plastic waste and littering

The amount of plastic waste has been increasing in Georgia over recent years. Littering and the leakage of plastic waste negatively affects the environment and human health and damages economic activities such as tourism, fisheries and shipping. Single-use plastic items represent a large amount of the total plastic products in Georgia and are a major source of plastic leakage into the environment, including marine litter.

Therefore, it is necessary to introduce measures and a legislative initiative in Georgia to reduce the unnecessary generation of single-use plastic items or over-packaging, encourage the reuse of packaging and create a system to recycle single-use plastic packaging. An EPR scheme on packaging waste that the Government is planning to introduce will significantly help finance actions to curb plastic litter.

Marine and surface water litter from sea-based sources is also a significant issue in Georgia that needs to be addressed. Moreover, plastic waste is discarded from ships and the loss or abandonment of fishing gear at sea and plastic items from aquaculture also require attention.

Improving the monitoring system, building relevant infrastructure, and organizing clean-up and awareness campaigns can significantly contribute to curbing plastic litter.

Biodegradable and compostable plastics can contribute to reducing the environmental pollution in Georgia. However, it should be noted that biodegradable plastics degrade under specific conditions and therefore, their improper management still might cause harm to ecosystems, especially to the marine environment.

Therefore, consumers should be provided with clear instructions on their usage via a labelling system. To this end, rules for the definition, use, application and labelling of compostable and biodegradable plastics should be developed and relevant infrastructure (a laboratory) should be built in Georgia in line with the legislative requirements.

Oxo-plastic bags have already been banned in Georgia, but it is necessary to establish measures covering other oxo-plastic items as well.

Microplastics, small fragments of plastic below 5mm in size, recently became a global issue, as it is a source of plastic leakage that poses a real threat both to the environment and human health. This issue has not yet been addressed in Georgia. Therefore, it is necessary to conduct targeted research and develop regulations to restrict intentionally added microplastics and reduce their unintentional release from various plastic containing items.

Objectives of Goal 2. Curbing plastic waste and littering

Objective 2.1. Reduce single-use plastics

Objective 2.2. Tackle sea-based sources of marine litter

Objective 2.3. Monitor and curb marine litter more effectively

Objective 2.4. Promote compostable and biodegradable plastics

Objective 2.5. Curb microplastics pollution

3.3.3 Goal 3: Driving investment and innovation towards circular solutions

Implementation of the NPWPP and its objectives to modernize the plastics value chain will require mobilizing investments in both infrastructure and innovation. Therefore, it is necessary to create a mechanism to attract investments and spur innovations in the sector.

Innovative solutions might cover new technological solutions for advanced sorting, recycling and polymer design processes. Scientific research is required in relation to biodegradable plastics and microplastics. Therefore, various financing schemes should be utilized, including a Public Private Partnership mechanism; economic instruments to promote plastic waste recycling and prevention; involving industries in this process by encouraging them to invest in infrastructure, research and development; and setting up a private investment fund to offset the environmental externalities of plastic production.

Objectives of Goal 3. Driving investment and innovation towards circular solutions

Objective 3.1. Create an enabling framework to promote investment and innovation in the plastic value chain

3.3.4 Goal 4: Harnessing global action

An increasing amount of plastic waste and its improper management is a global issue, and therefore joint efforts are required to address them. Georgia needs to participate in global dialogues and uptake best practices existing worldwide to address plastic waste management issues, including in the marine environment. Furthermore, developing sound management of plastic waste will help the country contribute to achieving the 2030 Sustainable Development Goals.

Georgia is a member of the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, and the Bucharest Convention on the Protection of the Black Sea Against Pollution and its protocols. Therefore, it is obligatory for the country to ensure that all requirements of international treaties are fully reflected in national legislation and implemented. Moreover, Georgia is a member of a commission on the protection of the Black Sea Against Pollution, which unites 6 countries - Georgia, Bulgaria, Romania, Russia, Turkey and Ukraine. It is important for

the country to effectively utilise this regional platform to address the issue of marine litter and promote sound plastic waste prevention and management systems.

Most recycled plastic items produced in Georgia are currently sold on the local market. In order to enable recycling companies in Georgia to participate in international trade, it is necessary to introduce a certification scheme for recycling plants and improve the quality of sorted waste and recycled products.

Objectives of Goal 4. Harnessing global action

Objective 4.1. Support regional cooperation

Objective 4.2. Support effective implementation of multilateral initiatives

3.4 Measures

The table below provides the list of recommended measures for Georgia to be implemented over a 20-year period. The measures have been developed according to each objective and goal in line with international best practices and requirements of Georgian legislation.

The measures have been assessed according to the technical and financial feasibility and urgency of their implementation and based on this, prioritization has been done and the following timeline has been elaborated: Short-term measures – 5 years (until 2026), Medium-term measures – 10 years (until 2031), Long-term measures – 20 years (until 2041).

Please note that the strategy (sub chapter 3.5) includes only measures to be implemented within a 10-year period, while the action plan (sub chapter 4.5) has measures to be implemented within a 5-year period.

Activities required to implement the measures within a 5-year period are presented in Chapter 4 - Action Plan.

Goal 1 Improving the economics and quality of plastics recycling	
Objective 1.1. Improve plastic product design	**Timeline**
Measure 1.1.1. Ensure that all plastics packaging placed on the Georgian market can be reused or recycled in a cost-effective manner in line with the requirements of relevant national legislation.	**Mid-term**
Measure 1.1.2. Improve the traceability of chemicals (e.g. heavy metals) and address the issue of legacy substances in recycled plastic streams in line with relevant national legislation.	**Long-term**
Measure 1.1.3. Improve eco-design – introduce requirements to support the recyclability of plastics (local production and import)	**Long-term**
Objective 1.2. Boost recycled content	**Timeline**

Measure 1.2.1. launch a Georgian-wide pledging campaign targeting industry and public authorities (voluntary commitments in support of the NPWPP's objective, in particular as regards the uptake of recycled plastics) Description of a pledging campaign please see in a separate table below.	**Long-term**
Measure 1.2.2. Assess and introduce regulatory or economic incentives for the uptake of recycled content, including the following: - put in place well-designed EPR schemes and/or deposit systems, in consultation with the relevant sectors - set up separate collection of plastics waste and improve the way in which this is done	**Short-term**
Measure 1.2.3. Food-contact materials: align plastics recycling processes with relevant EU regulations (Regulation (EC) No 1935/2004), improve characterization of contaminants and introduce effective monitoring system	**Mid-term**
Measure 1.2.4. Development of quality standards for sorted plastics waste and recycled plastics in line with EU guidelines (Standards of European Committee for Standardization)	**Long-term**
Measure 1.2.5. Establish ecolabel and Green Public Procurement systems to further incentivise the use of recycled plastics, including by developing adequate verification means (e.g. favor reusable and recycled plastics in public procurement)	**Mid-term**
Objective 1.3. Improve separate collection of plastic waste	**Timeline**
Measure 1.3.1. Ensure effective implementation of obligations on separate collection of waste through legislative initiatives and capacity building activities	**Short-term**
Goal 2 Curbing plastic waste and littering	
Objective 2.1. Reduce single-use plastics	**Timeline**
Measure 2.1.1. Conduct analytical work, including the launch of a public consultation, to determine the scope of a legislative initiative on single-use plastics (including economic instruments and incentives schemes)	**Short-term**

Measure 2.1.2. Promote existing alternatives to single-use plastic items (e.g. in catering and take-aways), where these are more environmentally beneficial	**Short-term**
Objective 2.2. Tackle sea-based sources of marine litter	**Timeline**
Measure 2.2.1. Prevent marine litter from ships (Consider requirements of EU directive 2019/883)	**Mid-term**
Measure 2.2.2. Development of measures to reduce loss or abandonment at sea of fishing gear	**Long-term**
Measure 2.2.3. Development of measures to limit plastic loss from aquaculture	**Long-term**
Objective 2.3. Monitor and curb marine litter more effectively	**Timeline**
Measure 2.3.1. Establish effective monitoring system and mapping of marine litter, including microplastics	**Short-term**
Measure 2.3.2. Develop an action plan of measures on marine litter in line with the Marine Strategy Framework Directive and the Waste Framework Directive	**Short-term**
Measure 2.3.3. Raise awareness of littering and enforce fines; promote river-banks and beach clean-up activities	**Short-term**
Measure 2.3.4. Improve waste collection, particularly near the river banks and coasts, and improve coordination between the authorities responsible for waste management, water and the marine environment at national and local levels	**Short-term**
Objective 2.4. Promote compostable and biodegradable plastics	**Timeline**
Measure 2.4.1. Create infrastructure (laboratory) and local capacity in Georgia to monitor compostable and biodegradable plastics	**Short-term**

Measure 2.4.2. Develop regulations and Start the process to restrict the use of oxo-plastics	**Mid-term**
Objective 2.5. Curb microplastics pollution	**Timeline**
Measure 2.5.1. Develop regulations to restrict the intentional addition of microplastics to products, or products containing microplastics	**Long-term**
Measure 2.5.2. Development of policy options for reducing unintentional release of microplastics from tyres, textiles and paint	**Mid-term**
Measure 2.5.3. development of measures to reduce plastic pellet spillage (e.g. certification scheme along the plastic supply chain and/or Best Available Techniques reference document under the Industrial Emissions Directive)	**Long-term**

Goal 3 Driving investment and innovation towards circular solutions

Objective 3.1. Create an enabling framework to promote investment and innovation in the plastic value chain	**Timeline**
Measure 3.1.1. Utilize various financing schemes, including a Public Private Partnership to support innovative solutions and new technologies aimed at reducing the environmental impacts of primary plastic production	**Mid-term**
Measure 3.1.2. Introduce economic instruments to promote plastic waste recycling and prevention	**Short-term**
Measure 3.1.3. Encourage industries to increase infrastructure and Research and Development (R&D) investment in areas of direct relevance to achieving the NPWPP	**Long-term**
Measure 3.1.4. Encourage industries to contribute to work on setting up a private investment fund to offset the environmental externalities of plastic production	**Long-term**

Goal 4 Harnessing global action	
Objective 4.1. Support regional cooperation	**Timeline**
Measure 4.1.1. Support cooperation on plastic waste prevention with Black Sea basin countries	**Mid-term**
Measure 4.1.2. Engage in international fora to develop a global response to the increase in marine litter	**Mid-term**
Measure 4.1.3. Encourage industries to play an active part in supporting an integrated, cross-border circular plastics economy	**Long-term**
Objective 4.2. Support effective implementation of multilateral initiatives	**Timeline**
Measure 4.2.1. Implement the requirements of the Basel Convention related to plastic waste (changes in legislation, improving monitoring system)	**Short-term**
Measure 4.2.2. Support implementation of the Convention on the Protection of the Black Sea Against Pollution and its protocols, in particular develop national action plan against marine litter	**Long-term**
Objective 4.3. Promote international trade in line with EU requirements	**Timeline**
Measure 4.3.1. Develop industry standards on sorted plastic waste and recycled plastics	**Long-term**
Measure 4.3.2. Ensure that imported and exported plastic waste is dealt appropriately	**Long-term**
Measure 4.3.3. Develop a certification scheme for recycling plants	**Long-term**

Description of a Pledging Campaign

1. The MEPA calls on stakeholders to come forward with voluntary pledges to boost the uptake of recycled plastics. The objective is to ensure that by 2030 certain amount of recycled plastics find their way into new products on the Georgian market.
2. Interested companies and/or industry associations have until certain period to submit their pledges to the indicated email address.
3. When sending in their pledges, stakeholders are asked to provide the MEPA with data illustrating how their pledge contributes to achieving the quantitative objective set in paragraph 1. Such data will be treated confidentially and will be used exclusively for the purpose of monitoring overall progress towards the quantitative objective. Pledges will be put under quality check, and assessed against their reliability and ability to meet declared deadlines.
4. When sending in their pledges on recycled content, stakeholders are welcome to make pledges covering other aspects which are relevant to the NPWPP, such as design for recyclability.
5. The pledges received will be made public through a dedicated webpage.

3.5 Logical framework

Goal 1. Improving the economics and quality of plastics recycling	**Link to (SDGs):**	**Indicator**	
	Goal 8. Decent work and economic growth **Goal 12. Ensure Sustainable Consumption and Production patterns**	**Increased access to and utilization of sustainable plastic products**	
	Measures	**Indicators**	**Targets**
Objective 1.1. Improve plastic product design	**1.1.1.** Ensure that all plastics packaging placed on the Georgian market can be reused or recycled in a cost-effective manner in line with the requirements of relevant national legislation.	**1.1.1.** Increased share (%) of re-used/recycled plastics packaging towards conventional plastics packaging placed on the Georgian market	**1.1.1.** Share of 45% till 2029
Objective 1.2. Boost recycled content	**1.2.2.** Assess and introduce regulatory or economic incentives for the uptake of recycled content, including the following: - put in place well-designed EPR schemes and/or deposit systems, in consultation with the relevant sectors – set up separate collection of plastics waste and improve the way in which this is done	**1.2.2.** Increased uptake of recycled plastic packaging waste (in percentage)	**1.2.2.** Increase in 44% of recycling rate till 2025 and 51% of recycling rate till 2031 in comparison to baseline data The baseline will be established during the feasibility study

	1.2.3. Food-contact materials: align plastics recycling processes with relevant national legislation, improve characterization of contaminants and introduce effective monitoring system	**1.2.3.** Increased share (%) of recycled plastics towards conventional plastics used in food contact materials	**1.2.3.** By 2028, 5 % of food contact plastics is substituted to recycled plastics
	1.2.5. Establish ecolabel and Green Public Procurement systems to further incentivise the use of recycled plastics, including by developing adequate verification means (e.g. favor reusable and recycled plastics in public procurement)	**1.2.5.** Increased demand on and utilization of recycled products (in percentage)	**1.2.5.** Increase in 30% of recycled products sold till 2030 in comparison to baseline data The baseline will be established during the feasibility study
Objective 1.3. Improve separate collection of plastic waste	**1.3.1.** Ensure effective implementation of obligations on separate collection of waste through legislative initiatives and capacity building activities	**1.3.1.** Increased amount of sorted plastics (in percentage)	**1.3.1.** 50% increase of sorted plastics till 2025 in comparison to baseline data The baseline will be established during the feasibility study
Goal 2. Curbing plastic waste and littering	**Link to (SDGs):**	**Indicator**	
	Goal 12. Ensure Sustainable Consumption and Production patterns **Goal 14. Conserve and sustainably use the oceans, seas and marine resources**	**Decreased level of Environmental Deterioration**	
	Measures	**Indicators**	**Targets**

Objective 2.1. Reduce single-use plastics	**2.1.1.** Conduct an assessment, including the launch of a public consultation, to determine the scope of a legislative initiative on single-use plastics (including economic instruments and incentives schemes)	**2.1.1.** Share of single-used plastics placed on Georgian market reduced	**2.1.1.** 2025 – 5 % reduction; 2030 – 10 % reduction
	2.1.2. Promote existing alternatives to single-use plastic items (e.g. in catering and take-aways), where these are more environmentally beneficial	**2.1.2.** Share of alternatives to single-use plastic items placed on Georgian market increased	**2.1.2.** 2025 – 5 %; 2030 – 10 %
Objective 2.2. Tackle sea-based sources of plastic marine litter	**2.2.1.** Prevent marine litter from ships	**2.2.1.** A legislative draft to reduce marine litter from ships and economic instruments are developed	**2.2.1.** A legislative draft and economic instruments developed by 2028
Objective 2.3. Monitor and curb rivers and marine litter more effectively	**2.3.1.** Mapping of marine litter, including microplastics	**2.3.1**. - **2.3.4:** Collection coverage of plastic waste generated near the coasts and rivers	**2.3.1.** - **2.3.4** 100% of collection coverage of plastic waste generated near the coasts and rivers by 2024
	2.3.2. Develop an action plan of measures on marine litter		
	2.3.3. Raise awareness of littering and improve monitoring; promote river-banks and beach clean-up activities		
	2.3.4. Improve waste collection, particularly near the river banks and coasts, and improve coordination between the authorities responsible for waste management, water and the marine environment		

Objective 2.4. Promote compostable and biodegradable plastics	**2.4.2.** Create infrastructure (laboratory) and local capacity in Georgia to monitor compostable and biodegradable plastics	**2.4.2.** A certified laboratory for testing compostable and biodegradable plastics established	**2.4.2.** At least one laboratory by 2023
	2.4.3. Develop regulations and start the process to restrict the use of oxo-plastics	**2.4.3.** Decreased amount of oxo-plastics products on Georgian market (in percentage)	**2.4.3. 20**% in decrease of oxo-plastics products by 2028 in comparison to baseline data
Objective 2.5. Curb microplastics pollution	**2.5.2.** Development of policy options for reducing unintentional release of microplastics from tyres, textiles and paint	**2.5.2.** Policy options (regulatory, market based, information, etc.) suitable for Georgia are developed to be gradually implemented	**2.5.1.** Policy options developed and their introduction started by 2028
Goal 3. Driving investment and innovation towards circular solutions	**Link to (SDGs):**	**Indicator**	
	Goal 9. Build resilient infrastructure, promote sustainable industrialization and foster innovation	**Increased financing for sustainable plastic waste management**	
	Measures	**Indicators**	**Targets**
Objective 3.1. Create an enabling framework to promote investment and	**3.1.1.** Utilize various financing schemes, including a Public Private Partnership to support innovative solutions and new technologies aimed at reducing the environmental impacts of primary plastic production	**3.1.1.** Number of innovative solutions supported through a Public Private Partnership, or other financial schemes	**3.1.1.** Number of innovative solutions by 2026

innovation in the plastic value chain	**3.1.2.** Introduce economic instruments to promote plastic waste recycling and prevention	**3.1.2**. Decreased amount of plastic waste disposed at landfills	**3.1.2.** 50% decrease of plastic waste disposed at landfills by 2025 in comparison to baseline data
Goal 4. Harnessing global action	**Link to (SDGs):**	**Indicator**	
	Goal 17. Revitalize the global partnership for sustainable development	**Improved cross border management of plastic waste**	
	Measures	**Indicators**	**Targets**
Objective 4.1. Support regional cooperation	**4.1.1.** Support cooperation on plastic waste prevention with Black Sea basin countries	**4.1.1, 4.1.2.** Joint actions with Black Sea basin countries implemented	**4.1.1, 4.1.2.** At least 3 joint actions implemented with Black Sea basin countries by 2028
	4.1.2. Engage in international fora to develop a global response to the increase in marine litter		
Objective 4.2. Support effective implementation of multilateral initiatives	**4.2.1.** Implement the requirements of the Basel Convention related to plastic waste (changes in legislation, improving monitoring system)	**4.2.1.** Increased amount of the imported quality plastic waste (in percentage)	**4.2.1. 50**% in increase of imported quality plastic waste by 2025 in comparison to baseline data

4 Action Plan

4.1 Policy options

Various policy instruments have been assessed, such as **regulatory, market-based, financing, voluntary and informative** to develop policy options and identify respective measures and activities in the action plan. Policy options have been developed on the basis of the goals, objectives and indicators included in the strategy and evaluated according to their technical and financial feasibility. Moreover, the results of the situation analysis, and experience of other countries have been assessed and consultations with stakeholders have been conducted.

As a result, the action plan includes activities that targets the prevention or minimization of plastic waste by developing laws and by-laws, standards and a methodological framework (**regulatory**); introduce economic instruments and extended producer responsibility, and deposit refund schemes (**market-based**); design financing schemes, including a Public Private Partnership (**financing**); promote river bank and beach clean-up activities (**voluntary**) and conduct capacity building and educational activities (**informative**).

The measures and activities in the action plan cover both the production and consumption phase of plastic products. They either directly address plastic waste prevention or avoid plastic waste entirely. Some measures target specific plastic products such as single-use plastics or micro plastics.

4.2 Action Plan

Goal 1. Improving the economics and quality of plastics recycling					
Objective 1.2. Boost recycled content					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
1.2.2. Assess and introduce regulatory or economic incentives for the uptake of recycled content, including the following: - put in place well-designed EPR schemes and/or deposit systems, in consultation with the relevant sectors – set up separate collection of plastics waste and improve the way in which this is done			**1.2.2:** • A draft technical Regulation on the Management of Packaging Waste developed • An operational electronic registry and database on the waste amounts, characteristics and generation is in place • A guideline on PROs monitoring system developed • Number of trainings for PROs	**300 000 USD**	Donor support
1.2.2.1. Approve and introduce a technical Regulation on Management of Packaging Waste, including deposit system	MEPA	Local governments PROs			
1.2.2.2. Operate an electronic registry and a database on the waste amounts, characteristics and generation	MEPA				
1.2.2.3. Develop a monitoring system of PROs	MEPA	Local governments			
1.1.2.4. Capacity building of PROs	MEPA, PROs	NGO sector			

Objective 1.3. Improve separate collection of plastic waste					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
1.3.1. Ensure effective implementation of obligations on separate collection of waste through legislative initiatives and capacity building activities **1.3.1.1.** Develop a technical regulation (or other relevant legislation) on separate collection of plastic waste not covered by EPR regulations **1.3.1.2.** Develop a guideline on separate collection and sorting of plastic waste in line with EU guidance for separate collection of plastic waste **1.3.1.3.** Implement capacity building and awareness raising activities for relevant stakeholders	MEPA MEPA MEPA	Local governments Local governments, NGO sector	**1.3.1** • A draft technical regulation on the management of plastic waste developed • A guideline on separate collection and sorting of waste in line with international requirements developed • A number of trainings conducted for relevant stakeholders; number of people reached via awareness raising activities	**350 00 USD**	Donor support

Goal 2. Curbing plastic waste and littering					
Objective 2.1. Reduce single-use plastics					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
2.1.1. Conduct research, including the launch of a public consultation, to determine the scope of a legislative initiative on single-use plastics (including economic instruments and incentives schemes) **2.1.1.1**. Conduct an assessment of the single-use plastics market in Georgia **2.1.1.2**. Analyze possible economic instruments and incentives schemes to reduce single-use plastics and conduct regulatory impact assessment (RIA) on the restriction of single-use plastics **2.1.1.3.** Conduct public consultations to determine the scope of a legislative initiative on single-use plastics **2.1.1.4.** Develop a technical regulation (or other relevant legislations) on the single-use plastics based on the results of RIA **2.1.1.5.** Public awareness raising on the negative impact of single-use plastics on the environment and human health	MEPA MEPA MEPA MEPA MEPA	Local governments Local governments Local governments	**2.1.1** • A draft of a technical regulation on single-use plastics developed • Number of awareness raising campaigns on the negative impact of single-use plastics	**500 000 USD**	Donor support

2.1.2. Promote existing alternatives to single-use plastic items (e.g. in catering and take-aways), where these are more environmentally beneficial **2.1.2.1.** Conduct a feasibility study on alternatives to single-use plastic items in Georgia (e.g. in catering and take-aways) (link to 2.1.1.1 and 2.1.1.2) **2.1.2.2** Develop and implement economic instruments to create incentives for promoting alternatives to single-use plastic items **2.1.2.3** Capacity building of private sector and other stakeholders **2.1.2.3** Public awareness raising	MEPA MEPA MEPA MEPA	Local governments MoESD, Local governments Local governments Local governments	**2.1.2** • Economic instruments developed • Number of trainings conducted for stakeholders • Number of awareness raising campaigns	**200 000 USD**	Donor support
Objective 2.3. Monitor and curb rivers and marine litter more effectively					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
2.3.1. Mapping of marine litter, including microplastics, in line with EU harmonised methods **2.3.1.1.** Conduct an assessment of rivers and marine litter from plastic (including microplastics) and mapping of pollution sources and amounts. Develop relevant recommendations	MEPA	Local governments	**2.3.1-2.** A draft of an action plan of measures on rivers and marine litter developed	**100 000 USD**	Donor support
2.3.2. Develop an action plan of measures on marine litter in line with the Marine Strategy Framework Directive, the Waste Framework Directive and the Convention on the Protection of the Black Sea Against Pollution and its protocols					

2.3.2.1 Asses the best international practices on the reduction of marine litter in line with the Marine Strategy Framework Directive, the Waste Framework Directive and the Convention on the Protection of the Black Sea Against Pollution and its protocols **2.3.2.2** Develop and implement an action plan of measures on rivers and marine litter reduction considering the requirements of the Marine Strategy Framework Directive, the Waste Framework Directive and the Convention on the Protection of the Black Sea Against Pollution and its protocols **(link to the activity 4.2.2.)**	MEPA MEPA	MoESD, Local governments			
2.3.3. Raise awareness of littering and enforce fines; promote riverbanks and beach clean-up activities **2.3.3.1.** Capacity building and institutional strengthening (including equipment) of institutions responsible for monitoring **2.3.3.2.** Public awareness raising to eradicate marine litter **2.3.3.3.** Riverbanks and beach clean-up activities	MEPA MEPA Local governments	Local governments Local governments MEPA	**2.3.3.** • Institutions responsible for monitoring strengthened and supplied with the required equipment • Number of awareness raising campaigns to eradicate littering and promote riverbanks and beach clean-up activities	**300 000 USD**	Donor support
2.3.4. Improve waste collection, particularly near the riverbanks and coasts, and improve coordination between the authorities responsible for waste management, water and the marine environment at national and local levels	MEPA, MRDI	Local governments	**2.3.4.** Relevant institutions supplied with the required equipment (amount of the provided equipment)	**50 000 USD** (A budget for the equipment will be identified based on the assessment)	Donor support

2.3.4.1. Conduct an assessment to identify the needs of institutions responsible for waste collection **2.3.4.2.** Ensure that relevant requirements are reflected in municipal waste management plans with sufficient actions and measures **2.3.4.3. I**nstitutions responsible for waste collection provided with the required equipment	Local governments MRDI	MEPA Local governments			
Objective 2.4. Promote compostable and biodegradable plastics					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
2.4.2. Create infrastructure (laboratory) and local capacity in Georgia to monitor compostable and biodegradable plastics **2.4.2.1.** Conduct an assessment of international methodologies for testing compostable and biodegradable plastics and standards for certification schemes to select suitable option for Georgia, as well as evaluate the needs for infrastructure. **2.4.2.2.** Support the introduction of international practices for the management of compostable and biodegradable plastics **2.4.2.3** Capacity building of relevant laboratory employees	MEPA MEPA MEPA	Local governments Local governments Local governments	**2.4.2** • A methodology and standard developed and introduced for testing compostable and biodegradable plastics • Certified laboratories	**500 000 USD** (Amount will be specified after the assessment)	Donor support

Goal 3. Driving investment and innovation towards circular solutions					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
3.1.1. Study various financing schemes to support innovative solutions and new technologies aimed at reducing the environmental impacts of primary plastic production			**3.1.1.** Financing schemes developed		
3.1.1.1. Assess a Public Private Partnership and developed recommendations on effective schemes	MEPA	MoESD, local governments		**400 000 USD**	Donor support
3.1.1.2. Support the introduction of effective schemes	MEPA	local governments			
3.1.2. Introduce economic instruments to promote plastic waste recycling and prevention					
3.1.2.1 Assess economic instruments to promote plastic waste recycling and prevention	MEPA	MoF, MoESD	**3.1.2.** An assessment report of economic instruments	**150 000 USD**	Donor support
3.1.2.2 Support the introduction of relevant economic instruments	MEPA	local governments			
Goal 4. Harnessing global action					
Objective 4.1. Support regional cooperation					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
4.1.1. Support cooperation on plastic waste prevention with Black Sea basin countries					
4.1.1.1. Initiate joint actions in cooperation with the Black Sea basin countries to prevent marine litter. For example, take an active role in the commission on the protection of the Black Sea Against Pollution	MEPA	MoESD, MoLHSD	**4.1.1.** Number of joint initiatives with the Black Sea basin countries on the prevention of marine litter.	**500 000 USD**	Donor support

4.1.2. Engage in international fora to develop a global response to the increase in marine litter **4.1.2.** Take part in international fora to develop a global response to the increase in marine litter	MEPA	MoESD	**4.1.2.** Number of conferences, meetings, round tables with participation of Georgian delegation on the development of a global response to the increase in marine litter	**50 000 USD**	Donor support
Objective 4.2. Support effective implementation of multilateral initiatives					
Measures	**Responsible Agency**	**Partner Agency**	**Indicators**	**Budget**	**Source of financing**
4.2.1. Implement the requirements of the Basel Convention related to plastic waste (changes in legislation, improving monitoring system) **4.2.1.1.** Introduce changes into waste management legislation of Georgia on new requirements of the Basel Convention related to plastic waste and conduct a regulatory impact assessment **4.2.1.1.** Introduce new requirements of the Basel Convention related to plastic waste into waste management legislation of Georgia **4.2.1.2.** Create an effective monitoring mechanism of new requirements introduced in the legislation	MEPA MEPA MEPA	MoF MoF, local governments	**4.2.1:** New requirements of the Basel Convention are reflected in national legislation An effective monitoring mechanism of new requirements in place	**250 000 USD**	Donor support

4.3 Required budget for implementation of the action plan

To evaluate investments needed for the implementation of the action plan, the costs of activities have been assessed by identifying and costing human or other resources that are required for their implementation. Required resources and their indicative (average) costs have been determined on the basis of surveys and stakeholder consultations. The total cost of activities, goals and objectives have been determined by calculating and summing the costs of all required resources.

Table 11. Indicative budget of the action plan by cost categories (USD)

	Goal 1		**Goal 2**			**Goal 3**	**Goal 4**
	Objective 1.2	Objective 1.3	Objective 2.1	Objective 2.3	Objective 2.4	Objective 3.1	Objective 4.1
A budget of objectives (USD)	**300 000 USD**	**350 00 USD**	**500 000 USD**	**550 000 USD**	**500 000 USD**	**550 000 USD**	**800 000 USD**
A budget of goals (USD)	**650 000 USD**		**2 100 100 USD**				**800 000 USD**
Sum (USD)	**3 550 000 USD**						

4.4 Stakeholder Involvement

The National Plastic Waste Prevention Program for Georgia has been developed in an inclusive manner with the involvement of relevant stakeholders. For this purpose, a working group consisting of the agencies that are engaged in plastic waste management within their competencies was established. The activity of the working group was coordinated by the Ministry of Environmental Protection and Agriculture.

The following agencies were engaged in the working group:

- Ministry of Environmental Protection and Agriculture (lead/coordinating agency)
- Ministry of Regional Development and Infrastructure
- Committee of Environmental Protection and Natural Resources of the Parliament of Georgia
- Ministry of Economy and Sustainable Development
- Ministry of Finance
- National Center for Disease Control and Public Health
- Tbilisi City Hall / Tbilservice Group
- Government of the Adjara Autonomous Republic / Adjara Solid Waste Management Company

Meetings and consultations were carried out both physically and virtually. Members of the working group were engaged at all stages of the document development process. Their comments and suggestions were considered both at the stage of baseline analysis and priority setting and during the development of the strategy and the action plan.

The document was discussed also with the representatives of the private sector and civil society and international donor organizations.

5 Monitoring and evaluation

Regular monitoring will be conducted to evaluate the implementation of the NPWPP, identify possible shortcomings and elaborate relevant recommendations.

The Ministry of Environmental Protection and Agriculture will be responsible for the monitoring of NPWPP implementation. Responsible agencies will provide MEPA with information required for the monitoring and development of relevant reports. MEPA will develop annual reports and make them available online.

Annex 1: Relevant donor funded initiatives in waste management, related to plastic waste management in Georgia

№	Title/Duration	Donor	Implementing organization	Scope	Geographic coverage
1	Keep Georgia Tidy 2019-2023	Sida	The Greens Movement of Georgia / Friends of the Earth – Georgia, Keep Georgia Tidy, Georgian Society of Nature Explorers Orchis	Empowering civil society organizations and monitoring municipal waste management plans; establishing a public watchdog system, as well as developing community skills and actively participating in waste management; waste management system analysis; analysis of municipal waste management plans and preparation of recommendations; analysis of existing sanitation systems and development of examples of individual sanitation systems; registration of illegal dumps and accounting of greenhouse gas emissions; consultation of local cleaning services; mapping of circular economy activities.	Georgia
2	The “European Union for Environment” EU4Environment Action 2019-2022	European Union	OECD UNIDO UNEP UNECE World Bank	Developing a draft action plan for waste management; Initiating/assisting the establishment of Extended Producers Responsibility Schemes.	Eastern Neighbouring Countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.
3	Solid Waste Management Sector Assessment, Operational Roadmap, and Investment Program for Integrated Development in Georgia 2020-2021	World Bank South Caucasus Regional Office	World Bank	Carry out a municipal SWM sector assessment and develop an operational roadmap and investment program to address the identified challenges related to the implementation of NWMS	Nationwide
4	Corporate Development and Regional Support Programs for Autonomous Republic of Achara and its Solid Waste Company 2020-2021	EBRD	Tetra Tech, Integrated Skills and Tethys Consulting	Corporate development programme for the Solid Waste Management Company and a regional support programme for Adjara AR	Adjara

5	Adjara Solid Waste Management Project 2010-2025	EBRD Sida ETC.	Ministry of Finance and Economy of Adjara Autonomous Republic and LLC Adjara Waste Management Company	Construction of sanitary landfill and associated facilities (e.g., sorting facility), procurement of landfill operations equipment and facilities, improvement of MSW transportation through establishing transfer station and procuring new brand transportation equipment	Adjara
6	Green Cities Initiative: Tbilisi Solid Waste Project 2019-2021	SSF	Tbilservice Group	Operation and maintenance of vehicles and machinery (slice and package); Upgrading existing waste transfer station; Upgrade of leachate treatment system at Tbilisi solid waste landfill.	Tbilisi
7	Performance Management System for Street Cleaning and Waste Management Services in 23 Municipalities of Georgia 2019-2021	UNDP – FRLD & DGG	The Ministry of Regional Development and Infrastructure	Development of Performance Management System (PMS) and e-tool for municipal solid waste management and street cleaning services; piloting of PMS in 8 municipalities, replication of PMS in 15 additional municipalities and promotion of PMS in 16 extra municipalities.	39 municipalities, Mtskheta -Mtianeti, Kvemo Kartli, Samegrelo-Zemo Svaneti, Imereti, Guria, Racha-Lechkhumi and Kvemo Svaneti
8	Integrated Solid Waste Management System in Kutaisi 2015-2024	EU/KfW	Solid Waste Management Company of Georgia	Assistance to LSGs in municipal waste management planning and implementation; assistance in establishing source separation systems, e.g., for green waste and dry recyclables; support to mountainous municipalities.	Imereti; Racha-Lechkhumi-Kvemo Svaneti
9	Integrated Solid Waste Management Programme II 2019-2023	KfW	Solid Waste Management Company of Georgia	Extension and improvement of street sweeping, waste collection and waste transport, as well as pilot projects in recycling and composting.	Samegrelo-Zemo Svaneti and Kakheti regions
10	Solid Waste Management – Kvemo Kartli	EBRD	Solid Waste Management Company of Georgia	Support in street sweeping, waste collection and waste transport, as well as pilot projects in recycling and composting.	Kvemo Kartli
11	Solid Waste Management – Central Georgia 2019-2024	EBRD	Solid Waste Management Company of Georgia	Support in street sweeping, waste collection and waste transport, as well as pilot projects in recycling and composting.	Mtskheta-Mtianeti, Shida Kartli, Samtskhe-Javakheti

Abbreviations

bln	Billion
CENN	Caucasus Environmental NGO Network
EC	European Commission
EPR	Extended Producer Responsibility
MEPA	Ministry of Environmental Protection and Agriculture of Georgia
mln	Million
MoESD	Ministry of Economy and Sustainable Development
MoLHSD	Ministry of Labor, Health and Social Defense of Georgia
MoRDI	Ministry of Regional Development and Infrastructure
MoF	Ministry of Finance
MSW	Municipal solid waste
NPWPP	National Plastic Waste Prevention Program for Georgia
PE	Polyethylene
PET	Polyethylene terephthalate
PMMA	Poly(methyl methacrylate)
PP	Polypropylene
PS	Polystyrene
PVC	Polyvinyl chloride
PU	Polyurethane
UNDP	The United Nations Development Programme
WMTR 2	Waste Management Technology in Regions, Phase 2