



Circular Economy in Georgia

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Opportunities for reusable packaging systems and women's participation

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List of Abbreviations

AA	Association Agreement
CAP	Climate Action Plan
CCL	Circular City Labs (project implemented by GIZ)
CE	Circular Economy
CENN	Caucasus Environmental NGO Network
EC	European Commission
EIEC	Environmental Information and Education Centre
EMBLAS	Improving Environmental Monitoring in the Black Sea
EPR	Extended Producer Responsibility
EU	European Union
EUR	Euro
FOB	Free on board
GeoStat	National Statistics Office of Georgia
GEL	Georgian lari
GHG	Greenhouse gases
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GRF	Governance Reform Fund
GSNE	Orchis Georgian Society of Natural Explorers
LLC	Limited Liability Company
MEPA	Ministry of Environmental Protection and Agriculture
Mgt	Megaton
NACE Rev.	Statistical classification of economic activities in the European Community
NDC	Nationally Determined Contribution
NNLE	Non-entrepreneurial Non-commercial Legal Entity
NPWPP	National Plastic Waste Prevention Program for Georgia
PET	Polyethylene terephthalate
RECC	Regional Environmental Centre for the Caucasus
UN	United Nations
UNDP	United Nations Development Programme
USD	United States Dollar

Executive Summary

This baseline study assesses the local conditions for reusable packaging solutions and explores opportunities for empowering women, as well as collaboration with the private sector and municipalities. The assessment is conducted through an overview of relevant legislations, policies, national statistical data, and academic literature. Additionally, interviews were conducted with relevant business operators and representatives of local government in three pre-selected cities (Tbilisi, Batumi, and Rustavi).

The research found that Georgia aspires to become a country committed to waste prevention and recycling. Adopting a “zero waste” approach is one of the main priorities of developing Georgia’s circular economy. According to the Government of Georgia, the country is in the process of transitioning to a circular economy and is seeking partnerships to build on international best practices and become a regional leader in implementing policies promoting circularity (GSNE Orchis, 2022). Furthermore, Tbilisi is currently the best-prepared city for hosting the GIZ project, Circular City Labs. The city has already developed a draft Waste Prevention and Recycling Strategy, the representatives from the Tbilisi City Hall’s Municipal Department of Economic

Development and the Department of Environmental Protection expressed interest in and readiness to cooperate on initiatives aimed at preventing packaging waste. At the same time, the study has identified several suitable businesses in Tbilisi that are interested in exploring and implementing a system of reusable packaging.

This baseline study was prepared by NNLE Operational Research Institute, including Kakha Rukhaia (Environmental Consultant), Maka Chitanava (Gender Expert), and Levan Pavlenishvili (Economist) and is financed by the German Federal Ministry for Economic Cooperation and Development (BMZ).

1. Introduction

Cities are generating more and more waste due to high densities of population, restaurants, businesses and industry. Reusable packaging systems are an important part of the circular economy. They address the root of the problem by ensuring that less packaging is used and less waste is produced. Further, they conserve resources and reduce greenhouse gases. Reusable packaging systems can be set up in different sectors and contexts, such as gastronomy, large-scale events, retail, and e-commerce. Women play a crucial role in environmentally sustainable consumption. Companies with improved gender diversity are more likely to engage in sustainable businesses. Moreover, female entrepreneurs can significantly contribute to new business areas of the circular economy. Therefore, the project ‘Circular City Labs - Testing Reusable Packaging Systems in Cities’ (CCL) implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH aims at a reduction of greenhouse gas (GHG) emissions through waste prevention by promoting economically viable reuse systems and other urban circular economy approaches, especially by empowering women as entrepreneurs. The project will support up to four cities in Albania, Georgia, Colombia, Kosovo, and South Africa in establishing approaches to an urban circular economy inviting local businesses, city administrations, academia, and civil society to elaborate functioning reusable packaging systems. The labs will have demonstrable and long-term positive effects on emission savings, the environment, economic development, and social cohesion in the sense of green recovery and just transition. Apart from this version at hand, there is a more detailed version intended for internal use only that includes more details on relevant stakeholders and initiatives, as well as further background information.

To serve as a foundation for the final selection of cities where the labs will be implemented, baseline studies were carried out in pre-selected countries. The main objectives of the baseline study were as follows:

- To analyse existing practices and infrastructure, as well as policy and legal framework for reusable packaging in the pre-selected cities in Georgia, identifying barriers and gaps to widespread adoption of the practice faced by stakeholders in the sector to prevent waste pollution and promote reusable packaging, waste prevention and minimization of environmental impact.
- To assess the role of women in the reusable packaging sector and understand the specific challenges and opportunities they encounter, identify ways to empower women in the sector, promote gender inclusivity, and provide recommendations to enhance their participation and representation in decision-making processes.
- To map relevant local actors in the country, including primary (those who are expected to be directly affected by the project) and key actors (who are able to apply these skills, knowledge or power to affect the project implementation and/or achievement of objectives) in the sector. The study also aimed to identify secondary actors whose involvement in the project is either indirect or temporary.
- To identify and explore opportunities for implementing reusable packaging systems in the cities, within the pre-selected cities to identify the one with the highest potential for implementation/support of financially viable packaging systems.

1.1 Methodology and limitations of the baseline study

To achieve the main objectives of the baseline-study the following strategies were employed:


Desk research and data analysis. The research team conducted a comprehensive literature review analysing the existing policy, laws, and academic literature on the topic relevant to the Georgian context. The research team also analysed available data from trustable data sources (i.e., the National Statistics Office of Georgia). The results of the desk research were used to assess the existing practices and infrastructure for reusable packaging, identify barriers and gaps in the adoption of reusable packaging systems in different cities in Georgia and understand the specific challenges faced by women in the sector.

Stakeholder engagement. The research team mapped local actors relevant to reusable packaging systems, and women empowerment as entrepreneurs in the reuse sector. The team identified (if any) local incubation/innovation centres focusing on the circular economy or women empowerment. After the mapping, the research team engaged with some identified stakeholders, including local businesses, packaging industry representatives, environmental organizations, women's empowerment groups and local government representatives. 15 semi-structured in-depth interviews were conducted to gather insights on current practices, challenges, gaps, and opportunities related to reusable packaging and women's participation in the sector. In addition, the purpose of these interviews was to analyse the awareness level of stakeholders regarding the issue, their interest in being involved in GIZ Circular City Lab and the potential for collaboration between different stakeholders. The insights gathered from the stakeholder interviews are also reflected in the report.


For the purposes of the baseline study, the research team has also pre-identified major sector stakeholders. The stakeholders can be divided into nine broad categories:

- 1 Local Governments
- 2 Business operators - packaging producers
- 3 Large retailer companies
- 4 Hotels
- 5 Food/Gastronomy and beverages
- 6 Business Associations
- 7 Non-Governmental Organizations
- 8 Academic institutions
- 9 Clusters

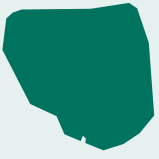
The target cities were pre-selected based on population size and with the highest packaging consumption, the presence of the packaging industry, consumer markets, the ability to pursue policy reform and implement a reuse system:



Tbilisi, as Georgia's capital and its largest city, both in terms of area and population size. Tbilisi also produces more packaging waste than any other city in Georgia. According to the National Statistics Office of Georgia (GeoStat), as of January 1, 2023, Tbilisi's population was 1,247 thousand residents, and its total area covered 720 square kilometres. In 2021, Tbilisi's gross domestic product (GDP) reached 26, 288 million GEL (at current prices), which amounted to 44 percent of Georgia's total GDP (at market prices). Retail and wholesale trade account for the largest share (24%), followed by real estate (11%) and manufacturing (9%). It is important to note that according to GeoStat's business registry, the majority of plastic producers are registered in Tbilisi.



Batumi, as the largest and the most important city for tourism and the administrative centre of the Autonomous Republic of Adjara. According to GeoStat, on January 1, 2023, Batumi's population was 179 thousand residents and its total area covered 64.9 square kilometres. According to GeoStat's data on tourism, in 2022 Adjara was the third most visited region by domestic visitors (152,000 domestic visitors) after Tbilisi and Imereti. Adjara was also the second most visited region by non-resident visitors (172,000 non-resident visitors) after Tbilisi.



Rustavi, as the most industrial of Georgia's cities. According to GeoStat, on January 1, 2023, Rustavi's population stood at 132.3 thousand residents and its area covered 60 square kilometres. According to the Plan for Local Economic Development prepared by the Rustavi Municipality, 3,154 business operators are registered in Rustavi, among which the majority (55%) represent retail trade, followed by the manufacturing industry (13%) and domestic services (10%).

2. Status-quo of circular economy and gender equality in Georgia

2.1 Facts and figures about the problem of (plastic) packaging waste pollution

Each year, 1.1 million tons of municipal waste is being generated in Georgia and the figure is increasing. According to GeoStat, between 2015 and 2021 the production of municipal waste increased by 30 percent.

The amount of municipal waste being produced is rising despite a decrease in population (in 2015, Georgia's population was 3.73 million people; by 2021 it had decreased to 3.63 million). This shows that per capita generation of municipal waste has been increasing (see Figure 1).

Figure 1. Municipal Waste Deposited in Landfills¹



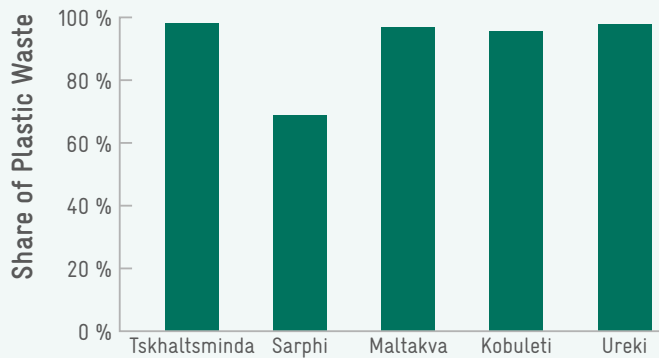
Source: GeoStat

According to a study of the composition of municipal waste, plastic waste comprises 12-16% of all waste collected and deposited in landfills in Georgia. Thus, the amount of plastic waste deposited in landfills each year can be estimated to be between 132,000 and 176,000 tons (CENN, 2021). A significant amount of plastic waste ends up in the environment, both from terrestrial sources and those in the Black Sea.

According to **municipal solid waste management plans** approved by Georgia's municipal assemblies in 2017, unregulated dumpsites exist in almost every village around the country, mostly along rivers and ravines, as well as along the Black Sea coast. There is no official data on the composition of waste in these dumpsites. But cleanup efforts by local governments, as well as campaigns by environmental groups and their donors, revealed that plastic waste is responsible for a significant share of solid waste deposited in unregulated dumpsites. According to the studies funded by the European Commission (EC) and the United Nations Development Programme (UNDP) as part of their joint project "Improving Environmental Monitoring in the Black Sea" (EM-BLAS I and II, EMBLAS Plus), plastic waste accounts for more than 95% of all waste accumulating in Georgia's coastal areas.

¹ Data from GeoStat is based on information provided by the following organizations: LLC Tbilservice Group, LLC Solid Waste Management Company of Georgia, LLC Sandasuptaveba, NNLE Kobuleti Sanitation and LLC Kedis Komunalurservi.

Figure 2. Share (%) of Plastic Waste in Coastal Dumpsites in Georgia (2019)

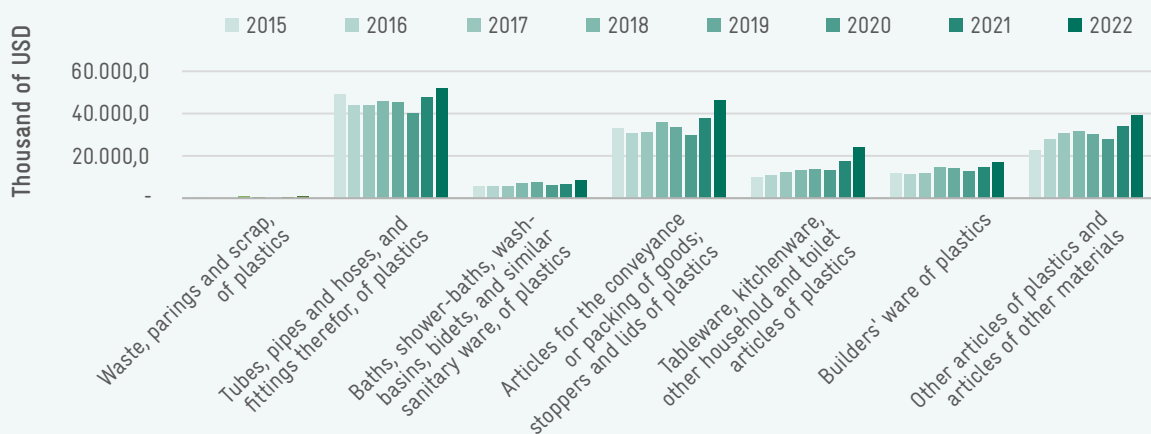


Source: (CENN, 2021)

It is important to note that **the Waste Management Code of Georgia** sets fines for illegal disposal of waste ranging from 80 GEL to 3,000 GEL². The code also requires that the polluter cleans up the affected territory. However, due to insufficient enforcement, the lack of infrastructure and relatively low public awareness, the problem of unregulated dumpsites persists.

According to available studies, the total amount of **plastic material and products imported and produced in Georgia** in 2020 reached 180,900 tons. 93 percent (168,300 tons) will eventually become plastic waste. PET bottles account for 22% of total expected solid waste, while polyethylene and polypropylene bags represent 44%. 27% will come from other forms of plastic waste. The total production of packaging waste is estimated at 200,000 tons per year. 132,000 tons of plastic waste will be deposited in landfills along with mixed municipal waste (CENN, 2021). In 2022 imports of plastic goods reached 187,736,000 USD, accounting for 1.3% of all imports (see Figure 3).

Figure 3. Import Value of Plastic Products (NACE-rev4 Category)

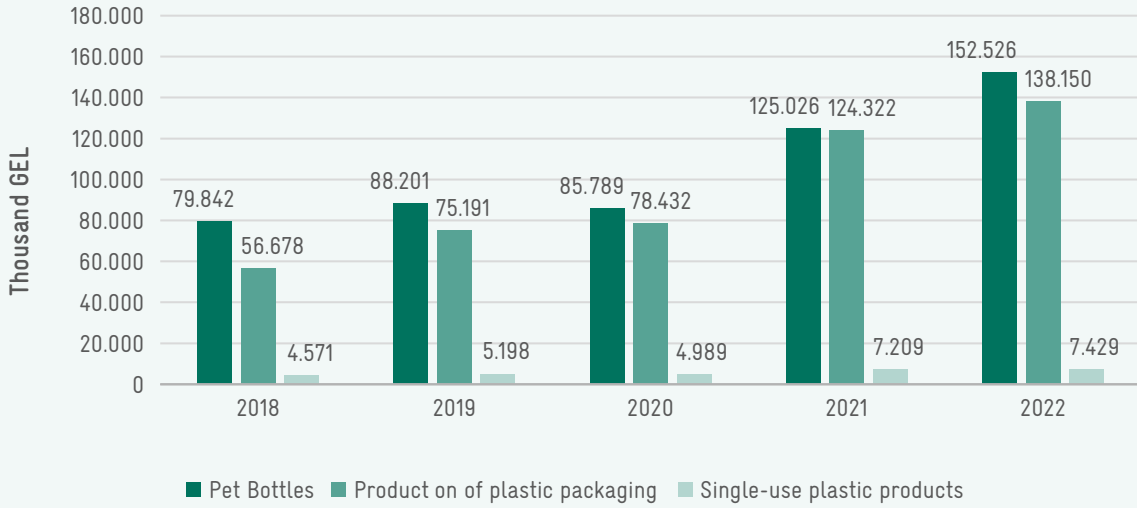


Source: GeoStat

² 28 to 1060 euros (Average exchange rate in September 2023 according to the National Bank of Georgia Eur/Gel = 2.8303)

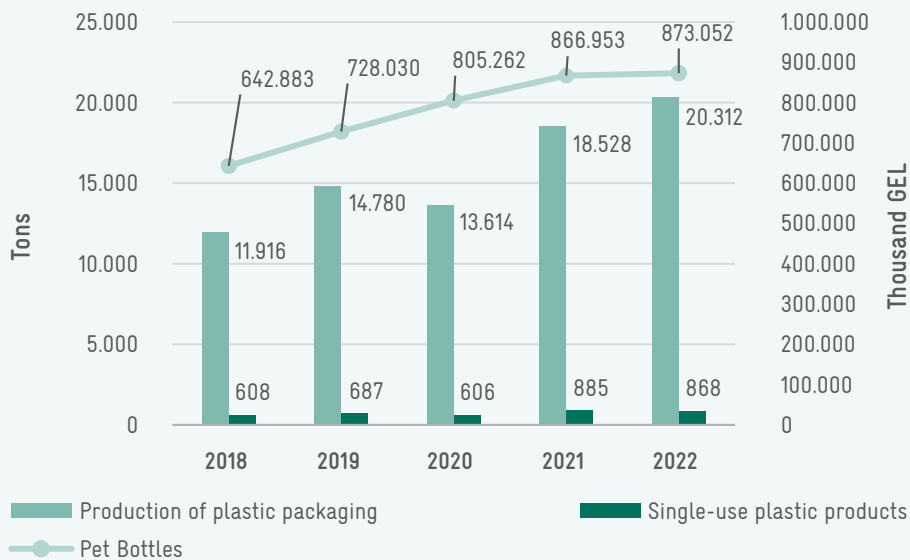
The use of plastic goods and single-use plastic products (packaging, kitchen items, etc.) is widespread. The figure below charts key statistics on the production of plastic goods in Georgia between 2018 and 2022.

Figure 4. Value of Plastic Products Produced in Georgia (2018-2022)



Source: GeoStat

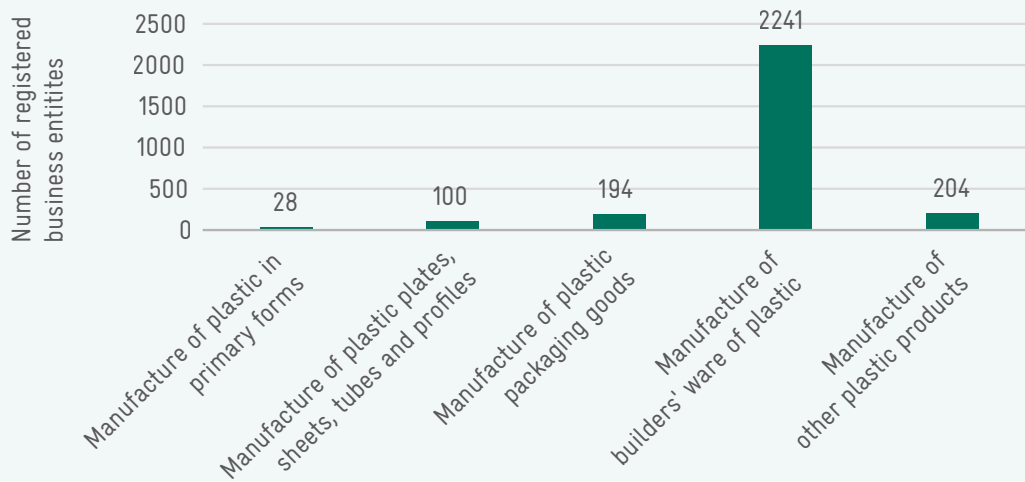
Figure 5. Plastic Products Produced in Georgia (2018-2022)



Source: GeoStat

According to GeoStat’s registry, in 2023 there are more than 2,000 entities in Georgia producing some form of plastic. Some are engaged in primary plastic production of tiles and packaging material (see Figure 6).

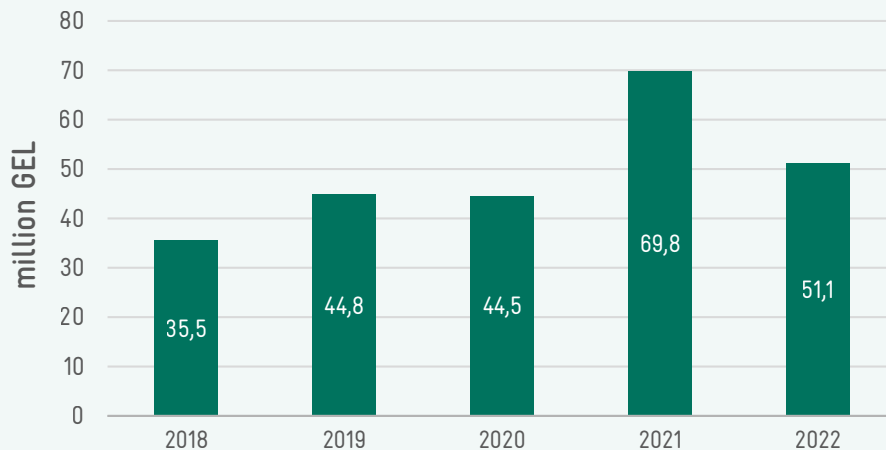
Figure 6. Plastic Product Producers in 2023



Source: GeoStat, Business Registry

In 2018-22, the plastic packaging industry generated between 39 million USD and 70 million USD of value added (see Figure 7).

Figure 7. Value Added in Plastic Packaging Industry 2018-2022 (NACE Rev.2 Activity Code: 22.22)

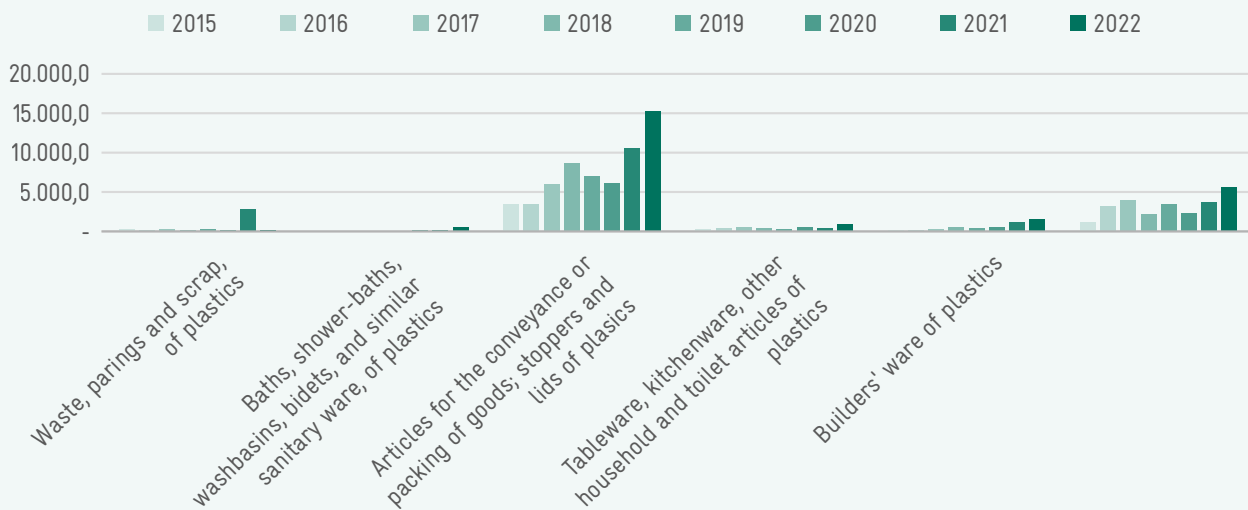


Source: GeoStat, Producer Disclosure

According to GeoStat, **Georgia's external trade turnover** has been rising. For example, between 2018 and 2022, it increased from 12,740 million USD to 19,131 million USD. In 2022, export volume (FOB) amounted to 5,583 million USD, while imports reached 13,547 million USD.

The volume of plastic products in international trade increased with the rising external trade turnover. Plastics involved in international trade include: (1) plastic waste, sheets, tiles and scrap plastic; (2) pipes, hoses and fittings; (3) plastic used in transporting manufactured goods and their packaging; (4) plastic cutlery, plastic toiletry, household and kitchen items; (5) plastic construction material and (6) other types of plastic products. The volume of exported plastics has also been rising (see Figure 8). In 2022, plastic exports reached 24,018,000 USD, comprising 0.43% of total exports.

Figure 8. Export Value of Plastic Products (NACE-rev4 category)



2.2 Status quo of the local waste management systems

Problems caused by improper waste management practices in Georgia are complex. Household refuse and toxic waste deposited at unregulated dumpsites, as well as non-compliant landfills, were main drivers of environmental pollution. A significant share of municipal waste ended up in unregulated dumpsites. At the same time, landfills that did not comply with safety standards posed a significant environmental threat.

To address these concerns, several important reform initiatives targeted the waste management sector. In 2014, Georgia and the European Union signed the **Association Agreement (AA)**, which included several provisions for implementing modern waste management practices in Georgia.

On January 15, 2015, the **Waste Management Code of Georgia** went into force. The Code is based on the AA and international best practices. It established a distribution of responsibilities and competencies among state organizations involved in waste management. The Code also defined administrative offences related to waste management and environmental pollution/littering and introduced financial sanctions related to all forms of waste management-related infringements. At the same time, the Government of Georgia approved close to 20 new subordinate normative acts aimed at supporting the implementation of international best practices related to waste management. The **National Waste Management Strategy (2016-2030)** was prepared in 2016. Additionally, the National Action Plan (2022-2026) identified specific activities that need to be undertaken over a five-year period to achieve targets set by the Strategy.

According to the **Local Self-government Code of Georgia**, the management of municipal waste falls within the complete and exclusive powers of the municipality. All municipalities have prepared a five-year action plan for managing municipal waste. Some private sector representatives are also required to prepare such plans. More specifically, according to the Waste Management Code, a legal entity that produces more than 200 tons of non-hazardous waste per year, or any quantity of hazardous waste is required to prepare a waste management plan. The same requirement exists for natural persons producing more than 1,000 tons of inert waste and for legal persons who produce more than 400 tons of inert waste per year.

The producer is responsible for the waste, which reflects the **“polluter pays” principle**. The producer is required to deliver the waste generated to relevant entities or to companies offering environmental solutions for collection and processing.

Municipalities have imposed local fees that residents and legal persons are required to cover. However, both the fees and collection rates are low (2.5 GEL per resident; for legal persons the fee varies by the amount of waste produced). Therefore, municipalities subsidize waste management expenditures from the municipal budget.

According to the declared goals of its Government, Georgia aspires to become a **country committed to waste reduction and recycling**. Georgia strives to address the accumulation of environmental problems in a timely manner and aims to contribute to international efforts, including those aimed at reducing the pollution of the environment by plastic waste.

Noteworthy that in 2014, national statistics revealed that, on average, 525 plastic bags per citizen are used annually, whereas in countries like Ireland, the number is 14, and in Denmark and Finland, it is only four. In 2018 Georgia began working on limiting the use of plastic bags. The Government of Georgia approved technical regulations regarding plastic and biodegradable bags, which regulate the production, import and sales of plastic, biodegradable and compostable bags.

The National Waste Management

The National Waste Management Plan identifies two issues related to waste prevention that must be addressed in **2024-2026**:

- Preparing an **assessment of waste prevention and reuse**³; development of a corresponding program.
- Assessing the enforcement of provisions of waste management laws in **state procurement and tenders** and developing corresponding recommendations.

The same document lists five issues related to plastic waste management that need to be addressed in **2024-2026**:

- Evaluation of plastic wastes streams and development of relevant recommendations;
- Building stakeholder capacity and raising awareness through campaigns;
- Assessment the market for disposal plastics, analysing alternatives and developing relevant recommendations;
- Development of a normative act on the prevention of single use plastics;
- Assessment of river basins and marine litter and preparation of relevant recommendations⁴.

In May of 2020, the Government of Georgia approved four technical regulations related to **Extended Producer Responsibility (EPR)**. These concerned the management of (1) battery and accumulator-related wastes, (2) waste oils, (3) electrical and electronic equipment and (4) tires. The documents identify the responsibilities and obligations of producers, **EPR organizations** and all other stakeholders. They also establish **collection, recovery and recycling targets** for all waste streams. EPR organizations have been established for each of the four specific types of wastes, which have begun operating according to their legal mandate.

The EPR technical regulation for packaging waste and for decommissioned automobiles is to be approved in the future. Work on the technical regulation of packaging is completed and it awaits approval. These are the first steps and the Government of Georgia plan to expand its activities and pursue consistent and reasonable policies in this field.

Additionally, Georgia has taken on **international commitments** related to waste management. Georgia is a signatory to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the Stockholm Convention on Persistent Organic Pollutants. Georgia also supports the United Nations (UN) zero waste initiatives and resolutions. Sustainable management of waste is also an important part of national priorities related to the UN Sustainable Development Goals.

³ Reuse – the purpose of this activity is to reuse material, a product or its part.

⁴ The Decree of the Government of Georgia (N: 414. August 9, 2022). On Amendments to the Decree “Approving the National Waste Management Strategy 2016-2030 and Waste Management Action Plan 2016-2020” On April 1, 2022 (N:160)

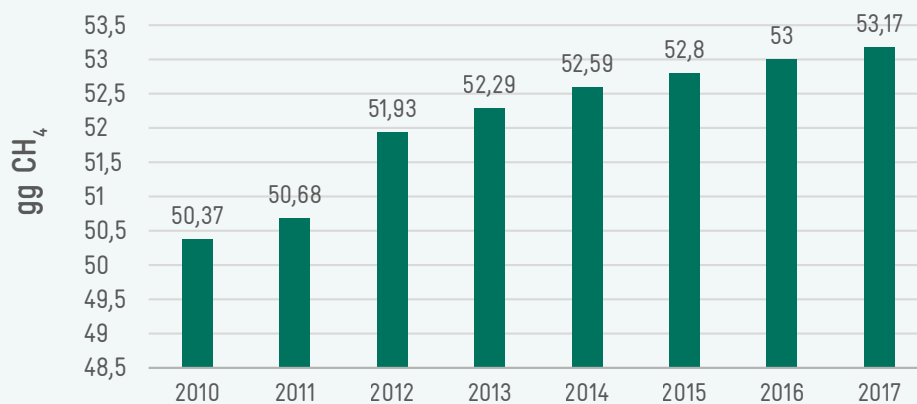
More specifically, the goal 12 about responsible consumption and production and objective 6 of Goal 11 (“Sustainable cities and communities”) aims to “reduce the adverse per capita environmental impact of cities,” including through the sustainable management of municipal and other kinds of waste.

In Georgia, transboundary movements are regulated by **the Law of Georgia on the Import, Export and Transit of Waste**.

2.3 GHG emissions and relevance of waste prevention

Most municipal solid waste in Georgia is deposited in landfills. It must be noted that most landfills in Georgia do not correspond to contemporary standards and are important sources of environmental pollution, including though methane emissions.

Figure 9. CH₄ Emissions from Municipal Solid Waste Landfills



Source: (UNDP, 2021)

No statistical or research data exists on the amount of GHG emissions related to the production and use of plastic products. At the same time, production-related emissions are not the only concern in this regard. GHG emissions are also generated in the process of plastic’s degradation in landfills, as well as during open-air incineration of plastics – a common practice in rural areas.

Georgia’s updated Nationally Determined Contribution (NDC) supports the development of low-carbon waste-management practices. In particular, it aims to encourage innovative technological solutions and services in this field, as well as waste separation and effective mainstreaming of the principles of circular economy.

Baseline and target values, as well as projected scenarios on the reduction of waste management related GHG emissions by 2030 are given in the table below.

Table 1. GHG emission-reduction targets in the waste management sector according to the Climate Change Action Plan 2030 based.

Strategic Target for 2030	2015	2030		
To reduce emissions in the waste sector		Baseline Scenario	Projections based on activities included in the CAP	Target value based on Georgia’s NDC
Supporting low-emission development of the waste management sector	1.38 mgt CO ₂ eq.	1.85 mgt CO ₂ eq.	1.37 – 1.10 mgt CO ₂ eq.	Quantitative target has not been set.

Source: Decree of the Government of Georgia (2021)

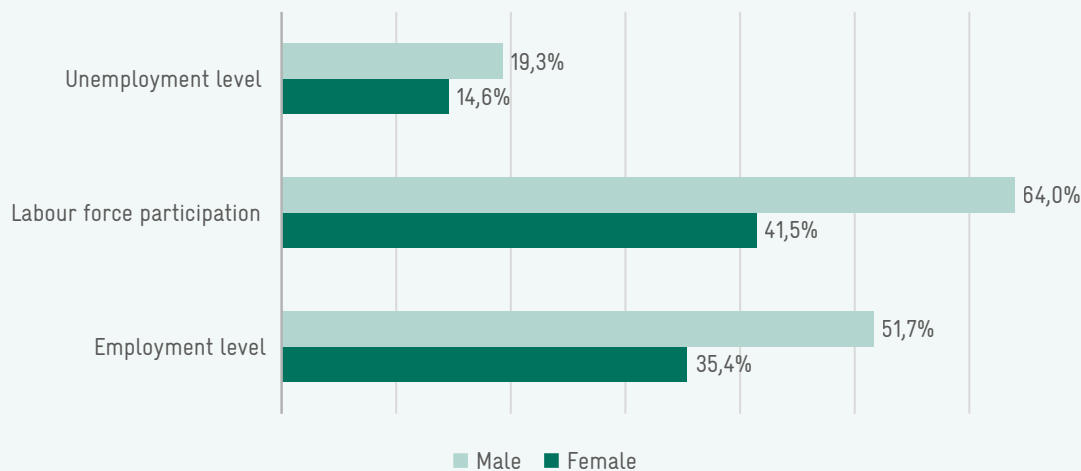
2.4 Facts & figures about gender equality and female economic contributions

Georgia has made important progress toward gender equality over the past few decades, but data and studies show that important barriers persist, requiring continued and wide-ranging efforts.

According to the **2023 Global Gender Gap Index** of the World Economic Forum, Georgia is 76th among 140 nations (the index is based on 2022 data). Georgia's Gender Gap Index is 0.708 (World Economic Forum, 2023). This value reflects four dimensions of gender equality: economic participation and opportunities, educational attainment, health and survival, and political empowerment. The index ranges from 0 to 1, where the value can be seen to stand for the proximity to complete equality (0 would indicate maximum inequality and 1 would stand for perfect equality). Georgia's score indicates that it has covered 70.8% of the gap, but important gender inequities persist. Georgia's relatively low score is due to poor performance in terms of political empowerment (91st place and the sub-index score of 0.163) and economic participation and opportunities (68th place and the sub-index score of 0.69). Georgia occupies a leading position according to the two remaining dimensions (educational attainment - 28th place and the sub-index score of 1; health and survival – 56th place, and the sub-index score of 0.974).

Georgia is among countries where significant gender inequities exist in terms of economic activity. According to the data from 2022, women trail men by 22.5 percentage points in economic activity. According to the data from the same year, employment rates show a gap of 16.2 percentage points.

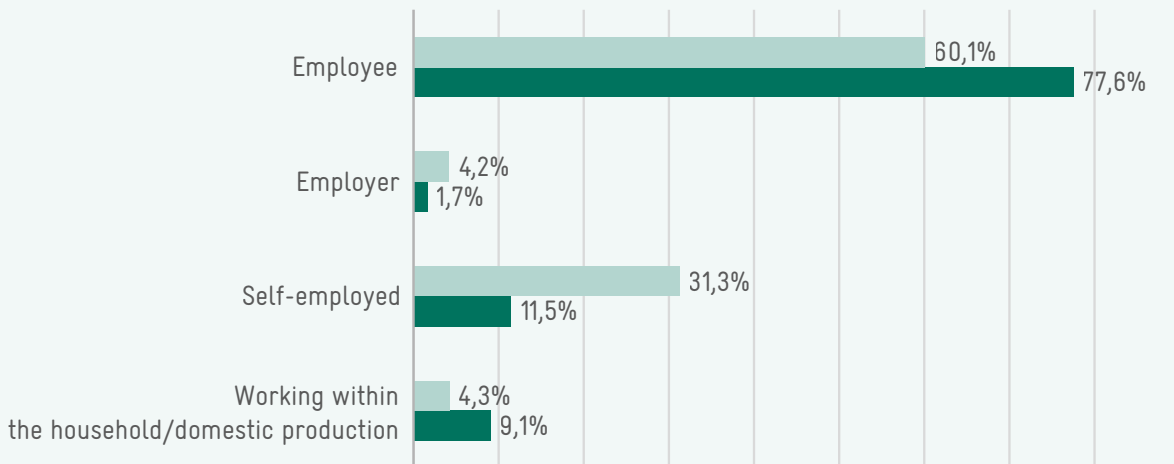
Figure 10. Labour Force by Sex (2022)



Source: GeoStat

There are important gender-related differences in the data on employment types. A larger share of employed women (77%) are hired workers (as opposed to self-employed). Women are also more likely to be employed as “contributing family workers” (9% of women). Additionally, men are more likely to be employers and own account workers (see Figure 11).

Figure 11. Employment Status and Sex (2022)



Source: GeoStat

In 2022, adjusted **gender pay gap** in Georgia stands at 23%, which means that even when accounting for demographics and job characteristics, women are paid, on average, only about three quarters of what their male peers receive. Adjusted gender pay gap in the manufacturing industry is 30.3% and 21.8% in the services sector.

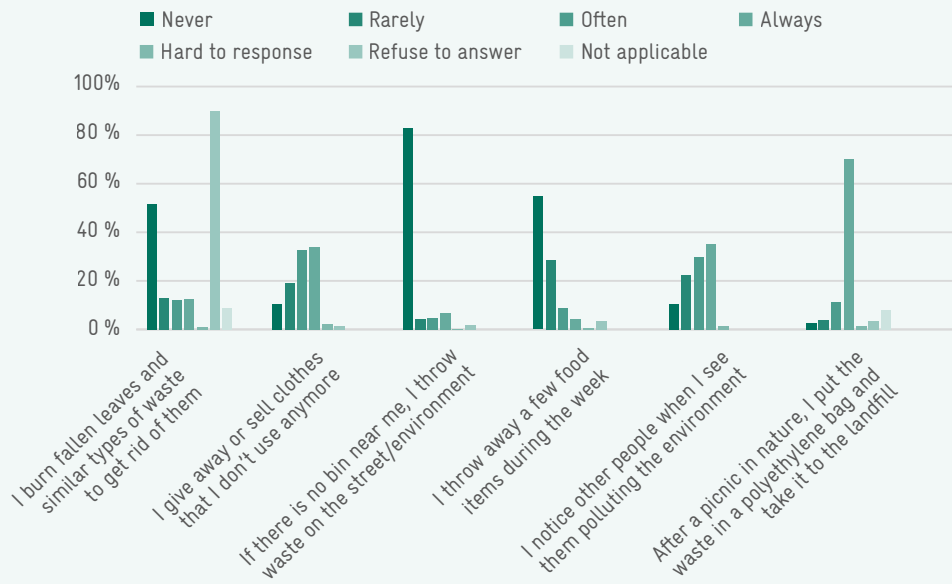
These key observations on Georgia's labour market show that women's economic empowerment is crucial. It is important to encourage women and increase their economic activity to make sure that they achieve their full economic potential. At the same time, it is vital to direct more efforts towards identifying and addressing barriers that help maintain potentially discriminating practices in the economy.

2.5 Awareness for (plastic) waste pollution and climate change

Waste Management

The Environmental Information and Education Centre (EIEC) of the Ministry of Environmental Protection and Agriculture (MEPA) has participated in and organized, along with civil society organizations, multiple campaigns aiming to raise the public's awareness of the pollution of the environment with waste, including plastic waste. According to research by the EIEC, when it comes to waste management practices, the majority of the population conforms to positive behavioural standards. For example, 70% of the respondents the EIEC surveyed indicated that they "always" place leftovers from a picnic into a polyethylene bag and dispose of them into trash cans. Additionally, 64-65% of respondents expressed that "always or often" sell or give away the clothes they no longer need. The same share of respondents indicate that they reprimand littering on the street (The Environmental Information and Education Centre of the Ministry of Environmental Protection, 2022) (See Figure 12).

Figure 12. Household refuse-related behaviour among respondents (N=1,501)



Source: The Environmental Information and Education Centre of the Ministry of Environmental Protection and Agriculture (MEPA).

The study shows that most people are aware of the adverse impact improperly managed waste can have on human health and the environment. But more work needs to be done on this issue, as the study also contains the following observations:

- One in four respondents indicated that they regularly incinerate their residential refuse.
- Half of the respondents pays no attention to excess packaging and does not use their own bag when shopping.
- Clear violations of proper waste-disposal standards are common (waste deposited in rivers and ravines; the practice of burning refuse, etc.)



Climate Change

The EIEC's survey reveals that the majority of respondents (61%) has noticed, over the past few years, signs of the degradation of environmental conditions in their residential area. These changes include the presence of new invasive species (23%), the increased frequency of disasters (22%), deforestation (17%) and deteriorating quality of water (16%). In terms of other climate change-related issues, respondents agreed with the following statements (EIEC, 2022):

- a** The impact of climate change is already felt in Georgia (62%);
- b** Interventions can mitigate climate change (53%);
- c** Climate change is real and dangerous (66%);
- d** Individuals can contribute to the mitigation of climate change-related risks through their behavior (48%).

In the Friedrich Ebert Stiftung youth survey (FES, 2023) found a correlation between educational attainment and expressed opinions on the reality of climate change. Higher educational attainment is correlated with stronger agreement with the statement that climate change is a real process that threatens life on the planet. Other noteworthy findings are as follows:

- Climate change is not among the most pressing issues for young people in Georgia. Only 1% mentioned it when asked about the most important problems their country is facing;
- When directly asked whether climate change is a global emergency or not, however, more than three quarters (76%) answered positively;
- Females and those with higher education are more likely to support this claim than their peers;
- Survey results and focus group findings show that while some young people think climate change is a natural process (48%), others believe that it is driven by human activity (49%);
- Regardless of their slightly different opinions in causality, young people are in favour of introducing new measures to combat climate change. During the survey, such restrictions were more often supported by females, as well as by capital city and urban residents;
- Young people claim that when they hear about global warming and efforts to mitigate it, they mostly feel hope (61%) and confidence (51%). However, most of them also feel fear (51%)

3. Circular economy and reuse in Georgia

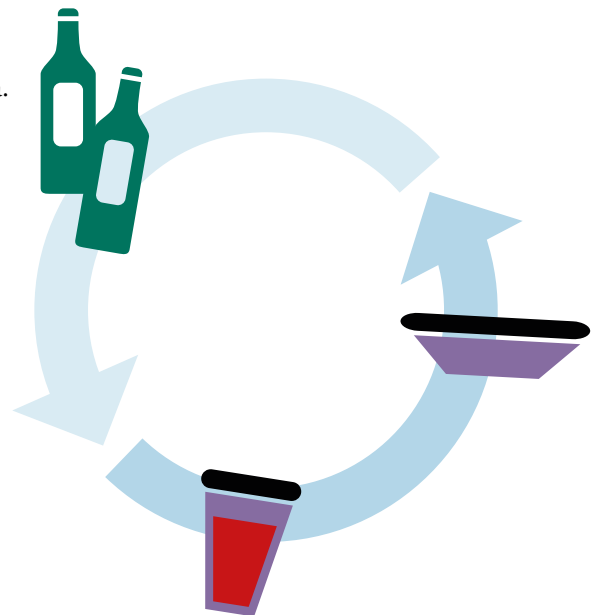
3.1 Legal framework and enabling conditions

The most important existing legislative framework that can be used to develop circular economy in Georgia is related to waste management. In this field, Georgia has already approved the Code and corresponding technical regulations (See 2.2. Status quo of local waste management system, including EPR in Georgia).

Georgia has not yet adopted a national legal framework devoted specifically to circular economy and municipalities have not formulated corresponding political documents. However, with the European Union's assistance, Georgia is working on a **National Waste Prevention Program (2022-2024)**⁵. The waste prevention program is based on the waste management hierarchy of EU's waste management framework directive. The hierarchy includes waste prevention, preparing for reuse, recycling, recovery and disposal. The program includes short, medium and long-term objectives that aim to turn Georgia into a country committed to waste prevention and recycling. The project will involve the preparation of a **Waste Prevention Plan**, which will bring Georgia's waste management sector closer to the EU standards.

In 2022, the Government of Georgia commissioned an important document on **Georgia's Circular Economy Mapping** an assessment of the Circularity Level of the Georgian Economy. According to the assessment, the share of circularity in the Georgian economy is 1.3%, translating into a circularity gap of 98.7%. The size of the gap points to the fact that the vast majority of resources being consumed in Georgia are of a primary nature. The country's economy is largely linear (GSNE Orchis, 2022). Georgia's economy consumes 315 million tons of resources per year, which amounts to 78 tons per capita. Over the past few years, the figure has been rising. A circularity level of 1.3% does not mean that 98.7% of resources end up as waste. Several factors contribute to the circularity gap: the majority of raw material consumed (40,056,014 tons) is added to material assets in the form of buildings and infrastructure, while 1,355,355 tons of raw material exist in the form of potentially recyclable biomass, like wood products and cash crops. The target for the next 5-10 years is to improve the share of circularity from 1.3% to 6.6% (GSNE Orchis, 2022).

It is important to mention that Georgia is currently working on a **National Roadmap to a Circular Economy**⁶. The Government of Georgia established the **Inter-Ministerial Coordination Board to facilitate transition to a circular economy in the country**. The Plenary Meeting in October 2023 was organized by the MEPA and GSNE "Orchis" to discuss the main steps required for the development of the National Roadmap to a Circular Economy for Georgia.



⁵ Project "Support to Waste Management and Development of Circular Economy in Georgia" (2022-2024), Donor – the EU, implementing organization – COWI, national partner – REC Caucasus. Project-specific objectives are to promote waste prevention and minimization concepts (sorting/recycling/reuse of wastes) to improve waste management practices, and to support the introduction of the concept of "Green"/Circular Economy in the society and the economic activities.

⁶ "Supporting the Government of Georgia in Enhancing Governance and Policies for a Transition to a Circular Economy" sub-project of the UNDP's Governance Reform Fund (GRF) Project, funded by the Government of Sweden. The GSNE "Orchis" represents an implementing agency for the Sub-Project, and the MEPA has a coordinating role.

3.2 Challenges for implementation

Georgia's most important political document on waste management⁷ contains no national indicators for the reuse of packaging material but establishes overall target values for recycling.

Table 2. Minimum Targets for (Packaging) Waste Management

Packaging materials for deposit	2026	2030
Recycling Targets	80%	91%
Plastic (bottles)	80%	91%
Metals (cans)	80%	91%
Non-deposit packaging material	2026	2030
Recycling Targets	41%	57%
Paper	51%	69%
Plastic	10%	10%
Glass	48%	66%
Metals	31%	46%
Wood	13 %	21%

Source: The Decree of the Government of Georgia (2022)

We can identify several main challenges related to the implementation of the main principles of circularity and the development of reuse systems in Georgia:

Waste prevention, reuse, recycling and recovering practices are uncommon, but several examples of municipal waste collection and recycling exist:

Paper	Paper and cardboard recycling is perhaps the most advanced, mostly due to the high price of recycled paper on the global market. The majority of collected paper is exported. The local market mostly consumes packaging cardboard and hygienic paper.
Plastic	About 25 companies in Georgia are engaged in the processing of plastic waste – their cumulative installed capacity ⁸ reaches 184,000 tons per year.
Metals	Due to the high price of scrap metal, it rarely ends up in landfills. Several companies process ferrous and non-ferrous metal waste in Georgia.
Glass	Approximately 1000 tons of glass are collected and recycling in Georgia per year (Decree of the Government of Georgia, 2022)

- Georgia's national legislation does not fully incorporate norms included in international conventions.
- Lack of human resources in relevant national public entities.
- Weak monitoring system.
- In general, no regulations, mechanisms or incentive schemes exist targeting single-use plastic products prevention (only the use of disposable plastic bags is regulated).
- Waste prevention mechanisms and related incentives are insufficient.
- Georgia lacks a well-functioning eco-labelling system and mechanisms.
- Relatively low awareness of the importance of plastic waste prevention, reuse, sorting and recycling among the public.
- Lack of experience with deposit return systems.

⁷ National Waste Management Action Plan 2022-2026

⁸ The maximum amount the plant can process.

Main challenges concerning Extended Producer Responsibility (EPR) include:

- The need to build key stakeholders' capacity.
- The need to understand best practices related to the involvement of EPR organizations in developing reuse systems.
- The need to raise awareness among business operators and the general public.

Main challenges concerning Municipal Governance

- Finances and infrastructure available on the municipal level are insufficient.
- The capacity of municipal staff to implement waste management practices that correspond to international best practices is limited.
- Lack of awareness regarding plastic waste prevention and reuse systems.

3.3 Most suitable economic sectors for the implementation of reuse solutions in Georgia

In Georgia total municipal waste produced in 2021 reached 1,104,952 tons, of which cities produced 768,257 tons and rural areas were responsible for 336,695 tons. An analysis of waste streams and studies of their composition shows that municipal waste consists of a combination of organic waste (54.7%), plastic waste (13.8%), paper and cardboard (10.6%), glass (2.3%), metals (1.4%) and other (11%) (The Decree of the Government of Georgia, 2022). Packaging waste is responsible for a significant share of municipal waste, which points to the importance of developing reuse systems.

Within the broader category of packaging waste, single-use packaging waste (plastic, paper/cardboard) is responsible for the largest share. Such packaging is common in the hospitality, HoReCa, beverage and retail sectors. Accordingly, it would be appropriate to target these sectors for promoting reusable packaging alternatives. The following section lists the most important target sectors and corresponding reuse models, as well as some relevant examples:

Hotels, Restaurants, Bars and Clubs:

- Collection of intact bottles and tableware. The return of such products to producers/suppliers through a deposit-refund system.
- Technical and logistical support of supply chains, setting up reverse logistics.

Fast Food Restaurants:

- Replacing single-use containers, cups, forks, spoons and plates with reusable alternatives that can be washed and used continuously.
- Technical and logistical support of supply chains, setting up reverse logistics.

Production of Alcoholic and Soft Drinks:

- Substituting polyethylene wrap used for beverage packs with reusable (plastic, wood) crates. Intact crates can return to suppliers/producers through a deposit-refund arrangement.
- Technical and logistical support of supply chains, setting up reverse logistics.

Retail (stores, supermarkets, hypermarkets) trade:

- Replacing disposable bags (paper, plastic, biodegradable, compostable) and food and beverage plastic single-use containers with reusable alternatives

Currently all reuse initiatives are still in their early stages and lack a systematic vision, appearing somewhat chaotic. During the research into baseline conditions, it became evident that experience with waste prevention practices is very limited. In Tbilisi, the following initiatives were identified and can be named as examples of reuse initiatives in their early stages:

B2C	B2B
Carrefour, a retail chain, used to offer its customers the choice of a reusable bag (alongside plastic alternatives) and deployed several financial instruments to encourage its adoption.	Tbilisi Marriott Hotel has engaged in the collection and return of empty, intact glass bottles to their producer.
Courtyard Marriott, Stamba, Room, Sheraton Metechi Palace, Raddison and other high-end hotels rarely use single-use cups for drinks, supporting waste prevention.	Some food and beverage providers deliver their products to the Ho-ReCa sector in reusable containers.
Adjaragroup's hotels and restaurants have prepared waste management plans, which means that waste prevention is among their priorities. For example, the company has acquired refillable tableware, which helped replace plastic and glass bottles used at events.	In Georgia, there are multiple packaging producers; however, there is limited experience in producing reusable packaging and containers.
8000 Vintages, a wine store and bar, uses a wine-dispenser and many types of reusable tableware.	
At Tbilisi's many festivals visitors can buy reusable wine glasses (but they have to buy these glasses, as there are no deposit-refund systems).	
Zero Effect Shop is the first zero waste shop in Tbilisi. It sells reusable products and hosts various activities to raise awareness regarding waste prevention and recycling.	
Some water providers collect bottles used for water dispensers in offices and refill/reuse them multiple times.	

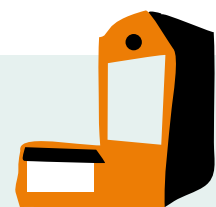
Additionally, there are other small and medium-size enterprises who use environmentally friendly packaging (mostly paper bags) or try to sell their products without packaging. All respondents showed high interest in the reuse topic and expressed openness to cooperate with the CCL project.

3.4 Awareness for CE/reuse of private and public sector and general public

There is no available data that measures the awareness of citizens in Georgia regarding CE/reuse. However, based on semi-structured (qualitative) interviews with key stakeholders during the baseline study, we can assume that awareness is relatively low. The key stakeholders are mostly concentrated on recycling policies and activities and are not well-informed about the opportunities related to reuse systems.

In general process that led to the creation of the assessment of the circularity level of the Georgian economy was an important first step in raising awareness around circularity in the public and private sectors. As part of this work, the inter-ministerial coordination board set up by the Government of Georgia, including public and private stakeholders, actively exchanged information amongst themselves. The majority of Georgian business operators are interested in collaborating with other stakeholders to participate in waste prevention initiatives and to implement waste prevention practices in their operations.

It is also encouraging that there are several ongoing academic initiatives on the circular economy. The Caucasus University and the International School of Economics at Tbilisi State University offer a course for students where they can learn about the principles of circular economy.



4. Gender equality and women's participation in the Georgian economy

4.1 Legal framework and enabling conditions

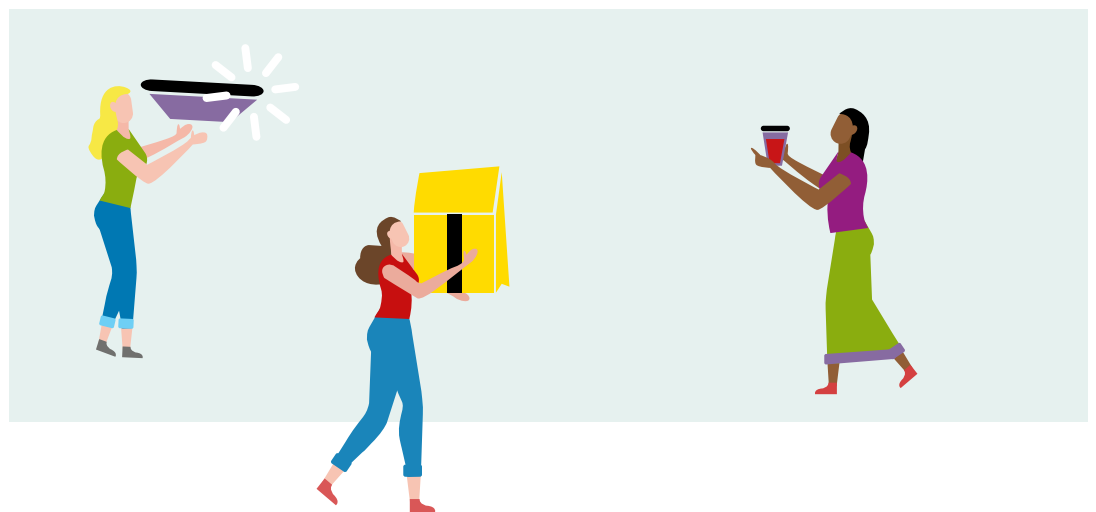
Georgia has made important progress on strengthening gender equality and the protection of women's rights within national legislation.

Article 11 of the Constitution of Georgia establishes that all persons are equal before the law. It also establishes that the state must guarantee equal rights and opportunities for men and women: "The State shall take special measures to ensure the substantive equality of men and women and to eliminate inequality" (Article 11). The Constitution's insistence on "substantive equality" expresses a commitment to eliminate gender inequality and provides a mandate for the state to develop laws, policies, programs and special measures aimed at this goal.

2010 **the Law on Gender Equality**⁹ "defines fundamental guarantees for equal rights, freedoms and opportunities [for women and men], and also determines legal mechanisms and conditions for their realisation in relevant aspects of public life" (Article 1). The same law provides legal guarantees supporting gender equality (Article 4) and establishes that "the State shall support and ensure equal rights for men and women in political, economic, social and cultural life," ensuring the achievement of substantive equality between men and women, as well as the overcoming of material inequality. The Law on Gender Equality also contains an important provision, according to which the State should support equal employment opportunities for both sexes (Article 6.2).

The purpose of the 2014 **Law of Georgia on the Elimination of All Forms of Discrimination**¹⁰ aims to ensure that all natural and legal persons enjoy the same rights. The Law provides protections against all forms of direct and indirect discrimination, unequal treatment and sexual harassment, both in the private and the public sector (Article 2.2 & 2.3).

Georgia's Labour Code¹¹ prohibits all forms of discrimination, including based on sex and sexual orientation, in labour and pre-contractual relations, including at the stage of vacancy announcement and the selection of employees. Changes to the Code approved in 2020 added provisions requiring employers to ensure **equal pay for equal work** (Article 4).



9 Available online: <https://matsne.gov.ge/document/view/91624?publication=10>

10 Available online: <https://matsne.gov.ge/ka/document/view/2339687?publication=3>

11 Available online: <https://matsne.gov.ge/ka/document/view/1155567?publication=24>

The State Concept on Economic Empowerment of Women¹², approved by the Parliament in 2023, is based on the Constitutional guarantee of substantive equality and aims to articulate a vision of women's empowerment and formulate basic policy in this area. The Concept identifies strategic areas of women's economic empowerment and potential activities in each direction:

- Equal access to economic resources – improving access to real estate, financial services, main assets and communication services and ensuring their effective utilization;
- Strengthening a gender-sensitive legal framework - improving current legislation and political documents, including regulatory norms addressing the gender pay gap, pregnancy and maternity leave;
- Improving public procurement and public employment practices – developing effective mechanisms to support the participation of woman-owned businesses in public procurement;
- Improving employment practices in the private sector – strengthening the protection of labour rights of employed women and bringing labour conditions closer to international standards.
- Recognizing, minimizing and ensuring an equitable distribution of unpaid labour and care work – developing a state policy of care work; recognizing, minimizing and redistributing the social burden of care; developing additional stimulating mechanisms;
- Encouraging the formalization of economic activity of women in the informal sector – raising awareness among women and addressing stereotypical attitudes.
- Confronting pernicious social norms – addressing gender-related and socio-economic barriers and guaranteeing equal economic opportunity.

As of 2023, 21 self-governing municipalities have signed **the European Charter for Equality of Women and Men in Local Life**¹³, which affirms their commitment to the principles of gender equality and expresses readiness to implement, within their jurisdiction, commitments included in the Charter and support gender equality on the local level. It is important to note that among municipalities selected for this project, only Tbilisi and Rustavi are signatories to the Charter.

4.2 Challenges for implementation

Despite important progress on improving national legislation and strengthening the protection of women's rights, gender stereotypes hindering the achievement of gender equality and the empowerment, including economic empowerment, of women and girls are still common in Georgia.

Gender stereotypes and attitudes place men in a dominant position in various aspects of social, economic and political life. The segregation of the labour market is present and so is the gender pay gap.

Entrepreneurship among women is limited. Poverty is high among women-headed households and women are at an increased risk of poverty.

4.3 Women in Georgia's (circular) economy and the potential to empower women in reuse

Research into the gender-related aspects of waste prevention can be said to be non-existent in Georgia. Therefore, it is difficult to identify gender-related challenges afflicting this sector. Based on stakeholder interviews, we can conclude that gender-related challenges in the waste prevention and reuse sectors are identical to those in the economy as a whole – but in this area they are even more persistent, as the sector is widely seen as predominantly masculine.

¹² Available online: <https://matsne.gov.ge/ka/document/view/5755428?publication=0>

¹³ Drawn up and promoted by the Council of European Municipalities and Regions and its partners.

There is no data on the representation of women in the waste prevention industry, circular economy or the reuse sector. Available reports that contain employment figures in the waste management sector are broken down by position and not by sex.

As for the Georgian economy as a whole, it fails to fully realize women's economic potential. Apart from important inequities in labour market participation, there is also a significant difference in access to and ownership of economic resources, which reflects unequal access to financial means and limits women's economic empowerment.

- As of 2022, 62% of undeveloped land is co-owned and 38% is owned individually. Most of the latter is owned by men (26%) and women hold a smaller share (12%). Additionally, the average size of land assets under women's ownership is smaller when compared to land owned by men (UN Women/ISET-PI, 2023).
- According to the same dataset, when it comes to undeveloped land, 42% is co-owned, 21% is owned by women and 37% is owned by men (UN Women/ISET-PI, 2023).
- As of 2022, more men own more than one property, which provides an example of inequitable distribution of resources among men and women (UN Women/ISET-PI, 2023).
- Access to finances – unequal ownership of resources translates directly into unequal access to finances. Even though no legal barriers exist for women seeking loans, in practice they find the credit market harder to navigate because they own less land and property needed to guarantee loans. As a result, women often turn to microfinance organization which usually offer higher interest rates than banks (Diakonidze, 2018).
- According to data from 2021, there are almost twice as many businesses started by men than by women (GeoStat, 2022).

Georgia is committed to supporting economic empowerment and funds important initiatives devoted to this aim. But such efforts are usually perceived as gender-neutral and they usually lack gender mainstreaming. A study of such programs showed that, apart from rare exceptions, women are underrepresented in state programs of entrepreneurial support, revealing that the state seems to have been unsuccessful in ensuring equitable participation of women in most of its economic programs (Georgian Institute of Politics, 2021).

4.4 Barriers for female economic participation (in reuse solutions)

Interviews conducted as part of the baseline study showed that stakeholders very rarely consider gender-related aspects in waste prevention and recycling. Despite acknowledging the importance of gender equality for Georgia's development, stakeholders have not considered opportunities for and the necessity of gender mainstreaming in reuse sector. This might be a result of a lack of information and knowledge regarding reuse and gender.

Interviews conducted with representatives of self-governing bodies (Tbilisi, Batumi and Rustavi) revealed that gender-related issues are not addressed in municipal waste management plans. Municipal bodies engage in **gender budgeting**, but gender budgeting of waste management is generally absent. Interviews also revealed that executive positions in the waste management sector are held mostly by men. Surveyed representatives of municipal bodies approve of women's participation, empowerment and inclusion in the packaging industry and express readiness to support such initiatives, including in collaboration with the private sector.

Interviews with business operators revealed that women rarely own businesses but are well-represented in executive positions. Respondents could not name any barriers that women business owners could face in the waste management industry. They generally understood gender equality in terms of the equitable distribution of men and women among different positions within the professional hierarchy. Interviews also revealed the existence of horizontal segregation in the industry, with certain professional roles, such as PR and communications, coordination, procurements, and assistance to the director, clearly over-represented by women.

5. Conclusions

Currently, all reuse initiatives in Georgia's circular economy sector are in their early stages, lacking a cohesive systemic vision. The research reveals a limited experience and awareness about waste prevention practices. However, among the pre-selected cities studied, Tbilisi stands out with relatively more expertise and awareness in sustainable waste management. As the largest consumer of packaging in the country, Tbilisi produces 36.6% of all solid municipal waste, with packaging waste accounting for a quarter of the total mass. Tbilisi has developed a comprehensive waste management plan, including a draft Strategy for

Waste Prevention and Recycling with reuse indicators, aligning with Georgia's national commitment to waste prevention. The city has actively hosted campaigns on waste separation, recycling and other sustainable waste management practices for years. Furthermore, businesses from a spectrum of sectors including HoReCa, night clubs, retail chains, producers of alcoholic and soft drinks, beverage companies, food/coffee café chains, and industry clusters based in Tbilisi have expressed a strong interest in collaborating with the project.

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